

SYMPTOMS AS INDICATORS.

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In its wanderings through the mazes and labyrinths of human experience and knowledge the mind may be represented as a traveller, often wandering aimlessly, but in the case of the searcher after truth the mind is always lured by some indication which becomes to it an incentive as well as a guide.

Indications or indicators may be said to be the advance agents by which the scientific mind is guided in its work.

An indicator thus may point the way to the revelations of a subject and also becomes a real index when it establishes the location of the data acquired.

Thus to the scientific type of mind every phenomenon of nature, either subjective or objective, becomes an indicator and is used as a part of the data for the establishment of theory and practice.

In this paper the subject of "indicators" is limited to the realm of the reactions of man usually spoken of as symptoms; and these two words, symptom and indicator, will be found to involve almost the entire gamut of the mental reactions of man.

It is with a full realization of the complexity of the subject that this abstract is presented, for I am not unmindful of the remarks made to me by Dr. Stanley Hall in discussing his own experiences, that in working in neglected fields or in new fields one at first finds many persons interested in a general way; later, but few persons can be approached on the deeper and more intricate phases of the subject, until at last when the manifold complexities and wider range come under intensified intellectual process, one stands alone to continue the work.

A glance at this chart (a large chart was shown) may enable you to get some idea of the ramifications and complexities of the subject. This chart represents a chronologic outline and topical details of the mazes through which I was compelled to wind my way in order to reach the position and viewpoint that enabled me to arrive at certain conclusions, a few of which are briefly referred to in this abstract. A good chart should have a place for every item, observation or ascertained fact. A good working theory should find a place for the ascertained facts.

Origin and Development of the Subject. At the age of 16, when my father died, the term symptom came definitely into my own vocabulary, brought about by inquiries regarding his illness. Later when I entered college I became acquainted with the term indicator, in connection with laboratory work in chemistry. From then on the term symptom was associated in my mind with bodily activities and the term indicator with physical phenomena. It was not until I entered medical college that I became acquainted with the term sign. Later

I acquired a discriminatory understanding of indicator, symptom, sign and test, in considering both man and his varying environment.

Differentiation and Definition. With reference to its use in this paper, an indicator is a condition or reaction subjective or objective which serves to aid the mind in the interpretation of phenomena associated with human activity.

A symptom is a subjective indicator; a sign is objective. Thus the feeling of lassitude, a headache, a buzzing of the ears, are all symptoms that may aid in locating and understanding the cause; whereas blood-shot eyes, a twitching of the muscles, and a swollen joint are signs, which although obvious enough may in reality be of secondary importance as etiologic factors.

A test may be considered in a general way as an experiment made for the purpose of determining and evaluating a subjective or objective reaction.

With regard to symptoms, as of all other phenomena, we can and must ask the eternal Where, When and Why? Anyone can answer as to place and time, but the why may be difficult.

Although the theory of Coniosis¹ and the interpretation of symptoms from the biologic and evolutionary viewpoint may become a very practical guide in regard to the where, when and why of symptoms, yet at the same time we should keep in mind the exceptional case, the exceptional tenth case, that may be "purely medical," or that may belong in the province of the psychoanalyst.

Biologic Interpretation and Application. Voluminous treatises have been published on symptoms, but they are medical books and deal with diseases. Doctors do not as a rule speak of "symptoms of health," although under our definition a condition of health is just as vital a subject for investigation as a condition of disease, for as a matter of fact one condition is in reality only thoroughly explained in the negative of the other.

Therefore it will be seen that the approach to an adequate understanding of the conditions that produce or cause disease must eventually find an avenue through an appreciation of what constitutes health. This is evidenced by the changes in medicine itself, which is gradually undergoing an evolution. More and more attention is given to the individual as an organism than to the disease as an entity. Etiology, namely causation, is considered more and more from the viewpoint of environment and of vocations and occupations, thus emphasizing the biologic interpretation and laying stress upon the importance of health supervision. With increased sanitation, improving the environment, less attention will be necessary for personal hygiene and still less for medication.

Problems are endless, and often simple observations will help in their solution. Brief mention might be made of a few such problems:

What is a proper schoolroom temperature? What are the subjective symptoms and objective signs of an improper temperature? The great discrepancy of opinions must be harmonized.

¹ See "Coniosis," Proc. Ind. Acad. Science, 1911, pp. 415-437.

Again, under what conditions do we feel chilly, and when do we want the home and houses overheated? Definite observations are necessary.

Further, the expression "I don't feel comfortable in a crowd" is frequently heard. Some people avoid crowds. Some go out of crowds "red as a beet," and others "white as a sheet."

Again, under what conditions does a man acquire knotty finger joints? Some individuals are sorely afflicted.

