University of California, San Diego
Commencement Exercises
June, 1984

I was honored by your kind invitation to participate with you today in these Commencement exercises. In part, this is a ceremonial occasion - a rite of passage - a day on which you cease being called "Mr." or, under honorable pretense, "Dr.", and are properly recognized by title as Doctor for the rest of your lives, with all the rights, privileges and <u>responsibilities</u> which that implies. It is an occasion which I well recall having awaited with great anticipation - an occasion which financially pressed parents awaited with perhaps even greater anticipation. It is a day on which you commence your professional career - a day on which hope and expectation are at their peak. And many of you, educated as you have been at one of the world's finest schools of medicine, will far surpass the goals you visualize today.

It is traditional at Commencement to honor someone with the opportunity of offering those last words of wisdom before degrees are conferred -words which, in some unique manner, may stimulate reflection, offer guidance or provide new insight. It is a daunting task which I approach with humility. However, I have kept firmly in mind the advice given to the young Dean of Canterbury who was approached by the Lord Chamberlain prior to giving his inaugural sermon. The Lord Chamberlain explained that the Queen would be attending and wished to know in advance something about the sermon. The Dean anxiously queried if there was some subject about which the Queen would like him to speak. The Chamberlain replied that, in fact, the Queen hadn't the slightest interest in the subject matter - only the length of the sermon - which had best be brief.

Medical education, as it did when I went to school, focuses primarily, and necessarily, on developing the skills necessary for the understanding and diagnosis of individual illnesses and the therapeutic measures which should be applied. Sometimes the cases are even identified by name and are not always referred to, as for example, the Stevens-Johnson syndrome in Room 20. With the now immense body of medical knowledge, most of you have been all but totally preoccupied with absorbing at least part of the vast library of information available, and with developing a host of technical skills. There is anxiety, an understandable anxiety, that in only weeks or months, the decisions which you personally may make could mean life or death to another human being. Under such circumstances, it is difficult to think of the individual except as a case - difficult to think of the individual as part of a family, let alone a community or to contemplate what might have been done to prevent the illness. At this stage in your career and in the milieu of a medical school, future aspirations focus on the care of illnesses and the classic specialties of clinical medicine for this is what you have known best.

As one moves through residency training, confidence accrues through experience, that illnesses in a large proportion of patients resolve without specific diagnosis, or indeed therapy, and that most emergencies

can be readily handled in a comparatively straightforward manner. Only a small proportion of the illnesses which you will see will prove to be intellectually challenging. It is during the period immediately before you that you will have the opportunity to reflect on the art, as well as the science of medicine - on the case as a patient, as a human being and the meaning of the illness to him and his family - on the root cause of disease and possibly its prevention - on the challenge and excitement of research in probing that which is yet unknown and perhaps, an opportunity to reflect even more broadly on the formidable challenges to ourselves as a global society and the role which health professionals may play in resolving such challenges.

My own career began in the field of internal medicine. My focus, however, abruptly changed during an interrupted residency when I was sent by the Communicable Disease Center on trips to Asia and to Central and South America to help deal with outbreaks of cholera, botulism and poliomyelitis. On visits to hospitals in these countires, I was startled to find entire wards given over to tetanus, typhoid, poliomyelitis, diphtheria and malnutrition. It was difficult to believe that so many beds could be devoted to illnesses, all entirely preventable, even a single case of which would have been a subject for grand rounds in the United States. At the same time, I pondered what possible hopes for a better life could be contemplated by the teeming masses of people one encountered everywhere in Calcutta and Dacca. Perhaps, more jarring to conscience and comprehension was to return to the United States and to luxuriate in drinking water from a tap and to view the cornucopia of a modern supermarket. Yet, it was surprising to talk with colleagues and friends, and to find that they only dimly perceived where one had been and that they were, at best, polite, but more often bored, by what might be occurring beyond their immediate environment.

It was disturbing to return in 1977, after 11 years with the World Health Organization, to find acquaintances less interested in the world beyond our shores than they were when we had left the United States. During this same period, our dependency as a nation on other countries for <u>their</u> natural resources and as markets for <u>our</u> exports had grown exponentially. Indeed what happens today in Iran or Argentina, for example, has immediate and profound repercussions on <u>our</u> costs for energy and to the stability of <u>our</u> banking system. This represents profound change. Let us not forget that little more than a generation ago, such countries were primarily of interest to tourists, readers of the <u>National Geographic</u> and to a prescient few who, like those long ago, looked beyond the boundaries of a comfortable Roman Empire and wondered and worried about other peoples and <u>their</u> concerns and <u>their</u> aspirations.

The world of man has grown more interdependent than ever in history; but can we much longer live so comfortably and apart from other nation-states and other peoples less well endowed than we? Lewis Thomas trenchantly noted in a recent paper in <u>Foreign Affairs</u> that man is genetically programmed for social living - a solitary, lone human, being as much of an anachronism as a lone termite or a hermit honey bee. As he points out, we succeeded in surviving for long periods as tribal units. However, with the historically recent invention of nation-states, we began to endanger our place in nature, splitting off into colonies of adversarial

groups. Some, by luck or geography or perseverance, have become rich and powerful, others dirt-poor and weak. If there is not a moral obligation to provide assistance to them on the grounds that we are, after all, members of the same social species, more powerful arguments intrude, relating to our own self-interest in having a more stable, predictable world.

