SPECIAL ARTICLE

BEYOND DIAGNOSIS

An Approach to the Integration of Behavioral Science and Clinical Medicine

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Abstract Failure to integrate behavioral science with clinical medicine is due to a lack of a schema for classifying patient behavior. A useful system for classifying patient behavior at the point of contact with the physician has five categories: attendance with symptoms or problems that have reached the limit of tolerance; attendance with symptoms that provoke action not because they cause distress but because of their implications; problems of living presenting as symptoms; attendance for administrative reasons; and attendance for reasons other than illness.

To fill a similar need for a taxonomy of social factors in illness, another schema for classifying interactions between patients and their environment has seven categories: loss, conflict, change, maladjustment, stress, isolation and failure. These systems, used in parallel with traditional clinical diagnosis, should provide a useful tool for the integration of behavioral science with clinical medicine.

BEFORE we can think in a clear and precise way about any order of phenomena, we have to develop a way of organizing our observations. We do this by classifying the phenomena in ways that will enable us to see relations between them and other orders of phenomena. In clinical diagnosis, we categorize diseases and give them names. As our knowledge of medical science advances, the schemas used for classifying diseases undergo successive revisions, as described by Feinstein.[1] In the diagnostic method, therefore, medicine has developed a working tool by which new knowledge from many fields of biology can be applied to the solution of clinical problems.

Our success in applying the biologic and physical sciences to medicine is in marked contrast to our failure in applying the behavioral and social sciences. Our problem is that we do not have a ready tool, like the diagnostic method, by which to apply these sciences to the behavior of patients. Lacking any system of classification or taxonomic vocabulary, we have no way of organizing our observations and no way of communicating our thoughts to others.

The confusion is made worse by our tendency to assume that the diagnostic method, so successful for the utilization of biologic knowledge, will be equally successful for the utilization of knowledge from behavioral science. By using the same taxonomic system for clinical and behavioral phenomena, we have made it difficult for ourselves to separate the two and to study the relations between them.[2] We have no way of classifying behavior that occurs concurrently with an organic illness. Yet every patient, whatever his illness, exhibits some form of behavior. The fact that this behavior may be considered normal by the physician does not remove the need to describe and classify it. We therefore require a taxonomy of patient behavior that can be used at any doctor-patient contact in parallel with the taxonomy of disease.

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All that has been said about patient behavior can be said with equal force about the social determinants of this behavior. We do, of course, take social histories from our patients. Too often, however, these are records of isolated facts, with no attempt to relate them to the patient's illness or his behavior. Our classification of social phenomena should wherever possible explain something about the patient's behavior, just as the clinical diagnosis explains something about the patient's symptoms.

The purpose of this paper is to fill these needs by proposing two schemas – one for patient behavior, and the other for social aspects of illness – for use alongside our schemas for classifying disease.

A TAXONOMY OF PATIENT BEHAVIOR

The taxonomy of patient behavior that I offer here takes the doctor-patient contact as the reference point. In this it differs from Mechanic's[3] concept of "illness behavior," which he defines as "the ways in which symptoms may be differentially perceived, evaluated and acted, or not acted upon, by different kinds of persons." It may be objected that my concept is too narrow a frame of reference to embrace the behavior of sick people. In any system of classification it is necessary, however, to have a point of reference, just as in morbid anatomy the point of reference was the state of the tissues at the time of death. Taking the doctor-patient contact as the reference point can also be justified because the whole purpose of the taxonomy is to increase the physician's understanding of patient behavior. For any contact between doctor and patient it should be possible to place the patient's behavior in one of the following categories. The categories are intended to be mutually exclusive: a patient should only be placed in one category at any one time.

Limit of Tolerance

The patient comes because his symptoms are causing pain, discomfort or disability that have become intolerable. This large category covers many straightforward episodes of illness from an attack of influenza to a fractured femur. It traverses a wide

range of tolerance, from a tendency to deny symptoms at one extreme to very low tolerance at the other. The capacity of a symptom to cause enough distress for a physician to be consulted will depend on many variables, including the patient's social and cultural background, and on his belief that an effective remedy is available.

