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**CHAPTER 15**  
***The Bridge to Validation***

*The desire for some method of sifting the proved from the vast mass of the unproved led over the bridge of introspection into the new domain of validation.*

—ELMER GATES

The life and goals of Elmer Gates cannot be understood apart from his progress in introspection (or introtechnics, as he called its arts), leading to cognosis and the art of validation.

At Germantown researches were begun into the volitional factor of conation and the conscious factor of volition, and its dirigative control from alethic motives only (auturgy) as the secret of the highest moral and ethical life. Important results were attained in Gates' study of consciousness and introspection. His first insight into the possibility of introspectively identifying the volitional mental unit that is the self-active conscious factor in a conation was that during the whole of phylogenetic organic evolution the act of will has been more frequently performed than any other conscious state, almost as frequently as all others combined, it being attendant upon every act of consciousness, the precursor of every act of attention, the concomitant of every bodily movement. So automatic and subconscious has it become that the conscious state that is the volitional factor cannot be

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detected. His second insight was that by frequently practicing the act of volitioning and simultaneously introspecting it by the new techniques it might be isolated and identified. He repeated systematically each of the various kinds of conation several hours daily, but it was nearly three years before the volitional factor was introspected.

An act or *conation* involves thinking, feeling, and doing, and has an intellective, or cognitive, element, such as image, concept, idea; an emotive, or feeling, element, such as desire, fear, hate, love; and a volitional, or will, element that puts into motion the anatomical and physiological processes that accomplish the truth that is cognized or the utility or beauty that is felt. To avoid tautology, he called the volitional, or will, factor of the will the bulic factor, or boule (from the Greek *boulesis*, "boule")—meaning the self-active part, the will-act per se.

The word *will* in common usage, and even in psychologic terminology, involves many factors that are not properly volitional.

When an act has been decided upon and the motion is about to be executed, there is that something done in the mind which is neither intellection, emotion, nor conation, but which sets in motion the execution of the deed. This also sets in motion the psychal interval or process which as the willing-process is the volitional element of conation.

Gates' own introspection taught him that choice is not a matter of will at all, but a predominance of intellectual judgment and emotive preference, because the thing chosen cannot be willed. The nature of consciousness is such that the intellectual and emotive content will make the choice. You prefer a pleasure to a pain not because you will not to like the pain, but because that is the nature of mind.

It was at the Chevy Chase laboratories that his first successful experiments were concluded, but Gates had been holding the problem prospectively in mind for at least ten years. His diary records over 368 experiments made during three weeks in December 1896, during which time he devoted his entire attention—over sixteen hours daily—to them. Since 1890, when he first

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practiced dirigating coenesthesia of the frontal lobes of the cortex and intellectual dirigation, no other practice had been so tiring.

A valuable part of these experiments consisted in living for one hour daily an ideal life intellectually, emotively, and volitionally to form a periodicity of habit whose influence extended over several hours.

Inhibition played a great part: in volition, Gates estimated, 90 percent was subconscious, with only 1/4 percent of purposively willed conations, the remainder being spontaneities to be inhibited. Control may be exercised over inhibitions to make them subconscious and thus waste less energy, and over body and environment for fewer intrusive spontaneities, he found. But mental life may be *directed* by truth willed into action (alethobulically, as he called it) to avoid nearly all spontaneities so that they need not even be inhibited.

Finally he no longer had to will the inhibition of an intrusive state; it began to be done subconsciously ("Cosmically—how wonderful," he exclaimed), and only those states relating to his subject came into awareness. "I never knew this before; it was never possible because my will was motive-governed, now it is more bulic. Heretofore my conations were effectively willed, now some are purely intellectobulic," he wrote.

For best subconscious mentation, business and domestic affairs must be so arranged that they could be dropped for a time. The

mentator must be free to allow the day's mentation to upset all previous plans without regret, even if incurring financial or social losses. Best alethic mentation can never come to one who is not free and eager to have all his plans and years of labor upset by the next day's insight. (So was his life guided.) Through the ages feelings have guided. Survival of the fittest, at the mercy of environment, is the rule at lower stages of evolution, but as more mind is embodied the mental factor becomes more dominant and the environment-molding creature appears. But he is almost wholly moved to act by desire, emotions, affections. The strongest motive is based on emotions of a selfish kind. Not until the highest motive can be willed despite affective states is man free from

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automatism. It will be a great step when man wills the conation that he knows he ought to will. The value of this insight into alethobulic conation is mostly in a method of research, Gates commented; one must *know* what is true before he will trust it.

One result was that the goal of his psychologic plans should be to prepare people for this kind of conation—which is intellectually, instead of emotionally, willed. This meant he must make a collection and verification of the mentative data of human knowledge, must have a place and means to verify it and keep it, and where people can learn it—a laboratory for research so “truth may be sought and the raw materials ready for the next Great Step—the discovery and immediate conation of truth when knowing and willing are one and when what is known and willed is immediately loved as nothing else can be loved.”

