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Please send suggestions and comments via e-mail to Morrie Mullins, *TIP* editor, or to Jenny Baker in the SIOP Administrative Office.

*Don't miss SIOP 2015 in Philadelphia, PA*

**April 23-25**

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## Eleventh Edition

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**Jose Cortina**
George Mason University

Greetings from wintry Fairfax. Today is March 4th. Tomorrow, we are supposed to get 3–5 inches of snow with a low of 6 degees! This is terrible! It's like Michigan in June! And what's worse, the midterm for my regression class is scheduled for tomorrow, and school will almost certainly be closed. In the interest of fairness, I'll just have to flunk everybody. Ah well. It makes grading easier.

On to business. The bylaws voting is over, and all of them passed! (See next page for the results.) There are some big changes in there, but in my opinion, they are changes for the better. Thanks to everyone who helped get them together, and thanks to those who chimed in on My.SIOP. We plan to roll out the procedures to incorporate the bylaws changes in May.

Speaking of May, many SIOP members are heading to Oslo for the 17th conference of the European Association of Work and Organizational Psychology. Jeg skal reise til Oslo, and I hope you will too. I want to encourage everyone to get involved in I-O-related organizations outside the U.S. The more connected our communities are, the more influence we can have on workplace matters worldwide. Also, there is a Viking ship museum (Vikingskipshuset for those keeping score at home. The Norwegians do some very strange things with the letter k). And while you have the calendar open, begin planning for the International Association of Applied Psychology conference in Montreal in 2018. **Gary Latham** will be giving the opening keynote for our division as president, but you should go anyway.

On the lobbying front, SIOP and its partner Lewis-Burke and Associates continue our efforts to get the word out regarding I-O and its importance for science and practice. **Seth Kaplan** and his GREAT team have done a wonderful job building infrastructure so that we can respond to opportunities identified by Lewis-Burke. And **Steve Zaccaro**, his affinity for country dancing notwithstanding, has been instrumental in building connections with the Congressional Management Foundation and with NSF. Thanks to everyone.

Related to this, **Ruth Kanfer, Lisa Finkelstein**, and **Mo Wang** have agreed to present their work at a congressional brief-

| Description | For | Against | Total | Winning |
|---|---|---|---|---|
| Amendment 1: "Eliminating the prerequisite organization membership requirement" | 436 | 68 | 504 | 87% |
| Amendment 2: "Establishing a pathway to Member status for Associate members" | 386 | 109 | 495 | 78% |
| Amendment 3: "Removing the listing of standing committees and other changes" | 474 | 20 | 494 | 96% |

ing on the aging workforce in a couple of months.  Thanks to all of them and to Lewis-Burke for coordinating these efforts.

Last but certainly not least, our own conference is around the corner.  Your voluntary attendance is, of course, mandatory.  If nothing else, you will want to catch the sessions in the Theme Track, titled, Rethinking our Approach to Organizational Science, put together by the great **Scott Tonidandel**.  To those who attended the conference in Hawaii, let's keep the energy going.  To those who didn't, shame on you.  You wouldn't want to miss 2 years in a row, would you?  As of this moment, we already have more than 3,000 registered, and that puts us on pace for more than 4,100.  You don't want to be left out, do you?  All the cool kids will be there.  My mom too.  Anyway, many, many people make the conference happen, but special thanks go to **Kristen Shockley**, Scott Tonidandel, **Evan Sinar, Eden King**, and of course Dave Nershi and his wonderful team at the SIOP AO.  If you see one of them in the hotel bar, buy them a drink. You owe it to them.

And now if you will excuse me, I need to sharpen the crampons, pack up the sled, get the reins on the dogs, etc.  Mush!
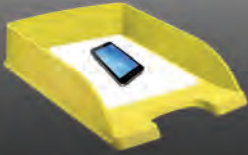
**Morrie Mullins**
Xavier University

# As the I-O Turns…

I'm not sure who it was that first told me about I-O. I suspect it may have been the person I dated my first year of college, and that I didn't listen too carefully because (a) I was in my first year of college and (b) I was a physics major, so why would I care about a business-focused branch of psychology, of all things?

The world turned. I stopped being a physics major, started being an accounting major, stopped being an accounting major (that took all of a day), and eventually found my way to psychology.

Since then, my view of I-O has continued to evolve. Grad school was a time of exploration and finding my niche. By the time I got to my third (and current, and hopefully last!) academic job, I thought I had I-O figured out. Or at least, I thought I'd figured out what it meant to me.

The world kept turning, though. Everything I read changes my perspective. Sometimes it's a little, and sometimes it's a lot. In this issue, we're saying good-bye to three of *TIP's* columnists, and they are all people who have had a major impact in shaping the way that I, at least, view I-O psychology. If they haven't shaped the way you view I-O, then perhaps you should go back through *TIP's* archives (http://www.siop.org/tip/backissues/backissues.aspx) and see what I mean.

When I stepped into the editorship, **Lori Foster Thompson** and **Alex Gloss** transitioned from writing their "Spotlight on Global I-O" column (which they'd coauthored with **M. K. Ward**) and into the current "Spotlight on Humanitarian Work Psychology" column. The HWP column ended up being a synthesis of the Global I-O column and Professor **Stuart Carr's** "Prosocial I-O: Quo Vadis" column, and I'll be honest: Combined with the reports from SIOP's UN team, Lori and Alex's column has changed the way I think about I-O.

To go into all the reasons why would take more space than I have. The short form, however, is this: I-Os are not just

making a difference to organizations, they (we) are making a difference to individuals. All over the world, I-O psychology is being applied to improve people's lives and not just in the "increased job satisfaction" and "decreased turnover" and "improved financial outcomes" kinds of ways that may come most easily to mind but in very human ways that can matter on a personal level. This kind of work is something that we need to talk about more; I know it's something I personally have been inspired to incorporate into my classes.

I'll miss getting columns from Lori and Alex, but their column itself is (thankfully!) not going away. **Ashley Hoffman,** chairperson of the Global Organisation for Humanitarian Work Psychology (GOHWP), will be stepping in. The important work surrounding HWP will continue to be highlighted in *TIP's* pages!

As much as Lori and Alex have helped me really reflect on what I value in I-O, the other columnist who will be leaving after this issue has perhaps shaped how I view, talk about, and teach the field as a whole as much as anybody in the world. **Paul Muchinsky** is retiring, and this issue marks his last column.

Paul will likely give me grief (probably not the word he would use...) for saying kind things about him, but he's been a staple of *TIP* for years. His editorship, his letters, his columns—his contributions to *TIP* alone are too numerous to bother trying to list off, and those are perhaps some of the less obvious impacts he's had on the field and on me. The first text I chose, when I taught

undergraduate I-O, was Paul's. It remains my go-to when I want to hand a student who doesn't know anything about the field an accessible, informative, relevant look at what we do. When I teach introductory psychology, I supplement my intro text (which shares the common problem of "Almost no I-O" that has been remarked upon in *TIP's* pages in the past) with lectures I developed based on his book.

It would be easy to write "The High Society" off as a humor column, but it would also be a mistake. What Paul does, sometimes subtly and sometimes less subtly, is shine light on those areas of I-O—be those our attitudes or our practices—that might make us uncomfortable to look at otherwise. He entertains, and sometimes he pushes boundaries, but forcing us to critically examine what we do and why we do it is vital. I will miss his contributions to our pages, both because he makes me chuckle and because he makes me think. I will also miss knowing that, four times a year at least, I will get to hear from someone who has been an unwavering supporter of *TIP* and whose support of our entire editorial team can't possibly be emphasized enough.

If I may quote one of SIOP's members, **Gary Kaufman,** who emailed me in response to one of Paul's columns last fall: "Bravo to Paul Muchinsky! I have also produced corrected correlations that exceeded 1.00, which is the I-O equivalent to going faster than the speed of light. In the long run, this is a practice that serves no one well."

Bravo indeed. So, thanks to Paul, Lori, and Alex. My apologies to those columnists who have left and not gotten quite so verbose a send-off!

With that, then, on to the content.

We start with the President's Column, where **Jose Cortina** provides his final thoughts from the President's podium. Then Paul Muchinsky regales us with his reflections on how I-O can close the gap that exists between our science and physics. His solution? Bulk us up!

In their "Organizational Neuroscience" column, M. K. Ward and **Bill Becker** share a fascinating interview with Professor **Michael Christian**. The variety of viewpoints M. K. and Bill continue to bring to *TIP's* pages keeps me excited for the future of our field.

This month's "Practitioners' Forum" comes to us courtesy of **Ben Porr** and **Jenna Bender,** who provide great analysis of, among other things, analytics. In reading this, I was struck by just how many other fascinating topics could emerge just from this paper, and I'd encourage readers to continue to share their own perspectives on best practices as well.

**Steven Toaddy's** "I-Opener" again shows him to be one of the most interesting young voices in *TIP's* pages. This issue, he focuses on issues related to the philosophy of science in an interview with an actual philosopher, Dr. Erin Flynn. We then change gears as **Lynda Zugec** brings us **Ameetha Garbharran** and **Kim Dowd-**

**eswell** to tell us about I-O psychology in South Africa, and **Seth Kaplan** and Laura Uttley's "SIOP in Washington" column fills us in on how President Obama's FY 2016 budget request may affect SIOP.

**Richard Vosburgh** returns with more "Practitioner Ponderings," this time starting from a question posed by Steven Hunt about how practitioners might deal with situations in which scientifically questionable advice is given to a client by another practitioner. The professional advice they offer is sound enough that I'm going to refer any of my future students who want to go the practitioner route to this piece.

In "TIP-TOPics," **Allison Ellis, Layla Mansfield**, and **Tori Crain** describe how to build a career in a specialty area within our broad "specialty area" of I-O. **Jeff Cucina** returns with part two of his history of pre-I-O employment tests, focusing on various countries' civil service examinations and on the East India Company.

Another of SIOP's bright young voices, **Alison Gabriel,** returns to the "Academics' Forum" and is joined by a colleague, **Serge P. da Motta Veiga**. Together, they talk with us about what they learned from the academic job search process. Fellow academics, be prepared for flashbacks! Speaking of academics, **Marcus Dickson** and **Loren Naidoo** return in "Max. Classroom Capacity," this time highlighting the great work being done by SIOP's Education and Training Committee. E&T continues to work on topics related to internships and mentoring, and given my prior work on

the committee I was thrilled to hear that the SIOP Teaching Wiki is still growing and supported. This is a FANTASTIC resource, and it will only get better as more of us share our materials, so check it out, and reach out to **Ali O'Malley** to submit your materials! (I need to… the wiki has a dead link to a syllabus of mine… oops!)

In their final "Spotlight on Humanitarian Work Psychology" column, Alex Gloss and Lori Foster Thompson introduce us to **Ashley Hoffman**. Ashley, the chairperson of the GOHWP, talks about her vision of HWP and what the GOHWP is currently working on.

"The Modern App" this issue features **Tiffany Poeppelman, Nikki Blacksmith,** and guest coauthor **Eleni Lobene** describing the use and challenges of adaptive training. Guest author Dan Kuang steps onto the "Legal Front" to describe the incredibly timely topic of sex discrimination in compensation and steps the OFCCP has taken to combat this type of discrimination. Any of you who may occasionally wonder, "What are some real-world examples I can use to teach my statistics students why degrees of freedom matter A LOT?" should definitely check this article out. Really an important paper.

**Milt Hakel** steps into the "Foundation Spotlight" to tell us about… microwave ovens and Wayne Gretzky? Trust me, friends, it's worth the read! (Worry not, gentle readers—**Rob Silzer** and **Chad Parson** will be back in July.)

Moving to our feature articles, we start with **Ed Locke, Kevin Williams,** and **Aline Masuda** describing the process of publishing a study that didn't quite fit with what reviewers expected. You may recall Jose Cortina mentioning this paper in his January editorial; it hits pretty close to home for his major initiatives, and frankly, what the authors describe may hit pretty close to home for anyone who has struggled to find an outlet for what they knew was good work!

**Piers Steel** provides a great example of I-O interfacing with the world of advertising as he describes an application of his work on procrastination. As editor, I'm obligated to click any link submitted to me in an article (a practice I try not to follow in most of my life!), and I have to say that I rarely have as much fun with links as I did with Piers's!

**Charles Hobson, Jana Szostek,** and **Louise Fitzgerald** describe the development of a tool designed to assess policies and practices related to sexual harassment. The authors are incredibly forthcoming with information about their development process and have provided links to substantial amounts of documentation on their website.

In the first of a series that will play out over coming issues, **Courtney Gear, Logan Michels, Daniel Sachau,** and **Richard Olson** share a mergers and acquisitions map of IBM's history in the consulting domain. If you've never looked at an M&A map before, it's fascinating—and quite revelatory!

Finally, **Alexandra Zelin, Joy Oliver, Samantha Chau, Bethany Bynum, Gary Carter, Mark Poteet,** and **Dennis Dover-**

**spike** return with the next round of their "competencies" series, this time focusing on competencies needed for consulting. I hope graduate students and educators everywhere are paying attention to this series of articles!

We wrap up with reports. **Kristen Shockley** and **Eden King** offer highlights from the upcoming SIOP conference: Philadelphia conference and Mark Poteet provides an update from the Professional Practice Committee.

**Drew Mallory, Deborah Rupp, John Scott, Lise Saari, Lori Foster Thompson, Mathian Osicki,** and **English Sall** invite I-O programs to join the United Nations Global Compact. This is a great opportunity that's open to both PhD and MA/MS programs, and I hope other programs will quickly follow

Purdue's lead. I know I'll be talking to my colleagues about it!

**Ann Huffman** gives us three reasons to go to the 2015 APA convention (I'd never thought I would see ebola listed as a "great reason" to go to a conference, but Ann makes it work!), **Lauren Kenney** presents this issue's IOTAs (send in your updates!), Clif Boutelle shares a number of SIOP members who have been quoted or otherwise featured prominently in national and international news reporting, and **Marianna Horn** updates us on upcoming conferences and meetings.

Thanks again to all *TIP*'s contributors—feature authors, editorial board members, committee chairs, and everyone else! Without you, and without our readers, there would be no *TIP*!

The High Society



**Paul M. Muchinsky\***
Hypergraphic Press, Inc.

* Fan mail may be sent to
pmmuchin@uncg.edu

# Bulking Up I-O Psychology

Some years ago **John Campbell** coined a clever term, "physics envy." He described how I-O psychology wished it could be more like physics. Physicists get to study invariant concepts like gravity and mass, unlike people who have good days and bad days. Furthermore, there is not much measurement error when assessing gravity and mass. Although physicists may be concerned with reliability issues in their measurements, the only time the word "valid" comes up is in reference to their driver's license. To date no one has advanced Campbell's concept of physics envy. Until now. The High Society is running with it.

Contrary to popular understanding, I do not believe that I-O psychology is light years behind physics in terms of advancing knowledge. Quite the contrary. I believe I-O psychology is so close to physics in the race of scientific supremacy, it would be, as they say in horse racing, a photo finish. In short, I-O psychology has absolutely nothing about which to be envious.

In support of my position, I offer no less than eight criteria for comparing the two scientific disciplines. As you will see, I-O psychology is so close to physics it almost looks like one is the shadow of the other. Quite frankly, if I were a physicist I would be embarrassed by how much they are not better than us.

## Festivals of Equations

If you want to bulk up a scientific discipline, there is no faster way than to make it appear more quantitative. The more quantitative the discipline, the greater is its perceived rigor. Never once in my long and distinguished career have I ever heard any discipline being criticized because it is "too rigorous."

Here is one of their equations:
    $E = mc^2$ (assuming a perfect vacuum)
Here is one of ours:
$$R^2_{c.12} = r^2_{1c} + r^2_{2c}$$ (assuming uncorrelated predictors)

Both disciplines like to make assumptions, and both are fond of squared terms. It's a tie.

### Theory Worship

No physicist would ever get a paper published that simply offered an intriguing idea. For example, man has landed on the moon but not on the sun. Conventional wisdom says a solar expedition would end in the incineration of the crew. But what if a physicist proposes this novel approach? The crew lands on the sun at night and leaves before day break. Think this idea would ever see the light of publication? No way. If you want something published in physics, the paper must test a theory. I need not remind you the same is true in I-O psychology. When it comes to following the only road to epistemological salvation, I-O psychology is second to none. Physicists are seeking to unravel the theory of the universe. I-O psychologists are seeking to unravel the theory of psychology applied to work. All theory, all the time. It's a tie.

### Laws

Physics is loaded with laws. All students in physics must know these laws. Among them are the laws of gravity, motion, thermodynamics, and conductivity. I-O psychology is also loaded with laws. All students in I-O psychology must know these laws. Among them are the CRA, ADA, FMLA, and ADEA. Can you image the consequences to someone in I-O psychology who believes in the acceptability of illegal employment discrimination? Can you imagine the consequences to some-

one in physics who believes that things fall up? You speak with authority when your position is supported by law. It's a tie.

### Disciplinary Confusion

Be honest. How many times did you have to explain to your family and friends that you were not studying to become a psychiatrist? You know the drill. "Psychiatrists don't have to write a dissertation. We do. Psychiatrists get to prescribe happy pills. We get to take them." It isn't any better in physics. I remember as a boy telling my grandmother that I was incurring a bout of constipation. She suggested I take a physic. I thought she wanted me to learn about force and resistance. Although such terms were seemingly relevant to my condition at the time, I didn't understand how they would relieve my symptoms. I didn't know that a "physic" was her generation's polite term for a laxative. It's not easy being #1 (or #2, for that matter). It's a tie.

### Recognized Accomplishment

There are two ways to know you have made it big. One is to perform at Carnegie Hall. The other is to appear on a postage stamp. A leading figure in I-O psychology, Lillian Moller Gilbreth, was featured on a 40¢ postage stamp. A leading figure in physics, Albert Einstein, was featured on a 15¢ postage stamp. When I was in school I learned 40 is bigger than 15. It goes without saying that bigger is better. Furthermore, Dr. Gilbreth should also receive some bonus points for breaking into the boy's club of her profession. I must con-

fess that rising postal rates, not degree of accomplishment, more likely account for the difference in the value of the stamps. It's a tie.

## Tribal Bonding

Any scientific discipline can produce authors who toil away in the privacy of their offices writing sole-authored papers. However, the real mark of scientific accomplishment is to garner the collective power of many brilliant minds in creating a paper. Papers with multiple coauthors are the very essence of a bulked-up discipline. They reveal the ageless wisdom that the power of the tribe is greater than any individual warrior. It is with immense professional pride I tell you that I have seen published articles in our field with as many as 32 authors! Some of these tribal bondings are meta-analyses. Everyone who contributed data didn't get thanked in a footnote. Instead, they received authorship. How else are you going to induce people to share data unless you bait them? Other studies are cross-cultural analyses. One person from each contributing nation became an author. I do not know how the serial position of the authors was determined. I presume it is alphabetical order by either the name of the author or the name of the nation. One can only hope that Dr. Zyzanski from Zimbabwe enjoyed the view from the caboose. Seeing these massive conclaves of authors makes my chest swell with pride knowing the bulk-up technique of safety in numbers is thriving in I-O psychology.

However, I was recently brought back down to earth. A hot topic in physics these days is researching the "Higgs Boson." It has something to do with creating matter from energy. Apparently the research is being conducted in various labs around the world. These folks recently got together and published an article reporting their team-of-teams findings. How many coauthors were there in this article? I hope you are sitting down. This one article had 2,897 authors! There were so many authors the printed journal article instructed the reader to go to the journal's website for the full slate of authors. How would you like to have been in charge of establishing the serial position of all the authors in a way that was equitable and satisfying to everyone? 2,897 is more than 32. The winner of this round is physics.

## Disciplinary Maturity

We are all human. To be human is to make mistakes, to err. Physicists and I-O psychologists both make mistakes in their respective disciplines. It takes a real man to admit he has made a mistake. It is a sign of honesty, courage, and true masculinity. What should one do after making a mistake? Two things: first, own up to it; and second, correct it. I-O psychology outbulks physics on this criterion. That's right, without shame or embarrassment I-O psychology has developed not one, not two, but six correction formulas. When we make mistakes, we have a small arsenal of ways to correct our errors. Physics? Not one. When their predictions go awry, they blame it on "rounding errors" or "disturbances in

the data" or some other such poppycock. C'mon physics! Bulk up! When I was a boy you said Pluto was a planet. Now you have changed your tune. Admit it when you are wrong. It does not make you look weak. Just the reverse—it makes you look strong! Do what I-O psychology does: Develop a bunch of correction formulas to cover your ass. I-O psychology needs them, and if the physicists were honest with themselves for once, they need them too. The winner of this round is I-O psychology.

### Alpha Image

If you are keeping score at home, as of the moment it is 1-1-5. This is the tie breaker. As people from all walks of life discuss the state of humanity, sooner or later the topic of intelligence rears its head. We acknowledge that some activities in life require a very high degree of intelligence. In fact, we often say the most intellectually demanding tasks in life can only be mastered by members of two occupations: brain surgeons and rocket scientists. A brain surgeon is a medical doctor, a physician. Not just any pill-pushing physician, but someone who has mastered slicing the brain. A rocket scientist is someone who has mastered the laws of physics. That's right; a rocket scientist is a physicist. I don't know how this "brain surgeon or rocket scientist" thing got started, but I know how to fix it. The next time you are sitting around the dining room table talking with your family, chatting up people in some social gathering, or setting levels of

attainment for your children, do the right and proactive thing. Drop this line into the conversation: "It would take either a brain surgeon or an I-O psychologist to understand something that complex." I say screw the rocket scientists, and by direct implication, screw the physicists. Do you think the physicists are extolling the intellect of I-O psychologists to others? Part of bulking up is not sitting back passively and lamenting your plight but actually doing something to make your life better. Think of substituting "I-O psychologist" for "rocket scientist" as a linguistic correction formula. There is no harm in adding one more to the pile.

So, what's the bottom line in the mano a mano competition between physics and I-O psychology? Physics is the winner, but only by a whisker. Furthermore, where we are weak compared to physics is highly modifiable. First, we can start with spreading the word about us. The brain surgeon now has a new roommate. Second, we get with the program about increasing tribal size. From here on out each one of us will list the other 8,000 members of SIOP as coauthors in our papers. What reviewers are going to reject your manuscript when they are also coauthors of it? Bulking up is all about size and power. We can make the Higgs Boson crowd look like your mother's garden club.

Physicists live in their own little world— the universe. We, on the other hand, know how to bring about organizational change. There is no better time than right now.

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# Connecting Counterproductive Work Behavior With the Resource Depleted Brain: A *TIP* Interview With Professor Michael Christian

**M. K. Ward**
North Carolina State University

**Bill Becker**
Texas Christian University

In this issue, we discuss a perspective of work behavior and performance that takes into account brain functioning and physiological resources required for self-regulation. Professor Michael Christian at the Kenan-Flagler Business School at the University of North Carolina describes how he draws on organizational neuroscience approaches to develop studies examining the relationship between energy resources in the brain and ethical behavior in the workplace.
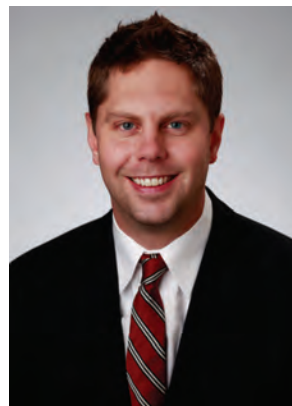
Michael Christian earned a PhD in management from the University of Arizona and a master's degree in industrial and organizational psychology from Tulane University. His research program aims to improve our understanding of how energy, self-control, and other self-regulatory processes influence performance and ethical work behavior. Michael Christian has worked with organizations regarding selection, training, and promotion. He has published in high-quality journals including *Administrative Science Quarterly, Academy of Management Journal, The Journal of Applied Psychology, Personnel Psychology,* and *Organizational Behavior and Human Decision Processes.* In short, Michael is an accomplished researcher with several projects that fall within the realm of organizational neuroscience.

