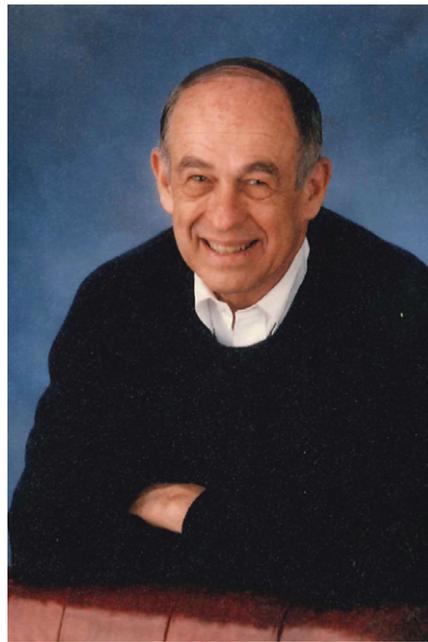




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What Was, What Is, and What May Be in OP/OB

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Abstract

This article presents a personalized view of the history, development, and current shape of the related fields of industrial–organizational (I/O) psychology and organizational behavior (OB) by two authors who have personally experienced many of the events and changes that have occurred in these fields over the past 50 or so years. Particular attention is given to the interconnections and differences between I/O psychology and OB and to the implications of those differences and overlaps for research and professional practice. The article concludes with some thoughts about areas of potential advances that could be made in the future and a discussion of some of the challenges to be faced in making those kinds of progress.

INTRODUCTION

Once upon a time, there was no industrial–organizational (I/O) psychology and no organizational behavior (OB). Put another way, there was no “O” in the field now labeled industrial and organizational psychology and no organizational behavior as a field at all. That was the situation at the beginning of the early post–World War II decade of the 1950s. However, by the end of that decade, there were stirrings of fundamental changes to come in the general area that constitutes the title of this new journal from Annual Reviews. To help understand where the interrelated fields of industrial and organizational psychology and organizational behavior are today, and how they got that way, we thought it would be useful to review how some of the early seeds were planted and were subsequently nurtured and grown.

However, before going further in this article, and at the Editor’s request, we digress for a minute here to describe our relevant academic backgrounds. We both received our PhDs in psychology departments (Porter at Yale and Schneider at the University of Maryland), albeit about a decade apart. Porter spent his first 10 years in the psychology department at Berkeley. In 1967, he made his one and only career move, to the new Irvine campus of the University of California, not in psychology but in the (then-named) Graduate School of Administration where he has remained ever since (the same unit was subsequently renamed the School of Business). Schneider, upon graduation, was hired at Yale in 1967 in the (then-named) Department of Administrative Sciences with a joint appointment in Psychology, where he stayed until 1971 when he returned to Maryland in Psychology with an appointment also in the Business School. In 1979, he was appointed to the Hannah Chair in Psychology and Management at Michigan State University, but he was there only 3 years, once again returning to Maryland where he stayed this time for 30 years, most of which he spent as head of the I/O Psychology Program.

As we reflect on how the I/O psychology (which we sometimes refer to here as simply I/O) and OB fields have evolved and developed, it is perhaps also important to note that both of your authors have been involved in the evolution of the profession as well as in academic scholarship, and this involvement no doubt has colored our perspective. Thus, both of us have been President of (what is now called) the Society for Industrial and Organizational Psychology (SIOP) and Chair of the Organizational Behavior Division of the Academy of Management, and Porter has served on numerous committees charged with the evaluation of business schools (which we sometimes refer to here as B schools) as well as the evaluation of I/O psychology programs. Collectively, these types of experiences will inform much of our commentary throughout the article.

As another aside, it is necessary to say a word about our use of terminology in relation to the title of this new Annual Reviews journal. The editorial committee have chosen *Annual Review of Organizational Psychology and Organizational Behavior*. They did this for several reasons. First, in order to include industrial and organizational psychology in the title, it would have been called the “Annual Review of Industrial and Organizational Psychology and Organizational Behavior,” a rather awkward designation to say the least. Second, many psychology-trained academics who will be among the likely readers of this journal call themselves organizational psychologists, even though there is no field (yet) officially named organizational psychology.¹ Rather, the field at this time, through its major professional organization, SIOP, is identified as industrial and organizational (I/O) psychology. Thus, that (I/O psychology, instead of O psychology) is the term we will use throughout this article along with organizational behavior (OB). More about the history of the labeling of these adjacent fields appears later in the article. Of course, there is also one other related

¹Apparently the first use of the term organizational psychology was by Leavitt & Bass (1964) in an *Annual Review of Psychology* article. Fifty years later we have an *Annual Review* for organizational psychology!

field that we should not omit from our discussions: human resource management (HRM). Although HRM is not explicitly included in the title of this new Annual Reviews journal, it certainly deserves to be mentioned in the present article because of its close ties with both I/O and OB, and we further address HRM below.

In the pages that follow, we organize our thoughts and comments around three time perspectives: “What Was,” roughly the post–World War II years from 1945 to the mid-1990s; “What Is,” the period from the mid-1990s to the present time; and, lastly, “What May Be,” the years ahead. The first section, What Was, presents our views of the history of the I/O psychology and OB fields during the 1945–1995 period, including in a few instances how we personally experienced some aspects of that history from the late 1950s onward. In the second section on What Is, we explore various facets of the current scene, as it were, with attention to the interweaving of I/O and OB and with a brief consideration of those fields’ close relative, HRM. In this section we had to be highly selective with respect to what we chose to mention and discuss. That is, given the increasing sprawl of these intersecting fields in relation to the number of pages available, what we present is not meant to be an encyclopedic discussion but reflects more our own viewpoints and knowledge. The third section, What May Be, provides us with the opportunity to speculate about the future. (We had thought about titling this section “What Will Be” but finally decided that a more humble heading for it would be appropriate.) This final section includes a discussion of the continuing challenges the fields will face in the immediate years ahead and some questions (not answers) concerning the potential rate of future progress of research and scholarship in I/O psychology and OB. Throughout the article, we have not hesitated to express our views on various issues, and thus, in keeping with the spirit of a perspectives article, this will be a rather personalized, even opinionated, review.

