Chapter 2
The Problem of Psychology

> *The 19th-century belief that psychology can be an integral discipline, which led to its institutionalization as an independent science, has been disconfirmed on every day of the 112 years since its presumptive founding. When the details of that history are attended to, the patent tendency has been toward theoretical and substantial fractionation (and increasing insularity among the "specialties"), not toward integration. Moreover, there are many principled considerations that underline the futility of seeking theoretical, conceptual or even paradigmatic unification.*
> *Sigmund Koch (1993, p. 902)*

Sigmund Koch was one of the premier scholars of psychology. He devoted his formidable intellect to analyzing the discipline's conceptual foundations and through intensive study he came to the conclusion that there simply was no elephant. In Koch's estimation, psychology was not *and could not be* a single coherent discipline. Because his professional biography reveals an enormous amount about the deep and profound conceptual problems that underlie psychology, it is worth taking some time to recount here. In the late 1930s and early 1940s, Koch was a rising star in psychological science, having authored, among other things, two major articles on the concept of motivation in the prestigious journal *Psychological Review* in 1941. Clark Hull's behaviorism was at its apex, and it seemed to Koch and many others at the time that the mathematization of animal behavior was truly at hand. Psychology was finally on the cusp of becoming a true, precise, objective science.

Yet, within a decade following World War II, this vision had dissolved into a mirage. Koch had come to see that "virtually every Hullian assumption, explanatory strategy, philosophical canon, and theoretical prescription [was] hopelessly wanting" (Robinson, 2001, p. 421). In 1952, during the period in which Koch was becoming increasingly disenchanted with positivism and behaviorism in psychology, he was given the charge by the American Psychological Association to direct and edit a large self-study of psychology, which ultimately resulted in the six volume, *Psychology: A Study of a Science* (Koch, 1959–1963). Although this opus

G. Henriques, *A New Unified Theory of Psychology*,
DOI 10.1007/978-1-4614-0058-5_2, © Springer Science+Business Media, LLC 2011

magnificentissimum—as one reviewer called it (Wertheimer, 1998)—was a brilliant compilation of the most exciting and groundbreaking research of the day, it nevertheless was becoming increasingly clear to Koch that, when viewed as a whole, the products of the discipline were severely limited, the conceptual organization was chaotic, and the direction of the field misguided.

Why and how had psychology become so misguided? According to Koch, one of the primary reasons was that the historical relationship between psychological knowledge and the scientific method were inverted. Other sciences, like physics and chemistry and biology, won their independence and ultimately institutional status by achieving enough knowledge to become sciences. Crucially for Koch, the methods of these sciences were developed following initial leads of knowledge. The reverse is true for much of scientific psychology. He declared that "at the time of its inception, psychology was unique in the extent to which its institutionalization preceded its content and its method preceded its problems" (Koch, 1959–1963; cited in Leary, 2001, p. 426). Thus in a classic case of putting the cart before the horse, rather than its methods being tools to justify knowledge, scientific psychological knowledge was justified by the mere virtue of applying scientific methods. By 1956, Koch increasingly saw "the damage that has been wrought by the stereotype of science as some kind of inexorable bulldozer which carves out great, linear, ever-lengthening highways of truth" (Koch, 1956; cited in Leary, 2001, p. 426).

Koch argued that the ultimate consequence of this core problem of blindly applying methods was a syndrome of ameaningful thought. "Ameaningful thought regards knowledge as an almost automatic result of a self-corrective rule structure, a fail proof heuristic, a methodology—rather than discovery. In consequence, much of psychological history can be seen as a form of scientistic role playing which, however sophisticated, entails the trivialization, and even evasion, of significant problems" (Koch, 1981, p. 257). In the same paper, Koch concluded that psychology was never effectively separated from philosophy, and although parts of it are scientific, it cannot be considered a coherent scientific discipline. Because it cannot be unified, it should instead be considered a collection of loosely related studies rather than a single coherent scientific field.