During our conversation with Michael, we talked about the not-so-subtle effects of energy depletion on work behaviors and possible interventions aimed at replenishing our brains when we need it most.

**How did you get interested in organizational neuroscience?**

There's a couple of reasons I am interested in organizational neuroscience and human physiology at work. I have always had an interest in medicine and almost went to medical school. Instead, I decided to do my graduate work in psychology, and I was really interested in the fundamental building blocks of why we behave the way we do. A lot of that comes down to physiological functioning. In terms of neuroscience, I tend to see psychological concepts as analogies of neural processes.

One of my major interest areas is self-regulation. How is it that we regulate our emotions, thoughts, and behaviors? How do we resist temptation and behave ethically? How do we will ourselves to do things that we ought to do? One of the stronger findings in neuroscience is that the frontal cortex is involved in executive functioning and regulation. This is what differentiates humans from a lot of other creatures and enables us to regulate ourselves rather than being beholden to the more primitive parts of our brain. In other words, we can engage in appropriate social behavior rather than being subject to our more automatic emotion-driven reactions.

With organizational studies, we tend to use relatively coarse measures (e.g., self-report measures) of these processes. By tapping into more direct measures, we can reduce error and better understand momentary behaviors and experiences. That brings me to my interest in blending neuroscience with organizational science.

To be clear, I don't do neuroscience. For now, we're not measuring actual brain activity in our studies. We do have the ability to integrate across the disciplines, and I draw on neuroscience findings because that's where I currently see industrial-organizational psychology developing. Currently, I have a focus on momentary experiences that, like neuroscience, necessitate attention to a within-person perspective. For a long period of time the focus in organizational research has been on between-person factors. Generally speaking, organizational research was founded in paradigms that don't account for the within-person variance that occurs in the moment or during the day. We're starting to realize that momentary experiences matter quite a bit, and that takes us away from a between-person perspective and takes us back toward a within-person perspective. That within- person perspective requires us to understand what sorts of dynamics and fluctuations occur in our brains and to link our physiology to specific behaviors. So by taking a scientific and physiological approach we can assess the underlying reasons for behavior in a more nuanced way.

**How did your interests translate into bringing neuroscience into your work?**

In my dissertation I focused on sleep deprivation. During people's careers sleep deprivation is inevitable. We've all experienced sleep deprivation, and we intuitively understand that something physiological is happening there. Sleep deprivation is usually studied in sleep journals and neuroscientific journals. There is a link between sleep

deprivation and glucose metabolic rate in the prefrontal cortex. That is the area that has executive control over our behaviors, emotions, and thoughts.  There's anecdotal evidence that people who are sleep deprived are more impulsive and not as in control of themselves when they've been subject to sleep deprivation. This is what I called resource depletion in my paper with Aleks Ellis in 2011, which is an analogy for what's happening in the prefrontal cortex region. The analogy allows for a deeper level of theory. We found that people who had sleep deprivation were more likely to succumb to temptation or behave in a non-normative way, and I found that fascinating.

In another study with David Welsh at the University of Washington and Aleksander Ellis and Mike Mai (2014) at the University of Arizona, we built on that finding. We looked at the role of caffeine and social influence. If we have depleted executive functioning, does caffeine intake actually energize those resources that a person lacks because of sleep deprivation? To answer this question, we conducted a laboratory study in which we kept some participants up all night and others were allowed to sleep all night. The next day we gave gum to participants who were sleep deprived. Some participants chewed gum that actually was caffeinated, and the other group chewed gum without caffeine in it. We found that people who chewed the gum with caffeine behaved at the same level of ethicality as people who were well rested. Another part of that was that people who were sleep deprived were more susceptible to unethical social influence. We had a confederate suggest that they be

deceptive in a way that would benefit them on a task. Specifically, we found that the people who were sleep deprived and did not chew the caffeinated gum were especially susceptible to the suggestion. However, the people who chewed caffeinated gum were just as likely to resist the suggestion as the control group. So it seems that caffeine following a sleepless night not only boost perceived energy levels, it also objectively makes us more ethical.

### What are the long-term goals of your program of research?

Many of the studies I have going on right now are about human energy. We are attempting to clean up the construct of energy that's all over the place in organizational science. We see it referred to as self-regulation, activation, resources, engagement, exhaustion, and so on. We lean heavily on work by Quinn, Spreitzer, and Lam (2012) to develop and test the idea that energy in the brain consists of two distinct forms: One is potential and the other is activated energy. Potential energy is like unused stocks and resources that we can activate in future tasks. In a paper published at ASQ with Noah Eisenkraft and Tali Kapadia (2015), we look at how daily somatic experiences of pain deplete our potential energy. If you're going to work sick or with an aching back, then you're devoting some of your attention and energy to that pain. On a daily basis this decreases the amount of activated energy that you have, which is the energy that you have any given moment. Thus, we differentiate between depletion and engagement. People who are dealing with chronic pain

are using up the resources so that they are less likely to demonstrate high contextual performance, and are more likely to experience burnout.

In another project with Erin Cooke Long, my PhD student here at University of North Carolina, we are using theories derived from neuroscience findings, to test the hypothesis that when people are sleep deprived they depend on moral heuristics more often than when we're rested. When we lack sleep, we have a decreased ability to see moral cues and to have moral awareness, as seen in the model proposed by Chris Barnes, Brian Gunia, and Dan Wagner (2014). So we are more likely to rationalize behavior by using quick short cuts than really deeply thinking about our behavior.

But the overarching goal of my research program is to improve our understanding of self-regulation in general. For example, again with Erin Cooke Long, we just published an in-press study in the Journal of Applied Psychology examining mindfulness as a self-regulatory enhancer and whether mindfulness enables the ability to decouple ego from experience (Long & Christian, 2015). We're also looking at whether that decreases their System 1 thinking and their automatic reactions. Although this didn't end up in the final publication, we used sensors to measure electrodermal activity and heart rate. In the pilot to understand how people react, we've found that people who participated in mindfulness show less electrodermal reactivity, and their heart rate didn't spike. We found that giving a brief 10 minute induction of mindfulness brings less reli-

ance on system one's automatic reactions to retaliate against transgressions. People are less likely to react to unfairness after being induced into a mindfulness state.

***What did you used to prime the mindfulness state?***

We looked at what Andy Hafenbrack, Zoe Kinias, and Sigal Barsade (2013) did in their publication in Psychological Science. We used the script from Laura Kiken and Natalie Shook (2011), published in Social Psychology and Personality Bulletin. Instructions were provided in the script, which for the mindfulness participants essentially asked participants to anchor their attention to their breathing. They were asked to maintain attention on the present moment by attending to their breathing cycle. Reminders asked participants to gently shift their attention back to the feeling of each breath. For the control group, participants were asked to think freely about anything they want and to let their minds wander.

We found that mindfulness decreases rumination about unfairness and decreases the emotion. These mechanisms account for downturns in retaliation for the mindful people.

***What's your response to the stance that neurons can't manage and that this is purely a reductionist approach to psychology?***

In my experience, some journal editors have been very open and encouraging of using neuroscience directly rather than using analogies. Any variance that we can explain that hasn't already been explained

is good. Neuroscience can predict more within-person variance, and that builds a fundamental understanding of human behavior. This is why we have multilevel paradigms. People don't behave based solely on their own volition. Recognizing nesting of influences is important to a complete understanding. For example, within organizations we have groups. In groups of people, we have individual people. Within individual people we have decisions, and within decisions we have neural activity. The reductionist criticism is understandable because it is difficult to measure neural activity as technology stands today.

*Yes, this is a critical intersection of technology, neuroscience, and I-O psychology. There are mobile sensing technologies that seem to hold promise for collecting within-person data in real-time.*

Absolutely. I'm interested to see what advances come out in the next 10 years about tracking brain activation via mobile phones.

*Do you have any advice for people who are interested in taking an organizational neuroscience approach to their research?*

I would say it's important to recognize that the things that we measure in organizational science are analogous to neuroscientific concepts. Because we often rely on analogies right now, we must make sure that the scientific evidence is strong and will really support the analogy that you choose to use.

We need to tie things together better. There is a wealth of information in physiol-

ogy and neuroscience that can fit into our models of behavior, and the more integrated and interdisciplinary we get, the closer we get to a complete picture of how and why people do their work.

## Conclusions

An energetic thank you to Michael Christian for sharing his ideas and time with us. We are hopeful that his current projects and future studies in organizational neuroscience may bring us closer to understanding energy at work. From that, we may learn how best to intervene so we can behave as if we got a full night's rest.

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## ERRATA

At the request of Dr. Sebastiano Massaro, two slight inaccuracies in his prior *TIP* interview (Organizational Neuroscience, http://www.siop.org/tip/jan15/523/files/35.html) need to be corrected.

On page 36, the article stated that, "MRI machines traditionally enable a higher spatial resolution than standard EEG systems because EEG measures signals at the scalp." The sentence should simply read, "MRI machines traditionally enable a higher resolution than standard EEG systems." In addition, on page 35, the sentence reading, "people that have no neural knowledge" should read, "people that have no basic neuroscience knowledge."

**Practitioners' Forum**



**Ben Porr**
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**Jenna Bender**
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# Clients Can't Always Get What They Want, but if You Show Impact…They'll Get What They Need

One of the challenges to being an I-O practitioner is that there is no standard conceptual framework for managing or demonstrating the financial value of human capital in an organization. Organizations have requirements to report on the "health" of the company based on standardized financial accounting metrics, but there are no such standards for human resources. In addition to this, we are typically trying to demonstrate impact on a dependent variable (i.e., organizational performance) that is not only ill-defined but also a constantly moving target (cf. Richard, Devinney, Yip, & Johnson, 2009). As discussed by Richard et al. (2009), organizational performance fluctuates, so our measurement is a "point in time" in a dynamic environment that is ever changing. Finally, as discussed in an excellent series of articles (cf. Fulmer & Ployhart, 2014; Nyberg, Moliterno, Hale, & Lepack, 2014; Ployhart, Nyberg, Reilly, & Maltarich, 2014), our levels of analysis are typically misaligned. We measure each individual and aggregate them to predict division or organizational level phenomena, which is a great start but is missing all the interactions and emergence (Kozlowski & Klein, 2000) that these individuals working together in their environment are actually producing.

With all these challenges, our goal is still to please the client by demonstrating impact. Because there are no set standards, this allows practitioners the freedom to tailor their solution to the specific organization and provides the space to be innovative in the implementation of solutions. Although our measurement isn't perfect, it's far better than having no measurement and making gut instinct decisions. As any practicing I-O knows, our application is probably the farthest along in selection, followed closely behind (with some help from our training colleagues) in training evaluation. A key driver for this is that we have honed in on systematic and structured measurement that can be repeated across organizations. Those areas of research are also at the right level of analysis where you are measuring individual attributes and comparing to individual performance. This

isn't always the case in our other fields like workforce planning, performance management, employee engagement, and so on. There are many methodologies or implementations that can occur within these fields, but typically we are aggregating individual responses to determine how they're impacting the success of the business (i.e., organizational level of analysis).

The purpose of this article is to provide some practical advice on demonstrating impact for your clients. It starts with understanding the key players in the project, understanding the true purpose of the project, setting expectations, and identifying short and long term outcomes that lead to the overall impact. We conclude with recommendations on analytics advances we can make in the field.

### Understand the Client, Stakeholders, and Decision Makers

As with our measurement, throughout the life of a project, the consultant is going to have to work with dynamic individuals who are influenced by the environment in which they operate and the work they do. By understanding the key players and environment, we can make sure to gather the right information, set the right expectations, and produce the right results for all interested parties. Sometimes these people are one and the same and sometimes they are completely separate people with competing priorities. Our fun job is to please all while still demonstrating impact without compromising the integrity of our work.

*The client.* This is typically the person managing the project from the customer side. They set the scope of the work and are involved in the day-to-day dealings of the project. This is the person that is ultimately responsible for and thus heavily invested in the success of the work. Because of this investment, this person will typically be able to provide honest answers to your questions and can provide you the initial overview of the environment. Unfortunately, this person might not understand the drivers of the project because it's been mandated from their leadership without complete context. This is where the others come into play.

*The stakeholders.* These are the people the project will impact either directly or indirectly. If you think about the change management aspects of the project, you can usually identify who's impacted by the change. These people can provide data and information that will inform the success and purpose of the project. Sometimes this information is direct and other times you need to indirectly infer issues and challenges based on the interactions with these people (e.g., willingness to share information, understanding of the need for the project).

*The decision maker(s)*. These are the people that will ultimately be determining the success of the project. They used their budget (or results from this project can impact their budgets) to make this project happen and want to see the impact it has made. It doesn't matter how much goodwill and progress you have made if you can't prove to them that their investment was worth it and ultimately if they want to continue funding your work.

It's important to note that each of these players may have differing priorities, differing desired outcomes, and differing perspectives regarding the project. As a result, it is necessary to quickly identify who these people are and their role in moving the initiative forward. This will enable you to better determine which information needs to be shared when, how, and with whom.

## Establish What Success Looks Like

As discussed earlier, competing demands may lead to the decision to implement a less-than-optimal solution. Sometimes this is a result of across-the-board mandates due to some new regulation or a shift in priorities. Sometimes this is a result of a client trying to implement the right solution but to the wrong problem. By first working with the client to identify and define the challenges or problems they hope to address, you can then effectively discuss what success looks like—how they ultimately would like to see the results of your efforts playing out—and use that information to establish your business case.

Once "success" has been defined by the client, it is time to call upon the research! Successful consultants are able to translate research and best practices into a "story" or language that can be readily understood and evaluated by the client.  But be wary, research can only take you so far. You'll want to make sure you use the research to support the data you have collected on the client already.

## Understand the Limitations

Although we graciously thank the many academicians who continue to supply the research upon which we base our applied methodologies, it is necessary to remember the limitations associated with certain research practices and, as previously mentioned, apply the appropriate level of caution when presenting research to clients. In the lab, we meticulously account for every variable: the seconds between priming the subject and the stimuli, the characteristics of the subjects in comparison to the confederates, the self-reported levels of subject engagement in the activity assigned.

Be flexible with how you communicate research to your client. By synthesizing the foundational research behind your methodology into the key drivers generating the results you hope to replicate, you are less likely to have your clients' eyes glaze over or receive pushback because they don't see the resemblance between their unique and complex organization and the participant groups from the research. Not only that, but when communicating with C-level leaders, it is vital that you use language that is going to resonate with them—for example less focus on correlations, and more on how solutions will provide a competitive advantage to their organization.

Also, the Rolling Stones had it right. You can't always get what you want. Unlike in the lab, where you can design your research protocol and hypotheses around the data you can collect, in applied settings, you have the data that is publically available and what your client is willing

and able to provide. You don't always have access to that one magical variable that is going to make it all come together. As a result, there are times when you will need to make assumptions and decisions based on incomplete information. In these instances, it is best to define your assumptions and validate them with your stakeholders and decision makers. They can then confirm or deny the assumptions you've made before moving forward. A major strength of I-O psychologists in organizations is this ability to critically evaluate the importance and prioritization of data and information to make informed decisions. Use this wisely.

### Establish Clear Goals and Expectations

As you're gaining clarity around your client's vision for "success" and familiarizing yourself with the limitations of the environment in which you'll be working, it is imperative to establish clear goals and expectations with your client. The client's definition of success may be lofty and conceptual. Let's use the example of establishing the organization as a well-liked and desirable employer in the field. This is certainly an admirable goal but leaves much to be desired on the implementation side.

To remedy the external perceptions of an organization is not an expeditious or straightforward venture. In this instance, it is best to communicate realistic expectations around realized impact. Clients may hope to see results in a few months that may be more realistically achieved over the course of a few years. It can be helpful to establish short-term and long-term indicators that can serve as more concrete repre-

sentations of progress towards the primary goal to assist clients with seeing progress in the interim. This is where the collection, organization, cleaning, and structuring of data are most critical. We need to make sure we are synthesizing each piece of data at the right level of analysis and clearly defining the validity of the data.

### Explain Impacts in a Meaningful Way

By organizing and tracking the data throughout the process, you can identify interim progress towards the larger goal. For example, an increase in resumé submissions or uptick in visits to the company's careers webpage could be indicators of shifting perceptions for our example organization. Although these data points don't tell a complete story (and may result from those pesky variables we can't control for), they can be paired with other indicators such as a synthesis of increasingly positive comments on Glassdoor.com and the jump up three spots on the most recent results of Fortune's Best Companies to Work For. By breaking down the big picture, you can create a collage of smaller impacts that let you know you're moving in the right direction.

As you gather this interim data from the indicators identified, make sure that the results are being communicated to your client in a clear and concise way. Clients want to know that your analytics are based on science but most likely have little preference to see the $R^2$ or fit indices. There are some good blogs that demonstrate visually appealing ways to portray data (e.g., http://aea365.org/blog/category/data-visualization-and-reporting). To ensure

that your client continues to see the value in your efforts, make sure you're portraying data in a way that is easily interpretable. For example, dashboards are a great tool to show data in a way that makes the story of your results tangible to the audience. Dashboards also, if set up well, can serve as a constant mechanism for feedback on your progress, ensuring that you always have ammo in your decision-making arsenal.

### Prepare to Adjust

Although indicators are a great tool for showing progress towards the client's vision for success, indicators can also alert you that you're starting to veer off course. By consistently tracking and assessing the indicators in your model, you can make informed, data-driven calibrations to your methodology to get you moving back in the right direction.

But sometimes adjusting can be necessary for reasons other than your results. When working with an organization, you may face shifting priorities from leadership, reduced resources, or receive new game-changing information. Keep the overall goal of your project in mind so any changes you make do not affect the impact your project should have in the organization.

### Call to Action: Move Toward More Accurate Measurement and Data Collection

Analytics has become quite the hot topic these days, and rightfully so. The challenge is now that there is so much data out there that without systematic measurement,

there are many ways to misinterpret findings. It's very easy to conduct ad hoc analyses on the plethora of data we have, but should we? Practicing I-Os add value not just through analysis but by helping clients collect, clean, and organize the right data. The more we can measure individuals, the teams they work in and the division they work for, the more we can align our levels of analysis. Ultimately, the more we can accurately demonstrate impact at the individual, team, and organizational level.

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## Oh, PhD. I Get It Now.



**The I-Opener**



**Steven Toaddy**
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A couple of issues ago, I made a flippant comment about philosophy underlying our field. That reminded me of something strange that I thought I had seen previously; I took a look at my diploma and, lo and behold, I'm a doctor of philosophy. Huh? I thought that I was a scientist. I was too embarrassed to ask around. Perhaps I have been trading on a knockoff this entire time. If we were philosophers, I would probably know about it, right? SIOP's website would be replete with the word and its variants.

Philosophy of science is mentioned, with brevity and vagueness I find unhelpful, in our guidelines for both master's- and doctoral-level education and training; the instances in which the phrase arises feel vestigial. But that phrase rang a bell.

I then remember being trained in this "philosophy of science"—in a context separate from that mentioned in any of the above guidelines—during my graduate and undergraduate experiences. I think I may even teach a class in philosophy of science to my own doctoral students. Just how far down does this reverse-crypto-philosophy conspiracy go?

Being at heart a hard-hitting investigative journalist,[1] I reached out to one of the people responsible for my philosophical training—the actual, you know, real philosopher Dr. Erin Flynn. I decided that he would probably clam up if I started hurling accusations about his field pulling the strings in mine, so I instead adopted a cheerful stance.

Kidding aside, take a look; he provided practical (and sometimes cautionary) advice regarding the study of philosophy of science by I-O psychologists, backed up with what I consider compelling arguments.

***I-Opener: In your opinion, how can academics and consultants in I-O psychology benefit from studying philosophy of science?***

Flynn: I suppose that's a version of the question "How can anyone benefit from studying philosophy?" which always makes my palms sweat a little bit. But an extremely broad answer is that often when individual scientists reflect on science, on the status of scientific truth, the status of scientific knowledge, my experience—and admittedly it's just anecdotal experience—but my experience is that the attitudes expressed are typically about as far from a reflective consideration of the actual status of scientific knowledge or truth as the average lay person's distance is from scientific knowledge itself.

What I'm trying to say is that there's a good deal of nuance—interesting nuance—in what scientific knowledge is, what constitutes scientific truth, and I think that, by and large, when scientists are practicing, they're exhibiting that nuance in their practice. When they step away from their practice and start to talk about science or the status of scientific knowledge, the status of scientific truth, all of that nuance, all of that precision, all of that care often goes out the window, and they say, sometimes, remarkably thoughtless things about scientific knowledge and scientific truth.

I think that, if they're concerned to think about the status of scientific knowledge and scientific truth, learning or studying a little bit of philosophy of science would behoove them; it would enrich their conversations.

Now it would also complicate their conversations in ways they might not appreciate, in ways, let's say for instance, that challenge the sort of hegemonic authority of something called "science" and what "science" says.

And I think generally that they would just have an enriched and nuanced appreciation for the questions of "what the hell constitutes knowledge? What, if anything, distinguishes scientific knowledge from other modes of knowledge?" A lot of these things are taken for granted, sometimes by scientists and often by certain parts of our culture.

For instance, suppose there's a dispute about the meaning or significance of some results or a particular claim, and let's say that the particular sort of claim that's being advanced by a psychologist is in some tension with an ordinary view of human behavior or human thought. Now I certainly think that we ought to be extremely receptive to whatever empirical research we generate, but when one is speaking with empirical scientists, there's sometimes a tendency on the part of scientists to say, "If there isn't empirical confirmation or a means of empirical testability, then the ordinary view is meaningless or scientifically useless or uninformative." In other words, the ordinary view has to go, or if it stays, it stays only under a cloud of suspicion. Sometimes this attitude expresses a healthy willingness to scrutinize the sorts of ordinary, folk-psychology views we take for granted. But sometimes that attitude expresses something else, not a healthy pursuit of knowledge but a kind of disciplinary retrenchment. Furthermore,

I think sometimes that attitude is accompanied by a total lack of awareness of the difficulty of determining just exactly what counts as empirical confirmation, just what counts as empirical support, to take up one issue very common and near and dear to the heart of philosophy of science, the problem, broadly speaking, of underdetermination: that it's not at all clear that any empirical evidence is ever sufficient to establish a particular proposition about the world.

Sometimes in the broader public discourse, there are points at which the scientist perhaps says, "this is what the research says, this is what the data say," as though that can effectively be a conversation stopper. And sometimes it's certainly true, it depends on a case-by-case basis whether that should be a conversation stopper, but anyone with even a little bit of knowledge of the philosophy of science understands the conceptual complexity involved in what I said just a moment ago—What do we mean by empirical support? What do we mean by inductive support? And what do we mean by suggesting that empirical evidence can determine a particular proposition, a particular claim about the world?

