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TIP

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FEATURES

DEPARTMENTS

A Message From Your President

Kevin R. Murphy

The last couple of months have been active ones for SIOP. Below, I will describe some of our activities in relation to proposed revisions in testing standards and in civil rights legislation. In addition to these activities, a number of committees, task forces, and individuals in SIOP have been involved in activities designed to enhance our visibility in APA and in the business community, and to increase our influence on key decisions that affect the application of psychology in organizations. Future TIP columns will report the progress of these important initiatives.

Rules and Regulations

In the last few months, there have been two important developments that are likely to affect SIOP members, both of which fall under the heading of "rules and regulations." First, the process of revising the Standards for Educational and Psychological Testing is proceeding rapidly. SIOP is one of many organizations asked to review and comment on proposed standards, and we have done so on the basis of extensive input from our members (including input from task forces specifically formed for this purpose and from numerous SIOP members who had independently examined the proposed testing standards. **Ann Marie Ryan** (Chair of the Scientific Affairs Committee) has been charged with coordinating SIOP's response to the latest draft of the proposed Standards and has done an excellent job pulling together the diverse comments of members into a document that forcefully states SIOP's concerns and suggestions.

Our experience with the Standards revision process so far has provided reasons for both concern and optimism. Concerns have been expressed by some members who perceived the draft standards as being overly burdensome, as sometimes being in conflict with other policies or laws that affect testing in organization, and as setting requirements for testing that will be impossible for many test users to meet. My own sense is that reactions to the proposed Standards have been a sort of Rorschach test. People whose main interests lie in the area of test theory, or who are part of a large-scale testing operation have generally been satisfied with the proposed Standards (although they have made many suggestions), whereas people who are involved in day-to-day applications of tests have raised a number of concerns. Because so many of our members fall into the latter category, SIOP has tried to be especially sensitive to the concerns of test users in drafting their response to the proposed Standards.

Despite the concerns expressed by some SIOP members about the current draft, there are reasons to be optimistic about the final outcome of the Standards revision. In particular, the committee charged with developing these standards has been highly responsive to the input they have received so far. Revisions of the initial technical chapters reflected a clear willingness on the part of the committee to consider and integrate suggestions for improving the document, and there is every reason to believe that the next round of revisions will help to resolve problems and build on the strengths of the current draft.

Second, SIOP has an opportunity to affect the debate about future developments in federal civil rights legislation. A bill entitled "The Civil Rights Act of 1997" has been introduced in the House (HR 1909). The main purpose of this bill is to outlaw acts that encourage or constitute "intentional discrimination" on the part of the Federal government. Because virtually all other forms of intentional discrimination are already covered by Federal law, this act will essentially outlaw preferential treatment as part of an affirmative action effort (one form of intentional discrimination is still explicitly permitted—i.e., discrimination on the basis of sex in the military).

On June 26 of this year, APA offered testimony regarding HR 1909, and SIOP's work in the area of affirmative action was prominently cited in that testimony. In particular, this testimony referred members and their staff to the SIOP document "Affirmative Action: A Review of Psychological and Behavioral Research" for the most recent and complete summary of relevant research. In addition, a brief summary of the SIOP report, prepared as a glossy fold-out document was distributed at this hearing, and was eagerly sought by those in attendance. The good news is that SIOP's voice will be heard in this debate. The bad news is that the bill seems to be proceeding on strictly party lines at this point, which means that research may be the last thing on legislators' minds. SIOP will keep a careful eye on future developments, and continue to work with APA to help influence this legislation.

A Lighter Note

An ex-president of SIOP (**Paul Sackett**) celebrated a noteworthy milestone (actually, several) last month. In addition to his evolving role as SIOP's Musician Laureate (his Presidential address and his ability to put together the SIOP President's Chorus at our last conference, and keep a straight face while doing it are accomplishments that will be long remembered) and his continuing efforts as co-chair of the Standards revision committee, Paul is a long-distance runner. A few of weeks ago, Paul ran 79

miles (THREE marathons!) in a 24-hour run for charity. He had a goal of running 100 miles, and was prevented from reaching this goal only by a series of acts of God (rain, high winds, lightning, etc.). Most SIOP members would be prevented from completing this goal by the fact that they collapsed with 99 miles to go. Congratulations Paul!

IOTAS

Michael D. Coovert

Oh October. Fall is in the air, and USF is becoming known for something other than its I/O program. That's right, we fielded our first football team in September. For someone who left the scarlet and gray glory fields of Ohio State, this has been a long time coming! For those of you who follow football, this issue of **TIP** is sure to provide some entertainment during half time. If you are not into football, I guess it stays in the "must read—professional" pile.

Our president, **Kevin Murphy**, updates us on two hot items—revision of the Standards for Educational and Psychological Testing, and proposed legislation that would outlaw discrimination by the Federal Government.

History buffs can thank **Ludy Benjamin** for providing us a snapshot of the early presidents (1945-1954) of Division 14.

Continuing the history theme, **Gerald Barrett** examines the context for the Nassau County Police Examination. Many of us enjoyed the symposium in St. Louis exploring issues related to this case. Here is some additional background and context.

Scott Highhouse and **Michael Zickar** contribute a provocative piece to this TIP. They ask us to examine the role of psychology in I/O. Have we strayed (too far) from our heritage? What master(s) do we serve?

Society Losses

Richard Campbell, SIOP's past president (1982–1983) has passed away. Richard's work was considerable in advancing both the science and the practice of I/O. He had recently contributed an article for our special historical issue of TIP (January, 1997, pp. 80–86). Richard's piece focused on the Society's decision to incorporate. **Ray Katzell** was kind enough to provide an obituary for this TIP.

The society was also informed of the death of **Harry Gollob**. Harry was perhaps best known for his quantitative work. As an elected member of the *Society for Multivariate Experimental Psychology*, the journal *Multivariate Behavioral* Research is publishing his obituary, see volume 32 number 2.

The TIP editorial board continues its excellent work

Phil Craiger and **Jason Weiss** illustrate computer-based training provided over the internet.

Charmine Härtel coordinated a contribution that presents dynamic modeling via microworlds. Wearing my computer science hat for a moment, I can tell you that models based on these worlds are used extensively in other disciplines. They are exceptional for testing assumptions and boundary conditions of theories. I also want to mention that **Dan Ilgen** and **Chuck Hulin**

have books in the works that focus on computational modeling of psychological phenomenon. Be on the look out for that excellent resource.

Student editors **Dawn Riddle** and **Lori Foster** make good on last column's promises. They provide insights on: differences in master's thesis work versus the dissertation; role playing; and tips on balancing life in graduate school with any other life you might be contemplating. Dawn and Lori have received many responses from their request for student program representatives, but they have not heard from all programs. So if yours is "representatively challenged," give them a call.

Allan Church takes on Organizational Learning, and **Tom Baker's** "Practice Network" is full of fun topics—successful consulting and a new archeological find—to name but two. **Dirk Steiner's** "International Forum" introduces us to two French professional associations.

There are a couple of additional gems to be found in this issue too.

Society Business

- Call for Fellowship Nominations - **Bob Dipboye**
- Announcement of the Annual Conference - **Katherine Klein**
- Upcoming Workshops - **Angie McDermott**
- Doctoral Consortium - **Steve Rogelberg** and **Lyse Wells**
- SIOP Award Committee Members - **Adrienne Colella**
- Call for APA Program Proposals - **Michael Burke**

People on the move...

Herman Aguinis has left the Psychology Department and joined the College of Business and Administration at the University of Colorado at Denver. **Steve Ashworth** has moved from AllState to Microsoft. The College Entrance Examination Board announced the promotion of **Howard Everson** to Vice President of Teaching and Learning programs. And SIOP Executive Committee member **Wayne Camara** became the Executive Director for Research and Development at the College Board. **Peter Chen** tells me that **Jeff Vancouver** has left New York University to join the I/O program at Ohio University. Jeff is a past Michigan State University student of **Neal Schmitt**. **Richard F. Martell** has moved from Columbia to Montana State where he will be affiliated with the applied program and co-directs the Applied Psychology Service. **Lynn Summers** and **John Fleenor** with others are forming a company called Mediappraise to deliver I/O services over the internet. HumRRO announces the addition of **Bob Ramos, Gina Medsker** and **Doug Quartetti** to their staff.

...and in the News

Dennis A. Hawver has been elected President of the Institute of Management Consultants for central New Jersey.

Traveling in Cyberspace: Web-Based Instruction

J. Philip Craiger and R. Jason Weiss
University of Nebraska at Omaha

In our last installment of Traveling in Cyberspace we discussed computer-based training (CBT): computer programs developed and used to deliver training and education to end-users. In this installment we discuss a type of CBT that delivers training over the World Wide Web (WWW). First, we describe the best implementation of web-based training we've found, the *Interactive Patient*. Next, we describe some current web sites that provide information on developing testing web-based training sites.

The Interactive Patient

The best implementation of web-based training we have found is located at the Marshall University School of Medicine (URL: http://medicus .marshall.edu/medicus.htm). Developed by Cristoph Lehmann, M.D. (now at the Johns Hopkins School of Medicine) and Kent Hayes, *The Interactive Patient* is a realistic, interactive computer simulation of a patient's visit to a physician's office. The educational goals of the *Interactive Patient* include increasing students', interns', and physicians' knowledge of illness and disease; enhancing communication, examination, and clinical problem-solving skills; as well as augmenting risk/benefit analysis and professional behavior (Lehmann, Lehmann, & Freedman, 1997).

The main menu presents the user with four choices, reflecting the typical sequence of an office visit: obtain an oral history from the patient; give the patient a physical exam; order lab tests and x-rays; and perform a diagnosis and treatment based on the results of the findings. Figure 1 is a screen shot of the initial encounter as the physician collects an oral history of the patient's ailment.

The interface for the oral history section of the simulation employs natural language understanding (NLU). NLU has been studied for quite some time by researchers in artificial intelligence (AI), and is generally considered to be one of the most difficult problems in AI. The NLU capabilities of the *Interactive Patient* are quite sophisticated. The user types in a question in the space provided (see Figure 1), and then clicks on the "Ask-Question" button. The question is then sent to the remote computer program which parses the question (i.e., attempts to "understand" it), retrieves the relevant answer from a database, and responds to the user electronically. Although we are not physicians, our questions seemed to elicit appropriate responses.

Users may also perform a (virtual) physical exam on the patient. The physical exam section allows users to (virtually) inspect, palpate, or auscu-late (i.e., use a stethoscope to listen to the heart and lungs) the patient. For example, if the patient claims lower back problems, the user/physician would use the mouse to point to a picture of the portion of the back that he/she

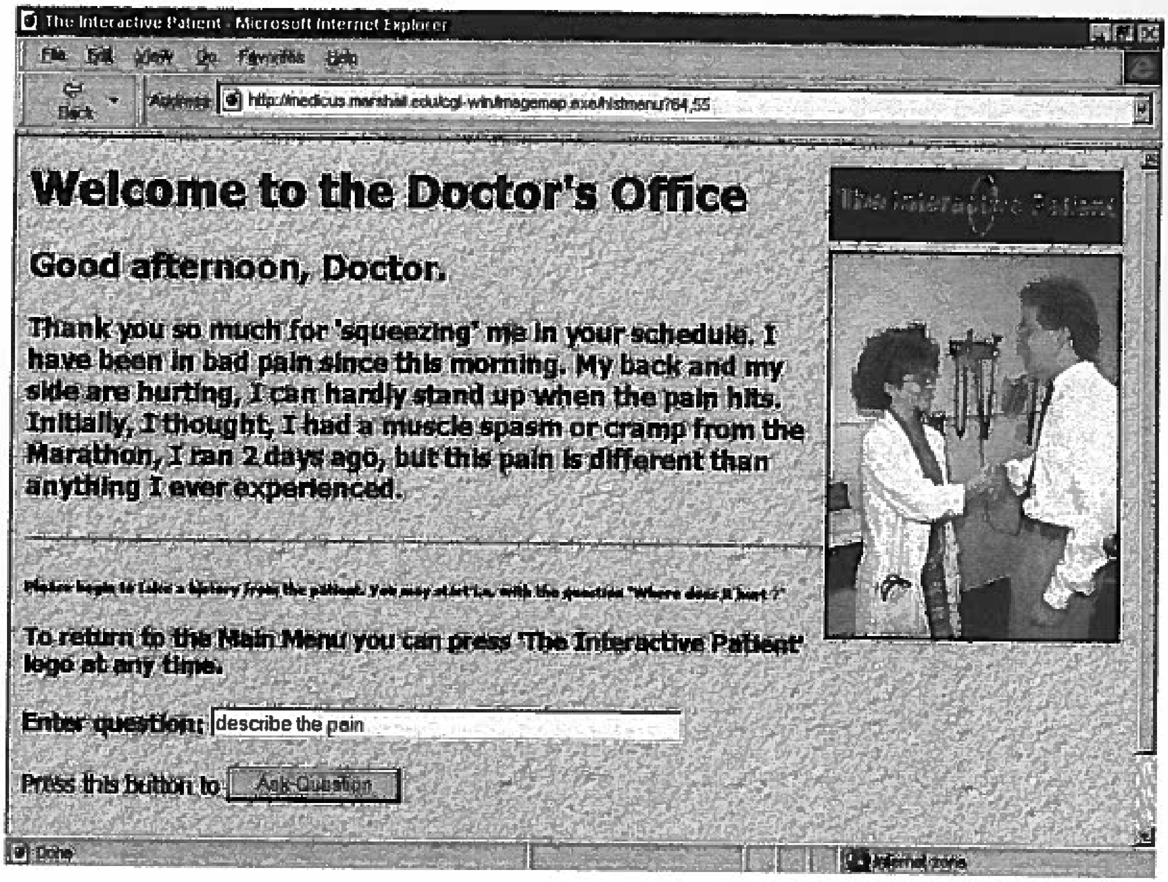

Figure 1: **Initial encounter—oral history**

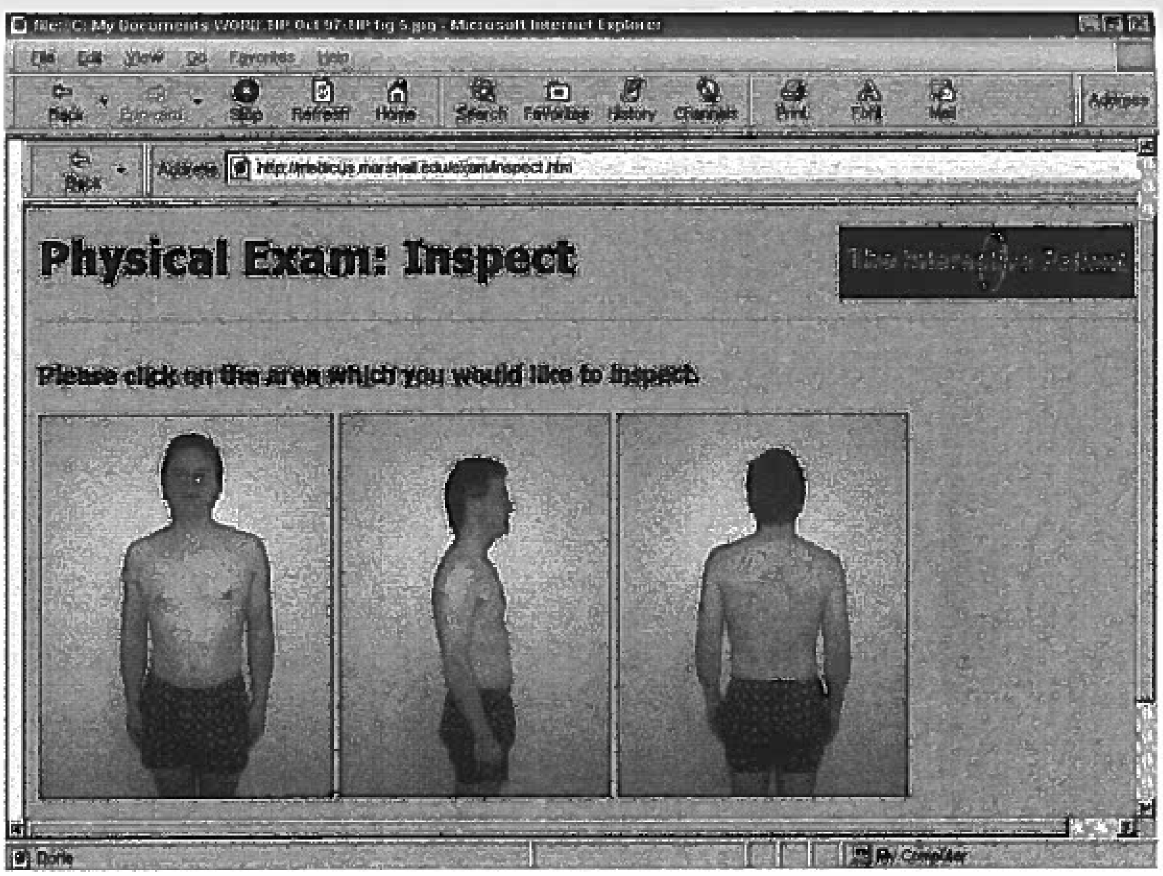

Figure 2: **Selection of lower back for closer inspection**

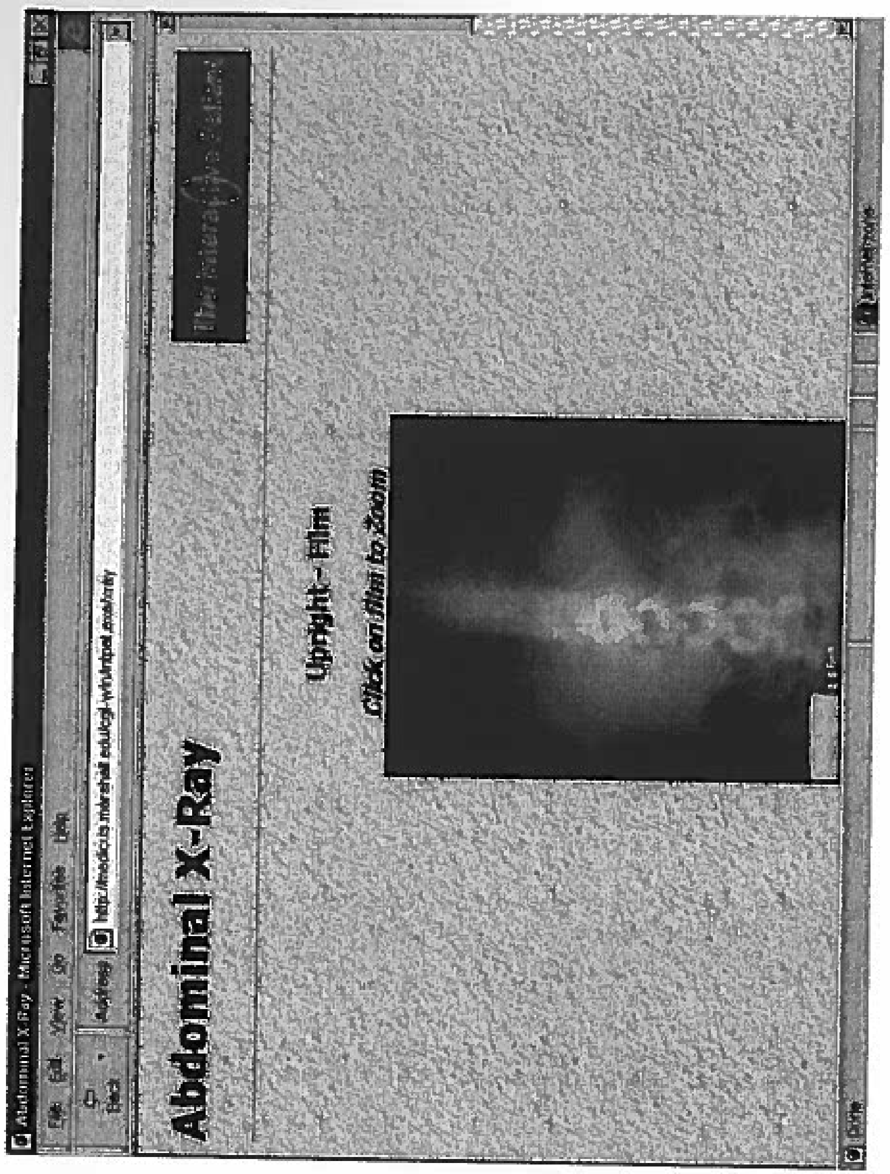

Figure 3: **Actual x-ray of patient's back**

would like to inspect (see Figure 2). After clicking on the relevant area, the user/physician receives feedback as to what, if anything, was found.

The lab and x-ray section allows the user/physician to request any combination of 21 possible lab tests (e.g., electrolyte panel, blood count, urine analysis, etc.) and five sets of possible x-rays (e.g., chest, abdominal, lumbar, etc.) of the patient. As in real life, the results of the x-rays are actual x-ray films of the patient, which the physician must inspect and interpret. Figure 3 shows a lumbar x-ray.

Finally, based on the oral history, physical exam, and lab/x-ray results, the physician selects from approximately 30 diagnoses, and one or more of 22 possible treatment plans. The diagnosis and treatment plan are then submitted electronically to be graded. The user then receives, via e-mail, a response indicating whether the diagnosis and treatment plan were correct.

The reason we chose to describe the *Interactive Patient* is that it is a sophisticated and realistic training device used by real students in a complex domain. The *Interactive Patient* has won numerous awards, and students' evaluations have been overwhelmingly positive (Lehmann et al., 1997). The *Interactive Patient* was planned and produced in accordance with the Accreditation Council for Continuing Medical Education, and physicians successfully completing the *Interactive Patient* receive continuing education credits through Marshall University School of Medicine. Dr. Cristoph Lehmann, co-developer of the *Interactive Patient*, is in the process of developing an "improved" version at the Johns Hopkins School of Medicine (C. Lehmann, personal communication, August 14, 1997).

Advantages and Disadvantages of Web-Based Instruction

Web-based instruction (WBI) is essentially a meshing of computer-based instruction and the WWW. Therefore, it offers an interesting hybrid of benefits and pitfalls that are related in a fairly complex fashion. The choice of moving to WBI should not be a "no-brainer," since there is much to consider. We describe some of the most common considerations below.

Cost. It seems that cost is inversely proportional to the amount of effort it will take to get the WBI system on-line. Authoring systems such as Authorware and Asymetrix Toolbook used to cost many thousands of dollars for a single license. Recently, prices have dropped drastically and companies are bundling additional useful software with their authoring systems. Nonetheless, a full-blown WBI set-up with authoring, server, and tracking software can cost a daunting amount of money—even before considering the time and expense of developing and maintaining the system. In contrast, one can program a reasonable WBI less expensively using simple HTML (HyperText Markup Language, the formatting language of the World Wide Web). However, such an endeavor could quickly become unmanageable depending on the complexity of the WBI under development.

When pursuing WBI, it is helpful to think in terms of costs per learner. If the course is highly amenable to WBI, it can be economically delivered to a far greater audience than previously feasible, reducing per-learner costs to a fraction of other instructional delivery methods. In addition, if learners pay for the instruction, an established WBI system could represent a powerful source of income with little ongoing expense to the organization.

Instructional effectiveness. The main issue is to find a method by which course material can be efficiently delivered to a student while maximizing the likelihood that the student will actually learn and retain the information. An optimistic approach finds many advantages to WBI, most of which are associated with computer-based instruction. These include the power of self-paced, experiential learning, the assurance of uniform delivery, and the richness of multimedia. In addition, the use of the WWW promises the availability of the course from anywhere on the planet. Although it's hard to imagine a student working on a statistics tutorial while lying on a beach in the south of France, the technology will be there should the inclination strike.

Aside from some case studies (see Khan, 1997), it is too soon to expect much systematic research evaluating the effectiveness of WBI. Although computer-based instruction is generally well-regarded, use of the WWW essentially turns it into a new form of distance learning. A recent review of research on distance education held that it can be as effective as face-to-face learning, provided that proper support and feedback are provided (Threlkeld & Brzoska, 1994). On the other hand, the flexibility of self-paced distance learning may also be detrimental. Classrooms and set class times create a separation between learning and non-learning activities, which in turn helps students concentrate on the task at hand. Students taking WBI instruction at home may potentially be distracted by other demands and therefore concentrate less than in a more traditional setting. Clearly, empirical research is necessary to confirm that WBI's potential is met in practice.

Logistics. In theory, WBI should be easier to implement widely than CBI, given that CBI typically relies on CD-ROMs or in-house networks, thus making widespread distribution somewhat difficult. The ubiquity of the Web means that access to course material is simple and instantaneous. However, simple access does not necessarily mean quick access. The Internet can be very slow in the evenings, especially when accessed via modem. Consequently, when WBI systems include large sound, graphics, and animation files, the effect might be a very useful WBI system that is also effectively unusable at certain times of the day. While technologies such as streaming (in which the client computer plays content while it is being delivered by the server) reduce this problem, burgeoning use of the Internet and perennial bandwidth issues suggest that it will remain a concern.

Another logistical issue concerns student tracking and testing. So far, only one WBI system (Asymetrix Librarian) could be found which tracks student progress in a database. Other authoring systems permit deployment

over the Internet, but offer no convenient ways to monitor student progress. Further, testing as it is commonly employed in academic settings is all but impossible. The former challenge will inevitably be met in future generations of software. The latter will simply require course designers to develop different ways to evaluate students in courses that require student grading.