Psychology's Philosophical Woes

What led Koch to such a powerfully negative conclusion regarding the possibility of a unified, scientific psychology? There are a multitude of reasons, in addition to a naïve reliance on scientific methodology. The subsequent sections provide a brief review of five major problem domains identified by critics like Koch and many others. These are (1) problems of definition and subject matter; (2) problems in the philosophy of mind, brain, and behavior; (3) problems of epistemology, mission, and values; (4) problems of disconnected domains of causality; and (5) problems of proliferation. It is important to note that my treatment of these domains will not be comprehensive, as these conceptual problems could fill—and have—many

volumes. The goal is to ensure that you have an appreciation of the nature, scope, and complexity of the theoretical, empirical, and moral issues that have pressed upon the discipline since its inception.

Problems of Definition and Subject Matter

Physics is defined as the science of energy and matter and their interactions. Biology is the science of life. So clear and universal are these definitions that they do not need citations. In contrast, defining psychology could not be more different. Consider that *The Dictionary of Psychology* offered the following "definition" under the term psychology:

> Psychology simply cannot be defined; indeed, it cannot even be easily characterized... Psychology is what scientists and philosophers of various persuasions have created to try to fulfill the need to understand the minds and behaviors of various organisms from the most primitive to the most complex...It is an attempt to understand what has so far pretty much escaped understanding, and any effort to circumscribe it or box it in is to imply that something is known about the edges of our knowledge, and that must be wrong. (Reber, 1995, p. 617)

Psychology has been variously defined as the science of consciousness, the science of the mind, the science of behavior, the science of mental processes and behavior, the science of the human soul, and the science of human behavior, among others. These different definitions do not even include the perspective of many like Koch who argue psychology is not properly considered a science, nor do they directly address the complicated issue regarding psychology as a healing profession and the place of practice relative to science.

To get a clear sense of the depth of the confusion, consider the following paradox. Most current and past definitions of psychology have included the concept of mind in some form or another (Benjamin, Bryant, Campbell, Luttrell, & Holtz, 1997). And yet B. F. Skinner—a man rated by some as the single most eminent psychologist of the twentieth century (Haggbloom et al., 2002)—explicitly argued that psychology could never be a science of mind (Skinner, 1990). Even more paradoxically, Skinner's anti-mentalism and exclusive focus on behavior was so strong that some prominent psychologists have questioned whether he should even be characterized as a psychologist (e.g., Kihlstrom, 2004). Given these rather embarrassing problems with definition, it is a little wonder why psychology has been characterized as the Rodney Dangerfield of the sciences (Stanovich, 2001).

Intimately related to the problem of definition has been the problem of proper subject matter. Leahey (2003) noted that psychology was historically founded on three distinct subject matters: (1) consciousness by structuralists like Wundt and Tichener; (2) unconsciousness by psychoanalysts like Freud and Jung; and (3) adaptation by functionalists like Spencer and James. Shortly after the turn of the century, Watson (1913) rejected each of these perspectives and argued that a fourth subject matter, behavior, was the proper subject matter of psychology. As behaviorism

gained prominence in America, the subject matter of psychology came to center on animal behavior, a fact well expressed by Tolman in his 1937 APA Presidential Address, when he remarked:

> [E]verything important in psychology (except such matters as the building up of a super-ego, that is everything save such matters as involve society and words) can be investigated in essence through the continued experimentation and theoretical analysis of the determiners of rat behavior at a choice point in a maze. (1938/1978, p. 364)

In addition to emphasizing the focus on animal behavior, this quotation also nicely captures what clearly is missing from traditional behaviorism, namely matters of society and words. As will be made clear in my solution to the problem of psychology in Chapter 7, the relationship between animal and human behavior has simply gone unresolved in theoretical psychology, and it has been one of the major impediments to coherently defining the field.

Behaviorism clearly specified psychology's subject matter as being in the domain of the animal. But a problem emerged regarding where psychology met biology (a problem that remains to the present day, see Henriques, 2003b). Consider that in 1947 a university commission given the charge of identifying the place of psychology in an ideal university characterized the field as "the systematic study, by any and all applicable and fruitful methods, of organisms in relation to their behavior, environmental relations, and experience" (Gregg, 1947, p. 2). As this characterization suggests, the subject matter broadened so far down the phylogenetic scale that it became increasingly unclear where psychology left off and biology began. Along these lines Ryans (1938) wrote, "We might. . .make a preliminary statement to the effect that psychology studies animal behavior. . .[a]nd that statement will probably not be questioned unless it may be by the very logically minded person who calls to our attention the difficulty of drawing a line of demarcation between plant and animal life" (p. 68). In a related vein, Koch (1965) pointedly commented, "Anything so awesome as the total domain comprised by the functioning of all organisms can hardly be thought to be the subject matter of a coherent discipline" (p. 65).

