Work, Psychology, and History

This book is a history of the origins and early years of industrial-organizational (I-O) psychology from the late 1800s to the early 1930s. In the early twentieth century, psychology was becoming established in colleges and universities, and the early psychologists were beginning to explore ways of applying their new science to the clinic, courtroom, and classroom. Some of these early scientist-practitioners turned their attention to the problems of industry, initially in the field of advertising and the study of fatigue. Notable was the interest in improving the efficiency of organizations, especially by improving employee selection procedures. From these initial efforts, I-O psychology has evolved into a worldwide enterprise with thousands of researchers and practitioners.

This is not a book of ancient history; this is history just out of reach. Many of the individuals who are central to this history lived well into the second half of the twentieth century. The early years of that century, however, were in many ways a different world. The late nineteenth and early twentieth centuries saw the electrification of cities, the great expansion of railways, and the advent of the internal combustion engine and the automobile. There was the rise of industrialization and of large corporations, with a concurrent emphasis on efficiency and production. Cities were expanding, as people migrated from an agrarian life to an urban one. World War I, the Great War, ushered in the beginning of large-scale mechanized, industrial warfare. There were many advances in science, including popularization of evolution and the establishment of a scientific psychology, central to the history of early industrial psychology. The environment was favorable for a psychology applied to the concerns of industry and business. Before beginning our history of this endeavor, however, a discussion of the terminology used to describe the evolving field is in order, followed by a brief description of present-day I-O psychology.

The use of *industrial-organizational* psychology in the book's title is something of a misnomer, as this term is a relatively recent one that was not in use during the time period covered in this book.[1] During the early part of the twentieth century, psychologists in the United States who worked with business organizations were variously called *economic psychologists*, *employment psychologists*, *business psychologists*, *consulting psychologists*, *applied psychologists*, *vocational psychologists*, or *industrial psychologists*, with *consulting psychologists* the preferred term early on and *industrial psychologists* becoming common by the 1920s (Arthur & Benjamin, 1999). *Industrial psychology* was also used in Great Britain, as shown, for example, by its use in the titles of a series of textbooks by the early industrial psychologist Charles S. Myers (Myers, 1925, 1926, 1929). Today in Great Britain the common term is *occupational psychology* (Warr, 2007).[2] In continental Europe, the term used to describe the activities of early psychologists involved in industrial work was a variation of the German *Psychotechniks*, coined by William Stern in 1903 (Allport, 1938).

Psychotechniks was translated into other European languages, including Dutch (*psychotechniek*), French (*psychotechnique*), Italian (*psicotecnica*), Russian (*psikhoteknika*), and Spanish (*psicotecnia*) (Salgado, 2001). Viteles (1932) viewed psychotechnology as akin to applied psychology. He saw the use of the term to describe only industrial applications as mistaken, noting that in Germany, applying psychology to industry was termed *industrielle psychotechnik*, similar to the use of *industrial psychology* in America. Geuter (1992), however, noted that by the 1920s in Germany, *psychotechnics* and *industrial psychology* were synonymous. Hugo Münsterberg (1914), who popularized the term, viewed psychotechnics as a mechanized approach to applied psychology. He viewed psychotechnics' relationship to general psychology as similar to how engineering is related to physics, that is, a technical specialty related to a scientific endeavor (cited in van Strien, 1998a). Viteles (1974), who studied in Europe in 1922 and 1923, preferred the more laboratory- and theory-based approaches to industrial psychology exemplified by the work of Otto Lipmann to the psychotechnology practiced by Walther Moede and Curt Piorkowski. *Psychotechnics* was never the preferred term in English, and in fact American psychologists, such as

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[1] The American Psychological Association's (APA) division for I-O psychology, Division 14, changed its name from "Industrial Psychology" to "Industrial-Organizational Psychology" in 1973. Seeking a measure of independence from APA, the division incorporated as the Society for Industrial and Organizational Psychology (SIOP) in 1983 (Benjamin, 1997b).

[2] In a 1948 memoir, the British psychologist T. H. Pear noted that although he still used the term industrial psychology, "we . . . tell our students that 'occupational' is a better word" (p. 112).

Kitson (1922b) and Viteles (1932) who used it found it necessary to explain its meaning to readers (Gundlach, 1998). By the late 1930s, even in continental Europe, the term was being replaced by *applied psychology* (Warr, 2007).

In 1912, the term *work psychology* was first used by Leo Engel in two articles in the journal *Zeitschrift für angewandte Psychologie (Journal of Applied Psychology)* (cited in Salgado, 2001), and this term eventually supplanted *psychotechnics* in continental Europe (Warr, 2007). For the most part, in Europe today the field is known as *work and organizational psychology (W/O)* (Salgado, 2007; Warr, 2007), and in Australia and New Zealand as *organizational psychology* (Warr, 2007). *Industrial-organizational psychology (I-O)* or *industrial/organizational psychology (I/O)* is the preferred designation in the United States.[3] Because this is a history of the roots of present-day I-O psychology, use of that term seemed appropriate in the title, though to be consistent with the time period covered, in discussing the early years I will use more time-appropriate terms such as *industrial psychology* or *psychotechnics* and refer to its practitioners for the most part as *industrial psychologists*.

Definitions of industrial psychology and related terms that appeared in contemporary textbooks were variations on the theme of applying psychology to business and industry. Henry C. Link (1919), for example, defined employment psychology "as the application of the scientific method to the mental actions concerned with employment" (p. 13). Early definitions highlighted the usefulness of this application for industry. Hugo Münsterberg (1913) saw applied psychology as an intermediary between psychology and the problems of business: "[T]he psychological experiment is systematically to be placed at the service of commerce and industry" (p. 3). Bernard Muscio (1920) emphasized that the aim of applying psychology to industry is to help industry meet its goals of reducing waste and increasing productivity. Later definitions (e.g., Viteles, 1932) added fostering worker adjustment to the goal of increasing efficiency, making explicit that, in theory at least, industrial psychology should benefit both management and the worker.

Industrial-organizational (I-O) psychology today is the subdiscipline of psychology concerned with the scientific study of work behavior and organizations. The "I" component, *industrial (or personnel) psychology*,

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[3] Use of a hyphen seems to me to be more inclusive than the use of a slash, which implies more of a separation between the industrial and organizational sides of the field. Therefore, in the interest of disciplinary harmony, I will use the hyphenated I-O throughout the book.

can trace its history to the study of individual differences and associated measurement issues. Industrial psychology has traditionally been concerned with human resource management (HRM) topics such as employee recruitment and selection, performance appraisal, and training. The "O" component, *organizational psychology*, has its roots in employee human relations concerns and covers more broad-based topics such as employee motivation, leadership, organizational power and politics, group processes, and organizational socialization, culture, design, and change. The content of organizational psychology overlaps to some degree with that of social psychology, sociology, political science, and especially its younger, more multidisciplinary sibling, *organizational behavior.* Historically there were other activities associated with I-O psychology. One was *engineering psychology* (aka *human factors* or *human engineering*). While human factors is still occasionally covered in I-O psychology textbooks, the field has become more interdisciplinary, incorporating cognitive psychology, physiology, and other disciplines. In human factors, the emphasis is on fitting the job to the person; that is, designing the job or machinery to best fit the human operator. Examples include designing machine displays commensurate with cognitive and physical abilities and designing a workplace to ensure worker safety. Another topic that was once a prominent part of industrial psychology is *vocational psychology*, finding the best job for an individual based on that person's interests and abilities. This area today is associated more with counseling psychology than I-O psychology. And the study of advertising, an early area of interest for industrial psychologists, is now part of the field of consumer psychology. While the "I" and "O" components of I-O psychology developed somewhat separately, there was overlap among the various topic areas in the early years, and there is much overlap today.[4]

