

## Adapting *Man Adapting*: Curing, Helping, Consoling<sup>1</sup>

RENÉ DUBOS

*The Rockefeller University New York, New York*

Received August 1, 1978

On the occasion of the one hundredth anniversary of Yale University School of Medicine, I was invited to deliver the Silliman Lectures that were published in 1965 under the title *Man Adapting*. The main theme of the lectures and of the book was that the states of health and disease are to a large extent the expressions of the success or failure of the adaptive responses made by the person to the challenges of the total environment [1]. I developed this theme by discussing at length certain biological and social problems of human adaptation but mentioned only in passing the purely medical aspects of the problem. At that time, it was taken for granted that the medical professions contribute to health by making it easier for human beings to adapt to the various situations that produce biological and psychological stresses. For example, while I emphasized that improvements in health during the past century had been brought about, less by therapeutic measures than by better nutrition and sanitation, I regarded these changes in the ways of life as part of medical policies, even if they had not been initiated by physicians. However, skepticism concerning the usefulness of modern medicine has become so widespread during the past two decades that it seems useful to review the role of medicine in the adaptive processes that are essential for the maintenance of health.

The opportunity for such a review presented itself when I was invited to deliver the first Caldwell B. Esselstyn [Foundation] Lecture at Yale Medical School in April 1978. The [foundation] theme for the lectureship "Health and the Spirit of Man," was selected with the purpose of providing "an opportunity for dialogue on relationships between social and ethical issues and how they affect health and the quality of life." In the light of this assignment, I shall extend the concept of adaptation discussed in *Man Adapting*, so as to incorporate the more humanistic aspects of medical care.

It is a paradox of recent social history that skepticism concerning the effectiveness of modern medicine, and even hostility to it, have been spreading through the general public precisely at the time when medical science can legitimately boast of its most spectacular achievements in the prevention and therapy of disease.

During the past few years, several books written by non-physicians have popularized the view that scientific medicine is far less effective than commonly assumed and furthermore is creating new pathological conditions—the so-called iatrogenic diseases. Modern medicine is also accused of weakening or destroying the sense of

<sup>1</sup>Caldwell B. Esselstyn Lecture on "Health and the Quality of Life." Presented at the Yale University School of Medicine on April 20, 1978.

responsibility for one's own health, and even of having economic, racist, and sexual biases [2].

While such books written by lay people might be dismissed as based on inadequate knowledge of clinical problems, some of their themes have been also presented in books and articles by eminent members of the medical profession, in Europe as well as in this country. In fact, some of the most radical suggestions for reforms in medical science, education, and practice have come from the medical establishment itself, especially from academic medicine [3].

There are many obvious reasons for being dissatisfied with the present status of medicine—for example: the slow rate of progress in the understanding and control of vascular disorders, cancers, rheumatoid arthritis, chronic nephritis, multiple sclerosis, and other chronic diseases; the increase in iatrogenic diseases; the cost of medical care; the poor physical conditions in many hospitals; the difficulty in obtaining medical attention when needed; the lack of medical facilities for underprivileged people; the excessive use of drugs, diagnostic tests, and expensive equipment, etc. But in my opinion, much of the public disenchantment with scientific medicine has a deeper psychological basis, rooted in the history and traditions of medical practice. It comes from the nostalgic illusion that things were better in the past when the physician served what has been referred to as a "priestly" function, providing care in a paternalistic relation with the patient, based on understanding and trust. There are, indeed, good historical and scientific reasons for the change in doctor-patient relationships.

