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## **PART ONE**

### ***Origin and Development of the Art of Mind-Using***

*With an enthusiasm as deep as human nature I have sought to lead mind to discover its own best method of working, to lead scientific method to improve itself, for so far scientific method is THE BEST OUTCOME OF THE AGES!*

—ELMER GATES

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## **CHAPTER 1**

### ***Early Tendencies and Influences***

*The drama of Cosmos and me! The plot is evolution to more mind, and the end is esthesia.*

—ELMER GATES, “Introspective Diary”

Looking back over his life in one of his frequent analyses, Elmer Gates, in 1910 (at age 51) summarized it thus: “If the mind that I inherited from The All enabled me to attain to these discoveries, it was because I was able to discover an art of mind-using; and if I could not have caught the fundamental insight, it undoubtedly would have been achieved by some other brain—now, or epochs from now. I happened to be ‘ready’ to let these dawning ideas ‘sit for their portraits’ (as Emerson said), and I was in that condition of utter mental freedom that made it possible for me to interpret my mental functionings without modifying them by superstition and prejudice. I attained to the basic insight that led to the mentative art (psychurgy), and the rest followed naturally and inevitably. I accomplished the discovery of the mentative art because I had the advantage of the knowledge that had been accumulated by thousands of pioneers in many domains, because my mind had the good fortune to escape the blight of myth and superstition, because my judgment was undeviated by ‘authorities,’ and because I was trying to do

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that kind of work that was then the culminating tendency of this period.”

Earlier he had written: “From my earliest youth I have been clearly aware of a special aptitude for the study of mind and Consciousness, and an imperative impulse has urged me onward

from day to day, lured ever by the sweet anticipation of further discoveries that would reveal more of that wonder of wonders *Consciousness* and the human mind. But there has been ever present another factor that has imperiously controlled the whole course of my life: an overwhelming conviction that it was my imperative duty and privilege to carry on this mission as a *World Work* rather than as an individual career, and almost regardless of the interests of a career. This feeling, this decree of my whole nature was so urgent that no other interests or influences were ever able to modify it.” (Elmer Gates used the word *consciousness* with two distinct meanings: with a small c it meant a conscious state; with a capital C it meant the more fundamental Consciousness underlying a conscious state.)

There is no better example than Elmer Gates to show, from his own observation, “that a man to the extent that he is predilectively awake and aware is something more than an individual force; he is also and more largely a product of the total progress of the world in which he is an integral part.” In his life especially, the urge to progress was not wholly of an intellectually definable nature but also largely came out of the mind’s subconsciousness as strong impulses to do or not to do, and as in-sights into the nature of things that evolved themselves out of the general fund of conscious and subconscious functionings. Out of them came growing conscious purposes that were “resolute in getting certain things done and later on found themselves justified when they were at last accomplished.”

Elmer Gates had strong hereditary tendencies to good health, long life, patient industry, and scientific pursuits. His ancestors (Swiss, German, Dutch, English) for a least six generations were of long life, with large and strong bodies, fair skin and chestnut-brown hair. They were moderately well educated, of

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considerable mechanical ability, influential in their spheres, exceedingly active, of good musical ability, extremely practical and honest, and without any record of crime, vice, drunkenness, deformity, or chronic disease.

Six generations before, a Swiss professor, the earliest ancestor of record, had gone from Berne to Berlin to teach mathematics and to preach. There he married an intellectual German girl. Their eldest son married a Holland Dutch girl; and their eldest son married an English girl and emigrated to the United States with a number of other people to escape religious persecution. Most of them settled in Pennsylvania at the beginning of the eighteenth century with the Pennsylvania Dutch; and a few, among them his ancestors, settled in Virginia. The next generation went to Ohio,

where Elmer was born on May 6, 1859, of the fourth generation in America. On both paternal and maternal lines of descent his ancestors were Protestant religious teachers, who at some trade or profession or agriculture made their own comfortable livelihood, always refusing pay for preaching.

His father, Jacob Goetz (the way the family name was spelled then), in addition to operating his farm, was a schoolteacher, an architect, a millwright, a manufacturer of agricultural machinery, a Baptist preacher, a good writer for religious journals, a fairly good mathematician, and an omnivorous reader of historical, religious, and philosophical books.

His excessively tenderhearted and highly conscientious mother, Phebe (daughter of J. Diederich, an architect), was deeply religious, fairly well educated and well read, and lovingly unselfish to an almost incredible degree. To the simplicity, health, normality, happy dispositions, integrity, and intense moral and ethical and religious nature of his parents, Elmer Gates credited his first and best start.

Fortunately, we can follow his account of his original points of view and those psychological events, which led his mind to evolve the art of getting more mind, and of using it more efficiently. He was born with such predilections and into such

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surroundings and influences that very early in life he was able to take the first steps into his new and interesting line of research in the study of mind and mental methods, which with unswerving devotion became his consecrated lifework. His preponderant predilection for the natural sciences led him, while quite young, into an eager and earnest study of their elements, and into a study of his own mind, which he instinctively regarded as part of nature. He studied not mainly from books but from nature. He studied objectively by direct observation and experiment (as in botany, geology, chemistry, physics, and astronomy), and subjectively by paying systematic attention to the workings of his mind (its mental states and processes), which were not less interesting than the most wonderful phenomena of objective nature. It never occurred to him to regard them as other than natural phenomena. More interesting than mixing chemicals, classifying crystals or working in electricity, the mental phenomena had a greater degree of reality to him (as mental states with actual qualities and durations and interactions and sequences, and as spontaneous and willed processes of states) than they had to anyone he knew. A mental state rising into his consciousness and culminating and changing into another state and disappearing was to him as much of an objective event taking place in nature as the fall of a meteorite or

the sprouting of a seed. Accordingly the “subjective” laboratory inside his own mind was a far more wonderful place than any external laboratory could possibly be.

His first objective laboratory was in a corner of an old fashioned rail fence, the corner roofed over and the sides boarded in, and inside a blacksmith’s anvil and furnace and tools, and a shelf for chemicals and apparatus. Unfortunately, a photograph of it, as well as one of his parents and himself as a boy, were stolen. Great was his pleasure when he did something new, or “fixed” something for someone.

The interest that most children find in story books, he found in getting knowledge and in making things. The objects in his “museum” took the place of toys; experiments in his “laboratory”

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took the place of games. He did not like a story unless it was true; fairy tales did not interest him. His juvenile laboratory, as small and incomplete as can be imagined, was to him “the holy shrine wherein by experiment the Oracle was consulted at all hours, day or night, and the universe was the Sacred Temple where Nature (including Mind and Consciousness as the most important part) was worshipped, accepting the sciences and arts as a ‘Bible’ that is being constantly revealed by mentation.” Such was increasingly his outlook from his twelfth to his twentieth year.

By a fortunate combination of the religious beliefs of his parents and governess and early teachers, he heard but few of the superstitions and fairy stories and mythologies that are usually “fed to unsuspecting childhood,” and consequently by training as well as by nature his mental attitude was such that the extravagant impossibilities of these myths and fables were of no interest. Thus the plain facts of the sciences and the ordinary phenomena of consciousness were not insipid, but on the contrary held his attention with an almost breathless and unflagging interest. So also, despite a natural longing for the symmetrical completeness and seeming finality of philosophy, he was led by predilection and circumstance into the more wonderful possibilities and realities of scientific knowledge rather than into the uncertain and ever-shifting regions of speculation.