   Although I-O psychology today has expanded its focus to organizations in the broad sense, in the early years work organizations were emphasized. Before we begin our exploration of the history of I-O psychology, I would like to first reflect on the nature of work and the central place it holds in our lives. Next is a discussion of the importance of understanding the history of psychology, followed by a section on historiography, the methods used when conducting and writing historical accounts. The chapter closes with an examination of the role of perspective for the historian, illustrating its

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[4] For the reader interested in more information about I-O psychology, there are a number of excellent introductory textbooks available. Recent examples include Landy and Conte (2016), Levy (2017), Muchinsky and Culbertson (2016), and Spector (2016).

importance by critically examining two classic histories by Edwin G. Boring (1929, revised in 1950) and Loren Baritz (1960).

The Central Role of Work in Our Lives

On the first day of classes in my I-O psychology course, I often point out to my mostly nineteen- and twenty-year-old students that once they complete their education, they can look forward to working forty to fifty hours a week for about the next forty to fifty years of their lives. My point is not to alarm or depress them but to emphasize just how central work will be in their lives; it will be the primary activity of their waking hours. Forty to fifty years is a long time to be dissatisfied, to be unfulfilled, or simply to be doing something you do not enjoy.

For a field defined as the scientific study of behavior in organizations, primarily work organizations, I-O psychology has surprisingly little to say about the subjective experience of work. Certainly this has been a fertile topic for others, from sociologists and journalists to novelists and poets. Given the history of I-O psychology, this neglect is understandable. I-O psychology came from a functionalist tradition in psychology, a desire to be useful. Usefulness for the early industrial psychologists, for the most part, was based on their ability to increase productivity and efficiency. I-O psychologists today know a great deal about how to do that, through organizational interventions such as improved selection, training, and performance appraisal systems. They also know a great deal about work motivation, leadership, employee satisfaction, group processes, and organizational culture, among many other topics. This is all useful information developed over 100-plus years of research and practice. Yet understanding the *meaning* of work has generally not been seen as an important part of that tradition. I need to be clear here that I am not implying that the early industrial psychologists or their disciplinary descendants were unconcerned with worker welfare or that their research and practice have not benefited workers. Understanding work as a means to something else, such as productivity, however, is not the same as understanding the meaning of work in our lives, although I-O psychologists have in recent years begun to devote more effort in this area (e.g., Ford, Hollenbeck, & Ryan, 2014).

Defining what we mean by the word *work* is not a simple matter. Our common-sense conception is that work is something we do in exchange for compensation and that it is something that, for the most part, we would not do if we were not compensated. But even superficial scrutiny of this

definition reveals problems. What about individuals who work without compensation? What about persons who enjoy their work so much that work encroaches on their nonwork time? We get little help from the dictionary. The *Shorter Oxford English Dictionary* (2002) has fourteen separate definitions of work as a noun and an additional twenty-three definitions of work as a verb. In a chapter describing how work is fundamental to human nature, Weiss (2014) proposed a definition of "working" as "agentic activity done with the purpose of changing the environment" (p. 39). While admitting that this is not *the* definition of work, he saw this definition as a useful starting point for developing a science of the subjective experience of working. Whether or not you agree with Weiss's definition, you can agree with him that because work has such an important place in our lives, it is a worthy subject for scientific inquiry.

So what does work mean to the person engaged in it? There is the obvious: that working provides money and other tangible benefits. These benefits might include health insurance and some sort of retirement benefit. In the late 1800s and early twentieth century when industrial psychology was emerging, compensation was generally viewed as the primary reason one worked. Systems such as Frederick Taylor's scientific management, discussed in Chapter 2, implemented programs to improve employee performance based on a simple transaction: change your behavior based on our analysis of how to improve the work process, and your increased production will put more money in your pocket. We will see that things turned out to be not quite that simple.[5]

In addition to compensation, work is also tied to a person's identity. After we learn someone's name, the next question we usually ask is "What do you do?" Our occupation can become an important part of our self-identity. And if the occupational socialization process is strong enough, our career becomes inseparable from who we are. Work can give us the opportunity to learn, to apply our skills in a creative manner, to demonstrate our competence. Our sense of self-esteem can be tied to our job and our ability to do that job well. Work can give structure to our days. While this may appear most applicable to work that allows us some level of self-expression, autonomy, and meaningfulness, work in general can provide an individual with a measure of dignity and self-respect. It is true, however,

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[5] Things were actually not that simple for Taylor, who had a more nuanced view of work motivation than a simple transaction of money for performance, although that was a major part of his system. Taylor and some of his colleagues were open to collaboration with psychologists and the examination of other motivators, but for the most part managers focused on the link between an individual's pay and output as the key aspect of Taylor's system (Baritz, 1960).

that during the time period covered in this history of I-O psychology, work was increasingly becoming simplified and mechanized, severely limiting its intrinsic value to the individual. In these situations, autonomy was extremely limited. Workers no longer worked for themselves; they now worked for someone else.

It is worth noting that while it is possible to generalize across individuals regarding their responses to work, there is a great deal of variability in how individuals view their jobs. I-O psychology was built on a foundation of the importance of these individual differences. People differ in significant ways in their interests, personalities, abilities, and attitudes, including their attitudes toward work. While we speak in generalities about what holds true for most workers most of the time, there will always be exceptions. Some workers will be perfectly satisfied in what to another person seems like a tremendously tedious job. While most workers desire a safe workplace, some thrive on risk and prefer dangerous environments. The "average worker" is a useful fiction. While the majority of employees will hover around the mean on whatever work-related variable we are measuring, it is important to remember there are others at the tail ends of the distribution, those who by definition differ from that average.

It is also important to emphasize that the meaning of work may differ across different cultures and societies and that the meaning of work has changed over time. Even in the relatively short time span covered in this book, the nature of work changed due to the advent of the second industrial revolution, the move to larger and more complex organizations with increased mechanization, and the beginning of a shift from a manufacturing economy to a service one. These changes, all relevant to the development of I-O psychology, occurred at different times in different cultures. Work has been viewed throughout history as both a blessing and a curse. In antiquity, work was seen as drudgery. Physical labor was viewed as only fit for slaves and the subordinate classes. By the twelfth and thirteenth centuries, theologians in Europe were stressing the moral and social benefits of work; however, they were not claiming that work had inherent value for the individual. Later proponents of the "work ethic" such as the Puritans in England and America saw work as positive, in that it was good for society and good for the character and health of the worker and it kept individuals away from vices such as alcohol, violence, and sex. Little was said, however, of any intrinsic satisfaction that may be derived from working (Thomas, 1999). From a religious perspective, both Catholic and Protestant traditions eventually came to view all work, not just the

work performed by the clergy, as noble and necessary for salvation (Hulin, 2014).

