Psychosomatics and Psychoneuroses

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All reality is one substance, one in cause, one in origin; and God and this reality are one.
—BRUNO (1548-1600)

Even at this stage of the evolutionary progress in psychiatry there is still extreme confusion over the concepts of neurosis, psychoneurosis, and psychosomatics. The situation becomes even more difficult since not only the professional world but also the lay world is constantly exposed to dramatic articles in all kinds of magazines, to radio lectures and movies on these subjects.

Clear definitions are necessary, especially in the interest of the poor patient who is becoming more disturbed and frightened, since little knowledge is worse than none. But clear definitions are also necessary for the physician who has to make plans and decisions about the form of therapy most effective for his patient.

In order to understand the problems both of psychosomatics and psychoneuroses we must consider the evolutionary development of the organism from the earliest form of life. That would be the protoplasmic cell-structure and cell-function we observe in an amoeba up to the highly complex organism we call *man*.

Many brilliant theories have been developed from Lamarckism, Darwinism, Monism (Ernst Haeckel) to Spencer's System of Synthetic Philosophy. In the next stage we see the beginning of the dissolution of Darwinism, and mechanistic and vitalistic theories take over. For many years these important concepts have influenced our personal as well as our medical thinking tremendously.

Whereas under the influence of Greek medicine and of great physicians like Hippocrates and Paracelsus medicine for centuries has been interested in man as possessing body and mind, under the influence of the great pathologist Rudolf Virchov great changes took place in the

19th Century. His famous "*Omnis cellula e cellula*" opened a new era of strong mechanistic, analytic and physico-chemical concepts in medicine.

Even though the mechanistic analytic concept has given us a tremendous insight into biological details, we have forgotten man as an organism, as an entity, a unity, *man-as-a-whole.*

Only a fundamental *"organismic concept"* which is already developing in different fields can give us a basic understanding of man as a body-mind-unit. *Man-as-a-whole* must be the fundamental idea in the future. Only then will we be able to understand man's psychosomatic or psychoneurotic disturbances.

Since psychiatry as well as medicine must always be based on our biological knowledge, we want to turn our interest to the latest developments in the field of biology. Enormous changes have taken place lately in that field which make many former theories completely obsolete. It is impossible to give a comprehensive report within the limitations of this paper.

I. von Uexkuell, one of the leading biologists, once defined man's cultural interests as "coming and going like waves. . . . The last wave we are still experiencing is the mechanistic wave, ebbing out of the stream of life." (13). Before that, von Uexkuell says, ". . . we faced the humanistic wave which had man as its central interest up to the 19th Century. But that interest disappeared and man was considered a machine with a soul." He continues, ". . . the different functions of the organism became the main-interest, functions which were explained readily by the law of cause and effect; functions which could be explained by atomistic energy, by the motion of electrons and protons." But Uexkuell already sees a new "wave" coming which has as its theme "Life." This he calls "the biological wave of human interest or *Weltanschauung.*"

Aside from von Uexkuell we find other outstanding names who were supporting a "biologic *Weltanschauung*" very strongly. I just want to mention here August Rauber, Hans Driesch (Vitalism), Emmanuel Radl, Raoul France, Gustav Wolff, and others. Later names are J. S. Haldane, I. G. Woodgers, Adolf Meyer-Abich, and especially Ludwig von Bertalanffy, whose "Organismic Concept" will interest us more later on. In other fields, stressing the concept of the *whole* I want to mention C. von Monakow (Biological Psychopathology), Ehrenfeld-Koehler (Gestalt-Psychology), Kurt Goldstein (Holistic Approach to Biology), Adolf Meyer (Psycho-biology), Henschen (Corre-

lation-Pathology), Kurt von Neergaard (Reaction-Pathology) among others.

Ludwig von Bertalanffy, who at the present is teaching biology at the University of Ottawa, has given us his far-reaching theory, "The Organismic Concept" (3), which will benefit our medical and psychiatric thinking tremendously. The fundamental points in his system are:

1) The organism as a whole (the whole governs the parts)
2) Dynamic order (dynamic equilibrium)
3) The primary activity (self-regulation)

In regard to the organism as a whole Bertalanffy stresses the self-regulatory capacities of the organism, the order *sui generis*. That capacity leads to self-orienting, self-selecting and directing functions. The totality of life comes first, and after that we have differentiation.