A study of Awareness in connection with the bulic factor would lead to the acme of psychologic discovery so far as his ability permitted, Gates anticipated with eagerness. “I eliminate from my consciousness every special state by calling up each class one at a time: such as color, sound, taste, musculation, images, emotions; and I notice among the variable groups of conscious states one invariable factor. Is it Consciousness per se or is it a different order of Consciousness as Awareness? In prolonged quiescence under favorable conditions I have seemingly been aware, but not of any special conscious content. Thus I taste sugar; the taste is sweet. The sweet is my conscious content, the consciousness is not something plus sweet, but take away the sweet and no taste remains. That is, the conscious sensory state disappears with the consciousness we call sweet. The same with every sensation, systemic or organic feeling, intellection, emotion, conation. I know for I have just been trying it. But when the conscious states disappear my Awareness does not. What I call

Awareness remains unaltered, and I know it remains the witness of each passing state.

“I will a conscious state, such as a memory, to come out of my subconsciousness, and it comes. What a marvel! I issue the volitional fiat and behold, it is done. What greater wonder?”

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Behold how insidiously this new insight has dawned in my mind. I have direct knowledge of differences between Consciousness Awareness, and the bulic factor of volition. I am aware that I am conscious of the states of self-consciousness. This is my experience with my mind.”

After many years of most sincere and earnest devotion to mind, he felt he was at last getting within sight of the highest domain—the ultimate psychologic point of view. He now knew where and *which way* to look.

He saw he was not to do the work he had so long planned, but must delegate it to others as soon as they were trained, and devote his time to researches in the new regime. He felt that a new order of discovery was at hand. “I cannot banish from my mind the intense expectancy that I might discover a power of the mind unknown. Perhaps my experience with Awareness and the bulic factor amounts to it. Has anyone ever before willed without affective content?”

In his diary, December 9, 1896, he wrote: “I must remove from myself all resentment and prejudice; to act only according to universal love; to plan only when Boule or Awareness is uppermost. They are never selfish. Why?”

One immediate result was the discovery that the isolation of the bulic state in consciousness was the first prerequisite to will-training. The chief result, however, was the training he received in controlling the will. “The record of experiments does not convey how difficult they were; the main and important results cannot be written now,” he wrote, “because I have no words to use and no skill in expounding a subject so new to me. “I have somewhat freely given sentences illustrative of my emotional and reverential attitude toward mind. My desire and aspiration and propection for more knowledge I regard as a prayer to Mind; not in any mystical but in a purely physiologic and psychologic sense. I want a new insight; I must desire to solve a problem, before the subconscious processes will go to work. That by a conscious desire and idea and volition I should be able to set to work that Cosmic Process called Mind is to me so overwhelming

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a mystery that I stand amazed and say, O wondrous Mind, give me more light. And when further light comes I am just as wonder-struck as when through an idea, an image, a desire, and a volition I call upon this Cosmic Process in me to move my arm, or recall a memory, and forthwith my arm moves and the memory is flashed into consciousness.”

The plan of the institutional work was also first formulated while at Germantown, and preliminary tasks were outlined. For instance, it would be harmful in mental training to re-functionate accepts, theories, false ideas, and untrue images of a science; therefore Gates saw it necessary first to collate and verify the data of the science by induction and eliminate theories by re-observation. It would not be easy; the literature was large, and an enormous amount of experimental work must be done with a large laboratory and many trained workers. But the main difficulty was that there was no scientific criterion or standard of truth. Induction is only relative, its facts known only in relation to other facts. In addition, suggestibility is almost constantly a source of errors, while those more fundamental than theory or hypothesis, like sensory illusions, may be inwrought in the higher mental processes. The questions seemed very formidable, but he hoped that by the aid of psychurgic methods they would be solved. If there is anything true in human knowledge, it has been discovered by mind, and since mind has consciousness as its underlying factor, he felt that in some way the secret lay enshrined in the phenomenon of Consciousness.

Before he went to Germantown, most of the main principles and methods of psychurgy had been solved, but there Gates accomplished a much further development of the science of introspection and the art of introspecting; a whole new domain of subjective experience was opened, although its full significance was not at first realized. It consisted in causing consciousness to make a study of its own activities and experiences with itself in a far more fundamental way than ever before. A new kind of logical process, more fundamental than induction, was discovered

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and an *art* of consciousing was deduced. At Chevy Chase further developments were achieved.

Only a few students have psychologic ability, and fewer yet can introspect, Gates found, so they have not the introspective experience that would make the description of his experiments understood. To many writers introspection was nothing more than morbid self-analysis. But after a student has his mind and brain rebuilt so that his mental content will include all the data of some

one science without false images and concepts and ideas, he can be taught to identify and name each normal and true kind of conscious state and process of states in each kind of intellectual faculty. When once he can bring each state and process into use and name it, and bring into activity each esthesia and name it, and perform each kind of single, compound, and complex conation and name it, then, and only then, can he be taught to do things with his intellectual faculties that will enable practice in the real and new and experimental introspection. Until then much may be misunderstood and seem unreal.