And, again, under what conditions are we under tension, with the jaws set? Tension and relaxation are names of important symptoms under city life, often reaching the point of visible signs. The where, when and why must always be sought.

The general sense organs, involutions of the ectoderm, keep us in touch with the external world and affect the sensorium; but we often forget that the so-called sympathetic nervous system co-ordinates the internal economy and has its own method of warning us that something is wrong, as for instance with the general metabolism. Generally we neglect the gentle warnings, and then appear surprised that assumed symptoms of health or of ill health are actually symptoms of disease.

Adjudication and Evaluation. The student of ill health, and of symptoms thereof, soon learns that rarely does a person come to him for advice on health, and only occasionally on account of a definite specific disease; but the majority of his cases—his material for study—is made up of those who complain of one or more annoying or distressing symptoms, relief from which they usually feel can be obtained from a "little medicine." Each patient of this kind has a more or less distinct idea of the nature of his ailment, and has faith in the efficacy of medication. Today there are many "new-fangled modes of treatment," as by various forms of light, especially for the relief of pain.

Although these patients are tolerated professionally, the question of properly evaluating the judgment of the patient becomes an interesting one to the conscientious physician, for he knows that these persons frequently become "old chronics" who contribute so largely to the fertility of the soil upon which the isms and pathies luxuriantly thrive, supplying the generous field for exploitation by quacks, and healers and curers, and the patent medicine man.

The Use and Abuse of the Term Symptom. This brings us to a consideration of the use and abuse of the term symptom. It is the aches and pains, the subjective annoyances and distressing feelings and sensations that drive persons to the point of applying for treatment and to the taking of medicine. Pills and powders, elixirs and tonics, and even health foods, are not in the great majority of cases a matter of a doctor's prescription. It is a rare instance where one finds an individual who is not an occasional self-prescriber, and the papers and magazines, page after page, testify to this condition by the cleverly worded appeals to this inordinate desire for relief through self-medication.

An analysis or critical examination of patent medicine advertisements will reveal a catering to this desire for relief from annoying and

distressing symptoms, which the sufferer may regard in the light of actual disease. Frequently these symptom names are so cleverly juggled as to present to the minds of the ignorant and unwary a picture of a condition associated with a disease, mainly a name made perhaps familiar through these very advertisements; and by a confusion of the terms symptom and disease the seed is sown which permits the idea to grow that relief and cure are synonymous.

Of course we say the purchaser of quack medicines is ignorant. But how should he know better? Who had charge of his education? Symptom is a word rarely to be found in the index of educational books. Curiously enough, the man who has been taught about the stars and the Milky Way in college, when the psychologic moment comes may also purchase an advertised medicine.

Taking a wider view of what is implied by the expression "The Patent Medicine Problem," the conviction forces itself on the student that Indiana is still in the "Patent Medicine Stage"—seeking to give relief to the afflicted, acting the Good Samaritan in binding up wounds, but making little or no effort to prevent the infliction of new wounds.

Indiana has not a single institution or school for the training of sanitary engineers, or for the proper training of sanitarians, hygienists and teachers of so-called "Physiology and Hygiene," a training that is not limited to mere textual recital, but one that is supplemented and enriched with the lessons from life histories, with the actual material from euthenics, eudemics and eubiotics to serve as a basis for emphasizing the lessons.

Therapeutics itself is gradually reaching the stage of a science; much simple observation and much experimenting under controlled conditions is still required. Alas that therapeutics should today be still the plaything of the ignorant. The discovery of any new element at once brings up questions: "What is it good for?" "What symptoms will it relieve and what diseases will it cure?"

Writers on therapeutics speak of the indications for the use or application of remedies. The old books gave long lists of indications; today the lists are getting shorter and shorter in the case of real remedies, but growing longer and longer in the case of remedies, or pseudo-remedies, for "conditions"—in short, for the symptoms of our "Triad of National Diseases," as found here, right at home; and to which I called attention in "Coniosis," printed in the Proceedings of this Academy for 1911.

The Necessity of the Biologic Viewpoint. This deplorable state of affairs in regard to the nature and significance of symptoms can be largely corrected through a study of life histories. If lessons in regard to the rise and decline of nations can be learned from history, why should not we also be able to learn lessons in regard to the rise, the work, the ills and decline of the individual by a study of biography, real life history, and not mere "book-chat," for "the proper study of mankind is man."

