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CHAPTER 7
Attention, Dirigation, and the Newest Introspection

The discoveries, inventions, and mental capacities obtained by these new methods of introspection were the initial steps that led to simple dirigation and introspective dirigation by which any bodily or mental conscious function could be indefinitely augmented and directed, and the subconscious processes augmented and controlled.

My whole life has been a perpetual introspective dirigation and an awareness of the one subject of the art of using mind . . . which became life's one incentive—so fascinating that nothing else has ever been of much interest. From my twelfth year on, my life was but a part of this one great experiment in the art of using the mind.

—ELMER GATES , early writings

Elmer Gates took up other subjects in ways similar to his study of acoustics until he began to get original ideas. He tried many different ways to discover what would produce in the shortest time the greatest number of new ideas that would experimentally prove true. Having found that the largest part of his mental content was not worth introspecting, that validated

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scientific data were the only normal data worth the efforts he selected another branch of physics, thermodynamics. He taught it to several persons and retaught it to himself. After several months of experimental work in acquiring anew his mental content relating to heat, and after new ideas had ceased to come, he directed his attention first to one classific group of thermodynamic data, and after several months to another, and so on with all groups. He thus became dominant upon thermodynamics; all other subjects were eclipsed in attention, and there arose an intense desire to answer questions on, and know more about, heat. He kept intending his mind on this subject until new ideas and thoughts, born out of the data in his mind, began to arrive. They turned out to be mostly true, and were not partial glimpses or often entirely untrue ones like his old naive insights. The new ideas were actually discovered relations between actual concepts; the new thoughts were generalizations from true ideas. As these data were held uppermost in attention, the whole subject assumed a degree of vividness and clarity and precision that was new and wonderful to experience—as in a vision. Every datum of that science was in

readiness at a second's notice, and only such data occupied the field of consciousness. All that hinterland of useless memories and speculations disappeared from focus, and original ideas in thermodynamics of a higher type began to form, some of which were the basis of practical inventions. It was the mental method, however, that was of interest.

Optics was selected as the next subject. After twelve weeks' reflection upon what he remembered from a short course two years before, only five new ideas resulted. Just one proved to be true, the false ones being the result of a theory that was accepted as fact. The results were not so prolific nor so easily acquired as in the previous mentation, although he tried harder. Before repeating this attempt, he experimentally re-acquired the data of optics to get new experiences and eliminate false data. In two weeks of directing his attention to these data he found eight new ideas, all of which proved true.

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He had noticed in his early experiments on conditions affecting mentation that he had greater facility in solving problems connected with the scientific domain that he was introspecting. It was now evident that this holding of a subject in mind introspectively produced some definite effect upon the mental processes and perhaps upon the brain, or it would not thus inevitably tend to new and true ideas. Also if only true data were held in consciousness, generalizations from his mental content were more apt to be true than false. The mind accepts both true and false with equal faith; and when a generalization includes both, it cannot be true. This practice became an important part of his growing art of discovery; namely, to re-acquire the data of a science in the psychotaxic way to eliminate the false data, then render the true content more dominant by introspective attention, or dirigation, to illuminate with awareness only the true and leave the false out of focus so that when relations were discovered or generalizations made, results would be true. His former tutor, Dr. Armstrong, who heard the first announcement of this law, said, "You can now quit work and retire; you have done your part for human welfare. All you need to do is to publish this one law and the method of applying it."

Four years before his next experiment Gates had learned the elements of the electrical branch of physics, but that knowledge had lain dormant. He set aside two weeks to see if suddenly he could get new ideas on the subject. He began by directing his attention first to one group and then another of electrical data, and thus kept the subject in mind at the same time each day, when well nourished and well rested, and in a room free from disturbances.

Each day began with a short period of quiescence. Then he would understandingly pass through consciousness each datum, holding it well in mind a few minutes. Then a synthetic view of the whole subject was held for a time. The possible relations and uses of each datum, the one to the other, were considered. After five weeks a number of new ideas began to occur; the mind had been put to work and was producing results in the selected subject. While seven ideas were new to

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him, six proved to be not true, and the other not new but a discovery of Faraday's.

