

REVIEW ARTICLES

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PSYCHOSOMATIC HYPOTHESES

AND RESEARCH

That the soul is united to all the
parts of the body jointly.

Descartes, *Les Passions de l'Âme*

We are witnessing today a prodigious progress by the medical sciences in their methods of investigation and treatment. The discovery of antibiotics has revolutionized the treatment of infectious diseases; surgical techniques, based upon safer methods of anesthesia and reawakening, and upon the perfection of a complex and exact instrumentation, have made it possible to perform more and more daring operations.

The improvement and multiplication of laboratory researches and of anatomico-pathological studies, the discoveries in endocrinology and bio-chemistry—all this extraordinary progress has culminated in greater knowledge of disease and in more effective therapy. The positive results of this potent analysis have entailed a fractioning, a sort of splintering of the totality which the sick man constitutes.

Psychosomatic medicine seeks precisely to recapture, amid the specialization of techniques, the fundamental unity of the being, both body and spirit, and to integrate into the framework of pathological causality *the emotional life* neglected by classical medicine. Psychosomatic doctrine has endeavored to go beyond the simultaneous achievements of Freudian psychology and Pavlov's reflexology.

It is to psychoanalysts that we owe the very first attempts to utilize directly in organic medicine the new dimensions which the psychology of the unconscious revealed. It was around 1920 that psychoanalysts attempted to apply to the mind pathological phenomena as they appeared in the experiments of the clinician of internal medicine—the idea of the role which the Freudian concept of emotional conflict plays in diagnosing illness. These very early attempts had no reverberations outside of the unconscious. Fifteen years later, with the help of Flanders, Dunbar and Franz Alexander, psychosomatic medicine found a satisfactory expression in the corps of a developed and coherent doctrine.

The first psychoanalysts who became interested in psycho-organic interrelationships interpreted them as phenomena of conversion. We know that this term was used by Freud to explain how, in hysteria, an unacceptable, repressed impulse could be “converted” into symptoms charged with expressing emotional tensions that could find no other appropriate outlet. Sexual excitation, for example, which normally subsides after the sexual act, can find another way of expressing itself: hysterical convulsions *reproducing* the motions of the sexual act. If a fit of anger cannot be exteriorized freely by shouts, tears or blows, it may be expressed by paralysis of those organs that are usually used to express similar affections. These substitutive satisfactions are disappointing because they are never balanced by a satisfactory release.

Unlike the early psychoanalysts, Alexander does not believe that the hysteria of conversion can account for all the somatic and emotional intricacies. The somatic disturbances which attracted his attention and which he believes to be the basis of the disorders described by psychosomatic medicine are related to the internal organs enervated by the vegetative nervous system.

The notion of hysterical conversion was hardly applicable to the understanding of visceral disorders. Extreme hypertension or an intestinal hemorrhage could not be considered conversion phenomena because these are limited to the system of the life relationship alone. An hysterical person can reject coexistence¹ and express this rejection by loss of voice: in this instance the symptom affects the sick person’s relations with others.

The visceral organs, controlled by the autonomous nervous system, have no direct relation to conceptual processes. The psychic contents can

1. Merleau-Ponty, *La phénoménologie de la Perception* (Paris, Gallimard, 1945).

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be expressed symbolically in the domain of voluntary enervation. For example, joy is expressed by laughter. Blushing can be the expression of shame, although here we reach a limit, but it is highly improbable that the vaso-constriction of the vascular system in essential hypertension is responsible for the symbolic expression of ideas. The vegetative functions are stimulated or imbued with specific emotional tensions which may, if they reach a certain threshold of intensity, or become chronic, culminate in permanent disorders of the vegetative organs. This is what traditional medicine is familiar with and calls "functional disorders."

For a long time doctors have described gastric, intestinal and cardiac nervous affections. These disorders did not show, despite careful study, any anatomical or histological alteration that might explain the cause. This was a matter of a reversible disturbance of the functions of an apparatus whose coordination and operation were disturbed, and no one was able to uncover any morphological alterations. But chronic functional disturbances can, after a time, become irreversible and subject to lesions. The affective conflicts that are to be found at the source of the disturbance in gastric secretions, for example, can result in an ulceration of the stomach; just as hypertension, affected by inhibited emotional tensions which cannot find a liberating outlet through the neuro-muscular channels of life relationships, results in a hypertrophy of myocarditis and in irreversible pathological changes in the heart valves. *Essential* arterial hypertension, a functional disorder, in the long run results in the disorganization of the entire cardio-vascular system.

