Introduction: Understanding the Future of Medicine

Eric J. Cassell and Mark Siegler

THE PATHS TO THE PRESENT

This book comes at a turning point in the history of medicine. It is a time, we believe, when the profession has begun to direct its attention away from an almost exclusive concern with the body and is again focusing on the sick person.

The history of medicine is a story of changing customs and costumes, instruments and methods, explanations and theories. Throughout runs the common thread of attempts to understand what makes people sick and through that understanding to make them well again. We titled this book *Changing Values in Medicine*, but a better name might have been *Enduring Values in Medicine*, for no sickness can be known apart from an appreciation of both the body and the person. It is strange that it should ever have seemed otherwise. Yet present-day disease concepts, despite their obvious utility, are conspicuous for their impersonality.

How medicine came to where it is now, and how it was ever possible to forget that sickness always involves more than only the body, is in itself instructive. The history of medicine is often written as the story of a steady and determined growth of knowledge about human biology and disease, as if the development of anatomy, physiology, biochemistry, pathology, and pathophysiology have all led inexorably to our present scientific mastery. According to that scenario, we are now in our finest hour and on the verge of even greater mastery. Some caution is necessary, because in every era commentators on medicine have spoken of the brilliant advances of their time, often forgetting that the same praises were sung about medicine in other periods which, in retrospect, seem particularly sterile.

The view of medical history as a steady progression is not only inaccurate, but also not very interesting. It is vastly more exciting and productive to conceive of medical history as a series of twists and turns, as excesses and droughts along an uncertain road (if that implication of directionality is even a useful metaphor), profoundly influenced by prevailing philosophies and cultures. Medicine is always a part of its contemporary world, both shaping and being shaped by that world. But its goal—the relief of sickness—has always been the same. And that goal has always been elusive.

When one of us (EJC) graduated from medical school in 1954, excitement over burgeoning therapeutic effectiveness was everywhere. People really spoke about stamping out disease! As unbelievable as it may seem, EJC was really concerned that everything would be cured and that no interesting diseases would remain. Of course, it turned out that solving some problems (primarily the big-name infectious diseases) merely allowed new and unsolvable problems to take the place of the old ones. The goal of providing adequate care for the sick is elusive precisely because of the ever-changing face of illness and the inevitable inadequacy of the physician's knowledge.

In the world of today's doctors, the patients are older, their diseases are often incurable, and society is undergoing some profound changes whose nature is not clear but whose effects are widespread. The public demands a more personal medical care governed by ethical strictures undreamed of a decade ago, care in which the patient is seen as a full and knowledgeable partner. At the same time, patients are suspicious of physicians and technology even while taking the effectiveness of both for granted. The paradoxes are numerous and discouraging to contemplate. How did we get here, and where is medicine going?

The present era of medicine started somewhat more than 150 years ago when the concept of disease as we know it came into being. Before the nineteenth century, patients presented themselves to physicians much as they do today—"dropsied and asthma'd and joint racking rheum'd." But physicians looking at those patients did not see sodium retention, small airway obstruction, or synovitis. Nor did they see rheumatic valvular disease, chronic obstructive pulmonary disease, or rheumatoid arthritis. They observed only the symptoms that could be heard or seen. To say that is merely to point to the truism that you cannot see what you do not know. Two factors impaired the ability of doctors to see beyond the obvious. First, they were overwhelmed by competing theories of how nature worked. Iatrochemists, vitalists, mechanists, and others offered different explanations of the operation of the body; proponents of each position were able to see only those facts that supported their own viewpoints. (Pres-

ent-day schools of psychology are similar.) Second, there was no cohesive nosology, or classification of disease, that could organize the phenomena of sickness out of the chaos of endless symptom manifestations and theoretical speculation.