Gates reacquired electrical data psychotaxically, eliminating the false, and kept them in attention. In three weeks eleven new ideas resulted, all but one of which were true, that being due to a false datum that had crept into his synopsis.

As his acoustical data had been dormant for almost two years, he then directed his attention to his synopsis of acoustics and music, and made many musical inventions and a few discoveries.

He found that while he could select the subject, he could not predetermine what problems would be solved. That seemed to be determined by (1) the kind of data in his mind, (2) the kind of development made by his mind, (3) the kind of growth that took place in his brain, and (4) the *next logical or classific step in his knowledge* of that subject. This series of experiments impressed him very much. "Could that strange and mysterious something called mind be called upon to do work, and that most important kind—discovering new knowledge?" he wrote.

He resolved to study attention more closely, and its effects on mind and body. He made hundreds of introspective and attentional experiments every day, spending eight or ten hours in profound quiet and keeping the subject of attention longingly uppermost in mind, "hoping, desiring, willing, craving that the Cosmical Mind-process might cause new ideas to enter consciousness." After six weeks' effort he attained a number of new ideas, thoughts, and insights, and discovered what he termed "dirigation" (from the Latin *dirigo*, "to direct").

When he limited his attention to some bodily part, he soon became aware of a feeling in it which, when the attention was prolonged, became more distinct. After several hours' practice daily for some months, the feeling became greatly intensified, to a sense of fullness, pressure, warmth, tingling, and indefinite excitations of the nerves of touch and temperature. By much practice he acquired skill in quickly dirigating intense feeling in any part of his body that he could mentally locate by getting its

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"local sign" in mind. To obtain a local sign, a conscious feeling must first be experienced in some bodily part or organ in order to locate it mentally. An organ like the pancreas or spleen can be located only from pain in it caused by ill-ness, or from special medicines given to locate the organ.

Everyone has noticed without doubt the increased pain due to paying attention to a toothache, nausea, or inflammation. Professor W. B. Carpenter, taking his cue from Harvey, spoke of the tingling sensation produced by "thinking" of some part of the body. However, Gates observed that Professor Carpenter had carried it no further, and that its significance was not understood.

After eight months' practice Gates could quickly get an intense feeling in any bodily part selected. Another form of practice was changing the dirigation from one part to another, which gave greater control over his body, and later gave a chance to study the volitional factor of conation. The mind, as it were, took conscious possession of parts over which it previously had but little governing power, and the health of every part was augmented. At first the feeling dirigatively aroused seemed simple and of one quality, but after a few years' practice it appeared as a complex of several different kinds of feeling that varied with the part. By introspectively selecting one feeling out of this complex and dirigating to it alone, a different local effect was produced with a feeling different from the whole. Dirigation to certain of these feelings definitely and measurably augmented the flow of blood and metabolism in the part. Mosso, the Italian physiologist, at a later date measured the increased weight of the head due to augmented blood supply during dreams and mental excitement, but Elmer Gates approached this from another standpoint, traced its relations to voluntary effort, and studied its general effects on body and mind.

Regular dirigation augmented the growth of a bodily part. As an example, a patient who was taught to dirigate was able to increase measurably the girth of one arm. Also abnormally small organs could slowly be increased in size, and it

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became evident that dirigation had applications in curing certain diseases and underdeveloped organs, as well as in training the attention. It was not difficult, after sufficient practice, by dirigation to produce emesis, catharsis, enuresis, salivation, lactation, lachrymation, and even sudoresis. But dirigation may psychologically produce physiological effects; it may cause appetite and laughter, healthy skin and cheerfulness, strength and exhilaration.