The totality is more than just the sum-total of its parts, more than just summation. There is a systematic inter-relationship between all the parts, an interdependence which makes it possible that the total organism possesses different qualities than the parts. But the parts also receive specific qualities which they will lose if separated from the total organism.

Bertalanffy also stresses the hierarchic order in the organism. There are different dimensions, the organism is multi-dimensional. Lower dimensions coordinated and integrated form higher dimensions. The autonomy of the organism is a fundamental principle. There is also a totality of processes and functions. Therefore Bertalanffy rejects a pure mechanistic concept with analytic-summative-deterministic orientation. According to him the organism does not show machinelike reactions following the laws of cause and effect. He also rejects very strongly the "vitalistic concept" which we still find very clearly expressed in Smut's "Holism." Bertalanffy considers both the mechanistic as well as the vitalistic concept insufficient. According to him the problem of life is one of organization, and through his "Organismic concept" he originates—in his opinion—a fundamental change in our biological thinking as well as in our concept of man.

The second important principle in Bertalanffy's theory is "The Dynamic Order." In the organism there exists a dynamic equilibrium, a constant interplay and interaction of all parts with a dynamic direction. He rejects completely the former static machinelike reaction-concepts of the mechanistic era.

The third principle in his theory is the concept of the internally active system (the primary activity and self-regulation). The concept of stimulus and reaction is broadened enormously. The organism through its own activity secures the totality and guarantees it through its active self-regulating processes. The rhythmic, cyclic and periodic functions in our organism demonstrate his concept of the internal primary activity.

In his book *Problems of Life* (3) (the biological world picture) Bertalanffy gives a brilliant description of his organismic theory, which, as mentioned before, goes far beyond the concept of Vitalism and even Holism.

Since we have learned from a biological viewpoint to think in terms of the whole organism, we must also from a psychological viewpoint think in terms of the whole personality. Whatever we see, hear, think, and feel, in plain words all our conscious experiences, will affect to a more or lesser degree our whole organism, our total personality. Even dreams have such an effect.

Kant tried to show us that ". . . the world of experience is everything and the world exists for us only through our experiences." But he also emphasized that man can only experience things for which his senses and brain are equipped (*a priori* principle). The world of our experiences is a mystery to us and the old philosophical teaching reminds us, *"Ut occulus, sic animus, se non videns alia cernit."** We can only study the different responses, that is, the manifestations these experiences produce in our organism. Even if we can observe responses in different spheres or on different levels, such as, for example, the mental, emotional, or the autonomic level, we want to underline from the very beginning the following: Every experience with all possible responses in our system forms a total uniform psychosomatic cycle. It is quite startling that these ideas are not completely new. I wish to mention here the great philosopher Spinoza, who wrote in regard to matter and mind: "Just as the emotion as felt is part of a whole, of which changes in the circulatory and respiratory and digestive systems are the basis, so an idea is a part, along with 'bodily' changes, of one complex organic process."

Why is such a uniform dynamic processuality and order necessary? Since our environment and its conditions are constantly changing we must be able to adjust and adapt as quickly and effectively as possible

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* As the eye, so the soul cannot see itself but recognizes others.

in order to survive. The effectiveness of our adaptive ability can only be guaranteed if all of our experiences from the outer world as well as from the inner world (instincts, vital feelings, etc.) can be collected, sifted, translated, transformed, and directed through regulatory centers which also coordinate the responses of the whole organism, of the total personality.

For a long time we have had only vague ideas about psychosomatic responses and functions. Today we have knowledge of at least two such regulatory centers (also closely inter-related), which regulate the total and uniform dynamic psychosomatic responses which follow every experience. This probably is just the beginning of our knowledge, but it brings us a tremendous step forward. These two centers which are located in the mid-brain, the so-called "diencephalon," are:

(a) the autonomic centers.
(b) the basal ganglia centers.