Around the middle of the eighteenth century, Cullen in Edinburgh and Sauvages in Paris, among others, developed disease classifications based on symptoms alone. In Sauvages's classification there were 2,400 "diseases"—including 18 kinds of angina, 19 kinds of asthma, 20 of pleurodynia, 13 of cardialgia, 20 of phthisis, and so on (Faber 1923). While those classifications were clumsy, they did represent a return to the actual phenomena of illness as a basis for the actions of physicians, a return to the bedside (in current jargon) and away from theoretical speculation. But as important as that empiricism was, it still lacked systematic guidance. The system that gave force to empirical methods and brought medicine out of chaos was the modern classification of disease.

The rise of modern nosologies, the classifications of disease that we use today, is detailed in a wonderful book, *Nosology*, by Knud Faber (1923). It is difficult to imagine the extent of the revolution in medicine that started in Paris in the beginning of the nineteenth century. At a lecture given recently by one of us, a student wondered aloud what physicians of 1815 saw when they looked at tuberculosis. The one thing they did not see was tuberculosis, because it had not yet been invented! They may have seen the pthisis in the lung, scrofula in the lymph nodes of the neck, kyphosis from a cold abcess of the spine, or any one of a number of other diverse afflictions, but not tuberculosis.

The brilliance of René Laënnec's contribution to medical progress was that he made it clear that all these things were but different manifestations of the same disease. He made that contribution by tying together what he saw in the living patient with what he saw at the autopsy, and by adding the essential element of physical examination. This is what we today call clinicopathological correlation. Why have we used the term *invent* rather than *discover*? We have done so to emphasize that when Laënnec brought the various organ manifestations of tuberculosis together under one rubric, he did not merely uncover a truth that had been lying there all along, like finding a new species of violet in the forest; rather, he made a major conceptual leap forward. It might have been possible to organize the reality that turned out to be tuberculosis in another way entirely. For example, the various presentations that we call tuberculosis, or the other afflictions presently known to be infectious, could have been viewed as diseases of malnutrition or social status, and in such a conception diseases would have included manifestations of the social being as

well as the body. Such disease constructions, while pointing to one set of causes, might have precluded the discovery of the mycobacterium. In fact, along with the concept of disease that developed in those years of ferment in Paris came the belief that for each disease there was a specific etiology. The revolution that started in the early 1800s with the concept of disease, coupled with the belief in specific etiology, opened the way for science to be brought to bear on the problems of medicine with the resultant spectacular success of which we are the beneficiaries.

Thus, in a brief period, disease classification, diagnostic methodologies, and the search for specific etiologies entered into medicine, turning it on its head. Stanley Reiser details these developments in his book, *Medicine and the Reign of Technology* (1978). Taken together, Faber's *Nosology* and Reiser's book provide an excellent means for understanding the recent past of medical history and provide a basis for predicting what the next major trends will be.

During the nineteenth and early twentieth centuries the challenge was diagnosis. Treatment was decidedly secondary. Dr. Laín Entralgo, in his book *Doctor and Patient* (1969), tells a story of the great clinician Skoda making rounds. Skoda held forth at the bedside of a patient, displaying his usual diagnostic brilliance. When one of the assistants asked him what should be done for the patient, Skoda brushed the question aside as of no importance! He, like other great physicians of those decades, felt that science had been the salvation of the profession. A new discipline (for Skoda, anatomical pathology was the base of medical knowledge) had entered medicine that saved it from the sloppy, unfounded, and uncontrolled therapeutics of purges, poultices, and phlebotomy. That was what treatment was, and that is why treatment was of no interest. Thus, science added an equally valid cognitive discipline to the moral discipline of responsibility to the patient and to the profession that had been handed down through millenia. Medicine, like the remainder of humankind, had entered the era of science and technology.

During the last forty or fifty years medicine has again been turned inside out by the rapidly expanding innovation with which we are all familiar. The fact that change is still going on hardly requires comment except to point out that one of the most recent major advances is the large-scale controlled therapeutic trial, the widespread acceptance of which is little more than a decade old.