For this reason Gates decided early not to divulge the details of his introspective discoveries, except to pupils who could repeat his experiments and had the character to use them only for the highest scientific, moral, and ethical purposes. In one of his last writings (1922), however, he points out that a study of his manuscript on Introtechnics should make much of his findings self-evident without the student's having to acquire the introspective skill. Even if the reader could not cross the "bridge," he would know it was there. "It is not too much to claim for this line of research," Gates ventured, "that it has opened up to the mind an entirely new domain of human experience and disclosed a new kind of human faculty; but to the truth of these claims the pupil's own experience must attest."

The remainder of this chapter is quoted or adapted from his exposition of introtechnics, and though technical, will describe this bridge of introspection that led to the new validation.

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It was a scientific study by experimental and statistical methods of the Light Within, or conscience, and of judgments and their value, that led to the discovery of the new methods and techniques of introspection. Quiescence was the necessary technique of the New Introspection, but its most surprising feature was its meaningless wholes. The entrance into this new Inner World from the familiar and obsessing influences of the Outer World and its Outmost Region was accomplished, as it were, by a new kind of inner vision capable of seeing in the dark, of seeing the outlines and moving forms of the speechless things that inhabit this Inner World—things seen by the apperceptive attention but continuing to be dark and masked forms to this first stage of this inner vision. The things, or "objects," of this Inner World are states and processes of states. "State" is the psychurgic term for any mental complex that can be discriminated and classified as a whole. For example, a sensation of red, an image of a horse, a feeling of pain, an emotion of anger, are cognitive states. These

states are seen by apperception as cognitive meanings, but introspection sees them as *meaningless* things or wholes. The mind knows the meanings of these states and processes, but the New Introspection looks at them dumbly—not knowing or caring what they mean, bewildered by the diversity and stream-like procession of these psychal wholes, the creatures of the subjective part of the introspector's cosmos.

There goes one now—a state. Behold it! To apperceptive attention it is a sensation, pain, feeling, emotion, image, concept, desire, purpose, mood, or some other cognitive mental whole. Behold it with the Inner World attention, or introspection, and if it is not *also apperceived*, it will have none of these cognitive meanings it will simply be a psychal whole to which the apperception has attached such meanings as have grown out of the introspector's particular experience in a particular environment. But to introspection at this stage, that psychal whole will be the *most plainly* introspected whole of a group of such wholes, constituting a stream of states (James) ever flowing out of the subconscious; a flowing *unbidden*—impelled and urged by

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non-volitional goings-on in the organism. Sometimes the stream is narrow or wide, rapid or slow, clear and placid or obstructed and raging. From waking to sleeping, and even during sleep, this chaotic and seemingly purposeless mob of states marches through this Inner World as if with sealed orders. This stream changes character from youth to age; its wholes correspond to the degree of the introspector's evolution and his environment. An inventory of the states, classified, is the cognitive mental content of meanings, but to introspection each state is a sphinx. Apperception sees the meanings, introspection does not—and this is the most conspicuous of the new things that the New Introspection teaches. This being devoid of meanings to introspection is what misled James and other psychologists, who apperceptively analyzed the meanings of the wholes instead of introspectively seeing them as meaningless psychal things.

I see it yet—that surprised glimpse of my first entrance into the midst of these stalking specters of the Inner World; almost always there is a central specter (state) highly illuminated by the searchlight of spontaneous or voluntary attention, surrounded by a motley group of less illuminated (associated, concomitant, and adjunctive) states that fade into invisibility at the ends and margins of the stream; states entering abruptly into this stream through external and internal stimuli; states of all kinds. O the excitement of it! when I first actually saw that stream of psychal wholes *without seeing the cognitive meanings*. I learned to tell when the

main and habitual stream was going on, when external stimuli thrust into it their kind of wholes, and when internal stimuli thrust into it their kind of wholes. A new natural history of the phenomena of the waking mind was being created.

The special technique that makes these results easy is the systematic practice of bodily, physiologic, and psychologic quiescence during artificially maintained favorable conditions to attain an introspective dominancy. The introspector must silence the roar of his brain-machinery. In this way not only the glares and noises but also the clouds and fogs are obviated, and the

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introspector steadies himself. Quiescence prepares not only that which is introspected but also that which introspects.

For the viewpoint of the Newer Introspection, look at one of the central states in the stream. Like a leviathan it is crowding other states out of its way. Introspection, taking care not to see its meanings, sees only the psychal "size," or quantity, of that whole, and its duration, and its orderly (not syntactical) relation to other wholes—and all these factors are new scientific data. Introspection sees also the *psychal parts* of a state, their number and combinations and intensities—sees them as meaningless facts; and all these are new kinds of facts, constituting a psychal anatomy of states, a psychanatomy. It is a great discovery to know that a state is a manifold, and to be able to study it as such; every feeling or sensation or image or emotion is a manifold. It is made up of psychal parts in orderly and taxic, but not spatial, arrangement with varying intensities and durations of these parts. Each combination of parts, number of parts, intensity or duration of a part, has or may have a cognitive meaning experientially associated with it according to the memory with which it happens to be enregistered. This is the basic insight into the temporal, local, and individualistic nature of cognition. Psychanatomy is a new science. It is not Freud's psychoanalysis nor anything like it.