WHAT WAS

The Beginning Era (1945–1975)

We somewhat arbitrarily label the years 1945–1975 “the beginning era.” If one examines the prevailing industrial psychology texts of the early years of that period (e.g., Tiffin 1946), one would be hard pressed to find the word organization mentioned at all. Rather, the terms in use were companies, corporations, and firms. The topical emphasis was on testing (for mental ability, personality, and dexterity), selection methods and validity, training, accidents and safety, fatigue, appraisal, and attitudes/morale. In other words, relatively minimal attention was given to the organizational context in which these activities took place. For example, Tiffin (1946) had no chapter on supervision. The focus was on the individual and how a person’s efficiency and effectiveness could be improved mostly through selection and training.

Early studies of organizations. To say that organizational-type phenomena were universally ignored in that period would clearly be inaccurate, but early on such research did not appear in I/O psychology texts. There were, however, specific research studies that did, indeed, highlight the social and interpersonal interaction context of work. In fact, the most influential of these—the famous studies conducted at the Hawthorne plant of the Western Electric Company outside of Chicago beginning in the mid-1920s and continuing through the early 1930s—were carried out well before World War II. Commonly referred to as the Hawthorne experiments, the studies were reported in the influential book by Roethlisberger & Dickson (1939), *Management and the Worker*. The Hawthorne experiments demonstrated that the main determinants of worker productivity in the types of manufacturing tasks that were studied were not aspects of the physical

environment such as the level of illumination (as originally thought when the studies began), or amounts of individual worker fatigue, but rather a complex mix of economic incentives, type of supervision received, group influences on individual behavior, employee attitudes, and the like. As highlighted in the Roethlisberger and Dickson book, the social environment of work, including supervisory relationships with subordinates and the nature of group norms, really mattered! However, these dramatic findings did not have an immediate impact on the then field of industrial psychology because of the imminent start (for those in the United States) in the first part of the 1940s of what came to be World War II. Attention of the field was directed elsewhere, especially to selection and training as demanded by the war effort. Indeed, application of selection methods to the military turned out to be so effective (summarized in Thorndike 1949) that business and industry became enamored with such practices, stimulating further developments and approaches to such issues (e.g., Guion 1965).

Thus, in the decade following the end of World War II, the focus of industrial psychology continued to be on the measurement of individual differences and their consequences for performance. Nevertheless, researchers at some universities began to broaden the domain of the field. In particular, at Ohio State University (e.g., Fleishman et al. 1955) and at the University of Michigan (e.g., Seashore 1954), well-designed pioneering studies were carried out on the nature and influence of leadership and groups, respectively. This was definitely “O-type” research that contributed to building a foundation for the eventual O in I/O and OB.

Another key, perhaps *the* key, development in the late 1950s and beginning of the 1960s was the publication of several seminal books that focused directly on organizational environments and their powerful effects on the behavior of those who worked in them. One such book, by a journalist rather than a behavioral scientist, was William H. Whyte’s (1956) *The Organization Man*. Although this book was in the popular press and not based on scientific research, it demonstrated with vivid description how organizations of that time period were dominating, if not totally controlling, the lives of the managers who worked in them. In the scholarly and academic realms, a virtual stream of highly influential books appeared in this time period. Among them were Argyris’s (1957) *Personality and Organization*, a book that the first author of this article remembers reading just after its publication and that had a profound effect on how he viewed the organizational world of that era; March & Simon’s (1958) *Organizations*; Herzberg et al.’s (1959) *The Motivation to Work*; McGregor’s (1960) *The Human Side of Enterprise*; and Likert’s (1961) *New Patterns of Management*. Anyone who was in the field of industrial psychology at the time with any leanings toward an O orientation could make a good argument as to which one of these works was most influential, but it would be impossible to deny the tremendous impact of these books as a collective set. They changed a relatively placid landscape of the scholarly study of individual differences with a bit of leadership and groups thrown in into a highly energized one. This was truly an exciting time for those of us with O-type interests, and one that will not be easy to exceed in that respect in the years ahead. (Perhaps we should even issue a challenge to contemporary scholars to do just that across some forthcoming 10-year period!)

The beginnings of organizational psychology and organizational behavior. By the mid- to late 1960s, the stage was set for the metamorphosis of industrial psychology into I/O psychology and for the birth of the brand-new field of OB. Although many factors contributed to these evolving developments, three were especially crucial: the continuing flow of influential books, developments occurring in US business schools, and the influence of the Academy of Management.

The continuing flow of influential books included Schein’s (1965) and Bass’s (1965) *Organizational Psychology* (the first texts with that title), Woodward’s (1965) *Industrial Organization*, Katz & Kahn’s (1966) *The Social Psychology of Organizations*, Thompson’s (1967)

Organizations in Action, and Lawrence & Lorsch's (1967) *Organization and Environment*. Together, these books brought the fields of social psychology and sociology more directly into the unfolding umbrella of organization studies.²

In the firmament of US higher education, university-based business schools occupied a relative backwater location in the decade or so after the end of World War II. Then, in 1959, two significant reports appeared: one sponsored by the Carnegie Corporation (Pierson 1959) and one by the Ford Foundation (Gordon & Howell 1959). (As a minor item of note, in the Gordon & Howell book reporting the Ford Foundation study, Porter was mentioned in a footnote on p. 76 for having prepared for the authors a brief overview of the leadership literature up to that time; little did he expect that he would be heavily involved in the next major study of US business education 25 years later!)

The two reports were written by economists, and both came to essentially the same conclusions, which were to have a major impact on business school education beginning in the 1960s. For our purposes here, two of the major recommendations contained in both reports that were to affect O studies were that business schools should put much more emphasis on modern behavioral science in their undergraduate and masters-level curricula and that they should promote a relevant behavioral research agenda as well. A consequence of these recommendations was that B schools had to scramble to find research-trained faculty who were qualified to do research and to teach behavioral science-based courses relevant to organizations. They proceeded to hire primarily faculty with an I/O psychology (or very occasionally a sociology) academic background and placed them in departments of management or some such general label. Schneider was hired at Yale during this period (in 1967) into a Department of Administrative Sciences with a few other then-young academics: Clay Alderfer, Chris Argyris (Chair), Richard Hackman, Tim Hall, Ed Lawler, Roy Lewicki, and Gerrit Wolf. But, what to call this overarching academic field, as it was not exclusively the province of any single discipline? Gradually, during the 1960s, the term organizational behavior materialized and became fairly widespread by the early 1970s. Apparently the first time the term was used in the title of a textbook was by Bass (1960) in *Leadership, Psychology, and Organizational Behavior*. A new field was now in existence!

