

SIX
The Psychologist *Malgré Lui*:
William James

“This Is No Science”

What is one to make of a distinguished professor of the new science of psychology who denies that it is a science? Who praises the findings of experimental psychologists but loathes performing experiments and does as few as possible? Who is said to be the greatest American psychologist of his time (the late nineteenth century) but

never took a course in psychology and sometimes even disavows the label of psychologist?

Listen to this maverick, William James:

To a poet friend he writes, in sarcastic allusion to the New Psychology of the German mechanists, “The only Psyche now recognized by science is a decapitated frog whose writhings express deeper truths than your weak-minded poets ever dreamed.”¹ In a letter to his brother, the novelist Henry James, he refers to psychology as a “nasty little subject” that excludes everything one would want to know.² Only two years after completing his huge and magisterial *Principles of Psychology* he writes:

It is indeed strange to hear people talk triumphantly of “the New Psychology,” and write “Histories of Psychology,” when into the real elements and forces which the word covers not the first glimpse of clear insight exists. A string of raw facts; a little gossip and wrangle about opinions; a little classification and generalization on the mere descriptive level; a strong prejudice that we *have* states of mind, and that our brain conditions them:

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but not a single law in the sense in which physics shows us laws, not a single proposition from which any consequence can causally be deduced. This is no science, it is only the hope of a science.³

Yet this outspoken recusant is not scornful of psychology but has great expectations of it. He sees its goal as the discovery of the connection between each physiological “brain state” and the corresponding state of mind; a genuine understanding of that connection would be “*the* scientific achievement, before which all past achievements would pale.”⁴ But he says psychology is not ready for that; its state is like that of physics before Galileo enunciated the laws of motion, chemistry before Lavoisier stated the law of the preservation of mass. The best it can do until its Galileo and Lavoisier come is to explain the laws of conscious mental life, but “come they some day surely will.”

Adorable Genius

The informality and unpretentiousness of James’s remarks tell us that we are in the presence of a man very unlike Wundt; no wonder they did not appreciate each other’s work. James, a short, slender man, lightly bearded and blue-eyed, with fine features and a noble forehead, chose to dress in what was, for that time, informal garb for a professor—Norfolk jacket, bright shirt, flowing tie. Friendly, charming, and outgoing, he often walked across Harvard Yard with students, animatedly talking to them, a spectacle to make a Herr Professor’s flesh creep. As a lecturer, he was so vivacious and humorous that one day a student interrupted and asked him to be serious for a moment.

Despite his ready smile and boyish, even impish, manner, he was a complex personality: strong yet intermittently frail, hardworking yet sociable, joyous but given to spells of melancholy, frivolous but profoundly serious, kind to students and loving to his family but easily bored and exasperated, especially by nitpicking chores like

proofreading (about which he once wrote, “Send me no proofs! I will return them unopened and never speak to you again”⁵). Although he had the manners of a gentleman and was thoroughly civil in his behavior, he could be wickedly derogatory, as in the remarks about Wundt quoted earlier, but usually he made such comments only in personal letters, and in his published work was gentle and courteous even when critical.

He wrote with a fluency, informality, and intimacy that no other psychologist of his time, certainly no German, would have dreamed of using. Of the differing codes governing the several social selves of a man he said, “You must not lie in general, but you may lie as much as you please if asked about your relations with a lady; you must accept a challenge from an equal, but if challenged by an inferior you may laugh him to scorn.”⁶ To illustrate the difficulty of paying attention to a subject one dislikes he offered this case (probably himself):

One snatches at any and every passing pretext, no matter how trivial or external, to escape from the

odiousness of the matter at hand. I know a person, for example, who will poke the fire, pick dust-specks from the floor, arrange his table, snatch up the newspaper, take down any book which catches his eye, trim his nails, waste the morning *anyhow*, in short, and all without premeditation,—simply because the only thing he *ought* to attend to is the preparation of a noonday lesson in formal logic which he detests. Anything but *that*!⁷

He sometimes salted his serious writing with humorous stories and jokes. Describing how Helmholtz and Wundt felt about a psychologist who had recently misapplied their principle of unconscious inference, he wrote, “It would be natural [for them] to feel towards him as the sailor in the story felt towards the horse who got his foot into the stirrup,—‘If you’re going to get on, I must get off.’”⁸

And he could be wonderfully sensitive and empathetic. He visited Helen Keller when she was a young girl and brought her a gift he thought she could particularly appreciate, and which in fact she never forgot—an ostrich feather.

No wonder the philosopher Alfred North Whitehead summed him up as “that adorable genius, William James.” Born in New York City in 1842, William James was a child of privilege and by all odds should have become a playboy or, at best, a dilettante.⁹

His Scotch-Irish grandfather, who had come from Ireland, was a shrewd, hardworking businessman and a promoter of the Erie Canal who amassed several million dollars. In consequence, his son Henry (William’s father) had no need to work. Henry went to divinity school for two years, but found its stern Presbyterian doctrines repugnant and quit; he continued, however, to be concerned with religious and philosophic questions all his life. At thirty-three, he had an acute emotional crisis. After dinner, while idly staring at the fire, he was suddenly overwhelmed by a nameless fear—“a perfectly insane and abject terror, without ostensible cause,”¹⁰ he later said—that lasted for only ten seconds but left him badly shaken and prey to recurring anxiety for two years. Physicians, trips, and other distractions were no help, but at last he found relief in the philosophy of the Swedish mystic

Emanuel Swedenborg, who himself had suffered just such anxiety attacks.

