TELLING LIKELY STORIES: THE RHETORIC OF THE NEW PSYCHOLOGY, 1880-1920
DAVID E. LEARY

This is a story about the New Psychologists who worked at the turn of the century to institutionalize a new science and to create a new set of professional roles. More particularly, it is about the rhetorical fabric they wove around the nascent science of psychology. The article focuses, one by one, on different strands of this fabric: (1) what persuaded the first generation of American psychologists to take an interest in the New Psychology; (2) the arguments they put forth to ensure that they could pursue their interest within particular institutional settings; (3) the arguments they put forth against the rights of other persons to engage in similar, competing pursuits; (4) the arguments they laid before various administrators, officials, interest groups, and the general public to guarantee continued and even increased support; and (5) the arguments they presented in the form of theories and practices developed between approximately 1880 and 1920. In this way, it attempts to construct a likely story about the establishment of the New Psychology in America.

Timaeus: Do not be surprised, Socrates, if on many matters concerning the gods and the whole world of change we are unable in every respect and on every occasion to render a consistent and accurate account. You must be satisfied if our account is as likely as any, remembering that both I and you who are sitting in judgement on it are merely human, and should not look for anything more than a likely story in such matters.

(Plato, ca. 355 B.C.)

Skill in speaking results from studied eloquence. It has five parts: invention, disposition, elocution, memory, and utterance. Its purpose is persuasion.

(Isidore of Seville, ca. 636 A.D.)

The first of rhetoric's parts is the wise choice of matter, And clearly the second is proper arrangement of thoughts: The third, a difficult task, demands the use of appropriate language; Memory's fourth—be master of what you would say. Then, fifth, be eloquent; this makes the system perfect.

(Walafrid Strabo, ca. 849 A.D.)

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INVENTIO: CHOOSING A Vocation

"The first of rhetoric's arts is the wise choice of matter."

What could have persuaded anyone, in 1880, to pursue a career in the New Psychology? Scientific psychology, with its emphasis on experiment and measurement, was still more dream than reality. Wilhelm Wundt's Grundzüge der physiologischen Psychologie, a founding text of the new discipline, had appeared only six years before; his laboratory was less than a year old, and his journal did not yet exist. Still, something distinctive had been happening in Germany for more than a decade, and at least two Americans had already found their way, however briefly, to Wundt's lecture room.

William James, a medical student convalescing in Europe, went to Heidelberg "because Helmholtz is there and a man named Wundt, from whom I think I may learn something of the physiology of the senses without too great bodily exertion." Soon after hearing Wundt, James decided to continue his study "in a general psychological direction," although he had no idea what "practical application" this study might lead. Perhaps, he mused, it might earn him "a professorship of moral philosophy at some western academy," if such positions were open "to men of a non-spiritualistic mould." It was then 1886; Wundt was still an obscure, part-time lecturer; and James was more than a decade away from becoming a professor of philosophy. Before reaching that goal, he taught physiology for seven years, inaugurated the new "physiological psychology" at Harvard University, and saw his first graduate student in psychology — G. Stanley Hall — go to Germany to do postgraduate work with Wundt.

Hall returned from Europe in the early 1880s and occupied the philosophical chair at the new Johns Hopkins University. There he opened the first American laboratory in which ongoing psychological research was done, directed the graduate work of several eminent psychologists-to-be, and established the first American Journal for the New Psychology. Then in 1888 he became the founding president of Clark University, where he continued to train graduate students in the New Psychology and, in 1892, founded the American Psychological Association.

Meanwhile, in 1889, James McKeen Cattell, a former student of Hall and Wundt, was awarded a professorship of psychology at the University of Pennsylvania. Within five years he moved to Columbia College, helped establish another psychology journal, began the "mental testing" of hundreds of college students, and founded a graduate program that would soon rival those of Harvard and Clark in the production of leading American psychologists.

Thus, by the mid-19th century, the New Psychology had all the trappings of an established scientific discipline: laboratories, journals, professorships, graduate programs, a professional organization, and at least one clear case of application. In addition, there was James's masterful textbook, The Principles of Psychology (1890), certainly one of the major factors in establishing the New Psychology in America.

Appearances notwithstanding, however, the degree to which the New Psychology was firmly established at the turn of the century is an open question to which we shall return. Meanwhile, we can consider why James, Hall, and Cattell chose to pursue a profession in the New Psychology. As different as they were, the answer in each case is the same. The New Psychology offered them an opportunity to resolve personal conflicts concerning science and religion, materialism and spirituality, determinism and free will.

