

## Illness and Disease

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The peculiar distinction between mind and body that was created by Cartesian dualism has proven to be a major obstacle to integrating the psychosocial and biophysical aspects of medical practice.<sup>15</sup> *Psyche* and *soma*, no matter how carefully they have been defined, have always been shown eventually to be somehow irreconcilable. The idea of mind and body as materially separable and independent entities, as convenient and attractive as it may be, simply does not fit with the realities of clinical experience. The reason for this may be that, traditional usage to the contrary, the terms themselves are not denotative of any tangible reality.<sup>13</sup> They are, in fact, artifices constructed by man to explain the fundamental differences between his internal and external experience. It is little wonder that theories of Psychosomatic Medicine that have been based too literally on such elusive concepts have proven so difficult to substantiate.<sup>6,9,11</sup> It thus may be profitable, for the time being at least, to set such customary considerations aside in order to explore alternative ways of integrating the mental and the physical aspects of ill-health. One simple model for doing this, as will be outlined here, involves clearly differentiating between the terms *illness* and *disease* so that each refers to an entity that is capable of existing independently of the other.

The terms *illness* and *disease* lack precision. Even though they are at times used almost interchangeably, there is a core distinction between them and it is this particular usage that will be emphasized here. *Illness* tends to be used to refer to what is wrong with the patient, *disease* to what is wrong with his body. *Illness* is what the patient suffers from, what troubles him, what he complains of, and what prompts him to seek medical attention. *Illness* refers to the patient's *experience* of ill-health. It comprises his impaired sense of well being, his perception that something is wrong with his body, and his various symptoms of pain, distress, and disablement. *Disease*, on the other hand, refers to various structural disorders of the individual's tissues and organs that give rise to the signs of ill-health. These are, for the most part, not accessible to the patient and not experienced by him. *Disease* may thus exist for considerable periods of time without the patient knowing. *Illness*, in contrast, exists

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only by virtue of the patient's awareness of it. Unlike disease, it is never present in the autopsy room.

Illness is thus a subjective and essentially private event which affects the patient as a whole and which is not directly amenable to verification. Disease, on the other hand, affects the more material aspects of the patient's being and, especially through the use of modern diagnostic procedures, is potentially an objective and public event capable of consensual validation. In contrast to illness, disease lends itself readily to procedures of scientific inquiry, including measurement and classification. The great scientific revolution that has so transformed medicine during the last century has, for these reasons, concerned itself almost exclusively with disease rather than with illness. The advances that have been made in our understanding of the disease process have not been paralleled by similar advancement in our understanding of the causation and cure of illness.

The various distinctions between illness and disease as they are here defined are summarized in Table 1. Many of these simply express differences between the physician's and the patient's perspective of ill-health. From the physician's point of view, disease is a tangible and real entity, evidence of which is directly accessible to him, whereas illness, being something that he cannot perceive directly, is viewed as discomfortingly vague and insubstantial. From the patient's point of view, just the opposite prevails. It is his illness that he perceives as being real; disease, to him, is a much more abstract entity whose existence can, for the most part, be detected only by the physician. Thus, in the ascertainment and overall investigation of ill-health, doctor and patient have complementary roles. Their relationship is central to the investigation, and in order to collaborate optimally, *mutual* trust is essential. Each has information to contribute, and unless each does his best to insure the veracity of the information supplied by him and acts in good faith upon what the other tells him, little in the way of a truly therapeutic relationship will emerge.

Only with the development of modern, scientific medicine has the technology for detecting disease separate from illness emerged. In west-

**Table 1.** *Distinctions between Illness and Disease*

ILLNESS	DISEASE
Experienced by patient	Apprehended by physician
Symptoms	Signs
Subjective	Objective
Unique	Replicable
Not directly verifiable	Consensual validation
Affects whole person	Affects discrete parts
Feeling unwell	Being unwell
Quality of life	Quantity of life
Compassionate care	Dispassionate care
Cause of suffering	Cause of death

ern countries prior to this time, and currently still in many less literate cultures, illness and disease are merged indistinguishably both in medical lore and in practice. Such prescientific systems, while obviously less effective in the treatment of disease, have often developed elaborate and remarkably effective methods for dealing with what has here been called illness. Possibly, as will be suggested later, some aspects of these "primitive" systems might well be incorporated into our own methods of caring for the ill.