The mid-eighteenth-century industrial revolution changed both the nature of work itself and the meaning workers gave to it. Mechanization, the separation of the worker from ownership of the finished product, and the advent of large organizations altered the social philosophy of work. The proto-capitalist Adam Smith (1723–1790) and the socialist Friedrich Engels (1820–1895) both saw human beings as natural idlers, who needed monetary incentives to work (Thomas, 1999).[6] Worth was equated with an individual's level of productivity. But throughout this history of work as necessary drudgery, there have been voices, rare before the late seventeenth century, that work can be meaningful to the individual worker and necessary for both physical and psychological well-being. Separated by more than 200 years, both the English clergyman Robert Burton (1577–1640) and the nurse and hospital reformer Florence Nightingale (1820–1910) wrote of the frustration and misery of voluntary and enforced idleness. Adam Smith's negative view of work was based on manual labor; he believed that other types of work could be inherently rewarding. Karl Marx saw the potential for work to lead to freedom and self-knowledge (Thomas, 1999).

Work is an important activity in our lives, not just an economic necessity but central to our self-identity and psychological well-being. Therefore, the scientific study of the behavior and cognitive processes of workers should have a central role in psychology. This does not seem to be the case, however. I-O psychology, with its focus on psychology applied to a particular setting, rather than examining a particular process, such as cognition or learning, can seem like something of an outlier in psychology.[7]

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[6] Adam Smith is often caricatured as an uncritical booster for unfettered capitalism (the "invisible hand"). His writings actually demonstrate a great concern for the working poor and a much more nuanced view of capitalism (Smith, 1776/1925).

[7] Evidence for this can be inferred by the paucity of coverage of I-O psychology in the majority of introductory psychology textbooks, which are generally organized around processes. For example, Maynard, Geberth, and Joseph (2002) examined fifty-four introductory psychology textbooks published between 1997 and 2000. They found that only a quarter of them included an overview of I-O psychology and only one text devoted a full chapter to the subject. Less than 2 percent of the total pages contained concepts or examples related to work. In a later survey, Payne and Pariyothorn (2007) looked at fifty-six introductory texts published between 2002 and 2005. Only five contained a chapter on I-O psychology; another three included an I-O psychology appendix. Rozin (2006) found the median number of pages concerned with work across six introductory psychology textbooks was 0.5. On a related note, a 2014 survey of baccalaureate psychology programs in the United States found 66 percent offered a course in I-O psychology/human factors, down from 75 percent in 2005 (Norcross, Hailstorks, Aiken, Pfund, Stamm, & Christidis, 2016).

Paul Rozin (2006) addressed this point. He discussed academic psychology's preference for categorizing its topic areas by process; for example, memory, learning, sensation, and perception. He noted that this propensity dates back to the earliest texts in the field by William James, Edward Titchener, and Wilhelm Wundt, all of whom organized their texts around mental processes. Subsequent textbook authors followed suit. Rozin recorded the median number of pages referred to in the indices of a sample of introductory textbooks for process-related and domain-related words; domain-related words having to do with leisure, food, politics, religion, and, importantly for our discussion, work. He divided up the texts into three time periods, 1890 to 1920, 1922 to 1939, and 1948 to 1958, reviewing five texts per time period. The time period most relevant for our history of early industrial psychology is 1922 to 1939. In that period, he found no entries for "work" in any of the five texts reviewed.[8] Rozin writes that academic psychology has consistently given the highest priority to discovering general laws of behavior and mental processes. It has generally ignored the descriptive phase and moved on to experimental designs to evaluate theory. Basic research was seen as fundamental, and descriptive work and life domains, such as work, were relegated to "applied" research.

As Rozin (2006) implied, in psychology, applied research was seen as less valuable and less challenging than basic research, and basic research was viewed as a prerequisite for applied work. These assertions are open to question. Danziger (1990) could find little evidence for the dependence of applied work on basic research in the early years of the twentieth century. In particular, the industrial psychology topics of personnel selection and advertising developed their own methods and practices that were not dependent on laboratory science. Stokes (1997, cited in Rozin, 2006) demonstrated that many prominent scientists, such as Pasteur, combined basic and applied science. Certainly basic science is dependent on applied work, such as the development of technological advancements (e.g., the MRI for understanding the nervous system). Real-world experimentation can be every bit as challenging as work in the laboratory, where it is easier to control extraneous variables. Rozin's intent is not to place basic and applied research in conflict. It is to show that academic psychology might benefit by spending more time describing and trying to understand life domains, that is, what we actually do, rather than an emphasis on

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[8] For the 1890–1920 time period, all but one text was published in 1911 or earlier, too early for industrial psychology. The five texts Rozin (2006) reviewed for the 1922–1939 period were Thorndike (1922), McDougall (1928), Woodworth (1929), Fernberger (1936), and Guilford (1939).

process. More than eighty-five years before Rozin's discussion of the importance of applied research, Edward L. Thorndike, well known for his laboratory research, offered his own defense of applied research. Thorndike (1919), in discussing the efforts of applied psychologists in World War I, stated that applying psychology to business, industry, or the military " . . . is harder than making psychology for other psychologists, and intrinsically requires higher talents." He further noted that the lab scientist is to a large extent free to choose the topic, that "[i]t is relatively easy to be scientific when you can direct your talent in any one of ten thousand directions; yourself asking the questions for which you proceed to find the answers!" For Thorndike, applied research was more difficult: "Psychology applied to the complicated problems of personnel work represents scientific research of the most subtle, involved, and laborious type" (p. 60).

The applied versus pure research debate is a reoccurring theme throughout this book. There is little debate, however, about the central place work occupies in our lives. It therefore follows that systematically studying work behavior and its ramifications is a valuable pursuit. I-O psychologists have a long history of doing just that. What are the benefits of studying the history of that undertaking, of examining the history of I-O psychology?

The Importance of a Historical Approach to Psychology

In 1960, Robert I. Watson published an influential article titled *The History of Psychology: A Neglected Area*. In that article, Watson decried the "provincial" attitude of American psychologists and their lack of interest in the history of their field. As evidence, he surveyed twenty years (1938–57) of the three journals most likely to publish history articles, the *American Journal of Psychology*, the *Journal of General Psychology*, and the *Psychological Bulletin*, and found that only 1 percent of publications in those journals could be classified as primarily historical in orientation. As further evidence, he examined the stated interests of the 1,638 psychologists listed in the 1958 *American Psychological Association Directory* and found that only 0.3 percent of psychologists listed history as an interest area. Watson speculated that the increase in specialization, expansion of the field, and a belief that historical work is somehow unscientific are among the possible reasons for this lack of interest. Nevertheless, as he succinctly put it: "To neglect history does not mean to escape its influence" (p. 255). Roughly half a century later, others (e.g., Benjamin & Baker, 2009; R. Smith, 2007) were still arguing for the relevance of a historical approach

to psychology and noting the difficulty in convincing psychologists of that opinion.