A major external force that directly affected the growth of the field of OB and, to some extent, indirectly affected the change of I psychology into I/O psychology was the influence of the academic professional organization of faculty members interested in the study of management, namely, the Academy of Management (AOM or the Academy). AOM, founded in the late 1930s, had been a relatively small and not very important organization through the 1950s and into the 1960s. (At the annual meeting in 1967, the Academy's "program" consisted of exactly four printed pages!) In fact, in its early years, AOM could be regarded as a prime example of an old boys network. However, by the end of the 1960s, owing to surging enrollments in B schools, the Academy's membership size was also mushrooming. Two developments taken by the leadership of AOM at that time were critical to its future growth and influence: First, it moved the date of its annual meeting from December to August (which may seem trivial, but it was not), and second, and especially important, in 1971 it created formal Divisions within its membership. One of the initial dozen Divisions was Organizational Behavior (with Porter being appointed its first chair by the Board of Governors of the Academy). As a result, those faculty members in B schools who were in

²Schein's (1965) little paperback emerged shortly after Schneider began his PhD program at Maryland, a program then steeped in the traditional industrial psychology topics of the time, which, as noted above, focused on the study and measurement of individual differences. The book completely changed Schneider's life and career with its focus on the psychological meaningfulness and understanding of organizational contexts and directly resulted in his research interests in organizational climate and what evolved to become the attraction-selection-attrition (ASA) model.

this field finally had a professional organizational location they could call their scholarly home. An OB identity was thus firmly established.

Meanwhile, within the scholarly home of industrial psychologists, that is, Division 14 of the American Psychological Association (since 1985, SIOP), some members (particularly academic members) of that organization were getting restless about what they regarded as an overly narrow and restrictive label for their field of psychology, namely, industrial. They were not necessarily opposed to that term as such, although some members probably were, but rather argued that it was not inclusive enough of their range of interests. The issue came to a head at a meeting of the Division's executive committee in the early 1970s, when a proposal was made to change the Division's name from industrial psychology to organizational psychology. After a long and somewhat heated discussion (as directly experienced by Porter), and with the committee unable to reach any consensus on whether to change the name or not, a compromise was proposed: to use both terms in the Division's title. This proposal was recommended to the Division's membership (which subsequently voted to approve the new name in 1973: Industrial and Organizational Psychology). Hence, the hybrid I/O label, a term that did not fully satisfy most members but which most could live with, became the academic identity for those whose interests were in the organizational psychology part of the industrial psychology space.

Also around the 1970s, the term human resource management emerged as a successor title to the now somewhat fusty designation of personnel administration. Up to the late 1960s and early 1970s, if business schools offered courses related to the people side of management, those courses usually fit under the personnel administration label. That label gradually gave way to HRM in both academia and in the business world owing to the increasing emphasis on viewing the employees of organizations as a resource and not simply, as in traditional management fashion, the impersonal set of staff personnel actions (compensation, benefits) to be administered. Thus, today in either realm, academe or business, one would be hard pressed to find any use of the terms personnel administration and personnel management.

Summary of the early years. Your authors were fortunate to live through a most exciting time in these early years of I/O and OB. We went from having the relatively narrow identity of individual-focused industrial psychologists to having a new additional focus on organizations and their behavior. This accomplishment was stimulated both by publications of books and articles emphasizing the role of humans in organizational performance and by the influence of the Carnegie and Ford reports emphasizing the need for a strong behavioral emphasis in schools of business administration. Business schools responded and grew impressively, and with that growth, AOM created its OB Division, and Division 14 of the American Psychological Association became the Division of Industrial and Organizational Psychology. This confluence of both intellectual and practical developments literally created the world of O that many of us now cheerfully inhabit. Let's see what happened next.

The Adolescent Years: Mid-1970s to Mid-1990s

Adolescents of all kinds have developmental and emotional issues with which they must learn to cope. Perhaps one of the most difficult issues is changing from a narrowly focused childhood to a full and complex world of adulthood. It was no different for the fields of concern here. For example, what began to emerge was some degree of conflict between the old industrial psychology orientation toward people at work, with its almost complete focus on individual differences, and the newer focus on organizations and group/social processes. This emphasis on individual differences existed from the earliest days in industrial psychology as noted by Viteles (1932), perhaps

the most important I/O psychologist of the first half of the twentieth century. He put the role of individual differences this way: “Industrial psychology is based on a study of *individual differences*—of human variability. . .” (p. 29, emphasis in the original). Thus the early work by Schneider on organizational climate was carried out at the individual level of analysis, and it took decades of effort to get to the point where such climate data were accepted at work group and organizational levels of analysis (Schneider et al. 2013).

Our point is that at the same time that there was increased conceptual consideration of social and organizational issues in the actual research being done and published, the methods for collecting data and the quantitative techniques used for data analysis remained largely at the individual level of analysis. A good example of this conflict was revealed in a study by Smith (1977). He wished to test the theory that attitudes predict attendance at work best when people are put under some kind of stress, that is, stress moderates the attitude–attendance relationship. He tested the theory by correlating attitude survey data with attendance on a given day, a day when there was a huge snowstorm in Chicago but not in other locations of the firm (Sears). The prediction of course was that in Chicago, attitude survey data would be related to attendance, but elsewhere these two variables would not be related. Because Smith had “only” unit attitude survey data, he *apologized* for the fact that he had to conduct the analyses at the group level to predict attendance rates; the results were in keeping with the hypothesis.

One might get the impression from what we’ve said that everyone was now studying social and organizational processes (even at the individual level of analysis), but this was not true; it was the exception and not the rule. For example, the 1970s saw the beginnings of the research that would transform selection testing: what came to be called validity generalization (VG; Schmidt & Hunter 1977). Until VG, personnel selection researchers had experienced differences across settings in the validity they observed even when they used the same test for seemingly the same job but in different settings; this phenomenon was called situation specificity (see McDaniel 2007 for a review of VG history). The research on VG since the 1970s has revealed with considerable consistency that artifacts account for much of the variance in validity across settings, when the same or similar tests are used for the same or similar jobs. What is clear from this literature is that the most important artifact is the sample size used in estimating validity (Guion 2011), which accounts for 75% or more of the variance in validity. Personnel selection and its components (job analysis, test and assessment developments, performance appraisal and criterion development, and so forth; see recent handbooks by Farr & Tippins 2010 and Schmitt 2012) continue to play very important roles in I/O psychology. But, it must be observed—as it was by Porter (1966) back in 1966—that there has been little crossover between the work of the more individual differences–oriented industrial psychologists and that of the more socially and organizationally focused organizational psychologists and organizational behaviorists. That is, even today we have few if any studies that explore the joint effects of individual differences variables and organizational contextual variables on either or both individual and unit/organizational performance (Ployhart & Schneider 2012); we have more to say about this issue below. For now we turn to the question of where all this research in I/O and OB was being published.

