# Introduction

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## "Do You Know Who Gordon Bower Is? Endel Tulving?"

These are questions the senior editor has asked of his classes at Cornell University and at Heidelberg University (Germany) the last several years. The students are among the best in their respective nations. Almost none of them recognize either name, much less what they contributed to psychology. That's a shame, because contemporary memory research would look very different, and much the worse, were it not for the influences of Bower and Tulving. The names of earlier greats of the field – Clark Hull, Edwin Guthrie, Edward Tolman, George Kelly, Julian Rotter, Eleanor Gibson, even Edward Titchener (an early Cornell psychologist) – draw similar blank looks from Sternberg's students. The students know neither who these great psychologists were nor, more importantly, what they contributed to the intellectual history of the field. The students know a few names from the past – Freud, Piaget, Skinner – but often have only rather vague ideas of what these thinkers proposed, as much of what they did is viewed today as "history."

The intellectual history of a field is the history of the ideas of a field and their origins in the thinkers who came up with the ideas and the contexts in which those thinkers worked. The reasons for studying the intellectual history of a field today are the same as they have always been. First, understanding the intellectual history of a field helps one understand why people think the way they do. Second, such understanding prevents one from "reinventing the wheel" – from merely reproposing old ideas and instead building on those ideas. How can students understand emotional memory or episodic memory without at least a passing acquaintance with the work of Tulving and Bower? Third, knowing intellectual history enables one to learn from mistakes of the past. Did we not learn a lot about experimental ethics from Stanley Milgram, or about studies getting out of control from Philip Zimbardo? Fourth, one may rediscover excellent ideas that have been lost. Fifth, knowing the intellectual history of a field is rewarding in its own right. It is truly fascinating, as almost anyone who gives it a chance discovers. Finally, understanding the intellectual history of a field helps us understand that, sooner or later, the work we do will itself belong to that history.

As a historian of psychology, the second editor echoes these reasons for the value of the intellectual history of our very complex field. We think that as you

read these chapters, you will see that the history of each of our topics developed as scientists and scholars engaged in an ongoing dialogue of ideas and related practices with those who preceded them. In each era, thinkers and scientists drew from the dialogue and from the rich social and cultural context of their times for ideas and innovations, just as we do today.

The senior editor had a recent experience that made him realize how quickly the present becomes past. Along with his colleagues Susan Fiske and Donald Foss, he edited a book of essays by 100 eminent psychologists in the field (Sternberg, Fiske, & Foss, 2016). These were psychologists who had achieved eminence, for the most part, in the latter part of the twentieth century or the early years of the twenty-first century. When the editor spoke to colleagues, however, including one of the coeditors, they viewed the essays about the essayists' careers as history. By the time of publication, the present already had become past!

The senior editor has authored or coauthored several textbooks in diverse fields – introductory psychology, cognitive psychology, educational psychology, to name a few of those fields – and every time he has had his rough drafts reviewed, reviewers (who, like him, are professors) have demanded that he cut down on the historical material he has included. They may be responding to student preferences or their own ideas about pedagogy, but one scarcely can understand the present if one does not understand the past. George Santayana's statement, "Those who cannot remember the past are condemned to repeat it," applies equally well to the history of ideas as to the history of political and economic institutions.

The reviewers' argument almost uniformly was that students are not interested and that such material distracts from presenting new material, as the length of a given textbook and each of its chapters must be limited. He has been told by other textbook authors that they have received similar demands, with the result that textbooks today contain relatively little historical material. The exception, of course, is textbooks on the history of psychology, but this course, which was once considered important for undergraduates to take, today is more likely to be considered optional – very optional!

We consider courses and books on the history of psychology important, but we also have noted that, generally, they are organized chronologically, that is, in terms of the historical periods of the field and their development. Chronological organization is a good way to learn the history of a field, of course, but may be less than ideal for learning the intellectual history of that field and its subfields. One of us is also an author of a textbook on the history of psychology (Pickren & Rutherford, 2010) and agreed to serve as a coeditor because he knows that a handbook of intellectual history, such as this one, can offer a complementary perspective to a standard chronological approach.

We have designed our handbook on the intellectual history of psychology topically, so that readers will be able to understand the intellectual history of each of the major subfields of the field. Such an organization complements the chronological organization of a typical history of psychology text. The book is

organized much as an introductory psychology text is, except that the goal of each chapter is not merely to present the most recent theory and research, but rather the intellectual history of this theory and research.

