

Gates, Elmer. "Life a Property of Matter." *Suggestion* (Chicago: August, 1904), pp. 70-73.

**Life a Property of Matter**  
**By Prof. Elmer Gates, Washington, D. C.,**  
*Written for Suggestion.*

By mind I mean the sum of all those activities in an organism by which experiences are remembered and acts adapted to end. The mind, by this definition, includes not only the conscious but also the subconscious activities of life. In fact, as I have elsewhere shown, if we were to suppress, in the lowest known living thing, those activities by which it FEELS stimuli, it would not longer be regarded as living.

This kinship with the cell need not alarm us; we need not be ashamed because we are simply the more highly developed brethren of amoeba and other one-celled organisms having minds of a lower order than ours. This kinship has deeper meanings. We have recently learned through modern research that even crystals have life; that the supposed distinction between "organic" and "inorganic" matter is no longer tenable; that we have to modify the dictum that all life comes from the egg and maintain that life finds its seat still lower in the scale—even in the molecule and atom. The hypothesis of spontaneous generation is no longer necessary—life is probably *immanent* in organized substance! If so, then we need not the hypothesis of a special creative fiat to *start life* on an evolving planet; the life is already there in its molecular masses! We need not suppose that life started by some germ floating through interplanetary space and lodging upon our earth—the life was already in the earth; the Creative Power was already immanently diffused through the earth's substance; the universal life being omnipresent. If all this contains a suggestion of the truth, then when we acknowledge our kinship with the mental life of the amoeba we assert our relationship to the Cosmic Life eternally immanent in the substance of all worlds—a relationship of which we may be proud.

Now, in the article on the Education of Brain Cells following this, I have called attention to the fact that the cells of which the bodily organs are composed are *alive* and they are alive because they are *sentient*, which is a *psychologic* characteristic; and that it is upon this mental character of the cells that the brain acts directly, in controlling organic functioning, through brain-training or brain-building.

When any organ or part of the body is subjected to all the discriminable sensory stimuli, in taxonomic groups, so as to train each sense systematically, there is enregistered in the brain

memories of these sensory experiences. These memories consist of structural and chemical changes in brain cells and fibers, and of course these cells have nervous connections with the end-organs of that part of the body from which they were derived. By this means the brain (or mind) gets in more direct and complete touch with that organ, sends to it more of the various nervous influences, and more directly controls it through the mind. This is *not a process of suggestion*, but of acquiring by scientifically-directed sensory observation all the classically-grouped sensory memories that can be obtained through any given part of the body or any organ, so as to anatomically increase the nervous connections between the cerebral cortex and that bodily part; and then subconsciously, by vaso-motor regulation, that part of the body will get more blood, etc.; and by *volitionally refunctioning* those memories in connection with *dirigative attention* to the related bodily part, physiologic effects and influences are at command. The truth that is in suggestion is herein carried one step further until it becomes an educative, brain-building process—the art and rationale of which is known.

It will not do merely to “suggest” colors, sounds, touches, pressures, etc.; the *actual* sounds, colors, etc., must be *perceived* in the natural way if a brain-enregistration corresponding to a particular sensory experience is to be produced.

Suggestion has its own special and important sphere of use, even as an aid to the process I am describing, but in this process the truth of suggestion has culminated in an educative brain-building preparation, and in Dirigative Attention to the bodily part.

## THE EDUCATION OF BRAIN CELLS.

I will give one experiment to demonstrate the connection between brain building and the functioning of the internal organs. I will premise by saying that each organ of the body is composed of cells which have their own mental (sentient) activities, and that these activities differ in their psychologic characteristics from those of the cells of other organs of the same body, each group of cells having special capacities and special kinds of labor to perform for the common good of the organism. They are capable of feeling a stimulus sent to them, and it must be remembered that only mind can *feel*; and these cells respond to this feeling by adaptive actions and perform certain results in accordance with the habit which has arisen out of their previous experience—such phenomena are mental phenomena, and the functioning of an organism may be described as the group-mentation of a society of cells.