WBI is still in its infancy. However, we have found an increasing number of Web-based courses, reflecting not only growth in the technology but also a widespread appreciation of its potential as an instructional tool. We invite readers to send us URLs of interesting and innovative Web-based courses. We can be reached via e-mail at pcraiger@unomaha.edu and weiss@unomaha.edu. Happy surfing!

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Vantage 2000: Using Computer-Based Technology to Advance I/O Psychology Towards Time-Oriented and Dynamic Methodologies and Practices

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The Vantage 2000 column seeks to provide a forum for discussing the latest in practice, research, and theory especially in relation to emerging views and characteristics of work forces and workplaces. The informative value of the column depends heavily upon your knowledge, experience, and intuition. You can personally help by sending me a note—be it your vision of the future, a problem you are trying to solve, research you are conducting, a consulting tip, something you'd like to hear about, or the name of a person or organization you recommend that I contact. You can also send newspaper clippings, references to a great article or book that you read, or areas of emerging controversy (for your organization or for theory). Further, I am seeking organizations or academic departments to profile that provide examples of innovation in philosophy, research, development, application, or implementation aimed at meeting the demands of contemporary and emerging environments. I am eager to receive your ideas and submissions. You can reach me at any of the following: Graduate School of Management, The University of Queensland, Brisbane, Queensland 4072, Australia; Phone: +61 7 3365-6747; e-mail: C.Hartel@gsm.uq.edu.au; Fax: +61 7 3365-6988.

This Vantage 2000 column features a contribution entitled "Microworlds for a Dynamic I/O Psychology in the 21st Century" and written by Nicholas DiFonzo (Rochester Institute of Technology), Donald A. Hantula (Temple University), and Prashant Bordia (University of Queensland). If you would like to contact the authors directly regarding this paper, the contact address is: Nicholas DiFonzo, Department of Psychology, Rochester Institute of Technology, 18 Lomb Memorial Drive, Rochester, NY 14623, Office Phone: (716) 475-2907, e-mail: NXDGSS@rit.edu, Fax: (716) 475-6715 As you read their paper and reflect upon the traditional methods used in I/O research and practice, you are sure to agree that advances are needed which enable us as researchers and practitioners to capture the time-oriented and dynamic phenomena with which I/O Psychology is concerned. Your ideas, experiences, and views on achieving this important agenda are sought. My thanks to Nick, Don, and Prashant for their contributions.

Microworlds for a Dynamic I/O Psychology in the 21st Century

Though most phenomena in I/O Psychology are dynamic in nature, most methodologies possess a decidedly static quality. By dynamic, we mean interactive, time-dependent, and non-linear (Gersick, 1989, 1991; Hogarth, 1980; Hollenbeck, Ilgen, Phillips, & Hedlund, 1994; Vallacher & Nowak, 1994). More precisely, dynamic phenomena usually involve a series of decisions/actions over time whose parameters change as a consequence of previous decisions/actions as well as factors unrelated to actor behavior (Brehmer, 1992). Such phenomena are the norm in I/O Psychology (e.g., impression formation processes, group norm formation, interpersonal communication and absenteeism patterns are all time-oriented and interactive). By static, we mean inert, snap-shot, and linear (cf., Lundberg, 1976; Stone, 1977; Thomas & Tymon, 1982). Static methodologies typically involve gathering data on a small number of variables for a small number of occasions. Static methodologies also abound (e.g., survey questionnaires, telephone interviews, and laboratory measures are usually administered once). Unfortunately, results of static methodologies are almost always used to make inferences about dynamic phenomena. This is akin to attempting to understand a video by viewing one frame and is therefore a serious drawback of much current I/O Psychological research and practice.

This argument is not merely a reiteration of the deficits inherent in cross-sectional as compared to longitudinal approaches (e.g., Stone, 1977). While we certainly concur with the advantages that longitudinal methodologies possess, we go beyond this in advocating a methodology that is even more sensitive to time-dependent change and that, in addition, is explicitly interactive. Typically, a more "fine-toothed" time-orientation (i.e., more snap-shots) is necessary to capture complex change over time. Semi-annual measures of job-satisfaction, for example, are likely to miss the waxing and waning that occurs with greater rapidity than twice per year.

Moreover, even increasing the frequency of measurement in a longitudinal study can be no more than a repetition of static measures (e.g., distributing surveys on a monthly basis). That is, the measure itself may not capture how situational changes have occurred in response to actions performed by the subject, as is the case when job parameters change as a result of subjects' job satisfaction survey responses. To study dynamic phenomena then, not merely longitudinal, but dynamic methodologies are needed.

Microworlds (MWs) are computer-created laboratory environments that are able to simulate dynamic experiences encountered in the field (Brehmer, 1992; DiFonzo, 1997; Omodei & Wearing, 1995). The key identifying feature of MWs is that they have the capacity to model dynamic decision systems (DDS).

Brehmer (1992; cf. Vallacher & Nowak, 1994) has described a DDS task as one where: a sequence of decisions are necessary to achieve the goal; the decisions are interdependent (i.e., decision parameters change as a result of previous decisions); the decision problem also changes due to autonomous system factors; and decisions are executed within a real or simulated time frame. An example of a MW used to investigate the behavioral effects of rumor is BROKER (DiFonzo & Bordia, in press).

BROKER was a stock investment game in which participants traded on one stock for 60 consecutive simulated days. The study manipulated the

presence and credibility of information presented concurrent with trading (i.e., news/published/unpublished rumors) and measured subjects' trading strategies. BROKER illustrates each component of a DDS in which the decision task was to maximize profit: subjects traded sequentially over 60 trading "days;" each decision impacted subsequent decisions parameters (e.g., cash available); the decision problem changed in response to trading decisions and an autonomous factor (price changes); and decisions were made in simulated real time (each "day" lasted 20 seconds). Other MWs have been used to study escalation (INVE$TMENT CHOICE$; Hantula & Crowell, 1994a, 1994b), group decision making under stress (LHX ATTACK CHOPPER; Härtel & Härtel, in press), and foraging patterns in consumer behavior (CYBERSHOPPER; Rajala & Hantula, 1997).

MWs offer compelling advantages to I/O researchers and practitioners endeavoring to understand dynamic I/O phenomena. We outline here two attractive benefits of MW methods stemming from their dynamic character: enhanced internal validity (afforded by high levels of experimental realism) and external validity (afforded by dynamic kinds of mundane realism).

First, even simple MWs offer a convincing experimental realism not often experienced in laboratory investigations. Experimental realism is the extent to which the experiment involves subjects, engrosses them, and they take it seriously (Aronson & Carlsmith, 1968). In our own MW studies mentioned above, subjects invariably reported a high degree of involvement. A few pounded their fists on the computer desk and cried with delight (or in agony) as they pursued the experimental task! Experimental realism is critical because it enhances internal validity (Aronson & Carlsmith, 1968). In order to infer that effects are due to the experimental manipulation, subjects must be involved and engaged in effortful processing. Otherwise, outcome behaviors may be caused by motivational factors (e.g., boredom).

Second, MWs offer dynamic kinds of mundane realism which have positive ramifications for external validity (generalizability). Mundane realism is the probability that experiences encountered in the study will occur in the "real world" (Aronson & Carlsmith, 1968). Four points related to MW mundane realism are noted here. First, because many computer-mediated activities (e.g., stock trading, Internet shopping, on-line interaction with co-workers, on-the-job computer-intensive activities) are increasingly popular, computer simulations are already predisposed toward high levels of mundane realism.

Second, the dynamic quality of most field experiences is likely to be an essential feature that only dynamic methods (i.e., MWs) can adequately capture. Simply put, a simulation must present the central features of the field experience in order for results to be validly generalized (Berkowitz & Donnerstein, 1982). As argued above, the dynamic aspects (e.g., complexity, time-orientation, interactivity) of many field phenomena are often essential to those phenomena; because MWs have been successful in reproducing such dynamic features (Gianutos, 1994; Omodei & Wearing, 1995), it follows that their replication enhances mundane realism in a vital manner heretofore rarely encountered.

Third, external validity, for all but the most narrow investigative foci, may in fact be hindered by excessive attention to mundane reality. For example, the highly detailed simulation of a manufacturing plant setting may render its generalizability null for a service industry environment (Dipboye & Flanagan, 1979). This limitation derives from the fact that, for most research questions, there is no "idealized" or "typical" real life situation that can be recreated. Ironically, this fact can make lab simulations that replicate dynamic features of the field highly generalizable. This is because MWs capture the essential dynamic process of a phenomena that may be expressed in a variety of specific domains. For example, the BROKER simulation possessed few specific static features of a stock trading experience (e.g., stock earning reports, broker fees, analyst opinions), but the DDS character of the encounter implied its relevance to phenomena where sequential decisions occur in the midst of rumors (e.g., turnover, purchase, and promotion decisions amidst, respectively, reorganization, product contamination, and turnover rumors; DiFonzo, Bordia, & Rosnow, 1994). Similarly, the manner and efficacy in which group decisions are achieved under pressure in a computerized helicopter simulation (LHX ATTACK CHOPPER) has implications for a larger genre of group decision processes than those occurring in aircraft (Härtel & Härtel, in press). Had BROKER and LHX ATTACK CHOPPER been too detailed (i.e., too mundane realistic), their relevance would have been constrained to stock trading and aircraft piloting, respectively. Relevance is a matter of judgment, but it should be noted that the usual measures (e.g., varying the sample, the procedure, and the specific experimental domain in which a process is said to operate) may be taken to increase generalizability (Aronson & Carlsmith, 1968). Milgram's (1963) memorable studies of obedience, for example, were highly generalizable because the sample was heterogeneous, he varied the experimental setting, and he varied the experimental procedure.

Fourth, generalizability (and any mundane realism it is based upon) may not be the primary intent of the study (Berkowitz & Donnerstein, 1982). Mook (1983) has argued that the aim of the investigation may be to test a theoretical idea using a given setting and with a given sample. It is not the setting or the sample that needs generalizing but the theory. Our own MWs, for example, were primarily concerned with testing psychological mechanisms linking rumor with behavior, partial reinforcement effects in escalation phenomena, and tenets from foraging theory in consumer choice behavior (though results are also germane to their respective simulated settings, i.e., securities trading and Internet shopping).

With these points in mind, we propose that the validity of a MW investigation may be evaluated by assessing experimental and mundane realism. Experimental realism may be measured by subject self-report of interest/involvement and/or by observation (e.g., non-verbal signs of attentive-

ness). Assessment of mundane realism is more complex; the phenomenological experience of the MW must correspond to the essential features of the field experience. This involves: (a) describing the fundamental features of the field experience, (b) describing the phenomenological experience of the MW, and (c) comparing a and b. These goals may be achieved by asking pilot-phase participants, experienced in the field phenomena under investigation, to perform functions a, b, and c. To the extent that, for example, stock brokers and helicopter pilots describe essential aspects of field and MW experience similarly, a case for MW mundane realism is supported. We reiterate, however, that mundane realism is only one component of generalizability, and that generalizability may not be the primary intent of the study; assessment of mundane realism may therefore not be appropriate in ascertaining MW quality.

Important implications of MWs also pertain to I/O Psychological practice. As compared with static methods, we propose that MWs will yield more highly reliable, valid, and useful data/results when dealing with dynamic phenomena. For example, the effectiveness of MWs in training has been known for some time (Cohen & Cyert, 1965). One can also imagine a variety of MWs for use in selection and evaluation. These would measure and/or teach, for example, dynamic problem solving skills under time-constraints (cf. LHX ATTACK CHOPPER; Härtel & Härtel, in press), predilection toward escalation behavior over repeated trials (cf. INVE$TMENT CHOICE$; Hantula & Crowell, 1994a), and the use and disuse of salient information in prediction (cf. BROKER; DiFonzo & Bordia, in press). MWs would also facilitate more dynamic approaches to such static methods as the ubiquitous employee satisfaction survey. The mouse paradigm (Vallacher & Nowak, 1994), where subjects indicate their moment-by-moment evaluations along a particular dimension by controlling the position of a mouse cursor along a line representing that dimension, may be especially useful here. For example, rather than ask employees to rate their pay satisfaction, they could indicate their level of pay satisfaction (using the mouse cursor) as increasing (or decreasing/randomized) levels of other job satisfaction dimensions (i.e., work, supervision, promotions, and co-workers; Smith, Kendall, & Hulin, 1969) were displayed over time. The advantages of these approaches parallel those discussed above, but in particular, it is clear that levels of a variable (e.g., job satisfaction) may not co-vary in a linear fashion with other variables, may vary in a predictable manner over simulated time, and may interact with other factors in complex ways not easily ascertained using static methods.

In these paragraphs we have argued for MWs as a dynamic tonic for static I/O Psychological methods; will the patient take the tonic? After all, dynamic decision behavior has thus far received little attention (Brehmer, 1992). However, three recent trends bode well for MW's increasing popularity. First, access to microcomputer hardware is now readily available. Second, the proliferation of user-friendly (e.g., object-oriented and authoring) programming software has reduced the expertise required to build dynamic (and, incidentally, vividly engrossing multi-media) MWs. Third, the rising popularity of the Internet offers I/O researchers the intriguing capability of casting a wider net for experimental subjects. A virtual laboratory to which managers, executives and other potential subjects may be invited can be created, thus mitigating the perennial problem of getting working people into the laboratory. The possibility that the (dynamic) laboratory "mountain" will finally come to the manager and executive "Muhammad" is exciting. With these trends in mind, we foresee a more central role for MW research and practice as I/O Psychology shifts from static to dynamic paradigms in the 21st century.

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Column Mission and Call for Contributions for Upcoming Columns

My goal for this column is to discuss the future of practice and research related to work and the workplace. I'd like to include perspectives from outside North America as well. To this end, I hope that, no matter where you are in the world, you will e-mail, call, write or fax me (see contact information below) with your suggestions, views, requests and contributions (the name of an organization or academic department I can profile in a manner consistent with the goals of this column, newspaper clippings, company program pamphlets, news of research-in-progress, experience with OD and HR strategies/programs and any other information—nothing is too small). I would also be interested to hear what types of information you would like me to share with you from the Australasia region. Please send any information relevant to the points discussed in this column along with your ideas for future topics to me at: Graduate School of Management, The University of Queensland, Brisbane, Queensland 4072, Australia; Phone: +61 7 3365-6747; fax: +61 7 3365-6988; e-mail: C.Hartel@gsm.uq.edu.au.

Call for Fellowship Nominations

Robert L. Dipboye

Each year, the Fellowship Committee requests and evaluates nominations of society members who have made unusual and outstanding contributions to psychology for the status of Fellow. The Fellowship Committee strongly encourages nominations of individuals from all areas of endeavor within our profession.

We particularly encourage nominations from candidates who have made their contribution through the practice and application of psychology, a group that is often under-represented in the nomination process. There are many I/O Psychologists who have contributed substantially to the field by applying psychology in organizations, and helping others apply our science in real-world settings. We encourage nominations of individuals who have accomplished this important goal.

Detailed information on criteria considered by the Fellowship Committee was published in *TIP*, April 1994, pp. 31–34. General criteria are summarized below.

Criteria

- Society Member for no less than 2 years at the time of election
- At least three letters of recommendation from Fellows of the Society
- An unusual and outstanding contribution to the field. This contribution can be achieved through research, practice, teaching, administration, or any combination of these. The distinguishing characteristic of Fellows is that they have made a contribution that goes beyond the norm of consistent and competent research, practice, teaching, et cetera, and that their efforts have helped advance our field.

Nomination

- By either Society Fellow or Member

Due Date

- December 1, 1997

Request Nomination Materials From and Direct Questions to:

Robert L. Dipboye, Chair, SIOP Fellowship Committee
Department of Psychology MS-25, Rice University
6100 South Main
Houston, TX 77005-1892
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The Early Presidents of Division 14: 1945–1954

Ludy T. Benjamin, Jr.
Texas A&M University

The early presidents of the American Psychological Association's (APA) Division on Industrial and Business Psychology, Division 14 (now the Society for Industrial and Organizational Psychology), had been part of the leadership of the American Association for Applied Psychology (AAAP). The AAAP was founded in 1937 and initially consisted of four sections. Section D was designated the Industrial and Business Psychology Section and was organized by **Harold E. Burtt** and **Walter Van Dyke Bingham** who served as the first two presidents of the Section. This section would become Division 14 of APA in 1945 when APA merged with AAAP (see Benjamin, in press). Nine of the first 10 Division 14 presidents had been active in AAAP's Section D.

This article provides brief descriptions of each of the first 10 presidents of Division 14. These sketches describe the principal interests and accomplishments of the key leaders of the division in its initial decade and provide the reader with sources for additional information on each of these early presidents. A more detailed history of Division 14/SIOP can be found in Benjamin (1997) and in the January, 1997 issue of *The Industrial-Organizational Psychologist.*

Bruce Victor Moore (1891–1977), the first Division 14 president, had chaired several committees in the AAAP, including the Committee on Training that explored models for professional education and training. He earned his doctorate in psychology in 1921 at the Carnegie Institute of Technology in the Applied Psychology program that Walter Van Dyke Bingham had begun in 1915. Moore's dissertation involved a selection test for Westinghouse Electric and Manufacturing Company that differentiated engineers working in sales from those better suited to design. Moore followed up that work with the development of an interest questionnaire, a technique that E. K. Strong, Jr. would later develop into the Strong Vocational Interest Blank. In 1920, a year before finishing his doctorate, Moore accepted a faculty position at Pennsylvania State College (later University) where he remained until 1952, chairing the Department of Psychology for many of those years. His presidential address was entitled "The Work, Training, and Status of Supervisors as Reported by Supervisors in Industry." The study was based on an impressive data set of more than 600 questionnaires that were supplemented with more than 200 personal interviews of supervisors in a number of Pennsylvania industries. Among Moore's many published works was a book co-authored with Bingham, entitled *How to Interview* (1931). That book went through three very successful editions (Bernreuter, 1979; Moore, 1961, no date).

The second of the Division 14 presidents was **John Gamewell Jenkins** (1901–1948), who was chair of the Psychology Department at the University of Maryland when elected president for 1946–1947. He earned his doctorate in psychology at Cornell University in 1929, although he had been teaching psychology at Iowa State College (later University) earlier. As an assistant professor at Cornell in 1935, Jenkins published *Psychology in Business and Industry: An Introduction to Psychotechnology*, a text that focused on psychological problems in selection, worker motivation, production, and market research. Jenkins left Cornell in 1937 to accept the chair's job at Maryland. There he would build an excellent program in industrial psychology, hiring Edwin Ghiselli and Roger Bellows in his first 2 years. As the United States prepared for the possibility of war, Jenkins chaired the National Research Council Committee on Selection and Training of Aircraft Pilots in 1939–1940 and headed the research unit of that committee for another year. During the war he was in charge of the Aviation Psychology Section of the Navy, where he attained the rank of Captain. His very promising career was cut short by his suicide the year after he completed his Division 14 presidency (Anderson, 1996; Bennett, 1948a).

George Kettner Bennett (1904–1975), who served 2 years as Secretary of Section D in the AAAP, was the third president, and the first to work exclusively in industry. He earned his doctorate in psychology at Yale University in 1935 under Clark L. Hull and went to work that year as Director of the Test Division of The Psychological Corporation, of which he became president in 1947. Bennett's research focused on construction of aptitude tests, design of automatic communication devices, and evaluation of tests of scientific aptitude. At The Psychological Corporation, Bennett authored a number of published tests including ones for college readiness, hand-tool dexterity, mechanical ability and comprehension, and productive thinking. One of his most important works was the Differential Aptitude Tests, which he used for research purposes for many years (Bennett, Seashore, & Wesman, 1947). Bennett's Division 14 presidential address noted industry's increased interest in psychologists following World War II and called for industrial psychologists to seize the moment by enhancing their science, their code of ethics, and their public relations (Bennett, 1948b).

The fourth president, **Floyd L. Ruch** (1903–1982), was the last Secretary for Section D and the first Secretary of Division 14. Ruch served the full 3-year term as Secretary for Division 14 and then was elected president the next year, a pattern that would repeat itself many times. His presidential address was entitled "The psychologist testifies in trademark confusion cases." Ruch earned his Ph.D. in psychology from Stanford University in 1930 under Walter Miles. After a postdoctoral year at the Sorbonne, he worked for several years in research positions for The Psychological Corporation and for the Opinion Research Corporation. At the University of Southern California (USC) he was chair of the program in business and industrial psychology from 1942 through 1968. During his tenure at USC he

founded a consulting firm in 1952, Psychological Services, Inc., which he headed until his death. Ruch is probably best known for his enormously successful introductory psychology textbook, *Psychology and Life*, first published in 1937. That book is still in print today in subsequent editions by Philip Zimbardo and Richard Gerrig (Gobble, 1988; Tenopyr, 1983).

Carroll Leonard Shartle (1903–1993) was head of Section D in 1945 at the time of the APA-AAAP merger and, as such, was appointed chair of the organizing committee for Division 14. He became the fifth president of the Division in 1949. He earned his Ph.D. in 1933 with Harold Burtt at Ohio State University. One of his earliest jobs was in the Occupational Research Program of the Department of Labor where in 1939 he produced the first *Dictionary of Occupational Titles*. After World War II, Shartle returned to the Ohio State campus where he initiated the Ohio State Leadership Studies at the Personnel Research Board. He remained there for his career except for several assignments that took him to government jobs in Washington, DC.

Shartle's many publications included two books, *Occupational Information* (1946) and *Executive Performance and Leadership* (1956). When the *Annual Review of Psychology* began publication in 1950, Shartle was asked to write the first entry on industrial psychology for that inaugural volume (Shartle, 1950). His legacy to industrial psychology is considerable, especially in the areas of job analysis, job classification, job counseling, and leadership (Eyde & Brumback, 1994; Stead & Shartle, 1940; Shartle, no date).

The sixth president of the Division was **Jack W. Dunlap** (1902–1977), who also served as president of the Psychometric Society, the Human Factors Society, and two other APA divisions. He earned his doctorate at Columbia University in 1931, working with E. L. Thorndike; his dissertation was a human factors study on the design of automobiles. After graduation, Dunlap taught at Fordham University and the University of Rochester, where he developed the *Academic Preferences Blank* in 1940. During World War II he worked on the selection and training of pilots as part of the Navy Aviation Psychology Program where he worked with John Jenkins. After a brief tenure with The Psychological Corporation following the war, Dunlap started his own company, Dunlap and Associates, which he headed until his retirement in 1966. The company was quite successful, specializing principally in human factors work for industry and government on a variety of problems in highway safety, emergency medical care, and flight training (Kurtz, 1979).

When **Marion Almina Bills** (1890–1970) was elected the seventh president of the division in 1951, she was the second to work full time in industry and the first woman to hold any elected office in Division 14. (It would be 16 years before another woman was elected to any of the offices, when in 1967, Patricia C. Smith became a division representative to the APA Council of Representatives, and 28 years until another woman was elected president—Mary Tenopyr in 1979.) Bills, who earned her doctoral degree at

Bryn Mawr College in 1917, spent a year at the University of Kansas as an assistant professor before joining the Bureau of Personnel Research at the Carnegie Institute of Technology where she worked from 1919 to 1923. In 1924 she took a job in personnel research with Aetna Life Affiliated in Hartford, Connecticut, eventually becoming an officer of the company from which she retired in 1955. Bills had served a 3-year term as the first Secretary of Section D from 1938 through 1940. In 1946 she was appointed by APA to the initial Committee on the American Board of Professional Examiners in Psychology, a committee instructed to prepare certification procedures for professional psychologists (Jenkins and Shartle were also on that nine-member committee). While at Aetna, Bills started a project to collect first-hand accounts of day-to-day life as a psychologist in industry. These 2-week diaries were to be used as a casebook to train psychologists for work in industry. They also formed the basis of her presidential address, emphasizing the expanding roles for psychologists in industry, particularly in management (see Austin, & Waung, 1995; Bills, 1953).

The eighth president was **Jay Lester Otis** (1907–1992) whose Ph.D. was earned with Morris Viteles at the University of Pennsylvania in 1936. In 1938 he accepted a faculty position at Western Reserve University where he became Director of the Personnel Research Institute. This institute was founded to provide services to businesses, primarily through personnel research (selection, turnover, transfer, promotion, attitude surveys) and to offer a laboratory experience for graduate students training in industrial psychology (see Otis, 1946). During the Second World War he was one of many psychologists who worked with Shartle in the Occupational Research Program of the Department of Labor, an experience that led to his book on job evaluation (Otis & Leukart, 1948). Otis's research was in the fields of selection, job evaluation, employee attitudes, accident prevention, and vocational guidance. He retired from Case Western Reserve in 1972.

Harold A. Edgerton (1904–), the ninth president, received his doctorate with Herbert A. Toops at Ohio State University in 1928. He remained at Ohio State until 1947, first as a research assistant and then as a faculty member. During the war he served as Director of the Occupational Opportunities Service from 1941–1945. It was also at this time that Edgerton began a 27-year consultantship with Science Service that led to the establishment of the Westinghouse Science Talent competition. He and Steuart H. Britt designed the selection instruments that were used in this prestigious competition for the next 40 years. In 1947, Edgerton left Ohio State to become Vice President of Richardson, Bellows, Henry, and Co. of New York, a consulting firm focused on industrial psychology. He left that company in 1962, having served as its president, to found his own consulting firm, Performance Research, Inc. in Washington, DC. He retired from that firm in 1970. Edgerton's research focused on test construction, measurement of aptitudes, sales performance, and performance criterion measures (Edgerton, 1978).