What are the arguments for studying the history of psychology? One answer is that understanding the past is a legitimate end in and of itself. There is no need to make history "useful" beyond that goal. In fact, there is a potential danger in trying to write history that is useful, as this can lead to "presentism," viewing the past through the lens of the present. The result can be a biased historical account. While many individuals do find history interesting in and of itself, applied psychology has a long functionalist tradition; considering the usefulness of science is part of its disciplinary DNA. Are there tangible benefits beyond interest for the historian in conducting historical research and for the individual reading this history?

I believe there are multiple benefits for both the historian and the reader. There is an old cliché in academia that you never really understand a topic until you teach it. I would argue it is also true that you cannot truly understand a topic unless you know something about how it developed. Take employee selection, a key activity of I-O psychologists for more than 100 years. Today, we tend to use a limited number of selection tools, such as interviews and psychological tests, which are evaluated using a more or less standard set of statistical procedures. Why those particular tools? Why those procedures? True, we can, and do, answer those questions in an ahistorical manner by citing their effectiveness and usefulness. But a richer understanding is possible by examining the evolution of selection research and practice: what procedures dropped out and why, which ones were retained and why. It is also instructive to note that researchers 100 years ago were struggling with the same questions about selection that we are today. And they approached those questions and problems intelligently and creatively, given the resources they had available to them. This is not to say that from a present-day perspective there were not missteps and wrong turns. It can be useful to learn from those efforts, which obviously we cannot do if we are unaware of them.[9] I am not advocating that history should be written as a litany of progress leading to present-day practice (more on this later in the chapter), only that understanding the history of a topic can increase understanding and appreciation of it.

In addition, I believe it is important to give credit where credit is due. An all-too-common experience for those who take a historical approach is to see a new theory or research finding appear in the literature, or more commonly in the press, with no recognition that this work has deep

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[9] I am studiously avoiding a "those who ignore history are doomed to repeat it" cliché here.

historical roots and, in fact, has already appeared in a recognizable form in some earlier incarnation.[10] It is perfectly understandable that a working scientist is more interested in making history than studying it. And it is true that virtually all research articles in psychology contain a "literature review" that purports to trace the progress of previous work on a research problem. Nevertheless, it would be gratifying to see more recognition of the accomplishments of those pioneering figures who were there first and whose work is foundational to the development of the field. Critical history should not be just a celebratory record of accomplishments, nor should it be simply an homage to individual achievement. But it can, in context, identify those persons who had a creative idea, developed an insightful solution to a problem, or simply made a contribution through dogged determination and hard work.

As is true of any maturing science, psychology has evolved into a highly specialized discipline. As knowledge expands, researchers narrow their focus and learn more and more about increasingly specific topic areas. While no one would argue against the many benefits of this phenomenon, there are some drawbacks. An important one is that this specialization can result in the fragmentation of a field, as researchers and practitioners increasingly identify with their own particular specialty areas and less with the field as a whole. We have seen this in psychology, for example, when physiologically minded psychologists identify with neuroscience and when the gulf between academic researchers and practitioners continues to widen. At an earlier time, at least in the United States, psychology graduate students had a core set of course requirements that provided a common basis or grounding for their identity as psychologists. As noted by Benjamin and Baker (2009), students in different specialty areas may complete their graduate training and have learned little in common except for research design and statistics.[11] While not vilifying specialization and noting its benefits, Benjamin and Baker, along with other historically minded psychologists, argue that an appreciation of the history of psychology can provide a context to evaluate this specialized knowledge, a sense of continuity in the discipline, and perhaps even a heightened sense of

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[10] It is, however, important to distinguish "foundations" from "antecedents," as discussed in the next section of this chapter.
[11] While this may be true for programs not accredited by the APA, accreditation guidelines for professional (i.e., clinical, counseling, and school psychology) do require, in addition to statistics and research design, breadth of understanding of biological, cognitive, affective, and social aspects of psychology. An understanding of history and systems of psychology is also required (APA Guidelines and Principles for Accreditation, n.d.).

community for psychologists, whatever their specialized interests might be. History provides a valuable sense of perspective and an understanding of common goals.

While knowledge of the history of the field can make one a better scientist and a better scientist-practitioner, Roger Smith (2007) noted that a problem with these sorts of practical or utilitarian arguments is that they make knowledge of history seem optional. Understanding history is nice perhaps, but not essential, and time spent on history might be more productively spent on more current concerns, i.e., on "real" science. Smith disagreed. He argued that practical justifications do not go far enough, that historical knowledge is critical because of the perspective it provides, perspective that is essential for understanding human behavior. In Smith's view, perspective, or context, provides a framework or coherent story for understanding the statements psychology puts forth. In addition, Smith claimed that knowledge of human nature alters that nature; that is, the subject matter of psychology is constantly evolving. We are reflective; changing our beliefs will change who we are. Therefore, we cannot presuppose that persons in the past are just another version of ourselves without examining their context. Smith's overarching point is that an understanding of history is not optional, it is essential. He echoes Robert Watson (1960) in noting that simply avoiding thinking about history does not negate its effects.

How much progress has been made in uncovering the history of psychology and making that history available since Robert Watson's (1960) call to arms? A great deal. Where Watson found virtually no interest in history in the American Psychological Association (APA), there is now an entire division of that organization, *Division 26: History of Psychology*, devoted to historical research. Where Watson combed general psychology journals, mostly fruitlessly, for historical articles, there are now entire journals, such as the *Journal of the History of the Behavioral Sciences*, *Revista de Historia de la Psicologia*, and the APA's *History of Psychology*, dedicated to scholarly historical research. While interest in the history of psychology, including I-O psychology, is growing, there is still an unfortunate bias against historical scholarship by some empirical researchers. This is one reason why psychologists working in this area will often also maintain a more traditional research program (Zickar, 2015). Given the benefits previously described for a historical approach to psychology, there is hope that one day psychology departments will no longer ask if a psychologist-historian is really needed but rather "Why don't we have one?" (Vaughn-Blount, Rutherford, Baker, & Johnson, 2009, p. 123).

A Note on Historiography

Historiography is the study of the theory and methods used to conduct and present historical research. While Stocking (1965) wrote that "history itself is in many respects the most undisciplined of disciplines" (p. 211), historians have generated an enormous body of work about how to properly carry out a historical study. Historians of psychology are no exception. They have examined their techniques and, influenced by the larger discussion of general historical methodology, have identified areas of concern. These issues can be conceptualized as competing viewpoints or perspectives about how historical research in psychology should be conducted and what types of phenomena should be emphasized (Hilgard, Leary, & McGuire, 1991). One set of perspectives, the "new" history of psychology, is contrasted with the "old" or traditional history. As described by psychologist-historians and historians of science such as Furumoto (1989, 2003) and Hilgard and colleagues (1991), the old history tended to be presentist in that it viewed past events through the lens of current research and practice. The new history concentrates on understanding the motivations and concerns of historical actors from their own perspectives, striving to view the historical period under study as it appeared during that time. Traditional history emphasized internal accounts, focusing on classic studies and discoveries within the field of psychology, while the new, external histories encompass the social, political, cultural, economic, and other factors that influence that development.