It is particularly important that the physician realize that his own disease orientation is not always shared by the patient. The patient's primary concern is his illness. As self evident as this may seem, failure to appreciate it fully can easily lead to a great deal of unnecessary friction and misunderstanding. When the patient feels ill and takes himself to the physician, it is his *illness* that he wants the doctor to fix. In some curious way, however, when the patient consults the physician, the latter listens to his story and questions, examines and investigates him primarily for evidence of disease. This is where his expertise lies and what his medical education has almost exclusively been concerned with. If some evidence of disease is found, it is toward this that the physician's therapeutic efforts are directed. If no evidence of disease is detected, the patient is often told that there is nothing wrong with him, despite the fact that the illness may persist. No matter how heroic his efforts or well meaning his intentions, the physician will do well to remember that the patient's satisfaction with the services he has received and his evaluation of the competence of the medical personnel involved ultimately depend on how effective they have been in alleviating the illness, for which he originally sought care.<sup>7</sup>

Despite the enormous progress that has been made in medical science during recent years, there is a growing and somewhat paradoxical dissatisfaction in many sectors of the community with the quality of the medical care that is being rendered. Remarkable as they have been, advances in the understanding and treatment of disease have not always been accompanied by commensurate increases in the nation's health and well-being. It may be that there are inherent limitations to the amount of progress that can be achieved through science and technology alone, especially in regards to the *quality* of human life.<sup>12,14</sup> Much of the scientific enterprise has been built on implicit, basic assumptions that have themselves never been subject to scientific scrutiny. Modern "scientific" medicine, for instance, is based largely on a paradigm whose validity has been taken for granted over the years without question or examination. Simply stated, it is as follows: "Illness is the result of disease and is best dealt with by treating the underlying disease." That this model represents at least a reasonable approximation to reality is not being questioned. The overall effectiveness of the therapeutic systems that are based upon it is eloquent testimony to its general goodness of fit. Explaining illness simply in terms of disease, however, unless there is an absolute and direct causal relationship between the two, imposes a reductionistic constraint on the model which limits its universality. Disease, of course, is neither necessary nor sufficient to explain illness.

Illness and disease, at least as here defined, can exist quite independently of each other and frequently do. It is in such instances, of course, that the disease-oriented paradigm most often fails to provide an effective model for intervention.

That disease can be present without producing illness is only too clearly documented by the large number of adventitious findings at autopsy. Some disorders, of course, such as hypertension, the early stages of cancer, and latent syphilis, are fairly uniformly "silent." Many other disease processes, including even entities such as myocardial infarction, can occur at times with little or no overt symptomatology. Because they do not feel ill, persons with such occult, subclinical, or asymptomatic disorders do not seek medical care and remain untreated unless detected by routine screening procedures. Even then, because they are not suffering, many such individuals lack sufficient motivation to comply with the necessities of treatment. Asymptomatic disease, because it contributes so heavily to the public morbidity, is a major concern of community and preventive health care programs.

How two individuals with ostensibly the same amount of disease can have different amounts of illness is still not clear. Some degree of variability is undoubtedly caused by minor differences in pathophysiology that would otherwise be inconsequential except for their chance proximity to afferent nervous pathways. But awareness of distressing symptoms, especially in the case of pain, has been shown to be related to a number of psychological, social, and cultural variables.<sup>17</sup> In terms of Signal Detection theory, for instance, individuals seem to differ widely in their sensitivity to information about their visceral functions, in both health and disease. Extremes of stoicism and denial, while serving to minimize the distress caused by trivial disorders, often contribute tragically to delay and noncompliance.<sup>3</sup> Over-sensitivity to such stimuli, on the other hand, burdens the system so much that it can not accurately discriminate between serious and non-serious dysfunctions.