CURRENT PROBLEMS

The effectiveness that blesses our hands would not have been possible were it not for disease classification introduced in the early nineteenth century. But a circularity is built into the system that prevents us

from seeing its inadequacies. The disease classification is based on pathology—alterations in structure. Even though disease definitions that are primarily biochemical or physiological have recently become acceptable, the basic thinking is still oriented around the structural alterations of disease. Consequently, the therapeutic effectiveness of which we are justly proud is also oriented toward diseases. It should be no surprise that our care of the sick is out of balance. If some aspect of an illness is not included in the definition of the associated disease, treatment will not usually be directed at that feature of the illness. The concentration on disease and technology has contributed to a lack of understanding of the more personal and human aspects of sickness. Growing awareness of that lack and widespread desire to find a remedy are part of the reason behind the Conference on Changing Values in Medicine and this volume. However, the search for a more balanced medicine is by no means new. There is a certain irony in the fact that Rudolf Virchow, who provided the strongest evidence for the structural basis of disease, and in so doing helped bury humanism in medicine for a hundred years, was himself a committed humanist. In 1848 he wrote, "Our task is an educational one, we must train men capable of fighting the battles of humanism" (*Medicinische Reform 1848*, p. 274). In this century, the deficiencies of an orientation to disease alone have become increasingly obvious. The March 19, 1927, issue of the *Journal of the American Medical Association* carried the now famous paper by Francis Peabody, "The Care of the Patient," which states the problem posed by concentrating on disease as clearly as it has ever been written.

Over the past two generations, certainly since the 1950s, medical educators have attempted to shift the orientation of medical education and medical practice away from an almost exclusive concern with disease and technology and toward a greater concentration on patients themselves. The phrase "treat the patient as a person" has been around for so long that it has become a cliché. Note that although the phrase "a coin lesion of the lung is carcinoma until proven otherwise" has also been around for a long time, we do not call it a cliché, but rather a dictum. The difference between the two statements is that the one about the coin lesion not only provides a direction for action, but it rests on a substantial base of knowledge and recorded experience. In addition, the language of description for the lung and its lesion is by now held in common by physicians over the entire world. By contrast, "treat the patient as a person" is an imperative that rests on the common humanity of physicians and patients; it is largely unspoken, uses no universally agreed upon "professional" language, and provides no unambiguous basis for action. (Indeed, the phrase itself is somewhat ambivalent since it literally means that a patient

should be treated as if a patient were a person; as in "when treating women with cancer of the breast, one should remember that they are also persons.")

It is not surprising, therefore, that these attempts to reorient the direction of the profession have not been very successful. In fact, there are even some who feel that the problem has actually worsened. These commentators point out that in recent decades medicine seems to have become increasingly technological and scientistic, and consequently more impersonal. According to that view, we take into our medical schools the most compassionate, concerned, and bright young people and turn them into "autotechnicons." While that may be a somewhat harsh viewpoint, it is certainly true that it is difficult to compete in the students' list of priorities with biochemistry or learning to do technical procedures or to read CAT scans.

During the same period that our disquiet with medicine has been growing, the world around has been in upheaval. The last two decades have seen our culture's view of science change from the source of salvation to the source of difficulties. Skepticism has replaced the former sense of trust. Paradoxically, a distinct antitechnological drift co-exists with a continued love of new products and the increased distrust of physicians noted earlier. It is startling these days to find that patients who have been seriously ill with infections often attribute their postillness fatigue to the antibiotics that cured them, instead of the illness. The drug has become the enemy, not the disease. While that may be a natural attribute of an extraordinarily healthy society, it is also an indicator of the cultural milieu.

There have also been marked changes in the traditional attitudes of Americans to their government and to authority in general (including physicians), and even in the concept of the individual, so vital to American political history. The word *individual* (the Constitution of the United States speaks of persons in the same sense), which once meant primarily someone who is equal before the law, has increasingly come to mean someone who is his or her own person—"me, myself, and I." Sameness is no longer the salient characteristic; instead, differences are the crucial feature of the concept of the individual. This is not the place to explore the profound conflicts that are introduced into American political life as a result of the change in the cultural meaning of the word *individual*. It is apposite, however, that this volume addresses an exactly parallel problem in medicine and in medical science. The social medicine movement of the 1930s addressed itself to the problem of providing all sick persons with equal care regardless of race, ethnicity, or socioeconomic status, and those are still important concerns. But now, in addition, the patient is seen

to be unique and it is because of its contribution to that sick person's illness and treatment, and its relevance to that person's life, that the idiosyncratic mix of features that we know as *person* has come to demand attention. This is clumsy to write because there is no synonym for *person*; the meaning resides in the word, and the meaning has changed in the last twenty years. All those intertwined changes—technological, cultural, and political—have created the setting in which the Conference on Changing Values in Medicine took place.