The characteristic technique of this Newer Introspection is re-functioning a state until it acquires a greater vividness and definiteness, and is freed from associative, concomitant, and adjunctive states, becoming so dominantly active that it is not only the most conspicuous state in the stream but so far as the directed attention is concerned, the *only* state. This technique also involves a re-functioning of the introspective attention until it can "see" with greater sensitiveness and distinctness. A normal state will thus reveal parts that would otherwise remain unknown.

When a series of conscious states that constitute a process are voluntarily brought into consciousness in the exact order in which



they normally occur, they re-function the anatomical structures and physiological activities and psychophysical units

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of the organism in which these states are embodied and by which they are manifested. This sends more blood to those parts that are functionally active, augments their metabolism and growth, and increases the vividness of the conscious states. It also makes them more definite and steady. Mental processes in an untrained mind are invariably accompanied by adjunctive states and processes that are not necessarily a part, but after being re-functioned these useless concomitants are dropped and the process itself can be introspected for the first time.

Quiescence turns down the lights in the chambers of the mind, so that a dim object may be seen more easily, while re-functional training makes the object itself more luminous. The result is a "re-functionative."

When a re-functionative is repeated, day by day for a short period at a time, the process renders it automatic and finally results in an "automotive," that goes on quite largely of its own accord, like walking, playing the musical scale, or repeating the alphabet. It is then introspected. There is one special period in the development of the automatic process when some of its states are just beginning to become subconscious and automatic and a later period when other states are becoming subconscious; and finally only the main states are left. Now, at these periods during a dominancy of quiescence the process is introspected *while it is automatically taking place and without being modified by the introspective attention.*

When I first began to apply the psychurgic art of discovering to the study of introspection, I would not have believed that one of the results would be the direct introspection of a process while it was occurring. The mentative art led to the methods above, in the order given, and until the last step was actually achieved the goal seemed as far away as ever. All these successive steps were necessary before the mind could take a "motion picture" of one of its processes. But how many will have the patience to go through so long and difficult a course of training! Fortunately only the specialist in introspection will need to do so, and his predilection will give a natural aptitude and bring time and

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disposition to devote years to the task. It will amply repay the effort, because along that line will be made the very greatest discoveries, among which will be an entire new series of facts on the great problems of Freedom and the relations of Consciousness

to the Cosmos. It is with automatics during a dominance of quiescence that true psychurgic introspection really begins; and it may confidently be said that these methods inaugurate an era in scientific psychology and therefore in science generally.

The Newest Introspection gives a still higher viewpoint. The stream comes unbidden; internal and external stimuli interject their characteristic states; a state is made of psychal parts; and associative enregistration gives a cognitive meaning to a state. In addition to these stream elements the introspector may cause a *purpose* to enter, and like a commander it orders and directs the states as if they were trained soldiers. Like a wizard it calls new states into being; it joins selected states into an orderly or interactional series or row of states constituting a "processive," in which each state by virtue of being in the process becomes a "telurgid"—that is, tied to the others by another kind of telurgid called desire, and directed by another called the idea of the end (telos). On this desire-telos all the other states are strung like pearls on a string, and this stringing modifies the states into telurgids. These states are subsidiary telurgids except for the two dominative telurgids called desire and telos; and these are a special kind of psychal whole. A processive effects a causal synthesis of otherwise merely orderly states, and in this way a whole lifetime may become synthetic instead of disjunctive. This "telic unit," this processive, this purposive whole, causes the *unbidden* stream more or less completely to vanish, and in its place arises a *bidden* procession of states, lured by desire, directed toward the telos, urged by intellectually adopted purpose.

A processive has apperceptively recognizable characters; it has cognitive meaning as a whole, and so has each of its telurgids; but we are now interested in a processive and its telurgids as meaningless things. We may introspectively notice that some are short and some are long; some are weak or strong, slow or

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swift, good or bad; some are directed and some drift; some are fulfilled in a moment of impulse and others require a lifetime of endeavor for a telos lying beyond death. Accessory, concomitant, and adjunctive states tend more and more to disappear as the telic whole becomes more dominant. To the apperception the processives are desires, ideas, muscations, seeings, hearings, images, emotions, and other intellectual and esthetic elements connected by a plan. To introspection they are meaningless psychal complexes tied together as a serial whole by two of the psychal wholes, the telos and desire; and this telic whole is the most conspicuous phenomenon of the Inner World. It is the Pharaoh's serpent that swallows all the others (if the person is

purposively efficient). Teleology, the science of purposing (from *teleo*, "purpose," and *telos*, "end"), and telurgy, its art, take their rise in these discoveries; as does teleotaxy, the doing of one's classified purposes (teleotaxis).

In this Newest Introspection during a fully attained periodical quiescence, the process of states (processive) is re-functioned, then dirigated into greater dominancy and vividness. A more mutually detailed natural history of cognitive states and processes is thus made possible—as it were, a histology of states and a macroscopic anatomy of processes.