II

Let us attempt to describe the relation that exists between the affective conflicts of patients and the pathogenesis of gastric ulcers, as the Chicago school conceives of it.

In most cases, ulcer patients have a characteristic psychology. They are persons of decision and energy who display a great independence and apparently find it difficult to accept the help and support of others. Close analysis of these attitudes proves them to be inexact and they can only be interpreted as reactions that protect the sick man from a deep desire for dependence and from his avowed yearning to be loved, helped and protected.

Other sick people, who accept their dependence and seek support from others, find their appeals ignored, not because of their inner defenses, but

because of unfavorable external circumstances. Patients affectively predisposed to ulceration of the gastric wall want to be loved and taken care of, but they can neither express nor accept this desire because of their unconscious guilt. Their desire to be loved is closely related with the desire to be fed—an association linked to the very early experiences of infancy; the mother's love is confused with the food and care that the baby received from her. Let us imagine, for one minute, what this all-powerful mother, the dispenser of food and care, must represent for the infant during the first days of his extra-uterine existence.

At the start of life nourishment represents a major and indelible emotional experience. For months the foetus lived in a perfect state of biophysiological equilibrium where there was no hiatus between need and satisfaction. It is truly the only moment in animal life when the sensation of anxious and frustrating expectation does not exist.

The new-born child is going to experience, from the very moment of birth, a multitude of disagreeable and unfamiliar impressions: the first is hunger. The mother will satisfy his hunger and relieve his discomfort. At the very beginning the appeasement of hunger is associated with a sense of well-being and security and with this crucial image of emotional life: the mother. This is why, irrational as it may seem in our civilization, there exists a fundamental fear which is at the origin of the adult's insecurity: the fear of starvation. The certainty of knowing that his hunger will be satisfied is inseparable from the sense of security an infant feels in his relation to a tender mother who loves and protects him. The physical sensation of feeling satiated by a mother who gives abundant and regular nourishment is associated in a real emotional equation with the primitive sense of security.

A second emotional attitude associated early in life with hunger sensations is a sense of jealous possessiveness. In the infant, possession is confused with the oral incorporation of sustenance.

Any frustration of the child's oral needs tends to further an aggressive impulse against the frustrating object. Generally speaking, it is the important role played by the mother in the physiological and libidinal economy of the child that makes any aggression against her dangerous. This explains why the child's aggressive tendencies are guilt-ridden and filled with anxiety.

All these affective inter-reactions make the mechanism of nourishment complicated; its functioning is dependent upon a great many emotional disturbances. In particular, the aggressive nature of these tendencies en-

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tails the risk of placing the child in conflict with his surroundings and, above all, with his mother.

Silbermann's² experiment illustrates these ideas empirically: A fistula in the esophagus of a dog prevents food from reaching its stomach. The food repeatedly offered it greatly stimulates the secretion of its gastric juices which, working on an empty stomach, repeatedly produce an ulceration. People with ulcers resemble in certain respects Silbermann's dog. Their gastric juices also are constantly being stimulated, often at the wrong time, because of the dual action of hunger-love, established at an early stage.

The treatment of stomach ulcers, seen from the psychosomatic point of view, must necessarily be twofold in the light of all the factors at play. The essential role of psychotherapy is first of all preventive and should begin before the organic lesion is formed. But even the chronic condition of a gastric ulcer responds brilliantly and permanently to a combination of judicious medical treatment and psychotherapy. When a man with ulcers shows evidence of a typical neurotic structure and serious affective conflicts he should contemplate a classic psychoanalysis.

The following is an example taken from Alexander.³ An eighteen-year-old student had a hemorrhage due to an ulceration of the duodenum. Five years after this incident, when the sick man began psychotherapeutic treatment, there was evidence of all the clinical and radiological signs of an ulcer in full bloom. Moreover, he suffered from premature ejaculations.