FOCUS OF THE CONFERENCE

Although this conference is certainly not the first time these issues have been addressed, it does represent a fundamental change in approach to the problem of attending to persons in the medical setting. That approach is based on several beliefs. We do not think that doctors turn away from the personal within their patients because doctors do not care, or that students opt for technical means because they lose their concern and compassion. Both students and doctors act the way they do because their knowledge and skills, all hard-earned, are primarily disease oriented. When they do not attend to the personal aspects of illness and patient care, it is simply because they do not know how. They do not have the knowledge or the skills because they were not taught. In fact, beyond providing role models and the moral imperative to treat the person, faculties of medicine do not know how to teach the special skills required by the change of medicine's focus toward the sick person.

The conference and this volume are more than a restatement of the need for a medicine concerned primarily with the sick person, and they go beyond simply another cry for more humanism in medicine. Rather, these papers are based on the belief that gaps in knowledge and understanding (technical problems in one sense of that word), and not a lack of humane impulse, are what stand in the way of progress. Further, the papers reflect the conviction that these difficulties will give way before the sustained application of intellect and concern, just as have the afflictions of the sick in previous times. That our knowledge is inadequate, that the path is obscure, merely joins us to all of the history of medicine. To redress these deficiencies, to acquire the necessary knowledge and skills, individuals must make this intellectual area their primary academic concern. And for that to happen, new sources of support must be made available and medical schools must honor the endeavor. With appropriate effort we believe that these changes can and will take place. It is our hope that this volume will point to some of the many areas of research that are necessary.

PATHS TO THE FUTURE

Even if we could agree about the problems of today's medicine, we would still be a long way from being able to propose solutions. Lack of agreement about the main difficulties in modern medicine has not stemmed the tide of proposed solutions. Holistic medicine is an example of a prescription for better medical practice that has taken hold as a small social movement. The proponents of holistic medicine, however, like most critics of current medical practice, are much clearer about what they do not want medical practice to be than about what physicians should do in the future.

What are the major barriers to understanding the future of medicine in a time of change? Of the many issues identified by the authors in this volume, we believe that three stand out. First, there is the change in the status of the individual noted above. This expresses itself in medicine as a tension between two different ways of viewing the patient. In one, roles and relationships assume primary importance: the patient is regarded as someone who relates to others, the disease, the environment, the physicians, and who cannot be seen or treated apart from those relationships. In the more recent view, the patient is considered primarily as an autonomous possessor of immutable rights that override every other consideration.

The second barrier to understanding the future of medicine arises from the science that has been fundamental to the development of modern medicine. In science the objective is to understand the individual occurrence by means of a general law. But in medical practice, knowledge of what is generally the case does not tell the physician how to treat this particular patient. The problem of how to proceed from the prototypic case to the individual instance remains to be solved in a systematic manner.

The third, and perhaps most important, source of difficulty is that many of medicine's basic concepts are assumed to be so widely shared and understood that definition and analysis are unnecessary. The strength of Otto Guttentag's essay—indeed, of his life's work—is his realization that we stumble not because of failures to understand the complex, but because we fail to stop and analyze the obvious and the simple. Professor Guttentag forces us to attend to the rarely articulated but fundamental question, "Who and what is medicine all about?"

Speaking from the perspective of the attending physician—the patient's doctor—Guttentag reexamines the most basic issues of all of medicine: what is a patient, what is care, what is sickness. Step by step, he looks at every concept in the central medical equation. His paper is a distillation of the work of decades: each of its major themes—the central role of the attending physician, the physician-

patient encounter, and the single disease concept or clinical entity—has been the subject of previous papers. His complex essay can most profitably be approached through the references provided at the end of his paper.

