Title: The legacy of William James.

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Introduction

William James (1842-1910) was a pioneer thinker whose life and work spanned the nineteenth and twentieth centuries and whose thought has reached into the twenty-first century. Although the nineteenth century was greatly influenced by German philosophy, especially Kant and Hegel's rigid, rationalist systems, James broke with that rationalist tradition. He viewed the universe as an open-ended, fluid place and integrated this perspective into his functional psychology and his pragmatic philosophy. Ideas, he asserted, are neither wholly true nor totally false. The worth of an idea was to be tested by its consequences on the lives of human beings. James' functionalism had a profound affect on John Dewey, who built it into his philosophy of instrumentalism (or experimentalism). Mind, Dewey argued, is an instrument for adapting the human organism to its environment. Ideas are tools. Good ideas get us into satisfactory relations with our environment (Urmson, 1965).

Dewey's functionalism, in turn, crept into Jean Piaget's psychology. "Genetic structuralism," Piaget (1985) informed us, "represents a possible synthesis ... with the functionalism of J. Dewey" (p. 68). Piaget labored throughout much of his life to resolve the dichotomy between structuralism and functionalism. Jerome Bruner picked up the challenge where Piaget left off and, thereby, indirectly extended the influence of James.

Bruner believed that children--if they were engaged in discovery learning and problem-solving activities--would come to grasp the structure of knowledge. And since all truths are relative, students must learn how to negotiate meanings. The influence of James, Dewey, Piaget, and others, helped to lay the foundation

through Bruner for the current constructivist movement in education (Sprinthall et al., 1998). James' ideas have not only had a profound influence on psychology, philosophy, and education, but they have filtered into contemporary physics as well. Nineteenth century physics was heavily influenced by Newtonian mechanics, which made a sharp distinction between the observer and the observed. The knower was viewed as being independent of what was known. Truth, once it was discovered, was fixed and eternal. James' pragmatism changed everything. The knower was placed at the center of the process of knowing. Truth was what the observer experienced as being true. Twentieth century physics, building on the Heisenberg Principle of Indeterminacy, has confirmed James' speculations. Objective truth is simply not possible. The act of observing an event alters the nature of the event. Or, as John Wheeler puts it: "'In some strange sense, the universe is a participatory universe'" (Capra, 1984, pp. 127-128).

James (1902/1960) has also had a significant impact upon religious thought in the United States. His classic work, The Varieties of Religious Experience, has been widely read by a diverse audience. Religious belief, James argued, should not be based on church doctrine; rather, it should be grounded in religious experience. Many scholars have drawn inspiration from James' insights. Dewey's (1934/1960) A Common Faith utilizes James' distinction between religion and religious experience. Dewey wished to separate the religious quality of experience from its attachment to historical religion. He argued that the religious quality of experience can be fused with the core values of our society. One can feel religious about expanding democratic values to those who have been excluded from sharing fully in them. Can the religious quality of experience be separated from its supernatural referent? Dewey and many others have answered yes. Many New Age churches (Unity, for example) illustrate this emphasis. "Sin and salvation" have been replaced by "consciousness." The Jesus Seminar, which attempted to determine what Jesus "really" said, appealed to scholarly consensus rather than church traditions in its attempt to uncover the

truth. Robert Funk (1996), who was Chair of the Jesus Seminar, observed: "The truths of religion are more like the truths of poetry than the truths of the empirical sciences. That is one reason I prefer to think of Jesus as a poet rather than as a second person of the Trinity" (p. 2).

Scholars in the United States of America, perhaps more so than in most other nations, have believed that the study of psychology holds a profound relevance for the practice of education. In this field too, James was the pioneer who helped forge this belief. Later psychologists--Thorndike, Skinner, Bruner, and Gardner--have built on James' legacy although the exact details of his influence are not always obvious. What is clear is that wherever a program in teacher preparation exists, educational psychology is likely its intimate partner, and most textbooks on educational psychology mention James' contributions as well as those who have shared and rejected in ideas. For example, Sprinthall, Sprinthall, and Oja (1998) in Educational Psychology: A Developmental Approach cite James' work nineteen times. They even present a two-page biographical sketch including his picture (pp. 10-11). The most frequently cited passages from James include: (a) "Psychology is a science. Teaching is an art; and sciences never generate arts directly out of themselves" (James, 1899/1958, pp. 23-24); (b) "Habit is thus the enormous fly-wheel of society, its most precious conservative agent" (James, 1890a, p. 121); and (c) his experiment on transfer which led him to reject the doctrine of faculty psychology. Few psychologists have attracted such attention, and both traditionalists and constructivists alike claim him as an intellectual godfather.