The principal characteristic of the affectivity of this man was excessive control of emotions that he was loath to express for fear of giving the impression of weakness. He had been a calm and diligent child and enjoyed the companionship of his parents. On the other hand, he was dominated by a brother three years his senior who was aggressive and independent. When the patient was thirteen his brother died and shortly thereafter his father died. His mother, left alone with him, felt lost and tried to lean on him and to give him responsibilities that he was neither able nor prepared to assume. His indifference and the impression of calm security that he tried from then on to give, were merely a reaction and a defense against his own desires for passivity and dependence.

In the course of treatment the patient became increasingly aware of the struggle that was going on within him to maintain the role he had assumed through fear of his own needs for tenderness and protection. A

2. *Proceedings of the Third Psychotherapy Council*, Chicago Institute for Psychoanalysis, 1946.

3. *Psychosomatic Medicine* (New York, Norton, 1950).

dream that he had in the course of his treatment illustrates his profound affective situation.

He is on a bicycle with his mother. *He has hold of the steering wheel.* He loses control of it and they both fall. His mother is injured in the fall. His dream is a plain expression of the anxiety he feels in a role he is not equal to, that he is loath to assume and that might, in the end, prove to be dangerous.

His pathetic and repressed need to be protected and treated like a child finally found a liberating outlet in the emotional relationship that he established with his psychotherapist. Step by step he was able in this way to accept, first, his need for dependence, and then, progressively, to give it up and adopt a less infantile attitude. He was able to establish a satisfactory relationship with women; the minor disturbances of sexual potency disappeared and his gastric disturbances improved at the same time.

III

We will now describe the psychology of excremental functions and the part that the archaic association established between the processes of fecal elimination and certain traits of character play in the pathogenesis of intestinal disorders. It was Freud who opened the way to the genetic understanding of this association, which seems, at first, a strange one.

Excremental functions play a large part in the life and affective evolution of the little child. Fecal matter seems to him an essential part of himself, his first possession. For the first time in a life of tyrannical dependence, *something*, at last, depends upon him and *his own will*; something, moreover, that his entourage, and his mother particularly, tends to overvalue. For the first time—and the child will never forget this revelation—he is master of a precious thing that belongs to him, that he can give or refuse in order to punish or gratify those around him. Very early a feeling of independence, and tendencies, either appeasing—to give, or aggressive—to refuse or to soil, are associated with excremental functions. In the affectivity of the child, the excremental function remains associated with the idea of a possession whose preciousness is evidenced by the attitude of his entourage. The child has learned that he can exchange his fecal matter, as one exchanges anything of value, for other goods: a caress, a compliment and even sweets. In this way a relationship is established at an early age between excrement and the idea of money, on the one hand, and a feeling of independence, the psychological satisfaction of the achievement of a valued act,

on the other. All these ideas are indispensable to an understanding of the psychogenic disorders of excremental functions. To clarify them, let us take an example from Portis.⁴

A young woman, recently married, suffered from an ulcerated colon, with sanguineous diarrhea. She responded to medical treatment but three months later the diarrhea returned. When she was asked about the events that preceded this sudden relapse, the patient could remember nothing that might explain it. She finally said, although she attached no importance to it, that her husband had asked her a few moments before, jokingly, if she thought she could reimburse him for the sum he had lent her for her wedding trousseau. The patient did not have the money, but she attempted to repay her debt in accordance with an archaic mechanism of exchange. When the doctor was able to explain to the patient this chain of reactions she was cured without any medication.

In cases of chronic constipation psychogenic elements are characteristic and never lacking. These patients suffer from a sense of being abandoned and the fear of not being understood by the people around them. Their constipation reflects both the need for a possession, which compensates for the sense of loss and neglect of the loved object, and satisfaction of the aggressive impulse, the response to the general feeling of rejection they suffer from.

Here is an example: a young woman, married for a short time, suffered from chronic constipation that no medical or dietary treatment could alleviate. Psychotherapy revealed the hopes the patient associated with marriage, the expectation of love and tenderness. These hopes were vain. The patient's husband had no idea of the intensity of his wife's need for affection and never thought that she might suffer from his coolness to her. The patient, on the other hand, believed that her marriage was a happy one and was unaware of the hostility that she felt toward her husband. Specifically, the patient never permitted herself to express the slightest criticism of her husband. She would say, in a playful tone of voice and without any apparent seriousness, that her husband never gave her the slightest gift, not even a flower. The doctor had an interview with the husband and helped him to understand the role that his attitude played in his wife's troubles; he urged him to be more demonstrative and generous.