The experienced physician, of course, encounters a great many patients whose symptoms are not explainable in terms of disease. If the complaints are relatively minor or transient, they usually present little problem and can be conveniently diagnosed as being due to a "virus" or some other physical cause that is not easy to confirm. Illness that occurs independently of disease presents a major problem to the physician only when it is relatively severe or when it continues to persist in spite of symptomatic treatment. The physician's dilemma in such cases is twofold. First, no matter how many tests and investigations the patient has been subjected to, it can be extremely difficult to be certain at times that there is no disease present. Often the problem is compounded by the fact that, on a statistical basis alone, occasional positive (and false-positive) test results will surface during the course of a complex investigation, thereby encouraging the physician to proceed even further. The second difficulty with these patients is that, especially for the more "scientific" physician, the more sure he is of the diagnosis, the less sure he is of what to do with the patient. Often the patient is reacted to as if he had committed some type of medical fraud and, despite the fact that his

symptoms persist, is told that he is not *really* ill and is dismissed from care. The treatment of illness *per se* is simply not recognized by such physicians as a legitimate part of their practice. They do, however, mostly without realizing it, treat many such ailments. The fact that no disease is present does not prevent them from using the disease model. In some instances, pseudo-diagnoses of an endocrine or metabolic disorder, such as hypoglycemia, hypothyroidism, or vitamin B<sub>12</sub> deficiency, are created to serve as a basis of therapy.<sup>16</sup> In other patients, especially when pain is the predominant symptom, the true state of affairs often goes undetected for long periods, during which time they may receive a wide assortment of medical and surgical treatments without lasting success. Functional illnesses that are associated with psychophysiological disturbances, even when they are correctly diagnosed, are treated as if they were merely disease-equivalents that required purely physical treatment.

Illness that does not result from disease is simply not as respectable in our society as is illness that does. While the reasoning behind this dichotomy is not entirely clear, much of it undoubtedly relates to the notion that the former, possibly because of its resemblance to malingering, is somehow of the individual's own making, while the latter is due to circumstances beyond the individual's control. The distinction, however, is simply not valid. It is becoming increasingly evident that in terms of lifestyle and self-indulgence, many individuals contribute significantly, through their own behavior, to the diseases that eventually befall them. True malingering, on the other hand, is relatively rare and the vast majority of individuals who are variously labeled as "turkeys" and "crocks," simply because their illnesses are not associated with significant amounts of disease, are largely innocent victims of long-standing and chronic conditions dating back to deficiencies in their early life. Because these prejudices cause both the doctor and the patient to opt for disease-oriented explanations whenever there is room for doubt, it is difficult to fully appreciate the true extent of physical illness that is neither caused by disease nor associated directly with physiologic dysfunction.

The perception of illness is, of course, a private affair that is based upon the individual's experience of his own physical well-being and upon the meaning he gives to this. As such, it is subject to exactly the same types of psychological and sociocultural influences that shape and distort other forms of human experience.<sup>8</sup> It should be no wonder then that a wide array of factors have been shown to cause, aggravate, and maintain illness, independent of their effect on disease. These factors can, at times, be sufficient to cause illnesses in their own right, as in the various functional disorders and somatic presentations of anxiety and depression, as well as in hypochondriasis, neurasthenia, conversion hysteria, and psychosis with somatic delusions. They can also be responsible, through much the same mechanisms, for producing states in which the degree of illness far exceeds the degree of disease or outlives it in such a way that a return to health is not achieved even after the disease process has been resolved.<sup>4</sup> In all these cases, it is well to remember that pain,

fatigue, insomnia, anorexia, and the other common symptoms of physical disorder are entirely nonspecific and are produced with almost equal frequency by psychological disturbances. Mental illness itself represents a major category of illness that is, for the most part, not the result of disease. In terms of etiology, it has many similarities with the functional illnesses discussed above. The major difference is that in the latter the symptoms are expressed chiefly in terms of somatic dysfunction.