Edwin E. Ghiselli (1907–1980) was the tenth president and the first not to have been a member of Section D of AAAP. His doctorate was received in 1936 at the University of California at Berkeley, with a dissertation on the effects of subcortical lesions on discrimination learning in rats. But his interests in industrial psychology came from his contacts with John Jenkins at Cornell University and the University of Maryland. Ghiselli returned to Berkeley as a faculty member in 1939 to establish a program in applied psychology and he remained there until his retirement in 1973, except for service during the war with the Aviation Psychology Research Program. His research career, which focused on psychological measurement, prediction models, management abilities, occupational tests, and performance earned him the first APA Distinguished Scientific Contribution Award (1972) given to an industrial psychologist (Beach, 1981; Ghiselli, 1978). His six books included works on personnel, theory of psychological measurement, validity of occupational tests, managerial thinking, and managerial talent. Ghiselli was, perhaps, the first of the Division presidents to work on organizational issues as well as the more traditional industrial topics of I/O psychology. SIOP's James McKeen Cattell Award was renamed for Ghiselli in 1983, an award given for innovations in research design.

These first 10 presidents were mostly in the same age cohort. Bills and Moore were born in 1890 and 1891 respectively, but the other 8 were born between 1901 and 1907. With the exception of Bills, who received her Ph.D. in 1917, they earned their doctorates in the decade and a half following the First World War, in an America that offered expanding op-portunities for applied psychological work. Most of them took traditional experimental training in psychology but over half of them did dissertation studies that were clearly in the domain of industrial psychology. It was their generation that would establish formal doctoral programs in the field.

Division 14 (and Section D of AAAP before it) was founded to advance the science and practice of industrial psychology and to promote work between psychologists in the academy and those in business. It has remained true to those objectives through a number of disciplinary changes that have seen the flowering of organizational psychology and organizational changes that have resulted in a semi-autonomous organization known as the Society for Industrial and Organizational Psychology, Inc. (SIOP). Whereas other applied specialties have fragmented within psychology, Division 14/SIOP has mostly held on to the science and practice of industrial/organizational psychology. This success stems, in part, from a commitment to a real integration of science and practice. That commitment can be seen in the early presidents of the Division drawn from psychologists working in universities as well as those in industrial and business settings.

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SIOP ANNUAL CONFERENCE '98

Wyndham Anatole Hotel
Dallas, Texas
April 24 – 26, 1998

Workshops and Doctoral Consortium: April 23, 1998

Katherine J. Klein, SIOP Conference Chair
University of Maryland

Dallas, Texas.... Big city, big boots, big hats, big drinks... and a big time to be had by all at the next annual SIOP Conference. We'll meet from Friday through Sunday, April 24th through the 26th, 1998 (with pre-conference workshops and the doctoral consortium on Thursday, April 23rd). What should you expect? The usual: excellent presentations, great conversations, good opportunities to network, and fun times with new and old friends. All this and a beautiful setting, too: the lovely Wyndham Anatole Hotel, with its extensive art collection, attractive grounds, and great exercise facilities.

Hotel, conference, workshop, and job placement registration forms will be available in January. You'll find them in three places: the Conference Registration booklet (mailed to all SIOP members in January), in the next issue of TIP (also coming out in January), and on the web (http://cmit.unomaha.edu/TIP/SIOP/SIOP.html). One way or another, we want to find you and get you signed up for the Conference.

If you have questions about or suggestions for the SIOP conference, please let me know. I can be reached at (301) 405-5929, or by e-mail: KLEIN@BSS3.UMD.EDU. I'd especially love to hear from you if you think you might like to donate a few hours of your time to SIOP during the Conference itself. We need many volunteers to keep the Conference running smoothly. If you do volunteer, you'll have some fun, you'll contribute to your Society, and you'll get an insider's view of the Conference.

The other members of the Conference Steering Committee would also be happy to hear from you. They are: **Kevin Murphy** (President), **Jim Farr** (Past President), **Steve Ashworth** (Job Placement), **Kevin Nilan** (Registration), **Angie McDermott** (Pre-Conference Workshops), **Tim Judge** (Program), and **Larry Peters** (Local Arrangements).

I look forward to seeing you in Dallas. Y'all come now! (I just couldn't resist....)

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SIOP Workshop Coming Attractions in 1998

Angie McDermott

Mark your calendars for the next SIOP Workshops to be held in Dallas on Thursday, April 23, 1998. Listed below are the Workshops we're planning. Even though the Workshop Committee has worked very hard to provide you with varied topics and presenters, there may be a few changes prior to the publication of the "official" roster.

1. **Recent Developments in Employment Litigation** by Keith M. Pyburn Jr., McCalla, Thompson, Pyburn, Hymowitz & Shapiro and William W. Ruch, Psychological Services, Inc.

2. **Performance Consulting: Making it Happen** by Thomas J. LaBonte and Robert Leininger, PNC Bank.

3. **System-Wide Re-Engineering Lessons** Learned From the Ford Motor Company Experience by Lee O. Sanborn, Ford Motor Company.

4. **Video-Based Situational Testing: Pros and Cons** by James L. Outtz, Outtz & Associates.

5. **Competency-Based Selection: Only One Piece of the HR Pie** by Michele E. A. Jayne, John Rauschenberger, Rick Smith, Ford Motor Company.

6. **Effective Customer Service Work Environments: Lessons Learned** by Benjamin Schneider, University of Maryland.

7. **How to Construct a Computerized Adaptive Test Using Item Response Theory** by Fritz Drasgow, University of Illinois and Michael Zickar, Bowling Green State University.

8. **Starting Teams: Keys to an Organized Approach** by Doug Johnson and Rodger Ballentine, Center for the Study of Work Teams at the University of North Texas.

9. **Strategic Leadership Development in a Global Environment** by Bill Mobley and John Baum, Global Research Consortia.

10. **Leveraging Multisource Feedback Systems to Drive Organization and Individual Change** by Carol W. Timmreck, Shell Oil Company and David W. Bracken, William M. Mercer, Inc.

11. **Leadership Development: Contemporary Practice** by Morgan W. McCall, University of Southern California and George P. Hollenbeck, Hollenbeck Associates.

12. **Beyond Utility Analysis: Building Business Partnership through Human Resource Metrics** by John Boudreau, Cornell University and Peter Ramstad, Personnel Decisions International.

13. **Strategies for Using Individual Assessment in Organizations** by P. Richard Jeanneret, Jeanneret and Associates, Robert F. Silzer, HR Assessment and Development and Sandra Davis, MDA Consulting Group.

14. **Learning to Work Across Boundaries: Lessons from the Front-line of Labor-Management Cooperation and Megamergers** by Gary Jusela, The Boeing Company and Tapas Sen, Transformational Strategies International, Inc.

Thirteenth Annual Industrial/Organizational Psychology Doctoral Consortium

Steven Rogelberg
Bowling Green State University

Lyse Wells
Rockwell Semiconductor Systems

Thursday, April 23, 1998 marks the day of the **Thirteenth Annual Industrial/Organizational Psychology Doctoral Consortium** held at the Wyndham Anatole Hotel in Dallas, the same site as the SIOP Conference.

The 1998 Consortium program includes an impressive lineup of speakers who have all made outstanding contributions to the field. Our breakfast speaker who will kick off the day's festivities will be **Jim Breaugh** of University of Missouri–St. Louis. Breakfast will be followed by two concurrent morning sessions, one featuring **Ann Marie Ryan** of Michigan State University, and another featuring **Stephen Gilliland** of the University of Arizona, recipient of this year's McCormick Award for Distinguished Early Career Contributions.

John Hollenbeck of Michigan State University and Editor of *Personnel Psychology* will discuss the pleasures and perils of the publication process following lunch. Our two concurrent afternoon sessions will feature **Joan Brannick** of Brannick Consulting and **Jerry Kehoe** of AT&T. The final event of the day will be a panel discussion including all of the above speakers. The panel will discuss career issues and take questions from the attendees.

Each I/O and HR/OB doctoral program will receive Consortium registration materials by January 1998. Enrollment is limited to one student per program up to a maximum of 40 participants. We encourage you to nominate students as soon as registration materials are received.

The consortium is designed for upper-level students close to the completion of their doctorates. Most participants will be graduate students in I/O psychology or HR/OB who are currently working on their dissertations. Preference will be given to nominees who meet these criteria and have not attended previous consortia.

If you need additional information, please contact: **Lyse Wells** by phone (714 221-5359) or e-mail at: Lyse.M.Wells@npbsmtp1.nb.rockwell.com.

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An Historical Perspective on the Nassau County Police Entrance Examination: *Arnold v. Ballard* (1975) Revisited

Gerald V. Barrett
University of Akron and Barrett & Associates, Inc.

In 1971, the City of Akron utilized a cognitive ability test to select entry-level police officers. The exam resulted in disparate impact against minorities and the City admitted that it had no validity evidence to support the use of the cognitive ability exam. As a result of the use of this test, a one-third minority quota was imposed by the court on the City (*Arnold v. Ballard*, 1975).

In September of 1973, I was commissioned by the City of Akron to develop a valid test battery for police force applicants. A class action suit alleging racial discrimination had been certified by the federal district court, consisting of Black persons who were applicants for the safety forces. The City needed a valid nondiscriminatory entrance test.

After reviewing the literature, I selected a cognitive ability test, a memory test, and two personality tests for a concurrent validation study. The memory test and personality tests were not only chosen to reduce potential disparate impact but also to predict job performance.

The concurrent validation study was completed in 6 months and resulted in a battery of four tests. The test battery was administered in June of 1974 to police force applicants, which included 159 blacks. Analysis of the test battery results revealed no significant difference in the mean scores of Blacks and Whites (*Arnold v. Ballard*, 1975).

The court found the test battery to be "substantially job related" and also found it to have practical significance (*Arnold v. Ballard*, 1975). Subsequent criterion-related studies were conducted for police Sergeants, police Lieutenants, entry-level Firefighters, fire Lieutenant, and fire Captain with similar results (*Black et al. v. City of Akron*, 1987; *Black Law Enforcement Officers Association v. City of Akron*, 1986; *La Monica v. City of Akron*, 1979; *Local 330, Akron Firefighter Assoc. v. City of Akron*, 1976; *Local 330, Akron Firefighter Assoc. v. City of Akron* (Appeal 1976); *Local 330 Akron Firefighters et al. v. City of Akron*, 1975; *Riley v. City of Akron*, 1986; *United Black Firefighter Association et al. v. City of Akron*, 1994; *United Black Firefighter Association et al. v. City of Akron*, 1985; *UBF et al. v. City of Akron*, 1996). All of the test batteries were accepted by the courts. Dr. Richard Barrett, the plaintiff's expert, "compared the Akron study favorably to others that he had seen." (*Arnold v. Ballard*, 1975).

After the first police class was selected using the 4-test battery, it became apparent that some recruits were having difficulty completing the police academy. The first job assignment for a new police recruit is to learn the

complex law and procedures required of a police officer. The initial solution was to make selection contingent upon passing a pre-academy course taught by police instructors.

The police pre-academy course was conducted for 6 weeks. I administered a content-valid test each week based on the course material. Applicants would not be hired unless they passed the pre-academy course. This was an obvious advantage for the potential new hires because they would not have to quit their current job before they had some assurance of being able to successfully complete the police academy.

Despite the general success of the selection system, and its obvious advantages to applicants, the pre-academy course was discontinued after a number of years. The City believed that the added cost of the pre-academy course could be avoided by having an entry-level test battery that selected candidates who were qualified and had the ability to pass the police academy. The elimination of the pre-academy course eventually led to the personality measures also being discontinued. After removing the pre-academy course from the selection system, it became obvious that the cognitive ability component of the test battery had to be weighted more heavily to continue successful selection of candidates. After considering the following issues involving the continued use of the personality measures, eliminating them from the test battery was the most logical solution. In the next paragraphs I present a number of the issues involved in the decision to discontinue the use of the personality measures.

First, there was a widespread impression that personality tests were biased against minority groups. Some plaintiff's experts testified that there was bias despite the empirical evidence to the contrary.

Second, I was concerned that some individuals would determine the identity of the tests and obtain a scoring key. I used various techniques to hide the identity of the tests, including increasing the number of items and not scoring a number of items. One court was concerned that applicants had to answer questions that were never scored.

Third, many items did not appear to be job relevant. This led some test takers to inquire about why they were being asked these questions. I had to explain why a construct labeled "social responsibility" was correlated with job performance.

Fourth, some testees were concerned that the personality tests were designed to reveal some "psychological" secrets about them. Elaborate procedures were used to maintain the confidentiality of individual responses.

Fifth, the testees were concerned that there were no right answers to the questions. They wanted to be told what they should study or do to obtain a higher score. As far as I know there is no legitimate advice you can give testees to increase personality test scores. This is particularity true if the test battery is to be readministered in 6 months. Some psychologists tell testees there are no correct answers to the personality test items, and simply tell the testees that they are to respond to the items as best they can. From the testees' point of view, there is always a correct answer; that answer which gives them a higher test score and thus results in their being hired.

Sixth, although this issue is currently being debated, I believe that the answers to personality test questions can be faked. This is a definite problem for a civil service test which gives a high test score to an individual who fakes well. This is a particular problem if the personality test is heavily weighted in the test battery. Other recent incidents have been reported of applicants' negative reactions to "failing the personality test" (Ryan, Ployhart, & Friedel, 1997). From the testees' point of view, there is no question that they can fail a personality test and not know the reason for their low scores.

Seventh, testees would testify in court or tell others they had been asked to respond to strange questions that they considered an invasion of their privacy. In fact, the personality tests had been purged of all questionable items. But the perception still remained.

It was evident that practical considerations became more important than scientific or legal concerns in the use of personality tests for selection. Based on my experience, I would predict or recommend the following.

First, if there is a legitimate police academy in Nassau County, some recruits will have difficulty in mastering the material. I say legitimate because some police academies will give the identical final exam repeatedly until everyone passes.

Second, if the same test battery is given again in Nassau County, or anywhere else, some organization will offer a pretest training program for applicants to "beat" both the personality tests and cognitive tests. In fact, I would predict that if the Nassau County test battery was administered again the only applicants who will not receive near perfect score would be those who couldn't afford the $1,000 or more often charged for a "test-preparation seminar."

Third, I would recommend great caution in the use of a personality test in the public sector because of the negative reaction of the testees and the public in general.

Fourth, as Dr. Richard Barrett once testified as the plaintiff's expert concerning one of my test batteries, "The operation was a success but the patient died." In other words, the validation effort was conducted professionally, however the results were not impressive (The Court still ruled the test battery was valid.) While the Nassau County project (HR Strategies, 1995) was professionally conducted, and an effort was made to produce a valid, nondiscriminatory test, still the end result doesn't appear to be a scientific or practical advance over what was accomplished 25 years ago by a number of investigators.

Fifth, I would caution against the repeated use of any test battery in a large municipality like Nassau County. Recently I was involved in a test-development project, and subsequent litigation, for Sergeant promotions within the Chicago Police Department (*Adams v. City of Chicago*, 1996),

involving approximately 4,000 candidates. Within 1 week of the administration, a 150-item job-knowledge test was "reconstructed." In fact, I testified in that case that "a group of approximately 20 individuals could reconstruct the test after the fact by memorizing approximately 7 items each" (*Adams v. City of Chicago*, 1995). The confidentiality of a test is always important. A protective order was imposed by the court. I should add that the United States Department of Justice is investigating the validity of the Sergeants' exam (*Adams v. City of Chicago*, 1995). With an applicant pool of over 25,000, the Nassau County test battery has probably already been "reconstructed" with little effort by a small group of applicants.

Sixth, either having a quota or having an entry-level test with a greatly reduced cognitive component increases the probability of disparate impact on subsequent promotional examinations (Kroeck, Barrett, & Alexander, 1983). The upper levels of the safety forces requires even more knowledge of complex laws, regulations, and procedures than the entry-level patrol officer position. I would expect continued litigation in Nassau County when those individuals selected using this test battery sit for promotional examinations.

Seventh, the results of the Nassau County validation study have provided a distinct advantage for those of us who have to routinely defend our validation efforts in court. I am sure the defense attorneys will point out that the Department of Justice's "Dream Team" labored for years and produced a test battery they approved which had many limitations, and the battery still did not eliminate disparate impact. One could argue that the Department of Justice's endorsement of this selection procedure has lowered the legal standards for test validation.

It is my opinion that the debate concerning the Nassau County Police entrance examination has been a healthy one. It has shed light on the difficulty of developing safety forces examinations that are valid, and minimize disparate impact.

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TIP-TOPics for Students

Dawn Riddle and Lori Foster
University of South Florida

We're back, and as promised we're reporting to you on information we've gathered from...you. We received lots of great information from the survey printed in the July, 1997 issue, and we collected some additional in-depth information on a handful of questions from I/O program student representatives.[1] We hope that many of you will continue to take advantage of the interactive nature of this column; this way, we can continue to address the TIP TOPics that are most important to you.

Our **In the Spotlight** segment presents an I/O tool commonly employed by practitioners that is being put to good use by some academicians in order to fulfill a variety of educational objectives. What might this tool be? We know you're on the edge of your seat, but you have to keep reading to find out what we're talking about! The **You Know, I've Been Wondering...** segment of this column answers questions that students often struggle with regarding dissertation research. The questions we posed were to faculty members from a variety of I/O programs; therefore, this section offers sometimes conflicting perspectives regarding factors important in dissertation research. In response to this, we have tried to provide a framework within which to consider these different points of view. Finally, we offer **TIPs for Balancing Life and Graduate School**. This issue's "TIP" emphasizes not "going it alone." We take a look at a variety of formal and informal resources students tap to obtain social, professional, and academic support.

Before we go any further, we want to thank the students who have contributed their time and energy to provide us with a wealth of information to share. OK, off we go!

In the Spotlight... Practicing What we Preach

Our spotlight for this edition focuses on something you may have read about, studied, or even encountered at the office—role plays. Sure, we know about the use of role plays in assessment centers, selection systems, and training programs, but have you ever engaged in a role play exercise in your classroom? OK... but have you used it on a regular basis as a *learning tool*, or to *practice* specific skills, or to take an *exam*? Well, we know some of you have, because you told us! We decided to shine the spotlight on the use

[1] The information upon which this column is based was assembled from input by student representatives of various I/O programs around the globe. If you would like to be a student representative for your program, GREAT! Get in touch with us by any of the options provided at the end of the column!

of role plays in I/O training for two reasons: (a) because a lot of people *didn't* tell us about it, and (b) we thought it was a great idea to illustrate I/O psychologists *practicing what we preach*!

We've heard from students representing institutions where role plays have been implemented in a variety of situations. They provided some examples to share with you:

Learning. Role plays can be useful in the classroom to provide a concrete example of a concept or simply to illustrate a point. For instance, some students wonder why a course in ethics is offered, and even required, in various I/O programs. In order to illustrate the viewpoint that ethics is a necessary part of I/O training, an instructor can present students with ethical dilemmas in the context of a role play. Students respond to the dilemmas, and the instructor plays, in essence, the devil's advocate (a manager/mentor), elucidating realistic social, organizational, and political pressures and consequences for the student to consider. The instructor can also point out courses of action that may lead to violations of the Ethics Code. After the exercise, students often comprehend the complexity of adhering to the code when faced with the real world, and they recognize the benefit of the course.

Practice. One student reported the use of a series of role plays to gain practice implementing an intervention with a human resources executive. Other suggestions where role-play exercises might readily be applied to practice specific skills include: conflict resolution, interviewing SMEs to gather critical incidents for a job analysis or scale development, negotiating, or interviewing a job applicant. Speaking of interviewing, role plays are also being used outside of the classroom to prepare students to enter the job market. A student plays the role of the job candidate (obviously), and a professor or classmate conducts a simulated job interview.

Assessment. Another student wrote to us about the use of a role play simulation for assessment purposes—yes, an exam for a personnel class. In this particular exercise, the student to be evaluated played the role of an in-house I/O psychologist at a large manufacturing company. The professor played the role of a manager within the company, and posed a series of problems/issues to be addressed by the psychologist. Student grades were based on appearance and presentation (i.e., appropriate attire, speech that was clear and jargon-free, interpersonal skills), as well as content (i.e., how students responded to the challenges presented by the manager).

In sum, it appears that several I/O graduate programs are cleverly implementing role plays as learning, practice, and/or assessment tools during graduate training. You may not be surprised to learn that many of the students who described these graduate training techniques found them to be particularly effective and engaging. But what else would you expect from a practice that I/O psychologists preach?

You Know, I've Been Wondering...

You may recall that this segment of the TIP-TOPics column, subtitled *Everything You've Always Wanted to Know About Graduate School But Were Afraid to Ask*, is dedicated to questions that I/O graduate students tend to ponder. In this regard, we were recently approached by a frustrated graduate student who, upon asking a professor "What's the difference between a thesis and a dissertation?" was simply told "A dissertation is longer!" Unfortunately, this graduate student, unable to glean any practical advice from such a response; turned to TIP-TOPics for assistance.

In an attempt to help this disconcerted student, we posed his question, along with a few other dissertation-related questions, to various I/O academicians. With the help of graduate students from around the globe, we received some very interesting responses. Here's what the experts said:[2]

Q: What's the difference between a thesis and a dissertation? We found three key factors distinguishing a dissertation from a thesis. Faculty members reported that *originality* (i.e., the degree to which the project makes a unique contribution to the literature); independence in terms of *supervision* (for both forming the research idea and data collection and analysis), and *scope* (i.e., depth and breadth of literature reviewed) were all important factors differentiating theses and dissertations. The table below provides answers to our question clustered according to these three factors.

Thesis	Dissertation
Originality	
• The thesis does not have to make a unique and independent contribution to the literature; it can be a straight replication of previous findings.	• The dissertation is much more independent work. It should make a unique contribution to the field. A dissertation is something that is conceived of completely by the student.
• The thesis allows the student to develop and demonstrate critical research skills (e.g., ability to find, review, and integrate previous literature; ability to collect, analyze, and interpret data; recognize limitations and shortcomings of own research, write in APA	• The dissertation should attempt to answer an important research question and contribute to the I/O research literature. At the time the student proposes the project, the committee should feel that there is at least a 70% chance that the project should get published if everything

[2] The answers reported in this segment are not meant to be exact quotes from faculty, rather they reflect the aggregation of content from a number of respondents.

style, etc.). The beginning of a student's career is spent learning the language of I/O psychology (i.e., learning the basics of statistics, the methodology, and some of the fundamental research). Therefore, it's unreasonable to expect that a master's thesis will significantly contribute to the research literature. The main goal of the thesis should be to introduce the student to the research process. A renowned I/O psychologist once said, "Nobody gets famous from their master's thesis."	turns out. If the likelihood is lower than that, the student should seriously consider another topic. • A dissertation represents an original piece of work.

Thesis	Dissertation
Supervision	
• The advisor plays a much greater supervisory role in the thesis project.	• The student shoulders the major responsibilities for the project, applying all the skills learned, with the advisor actually serving an advisory role. • The dissertation is conducted in a relatively independent fashion by the student. • Both theses and dissertations provide evidence of research skills, with much more independence required on the dissertation than the thesis.

Thesis	Dissertation
Scope	
• Most theses are an extension of a faculty member's research and are limited in scope.	• Typically, a dissertation is larger in scope than the thesis and, as such, represents a comprehensive review of all the relevant literature related to the topic of interest. • A dissertation is longer in length than a thesis.

Well, there you have it, faculty members seem to be in agreement regarding the main characteristics that differentiate theses and dissertations. But don't get too comfy, this is where the agreement ends! The remainder of the questions we posed reveal conflicting perspectives regarding the impact of dissertation complexity on post-Ph.D. marketability and the implication, if any, of choice of dissertation topic.

Q: How important is the complexity of a dissertation, in terms of design and analysis, when looking for a job after earning the Ph.D.? In other words, does the utilization of advanced designs/statistics in a dissertation make a graduate more "marketable" when looking for a job?

Complexity is Irrelevant

- Complexity of design and statistics is completely irrelevant, except where it contributes to the innovativeness of the project. The biggest selling point of the dissertation is that it is exciting and important—which is probably not correlated with complexity.
- No! The most significant consideration is whether the student can communicate the importance of the project's findings to the rest of psychology and to I/O psychologists. Too many students think that the importance of their research is obvious to the rest of the field.
- There has been a history of fascination with advanced statistics in I/O psychology, but there seems to be a growing awareness in the field that "trickier and complex" is not always better. This awareness is a result of the failure of many of these complex methodologies to provide better results than simpler methods. Statistical pyrotechnics are only necessary to the extent that these methods help provide information unavailable with less sexy methods.

Complexity is Moderately Important

- Complexity is moderately important to getting a job. Also important is the creativity of the study—such as whether the student found a meaningful way to integrate multiple areas of I/O.
- Complexity per se is not as important as "sophistication." The part of the job talk or interview where the candidate discusses his or her dissertation should make clear the candidate's strengths as a researcher. A project that is seen by the audience or interviewer as trivial/simplistic/reductive will reflect poorly on the candidate's ability to explore a meaningful research problem.

It Depends

- It depends on the type of job. With regard to industry, complexity is not as important as the paper being relevant, practical, and intuitively interesting and understandable. For academic jobs, it is more important that the dissertation is publishable. It may be the case that more complex designs are more publishable than others.