Manifestly, then, James influenced western thought in a variety of fields. To understand and evaluate the legacy of James, however, more is required. In pursuing this understanding and evaluating its importance, it is important to inquire further into his personal background, psychological theory, philosophical beliefs, religious thought, and educational theory. While these topics are separated for convenience, they obviously overlap at many points.

Personal Background

William James was born at Astor House, a hotel in New York City, in January of 1842, and his brother Henry was born fourteen months later. Their father, Henry James Senior, devoted himself to their education and made sure that they attended some of the best private schools in the United States and Europe. Their education was also nurtured as the family traveled extensively in England, France, Switzerland, and Germany. So, the brothers studied with tutors, visited galleries, museums, and theatres on both sides of the Atlantic. Throughout their education, they were always encouraged to think for themselves (Watson, 1963, pp. 317-342). William and Henry later disagreed about the merits of their education. William regretted its lack of discipline. Henry, however, found it invaluable: "'We wholesomely breathed inconsistency and ate and drank contradictions'" (Allport, 1943, p. 113).

Despite or, perhaps, because of his education, James was often unsure of what he wanted to do with his life. First, he had a youthful interest in painting and, thus, studied with William M. Hunt in Newport, Rhode Island. The experience convinced him he would make a mediocre artist. Later, at the age of 19, James enrolled at Harvard and studied chemistry with Charles W. Eliot. He soon shifted to the school of medicine, studying physiology and anatomy with Jeffries Wyman and Louis Agassiz. In 1865 James was invited to join Agassiz on an expedition up the Amazon River. Reflecting on the Amazon experience, James concluded he was not interested in collecting biological specimen. Although he had little interest in the practice of medicine, he entered the field because he considered it the only occupation that promised him an adequate income. He finished his medical degree in 1869, the only degree he ever received. As he faced the challenge of earning a living, Charles Eliot, who had been appointed Harvard president, offered him a position teaching physiology. The life of a college professor proved much to his liking and enabled him to develop his several pioneering theories (Earle, 1967, pp. 240-249).

In 1875 James taught the first course in psychology offered at an American college. He once quipped that the first lecture he ever heard on the subject was the one he delivered himself. James' course in psychology proved very popular, becoming the turning point in his career. The publisher, Henry Holt, offered him a contract to write a textbook on the subject. The work, The Principles of Psychology, was published twelve years later. The two volumes were instantly hailed a success and established James' reputation as a scholar. Later, a condensed volume was published as a textbook, which was used for many years in psychology classes (Watson, 1963, pp. 317-342).

Psychological Theory

The Principles of Psychology, published in 1890, represented a pioneer work in the treatment of psychology as a natural science. "Psychology, as a natural science, confines itself to the present life, in which every mind appears yoked to a body through which its manifestations appear" (James, 1890a, p. 199). The two volumes contained a mass of descriptive details reflecting James' inner life. "Introspective observation is what we have to rely on first and foremost and always," he asserted (James, 1890a, p. 185). James assumed the existence of mental states and that the task of the psychologist was one of describing these states as completely as possible: "The mind which the psychologist studies is the mind of distinct individuals inhabiting definite portions of a real space and a real time" (James, 1890a, p.183).

Like Dewey, James was greatly influenced by Darwin's theory of evolution, partially because it provided him with the springboard he needed to move his functional psychology to a higher plane. The theory of evolution contends that humans are kin to all the other living species, and that they are part of a complex web of life. Consequently, humans, like other organisms, must make an adaptation to their ever-changing environment. Most human conduct, James (1890a) argued, is regulated by the effortless custody of habit: "Habit is thus the

enormous fly-wheel of society, its most precious conservative agent" (p. 121). However, because humans live in a dynamic world, old habits frequently break down. When this occurs, action must be reinstated using consciousness, which "is at all times primarily a selecting agency" (p. 139). Consciousness performs the function of reestablishing the connection between the organism and its environment. This interaction gives rise to experience, which is "our educator, our sovereign helper and friend" (James, 1890b, p. 620).

Unsurprisingly, James' functionalism has attracted many disciples. Dewey's instrumentalism, for instance, grew directly out of James' functional psychology. Dewey credited James with providing the "'one specific philosophical factor which entered my thinking so as to give it a new direction and quality'" (Campbell, 1995, p. 33). Nor did functionalism end with Dewey. Piaget (1977) labored to incorporate it into his theory of genetic structuralism. He observed, "The concepts of nonbalance and reequilibration permit the possibility of a connection between the functionalist viewpoint and that which is characteristic of our genetic structuralism" (p. 84). Bruner (1990) capitalized on Dewey's and Piaget's thinking. Knowledge, he tells us, is not a copy of the external world. Instead, it is a fabrication or model constructed by mind. Objective truth is a fantasy. "All one can hope for is a viable pluralism backed by a willingness to negotiate differences in world-view" (p. 30). Negotiation, in turn, calls for open-mindedness and a willingness to view knowledge and values from multiple perspectives. Bruner (1986) argued that learners should be included in the negotiation "process by which facts are created and interpreted" (p. 127). His thought helped to lay the groundwork for the constructivist movement in education, which, per Driscoll (1994), "rests on the assumption that knowledge is constructed by learners as they attempt to make sense of their experiences" (p. 360).