When an automotive is dirigated, the result is a dirigative. After skill in dirigating to bodily parts is attained, the dirigator applies the method to the sensory nerve-endings, then to sensory brain-centers, and finally to the functional sets of structures of the higher mental processes. This augments the flow of blood to those parts, increases metabolism and growth and functional activity and renders the mental process more vivid and enduring. A state may be temporarily inhibited from its customary rapid changes, and even a very slight prolongation of some conscious states keeps them under the introspective focus long enough to be noticed, whereas ordinarily they would disappear too quickly to be caught even by the seemingly instantaneous photography of the mind.

Another technique led to the most useful result of psychurgy.

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Introspection of mentative dominancies takes place when a faculty has been furnished the psychotaxic content of states and processes belonging to a domain of knowledge and when (during a quiescence of all other activities) the introspects of that kind of activity have been selected, re-functioned, rendered automatic, and dirigated; then they may be combined into a synthetic whole. The whole system adapts itself to that kind of work; this one faculty becomes habitually active with others recessive or non-active, constituting a *mentative dominancy*—the most important, efficient, and potent result of psychurgy. This dominancy may then be introspected, and it reveals that faculty transfigured in all the plenitude of its beauty and power. Such a dominancy is the secret of genius; it holds the scepter of originality; it is the pioneer of pioneers!

When all the dirigatives of a psychotaxic group or faculty are functioned as a whole, the result is a "dominative."

The Highest Introspection with its technique of single and simultaneous processing, completed the bridge to the new validation. A few writers talk about attempts to introspect a mental process while it is taking place, but their records indicate they did nothing more than recollect what had taken place after the process

had ceased. I reached a new viewpoint when I learned that psychologists held that introspection was not merely useless but a vicious method of studying the mind because it modifies the process being introspected. I saw in this a momentous opportunity for studying the effects of one process on another, the resultant interaction of introspective and mental processes constituting a third class of mental phenomena and a new kind of psychology—an experimental introspection in which the effects of states and processes upon each other are studied.

I knew that what had been called introspection was nothing more than recollection, attention to the remembered experience, and an apperceptive and logical analysis of it; so their opinion did not much impress me. Besides, I had already trained myself in these lines and did not read the German psychological books until after I had entered the new domains. Attention to what

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takes place in the mind in a naive and instinctive way, to be able to tell in a superficial way what is most conspicuously going on, is the Old Introspection—for instance, to know if one is thirsty or hungry or sated, rested or active or tired; to know what images or ideas are associatively suggested by a word; or to notice what kind of activity is going on in the Outmost Region of the Inner World. But the logical analysis and classification is simply apperception. The Old Introspection consists in that act of voluntary attention by which it is turned away from the Outer World and focused on the Outmost Region of the Inner World to take notice of its most superficial features. It does not differ much from an apperceptive looking except that it is not by sensation or organesthesia that the looking inward is done. It is not a looking at all; it is not a kind of attention that is directed to sensory perception but is a more inward kind relating to this Outmost Region. It is an introspective perception (as understood by psychurgy). It is only from the higher level of the psychurgic introspection that this explanation could be made.

If the introspector can tell what things the mind is doing with reference to its grosser forms of cognition, he can practice the Old Introspection. If he can notice the same things as meaningless wholes, he will have entered into the New Introspection. If he can discriminate in a state its psychal parts, it will be a step in the Newer Introspection. If he introspectively (not apperceptively) can see the telic wholes, the Newest Introspection will be entered; and if he can discriminate the mutual modification of states, he will enter the Highest Introspection, the kind that finally provided the bridge that led to the new validation and a new world of Consciousness.

If attention is paid to any mental goings-on, there will be correspondingly less paid to some other state or process, and this requires nothing beyond apperceptive attention. But there is a very important effect of attention on the state or process attended to: it is thereby modified. If I pay attention to a pain, it becomes more intense by a greater innervation and dirigation, but attention to an emotion makes it less intense. These two

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instances alone demonstrate that the effects of attention are not the same; and I saw an opportunity to get a larger knowledge of states and processes and a more technical knowledge of introspection and apperception. By causing one cognitive state to act on another, by making them arise in the mind simultaneously or alternately, I was able to study the effect of one state on the activity and complexus of another. I studied the effect of apperceptive attention and introspective attention to a state or process, the effect of a state on a process, and of a process on its component telurgids; and I acquired a new kind of knowledge relating to psychal modifications of states and processes. This was the inauguration of Experimental Introspection, and its data gave rise to the new science of Introdynamics, the dynamic effects of states and processes on states and processes.

The stone that the builders had rejected became the chief corner-stone of the temple.

On introdynamics is based intro-urgy, the art of introspecting, one of the greatest of the psychurgic arts. It is in these domains that I desire so much to do further work and research. Therein is enough work for dozens of groups of investigators for several centuries.