New publication outlets for research. The *Journal of Applied Psychology* (JAP) published its first issue in 1917, and *Personnel Psychology* (PP) its first issue in 1948, so the more individual differences–oriented researchers had a considerable head start by the time the O in the field was introduced. Journals that were more O in nature emerged in the mid-1950s [*Administrative Science Quarterly* in 1956, *Academy of Management Journal* (AMJ) in 1958], shortly before business schools first began hiring research-oriented industrial psychologists. Later, additional journals were begun, including *Organizational Behavior and Human Performance* (OBHP, later

OBHDP, the *D* standing for *Decision* and the *P* for *Processes*) in 1965, *The Journal of Management* in 1975, and *Academy of Management Review* in 1976. *The Journal of Management* had one issue of 53 pages in 1975, but by 2004 it was publishing 1,000 pages per year (Van Fleet et al. 2006)—with rarely if ever an article on personnel selection.

JAP was early on and continues to be very broad with regard to the I and O foci for research. Porter, for example, was publishing attitude research that examined Maslow’s theory in the 1960s (Porter 1961), and Schneider was publishing service climate work in *JAP* by the early 1970s (Schneider 1973). Interestingly, Schneider’s earliest publications on organizational climate appeared in *PP* (Schneider & Bartlett 1968, 1970), and until we looked at the evidence, we thought those might have been aberrations. But the content analysis of *JAP* and *PP* by Cascio & Aguinis (2008; see our summary in **Table 1** to which we also refer later) indicates considerable overlap in the content of these two journals from at least 1963 to 2007, with the combined articles on predictors of performance and research methods/psychometric issues pretty consistently dominating both and work motivation/attitudes the next most often published topic. Of course, since the mid-1970s and the growth of OB programs in business schools, journals perhaps more relevant for O have proliferated with the creation of *Human Performance* in 1987, *The Journal of Organizational Behavior* in 1979, *Organization Science* in 1989, and more specialized outlets, such as *Leadership Quarterly* in 1989—and those are only the journals published in the United States. With the exception of *Human Performance*, our impression is that the cited outlets are almost completely dominated by O-related topics, with few studies of psychometrics and the individual differences that characterize testing and selection research.

In fact, a not-so-subtle indicator of the increase in business school faculty in the I/O field was reported in a 2003 analysis of the academic locations of members of the editorial boards of *JAP* and *PP*. The issue of where faculty reside was of so much interest that a panel at the SIOP conference in

Table 1 Rank-ordered areas of publication emphasis in the *Journal of Applied Psychology* and *Personnel Psychology*, 1963–2007^a

	<i>Journal of Applied Psychology</i>	<i>Personnel Psychology</i>
Research methods/psychometrics	1	1
Predictors of performance	3	2
Work motivation and attitudes	2	3
Performance measurement/work outcomes	4	4
Leader influences	6	5
Training and development	8 (tied)	6
Societal issues	7	7
Human factors	5	–
Decision making	8 (tied)	–
Job analysis	–	8
Career issues	10	9
Reward systems	–	10

^aData reported by Cascio & Aguinis (2008).

2003 was organized to discuss it (Aguinis et al. 2003). The analysis revealed that until 1992 more faculty from psychology were on the boards, but by 1997 the proportions had shifted, with more faculty from business schools—the trend was identical in both journals. Indeed, at the time of this writing, *JAP* has 12 associate editors, and 9 of them are in business schools; *PP* has four associate editors, and all of them are in B schools.

New topics of research interest. Not only did the late 1970s and 1980s bring us a new set of journals to respond to increases in OB programs and in I/O and OB research, but they also ushered in a few new topics of interest. For example, the issue of organizational culture was introduced formally into the field by Pettigrew (1979). Interest in the topic was very swift in writings for practitioners (e.g., Deal & Kennedy 1982), and improvements in the quality of manufactured products in Japan served to foster interest in what was happening in other national cultures as well (Ouchi 1981). Academic conferences were held on the topic, with Trice & Beyer (1993) reporting that between 1980 and 1985 there were five such conferences devoted specifically to the study of organizational culture (e.g., Frost et al. 1985).

Interest in the related topic of organizational climate at the time stimulated considerable research on what has come to be called the levels-of-analysis issue. This concerned, as noted earlier, the question of at which level in the firm research might best be conducted, individual differences having dominated the field of I/O psychology from the very beginning. Organizational culture researchers were immune to the levels issue because culture was, without question, an organizational phenomenon. But the more traditional psychological researchers doing research on organizational climate were not content with assumptions; it had to be proved conceptually and empirically that data collected from individuals could be meaningfully aggregated to higher levels of analysis to produce a team- and/or organizational-level variable. So began a series of efforts to provide such proof (e.g., Dansereau et al. 1984, Glick 1985, Rousseau 1985).

The need to consider the levels issue and the study of organizational culture and organizational climate introduced attempts to conceptually and empirically explore the issue of aggregates of individuals and behavior—the behavior not only of individuals but of teams and organizations themselves. Much of the early conceptual work on the levels issue in O research was summarized vividly by Klein et al. (1994), and the book by Klein & Kozlowski (2000) made clear the operational issues associated with research on aggregates. Our clear impression of the mid-1980s to mid-1990s “adolescent” period is that although considerable effort was being made by some to understand and predict such unit and organizational behavior, research in I/O and OB continued to be dominated by studies at the individual level of analysis, and consequently there was very little cross- or multilevel research being published.

Yet, there was clearly expansion of the issues being conceptualized and studied, even when the studies were still mostly at the individual level of analysis. Thus, the conceptual topics that dominated this era concerned individual-level motivation theory and leadership theory but not organizational processes related to organizational outcomes. This was the era of expectancy theory (Vroom 1964, Porter & Lawler 1968), goal-setting theory (Locke & Latham 1990), and job design (Hackman & Oldham 1980), as well as leader–member exchange (LMX) (Graen & Schiemann 1978), path–goal theory (House 1971), and decision-making approaches to leadership (Vroom & Yetton 1973). Much of this research is summarized effectively with a focus on managerial behavior in Campbell et al. (1970), in which the authors also suggested that there may be a future in studying and understanding what they called environmental variation (climate) and its effects on individual managerial behavior.