Although James laid the foundations for modern psychology, many of his ideas are not accepted as valid by today's scholarship. James' functionalism, for example, is no longer considered intellectually respectable by most

psychologists. The brain is not a simple tool (metaphor) for adapting the human organism to its environment. "Brain and mind," Gazzaniga (1998) has informed us, "are built from discrete units--or modules--that carry out specific functions. According to this theory, the brain is not a general problem-solving device whose every part is capable of any function. Rather it is a collection of devices that assist the mind's information-processing demands" (p. 53).

James is also credited with having "kicked the soul out of psychology" (Thorndike, 1943, p. 90). He replaced it with the concept of consciousness. "Every thought is part of a personal consciousness" (James, 1890a, p. 225). Consciousness, in turn, is experienced as a flow or whole that cannot be chopped into smaller bites. Consciousness is always changing. We are never twice in the same state of consciousness. Each thought constitutes its own unity, and once it has moved on it can never be retrieved. Consciousness is active in the world. It is always accepting, rejecting, uniting, and keeping objects separate from one another. Consciousness, which is a self-evident reality, serves as the jumping off point for all theories of knowledge.

Where exactly in the brain is consciousness located? James (1890a) maintained that "the cortex is the sole organ of consciousness in man" (p. 66). Gazzaniga (1998), however, has offered a more complex hypothesis: "The inventive and interpreting left hemisphere has a conscious experience very different from that of the truthful, literal right brain. Although both hemispheres can be viewed as conscious, the left brain's consciousness far surpasses that of the right" (p. 55).

In another strand of thought, the James-Lange theory of human emotions has been widely discussed in psychology. James' theory parted company with conventional wisdom. Most people believed perception gives rise to various emotional states, which, in turn, bring about bodily actions. James stood the sequence on its head. Bodily expressions, he believed, follow directly from the perception of the emotion-provoking event. Thus, we feel sorrow because we

weep; fear because we run; and anger because we strike out. James (1890b) presented the theory in the second volume of The Principles of Psychology and noted, "If we fancy some strong emotion, and then try to abstract from our consciousness of it all the feelings of its bodily symptoms, we find we have nothing left behind, no 'mind-stuff' out of which the emotion can be constituted, and that a cold and neutral state of intellectual perception is all that remains" (p. 451). Though James' theory has stimulated much research, present-day psychologists are inclined to view human emotions and bodily actions as interactive processes.

Philosophical System

James' (1890a) pragmatic philosophy grew out of his functional psychology. In his The Principles of Psychology, he claimed that "no action but such as are done for an end, and show a choice of means, can be called indubitable expressions of mind" (p. 11). Mind, thus, is defined by the role or function it performs. Functionalism demands that everything must be understood in terms of the difference it makes in experience. For James experience is holy ground. Ideas must prove their worth in experience. They are tools for grappling with the world. Good ideas work; they prove themselves in experience; they adapt us to our ever-changing environment (Kuklick, 1977).

When James shifted from psychology to philosophy, his theory of experience took on a decidedly cosmological twist. His metaphysics applied to reality categories originally framed for psychology. The psychological doctrine that thought is always changing became the philosophical principle that reality is process or change. The belief in human freedom was interpreted as evidence of universal voluntarism. Human behavior, though continuous with the past, is not determined by it. The future of the world, though it grows out of the past, is not arranged by it. Since humans are creative, the world is judged to be creative. Just as there are consistencies in human behavior (habits), so there are

consistencies in nature (laws). Whatever is true of human activity is equally true of reality (Earle, 1967, p. 248).

By the 1890s, James had established himself as America's premier philosopher. In a series of lectures delivered in 1898, James popularized the new philosophy, of pragmatism. He (1907/1982) freely acknowledged borrowing the term from Charles S. Peirce, who had published an article, "How to Make Our Ideas Clear," in the January, 1878, issue of Popular Science Monthly. Pragmatism, per James, allows us to clarify the meaning of an idea about an object by considering "what conceivable effects of a practical kind the object may involve" (p. 26). Our conception of these effects constitutes the "whole of our conception of the object" (p. 26).

Since James was by temperament a moralist, this element emerged in his philosophy too. He wished for people to live happy and productive lives, and he saw pragmatism as a way of promoting ideas that would prove fruitful in human experience. In addition, he (1907/1982) held truth to be relative and personal. The truth of an idea is to be judged by or is relative to its effects upon the lives of human beings. Truth is not inherent in an idea. It is what happens to an idea when people act upon it. The test for truth is "what concrete difference will its being true make in any one's actual life" (p. 92). Our desire to seek the truth is part of our obligation to do what pays. Thus, the worth of an idea is determined by its "practical cash value." The heart of pragmatism lies in its emphasis upon the relatedness of ideas that prove their worth in terms of future experiences.