I do think that if scientists were more familiar with those kinds of issues, they might do one of two things. On the one hand they might seize up and become paralyzed and say "oh my gosh, I can't assert anything anymore," which I don't think is particularly productive, but I think on the other hand they might realize that even for plain observational evidence, it is probably not the case that it is ever as unequivocal as your average article in Scientific American makes it out to be. And this is not just a point about being cautious with respect to what the evidence actually demonstrates. It is a question of the sorts of conceptual presuppositions and practical predispositions necessary for anything to count as a demonstration. These are typically not the sorts of conditions that are subject to empirical testing, yet they are required for every empirical test.

***Where might one start?***

Of course it depends on the specific question one wants to take up.

But because so many natural scientists' knowledge of philosophy of science seems to begin and end with Karl Popper, I would suggest people start not simply with Popper, who of course is fantastic and important but who ends up producing devotees. Instead I would suggest one begin with concise statements of Popper's position and then read the critics of Popper and follow out at least some of the conversations in 20th-century philosophy of science after Popper. The notion of falsifiability, for instance, is clearly an important and useful notion, but it has very obvious flaws. My suspicion is that the devotee of Karl Popper loves his Popper and when he encounters criticisms of Popper, he tends to have a response something like the following: "Oh, that's just philosophical mumbo-jumbo," or "that's just philosophical

complication." So he likes the simplicity, he likes the elegance of Popper's ideas, but he does not want to pursue the actual complications in investigating, for instance, the concept of falsifiability (or testability) as a demarcation criterion, which is still popularly cited all over the place. And that suggests what I might go so far as to call a remarkably unscientific attitude—to enjoy the elegance of the idea but then to be put off when a little bit of careful conceptual analysis and also historical and empirical analysis suggests that the idea has some deep flaws, to recoil and say "oh, that's just philosophers making problems where there are no problems." That's what I meant earlier when I spoke of the scientist who suddenly drops all of her scientific acumen, all of her critical antennae just go dull, and she wants an article of faith that neatly carves up the world (in this case the world of her own practice) in a way that she's probably predisposed to see it.

To follow this sort of line of discussion, find a good anthology. The Curd and Cover anthology has some nice and accessible pieces toward the beginning taking up exactly that issue: the importance of Popper's demarcation idea. Such an anthology shows the serious doubts philosophers and historians of science have raised about it, and what those doubts imply, what they tell us. A good anthology will also include commentary to help the reader navigate some of the inevitable complexities of the original articles.

Another way to answer the question

is "You just start with The Structure of Scientific Revolutions." I certainly think that if you want to do some heavy lifting, you've got to engage with Kuhn, and there I think you've got to read Kuhn himself rather than starting with critics or caricatures of Kuhn, which abound. If we're talking about recommending titles, *Structure* and then *The Road Since Structure*. In the latter he does a nice job of responding both to those who recoil from what they see as the arbitrariness and irrationality of scientific developments implied by his position, as well as those who embrace that aspect and infer that scientific knowledge, scientific development, scientific change has as it were no roots in evidence, in rationality, and so forth. And of course Kuhn thinks both of those responses to his work are wrong—everyone thinks that everyone else's responses to their work are wrong typically—but I find his conversations of those responses typically enlightening and enriching.

Of course, there are many other excellent philosophers of science, representing diverse theoretical positions. The more contemporary of these have had the benefit of reflecting on the foundational conversations in the field, and often strive to articulate broadly defensible, rich syntheses of these various approaches while still advancing unique positions of their own. Helen Longino and Imre Lakatos are two whose work I admire.

I would say to someone who wants to wade into this territory: I think it's more useful to read these philosophers

of science in conversation with each other—so to find articles in which they're arguing with each other—than it is to, let's say, pull down Popper's massive volumes and just plow through Popper, or to pull down Kuhn and just to plow through Kuhn. I think most readers are less likely to understand the limitations of what they're reading unless they turn to another philosopher who is directly taking up the ideas of that previous philosopher and exploring their weaknesses, their shortcomings, and so forth.

### What are the stumbling points and pitfalls associated with studying philosophy of science?

Involved with reading as I described above is one of the things that I think can be off putting to the inexperienced reader: Philosophy, in most of its traditions, is in conversation with past philosophers, so to be a student of philosophy is to be reading backward and forward. You're going to encounter stuff in contemporary work that will force you to go backward, and you're going to go backward and read stuff from the past and say, "What are we to make of this?" To figure it out, you have to go forward again in time, and there's no getting around that if you want to improve your grasp of these issues and of the conversation generally.

The other thing I think that can be off putting to a new student of philosophy is that when you start with more-recent work, not only is there a whole body of knowledge that is presupposed, but the debates about particular issues can

start to look pointlessly intricate or so intricate as to be overwhelming, perhaps particularly for the student who was attracted to science. I think typically in one's scientific training, one does not focus on controversy, one does not focus on uncertainty; one focuses on established techniques, established bodies of knowledge, and then on the effort to point one in the direction of as-yet-unexplored terrain. But there's not an emphasis on conceptual arguments.

To that point, let me offer another thought. I very often tell my students something along the following lines: the typical bench physicist, and I assume the typical I-O psychologist, can get along quite well in her day-to-day practice, can be a totally adequate practitioner of her particular scientific endeavor, without taking up the philosophical questions at all. But if she's practicing in the midst of what Kuhn calls a scientific revolution, a paradigm shift, she may find that her scientific training is of little use or is even an obstacle in assessing the new paradigm.

The student of physics might, as a side interest, read the exchange between Einstein and Bohr[2], but that's probably only going to happen if the student has a particular interest in that exchange. I don't know that it will help in their training, and this is a point that Kuhn makes as well as anyone. One of the things I find refreshing about Kuhn is that while his work is clearly philosophically significant, he's also very concerned with the history of science and with the actual practice and training of

scientists, and although he may have a sort of selective vision of that history and that training, I do think he has very astute things to say about them.

And so if the scientist has been drawn to science because he wants a well-defined technique that settles the question—and I understand that impulse, though I hope most scientists by the time they're graduate students get over it—then that science student may get frustrated with philosophy. If that impulse is too dominant in you, I think philosophical argument is just going to be terribly frustrating and overwhelming.

*I think that it's safe to say that there are individuals and traditions within our field that exemplify greater or lesser tolerance for ambiguity and, for lack of a better term, philosophical pondering.*

Let me follow up on that. I think that when you—and this is maybe a more concrete value philosophy can have to any practicing scientist—I think that when you look at the history of scientific development, the leaps forward, innovations, new research programs, I think they are often rooted in philosophical reflection on presuppositions and definitions: How have we been looking at this particular problem and what sorts of conceptual presuppositions are foreclosing certain questions? I do think that if the empirical

scientist is interested in breaking new ground or thinking about problems in new ways, then unavoidably they will be, whether they know it or not, involved in philosophical reflection upon the nature of the enterprise.

On the one hand, it's true that if you get too hung up on those philosophical questions you'll never get to the empirical science at all. On the other hand, there are instances in which one might say—and I'm speaking very abstractly—but one might say, "We've been thinking of a project or a program in this way, but if we thought of it in this slightly different way, are new vistas and research questions opened up?"

And certainly one might argue that Einstein's great advance, which is certainly a scientific advance, is a philosophical advance. He's looking at conceptual conundrums: Why these paradoxes and anomalies? If we made a conceptual shift, if we redefined basic terms, might these be resolved? Naturally we needed empirical confirmation, but one could argue that Einstein was really engaged in a bit of philosophy at those important moments. It wasn't philosophy of science, to be sure, but something like philosophy in science.

[1] This is clearly a lie.
[2] Yes, that's a link to Wikipedia. Stop looking at me like that.

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# HOGAN

## PREDICTS
### PERFORMANCE

THE SCIENCE OF PERSONALITY

In the last column on the international practice of I-O psychology, we discussed industrial-organizational psychology within the context of India and Indian organizations. As we begin to focus on South Africa, we notice interesting parallels (and differences) in how industrial-organizational psychology has evolved and continues to grow among political, economic, and cultural changes. Read on to explore the fascinating world of industrial-organizational psychology in South Africa!

## Showcasing I-O Psychology in South Africa

**Ameetha Garbharran**
(Registered Industrial Psychologist, South Africa; Independent Management Consultant, Toronto, Canada)

with contributions by **Kim Dowdeswell** (President of the Society for Industrial and Organizational Psychology of South Africa (SIOPSA); Head of Science and Research, CEB, South Africa)
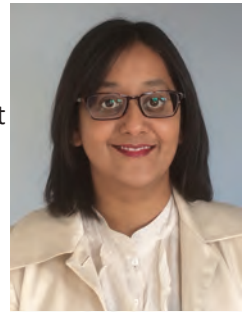
### Introduction

The South African story captivated the interest of the world as it played out on the international stage. Historically, the country was infamous for the legislated system of apartheid, which created a racially and socially fractured nation and an economically unequal and divided society. From the ashes of this inhumane system, inspirational leaders like Nelson Mandela emerged to spread hope and the promise of freedom for all South Africans. Now a democratic country, South Africa is a flagship for economic growth and development in Africa. This created new opportunities for doing business and drives the relevance and growth of the science and practice of the profession of I-O psychology in the country. This article will showcase recent developments and advances shaping the South African I-O psychology landscape that are paving the way for its continuing evolution in Africa's flagship economy.

**Lynda Zugec**
The Workforce
Consultants

## South Africa:
## Ahead of the Pack in Sub-Saharan Africa

Africa is recognized as the most promising growth region in the global economy (Annunziata, Johnson, & Kramer, 2013). Contributing 22.3% to Sub-Saharan Africa's (SSA) GDP growth in the 2000–2013 period, South Africa is one of three countries (with Nigeria and Angola) responsible for over 60% of the expansion of GDP in SSA since the year 2000. Ranked 53rd of 148 countries, South Africa is the SSA region's leader on the World Economic Forum's Global Competitiveness Index (GCI) based on the state of its institutions, infrastructure, labor market efficiency, health, education, technology, and innovation (Annunziata et al., 2013). Therefore, it provides a favorable business climate and attracts many international organizations to the SSA region.

The relative strength of the South African economy provides I-O psychologists with a vibrant and developing context to practice and research their profession and find innovative ways to manage unique challenges presented by broader social, economic, political, and legal realities. Alongside its First World infrastructure, progressive Constitution, and Bill of Rights and new-age labor legislation, South Africa hosts a Third World society that continues to struggle with issues of poverty, inadequate access to education, unemployment and underemployment, and the HIV and AIDS crisis. I-O psychologists are confronted with diverse issues ranging from using science to develop culturally fair assessment instruments, which minimize bias and adverse impact, to leveraging their practical skills to facilitate transformation in organizations by helping employees from different social, economic, and cultural backgrounds to work together productively and harmoniously. Their ultimate goal is to aid organizations straddling South Africa's dual First and Third World economies to effectively traverse the juxtapositions and maximize their effectiveness by managing the talents and nurturing the potential of the diverse workforce.

## Overseeing the Practice of I-O Psychology:
## The Health Professions Council
## of South Africa

The Health Professions Council of South Africa's (HPCSA, www.hpcsa.co.za) Professional Board for Psychology (PBP) regulates the practice of I-O psychology under the auspices of the Health Professions Act, No. 56 of 1974. One of the PBP's objectives in 2014 was to update and draft regulations for the development, control, and classification of psychological tests in South Africa. To this end, it commissioned the Psychometrics Committee to create an integrated and efficient psychological test review, classification, and certification system. With permission from the European Federation of Psychologists' Associations (EFPA), the PBP intends to use and adapt aspects of the EFPA's international guidelines for test evaluation and classification for the South African context (PsychologyNews, September, 2014). This symbolizes its commitment to applying international best practices to local initiatives. To foster collaboration, the PBP has invited the Society for Industrial and Organizational Psychology of South Africa (SIOPSA) and other

stakeholders to attend a meeting of the Psychometrics Committee with test publishers and developers in March 2015. The aim is to solicit contributions from interested parties regarding the way forward for re-imagining the system for reviewing and classifying psychological tests in South Africa.

### Necessity, Moral Prerogative, Best Practice: The Impetus for a Scientific, Evidence-Based Approach

The emphasis on advancing regulations governing the use of psychological tests in the South African context has special significance for I-O psychologists in light of the Employment Equity Act, No. 55 of 1998 (amended by the Employment Equity Amendment, Act No. 47 of 2013), which stipulates in Chapter 2, Section 8 that:

Psychological testing and other similar assessments of an employee are prohibited unless the test or assessment being used:

> (a) has been scientifically shown to be valid and reliable;
> (b) can be applied fairly to all employees; and
> (c) is not biased against any employee or group
> (d) has been certified by the Health Professions Council of South Africa established by section 2 of the Health Professions Act, 1974 (Act No. 56 of 1974), or any other body which may be authorised by law to certify those tests or assessments.

This progressive legislation replaced the apartheid system's social and labor laws that unfairly discriminated against people on the basis of race. Psychology's role in the service of the apartheid regime was not merely that of capitulation. It was also rather instrumental in crafting the system and providing scientific legitimacy to justify racial oppression in all facets of society, including the workplace. One of its misguided side-effects was the deprivation of opportunities to people of color (collectively referred to as "Black" South Africans) to compete for employment in select categories of work reserved exclusively for "White" South Africans (Cooper, Nicholas, Seedat, & Statman, 1990). Thus, when the new employment legislation was introduced to lead organizations away from exclusionary and discriminative practices to a scenario where decisions in the workplace were based on individuals' capabilities to fulfil the inherent requirements of jobs, I-O psychologists were confronted with the challenging task of overcoming what Owen (1998) recognized as a widespread distrust associated with using psychological instruments in the workplace because of the perception that they unfairly screened out suitable "Black" candidates.

In order to realize Nelson Mandela's vision that "Never and never again shall it be that this beautiful land will again experience the oppression of one by another," I-O psychologists embarked on a campaign of scientific research for benchmarking and validating the use of psychological tests for the purpose of making talent decisions fairly, based on objective and inherent requirements of jobs, and in a way that minimized bias and adverse impact. Groups such as

People Assessment in Industry (PAI) —now a special interest group of SIOPSA—and SIOPSA itself actively advocated for influencing policy and guiding the scientific and ethical use of psychological assessments to address the injustices of the past and ensure that all people were given an equal opportunity to be successful in the workplace regardless of their race, gender, color, creed, or sexual orientation.

This research campaign was approached in two primary ways and is ongoing: (a) to adapt and validate tests developed in other parts of the world for use in South Africa; and (b) to develop new tests customized for South Africa's unique societal composition (Paterson & Uys, 2005). The first approach was adopted by some test publishers. Using tests that had already been validated as effective predictors of on-the-job success internationally, organizations like SHL (now CEB) developed South African norms (Foxcroft, 2004) and engaged in validation research to demonstrate their predictive validity in South Africa. This was critical for proving their scientific rigor and utility and for addressing the scepticism that abounded about the historical unfairness associated with using psychological tests. The second approach, involving the development of new psychometric and psychological tests, is a long-term endeavor. A current noteworthy project is to develop a South African Personality Inventory (SAPI), which aims to fairly and equally measure personality constructs among South Africans from all ethnic, cultural, language, and racial groups (Hill, et al., 2013). The SAPI is in the early stages of development, and initial findings indicate that an indigenous South African personality instrument is imminent. Strides have been made to establish its construct validity and, with recommendations for further research to investigate its predictive validity in organizations (Hill et al., 2013), it is hoped that the SAPI will be a ground-breaking instrument that will facilitate the fair, bias-free, and culturally sensitive assessment of personality in the South African workplace in the near future.

Although scientific research on psychological assessment accounted for a significant proportion of the scholarly publications (27.19%) featured in the South African Journal of Industrial Psychology (SAJIP) between 2004 and 2013, this was surpassed by research published on organizational psychology (42.11%) about issues such as leadership behavior, organizational development, and employee engagement (Coetzee & Van Zyl, 2014; Schreuder & Coetzee, 2010). In combination, research on psychological assessment, organizational psychology and employee well-being (including issues such as job stress, burnout, and work–family balance) accounted for over 84% of the scientific publications in the SAJIP in the last decade. This highlights the trend that research in South Africa has typically focused on traditional domains of I-O psychology practice (Coetzee & Van Zyl, 2014). Although some emerging practice domains such as neuropsychology as it impacts optimal workplace performance, coaching psychology, and consumer psychology require more attention (Coetzee & Van Zyl, 2014), the tremendous contribution of scientific endeavors in South Africa to the fair, ethical, and meaningful practice of evidence-based I-O psychology cannot be overstated.

## The Practice of I-O Psychology in South Africa: Recent Milestones

Professional membership organizations such as SIOPSA and special interest groups of practitioners such as the Assessment Centre Study Group (ACSG, www.acsg.co.za) have guided the practice of I-O psychology in South Africa, actively bridging the scientist–practitioner divide. Through annual conferences and special events, they showcase the latest research while focusing firmly on the practical utility and implementation of scientific advancements for addressing critical organizational issues in the real world.

### *The Society for Industrial and Organizational Psychology of South Africa (SIOPSA)*

SIOPSA (www.siopsa.org.za) represents a membership base of over 400 I-O psychologists, 100 associate members, and more than 120 student members pursuing registration as I-O psychologists. As part of its 2020 vision, SIOPSA intends to focus on four main strategic imperatives:

- To establish the benefits of I-O psychology as a profession and SIOPSA as the leading professional society on "people matters" in the workplace;
- To create a professional society with which all current and future I-O psychologists in our country want to be associated;
- To establish SIOPSA as a self-regulatory body for I-O psychologists in South Africa; and
- To run as an effective business with services to its members and other stakeholders.

A recent noteworthy contribution to advancing the practice of I-O psychology in South Africa was made in 2014 by the Interest Group of Coaching and Consulting Psychology (IGCCP) —a special interest group of SIOPSA—when it released its draft Code of Practice for Registered Psychology Practitioners in Coaching. The purpose of the code is to define the scope of practice for psychologists and related professionals in the coaching domain to protect consumers of this service and maintain the integrity of the specialized interventions that registered psychologists and associated registered professionals are empowered to provide. In its annual tradition, SIOPSA will host its 17th yearly conference from July 27–29, 2015. The theme is "Breaking through Tradition: I-O Psychology for the 21st Century."

### *The Assessment Centre Study Group (ACSG)*

The ACSG was formed in the 1980s and serves as an acknowledgement and a constant reminder that any one type of psychometric, psychological, or behavioral assessment in isolation is not sufficient to effectively predict future job performance. Advocating the utility of multimethod approaches for assessing the competence of leaders and managers, the ACSG has been active in promoting the assessment (or development) center method as the most optimal and credible way for predicting effectiveness at senior levels of organizations. The theme of the ACSG's 35th annual conference from March 23–27, 2015 is "Bridging the Gap: Assessment Centres in Emerging Markets." A highlight at the 2015 conference will be the endorsement of the 5th edition of the Guidelines for Assessment

and Development Centres in South Africa, which are aligned with the 6th edition of the International Guidelines and Ethical Considerations for Assessment Centre Operations endorsed at the 38th International Congress on Assessment Center Methods in Alexandria, Virginia, USA in October 2014.

### Conclusion

Thus, I-O psychology is carving a unique identity as a profession in South Africa. While responding to distinctly South African and African challenges in the workplace, I-O psychologists have contributed to their discipline through scientific research. With an evidence-based orientation and a firm commitment to ensuring best practices in the application of psychology to the world of work, they craft solutions that measurably improve workplace performance. At the same time, they remain open to adopting new developments in the international arena to enhance their effectiveness. Far from being complacent in the light of the progress they have already made in advancing the science and practice of their discipline, South African I-O psychologists and the professional and regulatory bodies that represent and support them are constantly looking for ways to improve and remain relevant. Drawing on the famous words of Nelson Mandela, "The time is always right to do right," the profession of I-O psychology in South Africa has cemented its commitment to making a positive difference in the lives of those it serves by providing scientifically based, valid, meaningful, and relevant solutions to organizations and the individuals within them to support their continued growth and development. Thus, South Africa serves as

an example to countries across the world to practice a meaningful and relevant brand of I-O psychology rooted in science.

WE NEED YOU AND YOUR INPUT! We are calling upon you, the global I-O community, to reach out and submit topic ideas for future columns. Give us your insights from lessons learned in your practice. We are always looking for contributors, and we will be on the lookout!

To provide any feedback or insights on the International Practice Forum, please send an email to the following address: lynda.zugec@theworkforceconsultants.com

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**Seth Kaplan**
George Mason University

**Laura Uttley**
Lewis-Burke Associates LLC

# President Releases FY 2016 Budget Request

*We are excited to share with you information about SIOP's efforts to build its identity in Washington, DC to support federal funding for I-O research and use our research to help guide policy discussions. Each quarter we will report to you on new advocacy activities as well as our analysis of the role of I-O psychology in significant federal or congressional initiatives, such as the annual appropriations process and emerging national initiatives. We are excited about our progress and look forward to working with you as we pursue these important goals!*

### Introduction

On February 2, President Obama submitted his fiscal year (FY) 2016 budget request to Congress. The budget request outlines the administration's priorities for the upcoming fiscal year and advocates for specific funding levels for federal programs and initiatives, as congress begins to consider appropriations legislation. The president's FY 2016 budget request contains many bipartisan ideas but also requires significant changes in top-level spending caps to be realized.

Lewis-Burke Associates conducts a thorough analysis of the budget request annually, focusing on federal research, health, and education programs relevant to the science, research, and education communities. Through the FY 2016 appropriations process, Lewis-Burke will use the funding levels and programs described in the budget request to advocate for SIOP's public policy interests, including sustained investment in federal research programs. The president's budget request also outlines initiatives related to working families and federal employment, through which SIOP can engage federal policy makers to elevate the Society and advocate for the inclusion of industrial and organizational psychology considerations in the development and implementation of new programs and policies.

The full Lewis-Burke analysis of the president's FY 2016 budget request for federal research, health, and education programs is available [here](#).

## Overview of the President's Budget Request

The budget request presents a mostly positive agenda for research and education organizations, both by proposing increases for core funding agencies and by launching new initiatives and emphasis areas, such as an increase in the maximum Pell grant award and programs in the food–energy–water nexus, precision medicine and infectious diseases, agricultural research, and disaster resilience. Moreover, several of the biggest topics for investment and opportunity reflect areas of bipartisan support, such as cybersecurity and exascale computing, advanced manufacturing, and neuroscience. The president has also re-proposed a major new investment in public infrastructure, building on successful programs used in the economic stimulus legislation 5 years ago to enable states and local communities to derive new capital for major infrastructure needs. Initiatives such as this, an emphasis on expanded trade authority for the Asia-Pacific region, and proposed changes to higher education financing, come in a year when Congress is expected to consider related legislation, increasing the likelihood that some of these proposals will be accepted.

The annual budget request reflects months of planning and negotiations by the White House and provides a telling window into forthcoming plans and priorities. The proposed increases for research, education, and infrastructure reflect areas of emphasis for the remaining 2 years of the Obama Administration and benchmarks for which congressional champions will advocate throughout the appropriations process.

### *Federal Programs to Support Working Families and to Develop the Workforce*

Echoing the themes from the President's 2015 State of the Union Address, the President's FY 2016 budget request included a heavy emphasis on working families. Overall, the budget proposed a comprehensive approach to best support working families, including proposals to increase access to childcare, provide support for families caring for older adults, raise the minimum wage, promote community programs, and advocate for paid leave.

The budget request also emphasized improving worker safety. To achieve this goal, President Obama requested $990 million for the Occupational and Mine Safety and Health Administrations (OSHA and MSHA) to implement worker safety programs and evaluations. The budget request explains that these funds would help to promote safety in chemical plants, protect whistleblowers, and ensure the safety of mines.