For many years, especially since the investigations of Langley, Eppinger and Hess, and later through Cannon and L. R. Mueller, we gained an enormous amount of information about the autonomic centers and the autonomic functions which control the whole interior of the organism, especially the visceral organs, for the preservation of self and the species. Through these investigations we have learned that our experiences from the outer as well as from the inner world do not affect end-organs directly but rather indirectly over these important centers. In later years we have learned through other far-reaching investigations about other extremely important brain centers in the diencephalon, the so-called basal ganglia. Through the elaborate work of Cannon, L. R. Mueller and others, we know today that the "basal ganglia" functions also play an important role in the dynamic processuality and order of the uniform psychosomatic responses. L. R. Mueller comes to the conclusion: *"The basal ganglia are the center of our emotional life."* (10) That would mean that all our emotions (affects) or emotional responses are not isolated entities or aspects; they belong to a uniform cycle, to a total psychosomatic response.

Considering the enormous importance of these centers which are inter-related with each other, but also with all higher cortical centers and the rest of the organism down to the remotest cell group, Kurt von Neergaard coined the term of the "diencephalic regulatory center" (11). This will probably be the most important concept for us to grasp in order to understand how all of our experiences irradiate from our

consciousness into the whole organism. The personality-as-a-whole will respond. When we speak now in terms of a psychosomatic response we must realize that the whole personality will answer, resound, echo or reverberate and is conscious of it.

It is extremely difficult for us to change our abstract way of thinking (in describing isolated phenomena) to a concept of organismic and uniform functioning within a total personality. It should be clear by now that with every psychic stimulation (world of experiences) there starts a whole dynamic cycle, irradiating or periphresing over a complex regulatory center (the diencephalic center) into the whole organism. It is a total response for which I introduce here my own term: *"the effect circuit."*

We cannot any longer think in terms of palpitation, perspiration, tension, trembling, or in terms of increased output of adrenalin or of hypoglycemia, etc. It would also be wrong to think in terms of emotional disorders of "emotions affecting the organs." What we really observe and describe are just symptoms, partial manifestations of a total, uniform psychosomatic response(the uniform "effect circuit"). We have to change our concepts completely, especially in regard to the problems of emotions (pain-pleasure principle). The emotions do not "affect" the organs, the emotions do not "produce" physical symptoms or "cause" diseases as we read in most books on psychosomatic medicine. *They are merely a partial response.*

This reminds me of John Hunter's famous remark that "my life is in the hands of any rascal who wishes to annoy and tease me." He died, as the history goes, of an attack of angina pectoris, brought on in an angry debate. The annoyance (psychic trauma) plus anger plus angina pectoris became one total cycle (effect circuit) of which John Hunter was afraid, as if he had sensed something about psychosomatics.

It is the conscious experience which starts a uniform psychosomatic response, including the responses of the emotional centers, the autonomic centers, the motoric reactions and the hormonal output of our organism. Again I would like to mention Spinoza, who wrote: "By emotion (affectus) I understand the modifications of the body by which the power of action in the body is increased or diminished, aided or restrained, and at the same time the ideas of these modifications." I can only add the reaction of the famous physiologist Johannes Mueller in regard to Spinoza's concepts of emotions: "Unsurpassed mastery."

Diagnostically we also come to incorrect and incomplete concepts when we do not see the uniform responses of the total personality.