The following day the patient said that, for the first time in two years, she had a spontaneous bowel movement. Incidentally, she mentioned that

4. Portis, "Newer Concepts of the Etiology and Management of Idiopathic Ulcerative Colitis," *Journal of the American Medical Association*, 139; 208.

for the first time since their marriage her husband brought her a bouquet of flowers.

The patient's constipation was a regressive means of asserting the value of what she possessed and of responding, by a kind of functional miserliness, to the affective frustrations inflicted upon her by her husband.

IV

We shall now attempt to explain how the interrelation of emotional phenomena and physiological manifestations which we have just examined can be comprehended.

In the current writings of the theorists of psychosomatic medicine we read that between psychological phenomena on the one hand, and physiological manifestations on the other, either an "explanation" exists, or the two can be shown to be "concomitant." We have not taken sufficiently into account the fact that, in using this naïve kind of imagery, we suddenly introduce the quarrels and the difficulties of this dualism. Both the emotional phenomena and the physiological processes express, in their own original terms, *the same occurrence*.

It was Alexander who found the best solution to this problem. Unfortunately, he expressed his ideas in a few hasty and obscure pages.⁵ According to him, there are three primary tendencies, or three energetic vectors: incorporation, elimination, and retention.

The primitive and essential needs of the child: to receive nourishment *and* love; to eliminate feces *and* to express hostility; to retain feces *and* to manifest independence or aggression—these represent, simultaneously, tendencies *and* functions. From these archaic levels one can better understand the primitive synchronism of tendencies and functions that are as yet undifferentiated and that can be likened to the *fons et origo* and to the original womb of the specific affective and functional temperament of a given individual.

In the beginning, this is a matter of the biological and dynamic processes whose dual aspect, physiological and psychological, coincides. The desire to receive and the tendency to retain or to expel which is plain in certain types of temperament which psychoanalysis has isolated, are observable again in the physiological manifestations of gastric hypersecretion: constipation and diarrhea.

5. F. Alexander, "Analyse vectorielle du processus vital," *Principes de Psychanalyse* (Paris, Payot, 1952).

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The impulsive activity of the baby is organically connected with his essential functions. The infant's most primitive needs, either physiological, to suck, or affective, to be loved, protected and cared for, are intermingled. What we know today about the infant's development during the first months of his existence buttresses the concept of a primary root such as tendencies and functions.

Thanks to studies made by Margaret Ribble,⁶ we are in possession of a penetrating analysis of the infant's everyday circumstances and of his basic needs. The gesture of severing the umbilical cord is not sufficient to give him true autonomy. Man alone, of all the animals, is born into the world incomplete.

Portmann⁷ has concluded studies on comparative morphology which demonstrate that the new-born infant acquires the traits of an anthropoid only after the first year of life. It is this characteristic of neuro-physiological prematurity which makes him a dependent and unfinished being who has come into the world too soon.

During the post-natal period, the mother's role is such that one can maintain that between the intra-uterine existence of the infant and his first months of life there is a bond of organic continuity. This is a purely symbiotic relation which the infant is constrained to maintain with his mother. The latter is not only the source of indispensable nourishment: her role is more complex and more meaningful. The mother's care, her love, her caresses, even her cradling of the child and her words, allow him to mature and help him to acquire mastery of the functions that he first attempts. The mother is a veritable bio-affective extension of the infant.

Miss Ribble has shown that the new-born child has acute and massive need of oxygen. "The relative amount of anoxemia in the birth of man entails an element of uncertainty that has no equivalent in the animal kingdom," she writes. Suction, the care given to his body, the tenderness and security that the infant finds in his mother's love, stimulate his respiratory functions and overcome the first difficulties of hematosis.

Thus, emotional development and functional maturation depend upon the infant's very first affective experiences in his relations with his mother. One can never overstress the role of *structuration* played by the mother in her baby's development. The libidinal gratifications which the mother gives directly to the infant further his functional maturation. Much de-

6. Margaret Ribble, *The Right of Infancy* (New York, Columbia University Press, 1943).

7. Quoted by Racamier, "Etudes cliniques des frustrations précoces," *Revue Française de Psychanalyse*, No. 3, 1953.

pend upon this early phase. The apprenticeship of basic functions ranks with the development of permanent traits of character and with the personality's specific psychological reactions.

