

# Scientific Psychology: Should we Bury it or Praise it?♦♣

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## ABSTRACT

In 120 years since William James published his *Principles of Psychology*, scientific psychology has made great strides. Yet James' concerns about the lack of coherence of psychology have continued until this day. An analysis of the current disciplinary terrain suggests that large parts of contemporary psychology are being absorbed by the newly emerging fields of cognitive science and neuroscience. Social psychology may become part of a broader field of cultural studies, while other subfields that have primarily an applied status. What will remain central to scientific psychology is a concern with those issues that were pivotal for William James — self, will, consciousness, and personality. This enduring “core” of psychology may benefit from deeper and more extended interactions with literary and other artistic studies.

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In 1987, I was invited to deliver an address to the American Psychological Association. I decided to use this occasion to air some of the misgivings that I had about the status of psychology as a coherent scientific discipline. Not surprisingly, the talk received its share of criticism; and when I prepared a written version of the talk, it was rejected by a few mainstream psychological journals. Fortunately, a recently launched publication, *New Ideas in Psychology*, agreed to publish the critique in full and it generated a modest amount of discussion in the ensuing years. The invitation to contribute to the present volume has given me the opportunity to revisit the argument put forth over two decades ago.

## WILLIAM JAMES' ASPIRATIONS AND CONCERNS

One and a quarter century ago, the esteemed philosopher-turned-psychologist William James signed a contract to write the first American textbook in psychology. As he wrote to his friend Thomas W. Ward, “I have blocked out some reading in physiology and psychology. It seems to me that perhaps the time has come for psychology to begin to be a science” (quoted in Feinstein, 1984, p. 313). As is well known, a task slated to be completed in two years dragged on for a dozen years, but in the end James had expounded the subject in a way which has seldom if ever been equaled. Certainly it is difficult to think of any other textbook which is read not only for pleasure but also for profit well over a century after its initial publication.

In writing his unsurpassed *Principles of Psychology* (1890), James sought to share his vision of psychology and its relation to physiology, on the one hand, and to philosophy, on the other. He

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♦ This paper was presented initially as an invited address to Division 1 of the American Psychological Association upon the author's receipt of the William James Award. I wish to dedicate this paper to the memory of Henry A. Murray, with whom I was privileged to discuss its contents shortly before his death in June 1988.

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was well aware that these fields of knowledge did not yet fully cohere with one another, but he thought that it would soon be possible to bridge the region «lying between the physical changes in the nerves and the appearance of consciousness (in the shape of sense perceptions)» (Feinstein, 1984, p. 313). James composed memorable chapters on what are now the familiar staples of any psychology text: the senses, emotions, attention, memory, reasoning, and perception. Yet it is probably the central chapters — on the Stream of Consciousness and on the Self — that constitute his most distinctive contributions.

James' opus immediately drew praise among psychologists as well as scholars in related fields. In light of the subsequent fragmented history of psychology, the comments by two colleagues strike me as particularly apt. First there is James' first student and close associate in psychology, G. Stanley Hall:

The author (James) might be described as an impressionist in psychology. His portfolio contains sketches old and new, ethical, literary, scientific, and metaphysical, some exquisite and charming in detail and even color, others rough charcoal outlines, but all together stimulating and suggestive, and showing a great industry and great versatility. This is through and through a *tendance* book. Its very inconsistencies and incoherences not only reflect but greatly magnify all the unrest, distraction, and conflicts of the present hour. (quoted in Knight, 1954, p. 43)

Then his long-term colleague in philosophy, George Santayana commented:

It would be pedantry to regret the loss of logical unity in a book so rich and living, in which a generous nature breaks out at every point, and the perennial problems of the human mind are discussed so modestly, so solidly, with such a deep and pathetic sincerity. (quoted in James, 1963/1892, p. xi)

Since the initial appearance of the *Principles*, tens of thousands of works in psychology have been published; psychology as a discipline—academic and practical—has achieved remarkable success. The flagship publication *Psychological Science* received 1800 submissions in 2007. Yet, it is still not clear to many observers that the promise implied by a two-volume text in a new field called psychology has actually come to fruition. Clearly advances have been made in many, if not most, of the topics treated by James and his immediate successors. But have these advances added up to a unified discipline whose components interrelate with one another? Are they worthy to be called a science in the same sense that biology, chemistry, and physics — or, for that matter, economics or demography — merit that label? Are there serious attempts to tie together the “micro” and “macro” levels as are currently underway in the biological and the physical sciences?