James's situation was the most dramatic and is the best known. After switching his attention from art to science in the early 1860s, he became severely depressed by the vision of a completely determined world, a world in which free will and moral responsibility had no place. Still, his respect for science was such that the thought of foregoing the possibility of becoming a scientist was almost equally depresssing. In this context, psychology, as a prospective science dealing with the operations of the mind (including, most notably, the human will), offered him hope of an eventual rapprochement between his scientific ideals and his personal need to overcome the feeling that "not a wiggle of our will happens save as a result of physical laws." So he resolved to study the New Psychology, and indeed, in the course of this study, he eventually developed a scientific outlook that spurred a "crack" for freedom and hence for meaning in life.

Similarly, and quite independently, both Hall and Cattell concluded at later dates that the New Psychology was the best route to an acceptable philosophical position lying somewhere between the "destructive extremes" of idealism and materialism, leaving room for both religious feeling and scientific interests.

The same set of general concerns persuaded others to undertake careers in the new discipline. But it is important to note that such motives were not adequate, in and of themselves, to bring about the institutional changes that would make such career choice rewarding or even feasible. In deciding academic appointments, it was not a question of what was good for James, Hall, Cattell, or any other New Psychologist, but of what was good for a particular college or university: what suited its students, what appealed to its president, what was acceptable to its board of trustees. Up to the 1880s, what had been good for colleges and universities was traditional mental and moral philosophy, in the context of which the "old psychology" was taught, often by the college president, and generally as the crowning pinnacle of college education. To transform their personal concerns into academic and professional careers, the New Psychologists had to make their case for a different kind of psychology.

DISPOSITIO: MAKING THE PROPER ARRANGEMENTS

"And clearly the sound is a proper arrangement of thoughts."

In 1869, James completed his studies at Harvard Medical School and Charles Eliot became Harvard's twenty-first president. Over the next decade James's task was to persuade Eliot that the new "mental science" should have a place at Harvard, and furthermore, that he — William James — was the best person to teach this new "philosophical" course.

This task was facilitated by the confluence of three factors: (1) Eliot's disapproval of the dogmatic teaching style of Francis Bowen, the Alford Professor of Moral Philosophy; (2) Eliot's concern about the underenrollment in Bowen's courses; and (3) Eliot's conviction, nurtured by his Board of Overseers, that Harvard had to combat the materialism that prevailed in the scientific community.

Even with these helpful circumstances, however, James had to overcome some obstacles. In 1869 he was an unemployed, often convalescent young doctor, who could claim no distinguished record at Harvard's Scientific and Medical Schools nor any coursework, much less a degree, in philosophy. One could hardly expect much from him by way of scientific and philosophical innovation.
opened in 1875 with an address by Thomas Huxley, the agnostic scientist, instead of a prayer by a noted Presbyterian minister. For more than a decade the new university had so far been an enterprise created by the Hopkins family as well as by the local clergymen and gentry, which ignited into public furor when Hopkins announced in 1875 that he was "as far as possible from materialism in any form," being a graduate in divinity whose subsequent work in philosophy had served only to nurture "devout respect growing more profound at every step." Nor was it coincidental that the experimental studies conducted in Hall's laboratory while he was a lecturer at Hopkins were completely "safe," being so narrowly focused that they bore no threat to any principle, much less to religious piety; or that Hall "disorganized" the Metaphysical Club at Hopkins after it had seriously, though also quite critically, considered the tenets of materialism. The literary could go on, but the tone and substance of Hall's rhetoric are adequately conveyed by his inaugural address of October 1884. "Deeper psychologic insights," he declared, "are to effect a complete atonement between modern culture and religious sentiments and verities... . The new psychology, which brings simply a new method and a new standpoint to philosophy, is, I believe Christian to its root and centre.

Beyond that, Hall asserted, its "final mission" is to transmute the modern conception of the world "with the old Scriptural sense of unity, rationality, and love beneath and above all." These words illustrate why several historians have suggested that Hall's professorship at Hopkins was more a tribute to his "Philosophicomter" than to his philosophic stature. The same historians point out that five years later Hall "promoted himself to the presidency of Clark University and took a considerable part of the Hopkins faculty with him." They might also have mentioned his later promotion of the child study movement, st. security of other developments in the history of American psychology. Whatever one thinks of promoters, one must admit that they can be instrumental in establishing a new enterprise. A year after Hall moved from Hopkins to Clark, Cattell became Professor of Psychology at the University of Pennsylvania. What makes Cattell's case distinctive is that it was his father, by and large, who handled the necessary arrangements. As president of Lafayette College, William Cassady, that it was his father, by and large, who handled the necessary arrangements. As president of Lafayette College, William Cassady, used his many contacts in academia whenever he could to benefit his son's prospects. In the early 1880s he had helped his son get a fellowship at Hopkins. Subsequently, when he heard that the University of Pennsylvania had received support for a new chair of philosophy, he urged his son to improve his credentials, thus prompting the younger Cattell to set out for Wundt's Psychological Institute while the elder Cattell began lobbying on behalf of his son with his friend, William Pepper, the Provost at Pennsylvania. Several years later his efforts proved successful.