His first teachers were his parents, and also that remarkable and well-educated woman, Virginia, of whom he said the highest praise seemed inadequate (never mentioning any but her given name). She made her home with his parents and acted as a sort of companion and teacher, and with his other early teachers and tutors took great care to teach him the elements of the sciences by firsthand observation and experiment. His school life was in his home much more than in the public schools. This home amid the

serene surroundings of a farm in Ohio, unusually isolated for being near a city such as Dayton (not large then), was to him “replete with the animated quiet of the woods.”

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His father and mother taught him the earliest rudiments of an education: reading, writing, arithmetic, German and English, the use of tools in his father’s several workshops (carpenter’s and cabinetmaker’s tools, general machine-shop and machine tools, agricultural implements, clock maker’s tools, soldering and brazing outfits, jeweler’s tools, and so on). They taught him as systematically as if they were running a school for his sole benefit; and this instruction was kept up even while he was going to high school.

The governess Virginia, who had been educated for teaching school, assisted in this instruction, taking more and more of it in her charge as he grew older. She nurtured his love for the natural and encouraged his inherited aspirations toward a moral and religious life. His isolation from social distractions, and the sincerity of his early teachers, had much to do with the natural development of his early tendencies. By tendencies he meant predilections and mental abilities; and by influences, whatsoever promoted or hindered them.

The instructions given by these teachers from his fourth to his fourteenth year, the four years in high school, the three years in teachers normal school, and short elective courses in several colleges constituted his early education up to his twenty-fourth year. During all that time, however, he had a much more extensive, thorough, and practical education from private tutors and experiments in his laboratories than from any formal schooling.

The educational systems and curriculums of that time left their graduates, even those who had undertaken to perfect themselves in some specialty, in a deplorably impractical state; and so “woefully weighted down with undue respect for authorities and so misled by unproved theories and hypotheses that when they attempted to enter the practical work of their vocation they had to commence at the beginning with practical men and learn their trade or profession from the bottom up, where they should have started.” This had a pronounced effect on the general policy and plan of Elmer Gates’ life, because it was

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depressingly evident that the established courses of college instruction were not adapted for the kind of training he needed.. He was determined that those instincts, predilections, and

impulsions of his mind that tended toward new routes of observation and introspection and original lines of thought and discovery should not be limited or distorted or diverted from their natural course by any attempt to make his mental methods and capacities conform to time-honored academic patterns. If by reason of any degree of variation from the average mind his own had developed and started in new directions, he did not want it turned back into the old ruts by crowding it through the established and narrow school curriculums. In this work of self-education he sought the advice of educators and technical specialists and books, noting everything that would fit him for his work; and every day he also carried on his experimental research into the mind and consciousness.

After this unusual education he more definitely and intensively specialized in his own laboratories than he could have done in any college, for there was not a university in the world that had facilities or teachers for training in the lines into which he had entered. Wilhelm Wundt, the father of experimental psychology, established the first psychological laboratory in Germany in 1879. G. Stanley Hall, a student of Wundt's, established the first one in an American college, at Johns Hopkins in 1883. J. McKeen Cattell became the first professor to occupy a chair of psychology exclusively, at the University of Pennsylvania in 1888, where a laboratory was also established. William James became a professor of psychology in 1889, publishing his *Principles* in 1890. Munsterberg started at Harvard in 1889. Elmer Gates had been at work in his own and different way since 1872, at age thirteen. At various times and for a number of special researches he had in his private laboratories specialists from whom he learned the particular knowledge and skills in various technical arts and techniques in physics, physiology, psychology, chemistry, microscopy, bacteriology, and other fields in preparation for his serious work.

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Childhood was for him "a holy, although a somewhat lonely period," profoundly influenced by the love and unselfishness of his mother and by the sternness and practicality of his father; and especially by his father's workshop, always so well filled with the machinery and tools of half a dozen trades; and by the womanliness of his high-minded governess-teacher. Deep also was the influence of the books of several fairly good libraries, and finally of his solitary wanderings in the woods about his childhood home. "Those woods! with their ponds and creeks and rivers and shaded hills and early bloodroot and ginseng," he wrote later with tenderness, "childhood's familiar haunts where nature first took me into her confidence and when I first gave her my trust."

“The mind of youth, unhampered by outward concerns, is exceedingly plastic and impressionable,” he wrote; “comparatively trivial incidents of but a few hours duration are long afterwards remembered as events which seem to have covered months or years.” However, as corroborated by letters and diary notes, owing to a deep-seated prejudice against authorities of all kinds and a deep-seated instinct, he insisted on being taught from nature rather than from books, and this so agreed with the judgment of his governess-teacher Virginia that she enthusiastically adopted that pedagogic principle. His description of this enviable method follows.

It was his intense wish to have his teachers follow the bent of his mind’s tastes and insights rather than of their own. So definite and dominant was this trait that he invariably refused or failed to follow lessons otherwise forced upon him. His mind would rebel from a lesson it did not want at the time, just as surely as his appetite would rebel from food it did not want. Later in life he felt sure that this strong trait saved him from having all that was most original in his mind squeezed into the narrow and distorting mold of some ordinary creed or curriculum. It was his desire—and his teachers carried it out—that whenever in the course of daily life his attention was attracted

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to, and absorbed in, any object or event, he was then and there to have a lesson upon that subject.

Was it an insect that attracted his attention? Then he was forthwith to be shown that it had veins, ribs, or nerves in its wings; while this other insect (conveniently produced from some pigeonhole or box) had its gauzelike wings folded up and concealed beneath an outer covering of heavier and stronger sheath-like wings. And while his attention was still vivid, it was proper thing to be informed that the “nerve-winged” insects are called *Neuroptera* (from *neuron*, “nerve,” and *pteron*, “wing”), while the “sheath-winged” insects were named *Coleoptera* (from *koleos*, “sheath”), and so on. As soon as his interest began to lag he was to be allowed the completest freedom to study whatever else might attract his attention, and when the same day or the next he again became interested in insects, he was to resume his lesson in entomology just where he had left off. In this way classific systems developed out of a seemingly chaotic mixture of subjects. He was led to know the things before learning their classification!

If a flowering plant became the object of his attention, he was for contrast to be shown a fern, fungus, equisetum, or other flowerless plant, and be shown and told that there are two great divisions of plants: *Phanerogamia*, or flowering plants, and

*Cryptogamia*, or flowerless plants; and to discover further examples of each class was at once the purpose of a series of rambles through fields, swamps, and woods. The samples thus collected were kept for a time in an improvised herbarium. If a cat was found nursing her kittens, he was to make a list of *Mammalia*; and he was thus led to discover that some animals, like birds and fishes, do not suckle their young; but that however different in this respect, they are nevertheless alike in certain other respects, for instance they have backbones, or vertebral columns. He was then to make a list of *Vertebrata*, or backboned animals, which would at once bring up the question of *Invertebrata*, or backboneless animals. A rusty-bladed knife would

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give his teacher a chance to explain how rust is formed; that is, if his interest had naturally led him to inquire about it. The teacher's pedagogical method and subject matter, he insisted and his teacher insisted, should grow out of his love for the subject; and out of the teacher's full knowledge would come just as much instruction as his mind then needed, and ("How honest and splendid of her!" he exclaimed) when her knowledge of any subject was deficient, she would call to her assistance some professor or doctor or mineralogist or chemist or physicist whom she knew-and she seemed to know everybody. This natural method of pedagogy that they formulated was an important factor in preserving his originality, for thereby his mind was permitted to follow with spontaneous attention its Path of Interest while being guided by one who knew and loved and felt that subject. What more favorable circumstances could have existed?