The administration also focused on job training. Aligning with the Workforce Innovation and Opportunity Act, the President's request recommends a $500 million increase to strengthen in-person programs that help the unemployed find

job opportunities. In addition, the budget request suggests that $500 million be allocated for Industry Credentialing and Career Pathways Grants and $16 billion would be invested in the workforce development system to double the number of workers participating in training programs over 10 years. With these programs and budget recommendations, President Obama hopes to ensure that all workers are qualified and able to find jobs that meet their skill sets.

Last, the FY 2016 budget request highlighted the importance of retirement security, recognizing that many part-time employees do not have access to retirement benefits. In particular, the budget request would ensure that employees who have completed 500 hours of work each year for a period of 3 years would be eligible for retirement benefits. The President's budget also outlined requirements for retirement benefits for veterans and state efforts.

### Federal Management and Employment Reforms

The president's FY 2016 budget request for the Office of Management and Budget (OMB) included significant reforms for the federal employment system. Through the president's Management Agenda, OMB would improve government services and employment with three pillars in mind: effectiveness, efficiency, and people and culture.

*Effectiveness:* To boost federal agency effectiveness, the president's FY 2016 budget request calls for, among other things,

the scaling-up of the US Digital Service (USDS). Formed in 2014, USDS is a team of technology experts focused on improving key technical priorities across agencies and developing best practices to for hiring, training, and recruiting digital service experts into the government.

*Efficiency:* The President's Management Agenda would heighten the federal government's efficiency by expanding the Benchmark Initiative, which seeks to improve agency performance by measuring a number of administrative functions – including human capital – to comparatively evaluate agencies. In 2015 and 2016 the President would expand the Initiative to include customer satisfaction metrics and incorporate the findings of the program into agency performance reviews and strategic plans.

*People and culture:* Through the budget request, the Administration pledges to take executive actions to foster a more effective federal workforce. Key reforms would be made to the Senior Executive Service (SES), employee engagement, and performance and accountability assessment. As a large portion of the SES edges closer to retirement, agencies continue to pursue ways of supporting the transition into retirement for employees and improving hiring and training practices to appropriately fill vacant positions. The budget request would provide additional funding to the Office of Personnel Management (OPM) to support these efforts and would launch a White House Advisory Group to help manage SES reform and the Leadership Development Program to help train and develop high performers for SES responsibilities.

In addition, the president's budget request would support ongoing efforts to broadly disseminate data from the Federal Employee Viewpoint Survey, which measures employee engagement and satisfaction across federal agencies. The president's budget would improve the survey's metrics and implement programs to encourage application of survey results in performance plans. Further, the budget request would allocate $15 million to support the management of Cross-Agency Priority (CAP) goals, focused on enhanced coordination between agencies to meet designated performance targets. In addition, the budget request would provide support for the development of evidence-backed initiatives and the recruitment of social and behavioral scientists.

### Federal and Congressional Advocacy for SIOP and I-O in 2015

Advocating on behalf SIOP to increase the visibility of the Society and I-O science and research, as well as improving federal and congressional policy makers' understanding of the field and its applications, remain the foci of SIOP government relations. As policy makers further debate retirement programs, well-being in the workforce, performance and satisfaction metrics in the federal workforce, and workforce development and training programs, among other I-O-related issues, SIOP is well-positioned to serve as resource and to inform decision makers. Lewis-Burke Associates will continue to identify opportunities to highlight the impact of I-O on federal policy and programs while enhancing SIOP's voice as vital stakeholder.

As Congress considers the president's budget request and the House and Senate Appropriations Committees begin to debate FY 2016 appropriations, Lewis-Burke Associates will continue to advocate for policies and programs of interest to SIOP and I-O, including science and research. Advocacy activities from the first year and half of SIOP's engagement in federal government relations, including the congressional roundtables on the impact of the government shutdown and underemployment and unemployment, will be leveraged to exemplify the continued importance of I-O considerations in federal decision making.

There will also be opportunities to directly advocate for federal funding for science and research by submitting written testimony to the Appropriations Committees and participating in the science community advocacy efforts. For example, as a member of the Coalition for National Science Funding, SIOP is an active voice in the science community, advocating for sustained federal investment in the National Science Foundation, which funds several SIOP members. Through the Coalition, SIOP's advocacy message is amplified and complemented by community advocacy.

As SIOP continues to engage federal and congressional policy makers, the Government Relations Advocacy Team (GREAT) and Lewis-Burke will inform SIOP members about advocacy and outreach efforts through the quarterly column, as well as monthly through the *SIOP Newsbriefs.*

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**Practitioner Ponderings**



**Richard M. Vosburgh**
Retired CHRO & President,
RMV Solutions

File this article under "stuff you don't learn at graduate school." After my inaugural article in the January *TIP* where I invited input, I was sent an interesting question by **Dr. Steven Hunt**, the SVP of Customer Value at SuccessFactors/SAP:

> What is the best approach when a fellow scientist–practitioner makes an assertion to business leaders that you believe is more BS than PhD? While it doesn't happen often (thankfully), it does happen and I'm never quite sure how best to deal with it. And sometimes it could lead to companies investing millions of dollars in what might be considered highly questionable HR practices.

This was such an intriguing question that I invited Steve to help me write the answer. Here's what we came up with. We still don't think we have the perfect answer and welcome hearing from readers with their ideas!

### Dealing With Questionable Advice That Is Supposedly Rooted in Sound Science

We believe that most scientist–practitioners strive to separate the advice they provide to business leaders into two categories:

1. Facts rooted in solid scientific empirical research; and
2. Opinions reflecting personal experience.

Sometimes we're talking as "Dr. Egghead: I-O psychologist who reads lots of peer-review research articles studying employee performance" and other times we're talking as "Mr. Experience: strategic professional who has spent more than 20 years helping organizations maximize workforce productivity." Although there is always some overlap between facts and opinions, most scientist–practitioners seem to do a reasonable job keeping this distinction.

A problem you may have encountered is when a fellow PhD expresses personal opinions in a business setting as though they were accepted scientific findings or expresses scientific findings that have questionable validity. If this happens at

SIOP we have no issue systematically pointing out the lack of scientific validity to our fellow I-O psychologists. After all, we've all gone through the pain of a dissertation or thesis defense. But such openly critical approaches tend not to work well in a business setting. To illustrate, let's consider a hypothetical example.

Imagine a retail company hired a new general manager (GM) and gave her the objective of hiring 1,000 employees to staff five customer service call centers over the next 6 months. The GM knew these initial 1,000 hires would have a critical impact on the long-term culture of the call centers. So she held a meeting with the director of Staffing and director of Organizational Development to define a staffing strategy that will help build a strong customer service culture. Both the Staffing and OD directors have PhDs in I-O psychology. The three of them met, along with three other call center leaders.

The GM started the discussion by saying, "Within 2 months I need a process that will allow my managers to select the most qualified people for call center operations. The process needs to be easy to execute because we have five locations, and it needs to be legally defensible because we expect at least 20 people to not be hired for every one person who is hired."

The staffing director replied, "Let's use the selection measures we currently use for our sales call centers. These have been validated using meta-analytic techniques that show they are generalizable across all call center jobs."

The OD director then replied, "I have strong concerns about the accuracy and legal defensibility of using a test without local validation. Meta-analysts often make very questionable statistical assumptions such as correcting for reliability of multidimensional measures using estimates like Cronbach's alpha that assume unidimensionality."

The staffing director retorted by saying, "If you read Hunter and Schmidt you'd clearly understand that the issues about reliability correction in meta-analytic studies are vastly over-stated. There is no reason to establish local criterion validity if we can show adequate content validity."

At this point the GM said, "Could you two please leave while we find someone who can help us solve this business problem?"

What went wrong here? The big issue is not whether one of these PhDs is more right than the other. The big issue is that both of them just got kicked out of the conversation and as a result "science just left the room entirely." The reason science was kicked out of the discussion was because these PhDs failed to adjust their conversation to fit the realities of a business setting. The world of business is often not as tolerant of the "gift of critical feedback" as the world of academics. If you started picking apart the scientific shortcomings of a fellow PhD in a business meeting, you'd probably look more like a jerk than an enlightened scholar. In addition, a business audience is unlikely to understand a debate between two PhDs about things like construct validity of

survey tools or the significance of meta-analytic findings versus primary research. So even if you win the argument, no one that matters will be able to tell you were the winner. Last, when two I-O PhDs argue in front of business leaders, the main impression the business leaders get is that our field is neither conclusive nor sound, so they listen to someone else entirely.

So we've identified what not to do. But what should you do when you encounter a fellow PhD providing "scientific" advice to business leaders that strikes you as being more myth than reality? First, try to find a way to have a discussion with the person in a more private forum. This will allow you to dig into the science without alienating your nonscientific business colleagues. If you still find yourself at odds with this person's advice, then politely present data or research to the company that supports an alternative point of view.

But try to avoid challenging the validity of the person's claims directly. Such a challenge could easily come across as an attack on the other person's knowledge, competence, and even integrity. Regardless of whether such an attack is warranted, it won't make you look good. Last, remember the goal is to influence the organization not "win the argument." The training we get in graduate school often rewards people who tear into flawed logic or inaccurate data like a grizzly bear tears into a wild salmon. There may be times when such argumentative behavior is appropriate in a business setting, but more often than not it tends to backfire.

We invite scientist and practitioner perspectives on what advice you would give to people who may have faced similar situations. Please email me at rmvsolutionsllc@gmail.com.

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11TH ANNUAL SIOP LEADING EDGE CONSORTIUM

**BUILDING A HIGH-PERFORMANCE ORGANIZATION:**
A FRESH LOOK AT PERFORMANCE MANAGEMENT

October 2–3, 2015 | Renaissance Boston Waterfront

## TIP-Topics for Students

**Allison M. Ellis**
Portland State University

**Layla Mansfield**
Portland State University

**Tori L. Crain**
Portland State University

# The Path Less Traveled:
# Starting a Career in Your Specialty Area

As we deal with the demands of graduate school, it may be easy to forget that the end will eventually come, and at some point we will want to enter the workforce. For some, that job may fall nicely within the purview of traditional I-O psychology roles. For others, a bit of crafting may be needed in order to secure the right fit between interests and training. In either case, a recent report from the Bureau of Labor Statistics (2014) rates I-O psychology as the fastest growing occupation in the U.S., indicating that our skills and training are being valued and recognized more now than ever before.

In this column, we discuss general steps graduate students might take to learn about and understand the opportunities available in a nontraditional area of I-O psychology. As an example, we highlight one such specialty area, occupational health psychology (OHP)—an interdisciplinary field concerned with improving the health, safety, and well-being of employees—and summarize advice from an OHP employer and a recent OHP job candidate on the sorts of concrete actions that could help one prepare for work in OHP.

### Preparing to Work in Your Specialty Area

Although a few students enter graduate school with concrete career plans, for most, graduate school represents a time of exploration and self-discovery within a domain of interest. In the following section, we detail just a few of the numerous ways in which you can begin to lay the path toward a successful career as an I-O psychologist.

### *Leveraging Your Social Network*

Graduate school provides us with an opportunity to meet a variety of people who are working in the field of I-O psychology. It is important to cultivate these relationships and attempt to make more connections. One way to do so is attend conferences. First, by attending sessions related to topics of personal

interest, you may gain a better understanding of the applied work that is being done on this topic, as well as key players in the field. Conferences also offer many opportunities to attend social events that are meant to bring those with common interests together. For example, at SIOP there is typically a social gathering for those who are a part of the Society for Occupational Health Psychology (SOHP), which is meant to encourage networking with other students, faculty, and researchers who are working on or interested in OHP-focused projects.

Although networking at conferences can be important, it can be just as important to capitalize on the relationships you develop within your own department. For example, by keeping your advisor abreast of your career goals, you have the potential to increase your visibility for those within your advisor's network.  Other faculty members in your program should also be alerted to your career goals. In this way, the faculty can pass along internship, job, and/or learning opportunities when they become aware of them. Furthermore, your peers can play pivotal roles in providing access to organizations as they themselves get jobs and move into their careers. In this respect, we have found that our alumni are key players in providing internships and advice for current students.

### Understanding the "Jobscape"

Determining what you would like to do upon graduation (e.g., internal to an organization, consulting) is an important step towards realizing your career path; just as important is ascertaining what jobs are available within these domains. As mentioned above, faculty members can provide many resources regarding the potential job landscape, but there is much you can do to determine what your future job may look like. For example, subscribing to discussion lists early in your graduate school career (e.g., the OHP listserv, http://www.sohp-online.org/OHPListserv.htm) can alert you to potential jobs or internships that become available. By perusing these early and often you can gain insight into the types of skills and abilities that are being sought, and subsequently seek out related training opportunities. Finally, SIOP is a wonderful resource to turn to when looking for job postings. Not only does the website offer a service tailored to job seekers and employers (i.e., JobNet, http://www.siop.org/jobnet/), there are discussion boards that offer answers to other members' questions and provide insight on the many different interests of the greater I-O population.

### Service Work to the Profession

In many cases, potential jobs are relayed informally through your network of advisors and peers. Often, job postings are broadcast to a certain group before they are opened to the general public, making your social network particularly important. Another way to increase your social capital is to participate in service work. For example, volunteering at SIOP not only gives you an insider perspective of the conference, it can also increase your ties with others in the I-O field and, more specifically, those in your preferred specialty area. Many of the students at PSU have volunteered at SIOP

and with SOHP, and have found the experiences to be essential in their knowledge of the I-O field and in particular their specialty field. Service work may also take the form of serving on committees and task groups that can provide unique information about how to best prepare for your specialty area. For instance, service as a graduate student representative on a search committee for new faculty in your area of interest can help you understand what factors are important when applying for work in that area.

### Building the Foundation

Each student experiences graduate school differently, in part, because of differing goals and anticipated job paths. Students may be encouraged to focus on different kinds of tasks (e.g., publishing, applied experiences). However, we think there are some experiences that all employers will find attractive. For example, while publications are typically seen as very important for academic jobs, publications also signal your ability to conduct research in applied jobs and your ability to communicate effectively within consulting positions. Further, although external funding opportunities are important for jobs within academia, they may be equally important for applied positions, as they can highlight your ability and motivation to garner funding and/or contracts from clients. Finally, although organizations may be interested in your ability to work as part of a team and communicate with community partners, these skills can also be gained by working on academic projects. In sum, honing some key foundational skills can be an important initial step in preparing for any career in I-O psychology. The follow-

ing section demonstrates how effort placed on building key foundational skills along with some strategic preparation can set you apart from the competition and have you well on your way to your specialty career.

### Examples From a Recent Grad and Current Employer in Occupational Health Psychology

OHP represents one specialty area in which I-O psychologists might seek employment after graduate school. I-O psychologists bring an important skill set to the table, however the interdisciplinary nature of OHP can also pose unique challenges to those looking to work in this area, both in terms of getting a foot in the door and ensuring success once there. In order to provide a more concrete example of what it means to start a career in a specialty area, like OHP, we (like good I-O psychologists) took the opportunity to collect data.

### Perspective From a Recent OHP Graduate

To gain insight into what it's like to get started in a career in OHP, we interviewed **Dr. Lauren Murphy**. Lauren is an occupational health research psychologist at SHARP (Safety & Health Assessment & Research for Prevention) in the Washington State Department of Labor & Industries. She began this position in 2014, after completing a 3-year postdoctoral research fellowship at Harvard School of Public Health and the Liberty Mutual Research Institute for Safety.  Although Lauren is relatively new at SHARP, she has already contributed significantly to research projects focused on benefitting Washington workers.

In order to better understand what can bolster one's competitiveness on the job market when seeking out a career in a specialty field, we asked Lauren to share some of her critical experiences with us. Interestingly, she discussed her time at Harvard School of Public Health and the Liberty Mutual Research Institute for Safety. "Completing a postdoctoral fellowship was a tremendous asset when the time came to finding a job. I was able to gain in-depth knowledge in a new topic area (i.e., safety climate) that increased my value as a job candidate. Therefore, a postdoc is not necessarily for a graduate interested in only academics." Lauren explained to us that she had a choice when it came to career options, and she decided to accept a fully funded government position at SHARP, where she could conduct occupational health research. We also suggest that similar research associate positions, internships, or adjunct faculty appointments can help individuals to gain knowledge and skills that may have only been touched upon in graduate school. In addition, Lauren's post-doc has also helped her in other ways, "I have an exceptional group of mentors who have now become a network of collaborators that is vital to my career in research."

As we are interested in the graduate experience, we asked Lauren what she would do differently in graduate school if she were to do it again. She explained, "I was able to gain a great deal of field experience while in graduate school, which has been extremely beneficial when it comes to conducting quality work. However, to prepare for a research career, I would have sought more opportunities to coauthor peer-reviewed journal articles as a student." In addition to publishing, Lauren also mentioned the importance of experience with research funding, "It would have also been useful to gain familiarity with the grant writing process by sitting in on meetings in which grants were discussed."

### Perspective From an OHP Employer

As graduate students learning the ropes, we often try to come up with a clean schema to understand I-O psychology and categorize its various focus areas (e.g., industrial psychology versus organizational psychology, research versus practice). Despite our efforts, what has become clear through our own work and through the insight provided by our interviewees is that in practice it can be difficult to make such divisions; rather, having skills and perspectives that span the various areas of I-O psychology can make one even better within their given specialty area.

Chief Scientist at Sentis **Autumn Krauss,** PhD, uses her training to lead a team of I-O psychologists focused on driving the science behind Sentis' programs. As a consulting firm focused on applying psychology to improve the safety, well-being, and success of individual employees and their organizations, Sentis exemplifies the kind of interdisciplinary and multifaceted organization that might employ an I-O psychologist in the specialty area of OHP. When asked about the top three things she looks for in a prospective employee, Autumn said, "We are looking for individuals that are not only capable of working within this area but also are specifically

motivated by the goal of improving employee safety and health at work." If you're interested in focusing in a specialty area like OHP, then you probably feel like you have this base covered, but the key is conveying this passion to potential employers. In other words, don't assume that because you submitted your application to an organization they understand that you love what you do! Therefore, we recommend first taking the time to reflect on why it is you want to focus in this area. What is it about OHP (or any other specialty area) that is meaningful for you? Whether you find yourself in a job talk or other interview situation, make sure your passion is conveyed in a genuine way.

Second on Autumn's list was a demonstrated research-to-practice (R2P) mindset. She said, "I already assume the individual is well versed in the research literature; the question for me is whether they have both the ability and interest to translate empirical research into actionable practice. That is a key ingredient for a successful applied researcher." Therefore, as a graduate student, taking advantage of opportunities to get involved with community members with whom research is being conducted, taking advantage of internship opportunities, or other chances to get what Autumn calls "boots on the ground" experiences can sharpen your R2P skills and make you a more competitive candidate.
Finally, one of the most interesting and perhaps most challenging aspects of applying I-O psychology in new and innovative ways (as is the case in any specialty area) is that there is no step-by-step instruction manual. As such, third on Autumn's list of

top things she looks for in potential employees is innovation and creativity. She notes, "We look for researchers that are constantly coming up with new ideas and want to collaborate with others to try out new ways of working with our clients." This means not being afraid to go out on a limb when your ideas are grounded in good research and experience. In a practical sense, looking for opportunities in graduate school to collaborate with others outside of your immediate research team (i.e., your advisor) and getting involved in opportunities to apply your ideas to research or community work can be ways to flex your muscles for creativity and innovation and demonstrate your skills in this area. Taken together, we would conclude that it's about building foundational competencies and experiences in graduate school that allow one to effectively apply I-O psychology in ways that are personally meaningful.

## Summary

In sum, although one might seek "the path less traveled" —that is, pursuing a nontraditional I-O psychology role—the foundational knowledge and skills acquired during our training in graduate school are critical. We discussed how building your social network, letting faculty know about your career interests, seeking out information about your specialty field, and getting involved in service work can help one learn about the kinds of opportunities that exist outside traditional I-O psychology roles. In addition to coursework, taking advantage of "on the job" learning opportunities in the form of applied experiences, working with communities, and collaborating with others outside

your research group can help you hone the skills necessary to be successful in your specialty area. Finally, being passionate about your area and willing to think creatively can propel you toward a successful and enriching career as an I-O psychologist.

### *Looking Ahead to the Next Issue*

Our next column will focus on prosocial I-O, which represents another specialty area in which I-O psychologists may work. The conversation around how to put our skills as I-O psychologists to good use and for the benefit of our communities and society has already begun thanks to some inspiring recent research and community work. We'll describe this important work and point students in the direction of how to get involved. To correspond with the authors about this topic, please e-mail portlandstatetiptopics@pdx.edu. Also, to learn more about the graduate students at PSU as well as the writers of our column, you may view our graduate student website at http://www.pdx.edu/psy/graduate-students.

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Bureau of Labor Statistics. (2014). *Fastest growing occupations.* Retrieved from www.bls.gov/ooh/fastest-growing.htm.

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# ANNOUNCING



## TIP-TOPics Call for Graduate Student Columnist(s)

TIP-TOPics is a graduate student editorial column published in *The Industrial-Organizational Psychologist (TIP)* on a quarterly basis. The column provides information and advice relevant to SIOP's student membership and has historically been very popular.

The editorial columnist(s) can be an individual or group, and the groups may be made up of students from the same school or different schools; however, you must be current Student Affiliates of SIOP in good standing.

The TIPTOPics columnist(s) will have a 2-year tenure beginning with the October 2015 issue and ending with the July 2017 issue. Columnists must be graduate students throughout this time period, thus all prospective columnists should be at least 2 years from graduation. Columns are approximately 2,000 words, due four times a year (August 15, November 15, February 15, and May 15), and written according to APA guidelines.

### Submission Information

Statement of interest and one letter of recommendation (from a faculty member who is familiar with the work of the potential columnist/s) should be sent via e-mail to **Morrie Mullins** (mullins@xavier.edu) by July 10, 2015. The statement of interest should at a minimum address the following: (a) all potential columnist names and school affiliation and (b) how you will approach the content, style, and structure of the column, including a few potential column topics.

**Jeffrey M. Cucina**
U.S. Customs and Border Protection

# Early Pre-Industrial-Organizational Psychology Employment Tests: Part II

Note: This is the second installment of a two-part series. The author would like to thank Chihwei Su and Henry Busciglio for their valuable comments and suggestions on this paper.

This is the second installment of a two-part series on early pre-psychology employment tests that were used in the time period between the Chinese Imperial Examination and the psychologist-developed tests. In the previous issue of *TIP*, I described two types of employment tests that took place during the middle ages: guild masterpieces and university examinations, which were used for selecting professors rather than students (Cucina, 2015). We have to move forward in time several centuries for the next examples of early employment examinations. This time it was not the private sector that was leading the way but instead the government. In this issue I describe early civil service examinations that predated I-O psychology. I also discuss the competitive examinations used by the East India Company.

## Early Civil Service Examinations

In the 1700s and 1800s, a number of westerners took note of the Chinese government's examination process and began describing it in books and popular magazines (Teng, 1943). Eventually, western governments began using employment examinations for their civil servants. In 1791, France became the first western country to institute civil service examinations (Teng, 1943). It was a tumultuous time in France as the French revolution was underway and the country moved away from the monarchy and privileged classes toward democracy and the ideals of the enlightenment. The notion of selecting civil servants based on merit seems quite consistent with the movements underway in France at that time. Indeed, the French philosopher Voltaire wrote "The human mind certainly cannot imagine a government better than this one…of which the members [i.e., civil servants] are received only after several severe examinations" (Voltaire, 1756/1878,

p. 162; translation from Siu, 2004, p. 167). According to Teng (1943), the French examination was inspired by the Chinese system and was instituted by the French statesman Charles Maurice de Talleyrand but was disbanded by 1801[1]. About that time (i.e., circa 1800), Germany adopted civil service examinations (Teng, 1943). Ringer (1990) indicates that the German examinations were used for hiring secondary-school teachers as well as civil servants. Unfortunately, there are scant further details on the French and German civil service tests; however, much more information is available on similar examinations used in the United Kingdom and the United States.