The behaviorist argument that psychology was the science of behavior began to show cracks in its edifice by the 1960s. Serious questions regarding the concept of behavior and the viability of logical positivism, the rise of information science accompanied by the strong arguments that behavioral principles could not account for symbolic language, and the increasing growth of the profession of psychology with its need to address human problems all contributed to the loosening of the behaviorist grip on the field (see Skinner, 1987). With these changes came shifts in what was considered the proper subject matter of psychology. By the 1970s and 1980s, with the ascendance of cognitive and humanistic approaches in full force, the subject matter shifted back to focus primarily on the mind and human behavior at the level of the individual.

In summary, there are several unresolved problems regarding the definition of psychology and its proper subject matter. These problems include the following: (1) whether the discipline is about cognition, brain, conscious experience, or behavior (or all of these); (2) whether the discipline is concerned with animal behavior

in general or just human behavior; and (3) whether the discipline is scientific or humanistic in nature (more on this question below). The American Psychological Association defined psychology as "the study of the mind and behavior. The discipline embraces all aspects of the human experience—from the functions of the brain to the actions of nations, from child development to care for the aged. In every conceivable setting from scientific research centers to mental health care services, 'the understanding of behavior' is the enterprise of psychologists" (APA, 2011). Consistent with an organization that has achieved unity via division (cf. Dewsberry, 1996), the definition reveals an awkward amalgamation of the unresolved issues.

Problems in the Philosophy of Mind and Behavior

Although the defining characteristic of modern scientific psychology was the break with philosophy and the establishment of the discipline as an independent science, it should be clear by now that philosophical problems have always haunted the field. This is due in no small part to the fact that philosophers themselves have not resolved the foundational issues upon which the effective conception of a science of psychology rests. Consider that the well-known philosopher John Searle (2004) argued all of the major perspectives in philosophy of mind (including dualism, behaviorism, functionalism, materialism, cognitivism) are wrong. The first chapter in Searle's book, *A Dozen Problems in the Philosophy of Mind,* includes sections on the mind–body problem, the question of animal minds, the problem of free will, the problem of the self/personal identity, and the problem of the unconscious. As should be readily apparent, these issues are directly relevant for the science of psychology. Later I will have more to say about how the unified theory defines mind and resolves long-standing philosophical confusions.

Although there are many philosophical ambiguities associated with the concept of mind, in my research I discovered there is a crucial flaw in the concept of "behavior." It turns out that the term behavior has two mutually exclusive meanings, and this has resulted in enormous confusion. Consider that sometimes the term "behavior" is used in a general sense, such as "movements that generate measurable effects." This meaning is implicit in the opening line of Watson's (1913, p. 158) behavioral manifesto, which reads, "Psychology as the behaviorist views it is a purely objective experimental branch of natural science." Watson (1913) argued that by focusing on behavior, psychology becomes like other natural sciences because it is observable, measurable, and thus objective.

Other times, however, the term behavior is used in a specific sense, such as "animal responses under the control of specific stimuli." This variation in usage is problematic because it results in the term behavior being used in mutually exclusive ways. For example, sometimes the term is used to connect what psychologists study to what other "real" scientists study, as in "unlike those Freudian folks, we are a real science because we study and measure behavior." Yet, sometimes the term is used in *precisely the opposite manner*. That is, the term behavior is used to differentiate what psychologists study from what other scientists' study, as in "psychology is

the science of behavior," which is supposedly different from what biologists study. Thus the same term, behavior, is used to justify connection with other sciences in some circumstances and used to justify differentiation from other sciences in other instances. If the same term can be used for two mutually exclusive purposes, there is a problem with it.