Experimental researches in the sciences so constantly engaged Elmer's attention that from his eighth to his sixteenth year and onward he scarcely took time enough from thought and work to eat and sleep. So deeply was he interested in his subjects that the usual games and plays of childhood held almost no attraction. It was a fascinating conception and play that he had two laboratories—one outside his mind, filled with physical apparatus and in which experiments were carried on with the outside world, and the other inside his mind, filled with conscious states and mental processes and in which experiments were made with the subjective world. In the former, objects and physical forces would be made to interact and the results noted, while in the latter, conscious states and mental processes would be made to interact and the results noted. Thus by a fortunate combination of circumstances he found himself very early in life engaged in an experimental study of the functional activities and states of the "world within" in connection with that kind of constant reference

to the “world without” that led step by step into productive new methods and techniques of psychological research.

In addition to this unusual education, another influence was

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an inherited deep religious feeling, “as distinct as is the appreciation of the beautiful in the fine arts.” As introspected in his mind, this religious feeling was due to his “attitude to the Whole, the Cosmos, towards the Known and Unknown or imagined powers of The Beginningless. Morality is what one does for his own welfare—a phase of the instinct of self-preservation; and ethics is what one does for contributing to the welfare of others. Historically these introspectively distinct feelings and motives became mixed with distorting beliefs and myths, and when the universe itself is regarded as a Great Spirit of the anthropomorphic variety, the purity of the religious feeling is affected.”

When Elmer Gates found himself in doubt as to what constituted the moral and ethical right and wrong of any course of conduct, he would instinctively go off alone (perhaps at night on a hill in the woods) and get quiet and think and meditate over the question of “conscience” and the “Light Within” (which was the conviction of Virginia, she being a disciple of George Fox and Elias Hicks). She once said: “You do not think it over when you go off alone, you feel it through, as the Light Within shines on it”; and this was the main religious teaching of his early life. When he did anything that she thought should not have been done, she would ask him to wait until he felt like being alone and then think it over after the excitement of the incident had worn off. When he had decided which part was right or wrong, he was to come tell her truthfully what his judgment had been; and with a deep practical wisdom she laid stress upon the ability to treat it as a problem to be solved, to detect what was right and wrong--and she never scolded or punished him for the wrong or rewarded him for the right. It was deemed sufficient to be able to detect and acknowledge the results of the moral and ethical self-examination; the rest of the obligation was regarded as his affair. If he was willing to do what he regarded as wrong or neglect what he regarded as right, it was no longer her responsibility. During all the earlier years of this training, which she regarded as religious, it was expected

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that he would really try to “follow the Light Within.” Without being able to distinguish between it and his natural moral and ethical judgments based on knowledge and feelings, this was carried out fairly well in his daily conduct. But there soon came

matters of conduct upon which he had no knowledge or feelings for guidance and to which Virginia always sought “religious sanctions” (which she regarded as the Light Within and which to her meant conscience). This attempt to judge the difference between the Light Within and conscience and his natural disapprovals and approvals based on knowledge and feelings forced him into an introspective tendency and gave much practice in introspection.

That this practice did not lead him “into the barren deserts of purposeless meditations, useless broodings, and mysticism without a clue to its meanings” was due to the dominant scientific bent of his mind. His daily studies, and even his childhood plays, were so planned as to be somewhat of a systematic series of scientific observations of the phenomena of objective nature that gave a counterbalancing guidance; and as he regarded his mind as part of nature he naturally applied scientific methods to it. The special teachings of the different religious systems with which he came in contact were such as to render him critically skeptical of their special doctrines, dogmas, and creeds, but the profoundly religious nature acquired by inheritance and training kept him ever in a respectful and seeking attitude toward the fundamental aspirations and meanings of the religious instinct. In the light of his early and late researches he came to regard religion as one of the great natural modes of human development. He could discriminate in his mind between inherited racial religious instincts, often waning survivals (in evolutionary language), and a modern and scientifically based “insightive” feeling; and he found that just as the feeling for the beautiful is identified with all knowledge and nature and action, so is the religious feeling (when the mind is undungeoned and free), and thereby morals and ethics also become religious. After canceling the unscientific and unmoral and unethical teachings

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and practices of the various religions, there remains as a deep background, he found, a real religious instinct and mode of mentation.

An insatiable desire to know, always a deep influence in his life, was much intensified by these introspective experiences. This desire suddenly became still more intensified by a desire for true knowledge, however little it might be. He wanted to know; it did not matter what, provided he could know it to be absolutely true. Next, the question became how to tell the true knowledge from the false knowledge, the proved from the unproved—because any portion of the unproved might be false. Entirely apart from the utility of knowledge, he was animated by an overwhelming passion

for knowledge for its own sake, provided he knew “for sure and certain and without doubt” that it was true.

“I want to know,” he said to his mathematics tutor, “just what an absolutely known truth looks like. I want to know a group of facts, however few, with absolute certainty, which no beliefs or statements can contradict. With that iconoclastic club, I could demolish all idols and doctrines and beliefs and speculations that are not true; and with the method by which the mind can discover such absolute truth, however little, I will have the Key to unlock the Yet Unknown.”

“You are audaciously ambitious,” replied Professor Jordan.

“Yes,” Elmer continued, “but it is not merely I, it is the very nature of mind that speaks and seeks these results.”

He was filled with an unappeasable desire and craving for knowledge about the mind, with an ineffable desire to “rise upon the stepping stones of ordinary knowledge” and by introspective study of his mind, to a point of view “where some of the undiscovered secrets of the universe might be revealed, and something of the Eternal Mystery made plain.” He hoped that through some mind, perhaps his own, a wholly new domain of experience might be attained. Whether he could reasonably hope to achieve such a result did not matter; the aspiration was a powerful influence in his life.

This desire for some method of sifting the proved from the

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vast mass of the unproved (which later led over the bridge of introspection into the new domains of validation) was intensified by the “chaos of contradictory beliefs in which the human mind finds itself beclouded and oppressed.” The differences in belief entertained by the best people he knew produced in him a degree of surprise and consternation that was one of the directive influences of his early life. These persons were equally sincere and intelligent and honest, yet it would have been impossible to construct out of the imagination differences of opinion more widely divergent than were their convictions on political, religious, and philosophical subjects. Moreover, their beliefs were tenaciously espoused and argued with violent antagonisms and personal animosities. The meaning of birth and death and the issues of eternity were supposed to depend on certain arbitrary beliefs. Yet earnest and sincere persons were at the widest possible variance regarding questions of which many could have been settled on the basis of actual facts. Against any one religious belief or philosophical system that might be selected, all the others, Elmer felt, would be arrayed as if in deadly combat to prove it wrong.

He seriously wondered if the human race had gone crazy en masse. It seemed to be a lunatic asylum let loose. “The Idealist was just as honest as the Realist and argued just as well, the Pantheist and Deist were just as sincere as the Atheist or the Theist, the Spiritualist was just as much in earnest as the Naturalist, the Catholic was just as dogmatically sure as the Protestant, the Buddhist was just as fully convinced as the Christian; the Democrat was as vehement as the Republican, and the Pessimist was as arrogant as the Optimist, and so on throughout the long list,” he wrote in astonishment. How was his mind to judge between their varying and contradictory teachings and select the true? But he was even more disturbed at the amount of error, theory, and hypothesis in scientific textbooks, which were supposed to teach demonstrated knowledge only.

