THE THEORY AND PRACTICE OF PSYCHOTHERAPY WITH SPECIFIC DISORDERS

PSYCHOTHERAPY WITH PATIENTS WITH PSYCHOSOMATIC DISORDERS

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Table of Contents

Psychotherapy with Patients with Psychosomatic Disorders

In approaching the treatment of psychosomatic disorders it is first necessary to consider what a psychosomatic disorder is. This is by no means simple. The expression "psychosomatic" does not refer to a discipline, a field of study nor a medical subspecialty, but to a point of view—a way of thinking about any process which involves the total human organism. This way of thinking is synthetic and tries to apply all available information and methods which might be useful, whether from psychodynamics, sociology, anthropology, pathology, pharmacology, genetics, physiology, immunology, medicine, surgery or related fields. In practice however, the elements for synthesis vary not only with the problem under consideration but also with the capacities and experience of the synthesizer. The term "psychosomatic" has been criticized on the grounds that it implies a mind-body dichotomy rather than unity of mind and body. In the present writer's opinion, the term and the viewpoint to which it refers are forerunners of a general systems approach to health and disease.

One of the cardinal principles both in psychosomatics and in general systems theory is that events within a system or level of description—psychological, social, anatomical, physiological and so forth—must be studied by methods appropriate to that level and described in the language of that level. Only after this has been done may events from two or more levels be

correlated. Thus if we wish to study physiological changes in anxiety we cannot use physiological data to infer the presence of anxiety; if we do, our reasoning will be circular. If we wish to study psychodynamic patterns in thyroid disease, we cannot use psychodynamic data to infer the presence of thyroid disease nor medical data to infer the presence of psychodynamic patterns. These statements may seem truisms, but their principles are ignored with surprising frequency.

The term “psychosomatic” is also used in a more limited sense to refer to a causal sequence “from above downward”—that is, in which events at the psychological-psychodynamic level appear to influence events at some lower order of complexity, such as gastric motility or cardiovascular dynamics. This usage is in contrast with the term “somatopsychic” which implies the opposite causal sequence, such as the effect of brain damage on mental function or psychological reactions to physical disease. Psychosomatic events have somatopsychic feedback and vice versa, so that in a strict sense there are no purely psychosomatic or somatopsychic sequences. Nevertheless the distinction is convenient and necessary for ordering certain types of observations.

When the term “disorder” is added to the term “psychosomatic,” one ordinarily means clinical conditions in which “psychosomatic” causal sequences are inferred. Some idea of the diversity of these conditions may be

conveyed by the following classification, which should be considered as illustrative rather than definitive.

TYPES OF PSYCHOSOMATIC DISORDERS

Somatic Complaints of a Purely Ideational Nature

These are symptoms which express ideas and do not depend on physical changes in the areas complained of. Needless to say, the ideas may be, and often are, unconscious.

Somatic Delusions and Hallucinations

Although the idea expressed by these symptoms is conscious, it can and usually does stand in the place of other ideas and feelings which are not conscious. A patient may complain that he has pain and heaviness in his chest because his heart has turned to stone or he has nausea and indigestion because he is rotten inside. If the patient is grossly psychotic, the nature of the complaint is quickly recognized. If his cognitive functions are relatively intact and he has only an isolated somatic delusion, then its true nature is easily missed. Being aware that people may think him crazy, he consults a general physician complaining only of chest pain or indigestion. On finding nothing wrong, the physician reassures him that his complaint is due to nerves, and the patient seeks elsewhere for someone to soften his heart of

stone or to remove the rottenness inside. The examples chosen happen to be ones which convey feelings of self-accusation, but this type of "body language" may be used as well to express ideas related to other impulses and feelings. This type of complaint must, of course, be distinguished from delusional explanations erected on organically based symptoms, as for example pains of angina pectoris[1] interpreted as messages from heaven.

Obsessions About the Body

Somatic obsessions also express in body language ideas related to unconscious wishes. However, the patient recognizes them as irrational, even if this recognition does not bring relief of anxiety. As in the case of delusions, the consciously expressed idea stands instead of unconscious ones.

Hypochondriasis

This term is used loosely to refer to multiple bodily complaints which do not depend on physically based sensations. They are usually obsessional, delusional or a mixture of the two.

Conversion Reactions (Hysteria)

Like somatic delusions and obsessions, conversion reactions also express in body language ideas related to unconscious wishes. Instead of

appearing in conscious thought they appear involuntarily in charade or pantomime in which the players are organ systems. In the early days of psychoanalysis all psychosomatic disorders were assumed to be conversion reactions, even those with marked tissue damage; one's blood pressure, ulcers, bleeding from the bowel, etcetera, were all assumed to be symbolic expressions of unconscious ideas. Following World War II, there was a widespread reaction against this view. Many students of psychosomatics then felt that unconscious ideas could be expressed only by the sensory and voluntary motor symptoms and that the diagnosis of conversion reaction or hysteria should be confined to symptoms in these systems. Despite explicit statements of this sort, a number of symptoms involving involuntary systems continued to be recognized as hysterical, such as vomiting and false pregnancy (including cessation of menstruation). The earlier view was never completely supplanted, and Sperling, for example, continued to regard ulcerative colitis as a pregenital conversion in which bleeding from the bowel symbolizes a traumatic separation in the form of an abortion.

More recently, Engel and Engel and Schmale have marshalled substantial evidence that the conversion mechanism may underlie a wide variety of involuntary symptoms. They further maintain that tissue damage may occur as a complication of conversion reactions, although the damage itself is not the conversion reaction and does not have primary psychological meaning. Through the process of secondary symbolization the damage may,

of course, still acquire psychological meaning after it has developed.