After regaining his health, Henry devoted himself in part to writing works of theology and social reform (he styled himself “a philosopher and seeker of truth”), and in part to the education of his children. Dissatisfied with American schools, he alternately took his family—William James was the eldest of five children—to Europe to broaden their education and experience, and brought them back to their house on Washington Square in New York to keep in touch with their own culture.

As a result, William James attended schools in the United States, England, France, Switzerland, and Germany, and was also privately tutored; became familiar with the major museums and galleries in every city the family visited; acquired fluency in five languages; met, listened to, and talked to such frequenters of the James household as Thoreau, Emerson, Greeley, Hawthorne, Carlyle, Tennyson, and J. S. Mill; and through his father’s influence became widely read and well versed in philosophy. Not that Henry James, Sr., was a taskmaster or

disciplinarian; for his time, he was an unusually permissive and loving father, who encouraged dinner table arguments by the children about every kind of issue and, to his friends' horror, allowed his children to attend theater.

But a loving and permissive father can wield distressing influence over a child. At seventeen William James wanted to become a painter, but Henry James, Sr., who wanted him to seek a career in the sciences or philosophy, disapproved and took the family to Europe for a year as a distraction. Only because William persisted was he reluctantly allowed to study with an artist in Newport. After half a year William decided he was not gifted, perhaps more because of guilt feelings than a lack of talent, and, obeying his father's wishes, entered Harvard and began the study of chemistry.

But the detailed laboratory work tried his patience and he soon switched to physiology, then the vogue, what with the pioneering work in Europe of Müller, Helmholtz, and Du Bois-Reymond. After a while, however, because the family fortune was dwindling and William realized he would someday have to earn his own living, he switched to

Harvard Medical School. Medicine, too, failed to arouse his enthusiasm, and he took off much of a year to travel to the Amazon with Louis Agassiz, the eminent Harvard naturalist, hoping that natural history might be his true love. It proved not to be; he hated collecting specimens.

He resumed medical school but was beset by assorted ailments—back pain, weak vision, digestive disorders, and thoughts of suicide—some or most of which were exacerbated by his indecision about his future. Seeking relief, he went to France and Germany for nearly two years, took the baths, studied under Helmholtz and other leading physiologists, and became thoroughly conversant with the New Psychology.

Finally he returned and at twenty-seven completed medical school. He made no effort to practice because of his poor health, but spent his time studying psychology, sunk in gloom about his prospects and troubled by the profound differences between his scientific views of the mind and the world and his father's mystical and spiritual ones. In 1870, at twenty-eight, after nearly a year in these doldrums, he had an abrupt emotional crisis very much

like his father's. Many years later he described it in *Varieties of Religious Experience* in the guise of a memoir given him by an anonymous Frenchman:

I went one evening into a dressing-room in the twilight to procure some article that was there; when suddenly there fell upon me without warning, just as if it came out of the darkness, a horrible fear of my own existence. Simultaneously there arose in my mind the image of an epileptic patient whom I had seen in the asylum, a black-haired youth with greenish skin, entirely idiotic, who used to sit all day on one of the benches, or rather shelves against the wall, with his knees drawn up against his chin. *That shape am I*, I felt, potentially. I became a mass of quivering fear. After this the universe was changed for me altogether. I awoke morning after morning with a horrible dread at the pit of my stomach, and with a sense of the insecurity of life that I never knew before, and that I have never felt since.¹¹

In his mature years William diagnosed his father's crisis as an outbreak of long-repressed hostile feelings against his tyrannical father, but never suggested an explanation of his own crisis. Jacques Barzun has offered a hypothesis: "One may plausibly surmise that it was the intolerable pressure of not being able to rebel against a father who exerted no tyranny but that of love."¹²

The attack left James incapacitated for many months. During this period he was particularly troubled by the German physiologists' mechanistic vision of the world, the scientific equivalent of the Calvinistic determinism his own father had rebelled against. If mechanism gave a true picture of the mind, then all his thoughts, desires, and volitions were no more than the predetermined interactions of physical particles; he was as helpless to determine his actions as the epileptic patient in the asylum.

Finally, like his father, he was freed from his depression by reading— not Swedenborg but an essay on free will by Charles Renouvier, a French philosopher. As James wrote in his diary:

[I] see no reason why his definition of free will —“the sustaining of a thought *because I choose to* when I might have other thoughts”—need be the definition of an illusion. At any rate, I will assume for the present—until next year—that it is no illusion. My first act of free will shall be to believe in free will. I will go a step further with my will, not only act with it, but believe as well; believe in my individual reality and creative power.¹³

His will to believe in free will worked; he slowly began to recover, although all his life his health remained fragile and he continued to have minor bouts of depression. He spent the next two years reading widely in physiological and philosophical psychology and regaining his mental health. In 1872, nearing thirty, he was still financially dependent on his father and had no plans for his future when Harvard’s president, Charles Eliot, a neighbor—the James family had been living in Cambridge for some time—invited him to teach physiology at Harvard. He accepted, and remained there for the next thirty-five years.

But not as a professor of physiology. Within three years he began offering courses in physiological psychology and performing demonstrations for students in his little laboratory in Lawrence Hall. He continued to read omnivorously, forming his own lofty conception of psychology, and during the next three years presented some of his ideas so brilliantly in articles and book reviews that the publisher Henry Holt offered him a contract for a textbook of the new scientific psychology. James signed, apologizing that he would need two years. He took twelve, completing the task in 1890, but he produced a work that was successful far beyond the publisher’s hopes.