A significant exception to this focus on individual differences was the presentation of the competing values framework (CVF) by Quinn & Rohrbaugh (1983). Not often recalled in referencing the CVF is that its development began with a focus on outcome criteria typical of those

studied by selection researchers, such as individual performance quality, employee turnover, market performance, job satisfaction, and so forth. The authors then creatively asked the question of what kind of organizational context would most likely yield effectiveness against those criteria. So, rather than focus on the kinds of people (an I approach) who would yield those outcomes, they focused on the kinds of places (an O approach) that would yield those outcomes. A recent meta-analysis of research related to the CVF (Hartnell et al. 2011) has shown how prescient the early conceptual model was. That is, the meta-analysis revealed that the likelihood of a specific set of outcomes being achieved varied somewhat as a function of the kind of culture that existed in the firms. Perhaps of equal interest, the meta-analysis indicated that positive organizational cultures are typically significantly related to each other and do not compete, and they generally yield success regardless of the outcome of interest.

Summary of the adolescent years. As is the case with all adolescents, it was difficult to keep track of where I/O psychology and OB were headed and what issues the fields were focused on, much less at what levels of analysis issues were being studied. At the same time that some organizational-level foci, such as organizational climate and culture, were receiving attention, the work on validity generalization greatly enhanced the usefulness of personnel selection practices, so it is clear the study of individual differences was also alive and well. New outlets emerged for publishing research as the number of faculty grew rapidly in OB programs in B schools, and the range of interests that received research attention clearly expanded from testing/selection, fatigue, and accidents to work motivation, leadership, and job design; again, it was an exciting time to be alive and an I/O and OB researcher!

WHAT IS

I/O Psychology and OB Growth, and Differences Between I/O Psychology and OB Programs

Growth in membership in I/O psychology and OB. It is difficult to obtain membership numbers in SIOP and the OB Division of the Academy of Management from the early years, but we have such data from 2000 forward for both and see a negatively accelerated curve from then to the present. For example, the OB Division grew from 3,620 members in 2000 to 4,952 in 2005 to 6,165 in 2010. SIOP has also expanded its membership, with numbers for the similar periods of time as follows: 5,142 in 2000, 5,737 in 2005, and 6,924 in 2010. Note two things in these numbers: (a) SIOP and the OB Division through 2010 had approximately the same number of members, but (b) the OB Division grew significantly faster, increasing its membership approximately 50% from 2000 to 2010.

Differences between I/O psychology and OB emphases on practice. Almost all members of the OB Division are in academic positions, whereas only about 45% of SIOP members are in academia, with a similar percentage working in consultant organizations (most of them) or as in-house practitioners/researchers in a wide range of industries. (The balance of SIOP membership is in one form or another of government, with most of these in the federal government.³) This difference between SIOP and the OB Division has seemed to persist over time, perhaps stimulated by the desire of OB in business schools to emphasize rigorous behavioral research. Our experience with

³SIOP data were kindly provided by the SIOP office in response to our request.

this issue through the decades suggests that early on, people trained in I/O psychology were the founders of the modern OB programs, and those trained in such programs then stayed on in business schools as academics. In these B school settings, the focus of research changed from selection and criterion development and performance appraisal to such topics as leadership, motivation, and organizational relationships. Research became much more theory-driven and less driven toward the solution of practical business problems. Not surprisingly, “I/O types,” with their selection and practice orientation, no longer fit the new academic theory-driven model. Thus, it is our impression that business schools mostly stopped hiring brand-new I/O psychology graduates from about 1985 through the next decade or so. Indeed, this may have been the initial era of social psychologists (they were *really* academics) being hired into B schools. Only if they had already acquired excellent reputations for their research were I/O types hired.

Salary differences between I/O psychology and OB academic jobs. B school jobs became increasingly attractive to I/O graduates because of the salary differences that began to grow in the early 1980s, reaching at this writing \$50,000 or more per year for new PhD graduates. We continue to worry about the survival of I/O psychology programs given these salary differentials and the desire on the part of some psychology departments to also become more “scientific” by shutting down such programs, but I/O fortunately continues to thrive for two major reasons: First, psychology is a very popular major, and students wishing to study for an advanced degree find I/O psychology an intriguing area of interest. Second, recall that 50% of I/O PhDs hold nonacademic positions and there is essentially no training for PhD practitioners in this area in business schools. Indeed, our impression (only slightly overstated) is that if you are a PhD student in an OB program and you say you are interested in practice, your career is over. On a personal note here, Schneider (and his colleagues in other I/O programs) tried to ensure that PhD students had practical experience by involving them in consulting projects he had obtained and/or arranging for internships with consulting firms or in-house practitioners. Indeed, about three-quarters of Schneider’s database-based publications came from consulting projects (one project yielded nine publications!) he did with students who received their assistantships based on such projects while also pursuing their thesis or dissertation research. Paradoxically, although senior faculty members in B schools appear to do quite well as gurus in the world of consulting, their graduate students and junior colleagues typically do not appear to have such work as an option.

Differences in the Foci of I/O Psychology and OB

It is useful to go into a bit more detail regarding our perceptions of the differences between I/O and OB as professional fields. Despite the large salary differences between I/O and OB academic jobs, our prediction is that I/O psychology will not only survive but prosper owing to the greater variety of opportunities that exist for people trained in such programs. First, the traditional I/O psychology program of the 1960s and 1970s with an almost exclusive focus on selection and psychometrics is gone. So, I/O training programs have become much more expansive in their offerings, and it almost seems as if as many I/O psychology graduates go into coaching as go into selection as practitioners. The sidebar titled Top 10 Areas of Emphasis for SIOP Members reveals what members of that organization say they do. The data were collected at SIOP by presenting a long list of options for the focus of I/O work, and respondents could check off as many as three areas of emphasis as their main foci. We present the top areas of emphasis, and readers can see that the predominance of effort still occurs in selection and selection-related issues (testing/assessment,