In treating the possibility of psychology as a unified science, I am discussing a topic that William James would have found of interest. He himself had often voiced misgivings about the “confused and imperfect state” (Perry, 1935, vol. I, p. 40) and the “ante-scientific condition” of psychology (Allen, 1967, p. 315). In my view, James' concerns have proved all too justified. Psychology has *not* added up to an integrated science, and it is unlikely ever to achieve that status. It no longer makes sense to discuss scientific psychology as a tenable long-term goal. What does make sense is to recognize important insights that have been achieved by psychologists; to identify the contributions which contemporary psychology can make to disciplines which may some day achieve a firmer scientific status; and finally to determine



whether at least parts of psychology might survive as participants in a scholarly conversation that obtains across major disciplines.

### THE DREAM, THE DOUBTS, AND THE OPTIONS

In 1780 Immanuel Kant developed arguments which purported to show that a scientific psychology was not possible. The redoubtable philosopher identified three apparently insuperable obstacles: the mind is inherently affected while studying itself; there is nothing of spatial extent which can be studied; and there is no mathematical basis on which a science can be constructed. Kant concluded in magisterial terms:

Psychology can, therefore, never become anything more than a historical (and, as such, as much as possible) systematic natural doctrine of the internal sense, i.e., a natural description of the soul, but not a science of the soul, nor even a psychological experimental doctrine. (quoted in Watson, 1979, p. 88)

Postulating the impossibility of a field *a priori* is a risky thing to do. In the following century, such formidable scientists as Hermann von Helmholtz, Gustav Fechner, Johannes Mueller, and Wilhelm Wundt devoted their considerable powers to the refutation of Kant's dictum, thus laying the groundwork for James' work and for the potential emergence of a science of psychology.

In the second century after Kant's dismal epitaph, psychology conquered much of the academic world. What followed might be called, in the argot of Chinese dynasties, the Period of the Warring Schools: we had functionalism, behaviorism, structuralism, Gestalt Psychology, learning theory, psychoanalysis, and a pack of other "isms"; we hosted the movements surrounding magnetic scientists like James J. Gibson, Clark Hull, Jean Piaget, and B. F. Skinner; and we experienced a number of worldly successes, such as the intelligence test, various indices of psychopathology recorded in successive editions of the DSM manual, and the integrated commercial sphere that spans persuasion, advertising, and marketing. Psychology has become established as a potent societal force, with its departments, journals, institutions, and huge organizations. Within the United States the most prominent among them is the 150,000 member American Psychological Association (APA); but since 1988 there is a rival group, now called the Association for Psychological Society (APS), having 20,000 members, which styles it as a scientific alternative to the more ecumenical and more clinically oriented APA.

At least on the level of lip service, the dream of a unified psychology continues. It appears at the beginning and end of textbooks, though much less frequently in the intervening chapters. It surfaces as well in university catalogues and in the boilerplate statements of granting agencies. And occasionally, a scholar — more often an outsider or "independent researcher" than a practitioner of "normal science" — actually proposes a formula or "central dogma" for the field—one that purports to link all subfields and to bind the "micro" with the "macro" (Cook, 1986). But for the most part, psychologists (like other academics) go about their daily research and writing without agonizing about the actual or potential coherence of their field.



Occasionally, as exemplified by this volume, there has been explicit concern with the fragmentation of the discipline. Issues of the *American Psychologist* (Bickman & Goodstein, 1987) and *New Ideas In Psychology* (Baer, 1987; Bakan, 1987; Krantz, 1987; Royce, 1987; Toulmin, 1987) have been devoted largely to this topic. The debate has been framed in terms of “centrifugal” as opposed to “centripetal” forces in the field; about alternations between “cohesion” and “splintering” from one decade or from one generation to another; about system-building as opposed to tending one's own little settlement. Controversy has centered on whether physics, biology, or some other discipline should serve as a model for psychology; and whether we should deplore or revel in our pluralism. No less an authority than Sigmund Koch (1981) devoted much of his career to this nexus of issues and over the years assumed an increasingly pessimistic note.