This was not the whole extent of his consternation. The then recent criticism of the Euclidean axioms of geometry, the great

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number of psychological illusions of the senses, the Idealistic skepticism regarding the existence of an objective world, the historical fact that 99 percent of the theories advanced during the evolution of science turned out to be untrue—these and similar evidences led him, through a most radical skepticism regarding the reliability of scientific knowledge and the normality of the process by which it is attained, to inquire into the nature of the mind as it was manifested in himself and the nature and validity of the knowledge to which it is supposed to attain. The conflicting teachings of scientific “authorities” forced him ever more and more into skepticism.

When he reached what his parents and a few relatives supposed to be the “earliest age of discretion,” they sought to impose upon him their own sectarian or denominational views of religion; but his understanding found these doctrines quite opaque, and for many of their teachings he could not get the approval of his conscience or of the Light Within. In a letter written during that time he defined the Light Within as that approval or sanction which, after eliminating personal interests and beliefs, he found in his mind as to whether an act or motive was wholly in accord with what he knew or believed to be just, true, and for the good of all living things. Although he considered this not well expressed or complete, it was one of the guiding principles of his life; and every statement that was not in accordance was sure to be condemned when exposed to the searching rays of that clear white light within.

It was a matter of profound regret and astonishment that for some of the beliefs of his parents he could not find the approval of his sense of justice, truth, and altruism; and this surprise was not

lessened when he learned that some of his tutors had religious and philosophical opinions at variance not only with those of his parents but with each other. His microscopy teacher was a Materialist and Atheist; his mathematics tutor was an Agnostic; his uncle was a Universalist; his governess was a Friend, or Quaker; his parents were Baptists. He had friends who were Catholics, Methodists, Lutherans, Presbyterians, Spiritualists, Moslems,

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Buddhists, Pantheists, Idealists, Pessimists, Mystics, Occultists, Thaumaturgists, and what not.

Further obscuring his wavering faith in human teachings was his investigation of many of the current “omens” and “signs” of superstitious people. He found them devoid of truth as stated and believed, even when based on some misinterpreted truth. He was confronted with the discouraging spectacle of intelligent, apparently honest, and seemingly sane people sincerely believing in almost every possible kind of absurd practice. He felt as if this world were “an infinite labyrinth to whose mazes the clue had not been found, and as if at every turn false guides had been stationed.” It was hard for him to believe that a sane and honest man would deliberately teach as truth something about which, in his own conscience, he knew he did not know anything.

Quite naturally, very early in life he lost faith in the infallibility of books and teachers, and daily gained a corresponding respect for direct observation and experiment. At an unusually early age his parents and teachers gave him instruction in a number of subjects, particularly physics, chemistry, mathematics, history, botany, and zoology; and in these branches of science he made in his laboratories, or witnessed in others, almost every important experiment, to find out the truth for himself. He read German and French as easily as English and could “make out” Latin and Greek; but except for the beauty of literature, he became suspicious of the reliability of books, even scientific books (apart from mathematics, physics, and chemistry). He was naturally inventive, both in literary composition and in mechanics, and at the same time that his doubt was growing he was pondering why during certain periods new ideas came easily while at other times no amount of effort would produce original, creative thought. He was much influenced by this experience, and again and again by the fact that except upon matters of undoubted knowledge, his friends and teachers held antagonistic views. He fretted so much over these matters that for many months he daily went alone to meditate several hours at a time, hoping to devise some way to settle in his mind the great question of what

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constitutes Truth and Duty (and Opportunity). He concluded that the difference between knowledge and falsehood could be settled only by actual or inductive experience, and not by abstract speculation and philosophical theorizing, and that the tenacity and degree of conviction for a belief was not an argument for its truth. But he soon discovered to his consternation that even induction leads to mistakes, that it is only relatively true.

At this time his mind became filled with a still more profound skepticism. Like Descartes he doubted not merely every statement of religion and science and common knowledge that could be put into words, but with a more fundamental skepticism he doubted the integrity and sanity of the human mind itself. (Later, his friend, Major John Wesley Powell, director of the U.S. Geological Survey and outstanding scientist-philosopher, remarked that this was the most extreme skepticism ever reached by the mind of man.)

It occurred to Elmer as a gruesome conjecture that perhaps just as cancer is a diseased growth in the body, so may humanity and organic life as a whole here on earth be a pathological or diseased condition in and upon the earth. May not the mind that manifests itself in living things, and in the human race in particular, be an abnormality, and all its functionings and conscious states fundamentally biased with delusions of error? If so, every idea, desire, emotion, act, every statement that can be put in the form of a proposition, may be false and misleading. Why not?

The ominous question having arisen, it was necessary for peace of mind to inquire if there is anything that can really be known to be true. It was at least true that such a question had arisen in his mind; that much was certain. But even this bit of knowledge was in the form of an idea and was stated as a proposition, and might be the product of a biased or diseased mind. He meditated, wondered, longed for an anchorage. It was evidence of a healthier view when he concluded from observation that some persons (whether the mind is sane or insane) succeeded in getting more happiness out of life than others and were more

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successful in their undertakings. This fact at once overwhelmed him with an uncontrollable desire, to know all about "judgments," and this led quite naturally and inevitably into the beginning of a systematic attempt to study the mind scientifically.

Once again he took up experimental researches in several branches of physics, especially along inventive lines, not so much for making discoveries as from a persistent curiosity to see for himself just how the mind goes about making a discovery or invention. To those who were unaware of this purpose, it was a

mystery that anyone should carry on “experiments in physics in a machine shop to study psychology.” But he was making discoveries in physics to find out how the mind makes them, and he was busy demonstrating, proving, testing them to find out how the mind makes itself sure whether a datum is true or not (as distinguished from illusion, error, or theory). This was a new method of psychological research, and the instinctive beginnings of the Mind Art.

Always several lines of development seemed to be simultaneously going on in his mind. Experiment and observation in the sciences had indicated that it was not easy actually to corner, capture, and establish a fact. Reading and conversation constantly disclosed the strange situation that the most eminent authorities differed widely on questions that seemingly might be settled by processes of thought based on observation and experiment. He started out to search for such data and for a method of more indubitably proving them, and found himself trying to decide which one of a number of methods to try first. A dozen years or more might be required for even a partial test of an alleged datum by any one method; and the best and most originative years of his life might be spent in trying the wrong ways. Might there not be some instinctive guidance, or some guidance in the nature of the mind itself? Are not some kinds of judgments better than others? If so, then follow the best judgments in selecting lines of research for finding out the best ways of discovering and validating knowledge and ways of thinking about facts.

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Upon the advice of some of his teachers and friends he studied everything available on scientific method, but was disheartened by the paucity of the literature. He read Roger Bacon, Francis Bacon, Whewell’s *History of the Inductive Sciences*, and Watts on the Mind; he read John Stuart Mills and Bain and Herbert Spencer; but he found nothing more decisive than the relative validity of the inductive method (for he did not accept the dictum of any of the alleged revelations as scientific proof).