- Complexity is not the key issue. Rather, the *problem* should be the driving force. The goal should be to clear up a significant hole in the literature. A researcher doesn't necessarily need a complicated design to do that. In fact, the simpler the better. Utilization of advanced statistics/designs in a dissertation is a concrete demonstration (to potential employers) that a candidate can handle those advanced techniques. It might be important for some jobs, but not others. Also, if the candidate has used advanced techniques in consulting or other projects, then he or she has demonstrated the same thing.

Complexity Increases Marketability

- The complexity of the dissertation does make one more marketable, but only because doing a more complex/comprehensive project forces the student to acquire more knowledge. That is, the student won't have a better chance of getting a job just because his or her vita lists a complex-sounding dissertation. However, if this person has done a comprehensive piece of research, he or she will be better prepared for the job market.

As you can see, responses to this question varied quite a bit. I guess you could say that there really is no simple answer to this "complex" question.

Q: How important is the dissertation TOPIC during the post-Ph.D. job search? Does the choice of a particular topic cause a graduate to be labeled as a certain type of I/O psychologist?

Not that Big a Deal

- The topic is not that big a deal, especially if the student has done other work on the "I" side, if it is an "O" side dissertation, or vice versa. Many people have made a name for themselves in, for example, selection, after doing a dissertation on leadership. The importance of the topic differs from department to department however.
- The topic is not very important when looking for job. As for being labeled, it is possible, but a student can make it more or less so depending on the rest of the application materials (e.g., by stating future research interests that are different, or by stating "this is first in series of studies on this topic," etc.).
- Labeling is only a concern if the graduate education was unidimensional. As long as a student has done research in a number of areas, then a dissertation topic will not pigeon-hole him or her.
- The answer to this question differs, depending upon whether one is discussing an academic position or an applied position. There are instances where newly minted I/O Ph.D.s get few or no questions about their dissertations during interviews with corporations.

Definitely Important

- The dissertation topic is definitely of high importance, especially for academic jobs. The student should have dedicated at least a year researching the topic of his or her dissertation and should be brimming with additional research questions that usually present themselves when one studies any topic in depth. In their first few years in their new position, it is unlikely that new faculty will have as much time to pursue an additional line of research with as much thoroughness. Also, programs often are looking for a new faculty member to fill a research void that is not being covered by the other faculty. Last year, one university was interested in hiring someone with experience in job analysis, and a couple of other schools were looking for someone with a background in selection. Because the dissertation should be the student's best research to date, it seems reasonable to use that as an indicator of the quality and direction of their future research.
- Labeling could be a problem, especially for students doing work that borders on other areas (e.g., cognitive or social psychology).
- A topic that is clearly "I" might hurt a candidate pursuing a position where the ideal candidate is seen as an "O" person.

The above responses indicate that there was not a lot of consensus regarding this issue. Some faculty believed that the relationship between a dissertation topic and a future job is minimal, while others indicated that the choice of a particular dissertation topic heavily influences a student's future. In addition, some respondents suggested that students can minimize the extent to which dissertation topics pigeon-hole them by seeking graduate experiences that cover a range of topics and by emphasizing interests outside of the dissertation topic area during the job search. Furthermore, a number of respondents pointed out that in answering the questions above it is important to consider the type of job being sought—academic or applied.

In summary, the answers to certain thesis and dissertation-related questions may depend on who you ask. Though lacking in terms of irrefutable advice, this segment should provide some useful information to help students make more informed decisions about their thesis and dissertation research.

TIPs for Balancing Life and Graduate School

Today's **TIP**: consider forming or joining an informal "support group" that meets regularly. Who can better relate to the trials and tribulations that characterize graduate school than fellow I/O graduate students? Your peers can be a tremendous resource—socially, academically, and professionally.

For example, one I/O graduate informed us that she never would have finished her dissertation had it not been for her dissertation support group—aan informal group of students that met (at a member's house) one night per an informal group of students that met (at a member's house) one night per week to discuss dissertation-related frustrations, progress, and successes. Another individual described a graduate student instructor support network that meets regularly to discuss issues encountered when teaching undergraduate students. This network involves not only social sharing, but also informally coaching peers on teaching methods and approaches that have proven successful. Finally, we have recently discovered a comps network on the Internet. This listserv, called IoComps Net, is a great resource for I/O graduate students who desire comps-related support. Subscribers to this network are encouraged to post questions, answers, comments, citations, essays, and outlines relevant to the preparation for comps. For information on how to subscribe, visit the IoComps Net website at http://cmit.unomaha .edu/TIP/compsmaillist.html.

The point is, whether you're of the "strength in numbers," "misery loves company," or "two heads are better than one" persuasion, you may find that a support group can be a helpful tool for maintaining sanity during graduate school.

If you have any questions regarding this issue, or questions for TIP-TOPics to investigate, or would like to contribute information to our next edition, contact the editors via the options presented below.

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From Both Sides Now: Organizational Learning

Allan H. Church

One of the more irksome aspects (at least to me) of being an I/O psychologist is the seemingly endless number of mailings for books, conferences, software, training programs, and assessment tools one receives for being a member of any number of different academic and professional associations. Although many of these come with great eye-catching tag lines such as "anyone responsible for helping organizations prepare for the new challenges of the 21st century will not find a better learning resource this year," I was struck recently by the promotional material for a keynote session for an upcoming conference on organizational learning:

Our current ways of organizing have produced a deeply fragmented system that is ingrained in our minds as well as our institutional structures. Breaking free of these old models requires more than just developing an intellectual understanding of the fragmentation—it requires experiencing what an integrated knowledge-creating system is like.

Can anybody tell me exactly what an integrated knowledge-creating system is? As Freddie Mercury once said, I want to break free. Actually, I think additional jargon is being used here to describe the already jargonesque term double-loop learning—a concept which has been around for years (e.g., Argyris & Schön, 1978) and one that is at the very heart of the organizational learning (OL) movement. Like total quality management and business process reengineering, organizational learning is an area of theory, research and practice related to organizational change, education and management science that has achieved some prominence in certain professional circles in the last few years. This is due in large part, no doubt, to Peter Senge's best selling book *The Fifth Discipline* (1990) and its related offshoots (e.g., the "dog and pony" lecture circuit, special conferences, and the establishment of new centers for learning).

Of course, as with many other areas in and out of the realm of I/O psychology, I have some lingering questions and doubts about the concept and efficacy of organizational learning. First and foremost, the term organizational learning itself is in fact an anthropomorphism (i.e., "an interpretation of what is not human or personal in terms of human or personal characteristics"; Webster, 1979; p. 48). I don't know about anyone else, but I still have a hard time getting over the memories of my high school English teacher lecturing me on anthropomorphizing as one of the mortal sins of style. Clearly, from a purely semantic perspective, how can an organization as an entity really do *anything* on its own? Nobody goes around talking about organizational sleeping, organizational feeding, or organizational exercising, as far as I know, so how can organizations be said to actually learn? Thus, from my albeit biased perspective, organizations can't learn—but the people that compose and manage them can and do. Given the overall popularity of the OL framework, I approached several professionals for the thoughts and opinions on the existence and attributes of this phenomenon. As you might have guessed, not everyone agreed with my position, as evidenced in the following comments in response to this rather leading, multi-part question:

Do learning organizations truly exist (e.g., as opposed to individual learning, or a work group or department that has a passion for learning, etc.)? If yes:

- What do they look like?
- How do people know when they are a part of one?
- What proof do we have and in what ways are they better than other types of organizations?

The first set of comments on this topic comes from Victoria Marsick, Professor in the Adult and Organizational Learning Program in the Department of Organization and Leadership at Teachers College, Columbia University. Victoria is a strong proponent of the OL perspective and as such writes, consults and teaches in this area.

Victoria Marsick Responds

The answer to your question regarding the existing of learning organizations, as is often the case with organizational change, is, "It depends!" Learning organizations are a relatively recent phenomenon, though the idea of organizational learning is not new (Argyris and Schön, 1978). All organizations learn in some way, or they would not survive, but learning organizations demand conscious interventions to generate, capture, store, share, and use learning at the systems level in order to create innovative products and services. Few fully functioning, learning organizations exist because engaging an entire system, especially a large one, in organizational learning is complex. However, some companies are definitely on the road to becoming learning organizations, and can point to serious, promising experiments that have yielded some kind of system level learning. The learning organization is more a journey than a destination. Each step along the way often holds unpredictable consequences that require reevaluation and readjustment, so that just when you think you might be close, "more will always be revealed," to quote OD colleague Renee Rogers of Sulzer Orthopedics.

So, as you ask, what learning organizations they look like? There is no simple recipe. Watkins and Marsick (1993) refer to the need for "sculpting" a systems-level learning infrastructure. Systems learning looks different because of variations in industry and organizational culture; the stage of development of the business; the degree to which work is routine or non-routine; who holds the knowledge for the organization, and whether it is tacit or explicit; and whether expertise is stored in people who continually exercise judgment or in standard systems and processes. The following features stand out as essential: continuous learning at the systems level; knowledge generation and sharing; critical, systemic thinking; a culture of learning; a

spirit of flexibility and experimentation; and for many, though not all, a people-centered community that respects and encourages diversity (Gephart, Marsick, Van Buren, & Spiro, 1996).

How do people know when they are part of a learning organization? Employees in some of the larger organizations that are characterized as such often seem unsure that they are! System-level learning does not require that everyone learn everything; only that the system as a whole work in such a way that key individuals learn for the organization, and that the lessons learned be embedded in organizational norms and functions so that they are available to others. For that to take place, changes must take place in leadership, strategy, people, the culture, structures, and systems.

A simple test for finding out if you are in a learning organization is seeing what happens when honest mistakes are made. When mistakes are hidden because punishment will surely ensue, people take few risks. Yet, as Jerry Marlar (CEO of Sulzer Orthopedics) says, a key aspect of his job is to make sure that errors are identified and talked about so they do not continue to be made. Learning organizations have cultures of dialogue and inquiry that encourage trust and clear communication. They create work systems that include times to stop and check what others are thinking. They expect employees and work groups to set learning goals in addition to performance goals. They are constantly scanning their environment and using what they find to challenge the status quo. They tend toward flattened, decentralized structures that encourage an easy flow of information across boundaries. They create knowledge management systems (both high- and low-tech) to capture, share, and embed learning. They often involve representatives of the entire system in team and large group problem solving, visioning, scenario planning, or other collaborative business initiatives.

Is there proof that learning organizations are better than other types of organizations, and if so, in what ways? Again, it depends; this time, on what you mean by "better." Learning organizations encourage redundancy and conflict in the interests of knowledge creation. Some learning organizations want to create a nurturing environment, but as we know from our experience of nurturing families, caring does not eliminate conflict or challenge! Tension might increase as more people challenge old ways of doing things, people face the devils that keep them from being all that they can be, and knowledge networks lead to turf battles. So, people might not "feel" that they are better places to work.

But, ultimately, learning organizations should enhance innovation, core competence, and intellectual capital, and thus, the bottom line. Anecdotal data do speak of enhancements (Watkins & Marsick, 1996). Although there is, as yet, little research-based proof of impact, several instruments are being developed to get at these linkages (Gephart, Holton, Marsick, & Redding, 1997; Watkins, Yang, & Marsick, 1997). And the Center for Effective Organizations at the University of California found evidence of positive impact on both financial performance, and employee performance with respect to continuous improvement, customer focus, employee commitment, and overall work performance at the companies studied (Gephart et al., 1996).

The next set of comments come from Afzal Rahim, Professor of Management at Western Kentucky University and founder of the International Association for Conflict Management and president of the Center for Advanced Studies in Management. Afzal's reactions to the questions posed are also largely in the affirmative regarding the existence of OL, but with some caveats as you will see.

Afzal Rahim Responds

Q: Do learning organizations truly exist?

By the word "truly," if you mean perfect learning organizations, I do not know if there is such an ideal organization, but learning organizations do exist. Evidence indicates that a learning organization—Dexion International—was formed by Demetrius Comino, a Greek-Australian resident in England some 60 years ago. Some of the contemporary learning organizations in the U.S. are General Electric, Honda, and Corning. Other organizations which are in the process of becoming learning organizations are Ford, Federal Express, Xerox, and EDS.

Q: What do they look like?

Learning organizations are engaged in a continuous process of (a) creating, (b) disseminating, and (c) applying new knowledge for improving productivity and innovation and ultimately customer satisfaction. Such an organization encourages this process through appropriate strategic planning. Before we go any further we need to discuss what is meant by organizational learning. Chris Argyris defines organizational learning as a process of detection (cognitive) and correction (behavioral) of error. Single-loop learning results in the detection and correction of error without changing the underlying policies, assumptions, and goals. In other words, single-loop learning results in cognitive and behavioral changes within an existing paradigm (the Old Paradigm). Double-loop learning occurs when the detection and correction of error requires changes in the underlying policies, assumptions, and goals. In other words, double-loop learning involves cognitive and behavioral changes outside the existing paradigm (the New Paradigm). Organizational learning implies double-loop learning to deal with strategic issues. Single-loop learning is appropriate for handling day-to-day routine matters. Although opinions differ, I believe an organization which practices double-loop learning is a learning organization. Some of the characteristics of learning organizations are:

1. *Overcoming defensive reasoning an organizational defensive routines.* Learning is inhibited by defensive reasoning of organizational members. This type of reasoning takes place when members fail to take responsibility for their decisions and attempt to protect themselves against the complaints of errors of judgment, incompetence, or procrastination by blaming others.

Organizational defensive routines consist of all the procedures, policies, practices, and actions that prevent employees from having to experience embarrassment or threat. Also, these routines prevent them from examining the nature and causes of that embarrassment or threat. Honda Motor Corporation was able to overcome these defensive reactions and routines.

2. *Leadership.* Different kinds of leaders are needed who can influence the processes and structures that encourage double-loop learning. These leaders, "stand up and take their punches like adults, and we recognize that their best performance is often linked to shaky morale, job insecurity, high levels of frustration, and a vigilant focus on negatives" (Argyris). General Electric's CEO Jack Welch fits this description of leadership.

3. *Organizational culture.* Learning organizations must have cultures that support experimentation, risk taking, openness, and sharing of information and knowledge. Learning requires positive reinforcement. Managers need to know how to use reinforcements to elicit behaviors that are not only associated with effective performance and creativity, but also with risk taking for improving long-term performance.

4. *Organization design.* Learning organizations generally have flatter, more decentralized, and less complex designs than others. Some of the biggest corporations, such as GE, Xerox, DuPont, and Motorola are moving in this direction. Unfortunately, changes in organization design, without corresponding changes in culture, may not alter learning and consequently the basic ways of doing work.

Q: How do people know when they are a part of one?

Most employees are not fortunate enough to be a part of one. You are a part of a learning organization if it:

1. Encourages creative activities involving problem finding, problem solving, and solution implementation. Contemporary organizations are generally concerned with problem solving. This encourages Type III error which can be defined as the probability of solving the wrong problem when one should solve the right problem (Mitroff).

2. Encourages diverse viewpoints and continuous questioning and inquiry. If you are afraid to criticize your supervisors, subordinates, and peers, you are probably not in a learning organization.

3. Encourages substantive conflict and discourages affective conflict. Honda holds sessions in which subordinates can openly (but politely) question supervisors and challenge the status quo.

4. Encourages employees to take responsibility for their mistakes and not blame others.

5. Encourages experimentation, innovation, and risk taking.

6. Encourages employee empowerment.

7. Treats competition as a means of learning rather than a hostile power.

Q: What proof and/or in what ways are they better than other types of organizations?

Empirical evidence on learning organizations is lacking. Case studies indicate that these types of organizations are better than others in improving their capacity for rapid response to environmental challenges and consequently in improving and sustaining their long-term effectiveness. These types of organizations also seem to be particularly successful in improving customer satisfaction and loyalty.

The final comments on the issue of organizational learning are from **Edwin A. Locke**, Professor of Business and Management at the University of Maryland. As one might guess, he emphasizes the importance of the specific goals involved in the process of OL, among other things.

Edwin A. Locke Responds

Organizational Learning?

Learning is the acquisition of knowledge or skill. As such, it pertains only to individual organisms possessing the faculty of consciousness. Humans differ from the lower animals in that whereas the latter learn through trial and error, and through temporal and spatial association, people can learn conceptually (through reason).

An organization is not an entity (other than in law) but a group of individuals working together toward a common goal. Thus it is not literally the case the organization can learn; rather it is its members who learn. However, we can use the term organizational learning as a shorthand way of saying that a substantial number of people in the organization (or unit) have acquired new knowledge.

Organizational learning is not inevitably beneficial. For example, organizational members may learn the wrong thing (e.g., how to reduce costs when the real need is to increase quality, or vice versa) so that the new knowledge will place them at a competitive disadvantage. Or extensive learning may occur but what is learned is simply irrelevant to the organization's needs; thus time and money are wasted. Many "flavor of the month" training programs are never tied to the organization's real needs.

Even when the right things are learned there may be no benefits. Knowledge must be distinguished from action (performance). A person or "organization" can know something and not act on it. In an organizational context, knowledge may not be put into action due to inertia, conflicts between people or units as to what should be done, poor leadership—including the lack of clear goals or measurements' and many other reasons.

I believe that the best drivers of useful organizational learning are the organizations' (or units') (a) strategies and (b) goals. Learning often starts with training. For example, consider an organization that has decided to use service as a competitive strategy. Training would properly focus on pro-

grams that taught TQM and customer satisfaction principles and skills. If growth through innovation were a strategy, training in creative thinking would be relevant. If low cost were a strategy, training in how to stimulate employees to come up with useful cost saving ideas would be relevant.

Training, of course, is not the only method of promoting learning. Much can be learned from direct experience, though often little is actually learned from it. To learn from past experience it is necessary to purposefully conceptualize the meaning of what has happened—not much learning occurs by osmosis. Learning from the past often requires sophisticated data gathering and analysis (e.g., what processes distinguish between past new project introductions that were successful and those that were unsuccessful? What cost projections have been most accurate? Why?).

Learning can also occur through observing other organizations (e.g., benchmarking). The refusal to learn from outside sources can be motivated by arrogance (we know it all) and fear (suppose we find out we do not know everything?). Another way to gain new knowledge is to hire exceptional people (e.g., see Microsoft). Great leaders will move mountains (e.g., buy entire companies) to bring good people on board; not-so-great leaders will hide under mountains to avoid it, because their self-esteem is threatened by people who have as much (or more) ability as they do.

I believe that goal-driven learning is more effective than process-driven learning (Audia et al., 1996). By process-driven learning I mean, Let's introduce this process, because it is supposed to be a good thing (the latest fad). By goal-driven learning I mean, Let's introduce this because it will help us attain goal X. Processes (including technology) are not ends in themselves. They are only useful to the extent they produce beneficial results. When new learning is goal driven, it is more likely to be put into action than when it is treated as an "intrinsically" good thing.

I believe organizational learning is promoted best when the culture stresses continuous improvement (Locke & Jain, 1995), as long as the improvement is focused on specific outcomes and is measured through specific measurements that are evaluated by specific goals or standards. Such a culture starts with visionary leadership and is followed by selective hiring, focused training, clear and challenging goals, and suitable rewards. Eventually the kinds of actions the leader promotes become the shared norm and then you have a culture.

It sounds easy, but of course, it is not. Like everything valuable in life, it requires judgment, hard work, tenacity, and simultaneous attention to both large and small issues. The prime mover of organizational learning and of all great achievements, I believe, is an active mind. An active mind must be sharply distinguished from an open mind. A human mind is not a vessel in which stuff gets poured (at least not after the age of 6) but an active faculty that must be used by choice (Binswanger, 1991). Learning requires a constant process of observing reality, integrating facts into conclusions, finding patterns, identifying causes, seeing implications, projecting the future, imagining possibilities, making new connections, and so forth. Thomas Edison (Runes, 1948, p.168, quoting Joshua Reynolds) said that "There is no expedient to which a man will not resort to avoid the real labor of thinking." Those who do not avoid it, the thinkers, are those who move the world forward.

Conclusion

Based on the comments above, it is clear that many academics and practitioners do indeed believe in (a) the existence and (b) the *potential* efficacy of organizational learning. Both Victoria and Afzal, for example, commented on specific examples of organizations moving in the direction of the OL paradigm. Although the empirical data may still be lacking, the anecdotal evidence cited is at least encouraging. Altough only Ed acknowledged my issue with the anthropomorphic nature of the term itself, regardless of the constraints of the English language, the point being made by the proponents of the OL perspective is definitely a valid one—that is, we need to look to the processes and factors that support double-loop learning and continuous improvement in organizations. Further, it is difficult to argue with the ideals inherent in the comments above that defensiveness, finger-pointing, and lack of responsibility for one's actions are dysfunctional and ineffective organizational cultures that need to be changed to support learning, innovation, openness, and empowerment. This is, perhaps, one of the strongest lures of the OL concept.

But does OL mean overload? Yes and no. As Victoria mentioned, OL doesn't mean that employees have to learn everything, but the organization must be able to adapt, embed, and even institutionalize (a) the importance of learning and (b) specific knowledge that has been generated. Of course, this does mean that the process of building a organization focused on learning requires the potentially monumental task of insuring complimentary and supportive changes in leadership, culture, structure, selection, and reward systems as well, as all three contributors noted. Thus, although the idea of learning itself is largely a transactional (or incremental) one, the OL paradigm clearly represents a more transformational, large-scale systems-level approach to organizational change. Thus, as Ed noted, OL directed interventions will probably not be effective or impactful if they are being pursued for the wrong reasons or without appropriate goals and strategies in mind. As with many popular interventions and initiatives in ours and related fields (e.g., TQM, 360-degree feedback, reengineering, downsizing, etc.) these efforts tend to fail miserably when they are done simply for the sake of going along with the crowd.

Moreover, even if and when organizations move toward being more institutionally supportive of learning in general, based on the comments above, there is no guarantee that employees will (a) experience a more positive or nurturing workplace atmosphere due to potential conflicts and tensions inherent in the change process, and/or (b) notice any significant performance

improvements, particularly when there might be redundancies or even inappropriate or non-relevant learnings occurring. Thus, although the belief appears to be strong among proponents of the OL perspective that organizations devoted to continuous learning should eventually result in improvements in the quality of worklife, employee motivation and the bottom line, it will probably take a long time for these goals to be realized and may indeed require radical changes to the existing ways of doing business. In general, however, learning is one of the key processes of being an adaptable and ever-evolving being, and as such it is worthy of our attention as scientists and practitioners of human systems.

I would like to thank Victoria, Afzal, and Ed for contributing their thoughts and opinions on the topic of organizational learning for this issue (and in such a short time span as well). As always, I would like to acknowledge the input of **Janine Waclawski** regarding the questions and the contents, as well as the editorial assistance of Mary Zippo. Please send me your reactions, suggestions and comments regarding this issue (or any of the others) to AllanHC96@AOL.COM. Or you send it to me by mail at W. Warner Burke Associates Inc., 201 Wolfs Lane, Pelham, NY, 10803, (914) 738-0080, fax (914) 738-1059.

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Biographies

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Edwin A. Locke is a professor of Business and Management at the University of Maryland and was chairman of Management and Organization faculty for 12 years. He received his undergraduate degree from Harvard University in 1960. He received his M.A. and Ph.D. degrees in Industrial Psychology from Cornell University in 1962 and 1964, respectively. Dr. Locke has been elected a Fellow of the American Psychological Association, the American Psychological Society, SIOP, and the Academy of Management, and is a member of the Society of Organizational Behavior. He is on the editorial board of *Organizational Behavior and Human Decision Processes*. In 1993 he received the Distinguished Scientific Contribution Award from the Society of Industrial and Organizational Psychology. E-mail: ELOCKE@UMDACC.UMD.EDU

New Directions for Working at the Top

Jim Morrison

The November 25, 1996, issue of *Business Week* arrived at my desk as I was preparing for my 2-day Lumpur. My immediate reaction was that there was much work to be done to incorporate new material contained in the article "Best Boards—Worst Boards" into my 1997 programs.

The most innovative work in the *BW* article was the derivation of three measures of board performance ordinarily obtainable from a study of proxy statements: Independence, Accountability, and Director Quality. Although *BW* polled a variety of experts to provide additional measures of corporate board effectiveness, it is worth while for us to examine what gave a firm plus points in each of the three areas.

Independence:

- when there are no more than two inside directors on the board
- when there are no outside directors who directly or indirectly draw consulting, legal or other fees from the firm.
- when there are no interlocking directorships, that is, when CEOs do not sit on each other's boards

Accountability:

- when all directors own a minimum of $100,000 in stock (this is said to better align their interests with interests of the share holders)
- when the company does not provide pensions to directors (director pensions are said to make a director less likely to challenge the CEO)
- when the board stands for election every year

Director Quality:

- when fully employed directors sit on no more than three boards
- when retired directors sit on no more than six boards
- when at least one director has experience in the core business of the firm
- when the board has its own governance committee that regularly evaluates performance of the board. This is enhanced when directors make annual written, anonymous assessments of the board's performance and that of individual directors
- when all directors attend 75% or more of board and assigned committee meetings

Two of the firms on the "25 Best Boards" list consented to share with me what they had been doing with regard to director quality. One company had issued to all directors a list of 28 governance guidelines, which seemed to me to be rules of conduct for these movers and shakers of corporate America. The second company had provided a recent proxy statement that outlined exactly the expectations of directors and of management with regard to performance. Explicitly outlined in the documents were provisions: (a) for the establishment of a new board Committee on Director Affairs, and (b) for evaluation of board effectiveness and individual director performance.