These and other voices call into grave doubt the possibility—in theory or in practice—of a unified scientific psychology. The evidence of the past century gives little consolation to those who would like the textbook vision to become a reality. In what follows I focus on possible reactions to this state of affairs and then propose one plausible topography for the coming decades.

In as much as psychology gives little sign of cohering, we are faced with the following options:

- (1) We can simply close our minds to the possibility of disciplinary extinction and continue what we have been doing. No Super-body is likely to announce Psychology as a fraud, and so we can maintain the status quo.
- (2) Following a well-known suggestion made with reference to the Vietnam War by the late Senator Aiken of Vermont, we can simply *declare* that psychology is a success — as it has been, according to many criteria — and swallow any lingering doubts which we might entertain.
- (3) We can hope that we are simply passing through a temporary phase of fragmentation and that some enterprising researcher, or some brilliant theorist, will discover the “golden thread” that will unify our field.
- (4) We can claim that there has been an unjustified romanticization of other disciplines. After all, there are many numbers of subfields of biology: the geneticists or molecular biologists inhabit quite different worlds from the evolutionists, taxonomists, or paleontologists. At one time, my university had nine different departments of biology: and economics is at least as top-heavy as psychology with schools that struggle against one another.

There are certainly other options, but I favor a fifth. Let us recognize that fields of science evolve, often in unsuspected and unexpected ways. Nearly every field of knowledge begins as philosophy; and psychology continues to foreground its philosophical origins more faithfully than any other discipline. There was a period two centuries ago when psychology seemed impossible; a set of discoveries in the nineteenth century which established a number of enduring psychological paradigms and concepts; a complex of social and historical factors in the twentieth century which earned psychology a place in virtually every academic environment.



Still, while psychology was developing, so were other fields of knowledge. It is against the background of other evolving disciplines that psychology must be understood and located. In the last century, psychophysics — once the core of psychology — was slowly assimilated into engineering and computer science; and more recently, the study of animal behavior within psychology has been complemented by work from an ethological perspective. Certain approaches—such as simulating thought and behavior via neural nets (Rumelhart and McClelland 1986) — and certain thematic emphases — such as those of positive psychology — have recently come to the fore (Seligman 2004). It is my contention that what we presently call psychology has already begun to be absorbed by a number of more fundamental disciplines, some more scientific (in the classical sense), some less so. The option I favor is to discern traditional psychology's place(s) within this emerging topography.

#### THE EMERGING DISCIPLINARY TOPOGRAPHY

Roughly paralleling breakthroughs in physics in the decades following the beginning of the last century, and the parallel advances in molecular biology at mid-century, the years at the close of the 20th century can be well described as the coming-of-age of brain- or neuroscience. At every level of the nervous system, from the individual synapse to the blood-flow patterns through the entire cortex, our knowledge has accumulated at a phenomenal rate. Those areas of psychology which were traditionally called physiological psychology and comparative psychology, as well as large portions of what are called sensation and perception, are rapidly becoming the concerns of neuroscientists. Indeed the first nine chapters of James' *Principles* (I refer hereafter to the shorter version of that text) would all fit comfortably into a basic neuroscience course.

I should stress that I am not endorsing a reductionist position. The phenomena of sensation, perception, or other psychological states will never be reducible to “an account in terms of brain states.” As is well indicated in the pioneering work of neurophysiologists like David Hubel and Torsten Wiesel (Hubel, 1979), the categories and the level of psychological analysis will continue to be essential not only in ordinary discourse but also in the work of practicing neuroscientists. However, in my view, psychologically-trained individuals will increasingly take their places as members of research teams that are probing the structure and functioning of the nervous system. The perceptual psychologist or psychophysicist working in isolation is gradually becoming an anachronism.