## United Kingdom

In 1855, the United Kingdom began requiring the use of employment examinations for selection into Her Majesty's Civil Service (which sounds like something out of a James Bond movie but is actually the official term for the UK's government; UK Civil Service, 2014)[2]. The use of examinations was partly inspired by writers who applauded the use of civil service examinations in China and endorsed their adoption in the UK. For example, in 1847, the writer Thomas Taylor Meadows published a book that described the civil service examinations in China. He later stated that one of the goals of the book "was to urge the institution of Public Service Competitive Examinations for all British subjects" (Meadows, 1856; p. xxii).

Eventually, political leaders in the United Kingdom took notice, and Sir Stafford Northcote and Treasury Secretary Charles Trevelyan wrote a commissioned report in 1854 proposing changes to the UK's civil service (UK Civil Service, 2014). One of their recommendations was that "a proper system of examination before appointment" (p. 9); they envisioned the examination as "a competing literary examination…to test the intelligence…of the candidates" (p. 11). Their report even made recommendations as to when the examination should be conducted; they preferred "periodical examinations" (which "economizes the number, and also time of the examiners") over examinations for "each vacancy" (p. 12).

The first examination included items measuring mathematics, history, geography, writing (including grammar, punctuation, spelling, and penmanship), knowledge of Euclid's books 1 through 3, and translation of text in foreign languages (e.g., Latin) to English (UK Civil Service, 2014). A test preparation and candidate guidebook provided example questions, some of which are listed below, for the examination (King, 1856):

- "What number multiplied by  will give 15 as the product?" (Arithmetic, p. 14)
- "When, and how, was Christianity first introduced and finally planted in England?" (History, p. 33)
- "Name the capitals of the following countries: Prussia, Sweden, Persia, China, and Canada" (Geography, p. 38)
- "Extract the square root of

$$-a^2x^2 + 4abx + 6ac + 4b^2 + \frac{12bc}{x} + \frac{9c^2}{x^2},"$$

(Algebra, p. 55)
- "State Kepler's laws" (Science, p. 60)
- Write "a letter from an Australian

colonist, describing the effects of the discovery of gold, and speculating as to its future consequences" (English composition, p. 100)

There is a strong resemblance between these test items and the content of modern-day *g*-loaded tests, especially those measuring Carroll's (1993) Crystallized Intelligence and Quantitative Reasoning factors.

**United States**

Shortly after the United Kingdom began using civil service examinations, other countries followed suit including Canada (in 1858), New Zealand (in 1866), and South Australia (in 1874; Graves, 1877). Unfortunately, it took a presidential assassination for the United States to begin using civil service examinations. In our nation's early history, positions within the U.S. federal government were filled with the political supporters and friends of the president (National Archives, 2014). Although the military had been using competitive examinations as early as 1857 (*New York Times*, 1857), there were no requirements that applicants to federal employment had to compete among one another on the basis of examination scores. Only a handful of agencies were using examinations for selection. According to the *New York Times* (1870), the first agency to use competitive examinations was the Patent Office (beginning circa 1869), which used a 100-question written test. The *New York Times* also stated that the Census Bureau administered a 35-question competitive examination that included arithmetic problems and general knowledge items (e.g., "'On what principle does the balloon operate?,' 'When was the art of printing discovered and where?', 'When and by whom was steam first discovered' 'What was the origin of the present established Church of England?'"[3]; p. 2).

Unfortunately, most agencies did not use competitive examinations; most positions only required applicants to take what were termed "pass examinations." These examinations were only administered to politically connected applicants, and everyone, except for the "utterly incompetent" passed (Stahl, 1956; p. 20). Kavruck (1956) described the pass examinations as "a laughable formality," stating that "failures were unknown" and that an example question was "What did you have for breakfast this morning?" (p. 329).

The real test for admission into the federal government was politically based. Job seekers often pestered the president for positions in the federal government (National Archives). On July 2, 1881 tragedy struck; President Garfield suffered a fatal gunshot wound from a disgruntled applicant who was rejected for a consular position within the federal government (Freidel & Sidey, 2006). The assassin had been stalking the president for several months and showed signs of having a mental disorder (Hoogenboom, 1959; Millard, 2011). The presidential assassination spawned a movement for reform within the civil service which culminated in the passage of the Pendleton Act on January 16, 1883 (see Figure 1). The act required the use of competitive examinations

for civil service positions and created the U.S. Civil Service Commission (now the U.S. Office of Personnel Management). The federal government wasted no time in launching the examinations. By July 14, 1883 the first competitive examinations had been administered in Washington, Baltimore, and Philadelphia (The Evening Star, 1883a,b). According to a member of the examining board, the examinations included questions on grammar, arithmetic, geography, and history (e.g., "the names of generals who had fought in the revolutionary war,") and measured "the general intelligence of the candidates and technical fitness for clerical position." (The Evening Star, 1883c; p. 1). The first examination administered in Washington lasted 5 hours and covered topics such as grammar and spelling, arithmetic, fractions, interest, bookkeeping, copying, penmanship, letter writing, and knowledge of U.S. government (The Evening Star, 1883b). The examinations were open to the public and were advertised in notices published in newspapers (see Figure 2). There are reports of women (The Evening Star, 1883b) and African Americans (*The Washington Post*, 1883) taking the examinations, suggesting that the newly reformed civil service supported diversity and inclusion. Competition was fierce and after less than a year of administration, *The Washington Post* (1884) was already questioning the test security procedures for the examinations.
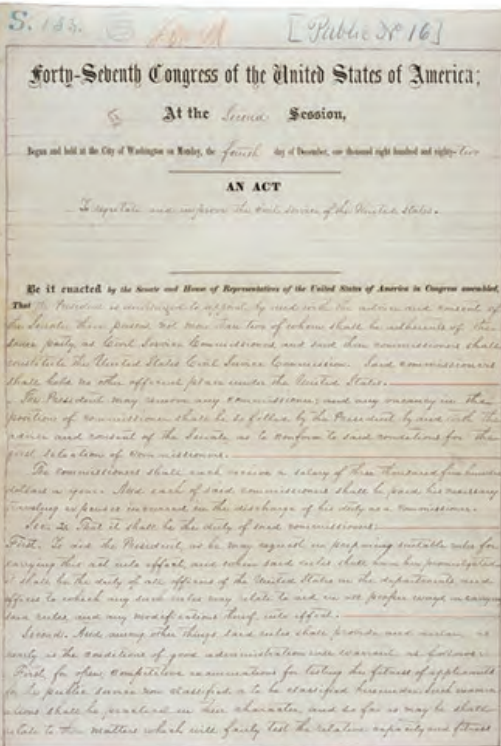
At first, only a small percentage of executive branch federal government positions were subject to competitive examinations (11% in 1884); over time the tested positions grew to 85% (in 1950; Stahl, 1956).

Eventually, psychology became established as a field of science and psychologists became involved in the development of civil service tests in the United States. A research division for test development was established at the U.S. Civil Service Commission in 1922 (Kavruck, 1956). An account of the early history of the commission reads like a who's who of psychology. Psychologists Arthur Otis, Edward Lee Thorndike, L.L. Thurstone, John B. Watson, and Robert Yerkes, among others, were all involved (to varying degrees) with the early work of the commission (Kavruck, 1956)

### A Private Sector Examination

So far we have only discussed the use of examinations for positions within universities and governments and for guild membership. You might ask, what was the first private-sector company that used tests to select employees? As best as I can tell, it was the East India Company, which was established in 1600 as a British trading company and had a royal charter to form a monopoly on trade between the United Kingdom and India (Encyclopaedia Britannica, 2014). The company grew to have great power, eventually having its own military and controlling much of India.

The East India Company was regulated, to a degree, by the British government. An article in *The Economist* (2011) hints that the use of competitive examinations might have been motivated to prevent the company from "getting stuffed with powerful politician's half-witted nephews" (i.e., to avoid nepotism). Lord Thomas Babington

Figure 1. Copy of the Pendleton Act of 1883. This act of Congress required "open, competitive examinations for testing the fitness of applicants for the public service… Such examinations shall be practical in their character, and … test the relative capacity and fitness of the persons examined."



Figure 2. Early notices of civil service examinations published in newsletters. The first notice was published in the October 24, 1878 edition of the New York Times, several years prior to the passage of the Pendleton Act. The second and third notices were published on December 15, 1886 and March 2, 1887 and on the front page of The Washington Star. Note that (*Cont.*)

Macaulay chaired a committee that planned the competitive examinations; applicants competed for jobs based on their scores on the examination (Graves, 1877). Macaulay was inspired by Jeremy Bentham, who advocated the use of competitive examinations for civil service positions, as well as by Adam Smith's (1776) book, *The Wealth of Nations,* which outlined a proposal for the use of competitive examinations (Willis, 2013). Willis notes that part of Bentham's rationale for the use of competitive examinations was that the concept of competition in the business world could also be applied to the job application process. Macaulay believed that intelligence was the main characteristic to look for in applicants and that examining applicant's accomplishments in science and literature were key indicators of intelligence (Foden, 1968). The competitive examinations were first administered in July 1855 and covered topics such as literature, math, history, science, and languages (ancient, modern, Sanskrit, and Arabic). The examinations were largely used for selecting applicants to positions that were responsible for controlling the company's territory in India (i.e., the company's own version of a civil service). In 1858, the British government took over the ruling of India; it retained the practice of using competitive examinations when selecting local officials (Ewing, 1982; Teng, 1943).

### Conclusion

the third notice is for positions within the U.S. State Department, which today uses a general knowledge test that covers many of the same topics (e.g., history, geography, writing skills, government; U.S. State Department, 2014).

I find it interesting that western governments began using employment tests before the advent of intelligence testing. Typically, critics of testing often imply that educational and employment tests (including military tests) originated from early psychologists (e.g., Binet, Yerkes) who studied individual differences in intelligence and then extended that work to educational and employment settings (e.g., Gould, 1996; Helms, 2012; Shenk, 2011). However, it actually appears that governments and some organizations were using tests long before psychologists arrived on the scene.

### SIOP Time Capsule

This year marks the 70th anniversary of Division 14 of the American Psychological Association (i.e., SIOP) and the 30th anniversary of the SIOP conference.  To commemorate these events, the SIOP History Committee is launching a time capsule project.  I am accepting your suggestions for donated items to be placed in the time capsule.  The items should reflect I-O psychology in 2015 and should be small in size.  Later this year, the time capsule will be sealed for 30 years. It will be unveiled and opened at the 2045 SIOP conference to celebrate the 100th anniversary of Division 14 and the 60th  SIOP conference.  If you would like to suggest an item to be donated for the capsule, please send your suggestion to jcucina@gmail.com.

### Notes

[1] France later re-adopted the use of civil service tests in the mid-1800s (Teng, 1943)
[2] By the first half of the 19th century, several government agencies in the United Kingdom

(e.g., the Treasury, the Emigration Office, the Board of Trade) were already using employment examinations for clerk positions (Northcote & Trevelyan, 1854).

[3] *The New York Times* astutely labeled this as a "more unfortunate question, whose answer must immediately reveal whether the applicant belonged to a certain religious denomination or not" (p. 2).

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# Motivation, Emotions, and Stress, Oh My! Lessons Learned From the Academic Job Search

In the past, people have asked me what the most difficult part of graduate school was. Was it taking comprehensive exams? Writing a master's thesis? Finding a topic you wouldn't get (too) sick of to write a dissertation about for almost 2 years? Although all of those salient graduate school events were incredibly challenging in a variety of ways, I actually found the job search process to be the most demanding, and stressful, as I was going through it. For me, it was a time when I truly felt completely out of control of the end result. Would all my hard work pay off? Would I find the ideal job with the best fit for who I wanted to be as an academic?

Luckily, I did find a great job in a department that maximized both my person–job and person–organization fit, with colleagues who respect me for who I am as a researcher and as a person in general. I was also fortunate that going on the job market introduced me to so many people already in the field (I cannot tell you the number of times I had a "star struck" moment meeting some of my favorite researchers!) and people on the job market who quickly grew to be some of my closest friends and collaborators. Had I known what a dream it would be on the other side of the process, I would have handled some of the stress differently. Because of this, I thought it would be fitting to share some important lessons learned during the job search and write with one of my collaborators and friends I met amid the chaos, Serge da Motta Veiga.

## 1. Your Motivations for Getting a Job Change Over Time

When the first academic job postings went up in June 2012, we were both eager to let the "fun" of the job search begin. This intrinsic drive was easy to maintain as more and more job postings emerged building up to the fall semester.[1] In the early stages of our job search, we both found our imaginations running wild with what our new jobs would

be like, where they would be located, and all the perks that would be associated with them. However, around September, reality slowly began to sink in. Word-of-mouth travels fast on the job market, and we both began hearing about campus visit invitations being sent out (sometimes to schools we were strongly considering) and who the "competition" was (a point we come back to later). Suddenly, a process that seemed so intrinsically motivating was now driven for the most part by external factors such as time pressure, negative (or even positive) feedback, and the feeling of wanting to take any job. Looking back, we now realize that this is the perfect time to have a reality check and put things in perspective. In keeping the job search as fun as possible, it is important to remember that there are many places that can provide an excellent fit, and, as cliché as it may seem, interview offers and job placements truly happen for a reason. Rather than focus on the pressure tied to the search, it is good to keep an open mind and remain motivated to explore new opportunities, even if those sometimes involve sticking around for an extra year at your degree-granting institution as a visiting Assistant Professor or postdoc while you look for the best fit.

## 2. Your Emotions (and Stress) Will Run Wild

To sum up the emotions and stress we experienced during our job search, we found the following quote from Wanberg and colleagues' research to be particularly pertinent[2]: "I have a pretty decent resumé, and I've sent it out maybe 100 times and I've gotten two responses. So I almost feel like in sending your resumé to an Internet application, it's a black hole that swallows up resumés." Going through an academic job search is no different, and the process can toy with your emotions and stress throughout the months spent searching for that ideal placement. When June 2012 arrived, we were excited to (finally) apply for assistant professor openings. However, submitting application packets certainly felt like sending something off into a black hole, and the anxiety can easily begin to creep in. We both spent 2 months applying for jobs and heard very little from schools, which definitely made us wonder if we were doing all the right things and if we were doing them right. When invitations for phone interviews and brief conference interviews began coming in (for us, this happened in a whirlwind period of 2 weeks toward the end of the summer), the excitement crept back in with a vengeance, but the nerves certainly remained as we wondered what questions we would be asked, how we would be treated during interviews, and whether a campus visit would follow. This is just the rollercoaster of emotions and stress that happened before we even got a campus visit! The emotions tied to the remaining phases of the process—campus visits, receiving an offer, negotiating, and finally accepting a job—all come with their own host of emotions and quickly can drain one's cognitive, emotional, and even physical resources. Regulating your emotions and your stress during the job search can be hard to do, but reeling those experiences in and managing them effectively can really help. Luckily for us, we understood (early on) that we were not alone in the process.

### 3. You Don't Have Competition, You Have a Support Group

Perhaps this is idiosyncratic to our experience, but we were fortunate to have a close circle of friends who were also in the job market, many of whom we happened to interview against. It is really easy to view the job market as a competition; it is hard not to let your mind wander and think about why this person was getting a campus visit and you didn't or who would also be visiting the same campus you were. But, instead of letting the job search process get the best of us, we reminded ourselves often that our "competition" was really our peer group that we would be interacting and working with for years to come. The person who also had a campus visit to a school you were going to? That could be someone you serve on an editorial board with one day. The person who got the "dream job" you originally thought you wanted? That might be a colleague of your one-day doctoral student as he or she goes out onto the job market. It is impossible to know who will or will not come back into your life as an academic, but it is better to err on the side of being supportive than to become combative. After all, you drain enough of your resources on the job market itself! We did not see any gain from draining additional resources by igniting competition. As an added bonus, both of us have started working with each other and additional individuals who were on the job market with us, helping us grow as researchers and expand our networks outside of our respective alma maters.

### 4. Don't Let the Job Market "Shut Down" Your Life

Fitting with the notion that the job search drains resources, it can become all too easy to stop focusing on your own work (namely your research and teaching). It is especially important to remember that many job offers come with the contingency of having your "degree in hand," making it crucial to stay on top of your dissertation. The job search can easily take up to an entire semester, meaning that you need to plan ahead if your data collection is occurring at the same time. For instance, if running an experiment, try to ask a graduate student (perhaps a newer student who wants research involvement) to help run participants in your absence. It may also be helpful to assemble a team of undergraduate research assistants who can help when needed. Or, try to design your data collection either before (i.e., during the summer) or after (i.e., late fall/ early spring) you are in the market. It is also important to keep up with other research projects, particularly manuscripts that have an invitation to revise. These can be nice distractions from the job market and can even help you secure a job! It never hurts to let potential employers know that you just received a revision request at a top journal.

Outside of work, your nonwork life is equally important. We both benefited immensely from maintaining our hobbies outside of academia, as well as spending time with family and friends. We were lucky in the sense that our spouses, family members, and immediate friends[3] were highly invested in our job search process

(in a nonoverbearing way!) and truly supported us every step of the way. Having their support was a great buffer from the stress we were experiencing and a good distraction from thinking constantly about the job market.

## 5. Keep the "Ultimate" Goal in Mind: Becoming a Professor

One final lesson is to always keep your "eye on the prize" and remember the ultimate goal tied to the varying motivation, emotions, and stress throughout the job market: becoming a professor in a discipline about which you are passionate. That first job is your ticket into the academic world and your way to contribute to higher education by teaching and mentoring undergraduate and graduate students. It is your way to help organizations and employees by conducting research in which you are interested and makes a meaningful impact in the lives of others. In the end, we have the unique opportunity to be creative

problem solvers on a day-to-day basis and have at least 6 years (or more) of job security before we go up for tenure (that is certainly another column for another day). That, in the end, certainly makes the job search entirely worth it, (additional) gray hairs, sleep deprivation, and all.[4]

[1] For the business school market, postings typically peak around the Academy of Management conference in August; for psychology, postings continue into the fall semester. This makes it very difficult to apply to both markets.
[2] Wanberg, C., Basbug, G., Van Hooft, E. A. J., Samtani, A. (2012). Navigating the black hole: Explicating layers of job search context and adaptational responses. Personnel Psychology, 65, 885-926
[3] We should also note that we had incredibly supportive advisors and faculty members in our respective programs that probably took the brunt of our panicking about the job search!
[4] Having a gigantic celebration at the end doesn't hurt, either.

## Max. Classroom Capacity

**Marcus Dickson**
Wayne State University



**Loren Naidoo**
Baruch College (CUNY)

One of the great things about working on this column has been the opportunity to connect to others in SIOP who are passionate about developing the students who share our interests in psychology in the workplace. One of those groups of folks is SIOP's Education and Training (E&T) Committee. E&T's purpose is to "monitor the state of graduate education in industrial and organizational psychology (I-O), encourage and promote the development of the scientific and practitioner skills of the Society's prospective members, prepare and revise the Guidelines for Education and Training at the Doctoral Level in Industrial-Organizational Psychology, Guidelines for Education and Training at the Masters Level in Industrial-Organizational Psychology, teaching modules, and contribute to and collaborate with Education and Training Boards of other professional societies (e.g., APA, APS)."

That's a pretty massive set of duties! Marcus served as chair of E&T a few years ago (and is trying to get Loren on the committee now!) and can testify to how much great work the committee does and how exciting it is to work with such dedicated, dynamic people.

This issue, we wanted to feature some of the great things that SIOP is doing for graduate students through the Education and Training Committee. We reached out to the current chair of E&T, **Whitney Botsford Morgan** of the University of Houston-Downtown, and she shared with us some of the initiatives E&T is pursuing. We're going to let Whitney and her colleagues tell us a little about each of those initiatives.

### Internships

Whitney Botsford Morgan herself is heading up the E&T initiative on grad student internships. It's pretty amazing to see everything that is available for I-O grad students. Here's Whitney to tell us about it.

A common question for a graduate student to ask is "How do I find an internship?" Although this question may be frequently asked by graduate students, a recent Perspectives piece urged serious consideration of introducing a certified internship for

practice-aimed students to enhance skill development (Byrne et al., 2014). As a result, SIOP's membership has been informally discussing how to enhance internship opportunities for graduate students.

The Education and Training Committee (E&T) began working on this initiative in 2014 and has since refreshed the internship webpages on SIOP's website, http://www.siop.org/IOInternships/toc.aspx.  Graduate students, particularly those in their first year, might begin by reading the section on "Managing Expectations: Students, Organizations, and the Profession" or perhaps the section on the "Types of Internship Opportunities."  After learning about internships in general, check out JobNet (http://www.siop.org/jobnet/) to see if there are any internship postings.  SIOP recently approved an internship posting rate at a 50% discount from full-time job postings (http://www.siop.org/jobnet/rates.aspx) to encourage employers to post opportunities that reach a wider graduate student audience. Employers, please considers posting internship opportunities to JobNet!  Finally, E&T is currently collaborating with the Placement Center Committee to launch its first internships-focused event at SIOP 2015.  This partnership and event will hopefully increase student participation in the Placement Center, which offers valuable resources to internship and job seekers, and provide an opportunity for students and employers to connect.

### Mentoring

**Juan Madera** of the University of Houston is working with **Mikki Hebl** of Rice University (they've got that Houston connection going there!) to head up E&T's Mentoring Initiative. Here's their story.

Three years ago SIOP President **Doug Reynolds** and Past SIOP President **Adrienne Colella** spearheaded a SIOP Diversity Task Force to increase the participation of ethnic minority SIOP student affiliates in associate and member roles postgraduation. To this end, the Committee on Ethnic Minority Affairs (CEMA) and the Education and Training (E&T) committee are partnering to develop a mentoring program for ethnic minority SIOP student affiliates. CEMA's primary goal of attracting, retaining, and integrating ethnic minorities into SIOP and E&T's focus on training and developing students and members make for an ideal amalgam to develop and establish a mentoring program for ethnic minority SIOP student affiliates.

We plan to launch this mentoring program at this year's SIOP conference in Philadelphia. We invite student affiliates who identify as ethnic minorities to attend the CEMA meeting and CEMA reception to find out about and join the mentoring program. Students will learn about the mentoring program logistics and procedures.  Mentors will be SIOP members and associates who represent both the academic and applied sides of I-O to give interested students an opportunity to partner with a mentor with similar career interests. We will also provide an opportunity during the CEMA reception for students and mentors to socialize and find common social interests.

So why a mentoring program? Research provides evidence that mentoring graduate students is associated with positive

behavioral and attitudinal outcomes (e.g., Eby, Allen, Evan, Ng, & DuBois, 2008). For example, Tenenbaum and colleagues (Tenenbaum, Crosby, & Gliner, 2001) examined how graduate students benefit from mentoring relationships from various departments at a large, public university. The study showed that mentoring provides instrumental, networking, and psychosocial help for graduate students. Instrumental and networking help was associated with tangible outcomes, such as publications, posters, and conference talks; whereas psychosocial help was associated with satisfaction with their graduate school experience. A meta-analysis (Eby et al., 2008) found that mentoring in academic settings led to stronger outcomes than in workplace mentoring settings. Mentoring in an academic environment can be different from organizational settings in several ways, such as the focus on socializing mentees into a profession (e.g., professor or practitioner) rather than into an organizational role and the cyclical relationship that is tied to the academic calendar (Ortiz-Walters & Gilson, 2005).