In tune with the new spirit of philosophy of his time, James believed pragmatism could be used to resolve many of the dualisms found in traditional philosophy. His 1904 essay, "Does Consciousness Exist?" is a noted example of the pragmatic method at work. He denied that a subject (knower)-object (known) relationship was fundamental to a theory of knowledge. Such a relationship assumed the existence of conscious minds knowing a mindless world. James

found this dualistic relationship to be incompatible with his theory of experience. Consciousness, he argued, is really a name for a non-entity. It does not exist as a thing but rather as a process or activity. What we experience when we think about it is a "stream of consciousness." He argued further against dividing the world into mind and matter; he preferred to speak of a continuous world composed of what he called "pure experience." In such a world, one portion of "pure experience" may exist as the knower while another may become the known. The teacher, for instance, knows his or her students; likewise, the students know their teacher. Knowing is an active interrelationship between two or more portions of "pure experience" (Russell, 1945, pp. 811-818).

James' fusion of the knower and the known has its counterpart in physics: the observer is intimately linked to what is observed. The "theory of subatomic particles," argued Fritjof Capra (1984) in The Tao of Physics, "reflects the impossibility of separating the scientific observer from the observed phenomena" (p. 266). Reality is not external to or independent of the human mind. Roger Jones (1982) in Physics as Metaphor asserted that consciousness is the source of the cosmos. Mind is what we see when we look at matter. "Physical science is a metaphor with which the scientist, like the poet, creates and extends meaning and value in the quest for understanding and purpose" (p. 9).

Do humans possess the power to choose their own destiny or is there a deterministic principle at work in the universe? James defended free will against mechanistic determinism. "Free-will," James (1907/1982) assured us, "pragmatically means novelties in the world" (p. 55). The future is not locked into repeating the past. Free will allows for the possibility of improving the human condition. Determinism, on the other hand, dooms humanity to reproducing the mistakes of the past. The belief in free will holds forth the promise of more desirable consequences than does the belief in determinism. By believing in free will and by acting upon that belief, people can actually contribute to their freedom.

Religious Thought

James acquired a deep interest in religious questions from his father. Like his father, he visited mediums, clairvoyants, and experimented with automatic writing. James often visited a Boston medium, Mrs. Piper. He regarded her as an honest person whose psychic abilities were worthy of study and recommended her to some of his students. Edmund Delabarre (1943) visited Mrs. Piper while he was a student at Harvard and wrote: "I had one or two sittings with her, puzzling as to how she could possibly have been able to mention so many facts concerning my private life" (p. 127). Though Mrs. Piper was good at reading the past, her predictions about the future often fell short of the mark.

On the other hand, James was not in the ordinary sense a religious person. He refused to pray because it made him feel foolish, and he rejected religious dogmatism. Plus, he believed there was a natural opposition between religion and morality. In his mind, religion all too frequently provided humanity with an excuse to take a "moral holiday." What interested James (1907/1982) about religion was its ability to infuse life with meaning. The core of religion was to be found in spontaneous religious experiences: "I myself believe that the evidence for God lies primarily in inner personal experiences" (p. 52). The world is richer and more varied than conventional science is willing to recognize. Religious experience suggests that there is a higher part of the universe. James (1902/1960) chose to "call this higher part of the universe by the name God" (p. 389). Though this higher part is beyond ordinary sense experience, nevertheless, it must be judged by the same pragmatic test as everything else--its ability to generate fruitful consequences in our lives. As James views on religion became known, he was invited to delivered the Gifford Lectures at Edinburgh in 1901-1902. Those lectures formed the basis for his book, The Varieties of Religious Experience. He (1902/1960) informed in audiences that there are two underlying themes running through all the world's great religions. The first is "a sense that there is something wrong about us as we naturally stand" (p. 383). The second is

the belief that our wrongness can only be corrected by "making proper connection with the higher power" (p. 383). Humanity stands in need of God. By opening ourselves to his influence, our destinies can be fulfilled: "We can experience union with something larger than ourselves and in that union find our greatest peace" (p. 395). James, then, clearly made room for God in his pragmatism. The belief in God meets all the criteria of James' pragmatic test. Thus James declared: "God is real since he produces real effects" (p. 389). His assertion that experience is the basis for religious belief influenced Dewey's A Common Faith. Dewey (1934/1960) distinguished between the words "religion" and "religious." Religion as a noun designates things like buildings, sacred books, doctrines, rituals, icons, taboos, and ceremonies. Religious, on the other hand, is an adjective describing a quality of experience. The religious quality of experience provides a useful source of human motivation: "Any activity pursued in behalf of an ideal end against obstacles and despite threats of personal loss because of conviction of its general enduring value is religious in quality" (p. 27). Dewey believed the religious quality of experience could be separated from supernatural religion and fused with the core values underlying American society. A religious attitude could be taken toward any ideal end. Indeed, taking a religious attitude toward society's highest values "has always been implicitly the common faith of mankind" (p. 87).