   The old history was personalistic, emphasizing the accomplishments of "Great Men" (in the older histories they were usually men); new histories emphasize context and intellectual climate or "Zeitgeist."[12] Traditional histories viewed psychology's history as one of steady, incremental progress and in that sense could be more of a celebration of progress than a critical examination of history. The new histories are more critical, viewing progress as discontinuous and at times nonexistent. Another criticism of traditional histories of psychology is that they rely on so-called "scissors-and-paste" histories, piecing together historical accounts from existing histories (Early & Bringmann, 1997). This use of secondary sources is contrasted with the new historian's emphasis on primary sources. Other problems with old histories are their failure to dig deeply into psychology's roots (Leahey, 2002) and their difficulty of distinguishing *anticipations*,

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[12] The concept of zeitgeist has been roundly criticized. "It has been rightly characterized as the lazy historian's way of contextualizing events" (Brock, 2017, p. 200). Zeitgeist is revisited in Chapter 2.

isolated ideas that are similar to but are not directly tied to current work, from *foundations*, concepts that have traceable, relatively continuous lines of influence (Sarup, 1978). And finally, new histories tend to be written by trained historians, while the old histories tended to be penned by psychologists without formal training in historiography (Lovett, 2006).

Some of the criticisms of the older, traditional histories are straightforward criticisms of poor historical scholarship. For example, factual information should be accurate and representative, foundational concepts should actually be foundational, and the historian should not begin with preconceived notions and cherry-pick information to support that view. For other criticisms of the old history, there is a danger of exaggerating the differences in the perspectives for effect, that is, setting up a straw person to knock down. While the "old" history is generally viewed as inferior to the "new" history of psychology, not all traditional histories fit the old history template (Lovett, 2006). And salient criticism is more appropriate when a characteristic of the old history is taken to an extreme. Take presentism, understanding the past in service of the present, versus historicism, understanding the past in service of the past. Presentism was characterized by Butterfield (1931/1965) as "Whig" history: history written from the viewpoint and in service of the present. The whiggish historian looks for antecedents for present-day phenomena and presents that history as an inexorable march of progress to a particular end. Whig history "is history with a happy ending" (Kelly, 1981, p. 229). As Stocking (1965) noted, whiggish history, a form of presentism, can be a problem for the scientist-historian who wants that history to be useful to the present-day reader. That historian can fall prey to "the sins of history written for the sake of the present … anachronism, distortion, misinterpretation, misleading analogy, neglect of context, oversimplification of process" (p. 215).

These are clearly bad outcomes. But is it even possible to write history without some reference to the present? And is presentism always a negative in writing history? Like the historical figures we write about, we are also influenced by our social, educational, political, cultural, and other environments. We can try to step outside that framework, but it is difficult to question assumptions we may not be aware of. Earlier in this chapter there was a discussion of the benefits of writing and studying history. Those benefits depend to a degree on a taking a presentist approach. This approach ideally would avoid a distorted, oversimplified history that ignores context. For students to be able to understand the connections between disparate areas of psychology and see how and why these areas eventually grew separate, however, some degree of "the past for the sake of

the present" is necessary. What is needed is what Stocking (1965) called "an enlightened presentism"; one that can provide useful information relevant for the present-day reader while avoiding the pitfalls associated with that approach. As Brock (2017) noted, presentism is concerned with answers, not with the questions that are asked. There is nothing wrong with asking questions motivated by current concerns, nor is there a need to suspend current moral values when conducting historical research. The danger is when the past is used simply to justify present-day practice rather than to examine the historical period in all of its contextual richness.

Regarding the criticism that the old history presents the past as a tale of uninterrupted progress, it may be that the history of science is one area where the "progress" portion of "uninterrupted progress" makes sense. This point was made by George Sarton (1936/1957) more than eighty years ago, when he pointed out that scientific growth can be unpredictable and explosive at times. It may be that our common-sense conception of science has more than a little truth to it.[13] It is a feature of the scientific method that hypotheses and theories are tested with empirical data and are supported or disconfirmed. Progress, in the sense of describing, predicting, understanding, and controlling behavior and mental processes, should ideally result. This is not to say that progress is continuous or linear. It is the historian's task to document what actually occurred: the missteps, blind alleys, and, at times, discontinuous nature of the process (albeit all judged from our present-day perspective). But real progress is possible. One need not describe history as an unbroken litany of accomplishment to reflect that.

While advocates of the new historiographical approach to psychology have made valid criticisms of previous histories of psychology, it would appear that there is merit to some aspects of the older approach. The author's goals are a determining factor. For example, a journal article concentrating on a specific past event could profitably rely solely on primary sources, including unpublished ones. The synthesis and scope of a text covering a large swath of the past, however, would necessarily use a mix of primary and secondary sources. While it is true that there is a danger of perpetuating "origin myths" and other misinformation by relying on

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[13] The classic example of a discontinuous rather than continuous view of the history of science is Thomas Kuhn's (1962) treatise on the paradigmatic nature of science. Normal science operates within a particular paradigm that dictates what questions are worthy of investigation and the proper methods of investigation. Major change occurs not within the paradigm but when the paradigm, the accepted worldview, is overturned. Think classical physics versus relativity or biology before and after evolutionary theory. Kuhn believed that psychology lacks an overarching paradigm; it is therefore pre-paradigmatic.

secondary sources, carefully vetted secondary sources can provide historical summaries in areas where access to primary sources is difficult or impossible. They are useful for identifying primary sources and can help in the interpretation of those sources (Zickar, 2015). At their best, they provide a scholarly commentary, offering different interpretations of data or events.

It is impossible, and may not even be desirable, to completely exclude a presentist orientation, as long as the historian is aware of the pitfalls of that approach. While with the advantage of hindsight it is tempting to concentrate on only those activities that survived and led to current practice, it is important to remember that individuals active during the period under examination did not have that luxury. They did not know how the story ended, and therefore viewing their efforts from their perspectives is essential. Context is important, but so are individual initiative and effort. Along with an appreciation of the historical context should be a recognition of those individuals who made critical contributions to the discipline. In the end, the important distinction may be not between old and new history but between bad and good history.[14]

The question of proper training and preparation for conducting a historical investigation is an important one. Anyone writing history should be familiar with the relevant historiography and be prepared to defend her or his choices.[15] Trained historians of science have an advantage in this, and psychologists interested in historical research need to put in the time and effort to develop the knowledge and expertise to conduct historical research. One contribution the psychologist-historian can bring to historical research is a deep understanding of the subject under investigation based on many years on intensive study. Knowledge of both historiography and the science itself is essential to understanding the history of any scientific enterprise. In the end, it is not credentials that are important but the quality of the historical scholarship that is produced.[16] Weidman

[14] Lovett (2006) noted that the difference between traditional and new histories may not be as great as it has been characterized. For example, some "new" history can also be criticized for the perceived sins of the old history, such as focusing on outstanding individuals, albeit not individuals found in traditional histories. Roughly ten years later, Brock (2017) published a point-by-point criticism of Lovett (2006), admonishing him for, among other perceived distortions, claiming that the new historians view presentism in an absolutist sense, that they deny the possibly of progress in psychology, and that they want the history of psychology moved from psychology departments to history departments. Lovett (2017) refuted Brock's critique, also point by point.

[15] See the Preface for a discussion of the choices I made for this book.

[16] Dewsbury (2003) describes three types of psychologist-historians: *dabblers* who view their historical research as an adjunct to other work in psychology, *retreads* who change their primary research area to history and take steps to become proficient in that area, and *straight-liners* who are trained in graduate programs in the history of psychology. In the interest of full disclosure, I best fit the *retread* category.