Medical Consequences of the Patient's Behavior

This is a heterogeneous group of disorders, some of which excite the interest of psychosomatic workers and some of which do not. As a rule interest in the damage caused by suicide attempts, hepatic cirrhosis[2] following alcoholism or illnesses aggravated by heavy smoking is not regarded as psychosomatic interest. Interest in obesity, on the other hand, is regarded as psychosomatic interest. Most cases of obesity are caused by eating more calories than are consumed by bodily activity. The mystery lies in the reason for the dissociation between physiological need for food and eating. It is generally recognized that neurotic and psychotic conflicts may contribute to any of these behaviors, but there is no agreement as to whether similar psychodynamic constellations underlie similar external behaviors. Behavior which is not necessarily neurotic may also have medical consequences, as for example, the eating of diets high in cholesterol which seem to contribute to the development of coronary artery disease.

Psychophysiological Symptoms

In this category belong symptoms such as perspiration and pounding of the heart in anxiety attacks, constipation and anorexia in depression, aching

muscles and joints resulting from chronic muscular tension, spastic colon, emotional diarrhea, upset stomach due to emotional tension and so forth. The complaints involve physical processes at the site of the symptoms. The heart does usually beat more forcefully and rapidly during anxiety attacks. The various digestive disturbances are related to changes in the function of the gastrointestinal tract, and chronic muscular tension can be demonstrated by electrical measurements. Though inappropriate to the situation, the symptoms do not exceed the limits of normal physiological function, do not involve structural damage to the tissues and usually subside with the emotional state of which they are a part. It has not so far been possible to make rigid connections between specific symptoms and specific types of emotion, though some loose correlations, such as those mentioned above, do seem to exist. One or more symptoms may appear in the absence of, or instead of, more overt emotional displays. Such symptoms are often called "affect equivalents." It may be difficult to know whether one is dealing with a normal but inappropriate affect equivalent or with a conversion in an involuntary system, and there may indeed be no sharp separation. Physicians other than psychiatrists often refer to symptoms in this category as "functional symptoms," indicating that they are generated by physiological functions and that there is no identifiable disease.

Psychophysiological symptoms are produced by autonomic nervous system discharges to heart, lungs, digestive glands, the adrenal medulla and

the digestive tract or by motor nerve discharges into skeletal muscles. Physiological discharges in emotional states are not limited to the autonomic and voluntary muscle systems but include the endocrine glands as well. The biological effects of neuroendocrine secretions are so profound as to affect the function of virtually every cell and tissue in the body. However, it is doubtful whether the secretion of hormones during emotional discharges gives rise to consciously perceived symptoms.

Psychic fatigue is a more complex symptom. Apparently it may be due in part to the added work imposed on cardiovascular and muscular systems by nervous discharge. Another contributing factor may be sleep loss. On the other hand the sensation of fatigue may disappear suddenly with a change of mood, suggesting that it also involves central perception and interpretation.

Psychic Aggravation of Existing Chronic Disease

It is sometimes unclear whether a particular disorder belongs in this category or the following one—"Psychosomatic Diseases"—which have psychic components in their etiology. Where psychic factors are involved in initial causation, they are usually also involved in subsequent aggravation. However, the reverse need not be true. Psychic aggravation may be striking and obvious in cases where psychic involvement in initial causation is more difficult to establish.

Cardiovascular diseases are among those in which psychic aggravation is clearest. Congestive heart failure or cardiac decompensation is an excellent example. Persons whose hearts have been damaged in such a way as to diminish permanently the working capacity of the heart are said to have diminished cardiac reserve. By various combinations of medication, diet and limitation of physical exertion, it is usually possible to keep the demands upon the heart within its capacity to meet them. So long as this is the case, the heart disease is said to be "compensated." A compensated system decompensates when the heart's work capacity is reduced further or when fresh demands are placed upon and exceed its capacity. One of the most common types of fresh demand is an emotional upset, the physiological effects of which are similar to those of physical exertion. The symptoms of cardiac decompensation are similar regardless of the cause and include breathlessness, accumulation of fluid in the lungs and tissues, and a shortage of oxygen in the tissues. Hospitalization, oxygen and additional medication are often necessary in order to reestablish a state of compensation. In a study of twenty-five consecutive hospital admissions for congestive heart failure (cardiac decompensation) Chambers and Reiser found that emotional stress was a major precipitating factor in 76 percent.

Another type of mismatch between supply and demand can occur when the coronary arteries, which carry the blood supply to heart muscles, are diseased. In the absence of physical or emotional stress, the diseased vessels

are often able to meet the heart muscle's demands for the delivery of blood, yet fail to meet the increased demands imposed by added emotional stress. In this way emotional stress may precipitate attacks of angina pectoris[3] or even ful-blown myocardial infardtions.[4]

In patients so disposed, emotional stress may also precipitate attacks of irregular heartbeat, apparently mediated by emotional effects on the autonomic nervous system. The heart is less efficient when beating irregularly and this in turn may precipitate an attack of congestive heart failure if cardiac reserve is already reduced by disease. The writer once had the opportunity to observe a dramatic example of this in which a woman suffered from obesity and severe rheumatic heart disease.[5] Her disease was adequately compensated until a rejection by her family precipitated an attack of auricular fibrillation, one type of irregular heartbeat and congestive heart failure. A successful physician-patient relationship was never established. The auricular fibrillation and congestive heart failure proved refractory to medical treatment and the patient eventually died. She did not reveal the emotional rejection to her physicians, who learned of it through other sources shortly before her death.