Many contemporary psychologists, theologians, and philosophers have borrowed--or, at least, seem influenced by James' conception of religious experience. Scott Peck's (1985) best selling book, The Road Less Traveled, argues that "the goal of life remains the spiritual growth of the individual, the solitary journey to peaks that can be climbed only alone" (p. 168). Peck argued that the path to spiritual growth leads out of superstition, through agnosticism, and toward a more mature understanding of God. Bishop John Shelby Spong (1992) in Rescuing the Bible from Fundamentalism declared, "Intelligence does not have to be a casualty of church life, that God can be worshiped with our minds" (p. 10). The key to understanding the Bible, he argued, is "not by studying

the lateral text but rather by entering the experience out of which the literal text came to be written" (p. 245). Deepak Chopra's (1997) book, The Path to Love: Renewing the Power of Spirit in Your Life, pushed the reader to "go through your most vivid experiences of spirit, soul, God, or love, and again look for messages that they have contained for you" (p. 97).

Educational Reflections

Per historical research, James was a gifted teacher and orator. His classes and public lectures were well attended. Correspondingly, people found him to be a warm and charming person. The language he used was filled with vivid imagery that stuck with his students for years. He was also blessed with a good memory and able to lecture without notes. Roswell Angier (1943), a former student, noted that James' typical approach was to enter the classroom, perch himself atop a desk, hold up his book, and ask if there were any questions. If there were questions, James would become animated and assertive. "These clarifying interludes were our joy, and James' forte" (p. 132). James (1899/1958) seemed to have sensed these same qualities about himself. He offered the following advice to teachers. "Prepare yourself in the subject so well that it shall be always on tap: then in the classroom trust your spontaneity and fling away all further care" (p. 145). As one might suspect, James often held class sessions at his home and would read selections from The Principles of Psychology. Students were won over by his friendliness and interest in them as people. Edmund Delabarre (1943), a former graduate student, recalled: "We were deeply impressed with his thorough mastery of his subject, his profound knowledge of all that had been written on all of its many phases, his judgment in arriving at such conclusions as were warranted by the evidence at hand" (p. 125).

In 1899 James published a pioneer book on educational psychology, Talks to Teachers on Psychology. It included selected passages from his two-volume work, The Principles of Psychology. He understood, perhaps better than many

modern theorists, the limitations of psychology for the practice of teaching. Psychology, he claimed (1899/1958), is a science. Teaching, on the other hand, is an art. "Sciences never generate arts directly out of themselves. An intermediate inventive mind must make the application, by use of its originality" (pp. 23-24). Science can merely lay down certain guidelines within which the practice of an art may take place. Within the general rules expressed by the science, the artist may exercise considerable freedom. So, many diverse methods of teaching may prove equally compatible with the principles of psychology: "To know psychology, therefore, is absolutely no guarantee that we shall be good teachers" (p. 24). Teaching is too complex to be reduced to a simple formula. Different teaching styles suit different personalities, and some teachers have a naturally commanding presence while others do not. There is little psychology can do to help with this problem.

James' belief that teaching is essentially an art has been echoed by other educators. Dewey (1919/1960), writing in Democracy and Education, tells us that "the method of teaching is the method of an art, of action intelligently directed by ends" (p. 200). Perhaps no one has expressed the aesthetics of teaching better than Gilbert Highet (1950) in The Art of Teaching. "Teaching is not like inducing a chemical reaction: it is much more like painting a picture or making a piece of music. You must throw your heart into it, you must realize it cannot all be done by formulas, or you will spoil your work, and your pupils, and yourself" (p. 8). Highet's words have been seconded by Elliot Eisner (2002), who tells us that "good teaching depends on sensibility and imagination. It courts surprise. It profits from caring. In short, good teaching is an artistic affair" (p. 576).

As observed earlier, James had a gift for using colorful language. It served him well in and out of the classroom. Teaching, James (1899/1958) tells us, is like mapping out a strategy for going to war. "In war all you have to do is to work your enemy into a position from which the natural obstacles prevent him from escaping ... then to fall on him in numbers superior to his own" (p. 25). So it is

with teaching. The teacher must work his or her students into such a state of interest that all distractions are banished from their minds. Once the teacher has captured his or her students' attention, the new material must be revealed in such an impressive fashion that it becomes etched into the students' minds. Finally, the teacher should fill the students with a burning "curiosity to know what the next steps about the subject are" (p. 25). The teacher who can execute such a battle plan is truly an artist in the classroom.