Consequently he naturally took a step of his own in the study of practical judgment-values. He made an elaborate tabulated record of all the conduct-decisions of moral and ethical right and wrong that he made, or that his teachers and friends made, in order to determine in the light of subsequent events which kinds of judgments proved to be effective and reliable guidance, hoping thereby to eliminate from his rules of conduct those kinds of judgments that did not prove worthwhile. Should no practical difference in outcome be found between an act based on the Light Within and a conscience-judgment, they would be regarded as

practically identical. If these two should prove to be different from judgments based on knowledge or feelings or beliefs or superstitions or previsionsal intuition, or on subconscious judgments, and should they differ from each other, he would thus find out about the obscure things. So far as he was able to learn, this was the first scientific study of the kind: to discover differences in the reliability for conduct-guidance of different kinds of judgments, evaluated by subsequent events.

For example, he found an important difference between judgments based on the Light Within and on conscience. It took long practice to eliminate the misleading effects of fear and hope and desire and superstition from either kind. He found conscience merely an automatic alarm that rings whenever actions do not correspond to beliefs, and that there is a fundamental physiologic and psychologic Light Within that is based on knowledge and normal feeling and is capable of true guidance. In all matters of volitional action, knowledge-guidance (of which the Light Within is a partial phase) is incomparably best. In

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matters outside conscious knowledge, the judgments of subconsciousness are more reliable (being based on knowledge-experiences that do not ordinarily get above the threshold of consciousness). Feelings are not guidance-judgments but imperative and unreasonable commands, concerning which judgments may be exercised. Psychologically he found the Light Within to be a form of judgment that consists in a consensus of all modes of judgment, supervised by one's ideals and aspirations. The ideal Light Within is the conscience that will accept only true knowledge for guidance.

Elmer Gates was so impressed with its possibilities that the study of judgment-values was continued. He concluded that the voluntary activities (conduct) of certain persons almost invariably led to undesirable or worthless consequences, while those of others almost always led to desirable and useful consequences. Furthermore, since there is an invariable and determinable causal relation between the kind of act and the kind of consequence, there should be a determinable relation between judgments that lead to acts and the consequences of the acts. One man apparently under the same conditions and with similar abilities will succeed in the very effort in which another fails. In the instances studied, 10 percent of them failed because of insufficient attention to the matter in hand, 51 percent because of lack of knowledge and ability, and 20 percent because of mistaken judgments. Contrary to expectations, failures were not nearly all due to wrong judgments, unless the failure to pay attention was caused by wrong

judgments on the part of the 10 percent at the time the matters were first planned, for wise judgment would have led to proper attention. In like manner the lack of knowledge and ability may have been due to wrong judgments at earlier periods in the lives of the 51 percent, leading them not to acquire the needed knowledge and ability.

These questions reopened the whole investigation. It was necessary to make a careful study of cases. Under conditions that seem similar, one person judges wisely and another unwisely; one has a “feeling” or “impulse” not to do certain things and

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subsequently finds he acted wisely, while the other finds he acted unwisely. What is the difference between the impulse of the successful man and that of the unsuccessful man? Since conscience can be trained, it follows that it can be set to ring when one's actions do not correspond to one's knowledge-judgments (or Light Within) and thus get conscience to act as a mentor, like a fully formed habit (to which class of mental processes Elmer found it introspectively belongs). The Light Within has to give an account of itself to knowledge, but conscience acknowledges no master but belief, except that sometimes it seems to be a reflex of fear or desire.

How deeply interested Elmer became in this subject! As he had been taught the experimental and observational methods of science, he accordingly undertook these methods to study judgments. His training in observing objective phenomena led him to try to “observe” what was going on in his mind when a judgment was being formed and otherwise introspectively to study the inner world of mind. He did this with the same systematic care previously devoted to the study of the outer world.

This was a new line of psychologic research. The following notes made at that time (1872) show the seriousness of this thirteen-year-old scientist.

“In order to settle doubts regarding the nature and reliability of conscience and other forms of judgments, I am making a systematic study of all kinds of judgments by exercising each kind on each motive, plan, event, and act; tabulating the approvals and disapprovals, and afterwards recording the consequences of the acts based on them, hoping in the light of subsequent events to learn from the good results which kinds of judgments are safe, and from the bad results which are unsafe. It is not easy to discriminate between conscience and the ‘Light Within,’ or between them and those indefinite promptings, impulses, leadings, and predilections which, whilst they are not data of knowledge, yet nevertheless under various names (such as intuition or

presentiment), potently lead and drive us into many of the decisions and acts of our lives. Moreover, it is necessary to distinguish

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between all those above-named states and such others as hope, desire, fear, prejudice, dream-impressions, and suggestion.”

From these data and further experience he came to the conclusion that there is a great difference between the reliability or guidance-value of the kinds of judgments, and that even for the same kind there is a difference in persons, and even in the same person at different times. This difference depends in a great measure on the way in which a judgment arises. In one person it may arise out of a long and pro-found conscious and subconscious gestation of all the knowledge and feeling and other kinds of experiences he has had upon the subject, while in another it may arise in an offhand manner, with not all but only part of his mental content having been consulted. In one an impulse to do is often a transitory whim not belonging to his dominant predilections, while in another it is an overpowering mandate he cannot resist. What is the cause of the difference? Young Elmer reached such conclusions as these:

A judgment of any kind that is based on less than the total mental content (so far as relevant) is not as reliable as when it is based on the total mental content, provided it consists of true knowledge and normal feeling and tested skill.

If the relevant mental content is made up of false and true knowledge, the judgments are just as apt to be wrong as right.

Habitually an average mind that has not been psychologically trained in systematic mentation and in introspecting a classified synopsis of its mental content furnishes itself when called upon (that is, presents to its attention) only some small portion of its knowledge and feeling relating to any subject.

These conclusions, of value in themselves, were not the more valuable result of the researches. Elmer found not only that constant reconsideration of his judgments, and appraisal of them according to consequences, made him more careful in making judgments but that he was actually making better judgments. He had unintentionally been undergoing a judgment-training a method later developed into a scientific guide to practical affairs.

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Morning, noon, and night Elmer practiced introspection to detect differences between kinds of judgments. This daily exercise led to a confirmed habit of introspecting very early in life, when the mind is most plastic, developing a most unusual skill. This

tendency did not lead into speculative habits of thought and morbid self-analysis, because the judgments were all carefully verified by events, and introspection was from the start combined with those experimental methods that are efficient in science.

An early glimpse into his final line of work brought the realization that the experimental methods of science could be applied not only to the introspective study of judgments and morals but also to the development of an art of mind-using—an art that would give to ordinary minds more and more of the capacities of genius and talent. The idea that there could be a “scientifically determined method of mentating was a gradually dawning glimpse into the promised land of highest hopes.”

These methods of testing his moral approvals and disapprovals profoundly influenced him not only at that time but throughout life. The tabulated study, kept up for a dozen years thereafter, pointed out, as if by a decree from the nature of things and therefore from his own nature, what was to be his work and mission in life. This study of his own tendencies, aptitudes, and weaknesses indicated the paths toward success and away from failure in his chosen line of work.