We believe that, for an intellectual history, the topical organization has a large advantage over a strictly chronological one, in that fields have evolved differently, and when one does a strictly chronological book, progress in each given field tends to be given short shrift in favor of generalities. Obviously, there is no one "right" way to organize an intellectual history, but we believe that our topical approach will provide readers with the most scholarly, comprehensive, and useful intellectual history of the field.

Our book, we hope, will be useful for professionals in the field, but it has been written as well for students of psychology. We asked authors to write at a level that would be understandable to students with no prior background in the field. We believe they have complied with our request.

We hope our readers find our book educational, engaging, and even entertaining. We love reading and writing about the history of our field, and would like readers to see why so many authors have become engaged in the intellectual history of our field of psychology. We wish the same for all our readers!

## References

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# 1 Major Paradigms and Approaches in Psychology

John G. Benjafield

When does the history of psychology begin? Some argue that it goes back at least to the ancient Greeks, who attempted to solve problems with which contemporary psychologists are still concerned (Robinson, 1976, 2013). For example, there are similarities between Aristotle's (384–323 BCE; McKeon, 1941; Tigner & Tigner, 2000) and Robert J. Sternberg's (1949–; 1988, 2000) conceptions of the nature of intelligence. The study of such similarities can provide a rich context within which to think about contemporary psychology. However, other historians stress that much of psychology has a relatively modern beginning. As Hermann Ebbinghaus (1850–1909), one of the originators of the modern psychology of learning, put it, "Only in recent times do we find an advance, at first slow but later increasing in rapidity, in the development of psychology" (1908, p. 3). The historical process by which psychology became an independent subject largely took place during the nineteenth and early twentieth centuries (Danziger, 2013, p. 830; Green, Shore, & Teo, 2001). This new psychology was to have its own subject matter and research methods that were distinct from older subjects such as philosophy. "Such concepts as ... *personality, behavior*, and *learning* were given such radically changed meanings by modern psychology that there simply were no earlier equivalents" (Danziger, 1997).

As psychology began to differentiate itself from other subjects, there were many attempts to say precisely what psychology should and should not be, a process that led to many disagreements. Such differences of opinion led to the formation of distinctive approaches to psychology that came to be called *schools.* Each of these early schools promoted its own agenda and criticized that of its competitors. By the 1930s, these schools were taken to be so characteristic of psychology that their study became an essential part of the undergraduate curriculum. Notable among the textbooks that provided students with overviews of these competing approaches were E. G. Boring's (1929) *A History of Experimental Psychology*, Edna Heidbreder's (1933) *Seven Psychologies*, and Robert S. Woodworth's (1931) *Contemporary Schools of Psychology.* We will begin with a discussion of the major schools that Boring, Heidbreder, and Woodworth considered. Although the schools are no longer a central part of psychology, many of the issues that they raised are still relevant today.[1] We will then explore

[1] I was still using Heidbreder's (1933) text in the 1970s. Even though it was forty or more years old, students loved it and found that it gave them an understanding of psychology that was

the ways in which Thomas Kuhn's (1970) *The Structure of Scientific Revolutions* was received by psychologists. Kuhn argued that a mature science was informed by a *paradigm* that unified the field. The debate concerning the degree to which psychology has had paradigms will then be reviewed. Finally, we will consider the possibility that much of the work of psychologists is not informed so much by schools or paradigms as it is by specific problems, often of an interdisciplinary sort.

## Schools of Psychology

### Introspectionism

Psychology at the end of the nineteenth century was considered by many to be the study of the mind by means of introspection (Heidbreder, 1933, p. 125). This view of psychology was pioneered by Wilhelm Wundt (1832–1920) in Germany and E. B. Titchener (1867–1927) in the United States. The method of introspection advocated by Wundt (1894, 1973) and Titchener (1898) was not "armchair psychology" (Scripture, 1936, p. 241) of the sort done by philosophers ruminating about the nature of their own mental life. Rather, introspection was to be a scientific method like any other. However, psychology had a different subject matter than other sciences. For example, physicists study objective events, such as the motion of physical bodies. By contrast, psychologists study subjective events. Titchener (1901) illustrated the difference between the two kinds of subject matter by means of the Müller-Lyer illusion, shown in Figure 1.1.

Images such as the Müller-Lyer can be approached in two ways. First, there is the objective way. One could measure the lengths of the two horizontal lines and discover that both are of the same length. Then there is the subjective way. One could ask experimental subjects to say which of the two horizontal lines appears to them to be the longest. The subjects will almost inevitably say "the line on the left." The psychologist is interested in the subject's experience of the lines, rather than in their objective length.