Of course, it was not his father's solicitations alone that got Cattell his professorship. Another persuasive factor was that he had received training from Wundt in Germany. At a time when American colleges and universities were undergoing reform, German training had considerable rhetorical value in the new Ph.D. Job market in the United States. German scholarship had become such a "feric" that even a brief stay in Germany, with no real training, could confer "a distinct advantage in the professorial race at home," and Cattell had received far more than perfunctory training.
Earning one's own credentials was not always enough, however. At times it was also necessary to discredit the credentials of those competing for the same position in the job market and in the marketplace of theory and practice. Even as the New Psychologists were learning the art of nerves and reaction times, others continued to speak of souls and faculties, and still others were becoming fluent in discussing spirits and trances, alternate selves and mind cures. If the New Psychologists were to become the acknowledged authorities on mind and action, they had to make certain that theirs was the language—and the voices—that would be heard.

**Elocution: Appropriating the Language**

"The third, a difficult task, demands the use of appropriate language."

New languages grow out of old ones. Though often posed as a rejection of traditional philosophical and psychological psychology, the New Psychology was actually an outgrowth of the rational and empirical psychologies of the past, and its new language was an emergent dialect of the old philosophical, patois, refurbished with a generous admixture of physiological terms. Whereas the "old psychologists" spoke about "souls" and explained human dynamics by reference to innate "faculties," the New Psychologists omitted all talk of "souls" and explained the same set of "faculties" by reference to more basic physiological and psychological processes.

Whatever their debt to the "old psychology," however, the New Psychologists clearly thought that their own theoretical language—with numerical calculations and references to experimental evidence—could provide more likely stories than their predecessors'. Indeed, as they became more and more conversant with the language of modern science, many of the "old psychologists" themselves found the New Psychology more convincing. As a result, many of them helped to usher in the New Psychology.

To be sure, not all mental and moral philosophers stepped aside to make room for the new scientific psychologists. Bowen's reaction to James's course—and to the New Psychology—was not at all acritical. Conversely, there were a number of American philosophers who saw the New Psychology as a threat to the role of the mental and moral philosophers that the New Psychologists were wise enough not to claim as their own. For instance, they studiously avoided religious or moral issues.

Still, the transition from the old philosophical psychology to the newer scientific psychology was less radical than it may seem. In many ways, it was more like a changing of the guard than a palace revolution. The fresh troops had new uniforms and followed a revised code of conduct, but their main duty—at least in the early days—was much the same as that of the old guard: they were to keep their eye on the normal faculties of the average human being, presumed to be the epitome of psychological functioning. Although there were some changes in the ways they fulfilled this task, far more dramatic and interesting changes were beginning to occur as a result of a different confrontation—not between old and new psychologists but between the New Psychologists and the new Psychical Researchers. It was largely through this confrontation that modern scientific psychology broadened its scope and extended its language to the point where it could tell likely stories about far more than the simply the sensory, cognitive, and motor capacities of the average human being.

James was in the vanguard of those interested in Psychical Research. His interest in Psychical Research followed naturally from his earlier personal crisis, which had been precipitated by the specter of a completely materialistic and deterministic world. Like others in the Psychological Research movement, James had become critical of naively materialistic science, and he sought through Psychical Research to provide empirical support for "the dramatic probability" that some kind of transpersonal consciousness exists behind individual human consciousness. He sought this support in a variety of ways, but primarily through the study of what he called "exceptional mental states"—trances, mediumship, visions, telepathy, subconscious phenomena, dual consciousness, alternate personality, automatic writing, and so on. Right up to his death in 1910, James remained open, curious, and yet critical about these sorts of psychical phenomena, which fell outside the domain of traditional psychological research. He asked that others, too, remain open on these issues.