James cautioned teachers not to think of themselves as psychologists. Collecting student data is secondary in importance to the task of teaching, and some of the best teachers may be the poorest contributors to child study. "The worst thing that can happen to a good teacher," James (1899/1958) cautioned, "is to get a bad conscience about her profession because she feels herself hopeless as a psychologist" (p. 27). The teacher's objective is not the same as the psychologist's. The teacher is interested in concrete cases: "What must I do to help Jimmy learn to read?" The psychologist is interested in discovering general principles: "What are the perceptual skills necessary for productive reading?" Yet, the findings of psychology are not always of practical use to the classroom teacher.

James (1899/1958) believed human behavior was tied to certain "instincts or native reactions." These native reactions provide the starting points for all education. Humans, for example, have a natural capacity for feeling fear. "Fear of punishment has always been a great weapon of the teacher" (p. 46). The opposite of fear is another native reaction, love. Love can be used as a source of motivation too. Students work harder for teachers whom they love. Curiosity is a central feature of human nature. It is the basis for all learning. Thus, schools should actively encourage curiosity. On the other hand, humans are not rigidly programmed with instincts like other animals. Hence, they are capable of learning by imitating one another. The ability to copy and transmit behavior, in turn, makes culture possible. All knowledge is built upon what we have inherited

from the past. Children emulate their parents and teachers. "Children admire a teacher who has skill" (James, 1899/1958, p. 49). Such a teacher may serve as a role model for his or her students.

James (1899/1958) believed humans possess an ambitious impulse. We take a sense of pride in what we can do for ourselves. Self-esteem is generated and enhanced by personal accomplishment. Sometimes teachers must appeal to the fighting spirit in their students, "a general unwillingness to be beaten by any kind of difficulty" (p. 51). Humans desire to own private property. The word "mine" is among the first words used by children. We all show pleasure in things belonging to us. Teachers can capitalize on this impulse by encouraging children to start collections of all kinds, stamps or insects. Finally, humans like to build and construct. The human hand is a natural extension of the mind: children love to saw, hammer, and glue. The more children can express their constructive impulse, the less the teacher will have to exercise his or her authority.

But habits are also important, for humankind lives or dies by its habits. The great bulk of our daily activities are strictly habitual. Civilization marches forward on its social habits. Habits may either enslave or set us free. Bad habits lock us into self-destructive patterns. Good habits, on the other hand, make our lives pleasant and fruitful. The following quotation illustrates James' (1890a) penchant for powerful metaphors.

> The hell to be endured hereafter, of which theology tells, is no worse than the hell we make for ourselves in this world by habitually fashioning our characters in the wrong way. Could the young but realize how soon they will become mere walking bundles of habits, they would give more heed to their conduct while in the plastic state. We are spinning our own fates, good or evil, and never to be undone. (p. 127)

Teachers, as mentioned earlier, are the custodians of good habits. "The teacher's prime concern," James (1899/1958) reminded us, "should be to engrain into the pupil that assortment of habits that shall be useful to him throughout life" (p. 58). We need to make our nervous system our ally instead of our enemy.

Students should make habitual as many useful skills as possible. The more the details of life can be turned over to the effortless custody of habit, the more the higher powers of the intellect can be set free to reflect on abstract ideas.

E. D. Hirsch, although not exactly Jamesean, has endorsed James' observations about the importance of habits. Students, he (2004) argued, should be taught procedural skills to the point of over-learning them: "Through practice, they become so habituated to a procedure that they no longer have to think or struggle to perform it" (p. 179). Higher level thinking does not occur in a vacuum, it depends upon a solid mastery of basic procedures.

James (1899/1958) extolled the virtue of hard work. He lamented the adoption of what he regarded as soft pedagogy that tried to make all learning fun and easy. "Soft pedagogics have taken the place of the old steep and rocky path of learning" (p. 51). Many worthwhile lessons can only be learned by applying ourselves to unpleasant tasks. Though teachers should try to make their lessons interesting, it is "nonsense to suppose that every step in education could be made interesting" (p. 51). Most classroom work is tiresome until we master it and make it our own. Mastery always involves the use of drill. Things must be practiced, built into our nervous systems, if we are to lay claim to them. Here, too, Hirsch (2004) concurred with James: there are no fun and easy shortcuts to learning. Mastery of basic knowledge requires a certain amount of stick-to-itiveness. "The principle of content rehearsal is essential for fixing content in long-term memory" (p. 180).