(2016) argued that while historians of science and psychologist-historians should retain their own orientations, identities, and departments, progress in the history of psychology depends on overcoming their mutual isolation, a scenario "in which communication and mutual understanding broaden and intensify" (p. 248).

In some historical accounts, the perspective of the historian is made explicit; in others, it is not. In either case, that perspective will affect what material is included and how that material is interpreted and presented. I close the chapter with an illustration of how perspective can affect the historical account by describing two histories relevant to our discussion of the history of I-O psychology. Both are, in my opinion, well-written, generally accurate accounts; both are considered classics. Both authors had an agenda, however, that influenced what they included and how that material was presented.

A Tale of Two Histories

The Servants of Power: A History of the Use of Social Science in American Industry (Baritz, 1960) is interesting for what it has to say about the development of I-O psychology. The *History of Experimental Psychology* (Boring, 1929, 1950) is relevant for what it does not say; that is, for its curious lack of virtually any discussion of industrial psychology as a component of the history of scientific psychology. Historian Loren Baritz (1928–2009) examined the sometimes precarious position industrial psychology has held in economic organizations and the managerial orientation he believed industrial psychology adopted as a result. Edwin G. Boring's (1886–1968) lack of coverage of industrial psychology illustrates that discipline's conflicted position within mainstream scientific psychology. While these themes will be expanded on in later chapters, these two histories are a useful introduction to the difficulty industrial psychology has had in establishing a distinctive identity. Psychology has been divided in recent years between a large applied clinical psychology component and an increasingly fragmented scientific component, with academic researchers increasingly self-identifying as neuroscientists, cognitive scientists, and other specialists. I-O psychology, as discussed earlier, has been somewhat marginalized within the overall discipline. I-O psychology has had difficulty establishing an identity distinct from the myriad of other consultants offering their services and finding a balance between management and worker concerns. The roots of these difficulties extend back to the very beginnings of industrial psychology.

Baritz's *Servants of Power* (1960) is not a history of industrial psychology per se, although Baritz did discuss a great deal of the history of American industrial psychology. While he occasionally mentioned European developments for the sake of contrast, his focus was on industrial social science in the United States. Baritz was interested in the relationship between intellectuals and American society. Since he viewed the traditional role of the intellectual as one of societal resistor or critic, Baritz set out to examine those intellectuals who take the contrary position of supporting societal norms and values. As a case study, he used the relationship between social scientists, including psychologists, and industry. Based on his introductory remarks, Baritz seems to have started with the conclusion that industrial psychologists, sociologists, and other professionals working in industry had adopted the values of management; he does provide a great deal of historical evidence to make a compelling case for his thesis.

Baritz saw managers as single-minded in their pursuit of profits. He stated that managers "are in the business to make money. Only to the extent that industrial social scientists can help in the realization of this goal will management make use of them" (p. 196). According to Baritz, industrial psychologists have been only too eager to side with management, compromising their scientific bona fides by adopting an almost exclusively pro-management perspective. He wrote that " . . . most industrial social scientists labored in industry as technicians, not as scientists . . . hemmed in by the very organization charts they helped to contrive" (p. 194). Baritz concluded that industrial psychologists' subservience to the "industrial elite" caused them to abandon their own intellectual obligations as scientists. They were trapped by their own aspirations: "Hired by management to solve specific problems, they had to produce" (p. 195). These conclusions would not have been news to the early industrial psychologists. For example, Arthur Kornhauser and Forrest Kingsbury noted in 1924 that it was management that controlled access to the research setting. If psychologists wanted access to organizations, they needed to play by management's rules. For Baritz, because of this subservience, the goals of industrial psychology research were dictated by management, not by the psychologists who should be pursuing knowledge for its own sake.

Servants of Power raises important questions about the relationship between industrial psychology and industry and about the practice and aspirations of industrial psychologists. First, has there been a persistent bias in favor of management by industrial psychologists? Next, if this is true, is this necessarily a bad thing? That is, can a case be made that despite taking a mostly pro-management view, industrial psychologists were still

providing a valuable service, not only for their employers but for the advancement of knowledge (the "scientist" portion of the scientist-practitioner model)? These questions have been discussed within the profession since its very beginning and have periodically been debated, sometimes with Baritz's critique as a focal point.[17] The industrial psychologist and historian of psychology Leonard W. Ferguson (1912–1988) was an early critic of Baritz. Ferguson (1962) wrote that Baritz's claim that industrial psychology is virtually always pro-management and seldom pro-labor "places a false emphasis on the true spirit of industrial psychology and can easily be refuted" (p. 7). In this article, Ferguson limited his pro-labor counterexamples to events and individuals associated with the first graduate program in industrial psychology at the Carnegie Institute of Technology.[18] Among his counterexamples to the charge of pro-management bias were the activities of the Division of Applied Psychology at Carnegie Tech, the Personnel Research Federation, and the Scott Company consulting firm, all of which are discussed later in this book. Ferguson describes how these and other organizations actively cooperated with and showed concern for labor.[19]

The early industrial psychologists gave considerable thought to their role in industry. One of the founders of industrial psychology, Hugo Münsterberg (1913), argued that industrial psychologists should take a neutral, scientific stance and not concern themselves with how business uses their expertise. That is, Münsterberg believed psychologists should be impartial, conducting the research in accordance to scientific principles and leaving the application to others. They should concern themselves only with the means, not with the ends, of their efforts. Other psychologists disagreed. Abraham Roback (1917) questioned whether such an impartial stance was even possible. He noted that the applied psychologist works as an agent of whomever is paying the fee, not as a broker who can serve both parties fairly. Others debated the psychologist's role in industry. Bingham (1923) stated: "Applied psychology . . . is *psychology in the service of ends other than its own*" (p. 294, italics in original). In that article, Bingham discusses the confusion as to whether the goal of psychology itself is primarily scientific, practical, or, as he believed, a combination of the two. Kornhauser (1947), a longtime critic (e.g., Kornhauser, 1929–30b) of industrial psychology's focus on the needs of

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[17] See, for example, the comment by Shore (1982), who was highly critical of industrial psychology's pro-management orientation, and the rejoinder by Stagner (1982).
[18] See Chapter 8 for a discussion of this program and its staff and students.
[19] The relationship between industrial psychology and organized labor is examined in Chapter 9.

management, noted that while industrial psychology has been highly successful as a management technique, as a scientific enterprise, it "remains a puny infant" (p. 224). In a discussion that to an extent foreshadows Baritz's book, Kornhauser discussed the limitations of taking the management viewpoint and argued that industrial psychology should also be concerned with societal, not just managerial, problems.

Adherence to a managerial perspective implies that there is less concern for the welfare of non-management workers. Certainly industrial psychologists were aware of the inherent conflict between the concerns of management and those of employees. The hope was that the work of industrial psychologists would benefit both groups. Improvement in efficiency and productivity would result in benefits for all; for example, scientific selection of applicants would result in employees who were both productive and satisfied in their jobs. Concern for workers was sometimes made explicit in early texts. For example, in his early text on employment psychology, Link (1919) devoted a chapter to "The Applicant's Point of View" and his concerns that applicants be treated fairly and with courtesy. And in his landmark 1932 text *Industrial Psychology*, Morris Viteles wrote that psychologists should be willing to sacrifice economic gains when attaining those gains conflicts with human values.