If neuroscience will absorb much from the “lower regions” of psychology, an analogous kind of raid will be made by cognitive science — perhaps from the “top”, perhaps more laterally (Gardner, 1985). This emerging branch of science is a self-styled interdisciplinary field which, like traditional psychology, seeks to uncover the basic processes of thought; however, adopting the current vogue, cognitive scientists regard the computer as the most suitable model for all forms of cognition.

While several disciplines are candidates for membership in an ultimate cognitive science, until this point researchers in psychology and of artificial intelligence have been particularly central in cognitive-scientific endeavors. Many of the concepts and paradigms in cognitive science come from psychology, while the methods of research and other key concepts stem from computer science, especially artificial intelligence. Among contemporary areas of psychology, the fields of attention, memory, reasoning, problem-solving, and the “higher forms” of perception and psychophysics are most closely affiliated with cognitive science. Parts



of developmental, educational, and neuropsychology will fit comfortably under the cognitivist label as well. Most of the remaining chapters in James' briefer text, beginning with Chapter 10 on Habit and concluding with Chapter 22 on Reasoning, would also find a proper place in a text of cognitive science.

In the case of cognitive science, there is little danger of a reductionism that will exclude psychological analyses. (When neuroscience is included within cognitive science, it typically assumes a non-reductionist guise in that company.) A greater risk is that, in coming up with a core computational theory, researchers may short change those aspects of reasoning or problem-solving that are characteristic of humans rather than mechanical objects (Dreyfus, 1972). Also undetermined at present is the issue of whether the various subfields of cognitive science — for example, perception, attention, memory, reasoning — will prove any less unwieldy when thought of in computational terms than they were when conceptualized in traditional psychological frames. The dispute about the appropriateness of parallel-distributed-processing models, as against von Neumann symbolic models, indicates that cognitive science may inherit psychology's woes (Pinker & Prince, 1988).

When I wrote my original paper, neuroscience and cognitive science stood as the two behemoths, threatening to absorb many settlements of science, including the mainstream of research in psychology. In the last quarter century, the two subfields have largely merged with one another. Nearly all cognitive scientists think now in terms of brain modeling and many of them actually use the tools of neuro-imaging. And neuroscientists, who once spurned cognitive terms and labels, now regularly immerse themselves in cognitive models. Other fields of psychology, such as social psychology, developmental psychology, or clinical psychology are less “at risk” of immediate absorption; possibly because they lack easily transportable research paradigms, they can continue to evolve with less threat of a takeover by an interdisciplinary “corporate raider.”

My remarks about these latter fields are even more speculative, but I will venture a few words about their possible fates. I see social psychology as continuing to produce striking demonstrations about human social behavior — the kinds of findings associated in the past with researchers like Solomon Asch, Leon Festinger, Fritz Heider, Stanley Milgram, and Muzafer Sherif — and more recently, with work like that of Richard Nisbet, Ellen Langer, and Anthony Greenwald. As impressionistic and suggestive as these findings can be, I do not see them adding up cumulatively into a cohesive science. Indeed, most are more likely to find their way into a general cultural discipline — including sociology, anthropology, and social psychology — than to be absorbed into more classical or aspiring sciences like neuroscience or cognitive science. Still, I note the rowing influence of a field sometimes dubbed social cognitive neuroscience (Damasio 2000; Greene 2003).

A number of current fields or subfields should continue to evolve without serious diversion. I have in mind here subfields like educational psychology, industrial psychology, and clinical psychology. For the most part these areas do not aspire to the status of “pure sciences.” Rather, they are applied fields, which use methods and findings from basic research in the service of problems that arise at the workplace, the market place, the school, or the clinic. They will maintain communication with neuroscience, cognitive science, and cultural studies, but not to the point of being integrally affected by scientific advances, disputes, or “takeovers” in areas with imperialistic design.



Clearly aspects of developmental studies are relevant to each of the four fields so far mentioned; neuroscientists must concern themselves with basic laws and stages of development; cognitive science will examine the development and breakdown of thinking capacities; cultural studies will feature a component dealing with the behaviors of children in different social and cultural contexts; and part of developmental psychology will continue to be intermingled with educational and clinical psychology.