Thus, while still young, Elmer Gates got face to face with the idea that in studying the mental states and processes themselves, rather than objective phenomena, the secrets of success were to be found. This was not such a study as was being made by the psychologists of that time, but a far more intimate study of the inner nature and workings of the mind than had ever been made. He was deeply, even religiously, impressed with the demonstration that acts which produced undesirable consequences were almost invariably based on ignorance or false knowledge, or had not arisen out of the whole scientific mental content; and conversely, that acts which most frequently produced desirable consequences were based on extensive scientific knowledge and

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true feeling and arose out of the whole conscious mental content, and also out of a natural fitness for that kind of effort combined with a true knowledge of the actual conditions of self and environment with reference to that specific act, or were led by normal feelings and an indefinable impulsion. These conclusions were legitimately deducible from the data of the tabulated record of judgments and acts, regarding which the main factors were introspectively obtained.

He found that mere belief or fear or desire for the impractical is capable of modifying these judgments, especially the purposes and incentives; and therefore it is a matter of vital concern what one believes. One should be wary of beliefs, except so far as they are a

matter of knowledge. There is but one safe belief: belief in true knowledge, for impulsions and leadings are apt to arise out of pathological instincts and are of a lower order of guidance-value than scientific knowledge. But even when aided by true knowledge and normal feelings, some persons have the power to make judgments that are more in keeping with the actual conditions of inner and outer things than do others with seemingly the same mental equipment, because they have genius capacities and also a greater ability to utilize their subconscious-ness.

This introspective study of his mind was the most profound influence in young Elmer's life.

Another of the most potent and interesting factors was the influence from the mind's subconsciousness as impulses and "leadings." It seemed to him with increasing introspective vividness that in all conclusions and judgments he had been utilizing only a part of his mental content. Was it an illusion? What constituted his mental content? Why did he have such feelings or presentiments or intuitions or previsions or urgings or apprehensions about things? This is when he began to study the mind's subconscious powers. It is doubtful if the strongest influences in his life, especially during these early years, were at all times his predilections for scientific pursuits. The consciously

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known incentives were not always the strongest tendencies at work in his mind, but sometimes he was much more forcibly impelled toward activities for which the incentives were not consciously known but felt as a predisposition. He called them leadings, being careful to point out that nothing occult or mystical was implied but only the pulling of the subconscious on his best abilities. Even before he knew why or what he was aiming at, his tendencies were mainly mindward. His thinking and wondering about the mind were utterly irresistible, and his pleasure in watching the movements of the mind was so well known to his early teachers that one once remarked, "He must be able to know more about his mind than we do of ours."

Long before he had begun his study of the elementary sciences, he looked upon the mind as "being far more wonderful than mountains or seas or the starry immensity of the heavens"; and although he knew not why it came to be so, the mind was to him "as really and truly part of nature as is the Milky Way or the moss covering the mound on which I sit." Mind was never merely and only his mind, but also something vaster and more basic than any and all human and animal minds. He was always much disturbed that only one of his early friends could understand this conception of non-individualistic and impersonal Mind, which "is the most

momentous and important thing in nature and whose possibilities are not exhausted by all the actual minds in all worlds in all ages.” He once expressed it by saying, “There can be a bigger mind than any actual mind known to us. I do not state this as a datum of science but as an actual conviction that influenced me. That which we name electricity is capable, no doubt, of manifesting in a greater number of ways than has ever been witnessed. There is more to it than we know about or inquire, and just so it is with mind; the mental abilities of all known living things from cells to mankind and of all higher species which yet may evolve or that may evolve on all the planets are even now contained within the possibilities of Mind.”

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A letter written to his teacher when he was fourteen years old expresses this belief in another way, and he never lost his concern for world problems:

“Dear Virginia: It pleased me to see you agree that the only important and hopeful feature about this petted planet on which about fifteen hundred million of us live is this—that it has on it such a wonderful and potent thing as Mind, which can discover and apply Truth. Were it not for that one thing I would despair. Therein lies the power and guidance to program. The difficulties of the human race will not be surmounted and the problems of this world will not be solved unless they are solved by the Mind. Through Mind, Truth becomes the Light of the World. I have seen the Light and shall follow it. . . . The most useful thing that can happen to a child is not to be born with a silver spoon in its mouth but to inherit a bright Mind—nothing can compensate for having been born with a mediocre mind. . . . If my present insights are reliable I am enough of a prophet to predict that it is within the power of science to give any person more Mind-as you have heard me promulge.”

This inward urge and impulsion and insight led Elmer to watch his mental processes while they were engaged in solving a problem in geometry or algebra or devising an experiment in chemistry or physics long before he had any intention of making a special study of the mind. Again and again he would engage in solving a problem or working out an invention or “thinking out something to write upon a subject,” and wonder and wonder at the seemingly incredible fact that the mind can invent a new device or discover a new bit of knowledge. From the first he was not so much impressed with the solution as with the goings-on of the mind. This attitude was not merely instinctive: he saw it as seemingly urged upon him by the total nature of things (among which was the mind). He was irresistibly constrained to do the thinking and

introspecting just to feel the goings-on; and so that the thinking might be real, he attacked real problems in mathematics, physics, chemistry, philosophy, and invention to watch the workings of the mind and feel it in the process of

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arriving at results—“wondering at it and reverencing it and being almost overjoyed about it.” He felt that he must do it, not because of any incentives or set purposes, but because, like Walt Whitman, he “felt an imperious conviction as total and irresistible as that which makes the sea flow and the globe revolve.”

At times during his long career, Gates would take joy in research work, in making ingenious and useful inventions, in proving or disproving a theory, in making money, in doing systematic experimentation for extending knowledge of a subject, but suddenly, even in the midst of the most successful and happy period of such work, he would feel an almost total loss of interest in it, and with an unutterable longing and with an unyielding tendency of his mind toward something else, with reference to which he had no conscious purposes or incentives, he would want to investigate that something else (shorthand, the Chinese language, crystallization, osmosis, the history of the world), and it would not leave his mind. It was an overwhelming tendency to investigate a certain domain of nature or think about a subject without having previously had any plans or incentives concerning it. He happened to call it a leading when it was first designated (led by inherited and phylogenetic tendencies and abilities), to distinguish it from a conscious plan or definite incentive of the usual kind, as when one studies shorthand to be a stenographer. But he had no intention of using it professionally when he was impelled to study all shorthand systems; and later this knowledge filled a gap in his plans. It was like when you get hungry for a certain food: you find your-self hungry for it, and that is all there is to it. When he had a leading, it was simply “borne in upon him” to occupy his time and thought with this or that subject without knowing why, and in spite of seemingly strong incentives and purposes relating to other lines of effort in which time and money had been spent and practical results were desired and about to be reaped.

For example, under such a leading he was impelled to lay out a course of experimental study of crystallization. After

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getting started, circumstances compelled him to drop the work, and with a lingering regret he never had time to continue. Ten years later others published discoveries relating to crystals which he

could not have avoided making with his proposed experiments. No doubt, he believed, his mind needed that knowledge and experience. After learning what others had discovered, he still was unsatisfied and just as eager to take up these researches.

Now he did not explain this phenomenon in any occult way. Just as the curative powers of nature (*vis medicatrix naturae*) “the “conatus” of certain writers—heal a wound and structurally build tissue, so he believed nature is a whole and heals its wounds and directs its growth and processes intelligently but not necessarily consciously. “It is probable,” he wrote in his sixteenth year to a friend, “that these powerful and reasonless impulsions or leadings are, after all, but the reflex stimulation of certain dominant and predilective abilities, pregnant with a new idea or thought or insight, and getting ready to give it birth.”