The year James began the book, 1878, was a landmark in another way. At thirty-six, he married. Despite his belief in free will, he seems to have been something less than a free agent in his choice of mate. Two years earlier his father had come home from a meeting of the Radical Club in Boston and announced that he had met William’s future wife, Alice Gibbens, a Boston schoolteacher and accomplished pianist. Although William dragged his feet

about meeting her, once he did so the die was cast. After a prolonged courtship, Alice became his dutiful, strong wife and helpmeet, mother of his five children, amanuensis, and lifelong intellectual companion. She appreciated his genius and understood his emotional needs and temperamental volatility, and despite many a spell of tension and many a battle, particularly before William's long trips—he needed periods of apartness—they were a devoted and loving couple.

Once he was married, James's remaining nervous and physical symptoms diminished; although his health was always imperfect, he went at life with a zest and energy he had never shown before. He was at last an independent man with his own identity, home, and income, free to pursue his own goals. Two years later Harvard recognized his special interests and abilities by making him an assistant professor of philosophy (his larger view of psychology fit more comfortably in that department than in the department of physiology), and in 1889 changed his title, finally, to professor of psychology.

Founding Father

There were no professors of psychology in American universities before James began teaching the subject in 1875. The only forms of psychology then taught in the United States were phrenology and Scottish mental philosophy, an offshoot of associationism used chiefly as a defense of revealed religion. James himself had never taken a course in the New Psychology because none was available; as he once jested, "The first lecture in psychology that I ever heard was the first I ever gave."

But within two decades at least two dozen American universities were offering instruction in psychology, three psychology journals were being published, and a professional psychology society had been founded. There were several reasons for the efflorescence: the desire of many university presidents to emulate the success of the German psychological institutes, the arrival in America of psychologists trained by Wundt, and, most of all, James's influence, exerted through his teaching, his dozens of well-

received articles, and his masterwork, *Principles of Psychology*.

James introduced experimental psychology to America. He began giving laboratory demonstrations to students at least as early as Wundt, and he and his students started performing laboratory experiments about the same time as Wundt and his students, if not earlier. Ironically, while James made much of the value of experimentation, he himself found it boring and intellectually confining. He usually spent no more than two hours a day in the laboratory, told a friend that “I naturally hate experimental work,” and said of the Leipzig style of laboratory work, “The thought of psycho-physical experimentation and altogether of brass-instrument and algebraic-formula psychology fills me with horror.”¹⁴

Yet he believed in it and had his students perform a broad array of experiments. They whirled frogs around to explore the function of the inner ear; did the same to human deaf mutes to test James’s hypothesis that, since their semicircular canals were damaged, they should be less subject to dizziness than normal people (he was right);

carried out reflex experiments on frogs’ legs, and reaction-time and speed of nerve-conduction experiments on human subjects; and, venturing far beyond Wundtian physiological psychology, did studies of hypnosis and automatic writing.

Although James hated to do experiments, he forced himself to when it was the best way to prove or disprove a theory. While writing the chapter on memory for *Principles*, he wanted to test the ancient belief still held by “faculty” psychologists that memory, like a muscle, can be strengthened by exercise, and that memorizing anything would therefore improve the memory not just for the memorized kind of material but for every kind. James was skeptical and used himself as his experimental subject. Over an eight-day span he memorized 158 lines of “Satyr,” a poem by Victor Hugo, taking an average of fifty seconds a line to do so. Next, working twenty minutes daily for thirty-eight days, he memorized the entire first book (798 lines) of Milton’s *Paradise Lost*. If the exercise theory were correct, this prolonged effort should have greatly strengthened his memory. He then went back to “Satyr”

and memorized another 158 lines—and found that it took him seven seconds longer per line than the first time. Exercise hadn't increased the strength of his memory; it had diminished it, at least temporarily.¹⁵ (He had several associates repeat the experiment, with roughly similar results.) A psychological theory accepted for two thousand years, and believed today by many laypeople, had been disproven.

But James's own experiments were only one source, and a minor one, of his ideas about psychology. He drew upon all his reading in both philosophical and physiological psychology; spent half a year in Europe in 1882–1883 visiting universities, attending laboratory sessions and lectures, and meeting and talking to dozens of leading psychologists and other scientists; corresponded regularly with many of them; and gathered reports and clinical studies of abnormal minds, and of normal ones under hypnosis, drugs, or stress.

He derived many of his major insights and hypotheses from another and very different source: introspection, of a kind quite unlike that practiced by Wundt and his students.

In James's opinion, any effort to seize and isolate individual elements of a thought process by means of Wundtian introspection would be doomed to failure:

As a snow-flake crystal caught in the warm hand is no longer a crystal but a drop, so, instead of catching the feeling of a relation moving to its term, we find we have caught some substantive thing, usually the last word we were pronouncing, statically taken, and with its function, tendency, and particular meaning in the sentence quite evaporated. The attempt at introspective analysis in these cases is in fact like seizing a spinning top to catch its motion, or trying to turn up the gas quickly enough to see how the darkness looks.¹⁶

But he felt that a naturalistic kind of introspection—an effort to observe our own thoughts and feelings as they actually seem to us—could tell us much about our mental life. This was, for him, the most important of investigative methods; he defined it as “looking into our own minds and reporting what we there discover.”¹⁷ (He was referring to

the introspection of conscious mental processes; at the time, neither he nor most other psychologists were aware of how large a part of our mental processes takes place outside consciousness.)

Such introspection required both concentration and practice, because inner states follow each other rapidly and often are blended and difficult to distinguish from one another. Yet it was feasible, James said, likening it to sense perception. Just as with practice one can notice, carefully observe, name, and classify objects outside oneself, one can do so with inner events.