The emotional state can and frequently does alter the insulin requirements of diabetics to such an extent that a previously well-regulated patient is precipitated into an episode of diabetic[6] acidosis[7] or coma. The

other common precipitants of acidosis are infections, failure to take insulin and departures from the diet.

Psychosomatic Diseases

In this category belong a number of physical disease entities, usually with pathological tissue changes and always with functioning in some organ system which is not only inappropriate but abnormal. In addition to the impact of emotional factors upon the course of the illness once it is established, there are further reasons to believe that emotional factors also play a significant role in producing the illness. It would seem reasonable to suppose that a period of "functional" disorder in an organ or system might precede the onset of a psychosomatic disease. This has been shown to be true of ulcerative colitis[8] in which the onset of structural bowel changes is usually preceded by years of "functional" bowel disturbances. As another example, peptic ulcer[9] is often preceded by "acid indigestion." It is frequently difficult to establish clinically the point at which one becomes the other. The onset of essential hypertension[10] is frequently preceded by labile blood pressure. However, psychophysiological symptoms do not necessarily lead to psychosomatic disease.

There is no rigorously established list of diseases which are and are not psychosomatic. In several, however, psychic etiological factors have been

noted as especially prominent and are traditionally regarded as psychosomatic. These include peptic ulcer,[11] ulcerative colitis,[12] essential hypertension,[13] thyrotoxicosis,[14] migraine headaches,[15] rheumatoid arthritis[16] and various allergic manifestations such as bronchial asthma, hay fever, urticaria (hives) and eczema. There are also some grounds for considering diabetes mellitus,[17] pernicious anemia,[18] coronary artery disease and malignant lymphomas[19] as partly psychogenic in etiology. The appropriateness of dividing diseases into psychosomatic and non-psychosomatic categories has been challenged and evidence introduced that psychic factors may play a role in the development of any illness. It should be understood, however, that at the present time only a very small minority of workers consider any illness with pathological tissue changes to be purely psychogenic. The majority hold that psychic and physical factors interact to produce the disease.

PSYCHOSOMATIC ETIOLOGY

It is paradoxical that almost no one has serious doubts that psychophysiological complaints and psychosomatic diseases exist, yet there is very little agreement as to how they are brought about. Of the various theories of psychosomatic etiology, none has had sufficiently rigorous and extensive validation to warrant final acceptance or rejection. The obstacles to accomplishing these tasks are the familiar ones in psychiatric research:

complexity of the psychological data, confusion as to which psychic trait or traits should be related to which illness or biological process, insufficient precision and resolving power of the psychological methodology and difficulty of obtaining adequate sampling of patients or adequate control of contaminating variables.

One of the common themes running through all psychosomatic theory is the issue of specificity versus non-specificity. Specificity implies that a specific type of psychic event or process is related to a specific type of somatic event. It has been suggested, for example, that compulsive personality goes with ulcerative colitis[20] ; that the emotion of anger is related to the secretion of the noradrenalin, and fear or anxiety to the secretion of adrenaline; that intense oral needs are related to the secretion of pepsinogen; that depressive illness is related to depletion of brain catecholamines; and so forth. Non-specificity implies that the quantity of psychic stress is related to the quantity of physiological disturbance, but that the type or quality of one is unrelated to the type or quality of the other. Most theories of non-specificity are not stated in such extreme terms but tend in this direction. The following theories to be discussed, and a number of others not considered here, combine specificity and non-specificity in a variety of ways.

Pavlov

Pavlov was highly critical of psychological concepts, which he regarded as unscientific. Nevertheless his work provided one of the first demonstrations, in the modern scientific sense, that psychosomatic processes are possible. In the course of research on the physiology of digestion he discovered the conditioned reflex, demonstrating that a stimulus which became a signal of food could produce physiological effects similar to those of food itself. The secretion of saliva and gastric juices which he studied were end results of parasympathetic nervous activity. Pavlov was mainly interested in these responses as a method for studying the "physiology of the cerebral cortex," of the making and breaking of temporary connections between stimuli, and of their facilitation and inhibition. He left to others the main tasks of studying the peripheral effects of conditioned responses. The specificity of his theory was high—a specific stimulus, related to a specific response, in an individual with a specific set of previous experiences.

Cannon

Cannon's work was crucial in providing a comprehensive view of the autonomic or involuntary nervous system with its two divisions, the sympathetic and the parasympathetic. He suggested that the activity levels in all branches of the sympathetic system rise and fall together, while the activities of the different parasympathetic branches vary independently of each other. This was expressed by the analogy of a piano in which the keys

represented different branches of the parasympathetic system and the loud-soft pedal represented the sympathetic system. The parasympathetic system promoted functions of reparation and reproduction such as digestion, defecation, urination and copulation; it also inhibited functions promoted by the sympathetic system. The sympathetic system discharged en masse during fear and rage, making preparation for and supporting the metabolic requirements of muscular exertion, fight and flight; these included acceleration of the heart rate, shifting of blood from viscera to muscles, mobilizing sugar into the bloodstream, accelerating the clotting of blood and inhibiting most of the functions which are enhanced by the parasympathetic system. Subsequent developments have supported most of his views but with important exceptions. The sympathetic system has proved much more plastic and flexible than he imagined, thus allowing it to participate with the parasympathetic and endocrine systems in producing a great variety of centrally programmed arrangements of cardiovascular, digestive and metabolic function, both in preparation for anticipated events and in response to current requirements. Consequently, the physiological changes in fear and rage are much less stereotyped than he suggested.