Until the middle of this century, few were the diseases for which there were specific therapies. The practice of medicine consisted chiefly in supportive care and encouragement—a form of service to the patient which usually required prolonged and repeated presence of the physician by the bedside. Sir William Osler, the most famous physician of the Anglo-Saxon world at the turn of the century, repeatedly stated that his effectiveness as a "healer" was due, not to his scientific knowledge of medicine but to his personal influence on patients. After he had become Regius Professor of Medicine in England at Oxford University, he organized in 1910 a symposium on "The Faith that Heals" during which he accounted in the following words for the therapeutic successes achieved at the Johns Hopkins Hospital in Baltimore during his chairmanship of the Department of Medicine: "Faith in *St. Johns Hopkins*, as we used to call him, an atmosphere of optimism, and cheerful nurses, worked just the same sort of cures as did Aesculapius at Epidaurus" (Osler's own italics) [4]. Dr. William Henry Welch, the architect of scientific medicine in the United States, also acknowledged that the very presence of the physician could have a healing effect independent of any intervention based on objective medical knowledge. Speaking of his own father who had practiced medicine in Connecticut, he wrote, "The instant he entered the sickroom, the patient felt better. The art of healing seemed to surround his physical body like an aura; it was often not his treatment but his presence that cured" [6]. Francis Peabody's famous remark, "The secret of the care of the patient is in caring for the patient," is another way of stating that there is a miraculous moment when the very presence of the doctor is the most effective part of the treatment.

Belief in the healing power of certain persons—whether shamans, medicine men, curanderos, or scientific physicians—has been expressed not only in myths and in literature, but also by painters.

The dignity of the ideal physician has been admirably conveyed, for example, by Rembrandt in one of his etchings dated 1651, now in the Philadelphia museum. The

etching is the portrait of an Amsterdam physician, shown in a private house, at the foot of a stairway where he has paused for a moment probably after seeing a patient. The mood on the physician's face expresses not only compassion for the plight of his patient but even more an immense effort of reflection as he tries to apprehend the complexities of disease. He is obviously pondering the problems of the body and the mind in their relation to the total undefinable experience of human life. The best known portrait of a physician, however, is probably the sentimental one painted by Sir Luke Fildes in 1891. It shows a kindly rotund family doctor, sitting pensively and passively but sympathetically at the bedside of a sick child. His pensive mood expresses more puzzlement than deep thought and his passive attitude betrays his awareness that there was not much he could do even if he really understood the nature of the child's disease.

A modern physician would probably be able to diagnose the diseases that proved puzzling to the physicians portrayed by Rembrandt and Fildes. It is probable, furthermore, that the child shown in Fildes' painting would not be seriously ill nowadays because he would have been immunized against the most common childhood diseases, or could be cured by antimicrobial therapy. But the traditional image of the "good ol' doc," leaning pensively over his patient, persists in the public mind despite the fact that some of the most useful things a modern physician can do usually require his presence by the bedside for only short periods of time. Many diagnostic tests and scientific measurements are carried out in laboratories. Immunization and other public health procedures prescribed by physicians are not necessarily carried out by them. Sophisticated medical and surgical technologies involve difficult decisions based on complex medical sciences but are likely to be largely executed by paramedical personnel. Whereas the *presence* of the physician was his chief contribution to therapy in the past, his *knowledge* is now the most important aspect of the medical act.

However, patients feel deprived and neglected because modern medicine is no longer entirely based, as was pre-scientific medicine, on the traditional doctor-patient relationship. They have the nostalgic illusion that things were better in the horse and buggy days when physicians were believed to have been more compassionate and attentive—even though they were as perplexed and ineffective as the physician in the Fildes' painting. In contrast, some contemporary physicians believe that the importance of this relationship decreases to the extent that medicine is based on better scientific knowledge of disease.

In his recent book, *The Post-Physician Era, Medicine in the 21st Century*, Dr. J.S. Maxmen of the Albert Einstein College of Medicine in New York City discusses the remarkable advances that have been made toward storing medical knowledge in computers and retrieving it in a form usable by clinicians. Computer programs have been designed for diagnosis, for taking medical histories, for prescribing therapy, and even for conducting psychotherapy. In these various functions, computers are not yet as good as the most experienced clinicians, but, according to Dr. Maxmen, they are in certain cases already better than ordinary physicians [6].

If medical knowledge and its use can thus be programmed in computers, it is not unlikely, still according to Dr. Maxmen, that most of the duties which are now regarded as the prerogatives of physicians will eventually be carried out by what he calls "medics," namely persons who have received only a short and limited amount of medical training. Highly trained physicians would then be needed only in a few specialties such as neurosurgery, and in situations where the patient will desire personal contact with a doctor having the right kind of diploma.