Gates also found that dirigation to sensory nerve-endings of the special senses, such as those of touch, taste, smell, sight, hearing, warmth, and cold, greatly increased the discriminative capacity. Thus after sufficient dirigation to the hearing organs he could hear fainter sounds and detect more minute differences between slightly differing pitches and amplitudes. (He recorded his upper limit of hearing as 55,000 c.p.s.) After having dirigated to hearing, if he dirigated to seeing he could feel something that seemed to leave the hearing organs and centers and go to the sight centers. He concluded that he felt the innervation and vasomotor blood dominancy leaving one set of structures and going to the other.

Finally he found that he could dirigate not only to the nerve endings of a special sense but to its functional center in the brain. To locate mentally its local sign required persistently continued practice until a feeling of fatigue was noticed. Dirigation to the nerve endings increased their sensitiveness as instruments for responding to their stimuli, while dirigation to the brain-center increased the discriminative powers of the introspective and analytic attention and augmented the natural functional activity of those parts.

When dirigation was to a sensory brain-center, it caused spontaneous "memoriam" images of a kind corresponding to the particular sense: when to the cerebral sight-center, pictures and visions; when to the hearing center, auditory images of voices and tones; when to a motor-center, images of walking and flying; and so on.

If dirigation was intense, frequent, and prolonged it produced a functional hyperesthesia that aroused images of more than

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usual vividness—a "dream-like" vividness and a self-active sort of spontaneity that was less subject to volitional modification than the memorial images. If these dreamlike images were dirigated to with sufficient intensity and frequency, there resulted not only an increased hyperesthesia but also a vasomotor surcharging of the functionally active organs, producing a hyperemia that created something still more vivid, phantasms, which were so seemingly real and so little susceptible to modification by voluntary effort that they were apt to be mistaken for reality. The image is thought to be an apparition. If this dirigation was continued, the hyperemia would not subside and the phantasm would become permanent, and the result would be delusional insanity, as happens in monomania.

Gates then found he could shift the dirigative dominancy from sensating to imaging, and thus he gradually learned to dirigate to the cortical image areas of each sense; and from that state to

dirigative control of the higher intellections, such as conceptuating, ideating, and thinking. This practice was an aid to intellection, rendering the function more alert, active, quick, and intense. One or two days' practice enabled him to render dominant and fully active any one of the intellectual powers, and its work was then done more easily, quickly, and accurately than otherwise.

This dirigation was extremely difficult because at first he could not locate the function anatomically. A process like ideating or thinking has not a definite center but consists in groups of cells and fibers and ganglia scattered variously throughout the cerebrum and subcerebral nervous structures. After long effort he could dirigate to a functional activity as soon as it could be distinguished from all other kinds of functioning. This he discovered how to do in two ways: by overworking that function just enough to feel slightly the prodromata of its fatigue; and by rapid alternation of different kinds of functions, as first the arithmetical, then the musical, changing rapidly until its unique distinction between the feelings was identified. The local sign was

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not necessarily the feeling of a bodily part but of an activity that differed *qualitatively* from other activities. Dirigation to the mental activities concerned with mathematics, for example, augmented ability in that line and increased the fruitfulness of new ideas.

Frequent dirigation of the happy esthesias made him brighter and stronger; of the depressing and melancholy ones, weaker and apathetic. By calling up an emotion, quickly changing to another and alternating, he introspectively found the local sign; the emotion could then be aroused without the aid of expedients at first necessary.

A pupil could be taught dirigatively to functionate all the happy esthesias more often in a single week, and get a fuller acquaintance with them, than he would normally in years of ordinary life. By this means the tide of life's energies will be augmented, and every mental capacity and activity increased, Gates pointed out. Emotive dirigation had many times enabled him to "keep sorrow in abeyance and worry at arm's length."

If the true data are dirigatively brought into consciousness and not the false, the former will become dominant and the latter will atrophy. If the happy and not the unhappy emotions are dirigated, the mind will soon be devoid of depressing conditions; and so with motives and all other conscious states. Dirigation is the key to the method by which the mind can be largely made over, especially in connection with later methods. Through dirigation he was first able to say, "I am ruler over my own mind."