This mentoring program would not be possible without the support of many SIOP members and associates, including Doug Reynolds, **Jim Outtz,** Adriella Colella, **Derek Avery, Kizzy Park, Charlie Law, Juliet R. Aiken, Dave Cadiz, Ryan Samia, Gonzalo Ferro, Scott Tonidandel, Erik Heggestad,** Mikki Hebl, and Whitney Botsford Morgan.

### The Teaching WIKI

**Alison (Ali) L. O'Malley** of Butler University has picked up the mantle of SIOP Teaching Wiki, a resource near and dear to our hearts.

There are so many great resources there and so few people make use of them! Here's Ali to persuade you why you should be taking from, and adding to, the SIOP Teaching Wiki.

This afternoon the "do your best" condition in my goal-setting theory demonstration outperformed the difficult, specific goal condition. The 22 students in my 300-level industrial-organizational psychology survey course were nonplussed, but I was rather bummed. I regulated my disappointment by telling the story of how **Gary Latham** came to be the "Manager of Non Physical Factors" at American Pulpwood Association in an effort to establish distance from a psychologist identity (Latham, 2012). Ah well, should the demo yield a similar result the next time around I will segue into a riff on the value of replication.

The real point here is to trace the origins of the goal-setting theory demonstration. I pulled the exercise from the SIOP Teaching Aids Wiki (http://siopwiki.wikifoundry. com/), a site created nearly a decade ago through the efforts of **Carrie Bulger, Mike Horvath,** and **Morrie Mullins** and since curated by Marcus Dickson, **Julie Lyon,** and others. The Teaching Aids Wiki enables I-O instructors to upload and share I-O teaching materials including syllabi, projects, and exercises. The vast majority of the content is geared toward undergraduate I-O courses. Upon taking the helm, I added some content and talked it up at SIOP, but altogether there was little new activity and it seemed as though the wiki's heyday had passed.

Enter my.SIOP. SIOP's Electronic Communications Committee (ECC) expressed a desire to

fold the Teaching Aids Wiki into the burgeoning my.SIOP site. The my.SIOP platform stabilized in fall 2014, and a reorganized version of the wiki content is making its way into my.SIOP under the Resources tab: http://my.siop.org/Resources/Teaching-Resources. Here, you can find inspiration for general course design (e.g., I-O related first day icebreakers, new and nearly vintage syllabi) alongside exercises and film clips mapping onto a host of I-O content areas mirroring the chapters in standard undergraduate I-O texts.

I am "the" I-O person at my institution, and I am only able to teach I-O on average every other year. Currently none of my colleagues who teach introductory psychology courses mention I-O (it seems I need to stage an intervention!). Shoenfelt, Stone, and Kottke (2015) remind us that many psychology departments do not have any I-O faculty. We have a shared responsibility to help others teach I-O and teach it well so our high potential undergraduate students have opportunities to assess fit with I-O pathways (Salter & O'Malley, 2014).

Here comes the pitch: Please visit the new teaching resources site on my.SIOP site and let me know what other I-O teaching resources you'd like to see. Even better, send both your new and your tried and true I-O teaching tools my way (aomalley@butler.edu). I will format them, post them, and express my deepest appreciation and gratitude for helping engage our students and promote deep learning. I hope your goal-setting theory demonstration works, and I look forward to hearing from you!

for their hard work on these great ideas for enriching our students' learning! If you have other great ideas for maximizing our classroom capacity that you would like to share, don't hesitate to write us at marcus.dickson@wayne.edu and loren.naidoo@baruch.cuny.edu.

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Spotlight
on
Humanitarian
Work
Psychology



**Alexander Gloss**
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# An Introduction to Ashley Hoffman

Hello *TIP* readers! We are excited to present another edition of the Spotlight on Humanitarian Work Psychology (HWP) column. In this issue we are privileged to interview the current chairperson of the Global Organisation for Humanitarian Work Psychology (GOHWP), a group that is working to highlight and support industrial-organizational (I-O) psychologists' engagement with the greater good. In addition to serving as chair of GOHWP, Ashley has taught one of the world's first courses on HWP in her role as instructor at Elon University.

Our interview with Ashley carries special significance because it will be the last interview that Lori and I conduct as editors of this column. This is a bittersweet moment for Lori and me as we have thoroughly enjoyed our time as editors of this column. Serving as editors has provided an opportunity to profile a range of issues and guests who have helped to shed light on the unique and pivotal role that I-O psychology and psychologists can play in efforts to promote global human development.

The purpose of this issue is not to look back but instead to look forward to what is in store for I-O psychology. Indeed, we are excited to announce that Ashley has agreed to take over at the helm of the Spotlight on HWP column. Therefore, our interview with Ashley is both a way to understand more about the current directions and activities of HWP and GOHWP and a way to introduce our readers to the incoming editor of this column. As we believe you will see in our interview with her, Ashley is an excellent person to carry on the tradition of showcasing the past, present, and potential future contributions of I-O psychology to global human development.

**Ashley Hoffman: Chair of the Global Organisation for Humanitarian Work Psychology**

*As editors of a column devoted to the subject, we some-*

*times take it for granted that others are familiar with HWP and what that name represents. What does the term HWP mean and what does that term represent to you?*

GOHWP defines humanitarian work psychology as "the synthesis of organisational, industrial, work, and other areas of psychology with deliberate and organised efforts to enhance human welfare." As our website (www.gohwp.org) points out, this definition includes activities that are not only traditionally associated with humanitarian assistance and international development but also with various prosocial priorities and forms work that have as their overt aim the improvement of human welfare. For example, one relevant priority is the International Labour Organisation's (ILO) concept of "decent work," which stipulates various preconditions for work that supports human well-being and dignity. In addition, as we are all too aware here in the United States, many challenging issues like poverty are not just relegated to lower-income countries, and many people, from social workers to social entrepreneurs, are engaged in forms of work that are overtly devoted to helping reduce poverty in every country in the world. The ILO's decent work agenda and the work of people in a range of professions devoted to tackling poverty are examples of the sort of issues and forms of work that GOHWP would classify as representing HWP. To me, the term HWP represents the tremendous potential for I-O psychology as a scientific discipline and as a group of talented professionals to contribute to the greater good. Of course, we all contribute to the greater good all the time through everything from helping organizations to effectively train workers to studying what constitutes effective leadership in diverse organizations. Yet at the same time, I would propose that we might not always think about our work as being connected to the broader trends and themes in our world and in particular to the interdisciplinary world of international development. GOHWP would love to see HWP become something that is not distinct or separate from I-O psychology. Instead, GOHWP would like to incorporate insights from HWP research and practice into our work regardless of the organization with which we work or the topics on which we conduct research.

*We know you're a fan of Twitter, so could you sum up HWP in 140 characters or less?*

HWP seeks to reduce poverty & increase humane work through research and the application of I-O—particularly in developing settings. *(Note: You can follow GOHWP on Twitter at* https://twitter.com/GOHWP)

*How did you become interested and involved in HWP?*

I began my graduate school career interested in researching the impact that implicit personality traits have on performance. At the same time in my personal life, I was very involved in my church, and that involvement led to a mission trip to Haiti in the summer of 2009. As often happens on many such religiously oriented mission trips, we engaged in forms of service to local communities. Even before the monumentally tragic earthquake of 2010, which took the lives of over

300,000 people and left some 1.5 million people homeless, Haiti was one of the most financially impoverished countries in the world. Yet in spite of that financial poverty and its resultant human indignity and suffering, there was a tremendous strength and resilience in the people I met.

Visiting Haiti and performing community services projects there was a paradigm shift for me both personally and professionally. Upon returning home, I was still fascinated by implicit personality traits, but I was filled with a sense of disappointment that I would have to turn away from a focus on humanitarian issues as I returned to my studies in I-O psychology. I clearly recall thinking "well, I guess I'll keep doing I-O work professionally, and then do aid work on the side," which is exactly what happened for about another year.

As it would happen, Elon University hired me as an instructor, and one of the perks of this job was the opportunity to teach a winter term course that allowed faculty to propose, and if approved by the university, teach a 3-week intensive course of their own design. I had the thought that humanitarian aid and development must have some sort of important psychological components, but I wasn't sure what they might be. While knowing nothing about the topic, I proposed a class focusing on the psychology of humanitarian work, and it was approved. Cue panic and be careful what you wish for!

Enter Lori Foster Thompson. Despite being a doctoral student in I-O psychology at


*Ashley performing community service work in Haiti in 2009.*

set up a meeting with Lori, and it is safe to say that the course of my career changed during that 30-minute meeting. I was excited to learn that there were a great many I-O psychologists who had been applying I-O psychology to humanitarian endeavors for some time. More than that, a small group of these people was trying to raise awareness of this form of research and practice in a group then known as the Global Task Force for Humanitarian Work Psychology (GTF). Through Lori and the GTF I connected with several other people, students, academics, and practitioners in the field of I-O who were interested in issues relating to humanitarian work.

Along the way, there have been so many people that have impacted my involvement in HWP, but perhaps no one more meaningfully than a humanitarian work psychologist named **Kristen Kirkland**. Kristen was working on a project to develop HWP curricula through her service as a board member of GOHWP. Kristen put a call out to GOHWP's membership, of which I was a part, for

input. I replied to the call and worked in tandem with Kristen to help develop curricular resources for others looking to teach HWP-related courses. Kristen, through her professional work at the nonprofit Every Mother Counts, was and is an inspiration to me. Without Kristen, I likely would have continued to be an interested but rather inactive member of GOHWP.

In a sense, I suppose my route to becoming involved in HWP was largely academic and accidental. As chair of GOHWP, I know this is the case for many I-O psychologists who are interested in research and practice in the arena of humanitarian and global development work; they have a desire to focus on these issues, but they are unaware of the number and diverse set of people and efforts who have already started doing so. Raising the collective awareness within I-O psychology of HWP and those practicing it is one of the chief goals of GOHWP.

### What are GOHWP's current top priorities and goals?

If I spend too much time thinking about what we're hoping to accomplish I get overwhelmed! The mountain of work to be done is a peculiar mix of exciting and anxiety provoking. In the short-term, I would love to see more psychologists getting connected to GOHWP's professional network (please sign up to get e-mail announcements, our newsletter, and join our discussion forums at www.gohwp.org!).  We are especially interested in reaching out to those from South America and Asia where HWP membership seems to be underrepresented.

As mentioned earlier, GOHWP is continuing to develop curricula in order to provide a more structured academic approach to the study of HWP. For example, in my course at Elon, we have studied issues such as recruitment and selection of volunteers and long-term aid and development workers, the unique plight of women and children in developing nations, and the broader issue of what constitutes responsible and informed aid. This past term, I also incorporated a guest speaker component, where humanitarian work psychologists worldwide used Skype to speak with my students about the work being conducted in the field. It was very exciting to see the way students responded to having a more personal connection to researchers and practitioners, and moving forward, GOHWP is hopeful that we will be able to provide these kinds of media resources to our membership so they can be incorporated into either HWP or more standard I-O courses.

### What are the biggest obstacles that someone interested and/or involved in HWP currently faces?

A huge obstacle is the lack of awareness of I-O psychology on behalf of stakeholders in the international development community and in organizations like the United Nations. For those actively involved in HWP, the path is especially difficult as they face the added complexity of explaining both the relevance of I-O psychology to issues of work and the relevance of I-O psychology to issues of humanitarian aid. Luckily, the lack of recognition of I-O psychology at the United Nations is changing thanks in large part to outreach efforts by SIOP

and other professional associations who are seeking greater recognition by and influence with prominent stakeholders involved in humanitarian assistance and international development work.

## Conclusion

Thank you to Ashley for taking the time to tell us a little more about GOHWP. We are thrilled to hand over the column to Ashley and to see the direction that HWP takes in the future. As a personal note, we wanted to thank the great many people who have helped to contribute to this column. Lori and I have gained tremendous inspiration and guidance from far too many people to list here but we especially want to thank **Morrie Mullins** and previous editors of *TIP* for their support in the execution of this column and **Stuart Carr** for his inspiration and guidance in all things related to HWP.

**Tiffany Poeppelman**
Google
(via Adecco)

**Eleni Lobene**
Aon Hewitt

**Nikki Blacksmith**
The George Washington University

# Personalizing the Learning Experience Through Adaptive Training

*"Technological change is the only constant in our work today" - Anonymous*

As roles and expectations within organizations rapidly change, primary constants include increasing diversity in the workforce and technological advancement. People learn differently and at different rates (Wittrock, 1989). Training instruction, however, is traditionally presented using a "one size fits all" approach; solutions are linear and uniform for all learners, regardless of each learner's proficiency in the necessary knowledge and skills. In order to save learners' time and maximize resources, organizations are investing in new adaptive training technology to systematically select and present only the information that is critical to address a skill gap or knowledge deficiency.

Adaptive training instruction reduces the reliance on human instructors, increases the ability to quickly provide training to mass quantities of learners, and reduces time spent in redundant or unnecessary training activities. In this article, we aim to (a) define adaptive training, (b) discuss the methods used for developing adaptive training, (c) highlight current applications of adaptive training technologies, and (d) present research gaps along with a call to action.

## What Is Adaptive Training?

Adaptive training, also referred to as accelerated learning or personalized learning, is a generic term for a family of approaches that alter the events or content presented during training based on learner needs (Durlach & Ray, 2011; Oskorus, Meyer, Andre, & Moore, 2010). These training approaches use individual difference variables (e.g., knowledge) to personalize the training experience through a highly realistic reflection of the work, culture, and job requirements (Bauer, Brusso, & Orvis, 2012).

Learning personalization is created by analyzing data that describe learners' past or current performance and information about training needs based on skills or abilities, aptitude, personality, learning style or preferences, and performance (Bauer, Brusso, & Orvis, 2012; Spain, Priest, & Murphy, 2012). Cumulatively, learners receive tailored instruction and feedback (Billings, 2012; Lester et al., 2014).

### How Is Adaptive Training Developed?

When adapting training there are often two ways of tailoring the content. One approach is to change the instruction within a training session, which is often referred to as *micro*-adaption; whereas changing what a learner does between sessions is referred to as *macro*-adaption (VanLehn, 2006).

*Microadaptation: Tailoring Training Within the Learning Session*

Two of the main methods of *micro*adaptation or changing the instruction or content presented to a learner are *item response theory (IRT)* and *branching.*

The first, IRT, is a mathematical method of measuring a learner's knowledge level in which the variable is continuous in nature while allowing for an individual person and item to be mapped on the same latent continuum (de Ayala, 2009). The IRT approach is based on the idea that an individual only endorses an item if he or she is close to the item on a continuum (Stark, Chernyshenko, Drasgow, & Williams, 2006). In other words, if an item is too extreme in either direction,

the individual will respond negatively to the item. Adaptive training programs run mathematical IRT models to determine the best scenario or content to present next. Conceptually this approach is similar to computerized adaptive tests designed by major test development companies.

The second method often used for microadaptation is called branching. Branching techniques are a form of storytelling; learners make decisions based on the content presented, and each decision point that is developed by a training designer leads to a distinct training path (Ivec, 2014). Typically these types of branching activities allow a learner to practice a skill within a safe environment with no consequences for failing. A final summation or report of the experience will be presented to the learner, and possibly managers, to show the consequences of the decisions made and why the content was filtered in one direction based on those decisions.

*Macroadaptation: Tailoring Training Across Learning Sessions*

Approaches to *macro*adaptation algorithms often include correlation models and various forms of Markov models, which are used to recommend a sequence of training modules deemed appropriate based on learner needs. Correlation models and predictive Markov models are computational methods for examining the relationship between environmental and learner-centric variables to identify the optimal path for learning. For instance, a Markov model is a good tool for modeling student transitions based on past

or current data about the learner (Carlin, Dumond, Dean, & Freeman, 2013). These frameworks attempt to create a method of predicting decisions or next steps based on an algorithm or model of prescribed skills and abilities. Most of the research that describes such models shows that these are best used to help identify exercises to enhance the learners experience by modeling the learner's contextual knowledge (Kaelbling, Littman, & Cassandra, 1998).

### Application Programming Interfaces (APIs)

Based on blended learning rules such as 70-20-10, most learning occurs outside of the classroom in informal settings (Lombardo & Eichinger, 1996), whereas a smaller percentage of learning occurs in formal environments such as Learning Management Systems (LMS) e-learning modules. With various sources of data that exist across a variety of platforms, there are new application programming interfaces (APIs) that allow internal systems (e.g., LMS), external training methods (e.g., Coursera web-courses), and learner data (e.g., knowledge, skills, abilities or KSAs) to interact with each other in order to track and assess performance of learners over time.

With systems being able to leverage new data from other tools, organizations are able to create adaptive learner-centric environments that share information in interoperable ways. One example of this is the Experience API, or xAPI, which is a data coding method of uniformly defining and describing learner data in a consistent way so that systems can share the performance data (Advanced Distributed Learning, 2013a, 2013b). One recent example of xAPI in use is the Soldier Performance Planner ($SP^2$), which is a prototype tool developed for the U.S. Army that enables learner performance data to be described and shared between military training simulation systems (Poeppelman et al., 2013).

Other learner data is also becoming more readily available and easily shared across social media platforms such as LinkedIn. With the permission of the learner, recent course certifications from Coursera and other information can be added to social media profiles immediately after completing the course. LinkedIn provides such APIs to allow users to also sign-in to a third party system and easily share their profile details.

### Adaptive Training Examples

The types of adaptive training applications that have hit the market are increasing in variety. In this section we highlight some additional efforts that are advancing the field and increasing the demand for tailored systems.

### Social Experiences via LMSs

As evidenced by their prominence at L&D conferences around the world, such as The Association for Talent Development (ATD, formerly ASTD) and Europe's Learning Technologies, LMS solutions are rapidly improving. Many of these LMSs are incorporating cloud solutions into their systems, which allow companies to host data anywhere, anytime so that if someone is not on an internal network they can still complete

a course (e.g., Litmos LMS). In addition, branching content within the course module is becoming increasingly available. Some LMS support social learning mechanisms to share, connect, and collaborate in one place like the Tessello "total learning system." These types of technology solutions not only allow training developers to create, track, and store learning content, but new LMSs now incorporate opportunities to create communities in which learners can interact with experts and mentors through social experiences. Each data source that is captured and included unlocks and enables personalized learning based on the learners' actions within the system.

### Virtual Experiences: Simulations and Games

Simulations are a broad category of technologies that replicate real-world processes and systems; they are engaging, require meaningful choices, and offer challenge-based sensory immersion, clear goals, and feedback (McNamara, Handler, & Fetzer, 2014). Some simulations have undergone gamification, or the use of game techniques, game thinking, and game mechanics to enhance nongame contexts.

*Medical applications.* Duke's Human Simulation and Patient Safety Center develops simulations to train clinicians in crisis management, procedural skills, decision making, and teamwork. For example, computer-based, virtual training technologies include Combat Medic for treating top causes of death in the modern battlefield, Maternal Hemorrhage for managing postpartum maternal hemorrhaging emergencies, and 3DiTeams for military healthcare team coordination.

*Military applications.* Americas Army is a simulation that was developed by the U.S. Army with applications including recruitment and training. China's People's Liberation Army has released multiple versions of the Glorious Mission that has the dual purpose of recruiting soldiers and training personnel in combat skills and technological awareness. Other applications of military adaptive training focus specifically on medical interventions, such as vMedic that enables single- and multiplayer interactions.

*Professional applications.* One of the earliest examples of gamification for personnel training is Hilton Ultimate Team Play for customer service. Another example is UpTick! for sales force development, which provides adaptive coaching in real-time by tracking performance data. Similarly, management and leadership skills are in demand across all domains and disciplines. Adaptive tools such as LEADeR assess specific aspects of leadership capability and potential, offer detailed developmental feedback, and appeal to a broad range of organizations.

### Practice and Research Gaps

Adaptive training technology development is outpacing the growth of the accompanying literature in the I-O world. Future research needs to:

*1. Determine optimal methods for adaptive training*. For new learning methods being deployed, specifically gamification
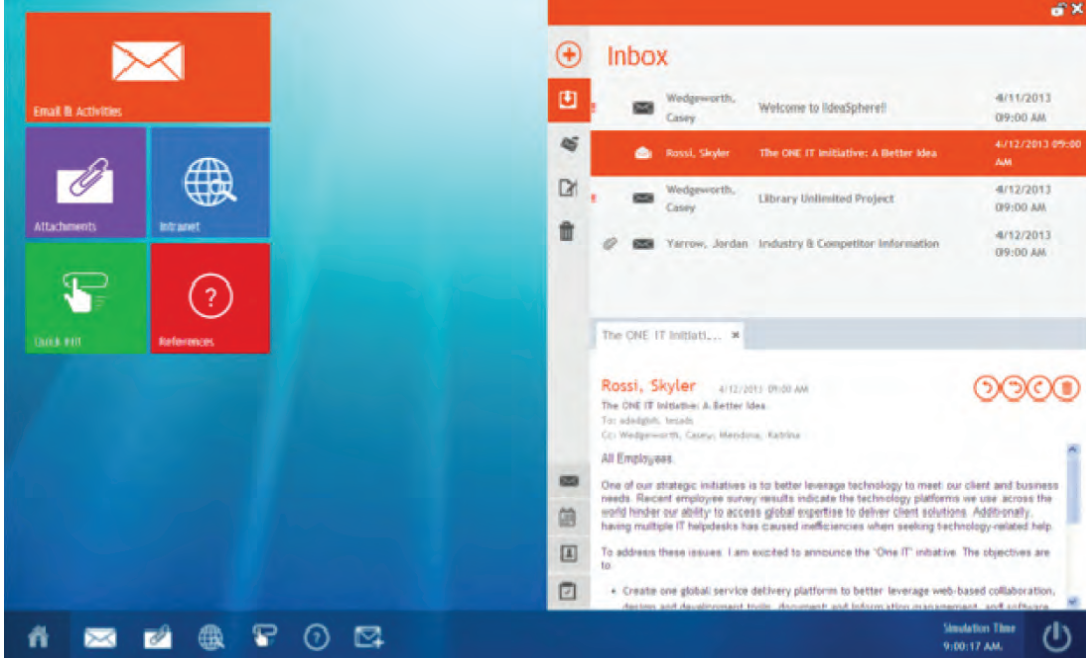
LEADeR, an adaptive simulation for leadership development, adapts the learner activities based on *their choices and interactions made in real-time.*

techniques, we must ensure that the games or learning opportunities help develop the right skills (Stodd, 2015). The reality is that many organizations are working hard to deploy the next cool, engaging training methods, but we must ensure they are the right ones. We must also ensure that adaptive methods are implemented based on the right skills and content that learners need to see.

*2. Conduct effectiveness evaluations.* There is a dearth of research isolating variables to determine effectiveness of adaptive feedback techniques (Durlach & Ray, 2011). Computer scientists tend to focus in detail on algorithms, model parameters, and software implementations utilized in a given study, but they often place less of an emphasis on the study's

theoretical framing, as well as its methodological details, such as the study population, apparatus, design, measures, procedures, and analysis (J. Rowe, personal communications, February 2, 2015). Carefully controlled research manipulating particular aspects of the training design is needed to advance the literature.