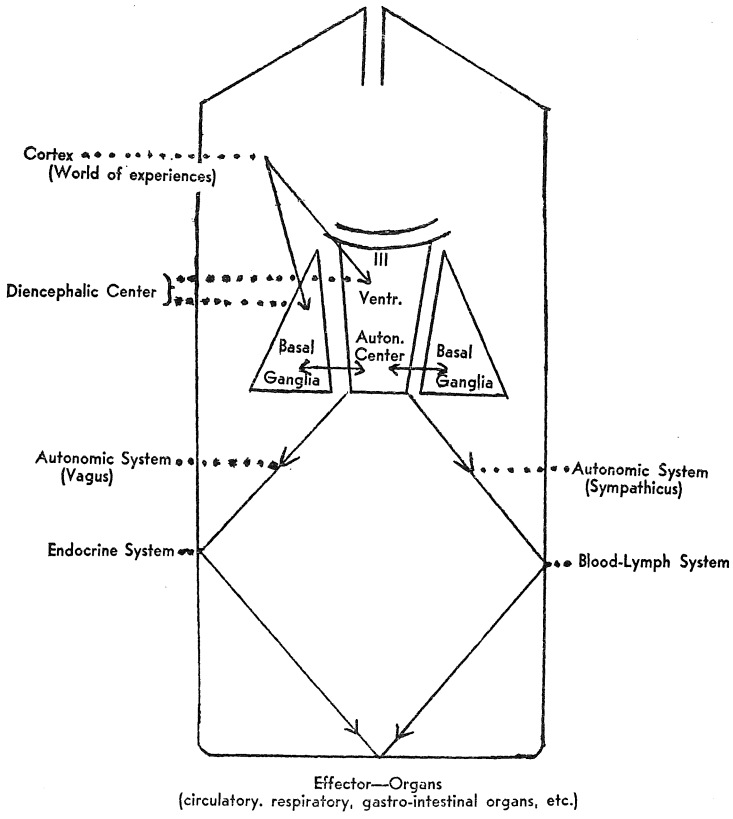

FIGURE 1
Diagram of the "Effect-Circuit"

Consequently we must forget about such terms as "organ-neurosis"—"affect-neurosis"—"neurotic character"—"oral-character" — and many others which have helped to confuse psychological thinking to a great extent. When we hear the expression emotional instability or emotional immaturity we must realize that the *whole* person is immature or unstable. Before I continue I wish to emphasize as strongly as possible: Emotions—as well as feelings—are not localized. They are the coming into consciousness, the mirroring, the manifestations within our ego-consciousness, of all the diencephalic and other complex bodily functions.

As early as 1849 the physician and philosopher Carl Gustav Carus wrote in his *Psyche*: (4)

> ". . . Everything which our soul does in the darkness of the unconsciousness, everything which the soul forms in us, creates, strives, worries and suffers, everything which stirs in our own organism, but also through the influences of other souls and of the total outside world, resounds into the brightness of our conscious psychic life. — We call that sound, that wonderful information the unconsciousness imports to the consciousness: EMOTION."

With his great psychological understanding, Alfred Adler made it clear that the person suffering from psychosomatic reactions has not caused them but they exist as the consequences of his shock experiences. Therefore we can state that psychosomatic reactions originate as involuntary responses of the whole organism and not as a sign of psychoneurosis. For many years Adler tried to stress the concept of unity in his "Individual Psychology." He spoke in terms of "experience acting as a shock, as an excitement, as an agitation of the personality-as-a-whole."—"But the shock is still no sign of nervous disease," he declared (2, p. 162). "We must . . . reject . . . all explanations which imply that a person induces his own sufferings, or that he wants to be ill" (2, p. 164). In regard to the effects of a shock, he continues: "The sufferer has not caused them; he does not want them; they do exist, however, as the consequences of a psychic shock . . ." (2, p. 164). The actual correlation between psychosomatic symptoms and neurosis he defined by declaring that "neurosis is the patient's automatic, unknowing exploitation of the symptoms resulting from the effects of a shock" (2, p. 180). The meaning and rationale of such exploitation of symptoms he explains by the patient's "inclination to beat a retreat from the problem confronting the individual and to secure that retreat by retaining the physical and psychical symptoms of shock" (2, p. 73).

This fact is fundamentally important for our future concept of psychosomatic reactions and disorders. Here I want to remind the reader briefly that we must differentiate very clearly between *reaction* and *disorder*. Reaction is a biological term describing the sum total of the shock symptoms, of the disturbed physiological equilibrium. Psychosomatic disorder develops out of the reaction and is, what I will describe later, a psychological activity of the personality.

The next question will be: Why is it that we observe such a variety of qualitative and quantitative symptoms? Again we must not forget that each individual is a unity in himself, different from anyone else.

Even the same experiences will cause different responses in different people. We must also remember that before an experience causes irradiation into the depth it streams into and goes through the world of ego-consciousness (the Self, the I, the World of Experiences). Here everything becomes colored and blended individually and evolves, as the famous psychologist Wundt expressed it, into "apperception." That means that experiences are never fixed or static phenomena. They become blended with other experiences and other associative and discriminative activities. The apperception finally determines the duration and the depth of any "effect-circuit."