In volitional dirigation he found it necessary first to separate introspectively the volitional from concomitant esthesive and intellective states; also from the *effort*-feeling that accompanies a conation. It was particularly difficult to discriminate between the volitional factor per se and the *effort*-feeling, and it would have been impossible without his long previous experience in experimental introspection, quiescence, and awareness. When once he got clearly before his introspection just what constitutes the volitional part of a conation, and dirigated, it became so

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astonishingly vivid that he was surprised never to have noticed it. Volitional dirigation more than doubled the mentative speed of his mind and enabled it to do intellective and emotive work with less than half the former expenditure of energy, chiefly because of the dropping of parasitic functionings. Mental processes that were before difficult or impossible became easy.

He found that dirigating to all the faculties concerned in an act, and to all the organs involved, caused increased aptitude. The results, he remarked, surprised and delighted him; but they cannot be properly understood without the previous training. An act involves a conscious purpose, has an end in view, requires effort, comprises intellective discernment of the idea of the act and the objects acted upon, includes esthesic preference that the act be performed, necessitates a volitional ordering of the performance, and depends on cooperation of the bodily and subconscious processes. All these factors must work together. To isolate these factors introspectively and dirigate to each independently brings each into undue vividness and augments the dominancy of the part it plays in the conation. This does not much improve the skill as a whole, and may even interfere; but dirigatively to train each factor equally much augments the skill, increases the speed, and conserves energy. This practice Gates considered one of the most valuable discoveries of the Mind Art.

But a better result was obtained when he finally dirigated to the mutual modification of all factors that resulted when they were simultaneously acting in the synthesis of the conation. He cited as an example shooting at a target with bow and arrow: the process was repeated in close succession until he located the feelings accompanying that conation as a whole, including the feeling of the whole bodily attitude, every muscular strain, and every mental operation. This kind of dirigation involved parts of the body and mind not brought into activity by any of the factors when separately dirigated, because the coordinated process always involved other structures and functions than those coordinated. It

required a separate set of associative enregistrations to coordinate, for instance, sight-memories with speech-memories.

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This conative dirigation quickly augmented every desirable factor. Moreover, when applied to a faculty it promoted originative work more than any other expedient.

Quiescence and dirigation are proper aids to the mentative process of inventing, discovering, and learning, Gates warns, only after all the other elements have been achieved; they are not substitutes. The intellective activities of sensating, imaging, conceptuating, ideating, thinking, and reasoning, and the esthesive and conative processes, are rendered more efficient and normal by proper dirigation and quiescence. Collection of the actual data of a science and their proper handling are facilitated and normalized by dirigation and quiescence and by regulation of bodily and environmental conditions. These practices are aids that promote mentation, and do not constitute it.

One of the practical uses is the equalization of one-sidedness in the mental life; to dirigate activity and blood to other organs than the ones overworked all day by some particular vocation is often the only way to rest them.

He found that dirigation could be applied to the *introspects* of a group of states. As he explained it: "When the introspects of a mentative synopsis of a special class of phenomena are dirigated, those structures of the brain which are functionally involved in maintaining these memories become the seat of vasomotor, metabolic, and liberomotor dominancies; and after some hours or weeks of practice, growth will have taken place, and these structures will have become subconsciously stimulated for their tasks. Active functionings of the subconscious kinds (differentiations and integrations) will occur, and the results will from time to time be flashed into consciousness. Evanescent and almost imperceptible shades of meanings and relations will be discoverable owing to the dirigatively exalted activity of the parts. Introspection becomes easier because of the greater intensity of the conscious states in *contrast* to the adjacent quiescent structures; and the enthusiasm—entheasm—exaltation of the rapture of anticipated discovery and new insight increases the

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total functioning with reference to this one contemplation. The whole conscious and subconscious mind in functional reaction with the cosmic forces tends to produce mental evolution in the understanding of that class of phenomena contemplated. Growth takes place, the attention concentrates in those structures which

must function to maintain the comprehension, and this renders those tissues most sensitive which are most directly concerned. At the same time the other cerebral structures by correlation of functioning become less active and more quiescent and anemic, so the consciousness in contrast acquires a dreamlike vividness; indistinct changes and shades of consciousness ordinarily unnoticeable, enter from the great subconscious domain."