One of the most striking departures from Cannon's all-or-none view of sympathetic function is Miller's finding that autonomically mediated functions may be modified by instrumental learning. By appropriate contingencies of reward and punishment, rats whose skeletal muscle

responses had been paralyzed by curare were trained to raise or lower their blood pressure, to increase or decrease intestinal motility or to modify blood vessel tone unilaterally in one or the other ear. While the role of these mechanisms in psychosomatic etiology is unclear, their discovery opens many possibilities which were previously unsuspected and which may be of very high importance.

Cannon's influence on psychosomatic theory was enormous, especially since the autonomic nervous system was in his time the only known pathway by which the brain might influence involuntary body functions. For many years it was known that the endocrine glands regulated important metabolic and reproductive functions and that the pituitary gland regulated the other endocrine glands. Only relatively recently was it recognized that the brain is an important regulator of the pituitary.

Cannon's theories were nonspecific psychologically. Fear, rage, resentment, tension, pain or anxiety, or almost any emotional disequilibrium might provoke a fight-flight physiological pattern. Physiologically they were highly specific.

Selye

Selye proposed the concepts of "stress" and the "general adaptation syndrome," after Cannon had made major contributions but before the role of

the brain in pituitary regulation was recognized. His concepts were based on the finding that a wide variety of injurious stimuli—including but not limited to toxins, burns, severe cold and mechanical injury—provoked the release of ACTH from the pituitary which in turn stimulated the release of corticoid hormones from the adrenal cortex. Adrenal hormones influence a wide variety of metabolic functions as well as biological defense reactions such as inflammation and antibody production; without adrenal hormones it is impossible to adapt to environmental changes and shifts in metabolic demands. Any stimulus which provoked ACTH release was defined as a stressor. Emotional distress was also found to provoke ACTH release and thereby emotional stimuli were placed in a class with biologically injurious ones. Selye recognized the psychosomatic implications of this concept and proposed that a number of the traditionally termed psychosomatic illnesses be called "diseases of adaptation." He further suggested that they might be caused by a disordered stress response in which there was an imbalance between adrenal cortical hormones and somatatropic hormone.

Selye's theory, like Cannon's, was psychologically nonspecific but highly specific physiologically. Later work has confirmed and extended his finding that emotional stimuli can provoke ACTH release. However, the stereotyped regularity of ACTH release by emotional stimuli predicted by Selye's theory has yet to be demonstrated. The suggestion that mild endocrine influences due to psychic factors might contribute to physical illness remains plausible

but unproved. The element of preparation for anticipated events, which figured so highly in Pavlov's and Cannon's ideas, was absent from Selye's. However, it has since become clear that the pituitary-adrenal axis does make anticipatory responses.

Alexander

As mentioned previously, Alexander was instrumental in deemphasizing the role of conversion reactions in systems which are normally involuntary and hence in the production of organic disease. From experiences of his own and his followers in psychoanalyzing patients with "psychosomatic" diseases, he concluded that a specific nuclear unconscious conflict is characteristic of patients with each disease, that the conflict originated in early childhood and, in most cases, long antedated the onset of the disease. The physiological "by-products" of unconscious strivings associated with the conflict caused chronic hyperactivity in the appropriate organ system and eventually led to a breakdown of normal structure and function in it. For example, peptic ulcer[21] patients were thought to have especially intense but repressed passive oral and oral aggressive strivings which were defended against by reaction formations resulting in overt behavior of ambition, hard work, self-reliance and super-independence. Because discharge of the repressed oral longings was blocked, they set up chronic substitute discharges in the parasympathetic innervations of the

stomach similar to the preparations for feeding which Pavlov had demonstrated. Essential hypertension[22] was thought to be associated with anxiety over repressed hostile competitive striving. The inhibited hostility resulted in a substitution of chronic sympathetic nervous discharge along the lines of the fight-flight reaction of Cannon. This in turn produced generalized vasoconstriction, the release of adrenaline and elevation of the blood pressure. Other formulations were proposed for migraine,[23] hyperthyroidism,[24] asthma, rheumatoid arthritis and ulcerative colitis.[25] In most of the formulations, pregenital and especially dependent and oral conflicts were prominent. It was recognized that not every patient with the appropriate conflict had the corresponding disease. Consequently, Alexander postulated a "somatic X factor" which was also specific for each disease. Both the conflict and the X factor were necessary to produce the disease, but neither alone was sufficient. These hypotheses entailed high specificity at both psychological and biological levels.

The psycho-analytic observations of Alexander and his followers have proved hard to replicate and generalize. One difficulty is the sheer labor involved in psychoanalyzing enough patients with each disease and systematizing the material to provide an adequate and representative sample. Another is the fact that those patients who can and will undergo psychoanalysis already constitute a skewed sample. Yet another is that the conflicts may not be so discreet and separable as they seem. For example,

persons who inhibit their oral strivings in one sphere of life may express them in another, and many persons can be shown to have more than one of the postulated conflicts. Smaller scale clinical studies have not uniformly supported the findings. In one, for example, ulcer patients were found to express their oral and dependent strivings quite freely and openly.

On the other hand, the gastric hypersecretion of hydrochloric acid and gastric hyper-motility due to nervous factors are characteristic of peptic ulcer patients. Hyper-salivation has also been reported, and it has been possible to induce gastrointestinal ulcerations by chronic stimulation of the hypothalamus in animals.