TOP 10 AREAS OF EMPHASIS FOR SIOP MEMBERS^a

1. Testing/assessment (e.g., selection methods, validation, predictors)
2. Coaching/leadership development
3. Staffing (e.g., recruitment, applicant reactions, selection system design, succession, workforce planning)
4. Leadership
5. Performance appraisal/feedback/management/goal setting
6. Organizational performance/change management/downsizing/OD
7. Research methodology (e.g., surveys)
8. Organizational culture/climate
9. Job analysis/job design/competency modeling
10. Groups/teams

^aData reported by T.L. Vanneman, Membership Services and Continuing Education Manager, Society for Industrial and Organizational Psychology (SIOP), personal communication, May 5, 2013.

staffing, and performance appraisal). Interestingly, the number two area of focus for SIOP members is coaching, and the number four area is leadership.⁴

These data on foci came anecdotally from both academics and practitioners, but, as revealed in **Table 1**, the results are equally supported by articles in two major publications in the *I/O* psychology field. Thus, in our summary ranking of the publication emphases listed in Cascio & Aguinis (2008), we see that the articles in *JAP* and *PP* map well, with a few notable exceptions, to these emphases. Not obvious from **Table 1** is that approximately 40% of all *JAP* articles for this period were in the areas of research methods/psychometrics, predictors of performance, and performance measurement/work outcomes, and for *PP*, the figure is almost 50%. These major research foci in *JAP* and *PP* are not the typical foci for OB researchers.

Our conclusion from these data is that *I/O* and OB foci and research are different in important ways and that given these differences, *I/O* psychology should survive and prosper because (a) managers like to hire the most able people they can because they fundamentally believe that individual-level ability is a key to success—and *I/O*-trained people can hold their own based on this criterion, (b) *I/O* training is such that hard criteria—that is, tangible outcomes of interest to management—remain a central focus for research and practice, and (c) *I/O* academics have expanded the range of issues they teach and on which they do research and consulting. Indeed, our impression is that some of the old battles between *I/O* in psychology departments and OB in business schools are no longer in evidence and that at the schools that have some of the leading *I/O* psychology and OB programs, they are actually working increasingly together to capitalize on collective strengths. So, rather than merely hiring another faculty member to fill an identified void, B schools and *I/O* programs are seeking strengths internally within their universities and then finding ways to work together to provide maximally interesting and useful environments for themselves and their students.

At this point, it is useful to briefly take up again the sibling field of HRM. Most business organizations of any size these days either have an HRM department or explicitly outsource HRM functions to a third-party consulting firm with the requisite specialized expertise. Interestingly,

⁴The SIOP data summarized in the sidebar were kindly provided by the SIOP office in response to our request.

however, most business schools do not to date have separate academic units labeled HRM. Either they do not offer any curriculum under this specific designation, or they place it inside OB units (such units are sometimes labeled OB/HRM). (Relevant to this situation and to the relative size of the two areas, for the 2013 annual meeting of AOM, the OB Division received 893 program submissions of papers, whereas the Human Resources Division received only 300.) Nevertheless, interest in HRM has grown in recent years, reflecting both its direct connection to the real-world aspects of business and demonstrations of the connections between HRM practices and business performance. Also, the influential professional organization Society for Human Resource Management (SHRM) has provided major financial support to the field and opportunities for researchers to connect to practicing HRM executives in organizations. Clearly, HRM represents an area of practice that utilizes the research that is produced by I/O and OB scholars (and SHRM acknowledges such research efforts with its annual Michael R. Losey Human Resource Research Award for academic research useful to HRM practitioners, which Schneider won in 2009).

I/O Psychology and OB Content Is Expanding Rapidly

We are forced to admit that when we open *JAP* or *AMJ*, we sometimes have to struggle a bit to even begin to understand what some of the articles may be about: Two examples are “Does It Take Two to Tango? Longitudinal Effects of Unilateral and Bilateral Integrative Negotiation Training” (Zerres et al. 2013) and “Emotion Helping by Managers: An Emergent Understanding of Discrepant Role Expectations and Outcomes” (Toegel et al. 2013). What ever happened to consideration and initiating structure? We are (partially!) teasing of course.

We actually like the directions I/O and OB research are taking. We are delighted with the movement into increasingly important more-macro-level studies. In the same issue of *JAP* in which the Zerres et al. (2013) article appears, we find an article on collective turnover (Heavey et al. 2013) and a culture-by-context study of negotiating teams (Gelfand et al. 2013). And in the same issue of *AMJ* in which the Toegel et al. (2013) article appears are articles on the role of personality in achieving status in work groups (Bendersky & Shah 2013) and how service climate and service-climate strength across units influence the types of emotional labor performed and their effects on service employees (Yagil & Medler-Liraz 2013). These kinds of multilevel studies on team- and organizational-level phenomena are, we feel, central to the future of I/O psychology and OB. Although both fields have had the word organizational in them, little of the research in the past actually addressed organizational-level outcomes. Some of the multilevel work we read now uses higher levels of analysis as additional predictors in hierarchical linear model (HLM) regressions of individual-level behavior!

New topics are also being explored. For example, research on employee engagement has enjoyed attention, including debates over whether it is old wine in new bottles (Newman & Harrison 2008), with the result that more research is done, and that is always a good thing. In this regard, we are reminded that in the early days of research on organizational climate, Guion (1973) claimed that such research was indeed old job satisfaction wine in a new climate bottle, and this stimulated the same kind of explosion of research seen with the engagement construct. Creativity and innovation research has also been expanding, perhaps stimulated by the implicit realization (at least in the United States) that numerous countries are now effective competitors, especially in the world of manufacturing, and that competitiveness in this world of multinational companies will require increased levels of creativity and innovation. This research has focused nicely on individual-, group-, and organizational-level variables (e.g., Anderson et al. 2004).

Although there is little expectancy theory research being done now, research on goal setting is still going strong, introducing, for example, issues having to do with priming via subconscious

goal stimuli (Latham & Piccolo 2012). Research on justice in organizations has also been prominent, and the facets of organizational justice have been explicated by replicating earlier laboratory studies of justice (Colquitt et al. 2001). There is significant research on justice climates that suggests justice is not only an individual experience but also a facet of organizational functioning (Rupp & Paddock 2010). In addition, although path-goal theory has apparently passed into the textbooks of history, there continues, of course, to be active research on leadership effects in organizations. For example, although there has been some research on self-managed teams, there is also research on how external leaders step in when times demand them even for such teams (e.g., Morgeson 2005). Leadership has also been studied simultaneously at multiple levels of analysis (Zohar & Luria 2005).