The type of experience is also extremely important for the variety of symptoms; for instance, external experiences (experiences *per se*), which threaten our very existence or the existence of our family; experiences threatening our needs (for food, sex, comfort), threatening our interest, our desires, aims, wants, and ambitions. Internal or introspective experiences, such as ideas, concepts, hopes, imaginations, conflicts, also exert great influence upon the variation of the syptomatology, as well as the fundamental theme of pleasantness or unpleasantness.

Whereas Freud thought mainly in terms of sexual traumata, Adler emphasized that *any* experience can act as a psychic trauma. Therefore, the more traumatic an experience (apperception) is to a person, the more severe is the psychosomatic response (effect-circuit). As Epictetus says: "Men are not influenced by things but by their thoughts about things."

Adler, as far back as 1907 in his study of "Organ Inferiority" concerned himself with the importance of the constitutional disposition, which in many persons is responsible for quantitatively different responses. Next to all these factors we also must recognize the importance of the "present disposition" (fourth dimension, the time factor). For instance: illness or a general state of fatigue will bring on responses we would not observe otherwise under normal conditions. I also want to mention the pre-menstrual situation, childbirth, menopause, etc.; also the age, time of adolescence, etc. The climatic and other factors are also of importance. We also cannot forget the environmental and genetic influences on the development and therefore upon the reactivity of the whole personality. But we should remember what Adler stressed: It is important what a person makes out of his genetic and environmental experiences.

Now we can ask with Alfred Adler: "What then is the real nature of a neurosis?" If we take *Hinsie's Psychiatric Dictionary* we read:

"As understood today by most psychiatrists, a neurosis is a mental or psychic disorder; it is a disorder of psychic functions, irrespective of etiology or cause." This explanation does not give us much information and in general we can state that there are so many different explanations of psychoneurosis that it becomes very confusing. From a historic point of view very little is known about the development of studies in the field of psychoneurosis. The term "neurosis" was coined by the Scotch physician Cullen (1776). The American physician George Beard considered Neurasthenia as the queen of neuroses. The first scientific explanation we can find was written by Sigmund Freud in collaboration with his teacher Josef Breuer in *The Psychic Mechanism of Hysterical Phenomena.* Janet, a pupil of Charcot, coined the term "psychoneurosis" and Dubois expresses similar viewpoints. The most important concept which still dominates psychiatric thinking tremendously is Freud's concept: "Neuroses in general are disturbances of the sexual functions"; and he writes, "Neurotic symptoms are substitutes for sexual satisfaction" (7). Later, in his *Three Contributions to the Theory of Sex* he considers the neurosis "the negative of a perversion." Freud's final conclusion was: "In a normal sex life no neurosis is possible."

Brunn, who follows Freud's ideas very closely, considers neuroses as functional disturbances of the nervous system and as primary disturbances of our instincts and affects. Rank, a pupil of Freud, developed the theory that all our neurotic disorders stem from the trauma of birth. Karen Horney writes: "Neurosis is a psychic disturbance brought about by fears and defenses against those fears, and by attempts to find compromisive solutions for conflicting tendencies." Rudolf Allers writes: "A neurosis is a disturbance of behavior due to mental factors, mostly acquired." Arthur Noyes describes psychoneurosis as "personality disturbances." Lowell Selling writes: "Psychoneurosis is a symptom complex which is caused by mental conflicts, exhibits no organic pathology, and manifests itself by disturbances in the thinking process." Van der Hoop describes psychoneurosis as "repressed, unresolved and fixated emotional difficulties." Adolf Meyer has a pluralistic viewpoint and considers psychoneurosis as substitute for a more effective adaptation. (Reaction types) Meyer speaks in terms of mal-adaptation and habit-deterioration (9). I could quote many other authors, each offering a different explanation.

In my own opinion the most dynamic and comprehensive concept of what a neurosis is was given by Alfred Adler, when he wrote:

"Neurosis is the patient's automatic, unknowing exploitation of the symptoms resulting from the effects of a shock" (2, p. 180). He continues: "The neurotic person 'secures' himself by his retreat and he 'secures' his retreat by intensifying the physical and psychic shock-symptoms that have resulted from the impact of a problem that has threatened him with defeat. He prefers his sufferings to the breakdown of his sense of personal worth."