There was, to be sure, a classic question about how this was possible. The conscious mind can observe external objects, but how can it observe itself? Was there a second consciousness that could watch the first one? How could we know that such a second consciousness existed—could we observe it, too? And how? James had an answer to such perplexities: introspection is, in reality, immediate retrospection; the conscious mind looks back and reports what it has just experienced.

He admitted that introspection is difficult and prone to error. Who could be sure of the exact order of feelings when they were excessively rapid? Of the comparative strengths of feelings when they were very much alike? Or which is longer when both occupied but an instant of time? Who could enumerate all the ingredients of such a complicated feeling as anger?

But he said that the validity of some kinds of introspective reports could be tested and verified by at least half a dozen kinds of well-established experimentation. The duration of simple mental processes, for one, could be estimated introspectively and then verified by reaction-time experiments; the introspective report of how many digits or letters one could simultaneously keep in mind, for another, could be verified by apperception experiments.

And while introspective reports of the more complex and subtle mental states might be impossible to verify experimentally, James maintained that since those acts are introspectively observable, any straightforward account of them can be regarded as literal. In any event,

“introspective observation is what we have to rely on first and foremost and always.”¹⁸

One other source of James’s psychological ideas—possibly the most important of all—was personal and nonscientific: his naturalistic, perceptive, and wise interpretation of human behavior, based on his own experience and understanding. Many of his major insights came from “psychologizing,” says the distinguished psychologist Ernest Hilgard in his authoritative *Psychology in America*:

To “psychologize” is to reflect on ordinary observations and then to offer a plausible interpretation of the relevant experience and behavior. Once expressed, such interpretations are often so plausible that detailed proof would seem irrelevant—or at least too tedious to be worth the effort. Shakespeare was such a “psychologizer” without making any pretense of being a psychologist. Among psychologists, James is the preeminent psychologizer. The consequence is that he encouraged a full-bodied, warm-hearted

psychology that is impatient with the trivial—a robust and vital psychology facing courageously psychology’s most puzzling problems.¹⁹

After twelve years of research, introspection, psychologizing, and writing, James completed *Principles*, which had been an almost intolerable burden to him. It was a huge work—nearly fourteen hundred pages in two volumes—and unsuitable for textbook use after all. Within two years, however, he turned out an abridged textbook version. (The full-length version became known as “James” and the abridged version as “Jimmy.”) *Principles* was an immediate and resounding success, and had a lasting effect on the development of American psychology. Nearly sixty years later Ralph Barton Perry, professor of philosophy at Harvard, would say of it, “No work in psychology has met with such an enthusiastic reception... nor has any other work enjoyed such enduring popularity.”²⁰

By 1892, when James completed Jimmy, he had been teaching and writing about psychology for seventeen

years, and grown weary of it. From then on he turned his creative efforts toward other things: education (he lectured on the applications of psychology in the classroom and published *Talks to Teachers* in 1899); the practical results of different kinds of religious experience (*The Varieties of Religious Experience* appeared in 1902); and philosophy (*Pragmatism*, published in 1907, established him as a leading American thinker).

He did, however, continue to write popular treatments of some of the ideas he had advanced in *Principles* and to keep up with psychological developments. In 1894 he was the first American to call attention to the work of the then obscure Viennese physician Sigmund Freud, and in 1909, though ailing, he went to Clark University to meet Freud on his only visit to the United States and to hear him speak.

Ever the nonconformist, James was willing to explore forms of psychology outside accepted scientific bounds. He took a keen interest in spiritualism and “psychical” phenomena, considering them an extension of abnormal psychology; closely followed the efforts of psychical

researchers; attended séances; and in 1884 founded the American Society for Psychical Research. He once made a pact with a dying friend to sit outside his room after his death and wait for a communication from the Beyond; none came. James coupled an open-minded attitude toward such subjects with an insistence on solid scientific evidence; late in life he concluded, “I find myself believing that there is ‘something in’ these never ending reports of psychical phenomena, although I haven’t yet the least positive notion of the something... Theoretically, I am no further than I was at the beginning.”²¹

From 1898 on, James had a personal reason to be interested in the afterlife. That year, at fifty-six, he overtaxed his heart while climbing in the Adirondacks, and thereafter had chronic heart trouble. His health gradually worsened; he resigned from Harvard in 1907, wrote two of his most important works of philosophy in the next three years, and died in 1910, at sixty-eight. John Dewey said of him at that time, “By common consent he was far and away the greatest of American psychologists. Were it not for the unreasoned admiration of men and things German,

there would be no question, I think, that he was the greatest psychologist of his time in any country—perhaps of any time.”²²

Ideas of the Pre-eminent Psychologizer

James had something to say about every topic within psychology, as known in his day, but his chief influence was due to the following handful of his concepts:

Functionalism: This is the label usually applied to Jamesian psychology. Unlike the New Psychologists, who maintained that higher mental processes are assembled in each individual from simple elements, James held that the higher processes were developed over the ages by evolution because of their adaptive value. He was seventeen when Darwin’s *Origin of Species* appeared (1859), twenty-nine when *The Descent of Man* was published (1871), and was impressed by both. It seemed clear to him that the mind’s complex processes had

evolved because of their life-preserving functions, and that to understand those processes one had to ask what functions they perform.

Functionalism is a handy label, and accurate enough, except that it applies only to some parts of James’s psychology. He had no actual system and deliberately avoided presenting his ideas as a coherent whole because he felt that it was far too early in the development of psychology for an all-embracing grand theory. As Ralph Barton Perry said, James was an explorer, not a mapmaker. In *Principles* he presented material and theories about every psychological phenomenon from the simplest sensations to reasoning without trying to force everything into a unified framework.