In the last analysis, a phenomenon is not the simple *representation* of two corresponding and parallel series of occurrences, merely at a different level. Rather, each series relates to an original language, and expresses on a blank page *the same affects*. The specific structure of the soma permits of only one perception in somatic terms, *regardless of the nature of the stimuli involved*.

The somatic *interpretation* of fear, for example, merely interprets our incorrigible anthropomorphism. It is the limitations of our imaginative faculties that force us to such mechanistic imagery. At the level upon which the processes take place, trembling, weakness of the knees, diarrhea and perspiration *are* fear, experienced in accordance with the only modality accessible to the soma.

Man will be seen to be a functional unity, an individual totality—body *and* affectivity—rather than parts added to other parts, indifferent one to the other and unrelated to the personality that animates and connects them.

V

We shall now attempt to give an account of the Russian version of psychosomatic medicine, termed *cortico-visceral pathology*, which offers an original interpretation of the problems we have just studied.

The Russian school has been inspired principally by Pavlov's researches; it is concerned with a physiological conception of phenomena of which the study of conditioned reflexes is the basis. Let us recall briefly the essential physiological notions that serve to explain these mechanisms.

The dog who salivates when he is shown a piece of meat obeys an absolute, innate, unconditioned reflex; if, at the same time that he is shown this meat, some sensory stimulus is presented—a prescribed sound, for example—after a certain number of experiments the sensory stimulus alone, without the association of the food, excites salivary secretion. In the cerebral cortex a new and temporary connection has been established between the stimulus and the organic response, a new type of reflex: the conditioned reflex.

The possibilities of conditioning in life are infinite, and we are beginning to see evidence of the extreme richness of these temporary connections, if any kind of excitation elicits any kind of response. As a consequence of the infinite number of excitations that it constantly receives,

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the cortex finds itself in a functional state which is constantly remanipulated by the phenomenon of excitation and inhibition. "The cortex represents a grandiose mosaic of points of excitation and of intricate inhibition, variable in quality and in intensity."⁸

Among the stimuli that arrive from the external world, language, which is *one of the first of these*, is integrated into the ensemble of mechanisms, and forms the second system of stimulation proper to man.

All corporeal functions seem to depend upon the cortex.

Let us attempt to analyze the contribution embodied in the great concept of conditioning. Although the *absolute* reflex is a partial one, elementary and stereotyped, a phenomenon which can bring into play only the inferior levels of the nervous system, the cortex, and consequently the entire organism, participate in the *conditioned* reflex. On the other hand, in the unconditioned reflex, the initial excitement will produce a movement of retreat; the sight of food starts up the digestive processes. Nothing like this is true of the conditioned reflex in which the stimulus and the response, through the play of intermediary structures, no longer have the same reciprocal relationship: sound may start either digestive or circulatory phenomena, etc. One might say, incidentally, that an innate reflex is almost an abstraction. This term, however, can only refer to the first experiment of a series; thereafter, the subject is always conditioned to a certain extent. We therefore believe that conditioning is a kind of setting to which all the relations of an individual to his environment, all his social activities, can be traced back. The affective life of the individual will be the source of analogous phenomena. His entire history can be written in terms of conditioning.

Let us now attempt to describe the mechanism of corticovisceral pathology as it is understood by the Russians. A quotation from Pavlov summarizes the essentials: "It may seem as if many functions take place completely uninfluenced by cerebral hemispheres, but in reality it does not happen this way. This higher level controls everything that happens in the body."⁹

The cerebral cortex acts upon the viscera by different mechanisms. It can either release innate functions by a mechanism of "starting them off," or modify functions by a mechanism of "correction." This is a fundamental fact but it is only one of the elements of a setting far more complex, be-

8. Pavlov, "Le Reflexe conditionné," *Grande Encyclopédie*.

9. Quoted from Pchouk, *Le Cortex cérébral et les Fonctions réceptrices de l'organisme* (Moscow, 1952), p. 7.

cause, outside of this action of the cortex upon the viscera, the modern Russian school has been able to give evidence of another action that operates in an inverse way: that of the viscera upon the cortex. This is an original contribution and one of very great import. Pavlov and his school described exteroceptive conditioned reflexes, that is to say, reflexes produced by the stimulation of the sensory organs. Bikow and his students showed that it was possible to produce interoceptive conditioned reflexes through excitation of the sensory organs of the viscera, the interoceptors. In these phenomena could be seen a biological interpretation of the notion of the unconscious.