The evolution of medicine is seen in a different light by Dr. Lewis Thomas, president of the Sloan-Kettering Cancer Center in New York City, who speaks from a long experience of medical teaching and of brilliant contributions to various fields of experimental pathology. Until 1930, Dr. Thomas states, medicine was almost useless and was likely indeed to do more harm than good. Therapeutic effectiveness began with the use of insulin and other hormones, of the sulfonamides and other antibacterial drugs, of vitamin B<sub>12</sub> for the treatment of pernicious anemia, and of the sophisticated physiological knowledge that permitted new kinds of surgical intervention.

All these therapeutic advances have been derived from laboratory experimentation. They correspond to what Dr. Thomas calls the "high" technologies of medicine, based on precise scientific knowledge of etiology and pathogenesis. Not only are these high medical technologies very effective, but their use is relatively simple and inexpensive. For example, the treatment of tuberculosis with isoniazid is vastly more effective and much less expensive than prolonged periods of cure in a sanatorium, and the same can be said for polio vaccination as against the use of the iron-lung machine. Typhoid fever which required prolonged hospitalization and exacting management by physicians and nurses can now readily be cured by chloramphenicol.

In contrast, procedures such as surgery or radiation for cancers, intensive care for coronary heart disease, renal dialysis, organ transplants, and psychotherapy can be regarded as "half way" technologies which are largely empirical because they are not based on a sufficient understanding of etiology and pathogenesis. These half-way technologies are at best questionably effective, because they deal with the result of the disease rather than with its underlying mechanisms. They are responsible for the high cost of medical care because they require the use of expensive equipment in elaborate hospital facilities, and the services of highly trained personnel for long periods of time. The only hope for the replacement of half-way technologies is in research into the causation and mechanisms of disease by the sophisticated methods of biological and medical sciences [7].

Dr. Thomas' plea for more emphasis on theoretical medical sciences does not imply on his part, however, a lack of appreciation for the humanistic aspects of medicine. In fact, he has recently urged that priority should be given to training in the humanities for college students who aspire to become physicians [8].

While it is true that specific therapies were practically non-existent before the 1930s, it is nevertheless certain that medicine has long been able to contribute to the management of disease and to the improvement of health even without the benefit of scientific knowledge. I shall try to define the beneficial role of medicine in the past by referring to Edward Livingstone Trudeau (1848–1915), an American physician, born in Louisiana, who was a contemporary and friend of William Osler.

Shortly after beginning medical practice in New York City, Trudeau suffered from advanced tuberculosis which compelled him to abandon his practice. As there seemed to be little hope for his recovery, he removed himself to the Adirondacks with the intention of engaging in his favorite sport—hunting—from the comfort of a canoe operated by a guide. To his surprise, however, his health progressively improved and he was able to resume the practice of medicine, but remained in the Adirondacks. He eventually settled in Saranac Lake where he created the first tuberculosis sanatorium in the United States.

As a result of the ease of home management of tuberculosis by chemotherapy, the Trudeau Sanatorium closed its doors a few years ago and has now been replaced by a

biomedical research institute. In the library of the Institute, one can still read a French motto that was often quoted by Trudeau during his days of medical practice:

*Guérir quelquefois,  
Soulager souvent,  
Consoler toujours.*

which means, freely translated; “to cure sometimes, to help often, to comfort and console always.” This motto is probably the most exact expression of the best that medicine could do at the turn of the century.

As will be noted, there is no mention of prevention in the motto. The reason is, of course, that smallpox was then the only disease for which there was an effective method of prevention. The development since Trudeau’s time of methods of prevention against many infectious diseases, nutritional deficiencies, occupational and environmental threats, and even a few genetic disorders provides a measure of scientific medicine’s achievements in our century. Several dramatic achievements have also occurred in the cure of disease—by chemotherapy, replacement therapy, and surgical procedures. Such preventive and truly curative procedures correspond to what Dr. Thomas calls the high technologies of medicine. The third component of Trudeau’s motto, “*consoler toujours*,” represents the purely humanistic ideal of medicine which is not likely to change with time or knowledge.

I shall now turn to Trudeau’s “*soulager souvent*,” because it still corresponds in my opinion to one of the most important roles of medicine in our times. The modern physician can often relieve the patient of a disease burden even when the disease cannot be cured. The importance of this aspect of medicine, however, can best be evaluated by considering first the meanings of the words health and disease.