The rapid and profound transformation of medicine by scientific and technological advances over the past fifty or so years seems to have changed the role of the physician, to have made romantic but obsolete the notion of a single doctor taking care of a single patient. In assessing these developments, Walsh McDermott contends that far from diminishing the centrality of the patient's own physician, the new technology has actually thrust the doctor into an even more pivotal role. Because the use of technology begins at the bedside, a return to the centrality of the attending physician is no more romantic idyll, but is increasingly essential in order to control the use and cost of technology. Hence McDermott calls for the development of a more "discriminating medicine," with the personal physician as the key to its success.

Pedro Laín Entralgo, writing about the meaning of the word *good* in *good patient*, and James Childress in his commentary, bring us directly to the center of another of the issues critical to understanding the future of medicine. For Professor Laín Entralgo the good patient is not only a person altered by sickness, but someone who has religious, moral, and social duties which are a necessary part of the equally necessary will to get well. These duties, and the obligation to try to get well, entail certain attitudes towards the physician, the patient's own self, and the surrounding society. In the totality of these duties, obligations, and attitudes, one finds the good patient. Written with Laín Entralgo's characteristic richness and penetrating insight into patients, doctors, and medicine, his essay places more emphasis on the duties of the patient than on his or her rights. This picture is not changed by his closing insistence that to be a good patient requires a good physician.

James Childress counters these views with arguments that—although seldom so well expressed—are becoming increasingly familiar to American physicians. Professor Childress takes Laín Entralgo to task for overemphasizing the patient's duties as a patient and undervaluing the individual's rights and freedoms that, he believes, are in no way diminished by the fact of patienthood. Childress vigorously argues the position sometimes called "radical autonomy": nothing must diminish patients' rights to make autonomous choices. To speak about the will to be cured represents a kind of moral paternalism in which the value of health is seen to have priority over other goals, such as freedom. Even the use of the term *good patient*, he suggests, introduces an unnecessarily moral tone to the argument, and he offers

as a substitute *responsible patient*. Although more articulate than most, Childress's plea has found many voices of late, even among physicians. This argument also has adherents in nursing.

This issue resonates in the other papers in the volume. In the discussions by Mark Siegler, Eric Cassell, and Otto Guttentag, as in the conversations of virtually all physicians, no matter what their stated position on patient autonomy, some necessary relationship between patient and doctor is presumed. Even Edmund Pellegrino, who is a forceful advocate of patient autonomy, points out that both the illness and the relationship with the physician alter the almost absolute primacy of autonomy that seems to be pictured by Childress. Pellegrino, however, resists Alasdair MacIntyre's characterization of the problem. With his usual elegant clarity, MacIntyre goes to the heart of the matter and contends that the person pictured in the radical autonomy view is, simply stated, a myth. No person exists apart from all of his or her roles or the social setting and matrix in which they are found. Autonomy, for MacIntyre, "is not ... a property of every rational agent. It is an achievement and a social achievement, as is rationality itself" (p. 95). It follows that the actions of physicians and the image of medicine they value and project will have a profound effect on the patient's ability to achieve and maintain autonomy. Does the depersonalizing bureaucracy of doctoring, organized in the name of efficiency or cost control, further enmesh patients or set them free? Will doctors be owners of the power of magic or sharers of knowledge? Is the patient an object of scientific attention or a sick person to be cared for? Alasdair MacIntyre explores all these questions and their implications in rewarding detail.