A subcategory of this class comprises patients who come with a problem of living rather than a symptom. Patients come to doctors with unhappiness as well as with illness. Often, unhappiness is expressed as a symptom or symptoms (as in the third category, discussed below). Sometimes, however, patients present a frank problem that they are no longer able to tolerate. It is important to differentiate problems of living from illnesses, since they require different management.

Limit of Anxiety

The patient comes, not because his symptoms are causing distress, but because of their implications. By definition, anxiety is a component of all these episodes. The patient only comes because he, or a relative, fears the consequences of his symptoms. A small hemoptysis would be an example of this category. Since they depend on a person's knowledge and beliefs about illness, episodes in this category are heavily influenced by social and cultural factors.

Physicians sometimes divide episodes of this kind into "necessary" and "unnecessary" visits. In doing so, however, the physician is assuming in the patient a knowledge of illness equivalent to his own. The physician's classification does not take into account the society in which the patients learn their attitudes to illness. A patient who has for the first time felt his own xiphisternum and comes complaining of a lump, is not displaying inappropriate anxiety. He has probably heard on many occasions that any lump should be reported to the doctor. Only if he fails to respond to reassurance and keeps attending, or if he has repeated episodes with different symptoms, can his behavior be considered inappropriate. In this case, he should be placed in the third category since his symptoms probably conceal an underlying problem of living. Of course, a patient will also frequently feel anxious about symptoms that have become intolerable. A myocardial infarct not only will drive a patient to his doctor but also may make him anxious about the future. The patient is classified according to the predominant pattern of behavior. At a later stage in the illness, when symptoms are relieved and anxiety predominates, the patient may have to be moved from the first to the second category.

Problems of Living Presenting as Symptoms (Heterothetic*)

Many episodes of illness that on the surface appear to be straightforward turn out on inquiry to have their origin in some disturbance of the patient's relation with his environment. The following are examples of this category.

*The term "heterothetic," meaning literally "putting forward other things (than appears to be the case)," has been suggested to me by Professor D.E. Gerber.

In the course of a month most people experience some symptom. Only a minority of these symptoms will be presented to physicians; the remainder will either be ignored or self-treated. It would be convenient to assume that the severity of the symptom and consultation with a physician are directly related. The evidence suggests, however, that no such clear relation exists. Whether or not a physician is consulted depends on several factors other than the severity of the symptom. Silver[4] found that patients with a low score of personal adjustment were frequent users of medical services. When studying the patients of a university clinic, Mechanic and Volkart[5] noted a positive association between reported life problems and utilization of services. They recognized that, for some illnesses, the use of medical services may be a result not only of symptoms perceived but also of life events and illness behavior. In cases like these the question "what is the diagnosis?" is often irrelevant. Instead, the physician must ask questions like "why did the patient come with this minor symptom"? Or "why does this mother keep bringing her child with minor infections"?

Relapses or new attendances for chronic disease may be due to a deterioration of the pathologic process. They may, on the other hand, be due to a problem of living that has disturbed the equilibrium that the patient has established with his environment. Poor control of an adolescent's diabetes may be due to an identity crisis. A woman may have come with her chronic backache because of the extra stress of her mother's illness. A woman may be seeking an operation for varicose veins, which she has had for 20 years, only to win back the affections of her husband.

Physicians — especially primary physicians — see many patients who present with vague distress or with symptoms for which no physical basis can be found. These cases may be given a label such as depression or hypochondriasis. Or the physician may content himself with a label that only describes symptoms, such as low-back syndrome, tension headaches, pleurodynia or dyspareunia. On further inquiry, however, the patient will often be found to have some major personal or social problem.

Failure to recover fully from an illness or operation may be due to residual disease, but often occurs because the patient has not made the necessary adjustment with his environment. This is often seen, for example, in patients who fail to recover fully from a myocardial infarct even though their cardiac function has returned to normal. This failure may be attributed to "anxiety" or "depression." These labels, however, are often a poor and inadequate description of a patient who has not been able to establish a new equilibrium with his environment: a failure that may be the cause, rather than the result, of depression.