In theory, health implies the absence of organic and mental disease. This scientific definition, however, is not really meaningful for the many persons who are more concerned with doing what they want to do, and becoming what they want to become than they are with the condition of their bodies. For them, disease is any state that deprives them of the freedom to act as they want; health is the possession of this freedom even if this means the presence of disease. Although I have translated Trudeau’s verb *soulager* by the expression “to help,” the French word has a much richer meaning. It implies removing a burden, a handicap—in other words, making it possible or easier for the patient to function as he or she elects to do. From this point of view, medicine can do a great deal, even when it cannot prevent or cure the disease [9]:

—It can relieve anxiety, as for example when a woman who has observed a lump in her breast is told by her physician that this lump is not malignant.

—It can decrease the severity of symptoms, as for example when patients suffering from arthritis or hypertension are treated with the proper drugs and advised as to the proper ways of life;

—It can help the patient to mobilize the natural defense mechanisms of the body and the mind—*naturae vis medicatrix*—which can go far toward controlling the disease or at least alleviating its manifestations.

—It can facilitate re-education by taking advantage of the enormous resiliency of the human organism and helping the patient to compensate for one or another handicap. Rehabilitation implies active participation of the mind and of the body for a creative process of adaptive change which depends on volition but usually also needs medical guidance.

Thus, in many different ways, the physician can help a patient suffering from a particular disease to function more or less effectively, even though the cause of the disease is not known and its pathogenesis poorly understood. However, what Trudeau meant by *soulager* demands of the physician an awareness of the patient's human peculiarities—a type of concern that transcends the precise information incorporated in a computer's program. This was the quality that Hawthorne had in mind when he wrote of Dr. Chillingsworth in *The Scarlet Letter*: "He deemed it essential to know the man before attempting to do him good." Knowing a person implies awareness of fears and aspirations as well as knowledge of biological characteristics.

Most societies have been rather ambiguous in their concept of the scope of medicine. In ancient China, there were special remedies for particular diseases, but there was also the Book of the Yellow Emperor, which formulated a broad medical code of comportment according to the seasons. The Greek god of medicine, Asklepios, had two daughters who symbolized the two complementary aspects of the medical art: Panakeia stood for the knowledge of drugs derived from the earth and from plants; Hygeia for the doctrine that the way to health is to avoid excesses and to live according to the laws of reason.

In our own times, as mentioned earlier, some physicians believe that the only worthwhile and legitimate role of medicine is in the prevention and treatment of disease by methods of scientifically proven value. Since truly effective methods exist for only a very small percentage of the complaints that bring people to physicians, the purely scientific view of medical practice would limit its role to precise diagnosis and to the use of a few specific remedies. Such type of practice might decrease the importance of the human quality in the doctor-patient relationship. In contrast, the physicians who formulated the philosophy of the World Health Organization and wrote its Charter asserted in the preamble that health is "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." Such a sweeping definition makes health a virtual synonym for happiness. If taken literally, it would demand of physicians that they become involved as guarantors in practically all phases of human development.

There are of course many intermediate positions between these two extreme social views of medicine—the one based entirely on hard scientific evidence, the other accepting responsibility for all aspects of human life. Some of these intermediate positions involve, for example, the containment of organic diseases that cannot be cured, the management of chronic non-containable diseases, advice about the general problems of living—from marital difficulties to the choice of a career. The role of medicine in the social system must thus be compatible with questions of values that differ from society to society and from time to time—values which cannot be determined by the medical profession itself because they are the prerogative of each particular society as a whole. Nevertheless, there are reasons to believe that medicine cannot be limited to the prevention and treatment of disease and must inevitably incorporate the spiritual problems of patients.

One of these reasons is symbolized by the fact that, in Western societies at least, the physician is usually referred to as "doctor"—a word which etymologically means teacher. This usage seems proper because, under the conditions of stress caused by disease, most patients need guidance and encouragement along with purely medical care. Few are the persons in our society to whom a patient can turn for counsel on personal matters and it is probable that, whether they want it or not, physicians will

continue to be expected to act as “doctors”—as teachers of individual patients and teachers of communities in many aspects of behavior.