In the past a number of major thinkers, such as Heinz Werner, Jean Piaget, and Jerome Bruner, have articulated the vision of an over-arching developmental science, somewhat along the lines of cognitive science, which would include material from neurology, physiology, evolution, life-span studies, child psychology, psychopathology, and perhaps even the study of different scientific disciplines (genetic epistemology). As a card-carrying developmentalist, I find this vision appealing. But I must note that pursuit of this vision has almost completely vanished in the most recent decades.

#### THE SURVIVING CENTER

It may seem that, in this Cook's tour of the disciplinary topography of the future, we have drifted far away from William James and his view of psychology. But that is only because I have yet to mention those subjects — and those chapters — that were central in William James' own account. I refer here to Consciousness — treated in Chapter 11; The Self — treated in Chapter 12; Will—the concluding substantive chapter; and Personality, which, while rarely mentioned explicitly by James, is in fact an important presence in these chapters.

For James, the issue of the self or ego — its experiences, its internal and social aspects, its aspirations, and its evolution through life — is key in psychology. James lived in the pre-Freudian era but had already intuited some of the issues which were to occupy Freud. And when he heard that Freud was coming to America, the ailing James made his way from Cambridge to Clark University Worcester, Massachusetts and declared to the visitor from Vienna, “The future of psychology belongs to your work.” As the historian H. Stuart Hughes commented, “there is no more dramatic moment in the intellectual history of our time” (1961, p. 113).

Since the time of James and Freud, the study of personality, self, will, and consciousness (hereafter, the “person-centered quartet”) has occupied a paradoxical position within psychology. On the one hand these topics are clearly central in any delineation of the field, and they occupy predictably pivotal spots in textbooks. And yet I must acknowledge there is a slight embarrassment about these topics. To be sure work continues on each of them, and many of the major figures in psychology have “had their say” on these topics. Also, there has emerged a consensus that personality can be described in terms of five principal factors: Openness, Conscientiousness, Extraversion, Agreeability, and Neuroticism. Nonetheless, in my view, progress here is less compelling than in other strands of psychology.

Interestingly, despite growing speculation about the nature of human consciousness, neither cognitive science, nor neuroscience, nor cultural studies has asserted dominance over these topics. I think this reluctance occurs not merely because these issues are difficult to study. I think it is because, rightly or wrongly, they are seen as central to psychology in a way that



nothing else is—indeed they could be seen historically as the defining features of psychology. Notably, these topics seem particularly resistant to decomposition, elementarism, or other forms of reductionism — and of course, the cannibalizing disciplines exhibit strong tendencies in this atomistic direction. Perhaps equally interesting, this definition might well be shared even in remote cultures. While failing to introspect about perceptual or cognitive processes, and displaying little interest in the study of other cultures or in stages of child development — preliterate societies do introspect and develop folk theories about the person and about personal experiences (Geertz, 1975).

If these fields are so central and yet have witnessed little progress, what can we expect of them in the future? I think that here we find a clue in the expansive psychologies of William James, Sigmund Freud, and Henry Murray. In one way or another, each of these scholars sensed an important truth: that the study of self or personality is at once a problem of psychology and the home ground of literature. In the examples they use and in the approaches they adopt, each researcher signaled the realization that the imaginative writer is tackling the same kinds of issues as the psychologist of personality. In James' case, of course, we have the lengthy and tortured relation with his brother Henry as well as frequent references to other writers and to literary examples; in Freud's case, there is his reliance on the great authors of the past — Sophocles, Shakespeare, Dostoevsky — for so many of his core concepts; in Murray's case, it is his deliberate appropriation of images from literature (e.g., *An American Icarus*) as well as his own pioneering scholarship on Herman Melville.

Literature constitutes an incredibly rich repository of information about human nature and personality, one that students interested in the “person-centered quartet” ignore at their peril. It is not in the least surprising that the three scholars cited here found particularly pivotal leads in the work of the great writers. But crucial insights about human nature are captured as well in other art forms, ranging from the visual arts to music to the dance. The focus in this discussion falls on literature but the same line of analysis can — and should — be extended to other art forms.