Hypersecretion of pepsinogen is also characteristic of ulcer patients before, during and after the development of the disease. Pepsinogen is secreted by the cells of the gastric mucosa and then enters the blood. Hypersecretion of pepsinogen, therefore, has several features suggestive of a "somatic X factor" for peptic ulcer and provided the basis for one of the few successful predictive studies of psychosomatic illnesses. Serum pepsinogen was measured in 2073 Army inductees, and a sample of those with the highest levels were selected as a group with high probability of developing ulcers during the stress of basic training. A sample with low values were selected as low probability subjects. The two groups of subjects were then given a battery of psychological tests, a medical questionnaire and a complete

radiologic examination of the upper gastrointestinal tract. At the initial examination, a significantly greater number of ulcers was found in the high pepsinogen group, and this group also developed a significantly greater number of ulcers during the course of basic training. On the basis of a prediction that evidences of orality, depression, dependence, anxiety over expressing hostility and needs to please and placate in the psychological test protocols would be characteristic of the high pepsinogen group, it was possible to identify correctly 71 percent of the highs and 51 percent of the lows. Especially strong psychological characteristics of the high pepsinogen group were found in those who had or would develop ulcers. Other evidence indicating that one may be a hyper-secreter from birth led Mirsky to suggest that hypersecretion of pepsinogen may reflect a biological trait which contributes to the development of strong oral needs and predisposes to the development of peptic ulcers in situations of stress. Engel suggested that the other psychosomatic illness may have analogous psychobiological predisposing constellations and proposed the term "somatopsychic-psychosomatic disorder."

Schur

Schur finds all the claims of psychological specificity unconvincing and argues that psychosomatic disorders tend to develop when defensive equilibria breakdown and regression occurs. The particular kind of

regression producing psychosomatic disorders is regression to primitive modes of ego functioning with resomatization of the channels for expression of primitive affect.

Wolff

Wolff pointed out that biological threats provoke various automatic biological protective patterns. Among these were the "protective pattern of offense involving eating," which is one of the infant's earliest aggressive patterns. This pattern included gastric hyper-function, increased blood flow and salivation. Another pattern was the "ejection-riddance reaction involving the large bowel, the stomach and duodenum." This included vomiting and diarrhea, which are nonspecific reactions of the infant to noxious agents even when the gastrointestinal tract is not invoked. Another was the "holding fast" reaction of skeletal muscles and large bowel. This was characterized by constipation with tense, aching muscles and joints. Another was the "protective reaction of nose and airways" with vasodilation, hypersecretion, contraction of smooth muscle and occlusion of airways.

According to Wolff these patterns tend to be evoked in predisposed individuals by nonspecific threats and to persist into adulthood in fragmented form. Prolonged and persistent use of a pattern tends to irritate the systems involved and predispose them to disease. The predisposition to a particular

pattern when threatened was considered to be genetic—due to "stock factors"—and to be analogous to the running pattern in the horse, the hoarding pattern of the squirrel or the retriever pattern of the dog.

Engel

On the basis of an extensive study of ulcerative colitis[26] patients Engel concluede that the disease tends to have its onset in the relationship, but only if the subject reacts with feelings of helplessness and hopelessness. Later work by Engel and various of his colleagues led to similar conclusions with respect to malignant lymphomas,[27] medical disease in general and psychiatric illness. These findings also formed the basis for another of the few successful psychosomatic predictive studies. Women entering the hospital for biopsies of the uterine cervix were interviewed for evidence of object loss, helplessness and hopelessness. The prediction was borne out that this state would tend to identify those women whose cervical lesions would prove to be malignant. The state has been termed the "giving up—given up complex" and is regarded as neither necessary nor sufficient for the development of disease but as contributory.

As noted previously, Engel's more recent theoretical interests have turned to a more specific mechanism—the role of conversion in the production of disease. Case material has been presented showing that a

sensory conversion may evoke appropriate biological protective patterns similar to those described by Wolff. Engel describes a female patient who as a child had been struck along with her mother by a hit-and-run driver on a deserted street in the dead of winter. The child had been thrown into a snow pile and not discovered for some time. As an adult, the resurgence of ambivalent feelings toward her mother was associated with conversion attacks in which she not only experienced a sensation of cold but had shaking chills, chattering teeth and blanching of her hands and feet, which became cold to the touch.

A conversion may also produce complications, as when a sensation of breathlessness leads to over-breathing, which then results in respiratory alkalosis.[28] The associated tetany[29] and sensations of tingling about the mouth are due to alkalosis and not part of the conversion. Engel describes other cases in which fantasies of punishment for sexual transgression had determined the site of skin eruptions. A soldier developed an urticarial eruption ("hives") with a linear distribution which might have been produced by a whipping on the back of his legs, thighs and buttocks. As a boy in a very strict orphanage, he had been whipped for peeking in the windows of the girls' dormitory. The urticarial eruption developed about an hour after he had been apprehended loitering on the grounds of the nurses' dormitory on the military post. An enlisted man, he had hoped to see one of the nurses whom he wanted to date. The officer who apprehended him reprimanded him

severely and ordered him to his barracks.

Another patient, a young woman, developed an eczematoid skin eruption around her neck where it was touched by the chain of a metal crucifix which was given her at the time of her confirmation. She was apprehensive about her confession, unsure whether she had sinned and felt ashamed and unclean when the crucifix was placed around her neck. Later eruptions occurred at the site of other metals contacting her skin if associations of sexual guilt were aroused.

To account for the development of these lesions, Engel depends heavily on experiments by Chapman, Goodell and Wolff. It had been known that the pain, tenderness and inflammation following injury to the skin is enhanced and sustained by antidromic (reverse direction) feedback activity along the same nerve fibers which carry the nociceptive impulses. Chemical substances (neurokinin, substance p) are released at the nerve terminals in the skin which facilitate the local inflammatory response, lower the threshold for pain and influence clotting mechanisms. The demonstration by Chapman *et al.* that the same feedback system can be activated by hypnotic suggestion of injury to the skin suggested to Engel that a similar mechanism might have operated in the cases where conversion had determined the site of skin eruptions. In these cases, skin eruptions would be complications of the conversion and not the conversion itself, just as tetany[30] is not a conversion but a complication of

hyper-ventilation. Engel suggests that similar processes might also produce pathological lesions in other systems.