*3. Identify learner reactions.* One area ripe for research is learner reactions to adaptive versus nonadaptive training technologies. We need to ensure we collect learner reaction data to understand whether adaptive methods and technology systems vary and how they are translating into useful experiences for each learner.

The involvement of I-O psychologists is essential to optimize adaptive training

systems. Fields currently steering the research include software engineering, computer programming, and computational modeling. I-O psychologists are uniquely suited to help determine an optimal level of challenge for learners, to decide the appropriate level of support to be provided, and to assist in the identification of errors made by the learner. Once these considerations are addressed, the adaptive training system can provide greater training efficiency (Durlach & Ray, 2011).

The research gaps and areas mentioned above represent only the beginning, we would love to hear about the ways you are working in this area.


You're invited!

Join the authors of The Modern App at SIOP to discuss adaptive training and other related technologies that merit further investigation. We will tweet more details, including time and location, so follow us on twitter (@themodernapp) or email us (themodernapp@gmail.com) for more information. See you in Philadelphia!

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On the Legal Front

Guest Author:
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# OFCCP Enforcement Efforts on Sex Discrimination in Compensation

Sex discrimination in compensation is traditionally understood within a pay equity framework. Quite simply, "Are women paid the same as men in similarly situated jobs after controlling for legitimate explanatory factors?" In application, pay differences that cannot be accounted for by reasonable explanatory factors (e.g., tenure, performance) is evidence of sex discrimination in compensation and violation of federal laws (Civil Rights Act 1964 Title VII, Equal Pay Act). Federal enforcement agencies (Equal Employment Opportunity Commission and Office of Federal Contract Compliance Programs; EEOC and OFCCP, respectively) and private plaintiffs have traditionally applied linear regression methods when investigating for pay discrimination. Overall, the process and methods for pay discrimination investigations within this traditional framework are well established and understood.

However, with the introduction of OFCCP's Directive 307[1], pay discrimination enforcement investigations have formally taken a decidedly complicated turn for employers. Unfortunately, most employers, practitioners, and analysts are simply unprepared for the following reasons:

- Traditional defense-oriented strategies of "slicing and dicing" data may lose a majority of its effectiveness through two proposed methods: (a) statistical aggregation and (b) cohort analysis of small groups.
- Traditional defense-oriented strategy to overload regression models with meaningless and nonsignificant explanatory factors to lower statistical power will be checked and reduced.
- A new theory of pay discrimination is articulated. In this new theoretical framework, full compliance within the traditional pay equity framework provides no assurance that Title VII pay discrimination charges cannot be successfully established.

Needless to say, practitioners need to familiarize themselves and fully understand Directive 307 to better steer their clients away from charges of sex discrimination in compensation.

### Directive 307: Important Concepts for Practitioners

Directive 307 is marvelously dense and subtle in its complexity, and unpacking all its details is simply beyond the scope of this article. For that reason, the goal here is to introduce important concepts from Directive 307 and to highlight the increase in risk exposure that companies need to accept going forward.

Section 8 in Directive 307 details eight essential elements of the OFCCP's approach to compensation analysis. Practitioners and analysts who are tasked to keep their clients within compliance should focus on the following four steps:

- *Develops pay analysis groups*
- *Investigates systemic, small group and individual discrimination*
- *Reviews and tests factors before accepting the factors for analysis*
- *Considers all employment practices that may lead to compensation disparities*

The first three items fall within a traditional framework of pay discrimination, while the last is an entirely new theoretical framework of pay discrimination. Each will be treated separately in two sections: (a) traditional and (b) new theories of pay discrimination.

### *Traditional Theories of Pay Discrimination*

Traditionally, pay discrimination investigations are focused on differences in average pay between men and women within a similarly situated job grouping, for example job title. At its core, these pay equity analyses apply regression methods to evaluate whether observed differences in pay between men and women are statistically meaningful after legitimate explanatory factors are controlled for (e.g., tenure and performance). As the regression-based adjusted mean difference in pay approaches zero, evidence of pay discrimination is equally reduced.

*Develops pay analysis groups.* In an effort to reduce or eliminate statistically significant pay disparity, a common defense-oriented strategy is to "slice and dice" the data until the sample size under evaluation are too small to have meaningful statistical power. Prior to Directive 307, this strategy has largely proven to be very successful in limiting the OFCCP's ability to obtain findings of pay discrimination.

In Directive 307, the OFCCP has articulated a counter response to the slice-and-dice strategy.

- Step 1: the OFCCP will develop Pay Analysis Groups (PAG), which are simply groups of related jobs.
- Step 2: the OFCCP will analyze the PAG in one regression analysis but statistically control for jobs (e.g. dummy coding).

By applying this strategy, the OFCCP can minimize the effects of sliced and diced data while controlling for differences among jobs.

*Investigates systemic, small group and individual discrimination.* Oftentimes, data are sliced too thinly to construct analyzable PAGs. In such instances, the OFCCP is not without options. By applying an Equal Pay Act framework to investigating for pay discrimination, the OFCCP can obtain meaningful conclusions even if there were only one women and one man in the analyses.

In the OFCCP compliance community, this method is often referred to as "Cohort Analysis" or more colloquially, "eye-ball regression." In application, cohort analysis is simply a qualitative comparison of pay between men and women after taking into account individual attributes (e.g. tenure, performance).

*Reviews and tests factors before accepting the factors for analysis.* Another common defense-oriented strategy to reduce or eliminate statistically significant pay disparity is to overload the regression model with explanatory factors. With the addition of each explanatory factor, 1 *df* is removed, and statistical power is reduced. Because most job titles are rarely above 50 employees, the additive effects can be significant in reducing statistical power. Rather than allowing a defense attorney, consultant, or analyst unchecked freedom to overspecify a regression model with meaningless explanatory factors, Directive 307 requires proof that an explanatory factor is meaningful and significantly related to pay before it is accepted as a factor for analysis.

*Traditional theory summary.* Within the traditional pay discrimination framework, the OFCCP has been challenged to demonstrate meaningful success. Through Directive 307, OFCCP has made it clear that it recognizes, understands, and can respond to the typical defense strategies employed in pay discrimination investigations. Although it may appear modest in scope, these three elements in Directive 307 will have significant and meaningful impact in application.

### New Theory of Pay Discrimination
In addition to addressing and mitigating some of the challenges that OFCCP experiences within the traditional pay discrimination framework, Directive 307 takes a significant step forward in expanding the scope of pay discrimination investigation. Directive 307 introduces a new theoretical framework, where it is possible for pay discrimination to be established even if there is 100% pay parity in the traditional sense. By borrowing from "funneling" theory, which is normally applied in adverse treatment in selection matters, the OFCCP has developed a compelling new theory of pay discrimination. This new theory is commonly referred to as "steering," which "considers all employment practices that may lead to compensation disparities."

Although traditional pay discrimination analyses are focused on differences in average pay between men and women *within* similarly situated jobs, steering is focused on employees' access to opportunities that affect pay (e.g. job placement, project assignment, training). Steering is a major shift and advancement in pay discrimination theory.

Since its introduction, the OFCCP has enjoyed considerable success in applying steering theory to obtaining conciliation agreements for pay discrimination (e.g. Central Parking System of Louisiana Inc, G&K Services Co, Hillshire Brands Co., Fort Meyer Construction). So far, the OFCCP has primarily focused on the *steering* of individuals belonging to traditionally advantaged groups (whites/men) for consideration in higher paid positions, whereas individuals from traditionally disadvantaged groups (minorities/women) are *steered* to and considered for lower paid positions.

This strategy will have significant impact on pay discrimination because from our experience most companies will exhibit the following:

- Men and White employees tend to be in higher paying positions.
- Women and minority employees tend to be in lower paying position.

Arguably, there may be legitimate reasons for this asymmetrical distribution, but it is important to take note that, regardless of the merits of the explanations, the cards are naturally stacked in favor of the OFCCP's enforcement investigation.

Given the flexibility of this new theoretical framework, the OFCCP is certainly exploring and extending the boundary conditions for the application of steering theory. For example, training is not typically associated with pay discrimination. However, when training impacts employees' promotability, which affects pay, access to training becomes a potential source of pay discrim-

ination. To complicate this, even open, generous, and neutral training access policies can result in adverse impact in pay.

For one company we worked with, training was 100% open to everyone. With such an open policy, no one would suspect that the company was liable for sex discrimination in training access or pay. Adding to this perception of openness and fairness was the fact that the training courses were offered by a local community college. The unfortunate twist, however, was that the community college, in an attempt to make its courses more accessible for working professionals, only offered them in the evenings. Consequently, women's participation was significantly lower than men's. Although our analyses found that promotion rates for women were not significantly different than men, after controlling for promotability (trained/not trained), we could not safely conclude for this client that they were 100% Title VII compliant in a steering theory framework.

Taken together, it is not an overstatement to suggest that steering theory significantly expands a company's risk and liability exposure in many significant ways. Whereas traditional pay discrimination investigations were primarily focused on compensation and payroll data, steering theory-based investigations require a thorough evaluation of all personnel decisions that impact employees' access to opportunities that affect pay. With a blended training in personnel decision making and statistics, I-O psychologists are particularly well-suited for these types of investigations.

## Conclusions

Prior to Directive 307, the OFCCP has had mixed success with enforcement actions related to sex discrimination in compensation. Due to the inherent complexity of compensation, the OFCCP always initiated an investigation from a disadvantaged position. Compounding this was the extremely well-developed and sophisticated defense strategies that companies could marshal to their advantage.

Directive 307 was developed to reduce, if not downright eliminate, some of the advantages that defense-oriented attorneys and consultants have enjoyed in the past. In addition, Directive 307 has introduced a new and very important theory of pay discrimination: steering. Taken together, it is clear that pay discrimination investigations will be more complex and complicated than in the past. For this reason, it is very important for analysts and consultants to fully understand Directive 307 and to get ahead before an investigation is ever initiated.

Sex discrimination in compensation has received considerable federal enforcement attention in recent years. This should come as no surprise as this has been one among many key problems that President Obama has committed himself to addressing. As one of the biggest employers, the federal government holds the greatest potential to reducing sex discrimination in compensation. OFCCP's Directive 307 will play a significant part in that effort.

[1] http://www.dol.gov/ofccp/regs/compliance/directives/dir307.htm

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**Foundation Spotlight**



**Milton D. Hakel**
SIOP Foundation
President

# On Microwave Ovens and Wayne Gretzky

I heard a story recently from **Karen Paul**, and it sets the stage for some thoughts about technology and I-O psychology.

Think of a box into which you can put a cup of water, then press a button, and seconds later it comes out boiling hot. What is it?

No mystery there—it's a microwave oven.

Now transport yourself back to 1967, or if you are not old enough to remember 1967, just imagine this scene: Your father is an engineer, and he comes home one day talking about a metal box and a cup of boiling water. Sounds interesting, right? A bit crazy too?

Karen's father had seen a demonstration of a prototype of the now ubiquitous microwave oven. What in the world was he talking about?

Well, when something appears that has no obvious precedent, it's hard to imagine how things will change. It's difficult to make predictions, especially about the future.

So much for microwaves. Let's turn to Wayne Gretzky. A few of you will be asking, "Who?"

Gretzky played 20 seasons in the National Hockey League (NHL). Nicknamed "The Great One", his Wikipedia entry reports that he has been called "the greatest hockey player ever" by many sportswriters, players, and the NHL itself. He is the leading point scorer in NHL history, with more assists than any other player has points, and is the only NHL player to total over 200 points in one season—a feat he accomplished four times. At the time of his retirement in 1999, he held 61 NHL records: 40 regular-season records, 15 playoff records, and six All-Star records. As of 2014, he still held 60 NHL records.

Altogether, one sterling performer. When asked how he got to be so good, he said "I skate to where the puck is going to be."

Think about that.  Now on to what this column is really about.

### Technology and I-O

Our research and practice has always embraced novel technology, beginning with multiple-choice-exam administration and scoring during World War I.  Technological advances over the decades, first in communication and then the invention of computers, nowadays permit ubiquitous online surveys and testing.  In their 2013 Frontiers series book, **Mike Coovert** and **Lori Foster Thompson** provide a stunning panorama of how technological advances are spurring I-O practice and science.

I want to talk about just one thin slice of this territory, although the slice keeps getting thicker.  The thin slice is visible in the overlap of what we've learned about learning, training, and development and the technologies of virtual reality and online simulations.

About a year ago **Morgan McCall** told me about his new Practice Series book, co-edited with **Cindy McCauley** (McCauley and McCall, 2014).  I'd been a fan of McCall and Lombardo's *Lessons of Experience* since its publication, so I was all ears.  When Morgan mentioned a chapter by Randy Hill on virtual reality and leadership development, I read it and knew immediately that I needed to learn more.

Hill describes the work underway at the University of Southern California's Institute for Creative Technologies (ICT).  ICT is an academic research institute, bringing film and game industry artists together with computer and social scientists to study and develop immersive media.

You can make a virtual visit by navigating to http://ict.usc.edu.  Check out the main website, then examine the full range of projects in ICT's portfolio at http://ict.usc.edu/prototypes/all/.  After making my virtual visit, I was so impressed that I leaned on Morgan to arrange a personal visit, and he was able to set one up.

The ICT prototype that has my continuing attention is their R&D work with trainees and virtual standardized patients, at http://ict.usc.edu/prototypes/usc-standard-patient-hospital/.  For me, it is a proof-of-concept demonstration that could serve as a model for a virtual consulting service.

Think back to the beginning of your professional career.  Upon graduation, each of us still had so very much to learn about life in organizations.  Hill begins his chapter by identifying the pitfalls of on-the-job learning:

1. It can take a long time to learn particular skills because the right experiences may happen infrequently
2. There is no guarantee that the right lessons will be learned, perhaps due to absence of reflection, mentoring, or coaching
3. Knowing principles does not prepare one for the emotional intensity and stress of job challenges
4. Making major mistakes is costly in terms of time and productivity, damage to others, and harm to one's own reputation

He asks, "Wouldn't it be better to learn and practice a skill prior to walking into a live situation?"

I've been thinking about all I saw at the Institute for Creative Technologies ever since my visit.

Dramatic advances for bootstrapping I-O are now plainly visible; new technologies can help scale I-O research and practice in ways that presently seem as crazy as a metal box that produces boiling water.

Randy Hill closed his chapter thus: "Game changing technologies are here: Be prepared to leverage them."

### Fund for the Future

Last October I focused the Foundation Spotlight on the Fund for the Future, the SIOP Foundation's initiative for charitable gifts that can yield benefits in the immediate future. Read about the Fund and "term gifts" in the October 2014 issue of *TIP*.

After your virtual visit to the Institute for Creative Technology, think about technology and I-O, especially about what we can do together to advance our science and practice. I'm thinking about how to use virtual reality to train new I-Os to present science to executives.

Contribute to the Fund for the Future at http://www.siop.org/foundation/donate.aspx. Call or write to any of the Founda-

tion Trustees with your creative ideas for how to advance our field.

We are the source of science for a smarter workplace. We need to continue skating to where the puck is going to be.

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# Meet the SIOP Administrative Office!

Have you ever called the SIOP office and wondered: What does the person I am talking to look like? What is their job at SIOP? What are their hobbies? Well wonder no more! Below are the photos and bios of all the SIOP Administrative Office staff. So, now that you know who we are, be sure to say hi at the conference. We are looking forward to seeing all of you!

communications and association management experience through my prior work as Executive Vice President of the National Exchange Club, Executive Director of Marketing for the U.S. Junior Chamber of Commerce, and as a newspaper and magazine editor. I enjoy playing tennis and wine blogging. I live in Perrysburg, Ohio, with my wife, Kathy, and our dog Amber.

**Dave Nershi**



**Linda Lentz**



I am Executive Director for the Society for Industrial and Organizational Psychology. I oversee the Administrative Office team and work with Executive Board and volunteer leaders to carry out goals of our 8,000-member professional society. I implement policies of the Executive Board and establish short-term goals for the administrative office that reflect long-term SIOP strategic goals. A major responsibility is planning, preparing and managing the annual conference. I'm a Certified Association Executive and have gained marketing,

I am the Director of Administrative Services, but I joined the SIOP staff in September 2002 as a part-time Finance Manager. In 2005, I took on the responsibilities of payroll and benefit coordination for the AO Staff. I was promoted to the director position in 2011. My primary roles include managing the finances and investments of the Society, working with the Financial Officer and Portfolio Officers to develop the annual budget, assisting with the Awards and Fellows programs, and serving as the liaison for the SIOP Foundation Board. From monitoring

the monthly finances, managing the hiring process for new team members, coordinating donor agreements for the Foundation, to assisting Dave with planning Society meetings, I have enjoyed the variety of the work at SIOP. I came to SIOP from the Dana Credit Corporation where I worked for 9 years in the leasing industry. As a nontraditional college student, I worked full-time at Toledo Hospital while attending the University of Toledo in the evenings. After 8 years, I received a BBA, with honors, in finance. My husband Bob and I moved to Bowling Green in 2001 with our children Nick and Miranda.

**Jenny Baker**



*My office mates picked this picture. They said it was the most "me." Should I be flattered or offended?*

Hello! I am the Publications Manager at SIOP. I prepare the conference program, *TIP, IOP*, and many other print and web materials. I also handle many of the conference logistics: designing and ordering tshirts, designing the conference bag art, preparing printed materials, preparing signage, and shipping all materials to the conference site.

I also prepare artwork as needed. Some of you may see my name on *Personnel Psychology* articles as I was the assistant managing editor during the Hakels' tenure as owners and I still proofread the journal.

On the personal side, my husband Duane and I live outside BG in the country with our furkids: 3 dogs, 2 cats, 2 donkeys, and 1 goat. I enjoy gardening, baking, shopping, camping and traveling, and reading. I received my bachelor's in Scientific and Technical Communication from Bowling Green State University. I also hold a 3rd degree black belt in karate and taught self-defense in the BG area for many years.

**Stephany Below**



I am the Communications Manager at SIOP, leading internal and external communications, media relations, content development, social media, and various visibility efforts. My duties include developing and editing content for the SIOP website, editing the monthly *Newsbriefs* newsletter, designing various promotional and educational pieces, and marketing SIOP events. I was very involved in SIOP's recent rebrand-

ing efforts and recently spearheaded work with SIOP's Visibility Committee to develop the annual Top 10 Workplace Trends list, Top Minds and Bottom Lines event series, and Smarter Workplace Awareness Month (September). I am also active with SIOP's Electronic Communications Committee on projects such as my.SIOP and promoting the use of social media.

I have worked at SIOP since 2008. Prior to this job, I was a newspaper reporter, covering education, business, politics, and general news. When not at the office, I enjoy traveling, reading science fiction, cooking/eating great food, and spending time with my husband and toddler.

**Emeka Ewuzie**



I am the SIOP .NET Web Developer. I manage .NET projects that SIOP members use daily, consulting, developing, implementing, and managing applications to meet our business needs. I work with SIOP volunteer leaders to respond to new/renewed programming needs by converting

business processes using the .NET platform. I update various programs to meet needs of conference and/or consortium meetings, and also provide troubleshooting and helpdesk assistance. I also provide programming support for the Foundation's fundraising efforts. Together with the rest of the staff, I create new programs to increase efficiency.

I have B.Sc. in Computer Science from Bowling Green State University. I'm not an avid sports fan – I would like to be, but I don't get out as much. When I get a chance, I still love to play tennis, racquetball, table tennis (Ping-Pong ), and football (soccer ) all in one day.

For me, sometimes writing code is like a calming escape from reality. I get to solve problems and build something out of nothing.

**Larry Nader**



I am the IT Manager at SIOP. My responsibilities include database, network, computer, and software management, and helpdesk for SIOP members. I have been

with SIOP since 1998. When I started with SIOP, I was one of just three employees. I have seen and helped implement the growth of the office, website, and member services. Prior to SIOP I owned and operated a radio station in California for 5 years and a printing/graphic design business for 10 years. I spent 2 years as a technical writer for the Microwave Instruments Division (MID) of Hewlett Packard (now called Keysight Technologies). Because of my radio experience, I DJ weddings occasionally. I have a wife, one son, three dogs, and a cat. I am active with Kiwanis, and other organizations in need of fundraising to serve the public.

### Jim Rebar



I have been working at SIOP since January 2012 as the office's web content specialist. I am responsible for all the static content on the SIOP website. Among my other duties are maintaining the Graduate Training Program database, updating committee rosters, and processing all the ads for *The Industrial-Organizational Psychologist (TIP)* and the annual conference program. I bring considerable expertise to the job

from my 6 years as photographer, graphics specialist, and system administrator at the *Northwest Signal* newspaper in Napoleon, Ohio. Prior to that, I worked in the federal government in the Baltimore, Maryland, area for almost 30 years as an intelligence analyst and computer requirements professional. I have a BA in Russian and an MA in Slavic Languages and Literatures from The Pennsylvania State University. I served 4 years in Germany in the U.S. Army before attending college. I am married to Carolyn and live in Bowling Green, Ohio.

### Jayne Tegge
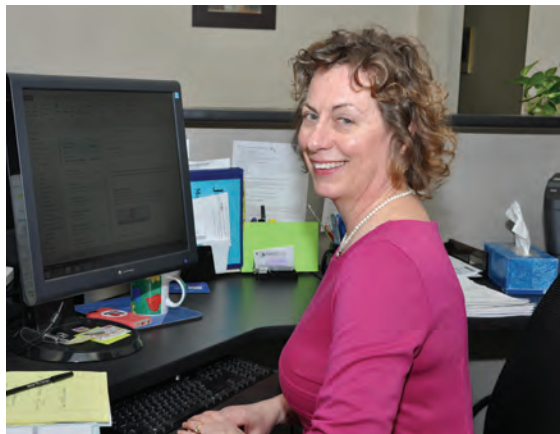


Hi, I'm Jayne Tegge, Member Services Specialist. If you call the SIOP office, you'll probably talk to me first. I recently joined the staff, after eight years as a librarian, so I'm still in the learning phase, but SIOP is a great place to work! My duties include membership applications, renewals, dues payments and records, as well as the SIOP Store, and the Executive Board Briefing Book. I graduated from the University of Dayton with a BA in Communications. My husband, Tim, and I just sent our only

daughter off to college, so we are learning how to fill our empty (and finally neat!) nest. I'm an avid cook, cookbook collector, food preserver and all things "foodie," have a huge garden, and squeeze in as much reading as possible at all times.

**Tracy Vanneman**



As the Membership Services and Continuing Education Manager for SIOP, I work on many aspects of the SIOP membership and event attendee experience. I work to recruit and retain members, manage the administration of the continuing education program, assist with event planning for the conference and LEC, and solicit and assist exhibitors and event sponsors. I joined the SIOP Administrative Office staff in 2008. Previously, I worked in development and event planning at Toledo Botanical Garden in Toledo, OH, as well as in newspaper advertising sales at the *News & Observer* in Raleigh, NC.
I hold a Bachelor of Science in Business Administration from Bowling Green State University. My husband, Jake, is a high school teacher and basketball coach, and we have four children: Lila (7), Nora (3),

and twin babies, Cole and Cori (5 months). I enjoy spending time with my family, watersports, being outdoors, and traveling (particularly to Walt Disney World!)