While we can point to instances of concern for workers, there is no question that to a large extent the early industrial psychologists not only identified with the goals of management for pragmatic reasons but also adopted management's ethic of productivity and efficiency. This view was consistent with early twentieth-century beliefs in continual progress and continuous improvement. As discussed in Chapter 2, psychologists were not alone in this orientation; their contemporaries in the scientific management movement held similar beliefs. The early industrial psychologists wanted to be useful, and for them usefulness involved demonstrating to business and industry that they could help management achieve organizational goals. Psychologists had to overcome management indifference and distrust to do so. In theory, a more efficient, productive, and therefore profitable organization should be good for workers and management alike, in that profitability provided continued employment for both groups. An added benefit for industrial psychologists was that working toward the goal of improved organizational performance permitted them access for research in applied settings, and this did result in scientific progress. The salient question is not whether improved productivity is a legitimate goal but whether, as Baritz implied, industrial psychologists worked to achieve this goal at the expense of the workers.

That question is more difficult to answer. The large industrial organizations that emerged as a result of Industrial Revolution presented new, unique problems for management, and strategies that were successful in small organizations were no longer viable. Large numbers of applicants had to be screened, selected, and trained. Their performance had to be evaluated, their compensation determined, and their productivity maintained. Counterproductive practices, such as nepotism and favoritism in selection, became more difficult for management to justify. The early industrial psychologists believed their scientific approach would contribute to better organizational functioning, and they were prepared to empirically demonstrate the effectiveness of their interventions. As noted previously, the early industrial psychologists believed their procedures could benefit all parties, and they did not see the goals of improved productivity and improved worker satisfaction as necessarily antithetical to one another.

There is a related relevant question, however, that has to do with transparency. Given that the early industrial psychologists often, although not always,[20] worked for management, how aware were the workers of the reasons for the tests, rating forms, and other interventions to which they were subjected? Some procedures were straightforward; for example, a job knowledge test to select workers for a skilled position would appear fair and relevant to an applicant. On the other end of the spectrum would be the use of a questionnaire or counseling program to ostensibly improve working conditions but actually used by management to identify union sympathies.[21] This lack of transparency would be viewed not only by workers but also by industrial psychologists as unethical. A grayer area is the use of interventions by psychologists where workers are subtly manipulated into practices, such as participation, that ostensibly improve their lot but whose unstated purpose is improved productivity. It is my impression that Baritz was more concerned with the subtle thread of subterfuge in these types of interventions than in those instances where the purpose of interventions was straightforward.

Baritz raised a number of important questions about the motives and practices of American industrial psychologists. Edwin G. Boring, on the

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[20] There were a number of prominent exceptions – for example, Arthur Kornhauser, who appears in a number of places in this text, most prominently in Chapter 9.

[21] The relationship between early industrial psychology and labor unions in the United States was actually more nuanced than our discussion here would suggest. For example, the first industrial psychology consulting firm, the Scott Company, declined to work for companies that were anti-labor (Ferguson, 1962–65), and James McKeen Cattell, who founded the Psychological Corporation in 1921, had a long-standing positive relationship with Samuel Gompers of the American Federation of Labor (Sokal, 1984). See Chapter 9 for a discussion of industrial psychology and organized labor.

other hand, did not raise issues of concern to industrial psychologists; he erased the history of industrial psychology almost entirely. Boring's *History of Experimental Psychology* (1929, revised in 1950) was the standard academic history of psychology for much of the twentieth century. Nance's (1962) survey of history of psychology courses in the United States found that 75 percent of them used Boring's text.[22] Boring's *History* is often put forth as an exemplar of the old approach to the history of psychology, but it is not a perfect fit for that criticism. Boring relied to a great extent on primary sources, was quite critical of theory and theorists, and, at least in the 1950 revision of his book, emphasized the zeitgeist as an important factor in the history of psychology (Lovett, 2006). It is true, however, that the first edition strongly emphasized individual contributions and included a great deal of biographical information and discussion of the personalities of these individuals. Boring has been criticized for his treatment of Wilhelm Wundt, a pioneering figure in scientific psychology. Similar to his teacher and mentor Edward Titchener, Boring stripped Wundt's psychology of its complexity and deprived his readers of Wundt's contributions to social psychology (Cerullo, 1988).[23]

There is another criticism of Boring and his book that is more germane to our history of I-O psychology. O'Donnell (1979) presented evidence that Boring wrote his *History* from a specific perspective with specific goals in mind. During the 1920s, as is still true today, there was tension between the "pure science" and the "applied" orientations in psychology. Boring, the head of the psychological laboratory at Harvard University, was squarely in the pure science camp. An acolyte of Cornell's Edward B. Titchener and his *structuralist* approach to psychology, Boring was a steadfast foe of *functionalist* orientation and of what he considered a premature rush to applied psychology.[24] Based in part of the perceived success of applied psychology in the World War I effort, he was greatly

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[22] It is interesting that in 1929 two other histories of psychology were published in addition to Boring's text. Neither of the books by Murphy (1929) nor Pillsbury (1929) have had nearly the influence of Boring's book. One plausible explanation for Boring's influence is that his book provided a scientific pedigree for the field greatly in need of one, in a way that was understandable to both psychologists and non-psychologists (see Capshew, 1999).

[23] See also Blumenthal (1975), Danziger (1980), and Leahey (1979); Goodwin (1999) provides a summary of the misconceptions about Wundt's psychology.

[24] *Structuralism* has as its goal the analysis of the mind into its fundamental structural elements (Goodwin, 1999), while *functionalism*, heavily influenced by evolutionary theory, focuses on the usefulness of the mind, that is, what is the mind *for*? These two orientations and their influence on industrial psychology are discussed in Chapter 2.

concerned that by the 1920s a shift was occurring toward the applied approach.[25]

Boring had reason to be concerned. Terman (1921) analyzed the 1920 APA membership data that Boring compiled as secretary of that organization. In that data, 340 of 393 members reported having research fields. Terman classified 167.1 (53 percent) of the 340 as conducting applied research (social and industrial psychology, "Chiefly Education," and psychopathology).[26] The high percentage of psychologists interested in applied work represents a striking realignment from the early days of the field. Terman was unconcerned with the trend toward applied work, noting that other sciences such as biology, chemistry, and physics have benefited from a focus on real-world problems. Boring did not agree. He took a number of actions to counteract this trend, including influencing the APA to suppress membership for applied psychologists (O'Donnell, 1979). He also set out to write a history of psychology whose narrow definition of "experimental" excluded the applied wing of the field altogether. O'Donnell (1979) stated that "[f]or Boring, history was not merely a matter of describing the past but of altering the future" (p. 289). Boring saw the efforts of applied psychologists as opposed to the true purpose of psychology as a laboratory science solely concerned with knowledge for its own sake. Therefore, the history of those applied efforts must be excised from the historical record.