The need, then, was to develop two different instruments for self-evaluation of overall board performance and individual director performance and a system that would give complete information to participants while protecting anonymity of the respondents. These are seen as essential to the continuing development of directors and continuing improvement of board effectiveness.

The major surprise to me was the intense interest this generated among the Southeast Asians attending the workshops, particularly in view of a measure of some cultural bias against revealing one's personal judgments to one's associates. However, the provision of anonymity seemed to dispel fears of this sort, especially when administered by an outside licensed psychologist.

A second point of interest is my observation of some proxies this spring that seemed to pick up on the *BW* article. Several are now pointing out "all directors attended 75% of all meetings."

My conclusion is, I/O psychologists are eminently qualified for working at the top with these types of interventions and innovations. As we see more corporations heeding the publicity about "bad board" performance, there will be increasing opportunities for Division 14 members to work at the top. However, we need to clarify to our current and future clients the skills we can bring to bear for the improvement of corporate board effectiveness, perhaps even including such information in our printed and video firm presentations. At the same time, competition is increasing as so many clinical psychologists, disillusioned with managed care, are seeking to find a more lucrative practice in industry.

Did you know that...

Jobs are listed on the TIP website between TIP issues. The listings under Jobs and Grants are updated whenever new ad requests are received by the SIOP Administrative Office. You may access the website at:

http://cmit.unomaha.edu/TIP/TIP.html

Practice Network

Thomas G. Baker
ESS, Corp.

Practice Network is dedicated to the discussion of issues of interest or import to the Industrial-Organizational practitioner. I am always available to speak with you at 614-475-7240 and hope you find something of interest in this issue's features.

Successful Consulting

Practice Network really enjoyed a recent conversation with a nice Fellow by the name of **Dick Jeanneret** (Jeanneret and Associates, Houston) about his thoughts and observations on running a successful I-O consulting business.

Dick has been an external consultant since shortly after graduating from Purdue. He credits much of his current success to the experience he got in that first firm, Lifson, Wilson, Ferguson, & Winick, Inc., where, in 5 years, he became a principal. This rapid rise into management meant he learned early on, not only how to deliver the technical end of I-O consulting, but also the business end.

For overall guidance, Dick feels strongly that "you should get a philosophy you commit to and do business by." This philosophy includes the importance of ethics, but also encompasses how you handle business dealings with your clients and the issue of balance between the scientific and practitioner world. We all know about Dick's ongoing contributions to the scientific community from the use of Jeanneret projects for countless dissertations to his current position as a panel editor for *Personnel Psychology* and much, much more over the years[1].

One of the basic decisions to be made by someone venturing into I-O consulting is whether they will employ a product or service business strategy. The former, exemplified by London House and the training side of DDI's business, concentrates on product development and distribution. Often products begin their life requested by clients who, in sharing development costs, have access to the completed product at reduced rates while the consulting company retains the right to market this product to other firms as well. The latter, or service business strategy, exemplified by Jeanneret and many, many other firms, develops proprietary products or delivers customized services for individual clients. This is the very customized end of I-O consulting.

Dick emphasizes that "you have to know what it is you want to do as a consultant to become successful at it. You have to know what it is you *really* want to do." Dick also notes that he went through several iterations of this thought process as he established the philosophical basis for his current firm. It seems to be something that consulting owners need to strive to understand for themselves; but, once done, should hold onto firmly as this is what will define the role and purpose of their firm into the future. This search is fundamentally important because, as Dick says, "it defines what you do as well as who it is you get to practice with you." Marketing is one way in which your philosophy is expressed. It also appears in how you accept and manage projects, treat your internal staff, your orientation towards customer service, et cetera.

Dick is cautious about the struggle ahead for small consulting firms (under five people). Our business is undergoing consolidation and rapidly being swallowed up into the large consulting firms such as Andersen Consulting, Towers-Perrin and others. "You really have to think today how you are going to compete in these domains. If you decide to stay small, you should build a strong network of associates and establish your alliances now. This will provide you with the ability to go after larger contracts. We were well trained in graduate school, but sometimes we think all we have to do is present our credentials and companies will buy our services." Now we compete against large, well funded, well marketed consulting businesses. Even if you question their client lists, you can't question their marketing savvy.

Even now, many of Dick's work assignments are concluded with a handshake. Imagine the difference in dynamics when you are billing a client as a project is underway for work accomplished, without the benefit of a detailed contract specifying hourly rates or project milestones. "When you utilize a service strategy, trust is very important to how a relationship works. Less is known to a client about exactly what you will do to help them, so higher levels of trust are needed."

Some of the qualities Dick Jeanneret looks for when he employs consultants in his organization include: technical training that includes "O" as well as "I" side activities, the ability to communicate in writing using business versus journal language styles, the ability to interact with a broad range of employees including handling the strong personalities and having a 'presence' in an executive boardroom, team orientation ("I am not looking for the lone ranger or superstar"), and a high degree of flexibility and tolerance for ambiguity (able to multi-track, work unstructured, be a manager of time, and be very self-disciplined).

Thanks Dick for sharing your thoughts with *Practice Network*!

1. Dick is also contributing the chapter entitled "Ethical, Legal and Professional Issues for Individual Psychological Assessment" to the next SIOP Practice Series book, ***Individual Psychological Assessment: Predicting Behavior in Organizational Settings***, edited by Jeanneret and Silzer. It should be available in the Spring of 1998.

Technology and Assessment: Trends and Observations

Practice Network enjoyed a recent conversation with **Cabot Jaffee, Sr.** (ESS, Orlando). With a history of assessment *way back* to AT&T assessment center days, Cabot has the long view of how technology has impacted centers in particular and personnel assessment in general.

The original model for the Bell System assessment centers in the 1960's, when Cabot joined the organization, was very labor intensive. Three weeks of assessor training, a 5-day assessment cycle including 2 days of report writing and assessor meetings. Paper and pencil was the technology of choice and, as Cabot notes, "these centers were famous for their wear and tear on assessors."

The first "technology" Cabot recalls after leaving AT&T was the move to behavioral checklists. This shift, although seemingly small, laid the foundation for important changes to come with the advent of computers. Checklists supplanted the use of purely narrative assessor observation and reporting. As computers became available they were programmed to work with these behavioral checklists so that "the assessor team meeting could be replaced by a computer analyzing the checklist information, weighting and combining them to come up with judgments as to the participant's overall performance." Checklists can be converted into reports for an individual's exercise performance, which can then be collapsed into an overall narrative report. It is this text manipulation which results in the most substantial time savings. Even now, some centers do not utilize computers to automate the data integration and reporting process, although, Cabot notes, repeated studies have shown how similar the final ratings are between computer and human integrated assessment center ratings.

In the last couple of years Cabot has observed the emergence of technologically sophisticated center exercises. Computerized business games have been around for a while, but now he is seeing the use of PCs to simulate meetings and in-baskets. For an in-basket simulation, a candidate can be presented with a realistic office surrounding including access to email and voice mail, a telephone, rolodex, and other typical office tools. The candidate can meet 'in person' and/or review bios of subordinates or others in the fictitious company, rummage in their file cabinets, be interrupted by secretaries, company peers, the phone or their boss, et cetera. Simulated meetings increase the standardization of the stimulus presented to assessment center participants as well as reduce the amount of administrators or role players needed to run an exercise. In both cases, an important leap forward is the use of sophisticated programming and possibly artificial intelligence to actually score and report on the results of these exercises, instead of just presenting the exercise in a standardized manner and tracking candidate actions.

Cabot feels, "If the idea of an assessment center is to simulate an environment, the ability to build these 'simulators' can be done much more readily with computer technology." He is excited about recent examples utilizing some very fancy software to provide very life-like simulations in the area of first-level manufacturing supervision assessment centers. "You can get people moving around in 'real space' and have them take actions which tap not only their managerial skills but also technical competence in simulations that are precisely their world," he says, "With the use of technology, you can give someone an almost exact replica of their environment."

Cabot Jaffee, Sr. stresses that the use of technology does not solely involve personal computers, but also includes the Internet and intranets, satellite broadcasting, and telephonic technologies. Cabot is especially noting the roles these technologies, particularly inter/intranets and satellites, can play in providing just-in-time as well as life-long learning opportunities. "These technologies allow us to deliver far more effective training for individuals," he observes.

Technology does have its price. Generally speaking, very technologically sophisticated solutions for organizations in the area of assessment and development are sometimes too pricey for one organization to shoulder alone. Close relationships can accomplish important HR activities cooperatively more effectively than one organization could alone. Cabot notes the recent emergence of company consortia as vehicles to address this issue. Two consortia in particular, LearnShare and the Talent Alliance are aggressively implementing two very interesting applications utilizing technology. Talent Alliance provides an Internet-based platform to allow employees from one company who are being downsized to make contact with another company which is growing. Think of it as an extremely sophisticated job bank in which an employee's resume as well as skill repertoire is matched automatically with another company's profile of skill requirements for current job openings. Future plans for this consortium also include the creation of on-line training and development for its member employees, the automatic trending of technical skill changes in employer jobs and more. LearnShare's members are using their combined resources as a sophisticated 'buyers club' to source, develop, and offer leading-edge training and development opportunities for member employees. Delivery technologies will include intranets, satellite broadcasting, CD-ROM, and so forth, with course materials coming from both member organizations as well as outside vendors. A very basic notion (combining the purchasing power of many companies) meets the 21st century through the effective use of technology!

"There used to be a fear that computers were a non-human way to make critical human resource decisions. Computers are increasingly seen as a very effective way to enhance services to employees and customers. The key is for us to use technologies appropriately as they relate to the best way to deliver services to our constituencies. Delegate to technology those things that technology can deliver so that we can put people to their highest and best use." Training opportunities for everyone throughout their lifetimes now exist. Organizations can deliver a myriad of training and development solutions on an as-needed basis along with a host of evaluation tools. This is changing organizations by optimizing the talents of their employees. Thanks Cabot for taking us inside the technology of today and the near future!

Show Me the Money!

To SD_y or not to SD_y—that is the question! The estimates are too high. The estimates are too low. The equations are too complex and detailed. The equations are oversimplified. The debates over the usability of utility estimates by real people in the real world go on and on, says **Ian Gover** (ARC Consultants, Inc., St. John's, Newfoundland, Canada).

Significant arguments support the use of financial estimates (As Ian says, "I try not to use the phrase 'utility analysis' anymore—it brings back graduate school nightmares for too many people.") which calculate the utility of human resource interventions. The following list is Ian's "Top Ten" reasons real-world managers scream "Show me the money!" and why I-O psychologists should continue in the pursuit of the best way to present this information to executives.

Enhanced Decision Making

1. The primary purpose of cost and benefit analysis is to assist managers in deciding whether to invest in an item of capital, an HR management system or what-have-you. Utility analysis has been proposed as a way to help managers apply information from I-O psychology, economics and information theory to make better human resource management as well as overall corporate decisions.
2. It fosters better managerial decisions by increasing the awareness of the value of personnel interventions and enhances the credibility of the people who devise such programs.
3. It provides decision makers with the ability to compare apples to apples, as opposed to comparing apples to validity coefficients.

Speaking Their Language

1. I-O and HR professionals should be interested in applying the results of financial forecasting to their work in organizations because such methods allow them to express the outcomes of interventions in terms that top managers are able to understand.
2. Remember who is buying your work. There is still the argument that meaningful terms for managers usually involve dollar signs and other monetary considerations.

Selling Our Products

1. The continued growth of the HR enterprise suggests that many competing programs will be proposed and that these programs will compete in turn with other worthwhile ventures, such as technological and capital investments, market expansion and advertisement, etc. If we are to compete for scarce resources, then financial forecasts estimating the dollar returns must be weighed against the alternative investments.
2. If, for example, we only look at outcomes in terms of statistical differences between groups, the results will not be comparable to those of competing investments. Would a production manager request a new piece of machinery without indicating the expected savings associated with increases in productivity or decreases in the unit costs of production?

Investment as Opposed to Overhead

1. Allow managers to see that HR adds value.
2. By highlighting the returns associated with an intervention, HR and I-O products may be less likely to be first on the chopping block when organizations tighten the purse strings.

Increased Accountability

1. The cost of HR interventions continues to consume larger and larger portions of corporate capital. As such, HR managers are experiencing increased pressure to justify and account for new and continuing programs. Utility analysis can help them do this.
2. The "easy money" days are long gone. Today's managers must account for the money given them and the way these dollars are spent.
3. Forecasts of the financial benefits associated with HR interventions provide figures that can be used as a basis for the evaluation of program results. It can help link the outcomes associated with a program with the incremental cash benefits that will result from it.

There is little argument that most managers are interested in seeing the incremental cash flow resulting from, for example, a new training program. Unfortunately, there is equally little argument that the methods and estimates developed by our profession have had much impact upon managerial decisions on the financial impact of HR and I-O programs.

Ian believes the evidence indicates that utility analyses will not work as stand-alone testimonies of the usefulness of HR and I-O interventions. Rather, the results of these analyses should be used to supplement more traditional and straightforward decision-making aids, such as relaying validity information or employee performance increases. Managers are interested in seeing the results of financial forecasts, however, they have yet to be convinced these estimates have merit.

Based on the school of hard knocks, Ian suggests that you follow five guidelines when utilizing financial forecasting of HR and I-O programs with executives and managers:

1. Remember your audience. Managers don't typically care about the details of statistical procedures—that is why you are there. What are the bottom line outcomes?
2. Keep it simple. Equations are a sure way to estrange managerial audiences.

3. Get key people involved. Reps from the finance department can be either your greatest ally or your worst enemy. Get key people on board early!
4. Emphasize the value and limitations of this information. Point out that they are just estimates, based on a number of assumptions. This is really not much different than when returns are estimated for a new piece of capital equipment.
5. Use in a supplementary way, not in a stand-alone manner. Use financial information as a supplement to traditional decision making aids.

For more discussion on the use of utility analysis in the 'real world', call Ian Gover in Canada at 709-754-2065 or email to arc@nf.sympatico.ca. Thanks Ian for your insights!

Heads Up on Revisions to APA Standards for Educational and Psychological Testing

Anyone interested in using testing in a selection or training context? Please read on.

This past March the first draft containing all chapters of the proposed new Standards was released for review and comment by organizations regarded as having relevant expertise. This included SIOP (whose response was made through the Scientific Affairs Committee headed by **Ann Marie Ryan**), The Equal Employment Advisory Council (an organization sponsored by member companies interested in supporting effective EEO practices), and other personnel testing organizations. Comments were due this past August.

Among the many I/O psychologists **John Callender** (Procter & Gamble, Cincinnati) has talked to in academia, consulting, and private practice who have seen the draft, the reactions have been extremely negative. The new chapter on Employment Testing and Credentialing, principally authored by **Paul Sackett**, is very good and is getting widespread praise. Problems arise because material in the other 14 chapters, which the Standards Committee are clearly positioning as applicable to employment testing, is virtually impossible to implement. Those other standards often conflict with the new chapter on Employment Testing; with legal requirements embodied in the EEOC Guidelines, the 1991 Civil Rights Act, and ADA; with SIOP's Principles for Validation and Use of Personnel Selection Procedures; and generally disregard the accumulated research on employment test validity.

This situation prompted these organizations and many I/O psychologists to write personal letters to the Joint Committee on Test Standards (via Diane Schneider in the APA Science Directorate), urging them to incorporate the modifications indicated by EEAC and to conduct another full round of review and discussion of another draft before sending it to be voted on by APA and the other sponsoring organizations (AERA, NCME).

John would like to acknowledge that EEAC's comments are the product of an intensive team effort by Frank Erwin, Jerry Kehoe, Mary Lewis, Bob

John would like to acknowledge that EEAC's comments are the product of an intensive team effort by Frank Erwin, Jerry Kehoe, Mary Lewis, Bob Lorenzo, Kathleen Lundquist, John Pass, Ken Pearlman, John Rauschenberger, Bill Ruch, James Sharf, David Smith, L. Rogers Taylor, Mary Tenopyr, Nancy Tippins, Anna Marie Valerio, as well as himself and EEAC staff members Ann Reesman and Erin Gery.

John hopes that by the time this article appears in TIP, we'll have some indication as to the Committee's intentions. Many of those he has talked to (while writing this in August) are not optimistic that the appropriate changes will be forthcoming. There has been some informal discussion about the roles individual APA members might play to try to defeat a vote by APA to ratify these proposed standards, if it should come to that. John hopes that kind of effort can be avoided, because he thinks it could potentially drive SIOP and APA further apart.

Need more info? Just send a request for the March 1997 Standards Draft and EEAC's commentary to John Callender at the Procter & Gamble Company, Two Procter & Gamble Plaza, Cincinnati, Ohio 45202, at FAX 513-983-7737 or via e-mail at callender.jc@pg.com. Please be sure to include your return address for mailing. If you don't need the multi-pound Standards and EEAC commentary but want to add your name and address to his growing list of people who want to keep up with new developments, John will be happy to oblige that request also.

Thanks John for getting involved!

Archeological Dig Unearths Data from 1956

Dig it (if you will)...you are a graduate intern at UPS, working with their survey master **Paul Siemion** (UPS, Atlanta). He orders you down to the archival basement, following cautiously behind you. You kneel and open a dust-encrusted file box to discover 41-year-old handwritten notes and comments bearing the signature of Rensis Likert and **Stanley Seashore**! You look fervently around, ready to secret this treasure off to the next SIOP conference to display it next to the 15-foot factor analysis, but alas, lock eyes with Paul who slowly gives you a knowing smile. This is not your ordinary intern experience!

You might actually see more about this at next year's conference (Paul is considering a presentation), but until then suffice to say that Paul and company have discovered a 1956 UPS survey run by Rensis Likert and the Survey Research Center of the University of Michigan. The results from this and other surveys conducted during that period of time were the basis for the SRC's "new theory of management" which proposed methods that develop high group loyalty and teamwork by exhibiting supportive managerial behaviors. This was new then??? Have we not come as far as we believe?

This survey, delivered at that time to the 7,000 or so UPS employees (compared to the regular 6-months 'ER Index" survey administered to UPS' current 350,000 employees) had 221 items. Amongst the gems include questions about your feelings for employees who fly the flag on holidays or take out bank loans, pointed questions about the degree to which you liked your union leadership, questions about what your father did for a living and whether your wife worked outside of the home. It is easy to point out the more inflammatory questions by current standards. (By the way, Likert used 4-, 5- and 6-response scales to survey questions.)

It is less easy to point to important flaws in the survey's conclusions. Contrasting results between organizationally identified "highly effective" versus "ineffective" package centers, the SRC found an important determiner of effectiveness to be the level of supportive managerial behaviors and the existence of team work. Paul notes that "these are conclusions about managerial behavior we have been using for some time." Likert used this and similar results as the basis for several articles.[2]

Thank you Paul for getting down on your hands and knees for I-O psychology!

Learning from Experience Interview

Just when you thought you knew everything, something else comes up. (Those of us with children know this feeling well.) Thankful for the kindness of a stranger **Alan Stopko** (Stopko and Associates, Rochester, NY), *Practice Network* found out something it didn't know (and yes, I am a parent—this is easy to do!).

There are about a dozen or so folks around the country promoting this relatively new concept called Learning from Experience Interviewing (LFE). Alan describes it as a "marriage between behavioral event interviewing and learning agility research by Peter Senge and Kerry Bunker, Ph.D. and Mike Lombardo, Ph.D. of CCL."

Behavioral event interviewing says that past actions are the best predictor of future behavior. We *assume* if you did *this* before you will do *it* again. LFE goes into past experiences one level deeper. LFE says that you did not fully experience or learn from a past experience by merely going thorough it without any reflection, sense making, and actual or potential applications. More than just looking at the action you took and the result which came of it, LFE asks the degree to which you reflect upon, identify new information and internalize learning or lessons from past experiences and actions.

"Learning research shows that high potentials reflect upon experiences, make sense of what has happened and translate that experience into new rules, models, paradigms," Alan says. "Higher learning people adapt more rapidly and are more successful succeeding with first time experiences because of this ability to learn. It doesn't matter if this is their first assignment in a foreign country, their first time to create a strategic plan or their first time to lead a product launch." Higher learning people reflect upon experiences, and look to what past learning, rules or models may help them in this new situation.

What does a "learning agile" person sound like? Alan gave an example of a woman who was assigned the management of a customer service center that was in some trouble. Previous management had run the operation down —it was treating customers badly. The challenge was to turn around this failing operation. She was successful in doing this. During a LFE on this challenge she was able to describe 14 or 15 new management "rules of thumb" she took away from her experience: things like how to run planning meetings, the importance of asking detailed specific questions to uncover the unhappiness of current customers, the importance of involving her staff members in creating action plans, the need to focus on issues first before creating action plans, the need to establish process milestones, checking back with your customers, et cetera.

From Alan Stopko's perspective, he has noticed a shift in the large organizations he works with, beyond behavioral event interviews. More and more organizations ask him to help them identify "learning agile" employees. How well, how far and how fast can people learn? What are the learning behaviors of highly successful people? Can we identify who has learned from his or her past experiences? (TB: Ever wonder if someone has had 10 years of experience, or 1 year of experience 10 times?)

The mechanics of LFE include a structured interview format, with a heavy dose of questions like "What did you learn from this experience?" "If you would do this again, what would you do the same and what would you do differently, and why?" Overall summary ratings are made for (a) the frequency of learning, and (b) bipolar ratings of a dozen or more learning behaviors; for example, rating whether someone actively involves others in the problem solving or prefers to make decisions on their own, or whether someone actively seeks information from new and different sources or prefers a single or secondary source of information.

Want more information? Alan suggests you get a copy of *The Learning Edge* by Calhoun Wick, *Learning from Experience* by Kerry Bunker, of CCL or Peter Senge's *Fifth Discipline Field Manual*. Or contact him directly at 716-248-3620, email to astop@aol.com

Thanks Alan for speaking to *Practice Network* on this interesting topic.

Let Your Fingers Do the Walking...

...And your mouth do the talking. Get on over to that telephone and give *Practice Network* a call! Contact **Thomas G. Baker** at 614-475-7240, FAX to 614-475-7245, email to vtcj69a@prodigy.com. Do it now, before it's too late!

2. Likert, R. (1958, March-April). Measuring organizational performance. *Harvard Business Review*, 41-50. Likert, R. (1959, March-April). A motivational approach to management development. *Harvard Business Review*, 41-50.

Where Has All the Psychology Gone?

Scott Highhouse & Michael J. Zickar
Bowling Green State University

The 50th anniversary of Division 14 is indeed a time to celebrate our achievements and growth. However, it also seems to be an appropriate time to reflect on the nature of I/O psychology as a discipline and its long-term prospects. The purpose of this essay is to question whether I/O psychology is losing touch with its mother discipline—psychology. The concern that we lay out in this paper is that I/O psychologists seem to be identifying less with psychology, and more with other disciplines such as business administration, sociology, and organization development. Whereas, much has been made about the scientist-practitioner gap in I/O psychology (e.g., Hyatt, Cropanzano, Finfer, Levy, Ruddy, Vandaveer, & Walker, 1997), little mention is made of the *I/O psychology–psychology gap.*

We are certainly not the first to raise the issue of I/O psychology's movement away from psychology. Over 25 years ago, a symposium was convened to discuss this very issue (Lawler, Cranny, Campbell, Schneider, MacKinney, & Vroom, 1971). In it, Campbell, noting the emigration of I/O psychologists and I/O psychology training out of psychology departments, concluded that "It is reasonably clear that the locus of psychology applied to organizational problems has passed from the psychology department, probably never to return" (p. 10). Around this same time, Naylor (1971) made the provocative prediction that I/O psychology would gradually fall into a state of mediocrity as a subdiscipline in psychology. According to Naylor, as more and more specialized courses are added to the graduate curriculum, the sub-area of I/O moves farther and farther away from the basic discipline of psychology. More than a decade later, Tenopyr (quoted in Dunnette, 1984, p. 13), a practitioner, noted about the field:

> I still believe that things haven't changed all that much in 20 years. There are new problems I worry about now. One is the technicianization of some I/O psychologists who were not well educated in the first place. Another is the mindless application of computers. A third is the growing hoard of people in 'organizational development' who seldom identify with true organizational psychology. In short, let's bring science and scientific education back to I/O psychology!

Just what does the field look like today? Has the subdiscipline of I/O psychology slipped away from the core discipline of psychology? Does I/O psychology have an identity separate from business subdisciplines such as organizational behavior, human resource management, or organization development? And, if so, is this something that should make us concerned? Below we make an initial attempt to answer these questions.

The Impact of Psychology on I/O

To explore whether I/O psychology applies findings from basic psychology more or less than in the past, and whether authors draw more or less from the psychology literature than from the business/management literature, we examined reference sections of all articles in selected volumes of *Journal of Applied Psychology* (JAP) and *Personnel Psychology* (PPsych). Specifically, we looked for references to the leading psychology and business/management journals to get an (admittedly crude) estimate of how much authors have drawn from one discipline versus the other over the years. In order to select the two journals with the highest impact in psychology and the two journals with the highest impact in business/management, we relied on Bill Starbuck's 1996 journal impact ratings (http://equity.stern.nyu.edu/~wstarbuc/). This resulted in the choice of *Psychological Review* and *Psychological Bulletin*[1] for psychology, and *Academy of Management Review* and *Administrative Science Quarterly* for business/management—we think that most would agree that these are the most important journals in their respective disciplines.