Many focus today on the dangers of nuclear proliferation - and what some have called "the final epidemic." There is no question but that this is an issue of overriding concern. But, consonant with good medical training, we must look beyond symptoms to the cause of illness. The genesis of the hostilities we fear, originate in a lack of common understanding and shared goals between nation-states. It breeds in a milieu of disease and ignorance. It can be translated more specifically into an equation of too many people and too few resources.

We can't easily generate more resources - they are finite. We can address the problem of quality of life, but only if we energetically concern ourselves with the other part of the equation - numbers of people.

Critically important to our own well-being is the well-being of our neighbors. It doesn't take a genius to comprehend the futility of periodically sending in the militia to restore order amongst hungry, illiterate masses of people. It's comparable to applying a band-aid to a broken leg. Genius, however, has hardly been a hallmark of U.S. foreign policy.

In our egocentric way, we overlook the importance of the sheer numbers of people - for example, in Central America and Mexico. In just one generation, the population of those countries alone will exceed that of the entire United States today. In less than 20 years, Mexico City itself is forecast to have a population of more than 27 million people, nearly four times the population of metropolitan Los Angeles today. Can their hopes and aspirations be so ignored as they have been over past centuries?

These countries and others require development assistance if their own economies are to grow, if they are to realize the objective of healthy, wanted children. Regrettably, the response of this administration and its recent predecessors has been to steadily diminish such support. Where once we contributed 2.7% of our gross national product, we now contribute one-tenth that amount. As a former AID administrator has observed, we spend more money on dog food than we do on the 600 million people in the world who are malnourished. More important, an ever increasing proportion of the assistance we do provide is for "security assistance," most of which is armament.

What has all this to do with health and medicine? A very great deal. Unrestrained population growth is the most important underlying problem of every developing country. In the less developed countries, 40% are now unemployed or underemployed. In the next 20 years, 700 million new jobs will need to be created to employ them and the children already

born who will be entering the work force. This is more jobs than exist in the whole of the entire western world. Yet, even today, contraception is available and used by only one in five married couples in the developing world - in major part because such contraceptives are unavailable to them. At the same time, a host of parasitic diseases imposes on entire populations a burden of unprecedented magnitude, important enough in terms of death, even more important because most are chronic, debilitating, often incapacitating in character. For those afflicted, productivity is seriously compromised. How effectively do you function with a temperature of 40°C. or with protracted diarrhea? Because most of the diseases are of little consequence to the industrialized countries, little support is given for research on what numerically are the world's most serious illnesses.

The problems are forbidding - indeed so overwhelming that you must wonder what possible contribution you as an individual, or even a group of you could make. I would submit, a very great deal. The practice of medicine, in this country as in other countries, has traditionally concerned itself with healing the sick. Its base has been the hospital and the clinic. Few resources and fewer still of our best physicians have been concerned with the community at large - in applying our best skills to prevent those illnesses from occurring. Physicians concerned with the traditional practice of medicine are in growing supply in this country. Surprisingly, some developing countries - Mexico and India, to cite two - actually have a surplus of physicians engaged in the practice of therapeutic medicine.

What is lacking in this country, and in developing countries as well, are physicians capable of and oriented to providing care to a community at large - to organize and to administer the application of preventive services whether they be prevention of illnesses or prevention of unwanted births. To do so well requires the best skills of medicine but a knowledge of politics, management and behavioral science as well. It's a different kind of medical practice than that to which you have been so extensively exposed, but it is no less challenging and exciting.

To illustrate for you the difference which a few people can make, I cite the smallpox eradication program. In just over 10 years, a disease which afflicted 10 to 15 million persons each year and killed more than two million was eradicated. A prevalent belief is that this was achieved with all but unlimited resources and thousands, if not tens of thousands, of international staff. Not at all. Our headquarters staff, at its peak, numbered four physicians, two administrators and three secretaries. In the field, at any given time, we never had more than 100 international staff. The achievement belonged to national health personnel - the <u>total</u> cost was less than the annual budget of the Johns Hopkins Hospital.

Truly, the international challenge is formidable - and increasing logarithmically - in major part, the problems must be addressed by those trained in medicine. In this country as well, concerns about the costs of health care offer a different but, in many ways, a parallel challenge. Required is a new generation of physicians whose concern is as much the community as the individual, whose skills and interests

extend beyond the diagnosis and reparative procedures necessary to deal with an illness or defect already acquired.

Charles Schultz, in his inimicable cartoon strip, summed up the situation succinctly when Lucy in her role as psychiatrist pointed out to Charlie Brown that life is like a great ocean liner. Some passengers place their deck chairs so as to look ahead to see where they are going and some so that they can view where they have been. She asked Charlie which type he was. He said that he hadn't managed to get his chair untangled yet. The next few years for you provide that time. Will you be looking to the past for your model, endeavoring to practice medicine as it was practiced in the earlier years of this century or looking to a future in which the community, both domestic and global, is the provenance of the modern physician?

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