Besides cortico-visceral and viscerocortical actions, the existence of systems of viscerovisceral-direct actions, without the intervention of the higher nervous centers, has been demonstrated.

All these mechanisms are subject to constant and intimate interactions which contribute to the formation of a functional state of equilibrium at the level of the cortex, variable at all times and dependent upon stimuli occurring within or without the body. It is this equilibrium that determines, at all times, the reactions of each organ and of the entire organism.

Certain cortical conditions can produce a disorder in the function of the viscera; repeated disorders of this kind can, in the long run, lead to changes in the structure, to lesions.

The effect of the diseased organ upon the cortex is different from that of the healthy organ and, in the pathological sense, contributes to the changes in cortical equilibrium.

The treatment recommended by the Soviet school is the logical consequence of its physiological concepts. The weary and diseased organ is put to rest and protected from harmful stimulation. This is done either by placing the disturbing cortex out of circulation, or by isolating the diseased organ from all the others. For example, the purpose of using sleep as therapy is to obtain a cortical separation and thus a change in the pathogenic conditioning. The use of novocain also isolates the organ by suppressing higher nervous afferents.

It is our opinion that the Russians' interest in describing purely physiological mechanisms and their deliberate refusal to probe the deepest main-springs of physiology and of emotional experience make their theories, so rich in many ways, inadequate.

VI

Having sketched the major principles of the psychosomatic school and illustrated with a few case histories the clinical approach, we must now

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ask, what does this amount to? It is, in fact, a reversal of the concepts that medical thought applied to the understanding of illness during the greater part of the last century and the first decades of this one.

The psychosomatic school has sought to effect the conceptual revolution, which consists in putting organic factors and emotional phenomena on the same plane and in introducing them *simultaneously* into the determinism of pathology.

Medical thought has been opposed to a true study of emotional factors seen from the standpoint of a contingent epiphenomenalism which needlessly obscures the clinical picture. The intrusion of the emotional world, incomprehensible and anarchical, conforming to none of the rules hitherto recognized, was considered a threat to the beautiful order of a clear and logical science. It has been said that this was nothing new and that, after all, psychosomatic medicine is part of the Hippocratic heritage. This affirmation is no more exact than the one that consists in maintaining that our atomic physics was already inscribed in Democritus' atomism or in Epicurus' *clinamen*.

Medical thought remained impregnated with the mechanistic materialism that dominated the entire scientific current of the nineteenth century; the doctor considered himself the body's engineer. He was inclined to associate the body with a machine whose wheels he took apart, seeking flaws or weaknesses and offering technical solutions; paying attention to the *parts*, which he thought of as separate, never seeing the sick man as the totality he really is. The doctor wanted and created his world simple and logical, and he moved in it with ease. His failure to understand at any given moment was ascribed to a lack of diagnostic talent or of information or knowledge, never to his complete failure to comprehend something essential. The mystery of illness seemed to him like the stammerings of a young science; he never doubted the totally intelligible nature of the phenomena he studied. The final truth about illness he thought of as veiled by an ignorance he hoped to penetrate; there existed beneath phenomena a reality that must be uncovered progressively—this was part of the certainty of his faith, the kind of spirit that is ready to meet a challenge. The doctor felt himself on safe ground so long as he dealt with organs and lesions that he could evaluate in a familiar world. He was filled with a strange discomfort when asked to venture into this moving world of which he knew so little, which he was not prepared to deal with, and whose laws escaped him. The revolution that psychosomatic concepts effected in medical thought was enough to thoroughly upset the doctor ac-

customed to thinking in the manner of the prevailing mechanistic outlook.

All the great clinicians of the last century admitted that the emotional life of the patient was an element in the pathological picture, but they acknowledged it as one would a poor relation who must be made to know his place: in an obscure corner of the chain that goes from causes to effects. When it was announced that the patient's affective life might play a major role in the ensemble of factors that resulted in a given pathological condition, the assertion seemed not only excessive but apparently marked a real setback for medical science. For the doctor accustomed to dealing with substantial concepts, this new trend seemed to be the negation of his best efforts to found a medical science, to pull it out of the old rut of magical cures into which, for such a long time, it had been buried. To leave the solid substructure of verifiable and measurable facts for a conjectural and uncertain method of approach seemed to him the beginning of an adventure filled with perils for a young science, which envisaged for itself a future similar to that of the physico-chemical sciences rather than an inconceivable return to the interpretation of dreams.