But if there is a relationship between the scientific study of personality and the writer's investigation of the world of his or her characters, just what should that relationship be? Should it be mutual support and regular communication? Should the psychologist attempt to locate the novelist's characters in his laboratory? Should the novelist draw explicitly or implicitly on the psychological theories and concepts of the time? Or, following Rorty (1979), should the conversation occur among psychologists and literary critics and theorists? Should the methods developed by literary theorists be appropriated by psychologists to help them in studying the ways in which the individual (reader or writer) conceives of and relates his life? Should psychological insights about memory, sense of time, or identification be utilized by students of literature to explain the ways in which fiction works for different readers or is produced by different writers? Or are any or all of these options fair game?

I remain uncertain just which form this collaboration should take and perhaps several forms deserve exploration. At the very least psychological investigators of the “person-centered quartet” ought to study works of art, including literature, with great care and test their portrayals against the claims of scientific study. Cooperative investigations among artists and psychologists could be very profitable, though the difficulty of such collaborations should not be underestimated. While the distance between psychologists and novelists might prove too





great, psychologists and students of literature can each enrich one another's pursuits. Indeed, they may provide examples and "limiting cases" for one another, the psychologist's precise methods and rigor being balanced by the literary scholar's broad view and skeptical cast of mind, particularly with respect to reductionism as in the five factors of personality. The psychologist's taxonomies and frameworks need to be tested against the rich range of characters found in literature and the powerful insights about the nature of text and of reading put forth recently by literary scholars. If the schemes of psychologists prove inadequate for dealing with these more rounded examples and concepts, then they need to be reconfigured or altogether scuttled. For their part, students of literature can benefit from a study of the way in which psychologists have conceptualized the human personality, operationalized these various conceptualizations, and tested certain tantalizing hypotheses about human behavior in the experimental laboratory.

It should prove possible for psychological writers and literary scholars to do more than read one another's publications. Here, indeed, I think that we can take an instructive leaf from colleagues in cognitive science and neuroscience. These fields have advanced in large measure because researchers reared in disparate disciplines work together shoulder-to-shoulder on problems of mutual interest. Topics like the nature and appreciation of irony, the appeal of fairy tales, or the power relations which obtain among individuals in Shakespearean plays, have already benefitted from cross-disciplinary investigations (Bettelheim, 1977; Brown & Gilman, 1989; Winner, 1988). Our own investigations at Harvard Project Zero have for some time benefitted from sustained collaborations among psychologists, artists, and experts in the systematic study of different art and literary forms (Gardner 1982; Gardner & Perkins, 1989; Winner, 1982, see also [pzweb.harvard.edu](http://pzweb.harvard.edu)). The knottiest problems in artistic analysis — such as the question of whether there might be *the* optimal interpretation of a work of art — call for interdisciplinary investigation.

Whatever collaboration eventually obtains among psychologists and individuals involved in literature and other art forms, one point seems clear. The part of psychology most likely to remain after the aforementioned cannibalizations have taken place is the study of the "person-centered quartet." Certain aspects of emotion and motivation may also elude the cognitive and neurosciences. These are topics for which psychologists may have special methods and insights; but they are equally the concern of writers and other artists, and of those who study them, like literary critics and theorists. No hard science à la physics is likely to emerge from the collaborations I envisage. But an interesting and highly useful kind of conversation between behavioral science and the humanities is likely to occur if psychologists and individuals in the arts make common cause. This insight was not lost on our forefathers, and it has been reinforced in promising work undertaken by Donald Spence (1982) and Jerome Bruner (1986), and Irvin Yalom (2005) among others.

#### WHITHER PSYCHOLOGISTS?

On his better days William James was a determined optimist, but he harbored his doubts about psychology. He once declared, "there is no such thing as a science of psychology" and added that "the whole present generation (of psychologists) is predestined to become unreadable old medieval lumber, as soon as the first genuine tracks of insight are made" (Allen, 1967, p. 315). I have indicated my belief that, over a century later, James' less optimistic vision has materialized and that it may be time to bury scientific psychology, at least as a single coherent undertaking.