Figure 1 shows the percentage of citations per *JAP* and *PPsych* article that came from the top two psychology and business/management journals. Inspection of Figure 1 reveals that in *JAP* there were more references to the psychology journals than references to the business/management journals until 1984, after which the citation rates of business journals became roughly equivalent to the psychology journals. The pattern in *PPsych* is less ambiguous; references to the leading business/management journals increased substantially over the years, while references to the leading psychology journals have decreased. In the 1996 volume of *PPsych*, there was nearly a 2 to 1 ratio of business/management references to psychology references.

Let's assume for a second that these data are an accurate reflection of I/O's connection with basic psychology. It would appear that the journals that have the greatest impact on contemporary thought and research in psychology are of less relevance these days to I/O psychologists. By contrast, the journals that are of most importance to business/management researchers are of greater importance to I/O psychologists than in the past. Consistent with this conclusion is the suggestion by authors in social psychology that I/O has disconnected from basic psychology (e.g., Funder, 1995; Sanna & Parks, 1997). For example, in reviewing research on personality judgments, Funder commented on I/O psychology's "relative isolation from mainstream personality and social psychology research" (p. 654). Why has I/O grown away from its roots?

One possible explanation for the apparent decline of interest in basic psychological research is the shift of allegiance of I/O psychologists from the

[1] We looked at citations for feature reviews, excluding citations for quantitative articles.

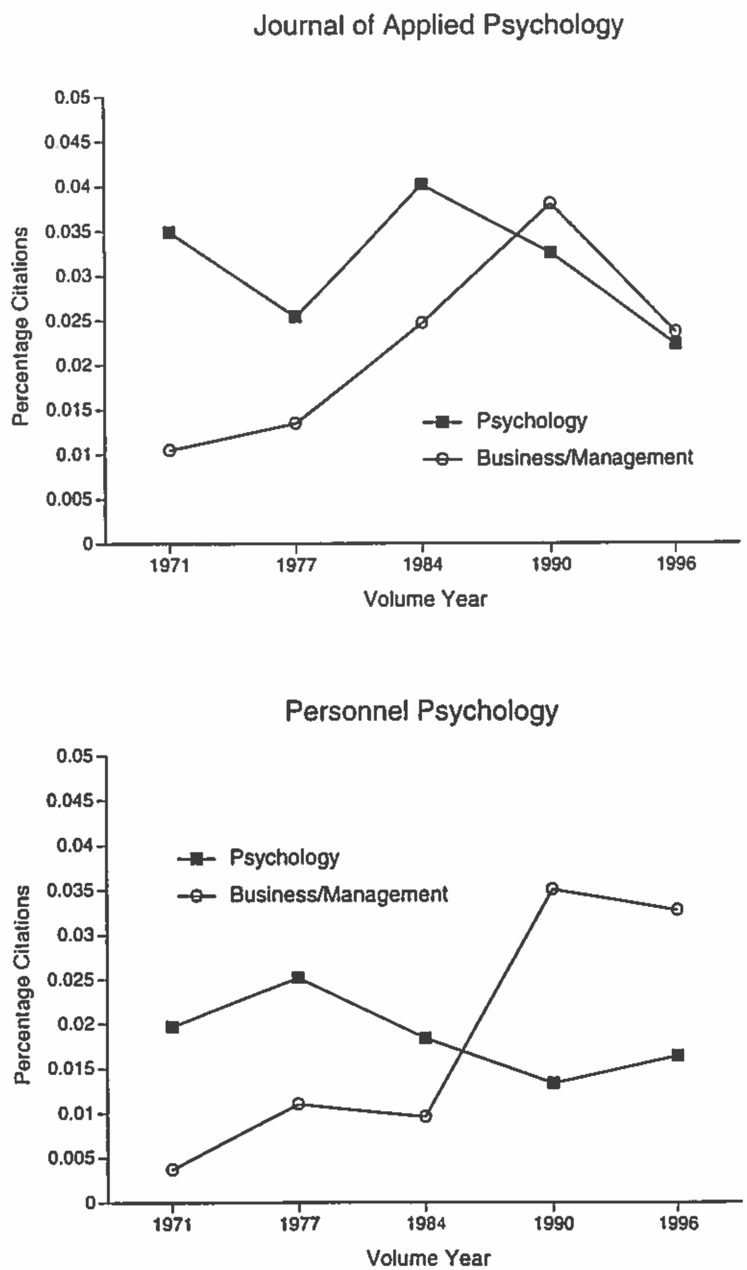

Figure 1: Percentage of citations for JAP and Ppsych articles that came from the top two psychology and business/management journals.

psychology department to business and management departments. Only 42% of the *academics* on the current *JAP* editorial board are in psychology departments, compared with 63% in 1984. Only 33% of the current *PPsych* editorial board academics are located in psychology departments, compared with 73% in 1984. In addition, only 36% of the SIOP fellows with academic appointments are located in departments of psychology.

Clearly many of I/O psychology's leading researchers and gatekeepers are outside of psychology departments today. This is not to say that I/O psychologists in business schools are any less fit to call themselves I/O psychologists (Indeed, they are often some of our best). However, researchers located in schools of business are more likely to be exposed to people working in business/management research, than in basic psychological research. One might expect that psychologists in business schools are rewarded more (formally or informally) for publishing in business/management journals than in psychology journals. Yet business/management journals that have been traditionally known for publishing micro articles appear to be moving toward more macro research, as they attempt to establish identities separate from psychology. In addition, **Vroom** (in Lawler et al., 1971) noted that the role pressures for psychologists in business schools are "substantially different" than those in departments of psychology. According to Vroom, the principal mission of the psychologist in a school of business "is no longer the development of psychologists, but rather the development of managers."

So What?

Presuming that I/O psychology is indeed influenced less by psychology than in the past, does it matter? We believe it does. Below we provide three general reasons for closing the I/O psychology–psychology gap.

Obtaining academic jobs. The Gordon and Howell report, published in 1959, examined the state of business education in the United States. This influential report recommended that managerial and organizational issues be studied in business schools using more rigorous scientific methods. Applied psychologists, well equipped to undertake such an endeavor, were highly sought after by business schools. Today, new psychology Ph.D.s continue to land jobs in business schools. However, we believe that this source of academic employment will be less available in the future because psychologists in the business schools have become well established enough to have their own "off-spring," who hold business Ph.D.s. More business school job ads these days contain the requirement that applicants possess degrees in business administration.

Given these trends, new I/O psychology Ph.D.s pursuing academic careers will be forced to look toward psychology departments as a primary source of employment. However, getting a job in a psychology department requires impressing the faculty members in divisions outside of I/O. This involves demonstrating connections with other areas of psychology, and possessing a strong foundation in basic psychology. However, as we take a look around the I/O community, we find little concern for enhancing students' knowledge of basic psychology. For example, we see calls for the abandonment of comprehensive exams in I/O graduate training, and replacing them with "competency" assessments which focus on tackling organizational problems (Aguinis & Kraiger, 1997). In addition, "Business/Consulting Skills" have been added to the core content areas of graduate training in the proposed *SIOP Guidelines for Education and Training at the Doctoral Level* (**Major**, 1996). We worry that graduate programs will replace courses that focus on individual differences with courses on how to conduct job analyses, or that courses on attitudes will be replaced with courses on how to deal with office politics. We are certain that such changes will not improve the ability of new I/O faculty to communicate with their non-I/O peers in departments of psychology, nor to apply knowledge from the basic discipline to the understanding of people in organizations.

Maintaining a separate identity. We believe that another compelling reason for I/O not to lose touch with basic psychology is to maintain a separate identity from related subdisciplines such as OB, HRM, or OD. What would be the need for a subdiscipline that is redundant? Psychology departments may decide that research on organizational behavior is sufficiently addressed in the business school and that it is unnecessary to have I/O graduate programs. However, the major identification of much of the organizational research in business seems to be with sociology (cf., Staw, 1991), although this research considers itself interdisciplinary. Also, the graduate training offered in the business school is of a different nature than that offered in psychology departments. As **Campbell** (in Lawler et al., 1971) noted, "The business school Ph.D. does get exposure to some of the so-called basic content areas within psychology, although these are limited almost exclusively to social psychology and quantitative methods" (p. 10). Certainly the best of applied psychology training borrows ideas from other disciplines, but there is no question that it is first and foremost psychology (APA, 1959).

Serving one master. A final reason for I/O to focus on maintaining its connection to psychology is to avoid becoming a field that merely services organizational problems. Vroom (in Lawler et al., 1971) noted that, to be effective in a school of business, the psychologist must respond to the interests and concerns of managers. It is possible that, given the growing influence of business/management on I/O psychology, this may become the foremost criterion for success as an I/O psychologist as well. However, **Guion** (1965) argued that I/O psychology should be defined as the "scientific study of the relationship between man and the world of work: The study of the adjustment people make to the places they go, the people they meet, and the things they do in the process of making a living" (p. 817). Nothing in this definition suggests that the primary concern for I/O psychologists should be to increase organizational profitability. As Guion

noted, such a narrowing of focus is to treat I/O psychology as a trade rather than as a discipline.

What happens when the focus of I/O psychologists is dictated by managers? On the one hand, research will be more directly applicable to the immediate needs of organizations, at least in the short term. However, there is a long-term danger in allowing research programs to be dictated by the ever-changing priorities of the business manager. Organizations are notorious for having their priorities driven by rapidly fluctuating economic cycles and management fads. As **Chuck Hulin** noted in a 1996 SIOP roundtable discussion, "360° feedback from last year becomes 450° feedback this year and both may vanish next year." Indeed, business/management academic research has been characterized as being driven by "management fashion" (Abrahamson, 1996). Guion (1965) argued that the academic I/O psychologist should not simply be a "mirror of current professional practice" but should engage in the development of new knowledge, as well as the dissemination of old knowledge.

Conclusion

The purpose of this essay was not to attack psychologists who choose to work in business schools, nor to call for the abandonment of research on practical organizational problems. Instead, we set out to raise the issue of what we perceive to be the gradual erosion of psychology from I/O psychology. Instead of simply bemoaning the current trajectory of I/O without providing recommendations, we propose the following ideas for closing the I/O psychology–psychology gap:

- I/O graduate programs should resist the temptation to increase the range of acceptable courses that meet core content requirements. Students may find core content courses more attractive if they are taught to apply the material from these core areas to the solution of applied and theoretical problems in I/O psychology.
- Current journal articles from core psychology journals (e.g., *Psychological Review*) could be included in I/O seminars and reading lists for comprehensive examinations. In addition, coursework might emphasize historical material so that students are better able to evaluate the progress of our field and avoid repeating past mistakes.
- Focus on competencies such as consulting skills could be balanced with attention to competencies that will enhance marketability in psychology departments, such as grant-writing skills.
- Debates could be encouraged in the classroom and at conferences that help us examine fundamental assumptions and philosophies underlying I/O as a discipline. For example, we might focus on differences between I/O and HRM/OB, or the degree to which I/O should be in the service of management versus psychology.

The major strength of I/O psychologists has been the ability to understand and apply basic psychological research. Practical techniques like goal setting and situational interviews rest on a solid foundation of psychological theory—such as Ajzen and Fishbein's theory of planned behavior. By staying connected with developments in basic psychology we avoid rediscovering phenomena that already exist. Let's return our attention to what we do best—*apply* psychology.

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Call for Program Proposals: 1998 APA Convention in San Francisco

Michael J. Burke

It is time to start developing program proposals for the 1998 APA Convention. The convention will be held in San Francisco from Friday, August 14, to Tuesday August 18. **Program proposals must be postmarked by November 21, 1997.**

The Board of Convention Affairs has established uniform requirements for all paper/proposals, which are detailed below. We welcome new and different program formats. We hope that having to write less encourages you to submit more. Papers, symposia, tutorials, panel discussions, and conversation hours are traditional, welcome formats, but we will also consider any innovative formats you can create.

Specific details about program submissions appeared in the September issue of the *APA Monitor*. The Call for Programs is also available by writing: **Convention Office, American Psychological Association, 750 First Street NE, Washington, DC 20002-4242.** Please note that although the APA Call for Programs indicates that presenters at the convention must be APA members or be sponsored by APA members, APA has given SIOP permission to waive these requirements. Thus, **you must be a SIOP member or sponsored by a SIOP member to present at the APA convention as part of SIOP's program, but you do not need to be a member of APA or be sponsored by one.**

Note that APA distinguishes between "presentations" and "programs," with different submission procedures for each:

- "Presentations" are individual papers to be presented either in a paper or poster session. Our presentations will be primarily poster sessions, however we also have the option of combining separately accepted papers into a paper session focusing on a common theme. Presentations (individual papers) will be blind reviewed. The requirements for submission are: five copies of a 500 to 1,000 word summary and five copies of a 100-word abstract. Please do not put your name on the summary or abstract, just the submission title. Submissions should be double-spaced, with one-inch margins using elite type.
- "Programs" refers to sessions with multiple presenters including traditional formats such as symposia, panel discussions, and debates. However, programs with creative, nontraditional formats are encouraged. Programs are not blind reviewed. It is important to know who the participants are in order to evaluate the proposal. Submit five copies of the complete proposal. Proposals for these sessions should include a 300-word general summary and 300-word summaries of

each participant's presentation. As with presentations, submissions must be double-spaced, with one-inch margins, in elite type.

In evaluating submissions to the Convention, we will be use the following criteria:

1. Appropriateness of the topic for SIOP
2. Technical adequacy (research methods, analyses)
3. Contribution to knowledge of the topic
4. Interest, informativeness, and innovation
5. For Programs: Do the multiple presentations form a coherent, integrated whole?

Given that the APA Convention will immediately follow the International Congress of Applied Psychology in San Francisco, we encourage the submission of joint "Programs" with SIOP members and our international colleagues. If you have questions, ideas, or suggestions for invited speakers, feel free to call or write: **Michael J. Burke, Department of Psychology, 2007 Stern Hall, Tulane University, New Orleans, LA 70118. Telephone: (504) 862-3328; e-mail: mburke1@mailhost.tcs.tulane.edu, Fax: (504) 862-8744.** Please send all program submissions to this address postmarked by November 21, 1997.

The Program Committee looks forward to receiving your ideas and submissions. This is going to be a great year to present at APA in San Francisco!

Interested in Serving on a SIOP Committee?

This is a good time to volunteer!
Contact:

Bernardo Ferdman
c/o SIOP Administrative Office
PO Box 87
745 Haskins Road, Suite A
Bowling Green OH 43402-0087
FAX: (419) 352-2645

International Forum

Dirk D. Steiner
Université de Nice-Sophia Antipolis

In this issue's column, the primary international issue is the International Association of Applied Psychology (IAAP) and its upcoming conference in San Francisco (August 9–14, 1998). Bernhard Wilpert, President of the IAAP provides a thorough overview of the Association's activities. Keeping with this theme, I would like to alert *TIP* readers to the activities of two French professional organizations and their upcoming conventions. Both of these organizations conduct their activities in French, which may present a drawback for many SIOP members. Nonetheless, they both are involved in some relevant activities for us; so brushing up on your françáis could be useful!

The first of these two French organizations is the Association Internationale de Psychologie du Travail de Langue Françáise (AIPTLF). Its 10th conference will take place in Bordeaux from August 24 to 27, 1998. The general theme of the conference is work transformations (subthemes: competencies, technologies, and communication). For more information, contact Prof. Claude Lemoine, Université de Rouen, Département de Psychologie, 76821 Mont St. Aignan cedex, FRANCE (fax: 33 235 14 61 04; e-mail: claude.lemoine@epeire.univ-rouen.fr). The second organization is the Association pour la Diffusion de la Recherche Internationale en Psychologie Sociale (ADRIPS). It will hold its second conference in Torino, Italy from September 17 to 19, 1998. The ADRIPS conference will feature presentations in all areas of basic and applied social psychology. For more information contact Prof. Nicole Dubois, Université de Nancy 2, Campus Lettres et Sciences Humaines, Département de Psychologie, BP 33-97, 54015 Nancy cedex, FRANCE (fax: 33 383 51 04 31; e-mail: dubois@clsh.u-nancy.fr

To comment on the Forum, suggest contributors, or propose a column, contact me at: Dirk Steiner, Faculté des Lettres, Arts, et Sciences Humaines, Université de Nice-Sophia Antipolis, 98, boulevard Edouard Herriot, 06204 Nice Cedex 3, FRANCE. e-mail: steiner@hermes.unice.fr, fax to: (33) 493.37.55.36.

International Association of Applied Psychology (IAAP)
Association Internationale de Psychologie Applique (AIPA)

Prof. Bernhard Wilpert, President of IAAP
TU Berlin-Sekr. DO 303
Institut für Psychologie
Doverstrasse 1
10587 Berlin
GERMANY
Fax: 49 30 314 25274

1. IAAP - Its Nature and Ways of Working

The International Association of Applied Psychology is the oldest international association of psychologists. Its official languages are English and French. Founded in 1920, it now has more than 2,000 members from more than 70 countries. Its aims are succinctly stated in Article 1 of its Constitution:

> to establish contact between those who, in different countries, devote themselves to scientific work in the various fields of applied psychology, and to advance the study and achievement of means likely to contribute to the scientific and social development in these fields.

The Association distinguishes five membership categories:

1. Full Members
2. Student Members
3. Honorary Members
4. Associate Members (non-psychologists working in fields of applied psychology)
5. Affiliate International Organization Members (international psychological societies/associations in a sub-field of applied psychology).

Most of the Association's work is achieved through its Divisions, Standing Committees, and Task Forces. The Divisions pursue the scientific concerns of IAAP members working in various sub-fields of applied psychology. In 1994, IAAP had recognized 13 divisions, the largest being the Division of Organizational Psychology (about 500 members). Standing Committees are concerned with aspects and recurrent problems that affect the Association as a whole. Task Forces deal with urgent but time-limited strategic issues in need of action by the Executive Committee or the Officers of IAAP.

2. Activities of IAAP

International Congress of Applied Psychology (ICAP). Every 4 years IAAP organizes a world congress of applied psychology which serves as a review of advances in applied psychology and unites several thousand psychologists from all over the world. Thus, the ICAP '90 (Kyoto) counted more than 2,000 participants, ICAP '94 (Madrid) some 3,500. The ICAP '98 will be hosted by the American Psychological Association in San Francisco.

Regional psychological conferences. IAAP (in co-operation with the International Union of Psychological Sciences and the International Association of Cross-Cultural Psychology), through its Divisions and as a whole, contributes to international regional conferences of psychology by organizing symposia, nominating members to the local scientific and organizing committees, nominating key-note speakers, organizing special Division programs, and by contributing to the funding of such conferences. These regional meetings are especially important for younger psychologists and colleagues from less developed countries who may not be able to afford the travel cost and congress fees for world congresses. Besides, they help to bridge the periods between two ICAPs, thus facilitating continuity of contacts and cooperation.

Regional meetings of divisions. Sometimes IAAP Divisions organize theme-oriented workshops and unite colleagues from a particular region in focused scientific exchange.

Awards. One way of highlighting the relevance of applied psychology is to honor colleagues who have made important contributions to the field by giving them a special IAAP Award. Two types of awards were created for this purpose:

1. an award "for recognized international impact in Applied Psychology" (recipient 1994: Donald Super, USA, posthumously);

2. an award "for outstanding contributions to the advancement of the profession of Psychology internationally," existing since 1982 this distinguished award has been conferred upon Gunner Westerland, Rudolf Amthauer, **Ed Fleishman, Claude Levy-Leboyer**, Charles de Wolff, Yehuda Amir, and in 1994 upon Jyuji Misumi, Japan.

Training. IAAP cooperates with other international Psychological Associations in the organization of "Advanced Research Training Seminars—ARTS" for colleagues from Third World countries. These Seminars are carried out in connection with international congresses and focus on particular themes such as cognitive psychology and developmental psychology. It is envisioned to expand training activities by IAAP members either coincidentally by renowned colleagues during their travels or through workshops in connection with international congresses.

Publications: Historically the principal publication of IAAP was the International Review of Applied Psychology/Revue International de Psychologie Appliquee, a quarterly journal which, in 1987 changed its name to Applied Psychology—An International Review (Lawrence Erlbaum/Psychology Press) which ranks among the best scientific periodicals in psychology. The journal allows and encourages controversial papers (including, since

1992, articles with "open peer commentaries"). It features three kinds of issues:

1. Special issues edited by guest editors looking at one theme in detail;
2. Regional issues presenting applied psychology from one area of the world;
3. General issues with freely submitted contributions.

The *European Work and Organizational Psychologist*, also a quarterly journal, is published in association with the European Association of Work and Organizational Psychology (EAWOP). This periodical aims particularly at bridging the gap between practicing and scientifically active applied psychologists. An *IAAP-Newsletter* is published twice a year to inform members about important developments and events in applied psychology and within the Association. In addition, several Divisions of IAAP inform their members with periodical editions of Division Newsletters. The *Proceedings of the 22nd ICAP in Kyoto 1990* were published (Lawrence Erlbaum) in 1992 in three volumes (Editors: J. Misumi, H. Motoaki, and B. Wilpert).

3. It Pays to Be a Member of IAAP

The most important benefit of being a member of IAAP is to be linked to a world-wide network of like-minded colleagues with opportunities to develop close cooperation and exchanges in research, teaching, and the practice of applied psychology. Members may, through their participation in the IAAP Divisions, influence the form and content of the international congresses. Border-spanning friendships and cooperative partnerships develop through activities in IAAP's Divisions, among Divisions, and among applied psychologists and colleagues of other cooperating disciplines (Associate Members). In order to further advance these contact possibilities, IAAP is actively pursuing the establishment of a world-wide electronic network among its members with easy link-up possibilities from personal computers and will provide membership directories on diskettes.

But there are also direct material benefits:

1. IAAP allows members to participate in its International Congresses of Applied Psychology and co-sponsored regional meetings at reduced fees;
2. IAAP's main journal, *Applied Psychology—An International Review*, its IAAP-Newsletter and Division newsletters are provided to members free of charge;
3. Additional journals are offered to IAAP members at drastically reduced subscription fees: *The European Work and Organizational Psychologist*, the *International Journal of Human Resource Management* (discounted from $90 to $44), *Human Relations* (12 issues annually, discounted from $415 to $95), and *Journal of Organizational Behavior* (discounted from $85 to $75);

4. IAAP offers drastically reduced membership dues for student members and members from low-income countries;
5. IAAP's fee structure is based on self-evaluation according to net annual income.

4. International Congress of Applied Psychology (ICAP)

For the first time in IAAP's history, an ICAP will take place on American grounds (24th ICAP, San Francisco, August 9–14, 1998). Thus, this important event provides a unique window for American colleagues to look into world-wide psychological developments and for international colleagues to confront themselves with psychology in the USA. This opportunity will be further increased by the "overlap day" (August 14, 1998) with the APA Convention, held also in San Francisco, August 14–19, 1998, organized by APA. IAAP and APA plan a reduced conference fee for participants in both events. The ICAP 2002 will take place in Singapore.

Report on the Twelfth Annual Industrial/Organizational Psychology Doctoral Student Consortium

Peter Bachiochi and Steven Rogelberg
Bowling Green State University

The Twelfth Annual I/O Doctoral Consortium was held on Thursday, April 10, 1997, preceding the SIOP Annual Conference in St. Louis. It was our pleasure to host 40 advanced students from 37 different programs. The students met their peers from other programs and received helpful advice from speakers who represented all of the possible professional avenues available within I/O psychology. Similar to last year's group, about two-thirds of the attendees this year were from psychology programs and the rest were from business or management programs. Like last year, there was an even split of students interested in academic careers and those interested in careers in applied fields.

Milt Hakel got the day started with a discussion of "the vision thing." Milt shared some of the responses of participants to a pre-consortium survey. In addition to sharing what the students expected to see in the field of I/O in the year 2020, Milt also shared his observations on what I/O psychologists must address in order to meet the needs of business in the future. Milt warmed up the crowd for the concurrent sessions which were to follow.

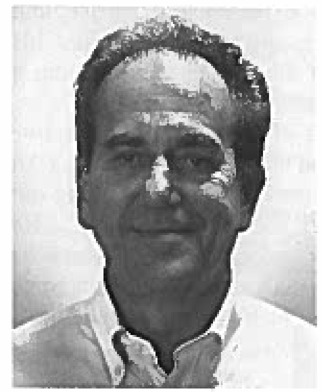
In the first morning session, **Joe Martocchio** discussed new directions in employee training research. Joe led a discussion of the theoretical advances as well as the empirical improvements being made to address the new interests in employee training. **Sara Rynes** provided the other morning session with recommendations on how to develop a productive research stream. Sara moved beyond the simple do's and don'ts and provided recommendations on how to develop interesting research questions that lead not only to significant results, but also to significant contributions to the field.

The morning sessions were followed by an Italian buffet lunch that knocked our collective socks off. After the group polished off the final cannoli, **Lois Tetrick** provided pointers to help the consortium attendees "avoid tripping on broken bricks or falling through the cracks on the yellow brick road to publication." Lois gave tips on writing, submitting, revising, and all of the other fun steps in the publication process. Lois then handed over the reins to **Mary Zalesny** and **Jeff McHenry** who took the stage for a joint afternoon session. Although they turned down our request for an interpretive dance illustrating the plight of the scientist-practitioner, Mary and Jeff came up with something better. Mary's talk, entitled "If this is Wednesday, this must be the new crisis" provided an entertaining and accurate portrayal of a day in the life of an I/O practitioner. Jeff followed Mary's talk with a team-building exercise and a discussion of the OD process. Fortunately, all of the participants survived the "electric fence" exercise and we were heading into the home stretch for the day.