Yet he did have a strong viewpoint. The physiological psychologists of Germany said that mental states were nothing but physiological states of the brain and nervous system; James termed this “an unwarrantable impertinence in the present state of psychology.”²³ He viewed mental life as real, and the physiological view that mind was

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nothing but physical reactions to outside stimuli as unworthy of belief or even debate:

All people unhesitatingly believe that they feel themselves thinking, and that they distinguish the mental state as an inward activity or passion, from all the objects with which it may cognitively deal. *I regard this belief as the most fundamental of all the postulates of Psychology*, and shall discard all curious inquiries about its certainty as too metaphysical for the scope of this book.²⁴

The proper subject of psychology was, therefore, the introspective analysis of the “states of mind” that we are conscious of in daily life and of the functions they perform for the organism.

(We will pass by what James had to say about physiological psychology in *Principles*, since there is little in those chapters that is distinctively Jamesian except for the lucid and often poetic prose.)

The nature of mind: Although James rejected the materialism of physiological psychology, he could not

accept the alternative of classic dualism, the theory that mind is a separate entity or substance parallel to and independent of the body. Not only was this wholly unprovable, but Fechner and Donders, among others, had already shown that certain physiological responses to stimuli caused certain states of mind.²⁵

James examined every major solution to the mind-body problem, found fault with each, and finally settled for a dualism of perspective. There are external objects, and our knowledge of those objects; there is a material world, and a set of mind states relating to them.²⁶ The latter are not mere brain states caused by external things; they are *mental* states that can interact with one another and, within the realm of mind, obey their own causal laws.

Whatever the ultimate nature of mental states, James said, psychologists should lay aside the whole mind-body question. Psychology was in no way ready or able to spell out the connections between physiological states and mental states, and its proper concern, for the present, was the description and explanation of such processes as reasoning, attention, will, imagination, memory, and

feelings. From James's time on, this would be the dominant view within many branches of American psychology—the study of personality and individual differences, educational psychology, abnormal psychology, child development studies, social psychology; everything, indeed, except experimental psychology, much of which would be behaviorist and anti-“mentalist” for many decades.

The stream of thought: Using introspective analysis as the major approach to investigating the conscious mind, James asserted that the reality most immediately perceived by that method is the unbroken flow of complex conscious thought:

Most books start with sensations, as the simplest mental facts, and proceed synthetically, constructing each higher stage from those below it. But this is abandoning the empirical method of investigation. No one ever had a simple sensation by itself. Consciousness, from our natal day, is of a teeming multiplicity of objects and relations. The only thing which psychology has a right to

postulate at the outset is the fact of thinking itself. *The first fact for us, then, as psychologists is that thinking of some sort goes on.* I use the word thinking for every form of consciousness indiscriminately. If we could say in English “it thinks,” as we say “it rains” or “it blows,” we should be stating the fact most simply and with the minimum of assumption. As we cannot, we must simply say that *thought goes on.* ²⁷

James considered consciousness not a *thing* but a process or *function*. Just as breathing is what the lungs do, conducting conscious mental life is what the brain does. Why does it? “For the sake of steering a nervous system grown too complex to regulate itself.”²⁸ Consciousness allows the organism to consider past, present, and future states of affairs, and, with the predictive power thus achieved, to plan ahead and adapt its behavior to the circumstances.²⁹ Consciousness is “a fighter for ends, of which many, but for its presence, would not be ends at all.”³⁰ The chief one is survival; that is its function.

On further introspection, we notice that consciousness has certain characteristics. Of the five James named, the most interesting—because it contradicted traditional Aristotelian conceptions of thinking—is that each person’s consciousness is a continuum, not a series of linked experiences or thoughts:

Consciousness, then, does not appear to itself chopped in bits. Such words as “chain” or “train” do not describe it fitly as it presents itself in the first instance. It is nothing jointed; it flows. A “river” or a “stream” is the metaphor by which it is most naturally described. *In talking of it hereafter, let us call it the stream of thought, of consciousness, or of subjective life.* ³¹

While the objects of our thoughts or perceptions may seem distinct and separate, our consciousness of them is itself a continuous flow; they are like things floating in a stream.

The concept of the stream of thought (or, as it is better known, the stream of consciousness) struck a responsive chord among psychologists and became useful and

important in both research and clinical work. It also was immediately taken up by a number of authors who sought to write in a stream-of-consciousness style, among them Marcel Proust, James Joyce, Virginia Woolf, and Gertrude Stein. (Stein actually studied under James at Harvard.)

The self: Even breaks in consciousness, such as those occurring in sleep, do not interrupt the continuity of the stream; when we awaken, we have no difficulty making the connection with our own stream of consciousness, with who we were and are. But that is because of another major characteristic of consciousness: its *personal* nature. Thoughts are not merely thoughts; they are *my* thoughts or *your* thoughts. There is a personal self that separates one’s consciousness from that of others and that knows, from moment to moment and day to day, that I am the same I who I was a moment ago, a day, decade, or lifetime ago. ³²

From the beginnings of psychology, thinkers had struggled with the problem of who or what knows that I am I and that my experiences have all happened to the same Me. What substance or entity, what watcher or monitor, accounts for the sense of selfhood and of

continuous identity? James called this “the most puzzling puzzle with which psychology has to deal.”³³

The classic answer was the soul or transcendental self. But a century earlier both Hume and Kant had shown that we can have no empirical knowledge of such a self.³⁴ Philosophers might still speculate about it, but psychologists could not observe or study it. Accordingly, the experimental psychologists of the nineteenth century did not even discuss the self, and the British associationists sloughed it off as no more than the connected chain of passing thoughts.