A bottom-up perspective clarifies the issues further. The most general definition of behavior is change in object–field relationship. From this understanding of the term behavior, we can see that all sciences are sciences of behavior. Physics is the science of the behavior of objects in general. Particle physicists study the behavior of very small (e.g., fermions) using quantum theory, and cosmologists study the behavior of very large (e.g., galaxies) using the theory of relativity (Greene, 1999). If it is agreed that physicists study behavior in general, then it logically follows that other scientists study the behavior of certain objects in particular. Chemists study the behavior of molecular objects; biologists study the behavior of living objects. This analysis highlights that there are obviously significant problems with defining psychology as "*the* science of behavior." It is not the fact that animals behave that makes them unique—it is that they behave so differently from other objects. The key then becomes defining the subset of behaviors that psychologists study.

Another major problem with the term behavior pertains to its relationship to consciousness. Sometimes behaviorists appear to reject the concept of consciousness outright. At various times, Watson and Skinner both argued that psychology should banish terms like mind, self, and consciousness. At other times, consciousness is interpreted as a kind of behavior. Skinner made this case explicitly, and frequently argued that consciousness experiences (e.g., when one is engaged in private dialogue or experiencing a toothache) clearly existed and were actually forms of behavior. He often characterized them as "early" forms of behavior and rather than claiming they did not exist, they were simply difficult to study because of their "covert" or private nature (e.g., Skinner, 1957). We will return to these issues in Chapter 7, where, with the help of the new macro-level map afforded by the ToK System and an articulation of Behavioral Investment Theory, I will outline my solution to schism between mentalists and behaviorists in a philosophical position I call mental behaviorism. Mental behaviorism specifies that the unique way in which animals behave should be labeled as "mental" and that this unique subset of behavior is the subject matter of the formal science of psychology.

Problems of Epistemology, Mission, and Values

Which is a better window into the human condition, *Hamlet* or a scientific treatise on human personality? Is the primary task of psychology to uncover the laws of human and animal behavior or to promote human betterment? Is the better way of understanding the human change processes associated with psychotherapy through case study in rich detail or randomized controlled clinical trials with clearly defined disorders and treatment manuals? Some of the most philosophically vexing problems have been between those who embrace a relatively more scientific versus humanistic vision of the discipline.

Early in the twentieth century, Vygotsky argued that the multiplicity of psychologies fell into two broad categories, one natural-scientific and the other descriptive-phenomenological (Cahan & White, 1992). Staats (1983) similarly listed 14 epistemological schisms inherent in the field (e.g., focus on objective versus subjective; pure versus applied science; valueless science versus values in science) and broadly characterized the split as being between behavioristic and humanistic positions. Kimble (1984) empirically documented the presence of psychology's scientific and humanistic cultures. He further showed that students of psychology tended to enter the field with a blend of scientific and humanistic justifications, yet established professionals tended to gravitate and hold values that were consistent with one end of the spectrum or another. Along these lines, Shealy (2005) observed:

> One of the problems for psychology is that we have yet to figure out how to integrate "science" and "humanism" in a way that is credible, recognizable, and compelling. Instead, the scientific theories we create, studies we construct, analyses we conduct, and findings we report are too often too far removed from whatever human phenomena they are designed to explain, predict, or control. . . [W]hen we subsequently "feed" such theories and findings to our students and trainees, they often leave the table feeling empty and dissatisfied, because the humanistic "food group" has been scientifically extruded from the main course; the reason being, if we put it on the plate along with everything else that our field has neatly prepared, we're bound to have a mess at the table. (p. 83)

Psychologists currently run the gamut from strongly defending psychology as an objective natural science that is no different in kind from biology or physics to postmodernists who view psychological knowledge as almost entirely socially constructed rather than discovered, with a group Held (2007) called "middle ground theorists" who occupy an in-between position.

A related (but also separate) domain of contention has been whether psychology's core is fundamentally that of a science or a profession or both. Of all the various conflicts between paradigms and philosophies, the conflicts between psychological scientists and professional practitioners have been the most salient, the most politically charged, and have had the most impact on the institution of psychology. Unlike other disciplines, which explicitly separate the science from the professional application of scientific knowledge (e.g., physics and engineering; biology and medicine; sociology and social work), the same term "psychology" refers to both the science and the professional practice of the discipline. In fact, in direct contrast to many who have argued that science and practice are fundamentally different endeavors no matter what the topic, the Boulder model in clinical psychology explicitly yoked science and practice together in its now famous "scientist–practitioner" model of training. Similarly, in his presidential address to the American Psychological Association, Fowler (1990) argued that both the science and the profession together represented the core of the discipline. And yet around the time of his address, in what was the latest manifestation of the institutional struggle between researchers and practitioners, the American Psychological Society (now the Association for Psychological Science) had recently formed, breaking away from APA because a large group of scientifically oriented psychologists felt there had been too much drift away from the science.