James knew only too well, however, that most of the New Psychologists had closed their minds, at least publicly, long before 1910. Although many of them had been among the early members of the American Society for Psychical Research (ASPR), founded in 1884, virtually all except James had backed away from the Society by 1890. The reasons for this were evident in the half-decade of Psychical Research, conducted by respected scientists from a variety of disciplines, had failed to produce clear-cut evidence regarding the Society's most publicized concern, namely, the existence of a spirit world. But other factors, including the institutionalization of the New Psychology, were also at work. To begin with, Psychical Research quickly attracted considerable public attention. At a time when the New Psychology was little known outside the world of academia, Psychical Research was being trumpeted in the daily press and in popular magazines, and even received notice in scientific journals. This had the generally positive effect of bringing the study of psychical phenomena to public attention, but the popularity and viability of Psychical Research created a problematic situation for the New Psychology. Psychical Research became a powerful contender in the market for ideas, applications, and jobs.

Although its best-known purpose was to make "an exact study of that border-land of human experience" overlooked by both traditional and scientific psychology, the first article of the ASPR's constitution explicitly stated that its broader goal was "the systematic study of the laws of mental action." Thus, the Society was the first professional organization in the United States to support psychological research of a general as well as specific nature, and it was recognized by many as the appropriate affiliation for psychologists. In fact, it was commonly expected that the Society would "expand its scope, and turn to the solution of some of those problems which press on every side for solution." Those who saw the Society in this light were pleased to learn that it had appointed a Committee on Experimental Psychology in 1887.13

Perhaps not coincidentally, at about this time, as the Society began to assimilate experimental psychology, many of the New Psychologists began to leave the organization. Rather than being subsumed under the banner of Psychical Research, they retreated from it. However, even in their retreat, the New Psychologists did not hesitate to use the public's interest in Psychical Research to advance their own cause. For instance, Hall, who had been ASPR Vice President in 1885, used funds he had received through this association to publish his American Journal of Psychology; and Carrell sought a chair at the University of Pennsylvania that had been endowed to support the investigation of Psychical Research.14

By 1890 the task facing the New Psychologists was clear. If they wanted their own version of psychology to receive greater recognition and support, they had to discredit
The decade proved utterly barren of practical import. As a new era dawned, the optimistic tone of the last was replaced by the dire predictions of some of the most prominent thinkers of the time. James, who had previously been so enthusiastic about the potential of psychology, now expressed his disappointment:

"Memory's fourth—be master of what you would say."

When James published his classic *Principles of Psychology* in 1890, some New Psychologists were bothered by its bold, unorthodox arguments and by its pointing to a variety of areas in which the New Psychology might someday be applied. Hall, for instance, worried that such "premature speculations" were not the sort of thing that was commended the scientific method in psychology to the confidence of conservative administrative boards, and by which its recent remarkable academic extension in the universities and colleges of this country have been made.

For such practical reasons, he said, James should have written a "plainer and humbler" book.

But James was not easily diverted or silenced. In response to another review, he wrote:

What every educator, every jail-warden, every doctor, every clergyman, every social reformer, every insurance agent, every judge and legislator, and all the rest of the people of the United States who are interested in the welfare of our country as a whole, has in mind when he hears the term "psychology," is the question whether psychology is science.

This is a question that has been asked for years, and to answer it correctly requires a knowledge of psychology that is beyond the grasp of most people. But the true answer is simple: psychology is science, and it can be applied to the solution of practical problems.

The primary realm for these pretentious claims, as well as for more realistic plans for future applications, was the field of education. Indeed, in many ways the institutionalization of modern psychology depended on developments in modern education. As we have already seen, the reform of American colleges and universities provided the first context within which the New Psychology was able to grow. Just as psychology was being introduced into psychology "under newly found scientific titles," so was it being applied to education.

The Progressive Movement in its many guises and variations was just then gathering momentum, and in education, business, government, and the public domain at large the call for scientific techniques, professional expertise, and efficient management was beginning to be heard. In this context, it was not long before James's thoughtful appeal for the development of an applied psychology was drowned in a sea of claims about actual achievements.

The actual achievements were rare, but the process did not escape notice. James, for one, enjoyed commenting on the "legitimation" that had been conferred on "occult" phenomena by means of their introduction into psychology "under newly found scientific titles." And it was not only the phenomena of Psychological Research, but also its theories about these phenomena, that made their way into the New Psychology. Sometimes this happened to subtly that even their new proponents did not realize their genealogy, as when a leading young experimental psychologist thought he had debunked the work of the Psychological Researchers by "proving" that visionary hallucinations were the result of "suggestion," or when one of the senior experimental psychologists in America thought he had explained away the range phenomena of Psychological Researchers by attributing them to the effects of "double personality." In fact, both explanations had been put forth by Psychological Researchers—and rejected by orthodox psychologists—more than a decade before.