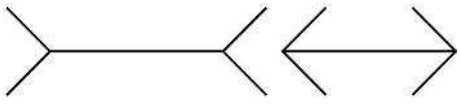

**Figure 1.1** *The Müller-Lyer illusion.*

unavailable in their other courses. I eventually moved on to more current texts (e.g., Benjafield, 2012a, 2015). However, because Heidbreder's text gives students a sense of "being there" that no current text can capture, it can still be a useful part of the curriculum.

As far as the introspectionists were concerned, the basic unit of subjective experience was the *sensation*, which they took to be an elementary experience that arises as the result of a stimulus. In some cases, asking subjects to report their experiences when exposed to particular stimuli gives reliable results. However, as the experimental situations get more complex, the results become less reliable. In part, this may be because subjects differ in the way they describe their experiences. For example, subjects may use a variety of words to describe their experience of different noises, including "abrupt, rough, harsh, startling, [and] unsatisfying" (Titchener, 1901, p. 53). In an attempt to obtain reliable results, Titchener trained his subjects to use a standard language when describing their experiences. For example, they were to report the duration and intensity of the experience given rise to by a stimulus, rather than say the first thing that came to mind. Above all, they were to avoid describing the experimental situation objectively. To do so was to commit what Titchener called the *stimulus error*. The task of the experimental subject was to describe one's subjective experiences, not the stimulus that was causing them.

There were many critics who considered the introspectionists' effort to create a science of subjectivity to be a failure. As a result, the introspective method as practiced by Titchener fell into disuse. However, other ways to study subjective experience were proposed, as we shall see.

## Functionalism

*The Principles of Psychology* by William James (1842–1910; 1983) is one of the most influential textbooks in the history of psychology. Because James had "a talent rare among intellectuals for the popularization of complex ideas" (Croce, 2010, p. 351), his descriptions of psychological phenomena seemed to readers to "match their own experience" (Richards, 1991, p. 210). While James was not, strictly speaking, a member of the school called *functionalism*, his influence on its formation was considerable, as we shall see.

James (1983, p. 1275) took Darwin's evolutionary theory seriously, and argued that "consciousness would not have evolved unless it enhanced the organism's chances of survival" (Green, 2009, p. 77). James treated "mental processes as rooted in the needs and practices of living organisms . . . an attitude which . . . became that of the first characteristically American school of psychology, functionalism" (Heidbreder, 1933, p. 198).

James (1904) welcomed functionalism, which he described as the work of

> John Dewey [1859–1952], and at least ten of his disciples, [who] have collectively put into the world a statement . . . both theoretical and practical, which is so simple, massive, and positive that . . . it deserves the title of a new system of philosophy. (p. 1)

One of Dewey's "disciples" was J. R. Angell (1869–1949; 1907, p. 61), who was an important advocate of functionalism in his own right. As a graduate student, Angell (1936) studied James's *Principles of Psychology* with Dewey,

and described it as the book that "unquestionably affected my thinking for the next 20 years more profoundly than any other" (p. 5). Angell (1907) characterized functionalism "as a protest against the exclusive excellence of another starting point for the study of the mind" (p. 61), by which he meant introspectionism. However, functionalism turned out to be much more than just a protest movement. Functionalists had broader interests and more eclectic methods than did the introspectionists, as well as a more practical approach to psychology. Much like James, the functionalists were inspired by Darwin's evolutionary theory and studied the ways in which people adapt to the environments in which they find themselves.

As a result of his reading of the *Principles of Psychology*, "William James was John Dewey's philosophical hero" (Gale, 1997, p. 49). Dewey, who worked at the University of Chicago as well as Teachers College, Columbia University, exemplifies the functionalist approach. Moreover, Dewey's influence on educational psychology in the United States was profound. Dewey argued that the psychological assumptions made by the educators of his time were flawed. One of these assumptions was that children should be taught "technical acquisitions that are to be needed in the specialized life of the adult" (Dewey, 1900, p. 107). This approach, called *formal discipline*, held that the job of education is to provide children with the knowledge that they will require when they are adults. Consequently, the child's mind is filled with facts about mathematics, geography, and so on, that may be relevant to an adult, but that are not yet relevant to a child.