Robert Sternberg and I argued that the split between scientists and professional practitioners stemmed from (a) political antagonisms, which arise in the context

of incomplete and inaccurate knowledge and often result in devaluing the "opposing" side; (b) the inherent complexity in both accruing and applying psychological knowledge; (c) the disorganization in the science of psychology; (d) major historical figures who failed to appreciated the core distinction between the science and practice; and (e) the fact that psychology is a single term used to reference both the science and a profession (Henriques & Sternberg, 2004). We further argued that the profession should be separated from the science because its fundamental mission was prescriptive (i.e., it is the application of scientific knowledge toward desired ends, such as increasing human well-being).

In summary, there are long-standing disputes within the field as to whether psychology is a scientific or humanistic enterprise, and whether its core identity is of a scientist devoted to uncovering knowledge or a practitioner devoted to the improvement of human well-being. In Chapter 7, I will explain how the new view afforded by the unified theory shows why psychology should be divided into three broad interrelated domains of *psychological formalism*, *human psychology,* and the *profession of psychology*, which correspond respectively to the natural scientific, social scientific, and humanistic branches of psychology.

Problems of Disconnected Domains of Causality

Given the above discussion, it should come as no surprise that psychologists have struggled to develop effective, comprehensive models of psychological phenomena. Consider the following questions. Is animal behavior a function of brain, cognition, or environmental contingencies? Are personality traits or situational variables the key determinants of human action? Is intelligence more a function of genetic or environmental influence? Is depression a normal human reaction, a psychological disorder, or a biological disease?

The lack of a generally agreed-upon meta-theoretical framework combined with the remarkably complex nature of the subject matter has had the predictable consequence of debates about psychological phenomena being characterized by opposing sides emphasizing one slice of causation to the relative exclusion of others. The problem is not that there are debates. Every discipline will have debates about the relative importance of various factors, and this is a healthy aspect of the quest for knowledge. However, what is frequently apparent in debates about psychological phenomena is captured by the metaphor of the blind men and the elephant. Theorists and researchers make claims about the essence and etiology of a particular psychological phenomena based on frames of understanding that are, at their roots, causally disconnected from one another. Behaviorally based contingency theories tend to be causally disconnected from cognitive theories, for example. Until the recent surge of interest in epigentics, behavior genetic theories have historically not been connected to environmental influences. Again, until recently, cognitive theories tended to be disconnected from neuroscience.

Evolutionary biology and culture represent yet another set of disconnected causes. One striking example of this causal disconnection is the debate between

evolutionary psychologists and social role theorists on the origin and nature of human sex differences. In an article titled, *The Origins of Sex Differences in Human Behavior: Evolved Dispositions Versus Social Roles*, Eagly and Wood (1999) examine the "stark contrast" between the two perspectives:

> In the origin theory proposed by evolutionary psychologists, the critical causal arrow points from evolutionary adaptations to psychological sex differences. Because men and women possess sex-specific evolved mechanisms, they differ psychologically and tend to occupy different roles. In contrast in the social structural origin theory, the critical causal arrow points from social structure to psychological sex differences. Because men and women tend to occupy different social roles, they become psychologically different in ways that adjust them to these roles. (p. 408)

Importantly, Eagly and Wood (1999) explicitly argue that the two perspectives are not simply reflective of different levels of analysis (e.g., biopsychological versus cultural), nor are the differences a function of a different focus on proximal (social roles) as opposed to distal (evolutionary) causation. Instead, they argue both perspectives incorporate various levels of analysis and proximal and distal vectors of causation. The perspectives have framed the nature and origin of those causes in mutually exclusive ways.