One can make the argument that because Boring's history is explicitly a history of "experimental" psychology, it is entirely appropriate to omit an applied field like industrial psychology.[27] After all, it is not fair to criticize Boring for writing the book he did not set out to write. While this sounds perfectly reasonable on the surface, a closer look reveals some serious difficulties with this argument. The scientific method is as applicable to field research as it is to research conducted in the laboratory. There is no

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[25] Boring contributed to that success with his service in the US Army Psychological Service (Murchison, 1929). Boring was not always hostile toward testing and applied work. Early in his career he wrote a number of papers (e.g., Boring, 1923) on applied topics. S. S. Stevens (1973), in an appreciation of Boring, wrote that Boring " . . . acquired a high respect for the wisdom and scientific honesty of the mental testers" (p. 45).

[26] Only 7.4 of those 340 members gave industrial psychology as their field of research. Another 10.7 gave "Applied" psychology as their field (Terman, 1921). APA members who reported more than one field of research were counted fractionally into those fields; this accounts for the fractions in Terman's results. While the percentage of industrial psychology researchers is small (2 percent), the applied category conceivably could have included some industrial psychology research.

[27] Boring (1950) saw experimental psychology as having three temporal phases: the first focusing on sensation and perception, followed by a concentration on learning, and the final stage concerned with the problems of conscious and unconscious motivation.

particular reason to say, for example, that a field biologist is not a scientist while one who works in a laboratory is. And while it is true that much of the industrial psychology research in, for example, employee selection was correlational rather than causal in nature, there is nothing inherently unscientific about correlational research. Boring's contemporary Joseph Jastrow (1930) wrote that to examine American psychology without reference to its practical aspect was a serious omission, and Lewis Terman privately admonished Boring for his bias toward experimentalism (O'Donnell, 1979). Boring could have justified including industrial psychology in his history. He chose not to do so.

O'Donnell's case against Boring is based on carefully documented but circumstantial evidence. While he wrote that antipathy toward applied psychology was Boring's primary motivation for writing his history, O'Donnell also noted that other personal, professional, and intellectual reasons are possible. Boring's desire for psychology to disengage from philosophy is one Boring himself mentions.[28] Samelson (1980), while not disagreeing that hostility toward applied psychology could have been a factor, suggested a number of other potential motivators. In addition to Boring's opposition to philosophy's control of psychology at Harvard, Samelson listed concerns Boring had about his expertise in the applied area, pressure on him to publish, and, possibly, his need to separate himself from his mentor Titchener's system of psychology. Samelson also noted that at the time Boring wrote his *History*, the boom in industrial psychology and testing in the early 1920s had passed and industrial psychology was in a period of slow growth and therefore not as large a threat to Boring's conceptualization of pure science as it once was. Regardless of the reasons, the result was that Boring did decide to leave industrial psychology out of his history.

In the first edition of Boring's book, the index has one entry for British industrial psychology and none for industrial psychology in the United States. Industrial psychology did merit a couple of sentences in the text. Boring mentioned the National Institute of Industrial Psychology in Great Britain and claimed that "[a]t the present time industrial psychology has been more successful in Great Britain than in 'practical America'" (Boring, 1929, p. 484).[29] The 1950 revision did not include an index entry for industrial psychology. While Boring did mention a number of

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[28] By the time Boring revised his *History* in 1950, he saw the split between psychology and philosophy as completed.

[29] This interpretation regarding the relative success of industrial psychology in Great Britain and the United States is questionable; see Chapter 6.

psychologists central to the history of I-O psychology, it was generally in reference to their accomplishments outside of industrial psychology, although their applied work was occasionally mentioned in passing. For example, Hugo Münsterberg "began at the core" of experimental psychology "but was lured to other interests in America" (Boring, 1929, p. 418). Münsterberg's seminal work in industrial psychology merited only a few words in the 1950 revision; his laboratory work was discussed in more detail. Boring (1950) did note that pioneering British industrial psychologist Charles S. Myers left Cambridge University in the early 1920s to direct the National Institute of Industrial Psychology and even referred to Myers's weariness with "academic bigotry" that pushed him toward that decision. Much more space, however, is devoted to Myers's experimental work. Other psychologists who contributed to the development of I-O psychology, such as Pear in Great Britain; Klemm, Poppelreuter, Marbe, Rupp, and Stern in Germany; Matsumoto in Japan; and Bingham, Hollingworth, Poffenberger, Strong, and Thurstone in the United States, appear in the both the original and the revision. If their work in industrial psychology is mentioned at all, it is not the primary reason for their inclusion. Pioneering industrial psychologists Otto Lipmann, Walter Dill Scott, and Morris Viteles, among many others, do not appear at all.

   Yet at least in the revised edition, I can sense no hostility to industrial psychology in particular or to applied psychology generally. Boring (1950) did devote a section to one applied field: educational psychology. And Boring seemed to have come around to a position of détente with applied work. He stated that "psychology is gaining self-confidence from the successful application of its facts and principles"; that "[t]he academics now know that psychology is not a mean and narrow subject which they themselves have dreamed up in order to be able to criticize one another"; and finally: "The dire warning of its doubtful parent that it [applied psychology] would come to no good end now seems very long ago" (pp. 742–743). Nevertheless, in Boring's view, industrial psychology was still not a subject for inclusion in his history of experimental psychology. For students in history of psychology courses who used his text, I suspect that the distinction between experimental and nonexperimental psychology was lost and that they emerged from those courses with no appreciation of the history of applied psychology and the impression that Boring's narrowly defined history of experimental psychology was *the* history of psychology.

Two histories, two agendas – one explicit, the other implicit. Both resulted in histories that are incomplete. In the case of Baritz, this resulted in a defensible criticism of industrial psychology as beholden to management, but one that could have recognized that the story was not quite that straightforward and that there are other perspectives worth considering. Despite the occasional polemics, *Servants of Power* generated a great deal of worthwhile reflection on I-O psychology's moral and ethical obligations. As for Boring, he wrote an informative history within the confines of his own definition of what constituted experimental psychology. This was his prerogative; one can make a reasonable case for his decision to exclude applied psychology, just as a plausible case can be made for its inclusion. The practical result of Boring's *History*, however, is that because of its standing as the standard history of psychology, generations of psychology students learned little about the applied aspects of that story, including the history of industrial psychology.

Chapter Summary

While the topics discussed in this introductory chapter are wide-ranging and may appear only loosely connected, they lay the groundwork for ideas that will be further developed in later chapters. Given the central role of work in our lives, it is worth reflecting on the meaning work has for individuals and on the necessity of studying work behavior. Discussed were the benefits of studying the history of I-O psychologists' efforts to understand work behavior and the use of that knowledge to improve the productivity of organizations and, arguably, the lives of the organizational members. Researching and writing that history involves decisions on what to include and what to leave out and on how to organize and frame the surviving content. The discussion of historiography made explicit the kinds of criteria used in making those decisions, both in general and as specifically applied to the history of the early years of I-O psychology. The perspective one takes when writing history has consequences, as illustrated by the examination of Baritz's (1960) and Boring's (1929, 1950) historical accounts that closed the chapter. In this chapter, it was noted that the context that events occur within is an important aspect of history. In Chapter 2, we will explore the contextual factors that directly and indirectly influenced the emergence of industrial psychology in the late nineteenth and early twentieth centuries.