Not only did introspection modify the state introspected, in this stage, but any conscious state whatever interacted with and modified any other state that was simultaneously present in consciousness. By knowing what effects a state had on another, and what effects the introspective process had on a state or on an intellectual or an esthetic process, I was not misled by the Old or Newer Introspections. This was a great step.

It is a fundamental law of introdynamics that *three kinds of modifications* may happen to a cognitive state: (1) a modification by which a state acquires a new or additional meaning to the person in whom this occurs, due to apperception and enregistration; (2) the state will become psychally more complex because introspection will see that new component not as a meaning but only as an additional psychal part; (3) that additional psychal part, or any other psychal part, may undergo a

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*change in intensity* of noticeable duration, and it is in this way that an almost infinite number of wholes may be created, far more than will ever be required by any creature as labels for its experiences.

The special technique of the Highest Introspection is difficult to explain to anyone who has not practiced the new methods. The introspective attention and the apperceptive attention are combined in a simultaneous juxtaposition, so that the apperceptively known states, while their meanings are in full focus, are introspected; and so introspectively seen factors are apperceived. This accomplishes an introanalysis of psychal parts of states in terms of their related outer meanings, and the psychal elements of meanings are thereby identified and classified, disclosing two kingdoms of psychal *wholes*. The one relates to outer things and relations, and I have called its units ectids; the other relates to inner things and relations, and I have termed these entids. Furthermore, in both units there are two kinds of component Psychal elements: those that are determined by the characteristics of the Outer World, and to which they correspond, I have called spectes; and those that are determined by the characteristics of the Inner World, and to which they correspond, which I have called cepts.

Entids and ectids relate to psychal *wholes* (states), while cepts and spectes relate to psychal *elements* of these wholes. One may practice specting independently and notice the difference between ectospectes and entospectes; or practice cepting alone and notice the difference between ectocepts and entocepts.

There is outlined in these psychal facts and classification a new descriptive science in which there are phenomena not taken into account in the purely mechanical theory of science, because they are not comprised in the Space-Time scheme. It is in these data that cognitive validation begins; it is of a new kind and very important.

Methods of validation hitherto known comprise inductive observation and experimental research, congruity and consistence, general averages and means, probability and testimony,

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and the more recent pragmatism. Even as improved by psychurgy, there is a grievous lack of certainty; not even one fact is known in its own right and indubitably; it is known only in relation to other facts, which in turn are known only in a relational way.

Psychotaxis was an important step, itself a new and efficient method of validation and research, but it also led only to relative knowledge.

The discovery of this Highest Introspection was an enormous step toward a better validation. These Four Branches of

Introspection, as I have otherwise called it, consist in the application of the three degrees (the memorial, the dreamlike, and the phasmic degrees of vividness) of the new techniques of introspection to an identification of the cepts and spect in the mental content, and of the entic and ectic factors in them. Ceptive and spective validation consists in identifying and making a psychotaxis of them. Entoceptive and ectoceptive validation consists in identifying the entic and ectic factors in each cept of the ceptotaxis. Entospective and ectospective validation consists in identifying the entic and ectic factors in each spect of the spectotaxis. This is a fourfold new domain in scientific psychology, and it is a vast and intricate one. Out of it has developed a new study of conscious states; namely, the mutual modification of cepts interacting with each other, and of spect with each other; processes of cepts and of spect; the mutual modification of entocepts and ectocepts and of entospects and ectospects; and a psychotaxis and dominancy of each of these four factors.

That part (cept) of a sensation or other intellective cognitive unit that relates to the subjective world (is shaped by the process or nature of Consciousness) is an entocept. The nature and mode of activity of outward objects also impress something of their nature on a related mental state, and this outwardly derived or objective factor (cept) is an ectocept. Hence sensations and other intellective units are resultants and components of objective and subjective factors, the resultant occupying a space midway between the two worlds and consisting in a blending of their

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two natures, like the overlapping of two colors resulting in a hue different from either.

All mental units of knowledge except cognostic data are made up of such resultant entoceptive and ectoceptive factors. An item of knowledge (spect) about a subjective thing is an entospect, about an objective thing is an ectospect. Incorrect and incomplete ectocepts (especially those in sensations and percepts) vitiate all ectospects that arise out of them; and incomplete and incorrect entocepts (especially those relating to the primary likenesses and differences of conscious states and to introspects) vitiate all entospects that arise out of them. In other words, the ectocept is that factor (cept) in a unit of knowledge that comes from the outside, and the entocept is that factor (cept) that comes from the inside; but both are combined in every mental unit that gives a "view" of the inside or outside. In any cognition a cept is that factor that has been directly or immediately shaped by outward or inward things; and these ceptive units are then combined into more

complex units that are items of knowledge about outward or inward things called spect. A spect is a view, belief, percept, concept, or image that the mind has of some *thing* in the objective or the subjective world. The mind cannot know outward things by ectocepts alone nor inward things by entocepts alone. A spect always is composed of the two kinds of cepts.