That such groups of cells can be re-educated is demonstrated by the following experiment:

Two shepherd dogs were fed milk containing enough annatto to render the milk just perceptibly yellow, and enough tartar emetic was put into the milk to give them nausea, almost to vomiting. After several repetitions, although thirsty, they refused to drink the milk, and the sight of the yellow milk caused them to indulge in those well-known expressions which a dog makes at a nauseous object. In order to make a still more profound impression upon them I began to feed them milk in the dark, and while they were drinking the milk colored yellow and containing the emetic, I turned on the light so that they might see the color of what they had been drinking, and thus associate that color in the milk with the nausea which yellow milk had previously produced. Thereafter they refused to drink milk in the dark.

Before describing the rest of the experiment I wish to remark that by this process I had been giving to that part of the brain and solar plexus and other subcerebral centers a series of educative memory structures that were catabolic and which caused the affective state of the dog toward the milk to be accompanied by feelings of nausea whenever he saw the milk, and by an emotion of dislike.

To show that brain memory-enregistrations have an intimate connection with the functioning of the stomach, I made still one more experiment. I began to give the dogs milk just about dusk, but without coloring it or putting in it an emetic, and thus they were soon led to freely drink milk in the dark. I then gave them milk colored with annatto, which substance has no action upon the dog, and while they were drinking the milk—they had been accustomed to it for several weeks—I turned on the lights so that they could see what they were drinking. Now this milk contained no emetic, but as soon as they saw its yellow color, three of the five stopped drinking and began to retch or vomit. The functioning of the unpleasant memory structures acted directly upon the stomach of the dog in a manner similar to the emetic, that is, the stomach centers of the brain had been educated to believe that yellow milk was nauseous. Every such catabolic memory interferes with normal digestion.

About three weeks thereafter I again began to feed them milk in the daylight, and gradually colored it to a deeper and deeper yellow, but without putting in the emetic; and in four weeks' time I succeeded in getting the dogs to drink yellow milk, and because of a small amount of sugar that I placed in the milk that had been colored yellow they soon began to prefer it to milk not colored yellow; and by placing small amounts of emetic in the uncolored milk, I soon got them to dislike the normal milk as much as on a

former occasion they had disliked the yellow milk.

Mrs. M. had been suffering for nine years from dyspepsia, consisting not so much of gastric inability as of improper assimilation. I gave her a systematic series of training in pleasurable odors and perfumes and tastes, and a systematic series of remembrances of pleasurable gustatory and other hunger feelings and thirst feelings, giving the training at the same hour each day every day for two months and teaching these experiences in classic groups of data—giving them a body of scientific and taxonomic knowledge of these subjects. The result was a restoration of her assimilative powers and a gain of 20 per cent in weight—she had been very much emaciated—and of more than 30 per cent in strength. The additional brain cells which were thus educatively placed in the cerebral areas ruling the gastric-intestinal tract caused the brain to send more and better stimuli to the digestive organs and thus bring about the cure of her disease through the life-activities of the cells.

I am not a practitioner and I do not take patients for pay nor for any other purpose except for experimental research.

Mr. L. was unable to distinguish as small a color-difference with the left eye as with the right eye. By producing upon the eyeball and its supplementary integuments a series of systematic sense impressions of the different kinds, and by giving him sensations upon the eye of many thousand tints, shades and hues of color which he had never before consciously discriminated, and without trying to test his capacity to discriminate the difference less than those which he had previously failed to recognize, I was able in seven weeks to produce, by means of brain-building of the seeing areas, a greater power of discrimination in that eye than in the other one, which was previously most acute.

The conclusion which I wish these experiments to emphasize is that the functioning of a body organ can be variously modified, stimulated and normalized, its abnormal functioning cured by means of libero-motor stimuli sent to these organs from their corresponding brain areas, and that, therefore, the change is effected by the action of the mind upon the psychic activities of the cells of the organ.