MacIntyre's paper, and indeed many of the other papers, makes it clear that certain kinds of knowledge and information which seem essential to medical practice are far from the scientific generalizations about the body and disease usually considered medical knowledge. Mark Siegler convincingly argues that clinical medicine, in contrast to research medicine, cannot be understood solely in terms of its body of scientific knowledge. He makes his point by showing that the nature and limits of clinical medicine are defined by what is essentially a personal encounter between doctor and patient. The evolution of the encounter is traced from its beginnings in the patient's decision that something is a "medical" problem to a developed relationship between doctor and patient. Dr. Siegler divides the encounter, for the purposes of analysis, into four clinical moments: the person in the prepatient phase, the initial encounter with the physician, the achievement of a negotiated accommodation between the two, and finally, the development of the doctor-patient relationship. The suggestion is advanced that the aggregation of many negotiations at the individual

doctor-patient level might reveal the socially and politically acceptable norms and limits of clinical medicine. Siegler shows how political, economic, and social forces, apart from the biology of disease, determine what issues will be considered medical, but also how much latitude there is for individual negotiations between doctor and patient. MacIntyre's essay is also apposite here: he shows how the so-called nonmedical actions and attitudes of physicians bear on the care of patients. Thus, the knowledge of how those actions and attitudes work their effects, and how they can be manipulated to best advantage in the care of the sick, is legitimate medical knowledge in clinical medicine.

While it may seem odd to some to consider information about the bureaucratic setting of medical care, for example, as specifically medical knowledge, it is Kenneth Schaffner, in his commentary on Siegler, who brings us to the truly central problem with current medical knowledge. Much of the history of medical science (in common with Western thought since the Greeks) has been preoccupied with the search for universal truths. That pursuit has been, as we are all aware, spectacularly rewarding. Schaffner points out that, particularly in the domain of sick persons, there are two features of central importance with which science can deal only inadequately: individual differences and differing levels of organization (subcellular, cellular, organ, organism, roles, social system and so forth). This defect of science is crucial because no understanding of the illness of a particular patient can be achieved without reference to levels as far apart as enzyme systems and interpersonal relationships. Further, and most important as Professor Schaffner makes clear, individual differences exist and produce effects at each level. Here, stated in another manner and based on evidence from the laboratory, is one of the difficulties that faces all who try to define the good physician. Judgment is the property of applying knowledge of the universal rule to the individual instance. *Individuum est ineffabile*, the individual is unknowable. Is that an unalterable truth, or might we not try to get a little closer to a way of knowing about individuals? The problems exposed by Professor Schaffner seem stubborn, but because they are barriers to medical progress, they invite attack.

Eric Cassell suggests that at least one obstacle to knowledge about the individual patient is the physician's apparent distaste for subjective information. Further, he is concerned that medical education, and consequently medical practice, has drifted away from direct relevance to the larger dimensions of its job because "the subjective aspects of illness—what patients say, desire, think, fear, feel, and care about, and how and why they behave the way they do toward disease, doctors, symptoms, their bodies, themselves, and others—seem to be an

impediment to staying at the bedside and to understanding sickness" (p. 151). After peeling away layers of this loaded issue, Cassell comes to personal meanings (the significance and importance of things to an individual, the beliefs and values attached to them) as the sense of the subjective that is at once both vital and troubling to medicine. Cassell attempts to show how personal meanings are important both diagnostically and therapeutically. After discussing aspects of the physician's subjectivity, he suggests that the personal meanings of patients can be known in all their individuality only through attentive understanding of the patient's conversation—a kind of listening very different from that in ordinary conversation and for which special training should be provided.

In commenting on Cassell, Ernan McMullin clarifies the distinctions between objective and subjective knowledge. In so doing he suggests that many of the difficulties physicians have in this area are a professional prejudice coming from the vain attempt to model medical science after physics or mathematics. Professor McMullin also questions whether there can be the systematic knowledge of the particular or individual case. He is doubtful of the possibility but suggests that the issue of a means to a reliable knowledge of the particular, like other problems raised by clinical medicine, will certainly draw increasing attention from philosophers.