The attempt to understand these impulsions and leadings of the mind’s subconsciousness led him into exhaustive and long continued investigation of spiritualism, thaumaturgy, astrology, palmistry, magic, hypnotism, and like subjects, but he found in these no valid explanation. He later studied medicine and obtained a “little light.” Finally a full explanation was subsequently found in the interaction between the mind’s conscious predilective abilities and the abilities and tendencies of the mind’s subconsciousness. A leading is a resultant of the interaction between a person’s predilections and all which lies below and above his conscious mind or is immanent in it; it is the whole Cosmos and subconscious mind acting in and through a person, using his whole mind, body, and environment as a functional part of a larger whole—as a part of the Cosmic Process (in which Mind is a factor). The mind, especially through the subconscious and infralogical processes feels, without knowing the reason, the influences of the resultant as a strong tendency but not as a consciously known incentive or purpose or impulse to do.

It is neither a mysterious nor an unusual experience, this

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matter of subconscious impulsion. Most persons do follow such leadings, and if the whole transaction is within their knowledge and experience, they are more apt to succeed than not. Most men of big affairs are influenced by reasonless impulses to do. In any case, Gates was frequently influenced by them. “It may be that such leadings or impulsions or hunches or intuitions,” he thought, “are but an echo of old phylogenetic instincts, as when certain animals continue to migrate annually to districts which have become inimical. But that is one of the kinds of mistakes the subconsciousness makes. Again it may be the beckoning from the

conatus; and it may be the subconscious judgments from data that have not risen into consciousness.”

Sometimes he would feel the injunction laid upon him to experiment in a particular domain, to try certain experiments. It did not follow that they would produce important results, but he found that they led to experimental data, which he felt he could not have done without, and which his mind needed. Whenever he felt that he could no longer avoid taking up the work indicated by a leading, when the matter intruded almost like an obsession into daily thought and work, when important matters were dropped to take up the indefinite but irresistible leading, he was inclined to believe that he was led by a larger part of himself than his conscious mind. During the early part of his career he could not help dropping all other matters, including important business that could have made an income for life, and devoting his whole time and thought and all his means exclusively to an exploration of the mind. It was not possible for him, time and again, later in life, to avoid spending his time and money in completing a course of investigation, then hurriedly as consulting physicist make just enough to pay for the next step of experiments. He felt that he was unavoidably compelled to complete each period of work just as soon as possible, at any expense of labor and money, so he might then, and not at a later period, be profiting by the results.

Gates related the story of De Quincey, who, not being able to resist eating opium, hired a bodyguard to keep it away from

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him, then bribed the bodyguard with a larger sum to let him have some. A leading is not pathological like morphinomania, but it is probably as irresistible. Gates could resist one—and even did so for years just to learn if he could—but he concluded that he should not. It should be done, if normal, to complete his self-expression. Sometimes the work indicated by the leading was taken up just to get rid of being bothered by it, and nearly always it led to unexpected and important developments in his lifework.

Gates' leadings were mindward and toward the “Inner World”; and then toward the “Very Inmost” of this Inner World to get a more fundamental knowledge of the “Outer World.” Whenever he most intensely wanted to know about the objective cosmos, he felt the leading (accompanied by a dim insight) that the only way better to know the Outer World is to get deeper into the Inner World. Later this became an intelligible purpose based on further discoveries, but at all times he was more potently led to these predilective efforts.

Another strong influence, his religious disposition, brought him a first glimpse of validation. This disposition was not fostered by

the theological or creedal teachings of the religions with which he came in contact. They had the opposite effect, although he was influenced by the characters and teachings of most of the great religious teachers—Confucius, Gautama Buddha, Christ, Fox, and Hicks—and all the poets from the earliest to Whitman and Emerson, whom he regarded as geniuses in their lines just as Newton was a genius in mathematical physics. His closest and most influential teacher, Virginia, shed upon him daily what she believed to be the spirit of the Light Within. The sectarian teachings of his parents and other relatives and friends only tended to prejudice him against their specific teachings, with the effect of making his natural religious attitude toward “The All, The Whole, the Infinite Cosmic Process burn more strongly within, with an intense emotional appreciation of the glories of nature as a Living Whole—a whole including mind, and alive with the conatus” (and not German or Fichteian pantheism, he insisted).

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“I often sat alone,” he wrote, “out in the woods on a hill at midnight amazed at the wonder of the immeasurable vastness of the sidereal system (who has not?), in which our little speck of an earth forms so small a part, and felt our insignificance (who has not?); but in my contemplation of the Infinite Universe and its eternal home in the continuum of Space and as never-ending in the continuum of Duration I did not only feel the sublimity of vastness and the humiliation of my insignificance but I was always distinctly aware, to my oneness with IT and overwhelmingly AWARE that what I knew as me, myself, is actually that much of the Cosmic Process going on as me (not Solipsism), and I devoutly contemplated it as the doing of The Eternal All—a little of the Now of Eternity. For several hours, night after night, when the mood was upon me while all alone and while the dominancies of daily life did not intrude their cares or excitements, I sat in speechless adoration and ecstatic surprise, gazing mentally into the limitless WHOLE wondering if out of its shoreless Cosmos could come into my pygmy mind an enlightenment and inspiration.

“O the ineffable hours of almost unbearable joy (how well I remember them!) as I pondered upon this Space-filling Mystery which from Eternity to Eternity has manifested itself in multitudinously various forms; and now after a beginningless Past, here it is, for me—just as I see it, just as I feel it . . . and I, I am a part of it! It is part of myself; I am born out of it, an inheritor of Its nature and possibilities! “With a profound love I called it my World-home; and to the Regnant Power in it I yearningly looked for knowledge, and for the ability to be useful to all evolving life, and looked for relief from the seemingly irremovable doubts into

which my contradictory teachers and books had plunged me. Perhaps never again will I experience the pristine emotional fervor of those halcyon days of longing aspiration and prophetic hope; never again will I attain a like zeal and enthusiasm. I remember that I reached the climax of conscious emotional intensity while craving for a sure basis of indubitable knowledge when I had the insight that it was to be

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found in Consciousness itself (and nowhere else). It is not possible for words to describe the utter amazement which filled me whenever I contemplated the wonder of the Universe and the still greater wonder that any part of it, as myself, could be conscious. To know more, and to know only truth, became the dominant incentive and purpose and impulse of my life; and it was unquestionably evident to me that it was my mind that must do the knowing and learning—upon it I must depend for ability, for correct judgments, for discoveries, and for the joy or sorrow of my existence.

“Marcus Aurelius said: ‘O Universe, I wish what Thou wishest.’

“To me, however, the universe was not mainly physical but a mental cosmos. I paraphrased the prayer of Aurelius: ‘I, a child of Life, born out of Thy nature, O Consciousness, wish what Thine own Nature wishes, and am a devotee of that standard.’”

Another profound influence of this period was the deep conviction that Mind, or Consciousness, is as much an essential and primordial part of the universe as is matter and motion; that if Mind had not been eternally in and of the universe, there could never have been such a thing as a conscious being; and that the principles, processes, and nature of all minds, and of the cosmic or universal condition that constitutes Mind, must be expressed in his mind. To that Cosmic Process which is the ground of mentation, with religious devotion and unswerving aspiration, he looked for that kind of subconscious guidance which would come in the form of better functional activity of the mental processes, as insights, as new and true ideas, as normal impulses and motives, as true esthetic appreciations.