In applying this line of thinking, it is necessary to distinguish between primary and secondary symbolization. Primary symbolization is the type described by Engel, in which a fantasy is elaborated about a body part or system before a pathological process develops in the tissue. Secondary symbolization means the erection of fantasies about a pathological process after it develops.

Comment

The view of the present writer is that claims of similar conflicts, similar instinctual makeup, similar ego structure or similar personality makeup in patients with similar symptoms are unconvincing. The common emphasis on oral, dependent and pregenital mechanisms have developed in an era when psychoanalysts are becoming increasingly aware of these impulses in all areas of psychic development and in all symptom complexes including classical hysterical, phobic and obsessive-compulsive neuroses. While their role is being so extensively reevaluated, it seems premature to assign them some special role in psychosomatics. The position of Schur would seem the soundest—namely, that there is nothing psychologically specific about psychosomatic illness, that it simply tends to be precipitated by psychological

regression and the breakdown of defenses. Furthermore, Engel would seem to be entirely correct in observing that regression, disruption of defenses and the "giving up—given up complex" are most likely to occur when key object relationships are threatened. The physiological pathways have yet to be clarified in detail but almost certainly must involve combinations of autonomic and neuroendocrine reactions together with local biological defense reactions as outlined by Wolff and Engel.

THERAPEUTIC CONSIDERATIONS

With such a diverse group of disorders, there can hardly be a unitary therapeutic approach determined by the fact that a psychosomatic disorder exists. On the contrary, psychosomatic disorders present the entire gamut of therapeutic problems—from grossly psychotic patients to "healthy neurotics." Hence they call for the entire repertoire of psychotherapeutic approaches—from supportive through classical psychoanalysis. The use of behavior, group and family therapies has not been reported extensively in these cases but undoubtedly each will eventually find its place in the treatment of psychosomatic patients. Miller's demonstration of operant conditioning of discreet autonomic reactions is especially suggestive that conditioning therapies might be effective in the treatment of some psychosomatic symptoms.

Despite the diversity of psychosomatic disorders and of the psychotherapeutic approaches to them, there are two central ideas of high importance, around which any type of therapeutic approach can be organized. They are (a) that the onset and exacerbations of both somatic and psychiatric illnesses tend to occur in the setting of a real, fantasied or threatened disruption of a key object relationship, which is accompanied by disruption of defensive and adaptive patterns, psychological regression and feelings of helplessness and hopelessness and (b) that physical illness per se tends to induce psychological regression; this tendency sums with any other regressive trends which the patient may bring with him to his illness.

The utility of the concept of the key relationship lies in its non-specificity, its simplicity and its central importance in all psychic function. None of the more complicated specificity hypotheses have been so well documented and none are so readily verifiable in one's everyday clinical work. Needless to say, this concept does not substitute for a full formulation of the psychodynamics of an individual patient; it does, however, provide a nodal point around which a more complete formulation may be organized. Furthermore this concept does not preclude any of the more specific formulations which might eventually be validated as characteristic of certain disorders. In fact if any such formulation should be valid, the key relationship concept provides a path for arriving at it. The fact that a threat to such a relationship disrupts defenses, induces regression and precipitates illness is

already evidence that the relationship is invested with neurotic or psychotic intensity derived from an object of early childhood, usually the mother. In fact the current relationship involved in precipitating the illness is not infrequently with the mother herself. In young adults the threat to the key relationship is also likely to be rejection by a spouse or lover. In later life the death or illness of a spouse is frequently the key precipitant of illnesses; in this age range the maturation, separation or rebellion of offspring is also often important.

It is not unusual to observe an acute rupture of a relationship, emotional collapse and the first attack of a chronic medical illness all occurring within hours. More frequent, however, is the onset of illness in a setting of gradual deterioration of a relationship and gradual failure of coping mechanisms.

The psychological forces activated by physical illness have been simply and profoundly described by Lederer. During the process of falling ill—the transition from health to illness—the central experiences are pain, discomfort, loss of strength and abilities, and anxiety. In addition to the realistic fears about one's comfort and well-being, there are unconscious anxieties, including fear of regression and passivity, fantasies that illness is a punishment for transgressions and shame that one's weaknesses may be exposed. At this stage one of the most potent provokers of anxiety is facing the unknown. The nature of the illness and its implications are likely to be

unknown. Diagnostic equipment and procedures are often unintelligible and mysterious. The language spoken by physicians, nurses and technicians is strange. Particularly devastating at this time are signs of apprehension, uncertainty or vacillation on the part of the physician. The lack of knowledge is well designed to draw out fantasies from the patient's unconscious. The particular patient's ways of dealing with anxiety and regressive urges are likely to be activated. These may range from denial of illness, delay in seeking treatment, aggressiveness and provocativeness to passivity, clinging and compliance.

Those who can tolerate the necessary degree of regression and dependence enter a stage of accepted illness. This is characterized by egocentricity, preoccupation with body functions, constriction of interests and a regressed dependent relationship with doctors and nurses which bears the stamp of whatever the patient's particular relationship had been with his parental objects in early childhood. The same caretaking persons are likely to be seen as omnipotent and idealized by one patient and as callous and malevolent by another. Jealousy of a nurse's or doctor's attention may extend to lengths entirely out of keeping with the patient's personality when well. Romantic heterosexual fantasies are fairly frequent. If defenses against the necessary degree of regression and dependence are too elaborate, there may be no stage of accepted illness and no secure emotional relationships with the medical team. This interferes with the treatment regimen and with the

effectiveness of any treatment which he does receive. Such was undoubtedly the case with the patient, cited earlier, in whom powerful medication was ineffective against her auricular fibrillation and congestive heart failure.