Children, of course, are attracted by activity. They prefer toys that respond or do things. The fascination with activity carries over into the classroom. James (1899/1958) proclaimed, "the child will always attend more to what a teacher does than to what the same teacher says" (p. 73). When the teacher is performing an experiment or is drawing on the blackboard, the children will be more attentive than when the teacher is merely talking. Children are interested in

living things, "moving things, or things that savor of danger or of blood, that have a dramatic quality" (p. 73). The more the teacher can utilize such interests, the greater will be the children's interests in the subject.

James was among the first to challenge the assumptions underlying faculty psychology, which were widely held in the nineteenth and early twentieth centuries. Per this theory, the mind is composed of various faculties. Among these faculties are memory, reason, and creativity. The metaphor further asserts that mental faculties, like muscles, can be strengthened through exercise. Thus, Latin is good for memory; geometry is good for reasoning; and music is good for creativity. Once a faculty has been strengthened through exercise, its powers can be applied to a number of other subjects. The skills acquired from Latin, for example, can be transferred to remembering names and dates in history (Watson, 1963, pp. 317-342).

James' rejection of faculty psychology is explained in The Principles of Psychology. He (1890a) briefly summarized how he tested the theory in part by testing his ability to memorize 158 lines from Victor Hugo's Satyr. He kept track of the time it took him to memorize the first half of the poem. He, then, exercised his memory by practicing 20 minutes a day for 38 days on the first book of Milton's Paradise Lost. At the end of this time, he tested his memory again by learning the second 158 lines of the Satyr. It took him longer to memorize the second half of the poem than it had the first half. James persuaded a small group of friends to try the same experiment. They obtained similar results.

James concluded the mind does not work like a set of separate faculties; rather, it functions as an integrated unit. Although skills learned in one context may be applied to another, there is no assurance that transfer will occur. The safest course of action for the teacher to follow is to make sure students understand the connection between what they are learning today and how it applies to what they will be studying the next day (pp. 666-668).

The problem of transfer is one of the great conundrums in all education. Can what is learned in one context be applied in a different situation? James' experiment stimulated the inquiry of other psychologists. Edward L. Thorndike, for instance, conducted several experiments related to the problem. He concluded that transfer only occurs where there are "identical elements". If the material a student learns in situation "A" is identical (or very similar) to what he or she will be required to demonstrate in situation "B," then transfer may occur. The teacher, however, cannot assume that transfer will automatically take place. The student, left to his or her own devices, probably will not grasp the similarities. The teacher must make the connection for the student (Bigge & Shermis, 1991, pp. 21-31).

Thorndike left educators with a parsimonious definition of transfer, which remained the prevailing opinion until Jerome S. Bruner (1965) published his classic book, The Process of Education. Bruner turned learning theory up-side-down when he declared any child could learn any subject at any age with some degree of intellectual respectability.

Bruner's central idea was that all knowledge has structure. Complex systems of thought are constructed out of simple or basic ideas. By learning how basic ideas are related to one another, students can become acquainted with the structure of knowledge: "The teaching and learning of structure, rather than simply the mastery of facts and techniques, is at the center of the classic problem of transfer" (p. 12). When students learn structure, they are actually learning how to learn. Thus the teaching and learning of structure can give rise to "massive general transfer" (p. 6). Many others, of course, have engaged in research about transfer since the question first arose.

Conclusion

An intellectual age is defined in large part by its seminal thinkers. These thinkers act as springboards, launching new ideas into society. The second half of the

nineteenth century witnessed the emergence of a few seminal thinkers. Charles Darwin was one of the most noteworthy. His theory of evolution revolutionized the study of biology. Any theory dealing with life on this planet, from gold fish to brain functions, must necessarily pay homage to Darwin. Albert Einstein was another seminal thinker. His theory of relativity altered irreparably Newtonian physics. No view of the cosmos would be complete without taking into account Einstein's concept of space-time. Sigmund Freud, the father of psychiatry, succeeded in making us painfully aware of the power of the unconscious mind. Gone forever is Aristotle's assertion that "man is a rational animal."

William James was no less a seminal thinker. He left behind a telling legacy. His pioneer work, The Principles of Psychology, still serves to stimulate contemporary research. A recent article by Zimmer (2005), "The Neurology of the Self" published in Scientific American, begins the search for the human "self" by quoting from James: "'Let us begin with the Self in its widest acceptation, and follow it up to its most delicate and subtle form'" (p. 94). James, after much ruminating, confessed to being baffled by how the brain managed to produce an awareness of self. Zimmer, after reviewing recent research on brain functions, concludes that the awareness of "self" is possibly located somewhere in the "medial prefrontal cortex" (pp. 92-101). Today's research is not a whole lot closer to discovering the seat of the "self" than was James a century ago, although he served to stimulate the search for such understanding.