I hope I was able to make clear that there is a tremendous difference between a psychosomatic reaction and psychoneurosis.

In the psychosomatic reaction we see the shock-symptoms, the disturbed physiological equilibrium, which follows the experience (psychic trauma). In the neurosis we see a disturbance in the unit of the whole personality; we see a disorganization, a faulty answer to traumatic experiences. We see the personality failing to perform normally and to adapt and adjust in a useful way. We see defenses which the neurotic person is using purposefully for his own aim and goal, in his own personal interest; as Adler says: "in the interest of his retreat or escape."

At this point it would be appropriate to discuss further the actual dynamic automatism which the patient can use in order to exploit the shock—or traumatic reactions. But this would go beyond the scope of this article. However, I want to mention a few of the most important psychic formations of automatisms: symbolisation, fixation, deviation, transformation, subjectivation, intensification, habit formation, displacement, repression, regression, image formation and other psychic automatisms, which secure the patient's prestige, alibis, and finally secure his retreat or escape.

It should be possible by now to understand the existing conflict between the specialist (the psychiatrist) and the general practitioner. When the latter claims he can cure neurosis quicker with medicine, etc., he forgets that he was treating a psychosomatic symptom or syndrome, which will respond outside of psychotherapy (inclusive information and interpretation) to all kinds of medical treatment. Here the patient can and should be helped through medication if necessary; through hormones, vitamines, minerals, diet, physiotherapy, hydrotherapy, rest, and so on. Shock-treatment also will have results, since with all probability shock-therapy will affect mainly the diencephalic center and bring the disturbed physiological functions back to a more normal equilibrium.

In the case of a psychoneurosis, psychotherapy is the indicated treatment, beginning with personality-analysis. Here we must analyze, help the patient to abstract, gain insight and get his cooperation (rapport). We must help the patient to understand his own symbolisations, his defenses and his retreat and escape mechanism. We have to try to show him that he purposefully exaggerates, dramatizes and concentrates on his symptoms (symptom-fixation, fixed ideas, etc.). Only in the psychoneurosis do we see substitutive, symbolic or disguised expressions and performances. There may be overlapping situations, since nothing is static in the living organism. But we must be able to differentiate between psychosomatics and psychoneuroses. Other psychiatric problems, like maladjustment and immaturity of the personality should not be confused with psychoneurosis. These situations may later on lead to a psychoneurosis. Psychopathic manifestations, like perversions, delinquency, etc., cannot be classified as psychoneuroses.

In the field of psychosomatics we have to study the disturbed physiology, neuro-physiology, chemistry and the disturbed autonomic functions more than the psychological functions.

In the psychoneurosis we have to study the personality-structure (the psychological functions). The psychoneurosis will not be cured by medical treatment, since, as Adler says, "Neurosis is the patient's automatic unknowing exploitation of symptoms resulting from the effects of a shock."

Summary

The world of experience is everything, and the world exists for us only through our experiences.

Every experience (psychic stimulation) starts a whole dynamic cycle, irradiating or periphresing over a complex regulatory center (the diencephalic center) into the whole organism, which I have termed *"effect-circuit."*

Emotions are not phenomena in themselves. They are the coming into the consciousness, the mirroring, the realization of all the diencephalic and physiological functions.

A psychosomatic reaction is a disturbed physiology of the neuro-vegetative-hormonal-motoric functions with little or no disturbance of the personality structure.

A psychoneurosis is the patient's unknowing exploitation of symptoms for the purpose of retreat or escape.

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"Individual Psychology has always stressed the fact that it regards psychic life as movement, and considers form, expression, function, as a kind of frozen movement. Hence, if an individual purposes to raise himself from a lower to a higher level, we should expect to find two seemingly contrasting points in the movement, namely, the point away from which the movement goes and the point toward which it is directed. It is from these points that we are able to learn something of the direction of the movement."

—ALFRED ADLER, *Intern. Journ. Ind. Psych.*, Vol. II, No. 7, p. 6 (1936).