We must distinguish between reactions that represent normal and abnormal conditions of the human body. More attention must be given to reactions that represent health, for health is really not a stable con-

dition. Health is a variable state of the organism, of body and mind. There are all sorts of qualifying terms, such as good, excellent and best. On the other hand, we have poor, bad, miserable, precarious, etc., and we even hear of those who have "lost their health," or "regained their health." Therefore it is no wonder that Emerson grew impatient and said "Talk Health," in place of the everlasting talk about symptoms and diseases. Yet, paradoxically enough, perhaps nine-tenths of the common symptoms of daily life are beneficent, are to be looked upon as warnings from nature, and are to be heeded; but the correct interpretation of these symptoms requires the knowledge growing out of the lessons from life histories, thus emphasizing this study as a contribution to the solution of health problems.

Commonly there are only two categories that are used by both the laity and the physician, namely, health and disease. But where one shades off into the other nobody knows.

The modern laboratory method has given rise to many tests, especially to indicate the presence or absence of specific diseases, but complaint has been made of an over-nicety, an over-refinement and the neglect of simple observations.

We need an American System of Medicine, one that concerns itself more and more with health and health supervision, with the where, when and why of symptoms and how to avert, avoid and prevent ill health; and this requires that the "naturalist type of mind" return to medicine. This type is represented by a small class, few in any community or average county; and in an earlier day this class naturally "took to medicine." However, since the teaching of natural history sciences has become so common in the colleges and high schools, this type of mind is neglecting medicine; and as a result those who today take up the study of medicine are usually not those with the naturalist propensities, and therefore the biologic viewpoint is neglected. Too many present-day physicians still seek a solution in the midst of the complexity of the city; or becoming discouraged on account of the difficulty of disentangling factors, they abandon all efforts at a solution,—and so the isms and pathies of all kinds flourish.

I venture to say, after a long study, that nine-tenths of the common symptoms today are indicators of an abnormal environment. The other day I passed a street thickly strewn with cinders and ashes; these were being reduced to dust under street traffic and the dust whirled about by speeding automobiles, resulting in irritation of mucous membranes. Then I passed a school playground formerly covered with cinders, very productive of "black spit," but now covered with crushed limestone. Gritty dust is an irritant, and common mucous catarrh is a normal, a physiologic reaction, a process analogous to tear formation in the eyes when foreign matter enters. But with infection about a simple catarrh becomes purulent, just as a simple cold may become purulent and "hang on," and that in turn is followed by scarring, a sclerosis, all of which is very interesting to the pathologist and to the clinician interested in the production or causation of symptoms.

We are living in the days of ill health rather than of definite or specific diseases. The number of cases of the latter, as reported in the

Monthly Bulletin of the State Board of Health, is so small that in any average county one, two or three physicians would not be overworked in attending to them, and yet such a county may have perhaps 50 physicians. What keeps them busy? While correcting and rewriting these notes, the morning's mail brought me seven pieces of proprietary medical literature, six of these related to remedies for the relief of symptoms, the seventh relates to acute articular rheumatism, really a rare disease and for which there are a hundred and one remedies, nearly all variations of the original salicin or salicylate method.

A nose and throat specialist was very frank when one of my old patients complained that he was not being cured; he said to him, "there are some conditions which we cannot cure, but we keep on treating the patient as long as he comes to us." No wonder biographies contain so few encomiums on the medical profession.

Those who lead a simple life, life under clean air conditions especially, are apt to have few symptoms, the opposite being true of those who live under complex city conditions. One may in this connection refer to the *Life and Letters of Huxley*, where there are over 200 references to health and ill health, with mention of but one specific disease,—influenza. These references are to varying bodily and mental conditions,—many while in London, few or none while in the open country. Page 154 of volume I is a striking page; half reveals life under city conditions and the other half gives the picture of country conditions.

Huxley's life itself reveals the fact that health in the great majority of cases is an indicator of the environment, good health indicating a good environment, bad health a bad environment. This demonstrates the importance of offsetting indoor and city life by life in the open, a practice indulged more and more by those who are wise and observant. Charles Dickens may be cited as a classical case of the value of offsetting. Much can be learned from biographies.

The organism must of course change with every change in the environment, and it must not be forgotten that the environment is conditioned by both subjective and objective factors. What a man reads is as much a part of his environment as what he eats, and the conditions under which he reads and eats are surely environmental factors, as potent and exacting as the conditions under which he works and sleeps. The two extremes of health and disease are rarely as sharply divided as two lots by a city fence. Frequently the transition is that from daylight to darkness or darkness to light. The twilight hour of the organism is the transition both from health to disease and from disease to health. The student of symptoms from the biologic, the naturalist and evolutionary viewpoint speaks of three categories: ease, unease and disease. What is commonly called "health" constantly fluctuates between ease and unease, rarely touching actual disease at all in the life of the present-day individual. But in the end all must die, and usually from some terminal infection, actual disease, and any philosophy, any theory, any religion that neglects to give discriminatory attention to symptoms, signs, indicators and tests—well, comment is unnecessary to any one who has had some training in biology.