Yet scientific psychologists merit praise as well. If we have so far failed in our more ambitious undertaking, we have developed any number of paradigms, concepts, and methods which should prove serviceable in contemporary and future scientific endeavors. There is no need to chronicle these achievements, because they stock our textbooks and are now often of the common lore. In reading these texts I can not help but feel pride about my membership in the psychological guild; it is clearly the work of our field which has provided the lion's share of evidence that the behavioral sciences merit attention and funding. If some psychologists suffer from “physics envy,” I have no doubt that many in other disciplines experience “psychology envy.”

We can rightly cherish the work of our most eminent practitioners — past and present — and the various concepts, findings, and schemes which they have developed. Whether psychology long endures as a self-contained field, scientists will long honor the discoveries of Donald Hebb and Karl Lashley, Martin Seligman and Mihaly Csikszentmihalyi, Amos Tversky and Daniel Kahneman, the concepts of identity crisis and cognitive dissonance, the laboratory procedures of psychophysics, psycholinguistics, and physiological psychology.

Even as we pay homage to our past contributors, we can participate as full members of research teams in the emerging disciplines of cognitive science, neuroscience, and, perhaps, cultural studies and developmental studies. Individuals researching in these areas will need the insights and methods of psychology — and if our colleagues do not work with us, they will only have to repeat our mistakes and reinvent our fields.

A third point is perhaps more subtle but it is equally important. I think that the major contribution that psychologists can make is to continue to tackle the most interesting problems that emerge and to follow those problems wherever they may lead. To paraphrase an old saw — “some scientists have avoided psychology because it is too easy; but others have avoided it because it is too hard.” It is in our bones — as it was in the bones of William James — to pursue the hard issues; to display an audacious curiosity about the human condition and to follow that curiosity wherever it looks.

A century and a half ago, William James' unstinting curiosity led him to physiology and thence to psychology — indeed to founding at Harvard around 1875 the first experimental laboratory in the country and perhaps in the world. The scientists who flocked to psychology in this century are as gifted a lot of scholars as any I can imagine. Perhaps today, some of those who in an earlier era would have turned to philosophy are instead attracted to computer science, to brain science or genetics, to literature, or literary studies. Such shifting of allegiances is understandable and appropriate. But my guess is that a healthy number of the most curious will continue to gravitate to those vexed issues which, at least in their minds, are best described as being psychological in nature.

If one of those bright students were to wander into my office in search of career advice, what would I say? I would counsel the student to look for those issues, problems, and phenomena that seem to straddle the newly emerging fields. I would have in mind those phenomena or problems that lie at the boundary of the individual self and the social self; which straddle stream of consciousness as a psychological concept and stream of consciousness as a presence in literature; which raise developmental issues in a neurological context or tackle neurological issues in a developmental context; which occur at the interface of “pure cognition” and



cognition as it unfolds in the school or at the working place. If psychology indeed turns out to be a field for foxes, rather than for hedgehogs — as I believe is the case — then I would try to convert psychologists into the sleekest and cleverest foxes around.

In closing, then, I find myself taking a leaf from Marc Antony. Having proposed a funeral for psychology as we know it, I have as well engaged in praise for much of what psychology has accomplished. I have suggested that there is much productive work left for those who, for whatever reason, choose to continue to call themselves psychologists and wish to pursue the kinds of issues and questions which are traditionally considered psychological. In so doing, I believe I have been faithful to the vision of William James, a man whose intellect was far too capacious ever to be corralled into a single discipline; and who in fact thrived by alighting on a topic for awhile and then moving on to another one. James reminds one of the proverbial fox, in Isaiah Berlin's figure, the impressionist painter, in the words of G. Stanley Hall. William James' long-time colleague Theodore Flournoy put it well:

[James] genius is so abundant, so varied, and so little preoccupied with the appearance of contradiction that in gathering in his various utterances, one does not easily frame him into a truly harmonious whole. Indeed it is almost a question whether he himself would have been able to produce a perfectly linked and coherent system from the magnificent treasure of material which he has left us. (quoted in Allen, 1967, p. 495)

As we psychologists move to the second century of a post Jamesian world, we could do worse than to emulate his spirit and his example.

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