Out of these facts relating to kinds of introspective cognitions arise important methods of ascertaining and validating knowledge. For instance, by the immediate introspective comparison of entocepts and ectocepts with ectospects while the objective "counterparts" of these ectospects are undergoing systematic experimental variation and are being perceptually observed, the ectospects may have their ceptive factors identified and corrected and their inductive meanings validated. Conversely, by the immediate introspective comparison of ectocepts and entocepts with introspects while their subjective counterparts are being introspectively watched, they may have their

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ceptive factors identified and corrected and their inductive meanings validated. Finally by cognosis the entoceptive content of a spect may be *standardized* by an absolute criterion. In other words, ectospects may be corrected by referring them to that part of the outward nature that impresses itself on Consciousness as ectocepts; and entocepts may be corrected by reference to that part of the inward nature that impresses itself on Consciousness as entocepts. Finally cognosis furnishes in itself the process and the absolutely known data by which all cepts and spect. may be validated.

The ceptive factors in an intellection are those that have been derived from the mind itself, owing to its nature and modes. The spective factors are those that are due to the nature and modes of objective things. Now, these objective things are probably known not as they really are but as the mind perceives and understands them; and the same is true of subjective things. Cective and spective factors are concerned in the knowing of any objective thing (by its corresponding ectid) and of any subjective thing (by its corresponding entid). Thus entic ceptospection and ectic spectroception result in an analysis of each intellection into its cepts, spect. s, entids, and ectids, thus establishing guideposts through the Inner Realm by which its data are validated; and besides, they are important data in and of themselves. It is important also to determine clearly the ceptive and spective factors of our knowledge of the esthesias and conations.

What observation is to the Outer World, introspection is to the Inner World. just as psychurgic observation and experiment lead to



a better knowledge of objective things, so the New Introspection leads to a more exact and extensive knowledge of subjective things. It identifies the subjectively and objectively derived factors of experience more definitely, distinguishes them carefully from integrative elaborations, and recognizes those domains in the subjective world that correspond to scientific realms in the objective world. The mind is no longer left in doubt regarding the reality of the volitional and non-volitional, or the subjective and objective, kinds of experience.

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The first epistemological law of validation is this: the smuggling of a spect into an entid when it does not belong there and its interpretative acceptance as belonging, and the smuggling of a cept into an ectid and its interpretative acceptance, are the fundamental errors and illusions of cognition; and no real validation of any kind is possible until these are eliminated. The direct demonstration of cepts in man's knowledge of Outer Things and of spect in his knowledge of Inner Things has a profound significance in epistemology: it conclusively refutes dualism and monistic idealism and psychophysical parallelism.

The fundamental modes of communicative exposition and cognistic mentation are rendered quite largely non-valid because everything that has been named, as image, concept, or idea, contains factors of such different values (entic, ectic, ceptive, spective) that almost any predicate that may be used with the name of a thing will not apply equally, nor in the same sense, to each one of these four factors. True validation cannot be applied to any statement whatever until these four factors have been identified in each term of a sentence. Do you see this? If you do, you will understand that a whole new method and system of validation has been discovered.

Introspective validation is a new kind of scientific method. Old methods made no attempt to get from the mental states out of which inductive premises came any *credentials* as to their *normality and truthfulness*. Introtechnics has discovered how to *rectify the mental states themselves*. Hence human testimony as introspects becomes scientific evidence. I have calculated that fully 90 percent of the usual errors in the inductive method and its inductions can be avoided by this fourfold rectification of the prelogical mental states. All states need this—even sensations, and the whole range of intellections. Among the most formidable are the useless adjunctive states; hence we must inquire into the validity of these mental states as *states* before they begin their life in logic.

These introspective methods culminate in an awareness-introspection, which is an introspection of the introspects; that is,

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it is an introspection of the introspective process and states. This is not cognition, and it is clearly differentiated from the Newest Introspection. After a series of introspective memories have been enregistered as an introtaxis, they may be aware, and while a directed introspected process is being carried on we can become aware of that introspective Consciousness; and this is a new kind of introspection.

All this introspective validation needs to be studied and tested and every step repeated many times by competent investigators. The day is gone when the authority of an individual is sufficient to establish a fact scientifically. Human testimony alone cannot establish a scientific datum.

So Elmer Gates closes his account of introtechnics.

It will be remembered that as an outgrowth of his youthful skepticism, Gates felt the need to discover validation to be a religious as well as a scientific necessity. From various considerations of his later work he was urged toward what he considered the most important technical problems of psychurgy: validating intellections to sift truth from error; evaluating esthesias to choose good from bad; and testing conations to select the useful—all these called collectively, alethification. His progress placed the subject on a scientific basis. The four branches of the Highest Introspection completed the bridge to validation, but the bridge had yet to be crossed and the new territory explored by further experience in studying Consciousness, or rather in observing Consciousness studying itself. From his point of view Consciousness may be considered to be a cosmic phenomenon having its essential characteristics and nature, just as electricity has; and when Consciousness occurs in any organism, the mind of that creature is built by enregistering, remembering, and associatively integrating these conscious states.