Dewey argued that education should be sensitive to the interests of the child. His approach became known as *progressive education*, and it acquired the reputation of allowing children to study whatever they wanted. However, this was not what Dewey had in mind. He only intended for children to be given *some* power to choose the problems they work on (Dewey, 1900, p. 108). Indeed, the role of teachers became even *more* important in Dewey's approach than it was under formal discipline. For example, in order to facilitate the acquisition of meaningful skills that will be useful in adulthood, it is important that teachers use the resources of the local community to familiarize children with its "physical, historical, economic, [and] occupational aspects" (Dewey, 1997, p. 40). Responsibly conducted, progressive education meant that a teacher could no longer simply teach by rote. As a result, the teacher's job was "more difficult to carry on than was ever the traditional system" (Dewey, 1997, p. 40).

## Behaviorism

The view that the study of consciousness has no place in psychology was forcefully stated by John B. Watson (1878–1958). "Psychology as the behaviorist views it" (Watson, 1913) became one of the most influential articles in the history of psychology. Watson's article has been cited more frequently than any other article containing the keyword *consciousness* and published before 1975 (PsycINFO, 2017).

In his doctoral dissertation, Watson studied the behavior of white rats in mazes. It is an obvious but nonetheless important point that the introspective method cannot be used with animals. Watson argued that introspection had no place in the study of people, either. "The time seems to have come when psychology must discard all reference to consciousness; when it need no longer delude itself into thinking that it is making mental states the object of observation" (Watson, 1913, p. 163). Real scientists do not waste their time trying to observe consciousness. Rather, they use their consciousness to make objective observations. Behavior can be observed objectively, while subjective experience cannot. By making psychology the study of *behavior* only, the study of both humans and other animals could be made parts of an integrated scientific discipline.

Watson (1916) realized that it was not enough to do away with introspection. He accepted that it was "incumbent upon me to suggest some method which we might begin to use in place of introspection" (p. 89). For this purpose, Watson turned to the method of *conditioning* as developed by the Nobel Prize–winning Russian physiologist I. P. Pavlov (1849–1956). In a laboratory setting, when a dog was presented with food in a bowl, the dog would salivate. After repeated exposure to this procedure, Pavlov observed that dogs were salivating when presented with an empty bowl or in the presence of the person who usually brought the bowl. How was one to understand the generalization of the response of salivation to previously neutral stimuli such as the person who brought the food?

Pavlov (1928) approached this question by distinguishing between an unconditioned stimulus and a conditioned stimulus. An *unconditioned stimulus* (UCS) elicited an *unconditioned response* (UCR), such as the sight of food (UCS) automatically eliciting salivation (UCR). Unconditioned connections were built into the nervous system of the animal. By pairing a neutral stimulus with the unconditioned stimulus, the neutral stimulus could come to elicit the unconditioned response. The previously neutral stimulus, such as the sight of the bringer of food, became a *conditioned stimulus* (CS), and the occurrence of salivation in the presence of the conditioned stimulus was a *conditioned response* (CR). Of course, in the world outside of the laboratory the animal could learn a great many more connections between CS's and CR's. These connections are signals that guide the animal in the direction of the things it needs, such as food. When an animal tracks its prey, it does so by responding to the conditioned stimuli that signal the presence of its quarry.

Notice that there is no place for consciousness in Pavlov's explanation of the process of conditioning. The conditioned connections are located in the central nervous system. Subjective experience plays no role in the construction of the network of learned connections. Indeed, one might say that subjective experience is an *epiphenomenon* (James, 1983, p. 133), meaning that it is simply a byproduct of brain processes. Consequently, the causes of behavior can be studied objectively, with no recourse to subjective experience.

Behaviorists made the most of their differences with the introspectionists. However, behaviorists and introspectionists were actually somewhat similar to

one another in that they were both forms of *associationism*, an approach that goes back at least to Aristotle (384–323 BC; McKeon, 1941). However, it was largely as a result of the work of John Locke (1632–1704; 1964) that associationism "became part of a taken for granted framework" of much of psychology (Danziger, 1997, p. 48). Associationist psychology held that the mind was made up of elementary units that were bound together by connections called *associations.* Both introspectionism and behaviorism were *elementaristic*, meaning that they broke everything down into simple units, such as *sensations* in the case of the introspectionists or *conditioned reflexes* in the case of the behaviorists.