To begin wrapping up the day, **Steve Ashworth** discussed how to get the most out of the SIOP Placement Center. Steve was then joined by the rest of the speakers for a final question-and-answer session designed to address the students' interests and concerns regarding professional development in I/O psychology. The Q & A session helped to complete a day focused on the future. Not only were attendees able to get insights about the future of I/O from prominent figures in the field, but they were also able to make new professional contacts and develop new friendships. We thank all of the presenters who graciously volunteered their time, insights, and energy to make this year's consortium a success.

OBITUARIES

RICHARD J. CAMPBELL (1932–1997)
A Love Story



It is with deep sadness that we report the passing of Richard J. Campbell, President of SIOP in 1982–83. He had fought for a long time against cancer, but finally succumbed peacefully on August 16 at his home in Mountain Lakes, New Jersey.

Born in Philadelphia on April 23, 1932, and raised there, he graduated from Temple University with a B.A. degree in 1954. He went to The Ohio State University for graduate study in psychology and obtained his M.A. in 1958 and Ph.D. in 1960 under Robert J. Wherry.

After receiving his doctorate, he worked in industry for over 25 years, first at General Motors and principally at AT&T, where he rose to being Director of Management Development, Education, and Work Relationships. At AT&T, his leadership helped fashion one of industry's preeminent programs of psychological research and application. Among its major endeavors was the long-term study of the psychological development of young managers which found, among other things, that growth was facilitated by the stimulation and challenge of their jobs. That research was reported in his landmark 1974 book, co-authored with Douglas Bray and Donald Grant, *Formative Years in Business*.

In 1988, Richard co-edited with John Campbell, and was a contributing author to, *Productivity in Industry*. That book described various psychological approaches to improving human work performance and was the second in the series, sponsored by SIOP, called Frontiers of Industrial and Organizational Psychology. Richard had been the spark plug of the series when, as SIOP president, he had pushed the revitalization of the Scientific Affairs Committee, which he asked me to chair. One of the major projects launched by the committee during his presidency was the Frontiers series.

Another of Richard's editorial contributions was his service on the editorial board of *Personnel Psychology*. When that journal initiated the section on Innovations in Research-Based Practice, he became its first editor, a position he filled until his death. He had been the ideal choice for that post, because he not only was a talented writer and editor with many contacts, but the concept of "research-based practice" captured the essence of the scientist-practitioner model that he epitomized in his career.

When Richard took early retirement from AT&T, I asked him to join me for cocktails at the New York University Club in mid-town Manhattan. A couple of drinks later, hoping for an affirmative answer, I asked whether he had any interest in an academic post. "Yes," he said with alacrity, "it's actually something that I've been thinking about for quite some time." The rest, to coin a phrase, is history.

Richard was appointed Professor of Psychology at N.Y.U. in 1987, a role that he filled admirably. His practical experience, technical expertise, and charisma combined to make up-beat disposition and readiness to put his knowledge, wisdom, and time at the disposal of others helped make him a wonderful faculty colleague.

When Richard opted in 1992 to join the staff of the Center for Creative Leadership to pursue his interest in research on managers, we at N.Y.U. contrived to keep him aboard as a part-time Adjunct Professor, working out a schedule that fit commuting between New York and Greensboro, NC. He was happy to do this, for he much enjoyed his professorial role, which he continued till the end. This restructuring of his job had one happy outcome for me. Because we were both by then working at N.Y.U. only part time, arrangements were made for him to share my office, thereby occasioning even more interaction between us.

At the Center for Creative Leadership, he was doing more studies of executive selection, one being why company executive selection programs have good or poor outcomes. Another had to do with developing a multimedia simulation for training managers to do better executive selection.

Throughout his career, Richard was active in professional affairs, especially those of SIOP, to which he was deeply devoted. He served SIOP in various capacities including, as already noted, as president. That dedication was formally recognized when, in 1989, SIOP bestowed on him its first Distinguished Service Award.

We extend our heartfelt sympathy to his family: his wife, the former Carol Rogers, his daughters Bonnie, Lisa, Andrea, and Carrie, and grandchildren Ellen and Anna. At the family's suggestion, donations in his memory may be made to the R. J. Campbell Scholarship Fund, NYU, c/o Madeline Heilman, Department of Psychology, 6 Washington Place, New York, NY 10003.

To say that Richard J. Campbell will be sorely missed doesn't begin to capture our feelings. He was wise, able, warm, cheerful, sincere, helpful, fun-loving, devoted, and a whole lot more. We love you, man.

Raymond A. Katzell

Upcoming Conferences and Meetings

This list was prepared by David Pollack. If you would like to submit additional entries, please write David Pollack at the U.S. Immigration and Naturalization Service, 425 I Street, NW, Room 2236, Washington, DC 20536, (or call (202) 305-0081, or fax entries to (202) 305-3664).

1997

Nov 4–8	Annual Convention of the American Evaluation Association. San Diego, CA. Contact: AEA, (804) 225-2089.

1998

March 27–29	19th Annual Industrial Organizational/Organizational Behavior Graduate Student Conference. San Diego, CA. Contact: California School of Professional Psychology-San Diego (619) 623-2777 ext. 313.
April 13–17	Annual Convention, American Educational Research Association. San Diego, CA. Contact: AERA, (202) 223-9485.
April 13–17	Annual Convention, National Council on Measurement in Education. San Diego, CA. Contact: NCME, (202) 223-9318.
April 24–26	Thirteenth Annual Conference of the Society for Industrial and Organizational Psychology. Dallas, TX. Contact: SIOP, (419) 353-0032.
May 9–13	Annual Conference of the American Society for Public Administration. Seattle, WA. Contact: ASPA, (202) 393-7878.
May 11–14	26th International Congress on the Assessment Center Method. Pittsburgh, PA. Contact: DDI, (412) 257-3952.

May 19–21	Annual Convention of the American Psychological Society. Washington, DC. Contact: APS, (202) 783-2077.
May 19–22	28th Annual Information Exchange on "What is New in O.D." Lincoln, NH. Contact: Organizational Development Institute, (216) 461-4333.
May 31–	Annual Conference of the American Society for Training and Development. San Francisco, CA. Contact: ASTD, (703) 683-8100.
June 14–17	Annual Conference of the Society for Human Resource Management. Minneapolis, MN. Contact: SHRM, (703) 548-3440.
June 21–25	Annual Conference of the International Personnel Management Association Assessment Council. Chicago, IL. Contact: IPMA, (703) 549-7100.
July 14–18	18th O.D. World Congress. Dublin, Ireland. Contact: Organizational Development Institute, (216) 461-4333.
Aug 9–12	Annual Meeting, Academy of Management. San Diego, CA. Contact: Academy of Management, (914) 923-2607.
Aug 9–13	Annual Convention of the American Statistical Association. Dallas, TX. Contact: ASA, (703) 684-1221.
Aug 14–18	Annual Convention of the American Psychological Association. San Francisco, CA. Contact: APA, (202) 336-6020.
Sept 23–25	Ninth Annual International Conference on Work Teams. Dallas, TX. Contact: Center for the Study of Work Teams, (817) 565-3096.
Oct 5–9	Annual Conference of the Human Factors and Ergonomics Society. Chicago, IL. Contact: The Human Factors and Ergonomics Society, (310) 394-1811.

CALLS & ANNOUNCEMENTS

Conference Announcement

The Center for the Study of Groups and Social Systems (The Boston Center of the A.K. Rice Institute) announces its 1998 Residential Conference on Group Relations: Authority, Leadership and Partnership in Organizational Life. This conference will be held on January 14–18, 1998 at the Mount Marie Conference Center, Holyoke Massachusetts, Evelyn D. Cleavely Director.

This will be an experiential conference in the Tavistock tradition designed to enable members to extend their awareness of group and organizational processes and of their participation in them. The method is learning through experience and reflection. The design of the conference is based on the assumption that by examining and interpreting experiences within the conference institution, members will be enabled to enlarge their understanding of their own institutions and their roles in them.

The conference is designed for members from diverse occupations. The primary task is to provide opportunities to study the exercise of leadership, authority and partnership in the context of interpersonal, intergroup, and institutional relations within the conference.

For further information and an application please contact: Center for the Study of Groups and Social Systems, c/o Marc Kessler, Department of Psychology, University of Vermont, Burlington VT 05405-0134, phone: (802) 656-0880, or M_Kessle@dewey.uvm.edu. Our web address is http://www.uvm.edu/~csgss.1998conf.html, fax: (802) 656-8783

Call for Nominations

The Publications and Communications Board has opened nominations for the editorships of *Experimental and Clinical Psychopharmacology, Journal of Experimental Psychology: Human Perception and Performance* (JEP:HPP), *Journal of Counseling Psychology* and *Clinician's Research Digest* for the years 2000-2006. Charles R. Shuster, Ph.D., Thomas H. Carr, Ph.D., Clara E. Hill, Ph.D., and Douglas K. Snyder, Ph.D., respectively, are the incumbent editors.

Candidates should be members of APA and should be available to start receiving manuscripts in early 1999 to prepare for issues published in 2000. Please note that the P&C Board encourages participation by members of underrepresented groups in the publication process and would particularly welcome such nominees. Self-nominations are also encouraged.

To nominate candidates, prepare a statement of one page or less in support of each candidate and send to:

Joe L. Martinez, Jr., Ph.D., for *Experimental and Clinical Psychopharmacology*

Lyle E. Bourne, Jr., Ph.D., for *JEP:HPP*

David L. Rosenhan, Ph.D., for *Journal of Counseling Psychology*

Richard M. Suinn, Ph.D., for *Clinician's Research Digest*

Address all nominations to the appropriate search committee at the following address: **Karen Sellman, P&C Board Search Liaison, Room 2004, American Psychological Association, 750 First Street, NE, Washington, DC 20002-4242.**

First Review of nominations will begin December 8, 1997.

The ***International Journal of Organizational Analysis*** is soliciting original theoretical and empirical articles dealing with national and international issues in the following areas:

1. Organization theory
2. Strategic management
3. Organizational behavior
4. Human resource management
5. Business and society, ethics and values

IJOA also publishes case studies, research notes, simulations, teaching notes, and book reviews. The journal is published in January, April, July, and October. Manuscripts must be prepared strictly according to the 1994 edition of the Publication Manual of the American Psychological Association and will be reviewed by a double-blind review process. Four copies of the manuscripts and requests for other details should be addressed to the Editor: **Dr. Afzal Rahim, Center for Advanced Studies in Management, 1574 Mallory Court, Bowling Green, KY 42103, Phone & Fax: (502) 782-2601, e-mail: mgt2000@aol.com**

Positions Available

I/O PSYCHOLOGY INTERNS. Ford Motor Company is accepting applications for pre-doctoral internships in industrial/organizational psychology. Ford is a worldwide leader in automotive products and financial services with 325,000 employees, including 143,000 employees in U.S. automotive operations.

The internships are full-time and last 12 months. Interns will be working with I/O psychologists and HR professionals on a variety of projects, most of which are international in scope. Projects include selection research, employee surveys and organizational development. All positions are located in Dearborn, Michigan.

Applicants must be enrolled in an I/O doctoral program and have completed a Master's degree or be admitted to doctoral candidacy. Candidates should have experience in selection research, construction of tests/surveys, statistical analysis and organizational/team development interventions. Familiarity with SPSS is preferred but not required. Foreign language skills are not required but would be a definite plus. Ford is an Equal Employment Opportunity Employer committed to a culturally diverse workforce.

Those interested in applying should submit a cover letter and resume to: Rick Smith, Ph.D., Ford Motor Company, Personnel Research Services, World Headquarters Room 710, Dearborn, MI 48121-1899. Fax: 313-594-1666; e-mail: rsmith87.ford@e-mail.com.

HUMAN RESOURCES RESEARCH INTERNSHIP. SBC Communications, Inc. (formerly Southwestern Bell Corporation) is currently accepting applications for pre-doctoral I/O Psychology internships in Human Resources Research and Planning.

The internship program gives students with a solid I/O background an opportunity to apply their training in a corporate environment. Interns work with two I/O Psychologists, independently, and with other Human Resource professionals on applied research and selection process development. The internship is designed to allow students to be responsible for entire projects from beginning to end. We also emphasize the importance of students completing the work needed for their degrees.

Qualified candidates should be advanced Ph.D. students (preferably 3rd or 4th year) in I/O psychology and should have completed a Masters degree or equivalent. Preference will be given to applicants with experience in job analysis, test development, and validation. Strong research, analytical, written and interpersonal communication skills are required. Experience in SAS is also desired.

These internships are full time and last for six months, beginning in January or July. The deadline for completed applications is October 15 for the internship beginning in January, and April 15 for the internship beginning in July. Please send cover letter and resume to: **Seth Zimmer, Ph.D., SBC Communications, Inc., 175 East Houston, Room 5-C-9, San Antonio, TX 78205.**

SENIOR CONSULTANT OR PROJECT MANAGER. Aon Consulting, formerly HRStrategies, is an internationally known HR consulting firm specializing in the design and implementation of creative solutions to human resource and organizational transition needs. Our staff of over 1,500 professionals includes more than 60 I/O psychologists offering exceptional service to the most recognized and innovative organizations in the world. As a member of the Aon family of companies, we offer global consulting capabilities through a worldwide network of offices.

Due to rapid growth, we are continually in search of exceptional candidates who can make valuable contributions to our team. Project work includes the construction and implementation of selection and assessment systems, performance management systems, career development programs, employee opinion surveys, and change management consulting.

We seek experienced I/O psychologists with a proven track record of superior project management and strong statistical skills with the ability to present in an applied manner. Send your resume outlining related experience to **Jennifer K. Burns, Human Resources Manager, Aon Consulting, P.O. Box 36778, Grosse Pointe MI 48236.** Aon Consulting is an Equal Opportunity Employer and a member of the Aon family.

CENTER FOR CREATIVE LEADERSHIP: RESEARCH ASSOCIATE. The Research Department of the Center for Creative Leadership is recruiting for a one to two year post-doctoral research associate. This position is responsible for providing research assistance on a new project designed to identify the capacities of individuals who are effective in global roles and to study how these capacities are best developed in individuals aspiring to complex management and leadership roles.

Specific knowledge, skills and abilities required include: Completion or near completion of Ph.D. in I/O or Social Psychology; knowledge and interest in cross-cultural, international, global, and/or expatriate issues as shown through course work, dissertation or thesis topics; good writing skills; good data analysis skills using SPSS or SAS.

Our research is definitional and fundamental in the sense that it inquires into the nature of leadership and the initial behaviors defining it, as well as how profound changes in individuals and organizations can result in a higher quality of, and greater capacity for leadership. Yet it is also applied research, in that we seek ways to transform these insights into techniques that lead to practical knowledge and measurable results for our clients.

Any interested Doctoral or Post-Doctoral student may forward a cover letter with resume and salary history to: **Human Resources-TIP, Center for Creative Leadership, P. O. Box 26300, Greensboro, North Carolina 27438-6300, Fax (910) 545-3929.**

The Center is an international, nonprofit educational institution whose mission is to advance the understanding, practice, and development of leadership for benefit of society worldwide.

The Center for Creative Leadership is committed to a policy of equality of opportunity for all its employees. Therefore we seek balances in our workforce which reflect the diversity of our customers and the communities in which we operate.

THE HONG KONG POLYTECHNIC UNIVERSITY invites applications for the following posts in the Department of Management: Professor/Associate Professor/Assistant Professor in Human Resources Management, Organizational Behaviour, Organization and Management Theory, International Management. The appointees will be required to teach and research in one or more of the above areas.

Applicants are expected to have a doctorate degree in a related field. They are expected to have a strong commitment to excellence in teaching and research. Applicants for Associate Professorship should have an outstanding research and publication record in their fields of specialization, good teaching performance and experience in curriculum development and course planning. A distinguished record of scholarship is required for the Professor post.

Salary and Conditions of Service: Professor: HK$792,660–HK$1,053,060 per annum; Associate Professor: HK$759,780–HK$1,020,660; Assistant Professor: HK$489,060–HK$554,820 HK$587,760–HK$587,760–HK$816,960 per annum. Note: US$1 = HK $7.72 as at 8 July 1997.

Initial appointment will be made on a fixed-term gratuity-bearing contract with generous fringe benefits. Applicants are invited to send in detailed curriculum vitae (in duplicate) with names and addresses of two referees (including current employer) to the **Personnel Office, Room AG426, Core A, Chung Sze Yuen Building, The Hong Kong Polytechnic University,**

Hung Hom, Kowloon, Hong Kong (by Fax: (852) 2764 3374, or by e-mail: postaff@pollyu.edu.hk). Closing date; November 1, 1997. Please indicate the Department, post and specialization in your application. Applicants wishing to receive an acknowledgement of their application should send in a self-addressed envelope together with their application. [Applicants who are not invited to an interview within 2 months should consider their application unsuccessful.] The University will keep the data on unsuccessful candidates up to 1 year. Applicants should indicate their preference in the application if they do not wish to give consent to this. General information about the University and the above-mentioned post is available on the University's World Wide Web Server: http://www.polyu.edu.hk.

I/O PSYCHOLOGY INTERNSHIP OPPORTUNITIES. GTE, a leader in telecommunications, is seeking candidates for internships in its Employee Capability and Competency Design Department. These positions will provide the opportunity to gain experience in a large corporation and to become an active participant in a Human Resources team. The intern will assist I/O Psychologists in planning and carrying out content and/or criterion-related test development and validation projects, writing technical reports, and other related projects.

Candidates must be advanced Ph.D. students in I/O psychology (3rd or 4th year). Training or experience in job analysis, development and validation of paper-and-pencil tests and structured interviews, competency modeling, and criterion development is required. Knowledge of current legal and professional guidelines for employee selection procedures is also required. A solid background in psychometrics is essential, and experience with SAS, SPSS, or a similar statistical package is highly desirable. Candidates must be able to cooperate in team efforts and have strong interpersonal, organizational, and communications skills, both oral and written.

These internships are full-time positions with a duration of 6 to 12 months. Internships will start at various times during the year. All positions are located in Irving, Texas. Interested applicants are invited to submit a resume, desired start date, a list of references, and graduate transcript to: **Nancy T. Tippins, Ph.D., GTE, 700 Hidden Ridge, HQW01J52, Irving, Texas 75038, EMail: nancy.tippins@telops.gte.com, Fax: (972) 718-4521.**

RESEARCH PSYCHOLOGIST. The National Security Agency, an intelligence agency within the Department of Defense, invites applications for the position of Research Psychologist. Duties include designing, implementing, evaluating, and reporting the results of applied research for the purposes of development of selection systems and attitudinal surveys. Candidates should possess a Ph.D. in I/O Psychology and a strong background in job analysis, text construction, psychometrics, multivariate statistical analysis, and research design. Familiarity with PC-driven statistical software packages, good oral/written communication skills, and the ability to work independently as well as with teams are required. At least 5 years of applied work experience is preferred, but we will consider less. Application processing time frequently takes several months. The starting salary will be $44,000-$60,000 depending upon qualifications and experience. Excellent career opportunities exist for the qualified candidate. Submit your resume, copies of both your graduate and undergraduate transcripts, and a letter describing your professional interest and career objectives to: **National Security Agency, Attn: S232R/(AWJ), Suite 6840 9800 Savage Road, Fort George G. Meade, MD 20755-6840. EOE.**

INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGIST. Bell Atlantic Network Services Incorporated has an immediate opening for an I/O Psychologist in its Selection Research Department, located in Arlington, Virginia. Bell Atlantic is a leader in the telecommunications industry and offers an opportunity to work in a dynamic and challenging corporate environment.

Bell Atlantic's Selection Research Department is responsible for developing, validating, and assisting with the implementation of selection systems throughout the Corporation. Other projects have involved work on performance appraisal, test preparation courses, and survey development. The selected candidate will work with a team of test development professionals on all phases of projects from conceptualization to implementation.

Qualified candidates will have a minimum of 2 years of experience in a corporate setting, a strong background in the development and validation of selection tools, and a graduate degree (Ph.D. preferred) in industrial/organizational psychology. Strong written communication, interpersonal, research, and statistical skills are essential.

Qualified and interested applicants should send their resumes to: **Jill K. Wheeler, Ph.D., Bell Atlantic Corporation, 1310 N. Court House Road, Upper Lobby, Arlington, VA 22201.** Bell Atlantic is an equal opportunity employer.

PSYCHOMETRICIAN/STATISTICIAN. Jeanneret & Associates, Inc., located in Houston, TX, invites applications for the position of Psychometrician or Statistician. The position involves complex data analysis and interpretation, research design and methodology, item analysis (classical and IRT), and report preparation. Initially the individual will work with Dr. Ira Chorush, a highly regarded statistical expert, to develop skills in both

analytical strategies and in presentation of expert testimony. Position will evolve into the role of presenting expert testimony for explanation/interpretation of psychometric/statistical/analytical issues with most assignments pertaining to EEO issues. The successful consultant will then assume full responsibility for the Firm's "statistical expert practice."

Qualified applicants must have a Ph.D. in I/O Psychology, Statistics, Measurement, or other program with emphasis on psychometric/statistical techniques and theory. Candidates must possess strong research, analytical, interpersonal, and oral and written communication skills. Some practical experience is preferred. Jeanneret & Associates is an equal opportunity employer.

Interested applicants should send a cover letter and resume (ABD or recent graduates should include a letter of recommendation from member of graduate faculty) to: **Barry R. Blakley, Ph.D., Jeanneret & Associates, Inc., 601 Jefferson, Suite 3900, Houston, Texas 77002.**

CONSULTING PSYCHOLOGISTS, INC. (CPI) is a management consulting firm in the Minneapolis area, specializing in the design and implementation of high-impact solutions to human resource and organizational needs. We are experiencing a continued period of extensive growth and are searching for more exceptional individuals who can make a significant contribution to our team. **Assessment Psychologist**—The qualified candidate will possess a Ph.D. in Clinical or Counseling or I/O Psychology with at least 3–5 years of experience. Required skills include assessment and test interpretation expertise as well as strong interpersonal and written communication skills. Experience with business assessments for organizational selection and development purposes preferred. Salary is commensurate with experience. **Industrial/Organizational Psychologist**—Project work and responsibilities include the development and implementation of selection and, performance management and employee development systems, employee opinion surveys, work profiling systems, as well as test development and validation. Two positions are available, with the first position requiring a candidate having either a Master's degree or a Ph.D. I/O Psychology with at least 3–5 years of experience in project implementation and management. The second position is an entry-level position requiring a Master's degree and 1 year of experience. Our growing base of long-term and new clients offer the opportunity to participate in a variety of cutting-edge human resource design projects including work profiling, competency model development, employee development and career planning systems, and selection systems. Required skills include excellent written and verbal communication skills, business development and client management capabilities, and the capacity to work in a fast-paced environment. Salary is commensurate with experience. Please submit cover letter and resume to: **Leann H. Rabaey, M.S., CPI, 5200 Willson Road, Suite 300, Edina, MN 55424**.

PARKSIDE ASSOCIATES, INC., Leaders in healthcare survey research since 1980. Parkside Associates Inc. is a rapidly growing healthcare survey research firm specializing in the development and utilization of employee, medical staff and patient satisfaction tools to monitor satisfaction for quality improvement. Our office is located in suburban Park Ridge, Illinois, just outside of Chicago. Since we are a growing firm, we are continuously searching for creative, highly motivated candidates with strong quantitative and interpersonal skills as possible additions to our staff.

Research Assistant/Survey Research Account Manager is the starting point for your career at Parkside. Responsibilities for this position include: consulting with clients on appropriate survey data collection methodologies, report writing and programming/data analysis using SAS, on-site data collections at client hospitals, and working with clients on effective utilization of survey data. Ideal candidates will possess an M.S. degree in I/O Psychology, an appropriate Social Science field, or Statistics, as well as knowledge/experience in survey research methods and SAS. Problem solving ability, good organizational skills and the ability to adapt in a dynamic environment are necessary. 5–10% travel.

Consultant is a senior position, specializing in directing employee, and physician survey projects or patient satisfaction survey projects. Responsibilities for this position include: advanced client management, presentation of survey results to senior management at client sites, and some report writing. Ideal candidates will posses, in addition to the requirements described above, outstanding presentation skills and 2–3 years successful consulting experience. 10%–20% travel.

We offer competitive salaries and comprehensive benefits. Please forward your resume and salary requirements to: **Attn.: RA/CON TIP597, Parkside Associates, Inc., 205 W. Touhy Avenue, Suite 204, Park Ridge, Il 60068**. We are an equal opportunity employer and encourage people of all cultural backgrounds to apply.

THE BOEING COMPANY: INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGIST. The Boeing Company, the number one aerospace company in the world, is seeking two individuals for its Assessment Development group in Seattle, WA. Boeing has an immediate need for a junior and a senior level Industrial/Organizational Psychologist to assist in the development, validation and implementation of company-wide selection systems.