Convalescence, the transition from accepted illness into relative health and responsibility, is analogous to adolescence and often runs a similar course. Doctors and nurses begin to lose their idealized qualities and may appear somewhat depreciated, like the parents of an adolescent. Patients who clung to the dependency on their parents may exhibit reluctance to give up the role of sick person and the dependence to which it entitles them. This can manifest itself in many ways such as reluctance to stop taking medicine, reluctance to resume activity appropriate to the improved state of health or actual recurrence of symptoms in the setting of discharge from the hospital. The "hanging on" reaction tends to be intensified by long periods of hospitalization. Thomas Mann's novel *The Magic Mountain* deals with such a reaction in a patient hospitalized for tuberculosis. On the other hand, patients who broke away from their families abruptly and prematurely during adolescence are likely to follow the same pattern with their physicians during convalescence. Patients who separated from their parents gradually but smoothly and progressively during adolescence are likely to have a smooth and uneventful convalescence. The more "psychosomatic" the disorder, the more likely are complications in the progression of the psychological stages of the illness and the more likely are these complications to feed back upon the

medical course of the illness.

During the stage of acute illness one faces a patient whose outbreak of symptoms was probably precipitated by the loss of an important source of dependent gratification, whether recognized or not, followed by disruption of defenses, regression, helplessness and hopelessness. The illness itself will have induced further regression. The situation is ripe for the development of rapid and intense transference relationships. Many perceptive nonpsychiatric physicians are very aware of these matters and handle them skillfully. Others are totally oblivious and hence unaware of the enormous effect of their behavior upon the course of the illness. During the acute phase of the illness, the psychological task is to effect some temporary restitution of the threatened object relationship, partially by replacing it with the naturally developing transference relationship to the physician and, if practical, by facilitating repair of the rupture with the key person. Uncovering psychotherapy during this phase is often impractical, but proper attention to developing good patient-physician rapport will usually facilitate the outpouring of a great deal of material which otherwise would be heavily defended. This readiness, even eagerness, of acutely ill patients to share heavily charged material has been noted repeatedly. Listening to this material and gently encouraging its revelation helps to cement the therapeutic relationship necessary for recovery. Several years ago, Margolin advocated a very exaggerated form of inducing this early attachment by means of

"anaclitic therapy." In this approach the physician assumed a totally giving and totally omnipotent role toward the patient, remaining available to him at any and all times, feeding him, stroking and massaging painful areas and attending to all minor details of physical care. This procedure was often life-saving but is very taxing for medical personnel to keep up for any length of time. Equally good results can usually be obtained less dramatically by merely being aware of the patient's likes, dislikes, dependent needs and conveying this awareness to him along with a sense of personal interest. It cannot be emphasized strongly enough that the success or failure of this relationship can and does spell the difference between effectiveness and ineffectiveness of very powerful drugs or even surgical operations. If the psychotherapist enters the case at this point, one of his major services may be to help restore a deteriorating relationship between patient, ward personnel and physician-in-charge.

Beyond the acute phase of illness the problems to be considered are whether psychotherapy offers the hope of sufficient emotional maturation to free the patient from the more neurotic aspects of his dependence on key objects and his vulnerability to the threat of separation. In arriving at this decision, his ego strengths, capacity for relationships and capacity for insight will be weighed in the usual manner. Also to be considered are the questions whether the vulnerability of his ego and his diseased organ systems can withstand the moderate but unavoidable degrees of frustration inherent in

insight giving techniques. The alternative is to establish and maintain a supportive relationship either with the general physician or the psychotherapist which may have to be maintained almost indefinitely, though with dilution during times of well-being and intensification during times of difficulty. The effectiveness of ostensibly medical visits scheduled mainly for psychological reasons is incomprehensible to many general physicians until they see it for themselves.

Whatever techniques are chosen, care must be taken that the general physician keep up his contact with the patient at a sufficient level to minimize feelings of rejection and abandonment by him during the transition period when the psychotherapeutic relationship is being built. Once the patient is established in psychotherapy, the problems of transference, countertransference, resistance, hostility and dependency differ in no characteristic way from the therapeutic problems with other patients. However, the vulnerability of the organ systems to separation and threats of separation must be borne in mind. During vacations and other interruptions one must anticipate the possibility not only of anxiety, depression and hostility but also of gastrointestinal bleeding, asthmatic attacks or whatever the particular somatic vulnerability happens to be. Even though the therapy seems to have gone well, additional exacerbations may occur around the time of termination. A gradual stepwise termination with a gradually decreasing frequency of visits is probably desirable. It is often best not to terminate

officially at all but to act as though one assumes that the patient will call periodically for appointments.

Our prognostic abilities for psychosomatic patients are even less than for neurotic and psychotic patients. In general the presence of schizophrenia, serious ego impairment, secondary gain from illness and intense strivings toward passivity and helplessness tend to signal a poor prognosis in psychosomatic disorders as well as in psychiatric ones. Other traits which may be characterized generally as maturity and ego strength tend to indicate a favorable prognosis in both the psychic and somatic spheres. With successful psychotherapy and substantial maturation of the personality, even fairly severely diseased organ systems may return to normal structure and function, provided there had been no irreversible tissue damage prior to therapy. The psychotherapist, however, should not entertain the illusion that the vulnerability of the organ system has been removed. His contribution has been to reduce the impact of emotional stress on this vulnerability. Unfortunately, life provides no security against object loss or further psychological stress. Hence the therapist must be prepared for exacerbations and should work to prevent unrealistic illusions either in himself or in his patient. This is not to deny that the gains through psychotherapy may spell the difference between a productive life and invalidism, but the removal of the organ vulnerability is probably a remaining task for biological research.