Until the eighteenth century, when Morgagni's treatise on anatomical pathology appeared, medicine remained an almost subjective art, in which examination of the patient had little or no place. With the appearance of pathological anatomy, the road that led to revolution was opened by Laënnec, and the primary task of a physical examination was to discover and foresee the troublesome lesion as well as to demonstrate its existence from the anatomical point of view. Techniques improved and multiplied. They became more and more meaningful to the doctor, who derived from them a growing sense of efficacy and understanding. But, by that strange paradox that makes every step forward become an obstacle when it reaches its maximum potential, techniques, unquestionably a contribution to progress, finally blind the doctor, who sees the disease more and more and the patient less and less: the trees have finally hidden the forest.

A vast expanse lies between notations the doctor will make on his complicated charts and laboratory tests that have been deemed necessary, on the one hand, and what the patient experiences and expresses, on the other hand; between the patient who suffers, burning with his own fever, and the degree that is registered by the thermometer; between, in short, the illness as experienced by the patient and the illness as diagnosed by the doctor. This difference marks the profound misunderstanding that has occurred between the doctor who sees himself, rightfully, of course, as

the practitioner of a strict science, and the patient who is obliged to entrust a part of his body, a little more diseased each day, to a greater and greater number of highly specialized physicians. It is this alarming impoverishment of the over-all perspective that doctors maintain in regard to the study of illness that causes concern about the technical progress of medicine.

Up to the present, the entire revolution of medicine has been confined to the domain of specialization. Specialization has proceeded from the organism to the organ, from the whole to the part—to the smallest part, about which we know more and more. Medical knowledge goes from the general to the particular and progressively loses a picture of the whole as it seeks to consecrate itself to an extensive analysis of organs, of parts of organs. The heart, the lungs, the skin and the kidneys have been explored with minute attention and admirable care; but man, who possesses these organs—his subjective needs and his efforts to adapt himself to his environment, how these internal conflicts and these external problems can be reconciled in order to keep all the parts of the machine in balance—in short, man, as a structure, has been neglected. The architecture of his tissues, the chemistry of his secretions, the calculated elements of his temperament, have been studied and are known; his deepest needs, *what he is*, his most intimate aspirations, apparently have been considered superfluous information. Illness is not only the microbe or the lesion; it is also a daily emotional tension, fear, hatred, desire, frustrations and competition, all the feelings that every individual experiences every day in his relations with others. It is useless for medical science to employ the physico-chemical sciences as a model, first of all because of the unique nature of the patient. The engineer can solve his problems by inductive reasoning, but this method is not valid when applied to man. The doctor's disappointment in his failure to solve medical problems by grasping the meaning of the phenomena of general laws is natural. Since Aristotle, we know that no science save general science exists. The introduction to the data of an already difficult problem of this frightening unknown—emotional life—which doctors were not able to grasp and utilize, gave rise to deep dismay in medical thinking. The role of affective conflicts and their influence cannot be dealt with by using the traditional methods of medical science. These subtle, emotional, and complex relations can be examined only by employing methods that are suitable and that are related to psychology.

Thanks to Freud's remarkable intuition we have today an irreplaceable technique for understanding and treating emotional disorders. When the

notion of *unconscious motivation* was introduced into psychology a decisive step was taken toward the development of a medical understanding of the person as an intelligible structure. The emotional element is no longer described as a non-specific oddity in the ensemble of an established pathological condition—a negative way of defining illness—but as an essential part of a positive diagnosis, based upon exact investigation, certain of its technique and of its doctrinal foundation. The distrust of the psychosomatic school which certain medical milieus evidenced should not obscure the favorable attitude it evoked elsewhere.

The psychosomatic approach to the medical problem, seen from a unitary point of view, responds to a kind of organic necessity for the development of medical science and is a happy addition to the general trend of ideas that tends to prevail today. The great currents of ideas that mark the beginning of this century seek to emphasize the ensemble and to draw away from analyses that strive to understand what is complex by merely adding elements together. This is why, for example, the dogma of cellular pathology, advanced by Virchow, had to be abandoned. Cellular disorders could not themselves be understood without referring to the disturbance of a structure. For cellular pathology, Leriche substitutes the pathology of tissue.