All these various episodes, apparently so different, have two things in common: the patient presents with symptoms that conceal an underlying problem of living; and the clinical diagnosis is often of secondary importance to the definition and understanding of the patient's problem of living. In many cases, as in chronic disease or in delayed recovery,

the diagnosis is already known. In minor illness, the diagnosis may be of little relevance. In symptoms for which no physical basis can be found, there may be no diagnosis at all, unless the physician latches on to some dubious finding to make a spurious "nondiagnosis." The importance of this category is that inclusion of a patient obliges the physician to search for the underlying problem of living.

Administrative

This category covers doctor-patient contacts whose sole purpose is administrative, even though the patient is ill – e.g., the provision of a certificate for an illness that would not otherwise lead to a demand for service.

No Illness

This category includes all attendances for preventive purposes, such as antenatal or well-baby care, or for general medical assessment when no symptoms are offered.

At any contact between patient and physician it should be possible to place the patient's behavior into one of the above categories. At further contacts for the same illness, the classification will remain the same unless the behavior changes. A patient with biliary colic, for example, will be placed in the first category (limit of tolerance) for all attendances up to and including cholecystectomy. If, however, his recovery is delayed for special reasons, he would go into the third (heterothetic). If the patient has more than one diagnosis, the illness behavior for each may different.

I am well aware that the above classification is open to a number of criticisms. It will be objected that no two physicians will classify patient behavior in exactly the same way. An episode that to one physician will be heterothetic, will to another be no more than the limit of tolerance. This is a very real defect in any system of classification. Given the nature of our phenomena, however, they are unavoidable. Even in the classification of clinical phenomena, wide discrepancies are found between the diagnostic practices of different physicians. This does not deter us from attempting to classify clinical phenomena, nor should it keep us from classifying behavioral phenomena. The taxonomy can evolve through many phases as our knowledge increases.

Patient Behavior and Psychiatric Morbidity

Many of the episodes described above are embraced by the term "psychiatric disease." Whether or not the disease model is appropriate to episodes of this type is a matter of debate. Some psychiatrists and social scientists argue that the decision to label a problem as an illness is social and cultural rather than scientific – a point of view ably presented by Szasz.[6] By labeling a problem as an illness, society apparently finds it easier to take a humanitarian rather than a punitive approach to the problem. We have witnessed this process with attempted suicide, with certain forms of juvenile delinquency and, more recently, with unwanted pregnancy.

Whether or not this practice is defensible on scientific grounds need not concern us here. To me, it seems dangerous because it oversimplifies the problem in the mind of the physician. To turn a problem of living into an illness encourages us to think of it as a "thing" that has to be treated or removed, rather than as a complex breakdown of equilibrium between an organism and its environment.

Certain psychiatric syndromes are, of course, clearly related to pathologic processes in the nervous system. Others may be judged to have a physical basis that has not yet been demonstrated. For our purposes, these syndromes may be treated in the same way as other organic diseases. The vast majority of emotional disorders in general medical practice I believe to fall into the category of "problems of living" or of the anxiety that is natural to people who feel their health and well-being to be threatened. These phenomena are more appropriately classified as patient behavior than as psychiatric morbidity. The recognition that these phenomena are of a different order from those of disease enables us to classify them under a different taxonomic system. Furthermore, the juxtaposition of the two taxonomies enables us not only to separate phenomena that are different, but also to identify relations that exist between them.

A Taxonomy of Social Factors in Illness and in Patient Behavior

In proposing a classification of patient behavior I have attempted to reduce to some sort of order a wide range of human responses to illness. A patient's behavior is determined by many factors, including his genetic makeup, his early imprinting, his previous experience of illness, his current life situation and his aspirations for the future. Of all these factors, the current life situation is the most amenable to alteration by physician, nurse or social worker. My second proposal, then, is for a classification of the interactions between the individual and his environment. We already possess a taxonomic vocabulary to describe some fairly static social factors, such as race and social class. But we have no way of classifying the ways in which a changing environment acts on an individual as he goes on his journey through life.