This debate, which despite numerous arguments and empirical investigations remains pretty much in the same place as it started (e.g., Buss, 2007; Wood & Eagly, 2007), is a prototypical example of how inadequate theoretical frames lead to disconnected causal claims that should have been put together from the start to allow for a more complete causal whole. First, it seems readily apparent to a reflective observer of human sex differences that beliefs and expectations (i.e., collective justification systems) about sex and gender play an enormously important role in influencing the manner in which boys and girls and men and women behave. Whether one compares role changes within a culture (e.g., differences between expectations for men and women within the United States in 1950 versus 2000) or between cultures (e.g., Canada versus Saudi Arabia), it is clear that any relatively comprehensive account of human gender differences must have a frame for understanding the emergence and function of social roles (i.e., justification systems for gender-based behaviors). And, as theorists like Eagly and Wood (1999) have appropriately pointed out, despite their lip service to evoked culture, evolutionary psychological frames have generally been relatively limited in their emphasis and capacity to explain such marked cultural variation (for an exception see Boyd & Richardson, 1985).

At the same time, one only needs an introduction to evolutionary lenses like sexual selection and parental investment theory and the briefest of cross-cultural surveys of sex differences in some areas, such as the tendencies to engage in uncommitted sexual activity (unsurprisingly, males tend to have lower thresholds), the tendencies to engage in physical competition (unsurprisingly, males engage in more competitive aggression), and tendencies to provide more parental care for offspring (unsurprisingly, females tend to invest more in offspring), to recognize that a safe assumption can be made that evolutionary selection pressures have shaped male and female psyches differently in at least some respects (Geary, 1998). What both

evolutionary psychology and the social role theory fail to do is provide a coherent framework for linking these causal elements into a coherent explanatory whole. In direct contrast to these causally disconnected theoretical frameworks, the unified theory knits together the key insights offered by evolutionary theory, social constructionist theory, psychodynamic theory, behavioral, cognitive, and neuroscience, and many others into a consilient tapestry that effectively maps the elephant.

Problems of Proliferation

One of the earliest experiences that sparked in me the quest for the elephant was the fact that there clearly had been a proliferation of perspectives in psychotherapy (e.g., over 400 separate treatment approaches had been identified in the 1990s). The differing viewpoints, although helpful in many ways, also creates a fog that prevents deeper understanding. It turns out that the problem of proliferation is pervasive, and it is one of the most complicated issues confronting the field.

In a section on the problem of proliferation, it is appropriate to point out explicitly that the present work is not the first attempt to theoretically unify psychology. There have been a few others. Arthur Staats (1963, 1996), for example, devoted his career to the development of a unified theory of psychology. Called psychological behaviorism, his approach explicitly attempted to build bridges both within the various fields in behavioral science and between behaviorism and traditional approaches in psychology (e.g., social, cognitive, and personality). Staats described his work as an inter-level, inter-field theory that cut across the various aspects of the discipline and used simpler phenomena to explain more complex phenomena. Staats (1996) articulated how animals build basic behavioral repertoires throughout their development by learning to approach positive emotional stimuli and avoid negative emotional stimuli. His model will be revisited in the chapter on Behavioral Investment Theory, and I will articulate the parallels between his system and the unified theory. Staats used his model as a building block for more complex models of human cognitive phenomena, such as language, and thus linked behavioral theory with higher cognitive processes. A particularly impressive aspect of Staats' approach was that he developed a research methodology that could be applied to many diverse areas.

But as Staats (1999) himself acknowledges, his unified theory did not "heroically [ride] off into the sunset" (p. 5), effectively solving the discipline's conceptual problems. As he experienced the difficulty his unified approach had in getting traction, Staats (1983) turned his attention to the institution and came to the conclusion that psychology has serious structural problems that prevent unification from occurring, even if it was theoretically possible. He saw that psychology had no institutional structure for considering unifying or integrating theories, nor any systematic way of evaluating them. Instead, the institutional infrastructure and research methodologies simply reward the creation of new scientific products, while completely failing to address the organization and consolidation of psychological knowledge. This structure has led to the problem of proliferation. A proliferation of terms, theories, methods, measuring instruments, therapies, experiments, paradigms, and empirical

findings that exist not as an organized set of information, but as a buzzing confusing mass so huge and ominous that even if there were organizing ideas, they would not be found because everyone is intent on inventing a new concept or term to measure rather than building on existing knowledge. Staats (1991) put the problem of proliferation this way:

> Psychology has so many unrelated elements of knowledge with so much mutual discreditation, inconsistency, redundancy, and controversy that abstracting general meaning is a great problem. There is a crisis, moreover, because the disunification feeds on itself and, left unchanged, will continue to grow. (p. 899)

One can see the nature of the problem of proliferation clearly when we consider that one of the major goals of a mature science is to consolidate knowledge into core principles that provide the foundation for understanding. Quantum mechanics and general relativity are foundational ideas that organize our knowledge and do a wonderful job describing the behavior of the material universe. Likewise, genetics, natural selection, and cell theory all work together to give a relatively comprehensive understanding of biological phenomena. When we turn to psychology and ask for the foundational principles that allow us to understand psychological phenomena, we find a disorganized proliferation of paradigms, ideas, concepts, and terms and a complete absence of foundational insights that can organize the more specific inquiries of psychological scientists.

Staats (1999) offered some bold potential solutions for the problem of proliferation. Most notably he suggested creating a reward structure that recognizes attempts to consolidate findings and perspectives into more parsimonious conceptual frames. He advocated, for example, that every APA journal devote a special issue to unifying key concepts and that universities develop specialized programs in theoretical and philosophical psychology that train psychologists about the problems of disunity and the changes that need to take place to move toward a more unified discipline. The suggestion has not been heeded, although during the past two decades the joint problem of fragmentation and proliferation has received substantially more attention than when Staats first articulated his systematic call regarding psychology's crisis of disunity over two and a half decades ago.

The preceding overview of the major problem areas in psychology has attempted to provide a survey of the deep and profound conceptual confusions that exist at the heart of the discipline. Given the current state of the field, Koch's conclusion that psychology occupies a fuzzy space between scientific and humanistic enterprises (as well as between biology and the social sciences, see Bunge, 1990) and that any dreams of being a coherent science should be given up seems justifiable. Should psychologists all join Koch, agree that psychology is a loose collection of studies that can never be unified and retire for the day? No. One fact at least should give pause. When the discipline's relationship to other fields is surveyed, a very interesting observation emerges, which is that psychology occupies a special place in the pantheon of human knowledge. Because of that special place, the deep questions that plague psychology turn out to be relevant for understanding all of human knowledge.

Psychology on the Fault Lines of Human Knowledge

Consider for a moment some of the most basic philosophical questions. For example, consider the question of ontology: What is real? Is the coke bottle on my desk real? Are the trees outside my window real? What about the pain from the slight cut on my finger? As one ponders these questions, they quickly give rise to the question of epistemology: How do I come to know things in the first place? With some reflection, it becomes clear that, at least to some extent, what is real for me depends in part on how I come to know things. Consider also the fact that although Cartesian substance dualism is not a viable philosophical stance, it remains the case that for Descartes the one truth that could stand up to even the most radical skepticism was the truth of his own self-consciousness, captured in his famous dictum *I Think, Therefore I Am*. The starting point for philosophy, then, is the experiencing, reflecting human individual, which turns out to be in the domain of human psychology.

Psychology, then, must address the issue of human meaning making. To use some of the terminology from the end of the previous chapter, such meaning making depends on the particular background structures that exist in the individual. For example, my background structures allow me to experience and understand the Coke bottle on my desk in a particular way, yet different background structures would result in a different reality. This point was well made in the 1980 film, *The Gods Must Be Crazy*, which tells the story of the dramatic impact a Coke bottle dropped by a passing airplane had on an isolated tribe in the Kalahari Desert. The tribesmen interpreted the bottle as a gift from the gods, and the film tracked how that meaning permeated the tribe and impacted its members.