Another reason for extending the role of medicine beyond the scope of precise scientific knowledge is that whatever affects the mind also affects the body and vice versa. This interplay has always been known from simple experience and is now becoming at last the subject of scientific exploration. Who could have imagined only a decade ago that behavior and the perception of pain are affected by endorphins and other peptide hormones secreted in the brain itself, and that acupuncture does influence the secretion of some of these hormones! The body-mind relationship is likely indeed to become one of the most active fields of medicine in the near future.

The chief trouble with today's scientific medicine is that it is too one-sided and therefore not scientific enough. Modern medicine will become really scientific only when it has learned to manage the biological and psychological forces that operate as *naturae vis medicatrix* and when it has really committed itself to the doctrine that, in human life, the health of the body is linked to the health of the mind.

Rembrandt's portrait of a physician mentioned earlier admirably conveys this spiritual aspect of human medicine which makes it differ from general biology. Ministering to the sick does not mean only dealing with the living organism as a machine and with the environment in which this machine functions. It implies also compassionate sympathy for the patient considered as a sensitive ethical being. Medicine will retain its unique position among the sciences only to the extent that it accepts some responsibility for the various aspects of life that determine our humanness.

#### ADDENDUM

According to one of the reviewers of this article, “Caring . . . will not still the economic or social criticisms of medicine. High cost, technological duplication, fragmented care, institutions that perpetuate service delivery patterns which provide poor care for the poor, members of the minority groups, etc., demand different solutions.” I agree with these remarks, but they seem to me so obvious and so irrelevant to my article as not to be worth stating. The reviewer also states that my article “may inadvertently limit thought by providing easy answers.” I believe this is taking too exalted a view of my influence on the reader. Furthermore, it should be noted that my assignment by the Caldwell B. Esselstyn Foundation was, “Health and the Spirit of Man,” not the delivery of medical care, a topic in which I have no professional competence.

#### REFERENCES

1. Dubos R: *Man Adapting*. New Haven, Conn, Yale University Press, 1965, p xvii
2. Carlson R: *The End of Medicine*. New York Wiley, 1975; Illich I: *Medical Nemesis*. New York, Pantheon, 1976; Ehrenreich J ed: *The Cultural Crisis in Modern Medicine*. New York, Monthly Review Press, 1978; Lander L: *Risk, Anger & the Malpractice Crisis*. New York, Farrar, Straus & Giroux, 1978
3. Fuchs V: The growing demand for medical care. *New Engl J Med* 279:190-195, 1968; McKeown T: *The Role of Medicine: Dream, Mirage or Nemesis*. London, Nuffield Provincial Hospital Trust, 1976; Wolf SG, Berk BB, eds: *Limits of Medicine—The Doctor's Job in the Coming Era*. New York, Plenum Press, 1976; White KL: Health problems and priorities and the health professions. *Preventive Medicine* 6:560-566, 1977; *Doing Better and Feeling Worse: Health in the United States*. *Daedalus* 106 (No 1), 1977; Ingelfinger FJ: Medicine: meritorious or meretricious. *Science* 200:941-946, 1978; McAuliffe WE: On the statistical validity of standards used in profile monitoring of health care. *Am J Public Health*, 68:645-651, 1978; Yankauer A: By their fruits ye shall know them. *Am J Public Health* 68:631-633, 1978
4. Cushing H: *The Life of Sir William Osler*. Oxford: The Clarendon Press, 1925, Vol II, p 223

5. Flexner S, Flexner JT: William Henry Welch and the Heroic Age of American Medicine. New York, Viking Press, 1941, p 32
6. Maxmen JS: The Post-Physician Era—Medicine in the 21st Century. New York, Wiley, 1976
7. Thomas L: Aspects of Biomedical Science Policy. An address to the Institute of Medicine, Washington, DC, November 9, 1972; Thomas L: On the science and technology of medicine. *Daedalus* 106:35–46, 1977; Thomas L: A meliorist view of disease and dying. *J Med and Philosophy* 1:212–221, 1976
8. Thomas L: Notes of a Biology Watcher—How to fix the premedical curriculum. *New Engl J Med* 298:1180–1181, 1978
9. McDermott W: Evaluating the physician and his technology. *Daedalus* 106:135–157, 1977; McDermott W: Medicine: the public good and one's own. *Persp in Biol and Med* 21:167–187, 1978