"As the demand grew, Hall emerged as the acknowledged leader among "educational psychologists." In 1894 he claimed that "the one chief and immediate field of application for all this work [in the New Psychology] is its application to education, considered as the science of human nature and the art of developing it to its fullest maturity." But Hall was far from alone. For instance, by 1894 Castel had already bypassed programmatic statements and had begun administering "mental tests" to the students of Columbia College, with the confident expectation that the results would be useful to the prospective science of pedagogy. Unfortunately, his efforts throughout the rest of the decade proved utterly barren of practical import."
However little the New Psychologists were actually able to deliver, the situation was one in which—as a well-known philosopher/psychologist put it—psychologists were "forced to win a hearing by somewhat magnifying their own office," while teachers simultaneously looked "more or less wondreringly toward the laboratory." Hoping for recognition and feeling called upon to lend assistance, the New Psychologists longed "to help everybody" and were "led to making vast promises," leaving the teachers "promise-crammed," but no wiser. Still, in the presence of so much desire on the part of teachers, school boards, educational reformers, and national education organizations, the mere promise of assistance aided the institutionalization of the New Psychology. At the same time, the mandate to assist in educational reform had a detectable effect on the late-nineteenth-century American psychology, which came to be dominated by learning theory.

The social demands that psychologists had to keep in mind as they presented their appeals for public recognition and support came from business, government, and the public at large as well as from educators. Businessmen were naturally interested in getting a step ahead of their competition, even if it involved consorting with psychologists. They stimulated the development of "business psychology," for instance, by asking psychologists to determine the qualities that make a good typesetter, and to study the habits formations involved in learning telegraphy. By the early 1900s such demands from business helped bring about a thriving new field of industrial psychology. Similarly, the beginnings of clinical psychology can be traced to requests by the public that psychologists deal with this or that personal problem. For example, the first psychological clinic resulted from a teacher's challenge that a New Psychologist prove his mettle by doing something to help a "chronic bad speller."

The relationship between the New Psychology and its potential consumer-public was not always one of demand and attempted supply. Psychologists had aspirations of their own, and often took the offensive in trying to bring them to fruition. Knowing that their long-range prospects depended on public support, they did not shy away from trying to persuade various constituencies that they wanted a particular psychological service. Through successful instances of such persuasion, often exercised on government officials, the demand for the New Psychology was significantly broadened.

Two such cases occurred in 1917. One was the establishment of the Iowa Child Welfare Research Station, which was to play an important role in the development of child psychology in America. The other was the instituting of psychological testing in the United States Army, which is commonly seen as a critical turning point in the development of psychological testing. As Cattell noted, the rapid growth of psychology in America was due to "conditions of the soil" as well as to the "vitality of the germ." And as we have seen, the first generations of New Psychologists took full advantage of these conditions in their efforts to gain recognition and support for their new discipline, even to the point of sometimes exaggerating its actual accomplishments and immediate prospects.

Still, it took more than fertile soil to bring about the establishment of the New Psychology. The "vitality of the germ" was dependent upon the New Psychology's intellectual premises, and the ultimate test of the new science and budding profession lay in the degree to which the New Psychologists could elaborate these premises. Insofar as they failed to articulate likely stories about mind and action—stories capable of encompassing the practical activities of research and application—they would have failed, on their own terms, to bring their young discipline to its desired state of perfection.

Ironically, at the very moment when their rhetoric of applicability had opened the door to the coveted goal, a tone of disappointment began to creep into the proponents of the New Psychology. The principal event of public recognition and support for the New Psychology was propitious. As Cattell noted, the rapid growth of psychology in America was due to "conditions of the soil" as well as to the "vitality of the germ." And as we have seen, the first generations of New Psychologists took full advantage of these conditions in their efforts to gain recognition and support for their new discipline, even to the point of sometimes exaggerating its actual accomplishments and immediate prospects.