We cite only a few of the expanding topics of which we are aware to provide a flavor of what current work in I/O and OB looks like to us, always remembering that, especially in I/O, the strengths of the past in the study and prediction of individual differences remain very relevant.

Summary of What Is

If adolescence is a time for trying to figure out who one is and adulthood is the time when this should have been solidified, we are pleased to say that I/O psychology and OB are still in robust, perhaps perpetual, adolescence. We see dynamism on every level, from issues having to do with science and practice and where those who do these are educated, to changes in the levels of analysis (including multiple levels) at which work is being done and additions and expansions of topics being studied. Our impression is that the research being published has the potential to be more practically useful than it is presently given credit for, and we address this issue in more detail below.

We want to note that a distinct failure in I/O and OB is a lack of research on the potential competitive advantage associated with the research we do. By contrast, for 20 or more years now, academics in HRM (e.g., Huselid 1995) have been documenting from large organizational-level databases how implementing best HRM practices can yield profits for companies. Does goal setting or LMX yield evidence-based profits for companies? Does personnel selection yield profits for companies? Of course, we know based on utility analyses that valid selection procedures compared with not-valid procedures have positive individual-production consequences. However, we have no idea how using valid selection procedures compares with having a positive organizational climate, for example, or even what the two in combination might do for organizational effectiveness (Ployhart & Schneider 2012). Perhaps most interesting to us is the question, borrowing from strategic management, of the degree to which what we do in I/O and OB achieves demonstrable competitive advantage for organizations. As Lievens (2013), a personnel selection academic, recently noted, if all companies use the same personality measures and indicators of “g” to hire their people, there is no competitive advantage in doing so—selection practices become a commodity. The way to gain competitive advantage is to combine such hiring practices with the other facets of organizational processes to produce something unique and inimitable—these are the requirements for competitive advantage through people.

WHAT MAY BE

As in any field of academic endeavor, there are areas of definite progress and areas of much slower advances. In this final section, we first briefly note one obvious area of progress. This is followed by a discussion of three unmet, or only partially met, challenges that we think characterize the current state of the fields. We conclude with four questions regarding the future progress of the fields in

terms of their research and scholarship (see sidebar, Continuing Challenges and Questions). Many of the ideas expressed in this final section, we should note, are not mentioned for the first time but represent points and issues that we want especially to emphasize.

Definite Progress

It seems obvious, at least to us, that there has been substantial progress in recent years on at least one significant dimension of scholarship in our fields: namely, research design and methodology. In contrast to several decades ago, there is now greater attention to aspects of research design involving such features as the development of more sophisticated means to rule out the effects of confounding variables. Especially prominent in this regard in recent years has been the increased use of multivariate statistics to aid in the interpretation of results. Likewise, lately there has been a greater diversity in the research methods used [e.g., meta-analysis of a variety of constructs as in Hartnell et al. (2011)] compared with the early years of I/O psychology and OB.

Another strong area of progress has been, as we noted earlier, in the conceptualization and measurement of group- and organizational-level phenomena, including group- and organizational-level research on variables such as climate, justice, and turnover that were previously accomplished only at the individual level.

Uneven Progress

Despite the obvious growth in the size and breadth of the I/O and OB fields over the past several decades, there are still plenty of unmet, or only partially met, challenges that characterize the current state of the fields. Without attempting to provide a laundry list of what's missing or incomplete in the total array of findings to date, we mention three prominent examples that we think illustrate major deficiencies in the contemporary landscape of what we could, and probably should, know. These will sound familiar given what we have said earlier, but they bear repeating here. They are, in no particular order, as follows.

Insufficient attention to the organizational (O) context by I/O psychology and the micro part of the OB field. Given that organizational is part of the names of both of the related fields, it is more than a bit ironic, as Johns (2006) has so eloquently noted, that there has been insufficient attention

CONTINUING CHALLENGES AND QUESTIONS

Continuing challenges

- A need for more attention to the organizational (“O”) context by the I/O field and the micro part of the OB field.
- A need for more research that cuts across the micro and macro dimensions of behavior within organizations.
- A need for more emphasis on international/global aspects of the fields.

Questions

- Can we build a robust evidence-based analysis of behavior in organizations?
- Can we achieve more meaningful integration of findings across a diverse array of topics?
- Can our research findings achieve greater impact on managerial practice?
- Are our theories up to the task of dealing with rapidly changing external environments that impact organizations?

to the organizational context. By insufficient attention to the O context, we mean the relative lack of (but certainly not zero) research and conceptual consideration given to the question of how the internal organizational environment in which individual-level variables are studied affects behavior and interacts with the variables of interest (a notable exception, for example, being the previously mentioned work on the CVF that did look at the effects of context). Three cases in point for which more attention to the within-organizational context could affect the conclusions drawn from research findings are as follows.

1. Behavior within groups: In organizations of any moderate or greater size, groups are surrounded by other groups that comprise the total organization. If a given group, for instance, exhibits exceptional performance, what is the reaction of other groups to those accomplishments, and how is the given group's subsequent performance affected? In complex organizations, no single group is an island unto itself! But would one know that from reading the groups literature?
2. Leadership: Acts of leadership can be differentially effective when, as in the context of organizations, people interact across extended periods of time. Thus, for example, how much transformational leadership can members of an organization tolerate if each new leader, within some limited time frame, imposes a new visionary direction? Or, what if different leaders in different parts of the organization have their own visionary directions? In other words, in organizational settings with many potential (e.g., functional) leaders, what are the limits, if any, of types of behavior—in this case transformational leadership—commonly regarded as good?
3. The impact of rewards and incentives: Do we know enough about how rewards/incentives given in one part of an organization can have positive or negative effects on individuals and units located elsewhere in the organization? The effects of rewards and incentives may be more widespread and complex than generally assumed when only those seemingly directly affected are studied.

The point of these three examples is this: What we know about groups, leadership, motivation, and the like seems limited without more direct focus on the internal organizational context as the setting for behavior.

Insufficient research that cuts across the micro and macro dimensions of behavior within organizations. Of course, we do not mean to imply that no such research exists, only that this is a type of domain that could benefit from more attention. For example, one could ask, how much have the I/O and OB fields contributed to the understanding of the effects of the structural balance of centralization versus decentralization in organizations and to identifying the consequences of a particular balance and changes to that balance in one or the other direction (i.e., toward more or less centralization)? That is, what are the effects of this kind of macro variable and changes (often frequent) in it on such microlevel issues as leadership, motivation, job attitudes, and the like? Do we know?