As shown in Figure 1, illness can be viewed as the final outcome of a series of complex interactions between biologic, psychologic, and social factors, not all of which are directly mediated by the disease process. In this model, psychosocial dysfunctions can produce illness directly as well as contribute indirectly through their effect on the biologic sub-system. Illness is thus seen as an entity in its own right, related to disease but not entirely determined by it. For a variety of reasons, however, illness as such has received much less formal scrutiny than has disease. The mechanisms that produce it are thus much less well systematized and understood. While a number of separate contributory factors have been identified, these have not, as yet, been woven into a single comprehensive fabric.<sup>1</sup> On the psychological level, for example, illness can develop either as a symbolic means for resolving unconscious conflict, as in some cases of conversion hysteria, or more simply as a means of obtaining gratification for unacknowledged personal needs. For some individuals, the psychological advantages of being ill and taken care of simply outweigh the disadvantages. The masochist's unconscious need to suffer clearly makes illness attractive to him. In addition, in many individuals, illness can serve more obvious purposes, such as helping them to avoid difficult situations, to receive financial compensation for injury, or to be absolved of responsibility for their actions. In other patients, when overwhelmed by an inability to cope with life's stresses, illness can be seen as a safe and respectable refuge. Over a lifetime, learning obviously plays a role in determining such illnesses. The extent to which illness has provided gratification or has proven rewarding in the past helps to determine its occurrence in the future. Predilection for the sick role can get shaped into an individual over the years by these means. Similarly, as has been recently shown, dysfunction of the autonomic nervous system

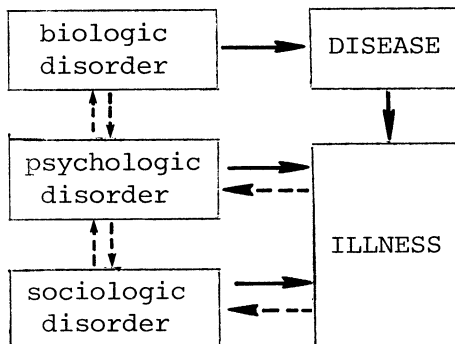


Figure 1. Model for the production of illness

can also be learned if systematically reinforced over time. Family and cultural attitudes toward health and disease also become inculcated into the way the individual views himself and responds to disability. The mechanisms by which all of these complex factors interact with each other and with other variables to determine illness, however, are obviously in need of further elucidation.<sup>10</sup>

The two great traditions of medicine are the relief of suffering and the prolongation of life. In its preoccupation with disease, however, modern medicine has inadvertently tended to treat the patient more as a machine than as a person. Much of the dissatisfaction expressed by patients about current medical care, and even possibly many of the lawsuits, stems from this unfortunate tendency. The patient is as concerned with the quality of his life as he is with its quantity. Feeling well (i.e., being free of illness) is as important to him as being well (i.e., being free of disease). The physician who comes to believe that the treatment of disease is an end in itself, unless he has a highly specialized referral practice, will find the care that he renders less appreciated and less effective than that rendered by his more compassionate colleagues. Obviously, illness and disease both need to be treated.

Ancient medical practice was devoted primarily to the treatment of illness. This was, of course, the only aspect of ill health for which there really was a remedy.

Medical practices that have healed the sick through the ages, while they may not have been able to cure disease, were clearly capable of relieving illness. The modern physician, rightfully impressed with the vastness of his technological accomplishments, tends to forget how effective some of these less sophisticated techniques were. Even today, the success and popularity of primitive shamans and witch doctors, and of faith healers and cultists in our own culture, serve to demonstrate further how powerful these forces are. Their danger lies in the fact that they can be so effective that they can relieve illness even when disease is present. This is, of course, most evident when they fall into the hands of unscrupulous practitioners who use them for their own gain rather than as a means of helping others. It would be an immense tragedy if modern medicine were, by default, to let such quacks and charlatans become the sole heirs to these powers of healing. When the rituals and "magic" practices that form the basis of these healing powers are studied and understood, it becomes evident that their efficacy derives primarily from the special relationship that is formed between healer and sufferer.<sup>2,5</sup> Thus, between doctor and patient, the curative effects of empathy and compassion, of ritual and suggestion, and of positive beliefs that are shared by both, are all potentially amenable to study, much as are other therapeutic agents. Helping to make people feel well, both when they are suffering from disease and when they are not, must again be viewed as a legitimate part of medical practice. Illness, at least as here defined, needs to be understood and treated in its own right and not merely as an extension of disease.

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