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Complainingly, at the very moment when their rhetoric of applicability had opened the door to the coveted goal, a tone of disappointment began to creep into the pronouncements of psychologists regarding the status of the discipline. Castell captured the mood in 1917, when he regretfully admitted that "our accomplishment falls far below
what it might be and should be." More than a decade later, in 1929, another leading psychologist reached the same conclusion, and so have many others up to our own time.20 As all of the commentators have known, the failure of twentieth-century psychologists to achieve even a relative unanimity on matters of theory and method has entailed a corresponding failure to establish disciplinary authority in psychology. After winning so many earlier battles—with personal crises, with college presidents and boards of trustees, with philosophers and Psychological Researchers, and with the custodians of public opinion and support—the New Psychologists failed to complete their mission. They failed to put the finishing touches on the discipline they had constructed.

Had he still been around in 1920, or even in 1980, James would not have been surprised or particularly disturbed to find psychological theory still in the making. The goal of presenting an argument that would end all argument was foreign to James's temperament and—as he pointed out—foreign to the historical reality of science itself. Following in the footsteps of his beloved Ralph Waldo Emerson, James believed that "science is nothing but the finding of analogy" and that the analogies of science—indeed, the analogies underlying all forms of knowledge—are "Baconian" rather than "frozen." Though a staunch empiricist—or rather, as he saw it, because he was a staunch empiricist—James insisted that there are always new ways to experience reality and different ways to categorize any experience. A creative genius in any field—in science as in the arts—is someone who has an unusual native talent for perceiving analogies that have not yet occurred to others, but which, when presented to others, are seen by them as revealing something salient about experience.20

Salliance, James knew, is not something that is absolute: what "works" for one person may not "work" for someone else. James felt, human—scientists included—had to humbly accept that the salience of the "spontaneous" creations of individuals will ultimately be judged by the "consensus" of their social and professional group.21

The achievement of scientific consensus, from this point of view, depends to a significant degree on the rhetorical power of particular analogies, or rather, of particular stories based on such analogies. This power will draw upon the experiential sensitivities of the particular scientific community, but it will not be reducible in any simple or direct fashion to "the brute facts of the matter." No analogy or likeness of reality is exactly identical with reality—or as another of James's admired men put it, "no likeness goes on all fours." Therefore, no story developed from analogical premises can be definitive or final: as Timaeus told Socrates long ago, we should not expect more than a likely story in such matters. Following similar reasoning, James concluded that "the best mark of health that a science can show is this unfinished—seeming front," even though he admitted that science's heuristic goal should be the attainment of "conceptions so adequate and exact that we shall never need to change them."22

James's belief in the analogical or metaphorical foundation of knowledge is richly illustrated in his own psychological writings. His description of thought or consciousness as a "stream" rather than a "chain" or "train" is well known, and his discussions of other psychological topics are similarly informed by underlying analogies and metaphors. The ultimate metaphors that founded and framed his psychological thinking—and that came to undergird his pluralistic pragmatism—were the Darwinian metaphors of "variation," "selection," and "function." All psychological states and actions, according to James, are the products of spontaneous variation and/or selection in terms of consequential functions. This "functionalist" orientation, shared by many other American psychologists, has structured much of the theoretical argumentation in twentieth-century psychology, leading his historical and functionalism to functionalistic behaviorism and back again. Its rhetorical power is clearly dependent upon the authority that Darwinian modes of analysis have come to enjoy because of their utility in making sense of a vast array of biological phenomena. Often taken as a definitively true story rather than as a usefully likely story, the functionalist account of mind and action has led to some of the central psychological myths of our time.23

Interestingly, Hall felt as strongly as James about the analogical or metaphorical basis of all knowledge. In a manner reminiscent of both James and Emerson, he claimed that metaphors are among the mind's "first spontaneous creations" and that they provide the basis for the development of language, which is therefore essentially "fossil poetry." With reference to psychological language in particular, Hall noted that through the "widening circle of objects and events" linked by metaphorical thinking, "scores of objects are no longer mere things of sense, but are words in the dictionary of psychic states and moral qualities." In saying this in his typically obscure manner, Hall had in mind a fact noted by others: that psychological concepts such as "imagination," "preparation," and moral concepts such as "dependability," "reliability," and "forthrightness," were drawn originally from physical anologies.24

Whatever their similarity, Hall's approach was also markedly different from that of James. Rather than assume that there is always more than one salient metaphorical view of reality, Hall supposed that one particular metaphorical approach could be the correct one. A monk rather than a Jamesian pluralist in this regard, he proposed his own recapitulation theory of psychological development as the ultimate scientific theory of human personality and character. Transforming a metaphor into a principle, he extrapolated theories of childhood, adolescence, and aging from the premise that the phylogenic history of the species is a literal, completely accurate analog of the developmental stages and crises in the life of the individual.25