James' pragmatism has become integrated into the thinking of American society. The stress on desirable consequences as a way of knowing the good and the true has found its way into legislation, political policy, and court decisions. Roosevelt's New Deal, coming during the Great Depression, reflected a strong pragmatic bias. Roosevelt was more interested in practical consequences--quick-starting the economy and putting people back to work--than he was with constitutional niceties. He demonstrated a similar pragmatic penchant at the beginning of World War II when he decided to "Lend-Lease" military supplies to

Britain. Democrats have not been the only practicing pragmatist in American politics. George W. Bush, a neoconservative who wishes to dismantle social security and democratize the Middle East, has found it expedient to offer pragmatic justifications from time to time. The war in Iraq is a prime example. When it was discovered that Saddam Hussein did not possess any weapons of mass destruction (which was given as the reason for going to war), the justification was switched to a pragmatic argument: Saddam was a sadistic dictator who had killed thousands of his own people; consequently, the world would be better off without him.

Pragmatism, with its accent on fruitful consequences, has found its way into Supreme Court decisions. The Brown v. Board of Education decision of 1954 is a noted example. The Court pointed out that education is the most important function of state and local governments. "Today it is a principal instrument in awakening the child to cultural values, in preparing him for later professional training, and in helping him to adjust normally to his environment" (Reutter, 1994, p. 890). No child can be expected to succeed if he (or she) has been denied the opportunity of an education. The Court went on to say that segregation created in the minds of African-American children "feelings of inferiority as to their status in the community that may affect their hearts and minds in a way unlikely ever to be undone" (Reutter, 1994, p. 890). The Court overturned Plessy v. Ferguson and concluded that "in the field of public education the doctrine of 'separate but equal' has no place. Separate educational facilities are inherently unequal" (Reutter, 1994, p. 891).

William James (1907/1982), for all his scientific training, never outgrew the religious mysticism he experienced at his father's dinner table. The basis for religion, he argued, is to be discovered in experience. "I myself believe that the evidence for God lies primarily in inner personal experience" (p. 52). William Johnston (1993) in his book, The Mystical Way, credits James with the observation that our normal waking consciousness is merely one special type of

consciousness, which does not exclude the existence of very different forms of consciousness. "In other words," says Johnston, "within the human mind are many, many worlds that are uncharted and unknown" (p. 23). How can we tune into these different levels of consciousness? Johnston's answer is that of a mystic: prayer and meditation. We often forget that a mystical experience is nonetheless an authentic experience. Dreams can have as large an impact upon our lives as physical experiences. Johnston's book supports the thesis that Christianity is basically a mystery religion. All of its underlying beliefs are contained in the mystery of the Christ: "One who enters deeply into this mystery enters into mystical experience" (p. 226).

James, though he was among the first to apply the findings of psychology to teaching, was not a forerunner of progressive education. He was far too conservative in his educational tastes. He placed the teacher front and center in the classroom. "The teacher's task is that of supervising the acquiring process" James (1899/1958) claimed. He advised the teacher to "prepare yourself in the subject so well that it shall be always on tap: then in the class-room trust your spontaneity and fling away all further care" (p. 145). The teacher, who is a depository of knowledge, "should never try to make the pupils do a thing which she cannot do herself" (pp 48-49).

With respect to teaching and learning, James has a present-day disciple in David Ausubel (who was one of the founders of cognitive psychology). Ausubel advocated in his writings expository teaching and reception learning. He believes most teachers favor this method because it is the most efficient and effective way of organizing classroom instruction. Even laboratory sciences--which lend themselves to the discovery method--can be taught as well or as effectively by using the expository method. "Didactic exposition has always constituted the core of any pedagogic system," asserted Ausubel (1963), "and, I suspect always will, because it is the only feasible and efficient method of transmitting large bodies of knowledge" (p. 160). The flipside of expository teaching is reception learning.

Such learning is not necessarily passive. When the learner is asked to relate the new information to ideas already existing in his or her cognitive structure, the method becomes very active indeed. The central feature of reception learning, Ausubel (1961) has noted, is that "the entire content of what is to be learned is presented to the learner in final form" (p. 16).

So what is James' legacy? His legacy lies in all the points where his thinking continues to intersect with our own. These points of intersection are in his major works: The Principles of Psychology, Pragmatism, The Varieties of Religious Experience, and Talks to Teachers on Psychology. James was not only America's first psychologist, but he established a standard for scholarship that was hard to follow. Selections from The Principles of Psychology are included in the Great Books of the Western World. When he moved from psychology to philosophy, James' functionalism grew into his pragmatism. The concept of experience was elevated to new metaphysical heights in The Varieties of Religious Experience. Any book that can remain in print for a century has certainly passed the pragmatic test. And what of James' Talks to Teachers on Psychology? It stands as a classic statement by a psychologist on the art of teaching and learning. Though many of his conclusions are no longer accepted as valid, nevertheless James continues to act as a springboard, stimulating contemporary research and debate in a variety of disciplines. Could any scholar ask for a grander legacy?

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