The previous discussions have indicated that physicians' abilities to know about their patients and to have a more comprehensive understanding of human sickness are restricted by narrow views of what constitutes medical knowledge, as well as archaic prejudices in regard to subjective or objective ways of knowing. Stephen Toulmin, in his essay on causation, and H. Tristram Engelhardt, Jr.'s comment on Toulmin highlight another of the conceptual straitjackets that inhibit greater concern with the sick person and maintain the exclusive focus on the disease. They show that what now holds us back was previously—and not too long ago—a liberating concept. At the same time that modern disease concepts were introduced early in the nineteenth century, the concept of specific etiology was also developed. While our success with infectious diseases would seem to uphold the idea of specific etiology, Professor Toulmin shows that questions of medical causation "do not raise intellectual questions about scientific explanation as much as they do practical questions about the attribution of responsibility" (p. 65). In other words, decisions about where to intervene in the chain of events leading to sickness will follow from ideas of causation. But he further points out that from a philosophical perspective psychological, social, and political factors have no less right to attention as causes of ill health than do somatic factors. Rather, habits of thought and action, not the logic of

effectiveness, maintain the concentration on physiology and biochemistry. These conclusions are reinforced by Engelhardt's review of the history of these issues, and his belief that by choosing where to place its accents of concern medicine creates a picture of disease that directs therapy and research. Medical accounts of causation are, thus, not value-free pictures of the world, but road maps which suggest approaches most likely to be successful for the purposes of health care.

Ideas presented by the authors in this volume suggest some of the problems that must be solved if medicine is to successfully redirect it energies towards the sick person and away from an exclusive concern with disease. It is not uncommon to end the introduction to a volume like this by suggesting that further research is necessary. It must be pointed out, however, that the kind of research that these questions require finds most physicians poorly prepared. The tools of laboratory investigation or even clinical or epidemiological study will not do. Even the habitual modes of thought of physicians will not suffice, and their prejudice against "soft" research (ultimately, something done merely with the brain) is an outright liability.

Philosophers are perhaps no better off after generations devoted largely to theoretical questions. John Ladd explores the history of the bristly relationship between medicine and philosophy in order to highlight current trends. There is no longer any doubt that there is a field of philosophy devoted to medicine and that there is a place for philosophy in medicine. It seems equally evident that Otto Guttentag no longer labors alone, as increasing numbers of physicians begin to tackle theoretical questions in clinical medicine. Professor Ladd demonstrates effectively that the contribution of philosophy to medicine (and vice versa) is by no means limited to medical ethics. Before long, one might surmise by reading his essay, the field of medical ethics which helped to create this new marriage will be but one child of the relationship. But the relationship will be strained and the reorientation of medical care primarily toward sick persons will be difficult as long as premedical and medical education remain as they are today.

Max Black's essay is a prescription for change that speaks eloquently of what can be taught to students to prepare them for a career in medicine devoted to the service of the sick. What he suggests in the way of training in communication, in teaching students methods of thought and inquiry, in grounding students in the principles of ethics and in other areas of the humanities, would seem a necessary part of premedical or medical curricula. Stanley Reiser's commentary makes the point that simply adding humanities to the curriculum of medical students, either in college or in medical school, is not sufficient; in

addition, teachers must continually be able to show why technological answers alone are inadequate to provide for the care of the sick and what dilemmas will be raised by any change in the direction of medical care.

In 1896, Andrew Dickson White, who had helped Ezra Cornell found Cornell University, published a book entitled *A History of the Warfare of Science with Theology in Christendom*. In two volumes he detailed the trials overcome by science in its rise to eminence in human thought. Science and technology have enriched medicine beyond anyone's wildest expectation. But the legacy of that warfare also remains, and it has kept physicians only partially trained and patients only partially served. It is our hope that this book, by opening up questions and suggesting exciting areas for research and study, as well as showing the eminent practicality of the collaboration of medicine and philosophy, will help to restore balance to medicine and redirect physicians to their age-old calling of healing the sick.

Bibliography

Faber, K. 1923. *Nosography*. New York: Paul Hoeber.

Laín Entralgo, P. 1969. *Doctor and Patient*. New York: McGraw-Hill.

Peabody, F. 1927. "The Care of the Patient." *Journal of the American Medical Association* 88, no. 12:8 7-82.

Reiser, S. 1978. *Medicine and the Reign of Technology*. New York: Cambridge University Press.

Virchow, R. 1848. *Medizinische Reform*.

White, A.D. 1960 [1896]. *A History of the Warfare of Science with Theology in Christendom*. Mineola, NY: Dover Publications.