The centrality of psychology to human knowledge is confirmed when we examine its place in relationship to other disciplines. Scholars of the discipline know that to dive into psychology is to dive into a whirlwind of thought that pulls one simultaneously toward the natural sciences, the social sciences, and the humanities. Gordon Allport characterized the discipline of psychology as existing at the center of the major intellectual fault lines in human knowledge. A rather extensive quote from Allport (1960) gives a clear articulation of his view of the problem:

> According to a division commonly adopted, there are exactly four winds in the intellectual heavens, springing from the four basic provinces of research and learning—the [physical] sciences, the biological sciences, the social sciences, and the humanities. Have you ever thought before that it is in the territory of psychology, and *only there*, that all these four winds collide and run a tempestuous course? (p. 4, italics in original)

Allport continued to describe the relationship of psychology to the four intellectual winds in very human terms:

> From the *[physical] sciences* comes the colossal impact of scientific methodology. I suppose in the entire history of human thought there never was a case where one science has been bullied by another science as psychology is bullied by her elder sister science, physics.
>
> From the *biological sciences* [come] the evolutionary and organismal points of view without which psychology would still be scholastic in character. . .In many quarters. . .[biology has] threatened to push every vestige of humanism out, leaving psychology with a plague of rats.

> *Social science* is causing a tornado on its own. It refuses to blend amicably with natural and biological science, but claims mind pretty much as its own province for study. Mind, they insist, takes its form almost wholly in response to cultural demands.
>
> The last wind that blows into our storm center is gentler and less voracious. . .It is the wind of humanism. After all is said and done, it is philosophy and literature and not the natural, biological, or social sciences, that have fostered psychology throughout the ages. (Allport, 1960, pp. 4–5)

Allport's sentiment that psychology occupies a unique and central position in contemporary knowledge systems was examined in great detail in a three volume publication, *Psychology and Its Allied Disciplines* (Bornstein, 1984), which explored psychology's relationship with the three great branches of learning: the natural sciences, the social sciences, and the humanities. The work examines psychology's relationship with twenty-two different disciplines, ranging from literature, religion, and philosophy in the humanities, to sociology, anthropology, and economics in the social sciences, to physics, biology, and mathematics in the natural sciences.

In reflecting on the fact that psychology has its tentacles connected to each of the great branches of learning, Bornstein makes another very interesting and relevant observation, which is that the fragmentation of knowledge has grown tremendously since psychology's inception as a discipline. He pointed out that although knowledge at the beginning of the twentieth century was far from an Aristotelian vision of unity, it nonetheless was organized in a relatively coherent way. Moreover, the domains of knowledge were manageable enough such that talented individuals could contribute positively to advancing diverse aspects of the discipline. To demonstrate this point, he tracked three of psychology's principal progenitors, Freud, James, and Wundt, and demonstrated how each had an appreciation for psychology's connection to the natural sciences, social sciences, and humanities, and how each man advanced thought in each of these major domains.

The situation is markedly different today. After more than a century of data collection, the amount of material to be mastered even in relatively specific domains is tremendous. Generalists have thus given way to specialists, the age of grand theory has been pronounced dead, and reward in the discipline is provided to those with precise, empirical, and technical knowledge. Questions about how it all fits together are seen as quaint and quixotic, and time for such speculation is reserved for armchairs, drinks after work, or researchers after a career of uncovering hard won empirical findings.

We are now in a place to define what I call the problem of psychology. The problem of psychology is the joint observation that the field cannot be coherently defined and yet it connects more deeply than any other discipline to the three great branches of learning. Taken together, these observations suggest that the problem of psychology is a profound problem in academia at large. This conclusion is bolstered by the fact that as psychology has lumbered along acquiring findings but not foundational clarity, the fragmentation of human knowledge has grown exponentially. All of this suggests that the question, "What is psychology?" is profoundly important, one of the central questions in all of philosophy. Asking the right questions is often the

most important step in getting the right answer. My interest in psychotherapy integration ultimately led me to ask the question, "What is psychology?". Although I had no idea at the time, it turns out that this is the right question. And, as startling as it sounds, because psychology connects to so many different domains, the correct answer to it opens up a whole new vision for integrating human knowledge.

I have now laid out two different but related arguments setting up the problem and the need for a solution. On the one hand, it seems that we should be able to see the elephant. That is, psychologists should be able to develop a way to unite the various perspectives and paradigms into a more effective, coherent, holistic view of the human condition. On the flip side, there are an enormous number of complicated problems that have prevented this integrative approach from succeeding in the past. Part II of this book offers four chapters on the four pieces that together make up the unified theory. These pieces are broad conceptual frames that provide new ways for assimilating and integrating existing lines of theory and research. We turn now to the first piece of the unified theory, Behavioral Investment Theory, which offers a new view for understanding cognition, brain, and behavior.