Notes

1 Pain, usually in the mid-chest or left arm, occurring when diseased but still functioning coronary arteries are temporarily unable to supply enough blood to the heart muscle to meet its requirements. Pain is usually precipitated by exertion, emotion, a heavy meal or exposure to cold or rarefied air and relieved by eliminating the precipitating factor or by drugs which enlarge the lumen of the coronary artery.

2 Gradual progressive destruction of liver tissue in severe chronic alcoholism. Death eventually results if the process is not arrested.

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4 Irreversible blocking of a coronary artery so that a portion of the heart muscle is permanently deprived of its blood supply. Symptoms of pain and breathlessness resemble the symptoms of angina pectoris but are usually more severe and are not reversed by drugs or by removing a precipitating factor. The affected area of heart muscle dies and is replaced by scar tissue. During the acute stage of the illness the patient's survival may be in doubt.

5 Damage to heart valves which is sometimes an aftermath of rheumatic fever. If the damage is severe enough, diminished cardiac reserve results, and the patient becomes subject to episodes of cardiac decompensation or congestive heart failure.

6 In diabetes mellitus a deficiency of insulin secretion by the pancreas is the central feature of the disease, but many other factors are involved. The naturally occurring disease is often much more severe than that caused by total removal of the pancreas. There may possibly be several types of diabetes mellitus. Diabetes insipidus is an entirely different disorder.

7 An abnormally acid condition of the blood resulting from the accumulation of improperly metabolized materials. This occurs when insulin requirements exceed the insulin dose by too much for too long. Coma results when the condition is severe, and death will then follow if treatment is not prompt and vigorous.

8 A generalized disease of unknown cause. Some of the outstanding symptoms are fever and bloody diarrhea or sometimes constipation. Ulcers form in the inner lining and muscular walls of the large intestine (colon) and may become secondarily infected by bacteria which inhabit the bowel. The disease is usually chronic and episodic, often leading to extensive scar formation in the large intestine. Occasionally the course is rapid and progressive, resulting in death.

9 A disease of unknown cause involving the lower stomach or upper duodenum. Outstanding symptoms in uncomplicated cases include burning and cramping in the mid or upper abdominal area, usually when the stomach is empty. Some relief is often afforded by the intake of milk or mild anti-acids. In the affected area a single craterlike ulcer erodes the inner lining of the stomach or duodenum and into the muscular wall. Motility and acid secretion by the stomach and duodenum are usually increased.

10 Abnormally elevated blood pressure (hypertension) in the absence of any known cause, such as impaired kidney function or hormone-secreting tumors. If prolonged and severe, the complications may include overworking of the heart or damage to the blood vessels of brain, heart or kidney.

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14 Also called Graves' disease, Basedow's disease and hyperthyroidism. Its cause is unknown. The central feature of the disorder is overproduction of thyroid hormones which are responsible for many of the symptoms, which include enlargement of the thyroid gland (goiter), general acceleration of the metabolic rate, intolerance to warm temperatures, restlessness, rapid heartbeat, perspiration and sometimes protrusion of the eyeballs. Rather similar symptoms may be produced by hormone secreting tumors of the thyroid, but the mechanism of these disorders is different.

15 Episodic headaches, usually severe, throbbing and confined to one side of the head. They are often preceded by various visual phenomena and followed by nausea and vomiting. The pre-headache phenomena are associated with constriction and the headache with dilation of cranial arteries. During the headache, the tissues surrounding cranial arteries on the involved side are swollen and tender.

16 A disease of unknown cause which is usually chronic and recurring. Its outstanding feature is inflammation of the lining membranes of various joints which causes pain, swelling and redness over the area. In the advanced stages there may be destruction of joint cartilage, scar tissue formation and fusion of joints.

17 In diabetes mellitus a deficiency of insulin secretion by the pancreas is the central feature of the disease, but many other factors are involved. The naturally occurring disease is often much more severe than that caused by total removal of the pancreas. There may possibly be several types of diabetes mellitus. Diabetes insipidus is an entirely different disorder.

18 Anemia due to deficiency of vitamin B12. It results from failure of the stomach to secrete enough of a material which enables the intestine to absorb dietary vitamin B12.

19 A collective term referring to various malignant disorders involving spleen, lymph nodes and other lymphatic and related tissues. These disorders include Hodgkin's disease, lymphatic leukemia and lympho sarcomas.

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27 A collective term referring to various malignant disorders involving spleen, lymph nodes and other lymphatic and related tissues. These disorders include Hodgkin's disease, lymphatic leukemia and lympho sarcomas.

28 Alkalosis (the opposite of acidosis) refers to any state in which the blood is abnormally alkaline. In respiratory alkalosis the primary cause is over-breathing, which drives the carbon dioxide level in the blood (and thereby the carbonic acid level also) to abnormally low levels. In alkaline blood the solubility of calcium compounds (and hence the serum calcium concentration) is reduced. This causes a condition known as tetany.

29 A syndrome which includes extension of the extremities with a characteristic flexion of the ankles and wrists known as carpopedal spasm. There is also twitching of the extremities and sensations of tingling about the mouth. The cause is low serum calcium concentration.

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