Although this style of reasoning soon fell out of favor, it is remarkable how fertile it was in suggesting ideas that others developed, and it is worth noting how often traces of recapitulationist thinking can be found in modern psychology. Though generally denouncing the surface of theoretical discourse, variations of recapitulationist thinking have slipped into basic psychological thinking and parlance through the attention given in America to the work of Sigmund Freud, Carl Jung, Jean Piaget, and others.26

In many ways, Cattell's view of knowledge was closer than that of James or Hall to the opinion that was to dominate American psychology in the half-century. Rather than touting spontaneous flashes of metaphorical insight, Cattell saw "men of science" engaging in the "every-day up hill work of the laboratory," whose work is "scarcely more stimulating than the routine of the factory or the farm."27 With such an antimetaphorical, "Baconian" view of science (structured by the metaphor of piecework labor), it is not surprising that the "theoretical" papers of Cattell and so many other modern psychologists have a life little longer than catalogs of facts aligned with economy and precision, as if to save room for future inventory, and as if precision alone fulfilled the task of analysis. Cattell's empirical research was simply much more of the same: his nearly-decade of "mental testing" left file upon file of meaningless data.

The rhetoric of the New Psychology, 1880—1920

The rhetoric of the New Psychology, 1880—1920 has been much more recent. While this is a huge task of analyzing and comparing the methodological practices endorsed by it—age-old, but the rhetoric of modern psychodiagnostic and treatment is much more recent. This is a huge topic,
what is pertinent here—and what will serve as an illustrative example—is the rhetoric that grew up around Castell's concept of "mental testing." As it developed from its original metaphorical basis in the "anthropomorphic" work of Francis Galton, the "psychometry" of the "mental testing" movement began in America by Castell was soon developed in a rhetoric of social disciplining and human engineering. Drawing attention and power from numerous linguistic and conceptual references to the two fields in which modern biological and physical science had most commonly proven its practical worth, an entire rhetoric of abnormal and clinical psychology was elaborated. As doctors tested for disease and engineers for stress, so psychologists from presumed and thought of themselves as being capable of testing for intelligence or insanity on any number of psychological properties. They were not only like doctors and engineers, they were doctors and engineers, testing "patients" for "mental disease" and diagnosing "solutions" for "mental stress." And more significantly, tied to this conceptual framework was a whole set of practical routines that still direct the professional activities of many psychologists, even after the conceptual framework itself—at least the profession murdering on medical analogy—has received some well-publicized criticism.4

Of course, many other premises have shaped the positions and thus defined the theoretical arguments and practical activities of twentieth-century American Psychologists. Even before 1920, many of these premises were firmly in place. Some are quite well known, though not all of them are recognized as analogical or metaphorical in nature. For instance, many realize that the classical behavioral John B. Watson was speaking metaphorically when he said that all organisms, including humans, are "stimulus-response machines." Organisms may be like machines, yet they are surely not machines in exactly the same way that cars and typewriters are machines. But few realize that the first elements in Watson's basic premise—"the concepts of "stimulus" and "response"—are also metaphors. As he noted in 1919, these terms are used "in psychology as in physiology. Only in psychology do we have to extend somewhat the usage of the term."5 Despite this admission—that psychological stimuli and responses are in some undefined way similar to, but not the same as physiological stimuli and responses—it was not long before the terms "stimulus" and "response" were taken by the majority of psychologists to be "objective" and "neutral" terms in the description and explanation of behavior.6

Such subtle movement from metaphorical to supposedly literal conceptualization of psychological phenomena is typical of the historian development of twentieth-century psychological rhetoric. In fact, as I hope will now seem likely, the apparently pure, neutral psychological language mandated earlier in the century by the dominant positivist philosophy of science was always, deeper down, informed by what might be called complicative thinking; and many of the theoretical arguments and developments over the past century have been the result, essentially, of analogical redescription of psychological phenomena. For instance, Watson, in his 1915 Presidential Address to the American Psychological Association, said: "It seems to me that the hysterical motor manifestations may be looked upon as conditioned reflexes. This is not an unreasonable analogy, and pursuing it might have enlightened our understanding of hysteria, but Watson did without further justification from this suggestive analogy to a matter-of-fact declaration that the "conditioned reflex can be used as an explanatory principle in the psychopathology of hysteria. 7