That some of the ideas attained during these special dirigations should prove true and valuable amazed him. He wrote "That no one may conclude that I believe these new ideas came out of nowhere and from nothingness, let me emphatically say that I know them to be the result of inferences from data already in my mind, or generalizations and new combinations thereof and better understandings and insights, and esthesic appreciations and appraisements of their useful applications. Intending the mind upon mere vacancy of mental content will not produce new ideas; re-functioning cannot give results unless there are true data as conscious states. The new ideas are not 'drawn out of the ether where they are stored,' as one spirited journalist insisted. They are apperceptive elaborations of mental content, and the results will be true or false in proportion to the true in the mental content. I know indubitably that by introspective dirigation I can attain new ideas on any subject at will by consciously dirigating that cosmic process which is the basis of my mind; and that new ideas achieved by subconscious methods were not attributable to any source outside myself, except insofar as my mind-process is cosmic and part of a universal process going on outside myself, and of which my mind is a fractional part. But how does it happen that when the same data are taught to a number of students there is only an occasional one

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who gets original ideas? It does not follow that because a student has studied a science he will make discoveries and inventions in it. Why not? That is just the point I was trying to discover."

These experiments in dirigation acquainted Gates with new characteristics of the powers and domains in his mind, and taught greater skill in introspection. A dirigated sense or higher mental process became more distinctly differentiated from other processes with which it was usually more or less associated and confounded. Hence these experiments led to a new method of introspection, a third step in his technique, which he called the Newest Introspection. The first step was attaining a periodicity in bodily and mental quiescence and in the mental function before introspecting it. The second step was preliminarily re-functioning the process; and the new third step was then dirigating that process

into greater vividness. It would then be more easily and accurately and completely introspected, with many details that would otherwise escape notice. In this Newest Introspection the Awareness became a predominant factor the introspective act now *witnessed* but did not interfere with what it witnessed.

There were three remarkable degrees of this Newest Introspection in which the dirigative effect was continued to the stage that was characterized by the "memorial image," the "dream-image," and the "phasm" (phantasm).

These were steps of great importance toward a more intimate and extensive knowledge of the mind, preparing the way for culminating discoveries. Gates had by now become an introspective specialist (the description of him as a natural psychologist was a fitting one). He did this work with the utmost religious seriousness, combined with deeply joyous interest. He did it with an overflowing zeal and a purpose that recognized no limitations— "just as well as I could and just as well as I knew how."

In this respect he made another psychologic discovery of deepest significance: that a disapproval (intellective, esthetic, emotive, moral, religious) with reference to the plans, motives, or acts bearing upon any line of original thinking, any qualms of

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conscience or judgment or taste (justified or not), amounted to an inhibitive dirigation that diminished or prevented further original results. Of this he had much direct proof. "A successful dirigation," he said, "must be one without disapprovals; hence it must be based on that which is true, just, and desirable." The plan or purpose of dirigative effort *must be changed until it does meet the approvals*, he further emphasized; and when every datum of the plan has been associatively integrated with an approval, and every datum dropped that does not get approval, then dirigation will successfully accomplish its purpose according to the abilities and "Plane" of the person doing it. The method by which a new truth is revealed is largely a moral achievement, the outcome of organized aspiration or desire-prayer—not a verbal invocation to a Being who grants it as a gift, but the direct effect of a natural and long interest that keeps the mind intended.

Gates found he was getting experiences so uniquely personal that any serious attempt to explain them to others was useless. He was able to find but two people who had sufficient repose and introspective ability to repeat his experiments, and then only a few of the experiments because of the great amount of time and practice required. Until the great utility of this line of work became known, few would ever have enough patience to attempt a

verification in their own minds of his introspective results. He therefore continued his study of the action of mind on body by conventional methods that could be more readily verified by others.

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