Principal responsibilities of the senior level I/O Psychologist position include developing assessment tools, conducting job analyses, providing internal consulting on selection issues, guiding assessment development staff, overseeing the work of external consultants and directing the statistical analysis of data. The ideal candidate will possess: a Ph.D. in I/O psychology with 5 to 9 years experience in a large company or consulting firm; significant experience with management assessment, written tests, structured interviews, and other assessment tools; a solid background in psychometrics and applied statistical techniques; knowledge of current legal issues in employment testing; and the ability to manage large scale projects. Attention to detail and excellent analytical, interpersonal, written communication and presentation skills are also required.

Principal responsibilities of the junior I/O Psychologist position include developing assessment tools, conducting job analyses and developing SAS programs to analyze data. Qualified candidates will possess: a MS or Ph.D. in I/O psychology, or closely related field; 2 to 4 years experience in job analysis, test development and validation; a solid background in statistics; and proficiency using SAS to analyze data. Attention to detail and strong analytical skills are a must.

Interested individuals are encouraged to apply as soon as possible. Please submit your resume detailing relevant work experience and salary requirements to: **Manager, Assessment Development; The Boeing Company; P.O. Box 3707, MS 6Y-84; Seattle, WA 98124-2207**. Please specify the position for which you are applying. The Boeing Company is an equal opportunity employer.

DEVELOPMENT DIMENSIONS INTERNATIONAL. At Development Dimensions International (DDI), rapid growth and expansion are creating multiple consulting opportunities for highly qualified Ph.D./Master-level I/O psychologists. Our consultants work with leading companies worldwide to develop creative solutions for their business needs by applying innovative I/O technologies and methodologies. We are looking for your innovative contributions to be a part of our continued success!

DDI is a Pittsburgh-based, international, organizational development, management consulting firm. We specialize in the research and development of HR systems applied at all organizational levels. These systems include assessment and selection, training and development, performance management, and organizational change. Each year, we provide services for 12,000 organizations in 36 countries to help them improve productivity, quality, and customer service.

A career with DDI will allow you to work with others on leading-edge, high-tech applications of applied psychology. You will work in a multidisciplined team of four to six professionals focused only on research/applications; there is no sales component involved. Working in a team allows you to expand your skills, while applying your knowledge to a wide variety of interesting challenges. Your team's productivity will be enhanced by unparalleled support services. Varied consulting assignments with the largest corporations in the world will provide you with exciting challenges and the opportunity to expand your professional horizons.

Senior Consultants lead teams dedicated to project delivery and product development. The position emphasizes integration of I/O methodologies to meet unique client requirements.

A wide variety of **Consultant** opportunities exists in teams committed to change management, selection, performance consulting, assessment center exercise development, training, and basic learning research. Growth and professional development opportunities abound. Each new consultant will have an individualized development plan.

Positions usually entail 30 percent overnight travel and offer an opportunity for exciting international travel and assignments.

Mail or fax resumes to: **Code: EATP, Development Dimensions International, 1225 Washington Pike, Bridgeville, PA 15017,FAX 412-220-2958.** EOE

CORPORATE PSYCHOLOGIST/MANAGEMENT CONSULTANT. Sperduto & Associates, Inc., an Atlanta-based consulting firm, is seeking a Georgia licensable Ph.D. psychologist to join its growing practice. The firm provides a variety of consulting services to top management including individual psychological assessment, management development, attitude and 360° feedback surveys, team building/development, and organizational analysis/design/development.

This position is a full-time career opportunity for an individual looking to make a long-term commitment to an established firm. Individual will learn in a fast-paced, supportive, apprenticeship-type training environment. Competitive entry-level salary with outstanding bonus opportunities and long-term earning potential based on performance.

Qualified candidates should possess: 1) strong interpersonal skills, 2) comfort interfacing with executives, 3) ability and interest in understanding individual personalities and behavior, 4) ability to work as an individual performer and as a team member, and 5) desire to learn and grow professionally. Counseling and assessment skills are desirable.

Send résumé and letter of interest to: Kay Loerch, Ph.D., Attn.: Recruiting Representative, SPERDUTO & ASSOCIATES, INC., 235 Peachtree Street, Suite 300, Atlanta GA 30303.

INDUSTRIAL/ORGANIZATIONAL INTERNSHIP. NYNEX Corporation Personnel Selection and Research is seeking a full or part-time I/O Intern. This position is located at corporate headquarters in mid-town Manhattan, New York. NYNEX Corporation is a leader in the telecommunications industry where I/O Interns are involved in fast-paced personnel research projects with a team of I/O psychologists. Projects include: selection procedure development and validation, job design, and personnel research on strategic business initiatives.

Interns are involved in project administration, data collection and analysis, and interpretation and communication of project results. Candidates should hold a Masters Degree and be currently enrolled in a Ph.D. program in I/O Psychology, Organizational Behavior, Psychometrics or related discipline. Qualified candidates will have a strong background in job analysis, selection procedure validation, research –methods, statistics, and computer data analysis. Internships at NYNEX provide excellent opportunities to gain insight into the workings of a major corporation. Compensation is very competitive and based on qualifications. Interested candidates should submit a cover letter, resume and list of references to: **Robert L. Hartford, Ph.D., NYNEX Corporation, 1095 Avenue of the Americas, Room 505, New York, New York 10036; Phone: 212-395-5776, Fax: 212-395-7639, e-mail: Robert_Hartford@smtp.nynex.com.**

SENIOR ORGANIZATION DEVELOPMENT SPECIALIST. The Johns Hopkins University invites applications for a specialist to act as a consultant to senior leaders and organizational units of the university to help improve the organization's productivity effectiveness and efficiency. Will provide assessment and diagnosis leadership coaching, process and diversity consultation, retreat design and facilitation, and crisis management. Also provide leadership on the sociotechnical aspects of university operations such as job designs, work flow analysis, organizational design and interface of technology and human skills. This is a full-time position reporting to the Director of Human Services.

Master's degree required in organizational psychology and/or development, business or related field and 1 to 5 years general consultation experience and demonstrated experience in sociotechnical systems design and intervention. Doctoral degree desired.

Review of responses will begin in October and the position is to remain open until candidate is hired. Individuals who meet the above requirements are encouraged to respond with a letter of application referencing Job #U97-6643, salary requirements and the names, addresses and telephone numbers of three professional references in confidence to: **Homewood Human Resources, 3400 North Charles Street, Baltimore, MD 21218 AA/EOE.** Excellent benefits including tuition remission. Smoke free and Drug free.

PERSONNEL DECISIONS INTERNATIONAL (PDI), a premier human resources and management consulting firm has two openings at our Minneapolis headquarters.

Senior Consultant/Research. This research expert will drive PDI's development business in the areas of coaching, training and development, organizational effectiveness, and teams. In addition to a Ph.D. in psychology, this position requires significant experience in measurement design and statistics, and publications in refereed journals. A strong orientation toward the application of psychological knowledge to workplace problems and issues is a must. This position is responsible for: designing and conducting research, publishing present findings, and developing collaborative relationships with internal and external clients.

Consultant/Strategic Performance Modeling. This individual will play a key role in building a global practice area in competency modeling and the definition of performance requirements. Specific duties will include participation in project design and planning, data collection and analysis (qualitative and quantitative), development of proposals and client reports, working acros PDI practice areas to develop integrated client solutions, and training other PDI consultants. The successful candidate will be an I/O psychologist with 3–5 years of applied experience in a business or consulting environment. A strong interest in job analysis and criterion development is key; and, experience in conducting job analysis projects designed to create an information base for supporting assessment tool design, performance management programs, selection projects, succession planning initiatives, and so forth, is essential. A willingness to develop or continue to refine skills in a variety of core practice areas, such as individual assessment, designing HR systems, selection systems, and multi-rater feedback programs is also a plus.

PDI offers a competitive compensation package, relocation assistance, and an opportunity to grow with the best. To apply, please send [of fax] a resume and salary requirements to: **VP of HR, PDI, 2000 Plaza VII Tower, 45 South 7th Street, Minneapolis, MN 55402. Fax: 612-337-3640.**

VICE PRESIDENT, WORKFORCE DEVELOPMENT DIVISION, DIRECTOR, MARKETING. ACT has two openings in the ACT Workforce Development Division, Vice President and Director, Marketing. The Workforce Development Division's mission is to assist business, educators, students, and workers adapt to the economic realities of the 21st century workplace. The division includes three departments: Work Keys Development, I/O Psychology, and Workplace Competencies, consisting of 28 employees many of whom hold advanced degrees. The Work Keys Development and I/O Psychology departments focus on identifying and assessing generic employability skills; activities include developing and implementing assessment and supporting job analysis, training, scoring, and reporting systems.

The **Vice President, Workforce Development Division** is responsible for strategic planning, developing potential national and international markets, leading product and services development efforts, developing and delivering human resources services, managing division departments, and serving as a client liaison for major national/international accounts.

Requirements include a master's or Ph.D. degree in I/O psychology, business, or education; 8 to 10 years senior management experience, preferably at a not-for-profit corporation; marketing and sales experience; knowledge of innovative assessment and training systems; knowledge of information technology; excellent communication and interpersonal skills; and strong strategic planning abilities.

The **Director, Work Keys Marketing/Sales** is responsible for developing, implementing, and monitoring national/international strategic marketing plans; identifying new markets and developing existing markets; monitoring program competitors, developing and delivering sales presentations; and advising regionally based sales representatives on marketing/sales matters.

Position requirements include a master's or Ph.D. degree in I/O psychology, business, marketing, or education; 5 years consulting, marketing, or corporate experience; and outstanding communication, presentation, strategic planning, and interpersonal skills.

To apply, submit a letter of application and resume to **Director of Human Resources Dept. (TIP), ACT National Office, 2201 N. Dodge Street St., P.O. Box 168, Iowa City, IA 52243-0168.** Please indicate position of interest in the application letter. ACT is an equal opportunity employer.

The Department of Psychology at **Wayne State University (WSU)** seeks applicants for a new position in one of its newly established Targets of Excellence research areas: **Workplace Psychology**. This appointment requires a Ph.D. degree and is to become effective in late August of 1998. Normal teaching loads are two courses per semester of undergraduate and graduate instruction. The rank of this position is open, but we especially encourage more senior, established persons to apply. We seek candidates with formal training in any area of I/O Psychology, though preference may be given to those with experience in Personnel Psychology. The ability to teach a graduate course in quantitative methods is highly desirable. In addition, successful applicants are expected to maintain or establish a funded research program.

Interested applicants should send a cover letter describing their research and teaching interests, an up-to-date c.v., copies of recent publications and arrange for three letters of reference to be sent to the **Chair of the Workplace Psychology Search Committee at Department of Psychology, Wayne State University, 71 West Warren Avenue, Detroit, MI 48202.**

Applications will be accepted until December 1, 1997, or until the position is filled. Interested applicants are encouraged to apply immediately. For more information about the department, visit our Web Site: **http://www.science.wayne.edu/~psych/**. Wayne State University is an equal opportunity/affirmative action employer. All buildings, structures and vehicles at WSU are smoke-free. Wayne State University—People working together to provide quality service.

ASSESSMENT SYSTEMS SPECIALIST. **Motorola** is seeking a Masters or Doctorate level individual with a background in I/O Psychology, Organizational Behavioral, Organizational Development or a related field for a full-time position in the Phoenix, AZ site of the Semiconductor Products Sector. The position requires the incumbent to be the Sector's expert resource on selection testing, surveys, organizational assessment, and general assessment. The position also affords the opportunity to develop as an organizational development consultant on other organization effectiveness issues. The position is available immediately. The primary responsibilities for the position are: provide consultation on the development and implementation of selection tests, surveys, 360-degree feedback instruments, and other assessment tools; develop assessment tools to support the succession systems and management development functions; partner with training organizations and test administrators to ensure compliance with testing requirements and federal legal guidelines;. review technical documents (e.g., validity, reliability) on assessment tools currently available, and make recommendations regarding their use; work with vendors and/or internal resources to develop assessment tools. Successful applicants will have the following characteristics: M.S. or Ph.D. (preferred) in I/O Psychology, Organizational Behavior, Organizational Development or a related field; a firm understanding of experimental method and research design; an understanding of psychometrics; a general understanding of EEO law and a firm grasp of how it applies to selection testing; a firm grasp of general statistics (regression, descriptives, hypothesis testing, ANOVA, factor analysis); a firm understanding of systems; a general understanding of Human Resources systems; outstanding presentation skills and experience; a general understanding of process consultation and intervention. Please send or fax resumes to: **Denise Holcomb, Motorola—Semiconductor Products Sector, 1438 West Broadway, Suite B100, Tempe, AZ 85282. Fax: (602) 994-6827. Please reference the job title when sending/faxing in resumes.**

FACTS ON TIP

The Industrial-Organizational Psychologist

What is TIP?

TIP is the official newsletter of the Society for Industrial & Organizational Psychology (SIOP), Division 14 of the American Psychological Association and an organizational affiliate of the American Psychological Society. It is published quarterly (January, April, August, October).

Who reads TIP?

Currently, **TIP** is mailed to approximately 4,680 subscribers. Of these, approximately 3,250 are professional members of SIOP. The others are institutions (businesses or libraries), graduate students, or active professionals and researchers who wish to keep up to date on the field of Industrial/ Organizational Psychology.

A 1995 survey of past and present SIOP members provides insight into who reads **TIP**. Of the 2,126 returned surveys:

- 92% held a doctorate (usually in psychology)
- 39% worked in academia
- 33% worked in consulting
- 22% worked in private or public organizations

Almost 53% of consultants work also in the academic area, and over 83% of those whose primary job is academic, also do some consulting.

What does TIP contain?

Each issue of **TIP** averages about 170 8.5" × 5.5" pages. The content of **TIP** generally falls into the following five categories:

- *Feature Articles*—profiles of leading I/O psychologists, history of the field, viewpoints on current issues, research summaries, legal updates (e.g., ADA or EEO), humor pieces
- *Society News*—reports from SIOP committees, a Society calendar, a student column, a message from the president
- *Position Ads*—job listings for I/O psychologists from university, public, and private work organizations
- *Announcements*—call for proposals, call for papers, fellowship opportunities, upcoming conferences, and so forth
- *Paid Advertising*—advertising from consulting firms, book publishers, test vendors, and so forth

Who writes for TIP?

TIP has an editorial board which is principally charged with developing material for each issue. In addition, committee chairs frequently contribute updates which are published in **TIP**.

Approximately 30-40% of each issue is comprised of unsolicited materials from outside contributors. These usually make up the majority of the feature articles.

What types of submissions are likely to be accepted in TIP?

Articles which are likely to be accepted in **TIP** can be characterized as follows:

- Timely—they address an issue of current concern for many I/O psychologists (e.g., implications of the ADA)
- Well-written—the purpose of the article is stated at the outset; the remainder of the article is well-organized and grammatically solid
- Short—contributions should be no more than 10 double-spaced pages
- Interesting in presentation or topic—Pure empirical studies are almost never published in **TIP**. Research reviews or theoretical papers may be. Debates, interviews, creative formats, or articles which express a divergent viewpoint will usually be inherently more interesting than research summaries.

What is the process of submitting to TIP?

Two copies of articles and features, as well as a copy on disk, should be sent to the Editor: Michael D. Coovert, Department of Psychology, BEH 339, University of South Florida, 4202 E. Fowler Avenue, Tampa, FL 33620-8200; or sent electronically to: FAX: 813/974-4617; e-mail: coovert@luna.cas.usf.edu. A separate cover letter should contain the author's address and phone number. It is not necessary to have a title page, but the title, author(s)' name(s)' affiliation should be at the top of the first page.

Deadlines for submitting are February 15, May 15, August 15, and November 15. Deadlines must be met to be considered for the next issue.

Copies of position ads and paid advertisements should be sent to the SIOP Administrative Office. Detailed information on advertising can be found on the last page of each issue of **TIP**.

How Do I Join SIOP?

Who Is Eligible?

Membership in the Society for Industrial and Organizational Psychology, Inc., (SIOP) is open to Fellows, Members, and Associates of the American Psychological Association (APA) and Fellows and Members of the American Psychological Society (APS). Applications for Society Member, Associate or as Foreign or Student Affiliates of the Society are handled through the Society Membership Committee. Recommendations for status as Fellows are made through the Fellowship Committee.

What Are the Criteria for Membership?

Applicants for Society Membership must (1) be paid Members of either APA, APS, or the I/O Section of the Canadian Psychological Association at the time of application; (2) have a doctoral degree based in part upon a psychological dissertation conferred by a graduate school of recognized standing; (3) be engaged in study or professional work that is primarily psychological in nature; and (4) be engaged in professional activities (research, teaching, practice) related to the purpose of the Society.

Applicants for Society Members not receiving a doctoral degree in I/O Psychology, or the equivalent thereof, should support their application with any one of the following: (1) two articles published in I/O related journals; (2) two letters of recommendation written by current Society Members; (3) name of I/O related courses taught; or (4) copies of unpublished research or evaluation reports in the I/O areas.

Applicants for Associate Membership must: (1) be paid Associate Members of APA or paid Members of APS at the time of application; (2) have completed two years of graduate study in psychology at a recognized school; (3) have a Master's degree in psychology (or related area) from a recognized graduate school; (4) have a minimum of one year's full-time professional work in psychology; and (5) be engaged in professional or graduate work related to the purpose of the Society.

Applicants for Foreign Affiliate Membership must: (1) reside in a country other than the United States; and (2) meet all the criteria for Society Member or Society Associate status with the exception that membership in APA or APS is not required.

Applicants for Student Affiliate Membership must be currently enrolled, and must have their faculty advisor sign their application form to verify that they are currently a student in good standing. They do not necessarily have to be majoring in psychology. Student Affiliate Members are not required to be Student Members of APA or APS, but must be presently engaged in formal study related to the purpose of the Society.

How Do I Proceed?

To apply for membership in SIOP, you should complete a Member/Associate Member/Foreign Affiliate application or a SIOP Student Affiliate application and return it to the SIOP Administrative Office. Student applicants should include a $10 membership fee with their application and the signature of their faculty advisor; all other applicants should not send any money until they have been accepted into membership.

Send applications (Student Affiliates should include payment and an advisor's signature) to:

SIOP Administrative Office • PO Box 87 • Bowling Green OH 43402-0087
(419) 353-0032 • (FAX) 352-1562

Application for Membership

Society for Industrial and Organizational Psychology, Inc.
Division 14 of the American Psychological Association
Organizational Affiliate of the American Psychological Society

Mailing Address

Name: ____________________

Address: ____________________

____

City: __________ State: _____ Zip: _____-_____

Telecommunications

Office: __________

Fax: __________

Email: __________

Home: __________

Current APA Status: ☐Fellow ☐Associate ☐Member ☐Foreign Affil.

Current APS Status: ☐Fellow ☐Member

Current CPA Status in I/O Section: ☐Fellow ☐Member

Check status in SIOP for which you are applying: (*Please refer to SIOP membership criteria*) ☐ Member ☐ Associate ☐ Foreign Affiliate

Note: Show any additional information to support your application on separate single-sided page(s).

Educational Background (List graduate education first)

Institution	Degree	Date	Major Area of Specialization

Professional Experience (List present position first)

Employer*	Title	Dates	
		From	To
1.			
2.			
3.			

*Attach additional, single-sided page(s) that describes briefly the duties of each job. Identify by the above numbers.

In making this application, I subscribe to and will support the purpose of the Society, "to promote human welfare through the various applications of psychology to all types of organizations...." I also subscribe to and will support the American Psychological Association's Ethical Principles of Psychologists as adopted by APA and endorsed by the Society. I affirm that the statements made in this application correctly represent my qualifications for election, and understand that if they do not my membership may be voided. I authorize investigation of all statements contained in this application.

Date: __________ Signature: __________

Return your application to: SIOP Administrative Office, P.O. Box 87, Bowling Green OH 43402.

Student Affiliate Application

Society for Industrial and Organizational Psychology, Inc. (SIOP)

1. *APPLICATION INFORMATION*

Applications must include the signature of a faculty advisor to verify your student status.
Student Affiliate dues are $10.00. Payment must be in U.S. funds by check, money order, or credit card (Visa, MasterCard and American Express only).
Dues payment covers a subscription to *The Industrial-Organizational Psychologist TIP* for $10. The *SIOP Membership Directory*, the *Conference Call for Proposals*, the *Conference Program*, other mailings, discounts on selected publications, and reduced rates for the Annual Conference and Workshops are also provided.
The SIOP dues year runs from May to April. Annual renewals are sent to members and affiliates each April.

2. *MAILING ADDRESS* *(Please print.)*

Name ____________________

Street address: ____________________

City: ____________________ State: __________ Zip: ________

Please include ZIP+ 4

3. *EMAIL ADDRESS & TELEPHONE* *(Please print.)*

Email: ____________________ Phone: __________

4. *EDUCATIONAL INFORMATION*

Name of institution: ____________________

Address of department: ____________________

Area of specialization/major: ____________________

Degree you are pursuing (e.g. Ph.D., M.S., etc.): ______ Year you expect to graduate: _____

Advisor's name (*please print*):: ____________________

Advisor's signature: ____________________ Date: ____

APPLICATION MUST BE SIGNED BY AN ADVISOR IN ORDER TO BE PROCESSED.

PAYMENT METHOD

Mark appropriate space: __ Check__ Money Order__ Visa/MasterCard/AmEx

Charge to card number: Expiration date: ____________________

Name on card: ____________________

Cardholder signature: ____________________

MAIL APPLICATION WITH DUES PAYMENT TO:

SIOP Administrative Office • PO Box 87 • Bowling Green OH 43402-0087

Committee Volunteer Form

Society for Industrial and Organizational Psychology, Inc.

Deadlines: The deadline for volunteering to serve on the Continuing Education and Workshop Committee is December 1st. For all other committees, nominations are accepted at any time. Please submit a completed form to the address given at the bottom of this page.

Mailing Address

Name: ____________________
(Last) (First) (MI)

Address: ____________________

City: __________ State: ___ Zip: ________

Telecommunications

Office: ____________________

Fax: ____________________

E-mail: ____________________

Home: ____________________

JobTitle: ____________________ **Organization:** ____________________

Highest Degree: __________ **Year Granted:** ______ **Institution:** ____________________

Society Status: Associate ☐ Member ☐ Fellow ☐

Committee Preference: If you have preferences concerning placement on committees, please indicate them by writing the number 1, 2, and 3, respectively, by the names of your first, second, and third most preferred committee assignments. Note, however, that you need not provide these rankings if you are indifferent about committee placement.

____ Awards	____ Education & Training	____ Professional Practice	____ Scientific Affairs
____ Committee on Committees	____ Fellowship (Fellows only)	____ Program (APA Meeting)	____ State Affairs
____ Continuing Education & Workshops	____ Membership	____ Program (SIOP Conference)	____ TIP Newsletter

____ **Please check here if you would be willing to serve as a mentor for a new SIOP member.**

Prior Society Service: If you have previously served on SIOP committees, please list their names and the years you served ____________________

Prior APA/APS Service: If you have previously served on APA or APS boards or committees, please list their names and the years you served ____________________

References: Please provide the names and addresses of two Members or Fellows of the Society who the Committee on Committees may contact to obtain additional information about you.

Name	Address	City	State	Zip
Name	Address	City	State	Zip

Your Signature: ____________________ **Date:** __________

Please mail or fax the completed form to: SIOP Administrative Office, PO Box 87, Bowling Green, OH, 43402-0087.
Fax (419) 352-2645. If you need further assistance call (419) 353-0032.

ADVERTISE IN TIP AND THE ANNUAL CONVENTION PROGRAM

The Industrial-Organizational Psychologist (TIP) is the official newsletter of the Society for Industrial and Organizational Psychology, Inc., Division 14 of the American Psychological Association, and an organizational affiliate of the American Psychological Society. **TIP** is distributed four times a year to more than 2,500 Society members; the **Society's Annual Convention Program** is distributed in the spring to the same group. Members receiving both publications include academicians and professional-practitioners in the field. In addition, **TIP** is distributed to foreign affiliates, graduate students, leaders of APA and APS, and individual and institutional subscribers. Current circulation is 4,700 copies per issue.

Advertising may be purchased in **TIP** and **the Annual Convention Program** in units as large as two pages and as small as one-half page. **"Position Available"** ads can also be obtained in **TIP** at a charge of $75.00 for less than 200 words, and $90.00 for less than 300 words. These ads may be placed on our Web page at no additional charge, but both a hard copy and a disk (ascii formatted) must be submitted or use e-mail. For information or placement of ads, contact: **SIOP Administrative Office, 745 Haskins, Rd., Suite A, P.O. Box 87, Bowling Green, OH 43402, Lhakel@SIOP.bgsu.edu, 419 353-0032.**

Advertising Rates

Rates per Insertion

Size of Ad	Number of Insertions: *One Time*	*Four or More*
Two-page spread	$450	$330
One page	$270	$200
Half page	$210	$165
Back cover	$450	$330

Plate Size

Size of Ad	*Vertical*	*Horizontal*
One page	7-1/4"	4-1/4"
Half page	3-1/4"	4-1/4"

Publishing Information

TIP is published four times a year: July, October, January, April. Respective closing dates are May 15, August 15, November 15, and February 15. The Annual Convention Program is published in March, with a closing date of January 15. **TIP** is a 5-1/2" x 8-1/2" booklet, printed by offset on enamel stock. Type is 10 point Times New Roman.

SOCIETY FOR INDUSTRIAL AND ORGANIZATIONAL PSYCHOLOGY