Or, as another example, how much research effort in these fields has been contributed to the topic of control systems and their effects? One of your authors found the answer to that question when drafting a chapter on the subject for an introductory management text: not much. A potentially fertile, unplowed micro–macro crosscutting area of research awaits attention!

Insufficient emphasis on the international/global aspects of the fields. Neither I/O psychology up to now nor OB during its first 40 or so years could be called cosmopolitan, as both fields were

generally dominated by US scholars producing United States–related research findings. Encouragingly, the picture is beginning to change, with the GLOBE project (House et al. 2004, 2013) being a good example, but progress has been uneven. A major intellectual task for all I/O psychology and OB scholars, whether in the United States or not, is to determine which are emic (culturally specific) and which are etic (universal) phenomena. As the GLOBE project has demonstrated, for example, some leadership attributes are etic (e.g., trustworthiness is universally viewed as positive; irritability is universally seen as negative), and others are emic (e.g., ambition is viewed as positive or negative depending on the specific culture). From the present time onward, our fields need more comprehensive, cross-national research of the type undertaken by GLOBE.

Will There Be Progress in the Future?

To conclude this article, we speculate about the future of the organizational psychology and organizational behavior realms of research and scholarship. Where are the fields headed? We could try to make predictions that probably would turn out to be no more (but, hopefully, no less) accurate than those of our colleagues. Therefore, rather than indulge in blue-sky conjectures, we propose a series of basic questions that the fields, and those working in them, will face in the coming years. The list is not meant to be exhaustive but rather representative of what we think are at least some of the more fundamental issues that need to be confronted.

Can we build a robust evidence-based analysis of behavior in organizational settings? Of course, calls for generating an evidence-based approach to management are not new (e.g., Rousseau 2006). Thus, the issue going forward is not whether or not conclusions should be evidence-based, but rather how strong the underlying basis for those conclusions will be. To state this differently, how well will our scholarship provide consistently supported generalizations? Just as in trials in the legal system, there is evidence and then there is *evidence*. So, the key word in the question we pose is “robust”—how vigorous, strong, forceful, and consistent will the evidence be? Looking ahead, if the fields are to make a case that there has been significant progress in building robust evidence-based sets of generalizations, then it will be incumbent upon scholars to develop agreed-upon metrics for measuring that progress across specific periods of time (e.g., 2000–2009, 2010–2019, etc.). Without some kind of accepted measures of the degree or amount of the fields’ data-driven advancements, we run the risk of making interesting but unsubstantiated assertions.

Can we achieve more meaningful integration of findings across a diverse array of topics? As the I/O and OB fields have developed and expanded over recent decades, there has been a vast increase in the number and range of concepts deemed central to the fields and a parallel increase in the diversity of research topics that are being explored and investigated. But these kinds of growth do not seem to have been accompanied by a corresponding increase in the integration of the concepts and research findings. In our view, as the fields move forward in the years ahead, there needs to be more effort to demonstrate how we generate cumulative knowledge about behavior in organizations, where new concepts and results actually and directly build on what has been discovered earlier. We have planted lots of trees, but do we have coherent forests?

Can our research findings achieve greater impact on managerial practice? Whether our research can achieve greater impact on managerial practice is another question that has been around for

a very long time and, when posed this way, would probably lead most scholars who are active in the fields to a “yes it can” answer. We feel that most of our colleagues would assume, indeed assert, that the potential for our research to do so is there. However, if the question is rephrased slightly to, will our research findings achieve greater impact (than up to now) on managerial practice?, the answer may not be so clear. Those in the I/O part of the OP/OB fields, especially those educated in I/O psychology graduate programs who are subsequently employed as practitioners, have a long-standing tradition of following the scientist-practitioner model, which emphatically links the two domains of activity in an implied common goal of research influencing practice. In the OB part of the two fields, the objective of linking findings to practice generally has not been articulated as a major goal. Partly, at least, this is because, as discussed previously, there is not an explicit practice side of the almost exclusively academic field. After all, how many new OB PhD recipients identify themselves as OB practitioners when they graduate? Few, if any, do so, with the vast majority going into academic jobs. Although many scholars in the OB field presumably do want to have greater impact on managerial practice than has been the case so far, that is probably not a universal motive. So, to repeat, will future research studies and their findings in the I/O and OB fields have increasing impact on managerial practice? Probably, in our opinion, but that is by no means a certainty.

Are our theories up to the task of dealing with rapidly changing external environments that impact organizations? As noted earlier, in the major journals, there has been an increasing emphasis in recent years on anchoring research findings in new or existing theory. Reviewers invariably note to authors who submit articles to our journals that if there is no theory, then there will be no “revise and resubmit” invitations! Compared with research from 20 or 30 years ago, research in the I/O and OB fields today is much more theory-driven. Dust-bowl empiricism has virtually evaporated, or, should we say, been blown away. The challenge going forward, however, is that the external environments—both an organization’s immediate environment and the larger global and macro environments—are changing at such rapid speed that it is difficult for theories to keep pace. This is not an insurmountable problem; indeed, it is a good one for the field to have. It helps prevent unwarranted complacency! So, if we were to make a prediction, it would be that “big data” will replace “big theory” as the next avenue forward.

CONCLUSION

We both feel remarkably fortunate for having found ourselves in this I/O psychology and OB world for so many years. The great variety of research we have just touched upon in this brief article is simply representative of the diversity and energy of the people in it. We think about where I/O psychology was in the 1960s and look at it now, and we think about the fact that the OB field was nonexistent in the 1960s and look at the now vibrant and growing area in B schools, and we know it is the hard work and insights of our colleagues that have made this transformation and this identifiable area of research and practice possible. It is very encouraging to us that so many of the early foci of the field have remained active areas of interest in which such great progress has been made (e.g., selection practices) and that there have been so many additions to what we study (e.g., organizational citizenship behavior; Podsakoff et al. 2009) and practice (e.g., coaching); the fields have clearly maintained their energy and dynamism over this period of time.

Although we never want to be naively sanguine, we see this new *Annual Review of Organizational Psychology and Organizational Behavior* as a symbol of what is yet to come in the fields of I/O psychology and OB as we move forward.

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Errata

An online log of corrections to *Annual Review of Organizational Psychology and Organizational Behavior* articles may be found at <http://www.annualreviews.org/errata/orgpsych>.