The relation of a sick person to his environment is, of course, a complex one. Social factors may be a cause of disease or disability. Even though not causal in the disease, social factors may determine the patient's behavior. A patient's illness and disability will itself produce changes in his life situation, which may, in turn, react on the patient to affect his behavior. We are dealing here not with linear relations but with a system as defined by Von Bertalanffy[7]: "A dynamic order of parts and processes standing in mutual interaction." The following is an attempt to classify these dynamic relations between people and their human and material environments. Since a person may obviously be acted upon by several of these processes simultaneously, the categories are not intended to be mutually exclusive. These factors can be termed "primary," if they are a cause of the illness or patient behavior, and "secondary," if they are a result of the illness.

Taxonomy of Social Factors in Illness and Patient Behavior

1. Loss – (a) Personal loss – loss of a loved one through death or desertion. (b) Loss of things – imposed loss of home, cherished possession or job.

2. Conflict – (a) Interpersonal – conflict within family, with neighbors or at work, where hostility is recognized. (b) Intrapersonal – role conflict or conflicting demands on the patient (as in a working mother).

3. Change – (a) Development – where time of life is the major problem (as in adolescence, menopause or senescence). (b) Geographic – where a move to an unfamiliar environment is the major problem (as in immigration).

4. Maladjustment – (a) Interpersonal – problems between people with no overt conflict (as in failure to achieve a satisfactory sexual relation without hostility between partners). (b) Personal – failure to adjust to the environment (home or job) in the absence of the above mentioned loss, conflict or change.

5. Stress – (a) Acute – unexpected event not covered under loss, conflict or change (for example, the sudden illness of a family member or friend). (b) Chronic – long-term situation not included in loss, conflict or change (for instance, the presence of a handicapped child in the family).

6. Isolation – not due to any recent loss, change or conflict (as in an elderly widow).

7. Failure or frustrated expectations – when the patient's goals in life are not fulfilled and when there is no evidence of an intervening event covered by loss, conflict or change (e.g., failure at school or failure to achieve occupational promotion).

A few examples will serve to illustrate the use of the proposed taxonomies.

Case 1. A middle-aged farmer comes with repeated minor injuries that keep him from working for an unusually long time. It transpires that he hates farming and would like to find other work.

Classification: clinical, recurrent minor trauma; behavioral, heterothetic; social, maladjustment (occupational).

Case 2. A middle-aged widow complains of a recurrence of dizziness that is not true vertigo. She has just had to admit her mother-in-law, who lived with her, to a nursing home for permanent care. Every time she visits her she is terrified that she will ask to be taken home. She is given counsel and support and reports that she is much improved a few days later.

Classification: clinical, dizziness without organic basis; behavioral, heterothetic; social, acute stress.

Case 3. A young man with marital sex problems complains of a small spot on his scrotum. He has recently had extramarital intercourse and is worried about venereal disease.

Classification: clinical, genital furuncle; behavioral, limit of anxiety; social, maladjustment (sexual).

Case 4. A 28-year-old married woman, known to suffer from multiple sclerosis, attends with blurring of vision. The blurring has been present since her previous relapse 12 months before and has not changed. On further inquiry, it appears that her reason for coming is fear of another pregnancy because her husband refuses to accept birth control.

Classification: clinical, multiple sclerosis; behavioral, heterothetic; social, maladjustment (marital).

How can these taxonomic systems affect the way we think about illness? First of all, they can provide us with a frame of reference and a vocabulary with which to express our observations about patient behavior and the social factors in illness. Secondly, they can release us from bondage of having to classify all behavioral phenomena under the heading of diagnosis. Thirdly, they can provide a system for classifying the many patient contacts in which there is no diagnosis in the accepted sense. Fourthly, they can force us to think about the behavioral and social aspects of illness, just as the discipline of diagnosis forces us to think about the pathogenesis of disease. If physicians were expected to state the behavioral and social classification of every illness, as they are now expected to state the diagnosis, they would find it much easier to apply the behavioral sciences to their clinical practice. Apart from its effect on the way physicians think, I believe that this new approach will enable us to study the epidemiology of medical practice in a way that provides a much more accurate record of the facts. The next era in medicine may well see much of the physician's role as a diagnostician taken over by the computer. If this occurs, the capacity of physicians to identify behavioral and social factors in illness may prove to be one of their most important skills.

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