James, however, felt that “the belief in a distinct principle of self-hood” was an integral part of the “common sense of mankind,”³⁵ and found a way to restore to psychology a meaningful—and researchable—concept of self. We are all conscious of our individual identity, we think of certain things as *me* and *mine*; these *feelings* and the *acts* associated with them can be investigated and thus are the “empirical self.”

The empirical self has several components: the material self (our body, clothing, possessions, family, home); the social self or selves (who we are and how we behave in relation to the different people in our lives—an anticipation of social psychology, which would not emerge as a specialty for decades); and the spiritual self, a person’s inner or subjective being, his entire collection of psychic faculties or dispositions. All these can be explored by introspection and observation; the empirical self is, after all, researchable.

But this still leaves unsolved that most puzzling puzzle of all. What accounts for the sense of me-ness, selfhood, and identity, the sure knowledge that I am who I was a while ago? James identified such thoughts as belonging to the “pure Ego,” a wholly subjective phenomenon, and suggested that its perception of continuing personal identity arises from the continuity of the stream of consciousness: “Resemblance among the parts of a continuum of feelings (especially bodily feelings)... constitutes the real and verifiable ‘personal identity’ which we feel.”³⁶

This being so, James said, psychology need not postulate a watcher or soul that observes the knowing mind and maintains a sense of identity: “[The soul] is at all events needless for expressing the actual subjective phenomena of consciousness as they appear.”³⁷ He stated this powerful conclusion even more forcefully in Jimmy:

The states of consciousness are all that psychology needs to do her work with. Metaphysics or theology may prove the Soul to exist; but for psychology the hypothesis of such a substantial principle of unity is superfluous.³⁸

Will: Some commentators say that James’s most valuable contribution to psychology was his theory of the will, the conscious process that directs voluntary movements.³⁹

Much of James’s discussion of the will in *Principles* was neurophysiological, dealing with how the will generates the nerve impulses that produce the desired muscular movements. But the far more interesting question he took up was how we come to will any act in

the first place. The key factor, in his view, was a supply of information and experience about our ability to achieve a desired end:

We desire to feel, to have, to do, all sorts of things which at the moment are not felt, had, or done. If with the desire there goes a sense that attainment is not possible, we simply *wish*; but if we believe that the end is in our power, we *will* that the desired feeling, having, or doing shall be real; and real it presently becomes, either immediately upon the willing or after certain preliminaries have been fulfilled.⁴⁰

How do we sense that the end is in our power? Through experience; through the knowledge of what different actions of ours would achieve: “A supply of ideas of the various movements that are possible, left in the memory by experiences of their involuntary performance, is thus the first prerequisite of the voluntary life.”⁴¹ Infants trying to grasp a toy make numerous random movements of their arms and hands, and sooner or later connect with the toy;

they eventually become capable of willing the proper movement. In analogous fashion, adults accumulate a vast repertoire of ideas of different actions and their probable consequences; we walk, talk, eat, and perform myriad other activities by willing the appropriate actions and achieving the desired ends.

Much of the time we will our routine actions unhesitatingly, because we feel no conflict about what we want to do. But at other times conflicting notions exist in our mind: we want to do A but we also want to do B, its contrary. In such cases, what determines which action we will? James's answer: we weigh the possibilities against each other, decide to ignore all but one, and thereby let that one become the reality. When we have made the choice, the will takes over; or perhaps one could say, Choosing which idea to ignore and which to attend to *is* the act of willing.⁴²

James gave one of his inimitably personal examples. He is lying abed of a chilly morning, he says, knowing how late he will be if he does not get up and what duties will remain undone, but hating the way getting up will feel and

preferring the way staying in bed feels. At last he deliberately inhibits all thoughts except that of what he must do that day— and lo and behold, the thought, made the center of his attention, produces the appropriate movements and he is up and out of bed.⁴³ “The essential achievement of the will, in short, when it is most ‘voluntary,’ is to attend to a difficult object and hold it fast before the mind... Effort of attention is thus the essential phenomenon of will.”⁴⁴

Sometimes making the choice is instant and simple, sometimes protracted and the result of deliberation, reasoning, and decision making. Whatever the process, in every case the mind is a cause of behavior, an intervenor in cause-and-effect relationships, and not an automaton responding passively to outside influences. Voluntary action implies *freedom* of the will.

James himself, as we know, had come to believe in free will during his emotional crisis; that belief had enabled him to climb out of his Slough of Despond. But he still had to reconcile that belief with the basic tenet of scientific psychology: All behavior is, or ultimately will be,

explicable, and every act has its causes. If every act is the result of determinable causes, how can there be any freedom for us to choose one of several possible, not wholly determined, futures? Yet we all experience what feels like freedom of will every time we make a decision to do, or not to do, anything, however trifling or however weighty.

James was utterly candid: "My own belief is that the question of free-will is insoluble on strictly psychologic grounds." The psychologist wants to build a science, and a science is a system of fixed relations, but free will is not a fixed and calculable relationship; it is beyond science and so is best left to metaphysics. Psychology will be psychology, whether free will is real or not.⁴⁵

But he insisted that a belief in free will is pragmatically sensible and necessary. He developed his philosophy of pragmatism after turning away from psychology, but its seeds exist in *Principles*. James's pragmatism does not say, as crude oversimplifications of it aver, that "truth is what works"; it does say that if we compare the implications of opposed solutions to a problem, we can choose which one

to believe in and act on.⁴⁶ To believe in total determinism would make us passive and impotent; to believe in free will allows us to consider alternatives, to plan, and to act on our plans. It is thus practical and realistic:

The brain is an instrument of possibilities, but of no certainties. But the consciousness, with its own ends present to it, and knowing also well which possibilities lead thereto and which away, will, if endowed with causal efficacy, reinforce the favorable possibilities and repress the unfavorable or indifferent ones...If [consciousness] is useful, it must be so through its causal efficaciousness, and the automaton-theory must succumb to the theory of commonsense.⁴⁷

As solid and enduring as these observations are, some parts of James's discussion of will sound curiously old-fashioned today. In his discussions of "unhealthiness of will," the "exaggerated impulsion" of the alcoholic or the drug user, or the "obstructed will" of the immobilized

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person, one hears genuine compassion for people in a diseased state—and overtones of moralistic disapproval:

No class of [persons] have better sentiments or feel more constantly the difference between the higher and the lower path in life than the hopeless failures, the sentimentalists, the drunkards, the schemers, the “dead-beats,” whose life is one long contradiction between knowledge and action, and who, with full command of theory, never get to holding their limp characters erect.⁴⁸

James’s psychology of will was an important feature of American psychology for some years, but during the long reign of behaviorism—from about 1920 to the 1960s—the topic all but disappeared from American psychology; there was no place in that deterministic system for any behavior initiated by the organism itself. Nor has will come back into fashion since then, at least not under that name; the word does not even appear in the index of many a contemporary psychology textbook.

Yet James’s psychology of will is, in fact, part of the mainstream of modern psychology under other names: “purposive behavior,” “intentionality,” “decision making,” “self-control,” “choices,” “self-efficacy,” and so on. Modern psychologists, especially clinicians, believe that behavior is, or eventually will be, wholly explicable, yet that human beings can to some degree direct their own behavior. If psychologists have not yet been able to answer how both these notions can be true at the same time, they often settle for William James’s own conclusion: the belief that we cannot affect our own behavior produces disastrous results; the belief that we can, produces beneficial results.

The unconscious: James’s psychology was concerned almost entirely with conscious mental life; in some parts of *Principles* one gets the impression that there are no unconscious mental states and that whatever takes place in the mind is, by definition, conscious. But in a number of places James took a different view of the matter.

In discussing voluntary acts, he carefully distinguished between those which we perform by consciously

commanding muscular movements and those others—the great bulk of voluntary acts—which, long performed and practiced, immediately and automatically follow the mental choice as if of themselves. We walk, climb stairs, put on or take off our clothing, without thinking of the movements that are necessary: “It is a general principle in Psychology that consciousness deserts all processes where it can no longer be of use.”⁴⁹ In many kinds of familiar activity, we actually do better when not thinking about the movements required:

We pitch or catch, we shoot or chop the better the less tactile and muscular (the less resident), and the more exclusively optical (the more remote), our consciousness is. Keep your *eye* on the place aimed at, and your hand will fetch it; think of your hand, and you will very likely miss your aim.⁵⁰

James thus anticipated modern learning research, which has shown that with practice, complex voluntary movements such as those of piano playing, driving, or playing tennis become “overlearned” and are largely

carried out unconsciously as soon as the conscious mind issues a general order.

He also recognized that when we do not attend to experiences, we may remain mostly unconscious of them even though they have their normal effect on our sense organs: “Our insensibility to habitual noises, etc., whilst awake, proves that we can neglect to attend to that which we nevertheless feel.”⁵¹

James was well aware of the role of the unconscious in particular phenomena of abnormal psychology, citing, among other examples, cases of hysterical blindness reported by the French psychologist Alfred Binet: “M. Binet has found the hand of his patients unconsciously writing down words which their eyes were vainly endeavoring to ‘see.’”⁵² But with his focus on conscious mental life, James could not conceive of knowledge as ever being entirely unconscious; he felt that somehow, somewhere, all knowledge was conscious. He followed another French contemporary, Pierre Janet, in holding that such seemingly unconscious knowledge was the result of a split personality; what the primary personality was

unconscious of was “consciously” known to the split-off secondary personality.⁵³

James explained certain aspects of the hypnotic state the same way, in particular post-hypnotic suggestion, in which the patient, given an instruction during the trance, carries it out after being awakened but remains completely unaware of having been told to do so.⁵⁴ The split-personality hypothesis was awkward, limited, and unverified by empirical evidence, but in presenting it, James was at least recognizing, well before the unconscious was generally accepted as a reality, that certain mental states occur outside primary consciousness.

In the years after the publication of *Principles*, James expanded his view of the unconscious, relying on it to account for dreams, automatic writing, “demoniacal possession,” and many of the mystical experiences reported in *The Varieties of Religious Experience*. Unlike Freud, who was beginning to publish his own views about the unconscious, James did not consider the unconscious a source of motivation or the mind’s way of banishing

impermissible sexual wishes from awareness.⁵⁵ Yet as early as 1896 James spoke of the possible usefulness of Freudian discoveries for the relief of hysterical symptoms, and after hearing Freud’s Clark University lectures in 1909 he said, “I hope that Freud and his pupils will push their ideas to their utmost limits... They can’t fail to throw light on human nature.”⁵⁶

Emotion: One minor theory advanced by James became more famous and led to far more research than any of the foregoing large-scale theories. This was his theory of emotion, which was as simple as it was revolutionary. The emotion we feel is not what causes such bodily symptoms as a racing heart or sweaty palms; rather, the nervous system, reacting to an external stimulus, produces those physical symptoms, and our perception of them is what we call an emotion. This statement is so intriguing and persuasive that it deserves to be quoted at length:

Our natural way of thinking...is that the mental perception of some fact excites the mental affection called the emotion, and that this latter

state of mind gives rise to the bodily expression. My theory, on the contrary, is that *the bodily changes follow directly the perception of the exciting fact, and that our feeling of the same changes as they occur is the emotion*. Commonsense says, we lose our fortune, are sorry and weep; we meet a bear, are frightened and run; we are insulted by a rival, are angry and strike. The hypothesis here to be defended says that this order of sequence is incorrect, that the one mental state is not immediately induced by the other, that the bodily manifestations must first be interposed between, and that the more rational statement is that we feel sorry because we cry, angry because we strike, afraid because we tremble.⁵⁷

He based this on introspection; one had only to look searchingly within to perceive that one's emotions develop their power from their physical manifestations:

Without the bodily states following on the perception, the latter would be purely cognitive in form, pale, colorless, destitute of emotional

warmth. We might then see the bear, and judge it best to run, receive the insult and deem it right to strike, but we should not actually *feel* afraid or angry.⁵⁸

Virtually the same theory was advanced at about the same time by a Danish physiologist, Carl Lange, whose work James acknowledged. Although he and Lange did not collaborate on the theory, it soon became known as the James-Lange theory, and is discussed, under that name, in today's textbooks.

The theory has had a curious history. It immediately provoked much controversy and research, and eventually was shown to be faulty in a number of ways. Walter Cannon, a Harvard physiologist, demonstrated in 1927 that certain dissimilar emotions are accompanied by generally similar bodily reactions; the physical responses are not specific enough to account for the different emotions. Both anger and fear, for instance, are marked by a speeded-up heart rate and an elevated blood pressure. Moreover, said Cannon, visceral reaction times are slow but emotional

reactions are often immediate; physical changes thus cannot always precede the emotion.⁵⁹ Cannon concluded that an emotional stimulus activates the thalamus (more recent research has, instead, pinpointed the hypothalamus and limbic system); from the brain, messages go out both to the autonomic nervous system, generating visceral changes, and to the cerebral cortex, creating the subjective feelings of the emotion.

Yet the James-Lange theory is still highly regarded by psychologists. It was correct in postulating that emotions have physical causes, although more recent and more complex explanations are based on physiological research with animals and psychological research with humans; evidence from these studies indicates that the arousing stimulus activates autonomic nervous processes in the brain, sending signals both to the body and to the mind, while other evidence shows that the experience of emotion is often the joint result of physiological arousal and cognitive appraisal based on experience and the situation.⁶⁰ Despite the James-Lange theory's shortcomings, it has practical applications. To the degree

that we control a physiological response to a stimulus, we govern the associated emotion. We count to ten to control rage, whistle to keep up courage, go running or play tennis to shake off depression. Many contemporary psychotherapists teach their patients to perform relaxation exercises to reduce anxiety or fear and to practice standing, walking, and talking in a confident manner to engender a feeling of confidence in themselves. In the 1980s the psychologist Paul Ekman and his colleagues at the University of California School of Medicine, San Francisco, showed that when volunteers consciously make facial expressions associated with certain emotions—surprise, disgust, sadness, anger, fear, happiness—they affect their heart rates and skin temperatures and induce in themselves a modicum of the appropriate emotion.⁶¹ The

Jamesian Paradoxes

Anyone who reads James's psychological writings is bound to be frequently puzzled: James is always clear and persuasive, but often equally so on opposing sides of an issue. He is chronically self-contradictory, not out of muddleheadedness but because he is intellectually too expansive to be confined within a closed or consistent system of thought. Gordon Allport, a leading psychological researcher and theorist of several decades ago, summed up James's chameleonlike qualities:

In the *Principles* alone, we find brilliant, baffling, unashamed contradictions. He is, for example, both a positivist and a phenomenologist. On Tuesdays, Thursdays, and Saturdays, he points in the direction of behaviorism and positivism, although he seems more exuberantly natural on Mondays, Wednesdays, Fridays, and Sundays, when he writes about the stream of consciousness, the varieties of religious experience, and the moral equivalent for war.⁶²

Allport, however, found this inconsistency a virtue. He spoke of James's "productive paradoxes"; seeing both sides of a question often laid open the kernel of a problem and left it ready for others to work on.⁶³

But the result was that James's influence on psychology, though great, was fragmented; though pervasive, was never dominant. James avoided creating a system, founded no school, trained few graduate students, and had no band of followers. Remarkably, however, a number of his ideas became part of mainstream psychology, particularly in America. Wundt won out over James as far as laboratory methods and experimentation were concerned; James's psychology, with its richness, realism, and pragmatism, won out over the Wundtian system.⁶⁴ As Raymond Fancher has said:

James transformed psychology from a somewhat recondite and abstract science that some students avoided because of the difficulty of introspective methodology, into a discipline that spoke directly to personal interests and concerns. James's

characterization of psychology as a “nasty little subject” that excludes all one would want to know is nowhere more clearly belied than in his own textbooks on psychology.⁶⁵

Outside the mainstream, James influenced psychology in two other respects, both of them practical. One: His suggested applications of psychological principles to teaching became the core of educational psychology. The other: In 1909, James, as an executive committee member of the National Committee for Mental Hygiene, was largely responsible for getting the Rockefeller Foundation and similar groups to allocate millions of dollars to the mental hygiene movement, the development of mental hospitals, and the training of mental health professionals.

When the American Psychological Association celebrated its seventy-fifth anniversary in 1977, the opening speaker, David Krech, spoke of William James as “our father who begat us.” Referring to the past three quarters of a century of work on questions James had raised, Krech said, “Even if I were to total up all advances

in gains and achievements and multiply them by a factor of hope, the total would still not suffice as an adequate tribute to lay at James’s feet.”⁶⁶

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