Virginia encouraged those mental habits that gave him acquaintance with his mind, and he acquired introspective skill. The hours of his conscious life were to him joyous “enthasms.” This looking to the highest directed the cosmic elements of mind in him to that kind of conscious and subconscious functioning which, because his attention was vividly and persistently focused

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upon the question for which solution was sought, was, as he learned later, most likely to lead to new ideas and insights about it. This intending the mind upon these subjects, month after month for several hours daily, led him to evolve a number of philosophical ideas that were new to him but most of which, he afterward learned, had long been the property of the great thinkers of the world. This pleased and instructed him, that his mind had been able to attain some of the great thoughts that others had previously attained.

Solitude much enhanced this introspective tendency. He was much alone during childhood and youth. By chance he had very few play-mates or acquaintances of his age. This gave ample leisure for reading and meditation, and he took profound pleasure in communing with his mind. In addition to daily study of the elements of science, he always spent an equal or greater time in his subjective laboratory making his mind experiment upon itself. Almost every day also he kept up the practice of going off alone in quiet surroundings, as on the hillside: “. . . with my beloved trees and would contemplate my beloved stars moving majestically in the sidereal vastness. I would also feel my integral oneness with that Mighty All and try, by virtue of its nature in me, to get the guidance of its presence (in my mental functionings) so I might be led toward greater normality and truer insights. O the ineffable yearnings of those silent evening hours, alone with the Eternal Cosmos and alone with Consciousness—the two central facts of the ages! O the prayers, too intense to be voiced, that out of that natural regnancy of Cosmos called Consciousness, there might come the insight to lead the race out of its muddle of beliefs and theories! How is it possible that our world, being part and parcel of that MIGHTY and ETERNAL PROCESS, can be so steeped in ignorance and crime, so strained and stressed by antagonistic customs and contradictory beliefs? Long and long I sought for some Ariadne’s clue that would lead my mind through the dark jungles of philosophy and belief, dark with ignorance, out into the open and sun-clear plateaus Of TRUTH. Long and long I sought eagerly

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for some insight that would lead me to some sure basis of knowledge that would give me faith in the beneficence, or at least in the rationality, of the Cosmos.”

“Unless,” he wrote at that time, “there is some small part of REALITY that can actually be known—unless the mind is capable of attaining, however little, of that true knowledge and know that it

is true, then forever is Man adrift in a rudderless ship, without chart or compass, upon a shoreless sea in endless night.”

This desire for a criterion of truth was so emotionally strong that to discover a method of validation was a religious necessity. He felt that “unless the mind can discover some valid mode of knowledge-getting, and know it is valid, it can never sift the false from the true in human beliefs; it is all a question of attaining a true knowledge of itself and the Cosmos. Where is it to find that rock-bottom basis? In the mind or outside it, or both? It is self-evident that even if found outside the mind it must be found by the mind and by mental methods, and whatever is thus found is mental content.” And thus, out of experimental studies in the “outer” and “inner” laboratories and out of his yearnings and meditations and impulses and influences came the first of a series of insights that guided to-ward the discovery not only of an art of mentation but also of a criterion for a validation more fundamental than induction.

He further described it in this way: His last station upon the frontier of the known, before he started out into the unknown to discover, if possible, a realm of indubitable knowledge, was the time-honored one of Greek philosophy that placed furthest out upon its borderline the advice “Know thyself,” and the still older one from the immemorial speculation of the Orient bearing the legend “Inquire within.” By a different method, and traveling in the opposite direction, modern science has flung far and wide another frontier marked by a border-line upon whose remotest guidepost is the motto “Induction.” The frontier of the inner world had been pushed to the limits of the old methods of introspection, and further progress was balked by speculation. The frontier of the Outer World had been extended so far that

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its data became unwieldy from their number, and obscure because of the theory and hypothesis inwrought with them (owing to defects of method and because the validity of its fundamental process was being questioned). With a new point of view of all these frontiers, Gates started into the unsurveyed regions. Perhaps the most significant feature of this study of the mind through which he was passing was the marriage of introspection and observation—the close union of the two methods in one mind.

Idealists and mystics, he emphasized, have seen only the Inner World, without being able to distinguish between its realities and its mirages. Materialists and scientific observers have seen only the Outer World, without being able to tell which part is objective or subjective. In his mind these two worlds were looked upon as one world, inextricably interrelated and combined until each world be-

held its face in the mirror of the other. Outward things, such as trees and mountains and stars, were not real things to his mind in any truer sense than were the mental states and processes. The latter seemed more fundamentally real. Others would talk of authorities outside himself, such as books and objective things, or of authority solely inside himself, such as the Light Within and speculative idealism, but both the Inner and Outer worlds seemed to him to be only a portion of the one reality.

This long and constant introspection by what proved to be the beginnings of several new methods revealed a number of new and highly important facts regarding mind and the nature of knowledge. These discoveries placed the whole subject of scientific method before him in a new light, directed him into a method of regulating mental functions that was productive of more than the usual discoveries, and gave a rigid and critical conception of the nature of knowledge. This incidentally did not ensure respect for “authorities” but gave increased confidence in an improved inductive method that he was beginning to discover.

It became increasingly evident, however, that the improved method was still inductive, that the truth was only relatively true,

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and that the proved datum contained no factor of absolute validity. He was therefore still not sure of the sanity and normality and validity of the mental processes by which facts are determined. An experiment does indeed seem to give facts, and he found it difficult to doubt them, until it occurred that this seeming certainty might, for aught he could then prove, be only the “seeming” of a pathological process of a deluded mind. Obviously if mind in living things were a diseased or abnormal manifestation like cancer, then falsehoods and illusions might be true to such a mind. The “facts” of observation and experiment, such as he had been laboriously verifying, could be considered facts only if the mind were reliable and its testimony valid, and the Cosmos rational.

Here was his dilemma: “If the mind as it evolves or manifests on earth is fundamentally biased or diseased how can it be of use to prove anything? And what would it matter anyway? How can certainty arise out of it? How can even one simple fact be proved beyond doubt? Yet some one fact **MUST** be found as a standard, a criterion, a test by which to judge other alleged facts if we are to validate anything; if we are to find a method of complete validation we must first find an absolutely known **CRITERION!** If even one such fact could be ascertained then we would have one specimen of truth—one datum, with which if other alleged facts were not congruous, we would know them to be falsehoods.”

It did not at that time seem probable that the mind could ever discover any fact about itself that would justify the validity of its own Process. But the problem was brought distinctly before his conscious mind, and the task was set to the subconscious processes. “Soon I was deeply convinced that the basis of my belief in regard to the possibility of true knowledge and complete mental sanity was actually then being established scientifically in my mental process,” he wrote, “that the faith that is intrinsic in every scientist, artist, artisan, philosopher, and immanent in every joy, fact, morality, ethicality, worshipful attitude toward the WHOLE, is capable of being based on an

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absolutely known datum which every mind of adequate capacity will accept indubitably when once it is known. If so, can I fully find it and know it? Can any adequately evolved New-age mind find it?”

His parents must have experienced much joy when their only child, Elmer, was born to them late in life and they watched him grow into the exuberant health and vigor of an active boyhood filled with eager interest in everything. They must have been proud of his early evidence of scientific ability and mental maturity beyond his years, but must have viewed with astonishment if not alarm that he “found their sectarian doctrines quite opaque and not in accordance with his conscience.” His early teachers must have felt well rewarded, watching his exceptional development into prodigious productivity, which we will see.

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