This sort of linguistic sleight of hand, by which an analogical redescription is taken to be a new theoretical explanation, was noted in 1924 by a perceptive observer who complained that psychologists, for all its theories, has performed no miracles. It has regained our emotions 'complexes' and our habits 'conditioned reflexes,' but it has neither changed our habits nor rid us of our emotions. We are the same blundering folk that we were twelve years ago, and far less sure of ourselves. 8

Even those who would be more generous in their assessment of modern psychology will probably sympathize with this critique. Yet it is a measure of the success of modern psychology's rhetoric that so many people have learned to turn to psychology book in helping with their problems. Indeed, many Americans now approach psychology as their predecessors approached religion. Not coincidentally, a great deal of religious rhetoric has found its way into psychological rhetoric. Why is this so? Why have so many Americans been persuaded and assuaged by contemporary psychology? Why do its theories seem to them to be likely stories or at least reasonable stories? Reconceptualizing the topics treated in this essay, the answers to these questions probably include the fact that at least some of psychology's address human experience and try to resolve personal problems; that the fact that the modern academic and other social institutions have conferred their blessing upon the discipline; the fact that people have learned to believe—and want to believe—the claims of science; and the fact that the stories themselves make use of familiar cultural categories.

Is it really surprising, for instance, that in a society which places high value on efficiency, psychologists have used metaphors of efficiency as the very core of their thinking and rhetoric? Is it really surprising that in a capitalist society, psychologists have given metaphors of productivity and exchange a prominent place in their analyses of society and behavior? Is it really surprising that in a society obsessed with technology, psychologists have turned to cybernetic analogs of both cognitive and neurological functioning? 9 I don't think so, nor do I think x suggesting that so many Americans have been persuaded over the past century by the stories based on these constructs.

Notes
1. To avoid any misunderstanding, I want to make it clear that I am not suggesting any sort of "stage theory" regarding the history of disciplines, or of psychology. Although the triadicadditions of my story fall roughly into a chronological pattern, these additions are artificial and were chosen for their practical rather than theoretical utility. In fact, the theory treated in the various sections of this essay did not occur in any absolutely sequential fashion, and were often intertwined in more complex ways than I can illustrate here. That is, the categories, based on the three principal parts of science, are obliquely interconnected metaphorically. In fact, one of my goals in this essay is to extend the traditional notion of rhetoric typically focused on as discursive discourse, as presented in the final section to include the broader range of argumentation within which the discipline of psychology was institutionalized.


5. William James to Henry James, Jr., 8 April 1873, in Perry, Thought and Character, 1: 341.


15. In the extant written focus on war, the focus on war is in the realm of psychology psychology and the pursuit of psychological truths in psychology. The focus is not on psychological theory the, the latter will be treated in the first section of the paper.


26. By myth I mean the taking of a metaphor or as metaphor —forming to say "like" as "as", or "as" as "like", or analogies of the metaphorical, to cover a wide range of phenomena, for instance, it is founded, in the broad idea of metaphorical metaphors, of variation, and selection, and because the fact that he transfers the sense of their own metaphors from the phylologico-social to another level, and from biological deception to behavioral learning, thereby a metaphor may reveal to other phenomena without acquisition or assimilation. See ibid., The Behavior of Organisms: An Experimental Analysis (New York: Althaus, Century, 1923).


30. Ralph Waldo Emerson, “The American Scholar” (1841) and “The Poet” (1844), in Essays and Lectures, ed. Joel Porte (New York: Library Classics of America, 1985), pp. 37 and 48; See James, Principles, 1: 423-424; 529-110; 109-110. 36-154. Another of James’s masters had also believed, stating in his, that the ability to make unusual associations as the root of creativity, indeed, Charles Darwin complained during his early creative period about the "interior labour of original invention things" that was due, in part, to the fact that "none of the old things that have moved by obviouly estabishment" (M슛lebaker, 16 August 1856, transcribed by Paul H. Barrard, in Howard E. Griswold, Darwin and Men of Science (New York: Dutton, 1982), p. 23. A lecture later Darwin reflected on the other side of his experience—on the "ostracism pleasure... derived from comparison forming of one's mind" (The Life and Letters of Charles Darwin, 2nd ed, 1 vol., ed. F. Darwin (London: John Murray, 1847), I: 349.


34. See James, Principles, 2: 44-49.

35. See ibid., pp. 247-248.


37. See ibid., pp. 10-11.

38. See ibid., pp. 12-11.


40. See ibid., pp. 12-11.

41. See ibid., pp. 10-11.

42. See ibid., pp. 12-11.

43. See ibid., pp. 10-11.

44. See ibid., pp. 12-11.

45. See ibid., pp. 10-11.