Regardless of the old speculations about consciousness or the tendency of many scientists now to avoid even using the term, Gates knew that he was conscious and was aware that he knew

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it. Some modern philosophers of science have labeled the quest for certainty a speculative waste of time, and by old methods this may well be true, but to Elmer Gates the whole nature of Mind demanded it. Is there one fact for certain? he wondered. The unique and totally indefinable experience that Consciousness has

in simply being conscious is such a fact that Consciousness cannot doubt. It is the first, the simplest, the primordial and fundamental experience, the beginning of all other experience—not the experience that the mentator has with Consciousness, but the experience that Consciousness has with *itself*. But Consciousness also detects differences in consciousness, else there would be no further experience; it discovers that changes take place in consciousness, that it has *different kinds* of conscious states: that they succeed each other, that a previously experienced conscious state can be reproduced, that there are likenesses between states, and so on. In brief, the first fact or datum is Consciousness experiencing itself, and consciencing is the process by which it knows more about itself.

Consciousness by its own activities progresses from the first experience to a full knowledge about all its subjective states, and inventories can be made of them. (Gates entitled one of his expositions, “About the 2300 Groups of Facts Relating to Consciousness.”) Through its volitional states, as detected in the volitional factor of conation and the conscious factor of volition, Consciousness discovers that some are voluntarily reproducible; that of the involuntary states some relate to the body and others do not. Those which do not are outside the body and independent of volition, and have come to be known as the not-self states, or objective phenomena, as contrasted with the self-states, or subjective phenomena. Thus Consciousness by experience with itself bridges the supposed chasm between subjective and objective. At no point from first datum to last generalization of true science is there a break in the conscious continuity of the indubitable and inductive certainty of the knowledge acquired. The criterion is present at every step of the process of consciencing by

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which Consciousness “introspectively” becomes acquainted with its own “subjective world” and by which, through sensory stimuli, it gets a knowledge of its organism and other objective things.

In experimental introspection the experimenter will not only know he is *conscious when he is conscious* of a state but be able to introspect that *knowing* as a process of conscious states, each having certain discriminable qualitative differences and intensity-differences and duration-differences and clusterings and sequences. All states will have a psychal effect upon each other, and entirely apart from their cognitive meanings and their inductive or logical relations, the experimenter will know, with a greater certainty than he can know anything else whatever, that

when he is conscious he is actually conscious of a psychal state and its changes. So Gates emphatically described his experience.

When images of actual objects are before consciousness, those that are alike are grouped together, and the likenessing process is really an inability to detect a difference between two or more images (though a further study of the object with better methods of observation may show a difference). If Consciousness could not detect differences between its states, it would never have more than one state. One does not need to know what Consciousness is in order to know that *it is*, any more than Faraday needed to know what electricity is in order to find out what it will do. How Consciousness can be we know not, but that it actually is we know indubitably; when awake and aware, we know we are awake and aware. When we are conscious that our feet are warm, there is something else happening than just knowing this fact; namely, we know that consciousness is taking place, and we know it has certain different qualitative states and that changes take place in consciousness, that these states have their durations and intensities and clusterings and successions, entirely apart from their cognitive meanings. When Consciousness becomes conscious of consciousness, it knows those things absolutely and not relatively; and all this is a higher and more

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fundamental validation than induction or introspective rectification of mental states.

Form a mental image out in space of a magnetized piece of steel and near it place a copper wire in a closed loop. No electricity is anywhere in the vicinity. Move the wire through the magnetic field, and immediately a current of electricity flows in the wire, and while it flows the whole nature of electricity will be there, and it will act according to its nature. So when consciousness arises in a conscious state, the whole nature of Consciousness will be there acting out its nature, creating enregistrations in the psychophysical complexus in which it occurs. If Consciousness could not detect differences in its states, we could not be conscious at all, and knowledge and experience could never start. The detection of a difference in consciousness is the basic and prelogical induction, and the detection of a likeness is the basic deduction, which gives a criterion of truth applicable even to submental matters. Hence conceptuation has for its basic process of classification an infallible criterion and highest authority.

A state comprises four things in natural history: an objective thing; a subjective mental state; a brain-enregistration; and a name for the concept of that state and thing. By means of these four

mental things the Cosmos becomes functionally operative in the life of the person.

Roger Babson asked Steinmetz, "What line of research will see the greatest development during the next fifty years?" Steinmetz replied: "I think the greatest discovery will be made along spiritual lines. Here is a force which history clearly teaches has been the greatest power in the development of man. Yet we have been merely playing with it and never seriously studying it as we have physical forces.

"Some day people will learn that material things do not bring happiness and are of little use in making men and women creative and powerful. Then scientists will turn their laboratories over to the study of God and prayer and the spiritual forces which as yet have hardly been scratched. When this day comes,

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the world will see more advancement in one generation than it has in the last four." (C. D. Wagoner, "Steinmetz Revisted," *General Electric Review*, July 1957.)

"Whitman says the more he sees of the shows of the world, the older his experience, the more sure he feels that the *real* something is yet to be known. So feel I," wrote Elmer Gates in 1906.