## Gestalt Psychology

Gestalt psychology was based largely in Berlin, and included Max Wertheimer (1880–1943; 1967), Kurt Koffka (1886–1941; 1935), and Wolfgang Köhler (1887–1967; 1967), among others. Gestalt psychology rejected both introspectionism and behaviorism for their elementarism. *Gestalt* means "whole" or "configuration," and the gestalt psychologists argued that no unit of experience or behavior could be understood in isolation from the whole of which it was a part. Their classic demonstration of this point was *apparent motion* (Koffka, 1935, p. 280f ). Suppose a subject is presented with two lights that alternately go on and off. If the lights go on and off at the right rate, then the observer sees not two lights but one light moving back and forth. The gestalt psychologists believed that the phenomenon of apparent motion occurs because observers tend to construct experiences that are as simple as conditions allow. It is not as if we have been conditioned to see the two lights as one. Rather, we spontaneously organize our experience to be as simple and unified as possible, a tendency called the *minimum principle* (Hatfield & Epstein, 1987; Köhler, 1967).

Gestalt psychologists made much of demonstrations such as apparent motion in which all the subjects reported the same experiences. Subjects were not trained in how to report their experiences. Rather, gestalt psychology relied on the naïve description of experience, an approach called *phenomenology* (Koffka, 1935, p. 73; Gurwitsch, 1966, pp. 3–55). Since they believed that the same *laws of organization* (Wertheimer, 1958) determined the basic structure of everyone's experience, then such a simple, straightforward method made sense to them. Moreover, they argued that the organization of subjective experience is the same as the organization of the corresponding processes in the brain. The gestalt psychologists called this correspondence *isomorphism* (i.e., *same form*) (Köhler, 1960). Gestalt psychologists did not invent the concept of isomorphism. Indeed, it had been introduced earlier in other scientific subjects including biology, chemistry, and mathematics (Benjafield, 2008, p. 110; 2013, p. 44) to describe the fact that different phenomena may be organized in the same way. Thus, the gestalt psychologists could argue that their holistic approach was similar to that taken by older, more respected sciences. From their viewpoint, it was gestalt psychology that was truly scientific, rather than behaviorism or introspectionism.

Gestalt psychology seemed strange to many anglophone psychologists because it had developed within a different intellectual tradition than the British empiricism with which anglophone psychologists were familiar. Gestalt psychology was foreshadowed by German thinkers such as the polymath Johann Wolfgang von Goethe (1749–1832; 1995; 1970), whose use of the word *gestalt* to refer to the "self-actualizing wholeness of organic forms" inspired the gestalt psychologists (Ash, 1995, p. 85f). However, the word *gestalt* was foreign to anglophone psychologists, some of whom could never quite fathom what it was supposed to mean (e.g., Wheeler, Perkins, & Bartley, 1931, 1933a, 1933b, 1933c). This example illustrates the importance of familiarizing ourselves, as far as possible, with the ways in which psychology is done in different countries (Pickren, 2010, 2012).

## Psychoanalysis

The invention of psychoanalysis by Sigmund Freud (1856–1939) was extraordinarily important not just for psychologists and psychiatrists, but for ordinary people as well. Versions of Freud's ideas were widely circulated in popular culture as well as in scholarly journals. As a result, what many ordinary people took to be the Freudian view of human nature became almost "common sense" (Richards, 2000; Shakow & Rapaport, 1964). Indeed, the vocabulary of psychoanalysis is still used in everyday conversation. Examples include words and phrases such as *Oedipus complex, id, defense mechanisms, phallic symbols*, and *Freudian slips* (Kelly, 2014).

Freud "always regarded" *The Interpretation of Dreams* (1965) "as his most important work" (Strachey, 1965, p. xx). In it he presented the fundamental concepts that were to guide his subsequent thinking. To begin with, there was the distinction between *conscious, preconscious*, and *unconscious* mental processes. The conscious part of the psyche contains that of which we are aware. The preconscious consists of what we are not now aware, but could become so. Many of our memories belong here. The unconscious includes sexual desires and experiences that have been repressed, meaning that they have been actively forgotten. Wishes and experiences that have become unconscious can only access consciousness by first passing through the preconscious. However, unconscious material is usually blocked from access to the preconscious by a censor, which consists of those prohibitions we have acquired through socialization. The censor is an internalization of the ways that significant others in our lives want us to be. In Freud's subsequent formulations of psychoanalysis it became the *superego.*

When we dream we regress to a time before the censor was fully developed. As a consequence, repressed wishes and experiences can enter the preconscious. Unconscious material is never expressed in a dream without first being clothed in preconscious material. The dream is thus a fusion of unconscious and preconscious ideas. That is why it is necessary to analyze a dream, to uncover the *latent content* of the dream as disguised in its *manifest content* – the dream as