All of the pathology of adaptation described by Selye was developed in opposition to the atomistic analyses of the end of the nineteenth century. Pathological phenomena are considered the over-all answer of the organism to outside aggression. Psychoanalysis was to add the notion of intrapsychic conflict, which can also be described as internal stress.

The Soviet school, in emphasizing the over-all nature of illness, links up with the modern concept of the primacy of structures. The emphasis that this school places on the dynamic nature of cortical processes brings it close, in this domain, to the descriptions of Freudian psychology.

Pavlov's physiology shows evidence of the possibility of supple and conditioned cortical modifications in response to an infinite variety of stimuli, explaining the differentiated adaptations by changes of milieus. The cortex is the seat of constant functional transformations in keeping with the collision between the nervous rhythms of inhibition and excitation. Psychoanalysis, describing differentiated intrapsychic elements (ego, super ego, elementary unconscious) that can enter into conflict, confirms and reinforces the fundamental notion of affective dynamics.

In psychology, the Gestalt school introduces an original and fecund picture of the problems of perception. In opposition to the theories of

Condillac, who attempted to recompose structures on the basis of elementary mental facts, the psychology of form affirms the primacy of structures which outline a given pattern that is not reducible to the elements which compose it. Everywhere one reads about the tendency to describe ensembles, to give prominence to structures. Man is no longer envisaged either in terms of nature or in terms of culture, i.e., body or mind, but the two apparently antithetic terms are taken up in a dialectical movement which transcends them and merges them in order to reveal their intimate and common essence.

To the notion of structure, so vigorously stressed by many different researches, there has recently been joined the idea of the role played by the history of the patient. Undoubtedly, the doctor had always acquainted himself with the history of the disease. But the information he obtained was never really used to achieve a dynamic understanding of the malady in question. Moreover, what information he did have was superficial and limited to the *pathological* past. The *emotional* past was quite as much ignored as the present. The view taken of the patient's past remained *objective* and, as it were, external to the totality of his emotional experiences.

Psychosomatic medicine teaches the doctor to listen to the patient and to ascribe an intelligible dynamic meaning to the events of his emotional life. The history of the sick person eventually acquires a significance which can be deciphered and employed. The entire past sheds light on the pathological present. Between the past and the present, there exists a tie, and it is this connection which psychosomatic medicine has endeavored to re-establish. The pathological present, embodied in a structure which forms part of an organic whole, is itself the culmination of the total history of the individual. Thus the structure, seen as something spatial, and the history as movement in time, join and condition each other in the structural-historical continuum of the total pathological phenomenon.

This notion of *historicity*, which psychosomatic medicine places in relief and which it makes one of the keys to an understanding of disease, can be found in what is sometimes called philosophical anthropology. There too an effort is made to see man in his concrete reality, uniting mind and matter, in his living and continuous relations with himself and with others.

All of the currents of this era—in the arts and in ideas—converge upon this major question mark: man. It is from the standpoint of rediscovered humanism, which concerns itself with the ever shrinking place that man

occupies in medical thought, that one can locate the psychosomatic approach.

The psychosomatic school is, to be sure, a valid reaction against the stubborn organicism which for so long dominated medical thought. This current, prodigiously enriching, must, however, remain balanced and close to clinical realities. Although emotional factors play a considerable and probably preponderant role in all functional disturbances, although they represent an essential modality in the pathogenesis of a good many organic disturbances, it is nonetheless true that recognition of them will be of greater service to a new and more fertile approach to disease if one is careful not to advance the claim—which would be, so to speak, the inverse of the error so justly denounced by psychosomatic medicine—that they are the *deus ex machina* of pathology.

Traditional medical thought, reflective and prudent, is alarmed by the daring of a step which strikes it as being, in certain of its formulations, a challenge to common sense. Let us say, then, paraphrasing Claudel, that “common sense is not always unerring,” and let us recall that for Valéry, common sense is that faculty of the mind which for so long has enabled mankind to deny the existence of antipodes. According to Descartes, an exertion of will is necessary to believe that two and two make four. It is incumbent on medical thought to make a great effort to integrate the new trend into its development and to reconsider the problem of the *sick man* from a new point of view.