And we get public relations support from **Clif Boutelle.**



I started working as a consultant at SIOP in 2000 after 35 years at Bowling Green State University, retiring in 1999 as associate vice president of marketing and communications. Lee Hakel, who then headed the SIOP Administrative Office in Bowling Green, asked me if I would be interested in doing some part-time promotional work for the field of I-O and the work being done by SIOP members. I was familiar with I-O because of BGSU's outstanding I-O program and working with people like Bob Guion and Olin and Pat Smith. I've been at SIOP since and have greatly enjoyed working with and meeting so many outstanding members. When not at the office, I can usually be found on the golf course or traveling with my wife, Judy, to visit our children and grandchildren.

# The Virtue of Persistence

**Edwin A. Locke**
**University of Maryland**

**Kevin J. Williams**
**SUNY Albany**

**Aline Masuda**
**EADA Business School**

Everyone knows the value of resilience and persistence when trying to publish, but our story is an outlier even in that context. We thought we would share our perhaps quixotic and in hindsight somewhat humorous journey in hope that it encourages others to persevere.

Our paper, "The Effect of Simultaneous Learning and Performance Goals on Performance: An Inductive Exploration" (Masuda, Locke, & Williams, 2014), published in the *Journal of Cognitive Psychology,* was unique (at least in our view) in two important respects: (a) It was the first study (actually two studies) to look at the effects of specific learning and performance goals when given at the same time; (b) it found a variety of curvilinear relationships never seen before in the goal setting literature.

Over a period of 6 years the paper was rejected by six A journals, a B journal, and a C journal. Getting rejected is now a normal experience for everyone but what is more interesting were the types of reasons given.

1.  The most frequent (and virtually universal) criticism was that we submitted the manuscript as inductive rather than deductive. We did this because we had no basis for making deductive predictions about our major question: What would happen if the two types of goals were given together? This seemed to infuriate reviewers. This is ironic because goal setting theory was developed inductively (Locke & Latham, 1990, 2013) and could never have been developed at all if the journals in the 1960s and 1970s had been as theory manic as they are now. We could have made up phony deductions for this paper but chose not to. Our work was inductive, and it would not have been right to present it as deductive (although we were certainly pushed to do so).

2.  The first study, originally submitted alone, used self-reported goals because the assigned goal manipulations failed. The first journal we submitted to told us to replicate with successfully assigned goals before they would accept it. We did that; then they rejected it anyway.

3.  Despite the fact that this was a goal setting study, many reviewers did not seem to know the goal setting literature. A frequent problem was that many reviewers only knew the goal orientation (GO) literature. This literature is based on traits,

whereas GST is based on states. The two literatures barely overlap, and no relevant predictions could be made from the trait literature. GO can be manipulated as a state (though the goals are still not specific), but no state findings bear on our study. One reviewer claimed GST was developed deductively from the start, the exact opposite of the truth. Others did not understand what had been previously discovered about the best way to measure or assign a goal (i.e., the lowest score you would be satisfied with, which is not the same as saying the goal itself is low). Another claimed that you need incentives, other than built-in achievement motivation, to do lab studies. Others did not know the proximal-distance goal literature, and so on.

4. More bizarre, we were accused of not knowing the GS literature ourselves; this was obviously connected to #3 above.

5. We realize the bind that editors may have felt in selecting reviewers for our manuscript. In the traditional goal setting literature, there are two experts on learning goals, Gary Latham and Gerard Seijts. Latham could not be used as a reviewer because of a long time association with Locke, but Locke had never worked with Seijts and only knew him slightly. All the rejection journals refused to use Seijts despite his name and qualifications being offered. Many of the journals assumed expertise in GO was sufficient.

6. We were told by a number of reviewers that we should have used a different

design (that is, done a different study). Each one had their own opinion. But all the suggested designs were incompatible with our core purpose, which was to look at the effects of assigned performance and learning goals together. When breaking new ground, there are scores of legitimate options, including those suggested by reviewers. But at the beginning stage of research on a topic, it is simply arbitrary to claim that only one design should be used. Inductive theory building involves doing a variety of studies and then integrating them into a coherent whole. You need to start somewhere.

One might ask why we kept trying after so many failures. After all, sometimes it is just better to give up, and this is especially true if the work is, in fact, not very good. Perhaps we were just gluttons for punishment, but we were convinced that our studies would move the field forward and encourage new studies; here was high author efficacy and strong goal commitment. Of course, persistence is a mediator of goal effects.

We hope our experience might inspire other researchers, if they are convinced that their work is good. Of course, doing good work is hard. Locke may post on this at a later date.

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# Procrastination at its Best

## Piers Steel
## University of Calgary

The Cannes Creativity Festival is the "Oscars" of creative communications. Each year, over 12,000 people from 94 countries come to celebrate and compete for the titles of best and most provocative media entries. In 2013, Droga5, one of the world's top three advertising agencies, brought back the Titanium Lion award for best integrative piece. This is the story of how procrastination and I-O psychology became a key part of the package that won the award.

You can see Droga5's award winning campaign for *Prudential* at Bring Your Challenges, with your guide Professor Dan Gilbert of Harvard (of the internationally bestselling book *Stumbling on Happiness* fame). Applying elements of behavioral economics and psychology, they help people overcome the problems with planning for their financial future. Yours truly, Dr. Piers Steel, makes an entrance in Challenge 2, "I'll do it later." Yes, that's my area of expertise, procrastination, evinced by the *Psychological Bulletin* article, "The Nature of Procrastination" (Steel, 2007), winner of APA's George A. Miller award, and then later the popular nonfiction book *The Procrastination Equation* (Steel, 2010). For the latter of these, I did my best to package psychological science in a way that is attractive to the everyday audience. Details regarding my work are available on my website, http://procrastinus.com/.

Droga5 wanted two pieces. First, design an evocative way to show productive procrastination. Productive procrastination is where you put off until later with the goal of getting more done, which technically isn't procrastination (i.e., which is an *irrational* delay), but it's a common term and we are going to go with it. Here, I get to be featured in a video, which we filmed in New Jersey: Episode Two: Your Brain Is to Blame. If you watch it, you will see a classic ego depletion study (e.g., Hagger, Wood, Stiff, & Chatzisarantis, 2010). The design behind it is reviewed in this SIOP article by Clif Boutelle. Basically, we had 24 people do excruciatingly boring tasks (e.g., count all the *e*s in a postmodernist essay). We then divided them into two groups; half had to continue working while we allowed half to recharge in various ways. Some got to rest, some got to web surf, some got to play with puppies. Of note, the puppy room was the big hit and half the film crew played with them after the experiment was over, including myself. My own university has one now. The experiment worked! It was a very near thing. My statistical power analyses indicated that we should have about double the sample size at least to be dependable, but production costs had the final say. When only a third of the ego depletion group decided to put off, I was *euphemistically* nervous, as was everyone else. We didn't know what the recharged group would do, but they all chose to stay and work. The piece worked (yah science!).

We drove back to Manhattan; I had way, way too many Manhattans to celebrate; and my flight back home early (so terribly, terribly early) the next day was a harsh reminder that I'm no longer in my 20s.

The other piece was a measure of procrastination, which should have been easy because I had already two published measures. Putting the "create" back into creative, what Droga5 really wanted was something else, a typology of procrastination, as in "What kind of procrastinator are you?" This I didn't have. Step 1 was to see what everyone else did. This is where my recent review of procrastination (i.e., that *Psychological Bulletin* article) comes in handy. There were a dozen pieces pointing to different types of procrastination, such as McCown, Johnson, and Petzel's (1989) "Procrastination, a Principal Components Analysis" and Gueorguieva's (2011) PhD dissertation, "Procrastination a Measurement of Types." Though no single study covers them all, at least two suggested at least one of the following six types: **People Pleaser** (agrees to untenable tasks to avoid confrontation), **The Worrier** (puts off tasks due to anxiety), **The Unmotivated** (simply lacks motivation to move forward), **The Big Dreamer** (puts off tasks as soon as they become boring), **The Buzzer Breaker** (who puts off tasks strategically to maximize performance), and **The Distracted** (who is constantly interrupted at work). I put together descriptions and sample items and thought I was about done. The next steps should have been a tried-and-true standard test development process. Again, this wasn't what Droga5 wanted as a survey because it wasn't the creative work that's going to win awards.

Going back to the drawing board, there are parallels between the tree-like dendrograms generated by typology analyses and ipsative test development (where people have to make a choice between two alternatives). Ipsative questions can consequently act like gates at each split of the dendogram tree and, on the basis of this insight, I developed the mockup in Figure 1. The person starts along a path and the questions they take depend on the answers before. We used this as a prototype for the final version, which you can find at http://www.bringyourchallenges.com/ill-do-it-later#procrastinator. The part of putting the test questions into the narrative, "A Day in the Life of a Procrastinator," was from the people at Droga5, which is charming and brilliant. The questions are organized around choice points that a person might experience as they make their way through a typical day. Of note, if you take a close look at the nightstand in the opening question, you'll see a copy of my book *The Procrastination Equation*, a nice plug courtesy of Droga5.

Working with a world-class creative team is challenging, inspiring, and makes you really want to bring your best, to represent. It also opens the possibility of what assessment can be, beyond a series of survey items, all answered on a 1 to 5 scale. By adding an artistic element to the personality assessment, the very act of taking a test can be itself entertaining, aside from the results themselves. Indeed, our science can be made into art. One day, this needs to written up for a scholarly journal to compare the results from a standard survey or vanilla test to this one with flair. But, as you might have guessed, I've been putting it off.

"I procrastinate"

"Procrastination is a problem for me" — Disagree / Agree

"Negative emotions, such as anxiety or hate, drive my procrastination" — Disagree / Agree — Choose One

"I take on more than I should" — Disagree / Agree

Choose One

"I procrastinate because I'm tired"

"I procrastinate because of anxiety"

"It's hard to get started with all the distractions"

"My work seems pointless"

"I put the desires of others ahead of myself" — Disagree / Agree

Choose One

"I go wherever my interests take me."

"I'm constantly interrupted while working"

**The Pleaser**
Procrastination here comes from the best of intentions, where from your desire to help others, you often end up overcommitting. You tend to be more nice than assertive.

**The Explorer**
You follow your own path and focus on wherever you want, usually the more novel the better. A big picture person, details and concrete steps don't always happen.

**Environmental**
Often multi-tasking, you work with the best of intentions, but life gets in your way. Every time you settle down to your big tasks, the little ones seem to stop you.

**Discontented**
You are feeling listless reflecting about all you should do. Often, you need to wait until just before the deadline before you feel enough energy to get you going.

**The Worrier**
You set high goals for yourself, but the anxiety you feel can overwhelm and you need to put tasks aside. Sometimes, it is the deadline that forces you to work on them.

**Thrill Seeker**
For most part, you don't need advice. You love doing last minute work and have a good sense of exactly when you need to get started to get stuff done.

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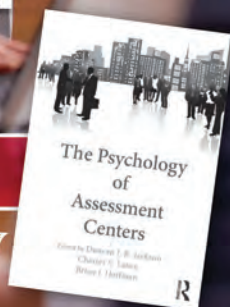
# The Development of a Content Valid Tool to Assess Organizational Policies and Practices Concerning Workplace Sexual Harassment

**Charles J. Hobson and Jana Szostek**
**Indiana University Northwest**

**Louise E. Fitzgerald**
**Professor Emeritus University of Illinois, Champagne-Urbana**

## Introduction

### Incidence and Impact

Workplace sexual harassment continues to be a challenge. High-profile problems with prominent politicians (former San Diego Mayor Bob Filner and former New York State Assemblyman Vito Lopez) and within the Department of Defense (estimated 26,000 military personnel experienced unwanted sexual contact in 2012; Thompson, 2013) have kept sexual harassment in the national spotlight. A review of recent sexual harassment-related EEOC settlements by Hobson et al. (2011) found that the average fine paid by employers was $732,976.00. Statistics from the EEOC website indicate that the agency continues to be active in pursuing sexual harassment violations, announcing settlements with 25 employers and initiating lawsuits against an additional 14 in 2013. Cases that are tried in court can result in even higher awards, as evidenced by the $1.2 million award to a 5-week employee at Tyson Foods (*West v. Tyson Foods,* 2010), in addition to the substantial costs of litigation defense (estimated average $450,000.00, Coyle & Sumida, 2005).

A large body of behavioral science research has confirmed the substantial victim-related consequences of workplace sexual harassment (Berdahl & Raver, 2011; Chan, Chun, Chow, & Cheung, 2008; Willness, Steel, & Lee, 2007). These include significant decreases in psychological and physical health, job satisfaction, engagement, and organizational commitment and higher incidences of workplace withdrawal behaviors. Employers can face increased costs for absenteeism, turnover, and healthcare.

### Prevention and Correction

Over the last 30 years, much has been written about how to address workplace sexual harassment. Five informational domains are particularly important in identifying and understanding organizational preventive and corrective strategies. First, the U.S. Supreme Court has issued 15 decisions since 1986 that involve workplace sexual harassment. These decisions provide critical interpretations of employers' prevention and correction responsibilities under Title VII of the 1964 Civil Rights Act.

Second, the Equal Employment Opportunity Commission (EEOC), as the federal enforcement authority for Title VII, has published six documents since 1980 that provide guidance to employers concerning workplace sexual harassment prevention/correction. These documents provide an interpretation of both Title VII and subsequent Supreme Court decisions, as well as action steps for remaining in legal compliance.

Third, since 1999, the EEOC has published summaries of settlements with organizations charged with workplace sexual harassment. These settlement agreements can be very useful in identifying those preventive/corrective actions deemed most important by the EEOC. Fourth, considerable behavioral science research has been conducted in the last 30 years on the topic of sexual harassment. Four recent reviews of this literature are invaluable in documenting the impact of preventive and corrective strategies in addressing workplace sexual harassment. Fifth, the Society for Human Resource Management (SHRM), the world's largest organization of HR professionals, publishes research-based documents to guide workplace decisions. The SHRM Learning System (2011), which defines the HR management body of knowledge and recommended practices, contains specific guidance as to sexual harassment prevention/correction.

### Organizational Assessment

In spite of the considerable legal, regulatory, research, and professional attention, a comprehensive sexual harassment prevention assessment tool has not been developed. This lack of a single, comprehensive assessment tool causes a number of problems. First, in legal and regulatory cases, there is no objective, agreed-upon standard to evaluate the diligence or effectiveness of a firm's efforts to address workplace sexual harassment nor to guide remedial efforts. Second, organizations are unable to conduct a thorough self-assessment and implement instrument-driven improvement strategies. Third, empirical research on the impact of organization-level factors affecting workplace sexual harassment is critically hindered.

### Purpose

The purpose of this paper is to:
- Conduct a rigorous content analysis of the five informational domains to identify organizational preventive/corrective strategies related to workplace sexual harassment, and
- Formulate a comprehensive, objective, content-valid, easy-to-use instrument

that organizations can use to assess their sexual harassment prevention/correction strategies.

## Review of Five Informational Domains

In identifying items for possible inclusion in the organizational sexual harassment prevention profile, these five overlapping informational domains were reviewed and are summarized below.

### *Supreme Court Cases*

From 1986 through 2010, the Supreme Court issued 15 decisions addressing aspects of workplace sexual harassment (see Supporting Materials via weblink). Of these, four are particularly important from a sexual harassment prevention perspective: *Meritor Savings Bank v. Vinson* (1986), *Oncale v. Sundowner Offshore Services* (1998), *Farragher v. City of Boca Raton* (1998), and *Burlington Northern & Santa Fe Railway Co. v. White* (2006). These rulings provide clear guidance on organizational preventive/corrective measures.

From *Meritor* (1986), we learn that organizations should have a policy that specifically addresses sexual harassment, provides multiple complaint filing options in addition to one's immediate supervisor, and encourages victims to report harassment. The *Oncale* (1998) court extended Title VII protection to same-sex harassment. In *Farragher* (1998), the court expanded on *Meritor*. Not only must an organization have a policy, but they should widely distribute a written sexual harassment policy to all employees, have a procedure for filing

sexual harassment complaints, monitor supervisor actions, and, as in *Meritor*, provide multiple complaint filing options. Finally, in *Burlington* (2006), we learn that policies should assure complainants that they will be protected from retaliation, thereby encouraging victims to report harassment.

### *EEOC Guidelines Concerning Workplace Sexual Harassment*

Beginning in 1980, the EEOC has issued written guidelines, often following Supreme Court decisions, concerning appropriate strategies employers should use to handle workplace sexual harassment. Six EEOC documents specifically address workplace sexual harassment (see Supporting Materials via weblink). Through these documents, the EEOC has provided specific recommendations concerning prevention of workplace sexual harassment. The Supreme Court holds these recommendations in high regard.[1] The document that provides the most descriptive and detailed guidance is the "Enforcement Guidance on Vicarious Employer Liability for Unlawful Harassment by Supervisors."

With respect to a sexual harassment policy and procedure, we learn that an employer should create, distribute, and follow a sexual harassment policy and procedure. It is the employer's responsibility to proactively work to protect employees from sexual harassment. Failure to implement and follow the policy and procedure can lead to liability should an EEOC investigation or lawsuit occur. The employer should give each employee a copy of the policy and procedure, post them in central locations

within the organization, incorporate them into the employee handbook, provide training to all employees, and redistribute them regularly (EEOC, 1999).

The policy and procedure itself should include a clear explanation of what behaviors are prohibited, a description of the complaint process with multiple reporting options, and a description of the investigation process. In addition, employees should be assured that their confidentiality will be protected as best as possible; that immediate, appropriate corrective action will be taken; and that employees will be protected against retaliation (EEOC, 1999).

The policy should prohibit all forms of sexual harassment by anyone in the workplace, including coworkers, supervisors, and clients. The employer must express nontolerance of sexual harassment from the executives to the front-line employees. Employees should be encouraged to report harassment so that management can correct the problem before it escalates (EEOC, 1999).

The complaint process should be designed so as to encourage victims and witnesses to report sexual harassment. Steps that create unreasonable obstacles should be removed. The process should be clearly explained and multiple reporting options, including persons outside the normal chain of command (such as human resources), should be available. All complaints, regardless of how management is made aware, must be investigated. Employees should also be told how to file a complaint with the EEOC and the state's fair employment agency (EEOC, 1999).

A thorough and impartial investigation should begin immediately upon notification that sexual harassment may be occurring and should not be conducted by a person whom the harasser has authority over. If the victim and alleged harasser need to be separated, care must be taken to not place a burden on the victim as this may constitute unlawful retaliation (EEOC, 1999).

Retaliation is a major concern when complaints occur. Employers need to strongly state that retaliation for reporting sexual harassment will not be tolerated. Measures must be taken to ensure that retaliation does not occur, including monitoring employment decisions that pertain to complainants and witnesses (EEOC, 1999).

In remediating the effects of the harassment, the company should ensure that the harassment has stopped, that the harassment does not recur, and that the impact of the harassment on the victim(s) is corrected. Discipline should be appropriate for the severity of the harassment (EEOC, 1999).

Managers, as the front-line representatives of the business, should be taught what to do when a complaint is brought to them, including a requirement to report complaints to designated officials. Managers should know what is expected of them in these situations and should receive periodic training to explain the policy, the behaviors that are forbidden, how to effectively respond to a complaint, and the importance of not retaliating against those complaining of or witnessing harassment. The employer also has a duty to monitor managers' behavior

to ensure that managers are carrying out their duties appropriately and are not engaged in harassment. When hiring managers, employers should screen for a history of harassment (EEOC, 1999).

### *EEOC Settlement Agreements*

The EEOC publishes press releases announcing settlement agreements reached with employers named in workplace discrimination complaints filed with the agency. These settlement agreements typically include information about the plaintiffs, defendant, nature of the harassment, and content of the negotiated agreement, including any monetary damages and corrective/preventive actions to be implemented by the employer.  Analysis of these agreements can be useful in identifying the organizational corrective/preventive actions considered most important by the EEOC.

From 1999 until early 2010, there were 65 settlement agreements posted on the EEOC website that dealt specifically and exclusively with workplace sexual harassment complaints (see Supporting Materials via weblink). Hobson et al. (2011) reviewed these 65 settlement announcements and identified the type and frequency of corrective/preventive actions required by the EEOC, if not already in place at the

defendant organizations. (Please see Table 1.) These findings support the key themes provided in the various EEOC guidelines and Supreme Court decisions, namely that policies and procedures specifically related to sexual harassment prevention should be developed, distributed, and followed.

### *Behavioral Science Literature Reviews*

Four recent literature reviews have summarized the behavioral science research on workplace sexual harassment (see Supporting Materials via weblink). Although this research overlaps the EEOC Guidelines and Settlements and Supreme Court rulings, unique recommendations concerning the prevention and correction of workplace sexual harassment can be gleaned from these studies. Of these four literature reviews, Hobson, Kesic, Rosetti, and Guziewicz (2003) provide the most complete set of recommendations. Their unique recommendations are provided here.

Sexual harassment training should be developed and presented by professionally qualified trainers, supported by senior management, and interactive. Training should be provided to all employees, including senior management, and be mandatory for all managers (Hobson et al., 2003).

Complaint investigations should be conducted by professionally trained investigators, utilized in response to every complaint recorded, and result in a written report. Investigations should

Table 1
*EEOC-Required Corrective/Preventive Action*

| | Frequency (out of 65) | Percentage |
|---|---|---|
| Managerial training | 62 | 95% |
| Employee training | 47 | 72% |
| Sexual harassment policy development | 23 | 35% |
| Sexual harassment policy posting | 26 | 40% |
| Sexual harassment policy distribution | 12 | 18% |
| Complaint handling process development | 24 | 37% |

include immediate and documented monitoring of the complainant and the workplace to ensure that harassment has ceased and no retaliation occurs. If warranted, the harasser should be referred for counseling services (Hobson et al., 2003).

Corrective action should include continued, documented, periodic monitoring of the complainant and workplace to ensure that the harassment has stopped and no retaliation has occurred. Disciplinary action should be proportional to the severity of the offense, including termination for repeated or egregious misconduct (Hobson et al., 2003).

### Society for Human Resource Management Guidelines

SHRM publishes professional guidelines concerning workplace sexual harassment in Module Two, Workforce Planning and Employment, of the SHRM Learning System (2011). Specific recommendations include having a written policy on workplace sexual harassment that includes a clear definition and examples of sexual harassment, a clear statement that the organization will not tolerate sexual harassment, a statement that the policy applies to all business-related functions, even off-site functions and business travel, and a complaint procedure that encourages employees to come forward. Organizations should train managers and employees, use multiple methods to effectively communicate the sexual harassment policy to all managers and employees, promptly and thoroughly investigate all complaints, and institute corrective/disciplinary actions for documented sexual harassment (SHRM, 2011).

## Instrument Development

The process of developing this content-valid profile involved the following steps: item identification, item category identification, item assignment to categories, and instrument scoring. Although the tool is not an employee selection device, the methodology employed closely maps onto major requirements for establishing evidence of content validity provided in the Society for Industrial and Organizational Psychology's (SIOP) *Principles for the Use of Personnel Selection Procedures* (2003). The most important and relevant of these include: (a) an accurate and comprehensive delineation of the content domain of interest, (b) clear decision rules for identifying important elements in the content domain, (c) the use of qualified and unbiased SMEs in analyzing the content domain and identifying important elements, and (d) straight forward guidelines for administration and scoring (SIOP, 2003).

### Item Identification

Based upon content analyses of the five informational domains, specific requirements and recommendations concerning the prevention and correction of workplace sexual harassment were identified. Combining these requirements/recommendations across the five domains produced a pool of 45 unique items.

### Item Category Identification

An overall review of the five content domains indicated that the derived requirements/recommendations could be catego-

rized as a set of five conceptually distinct aspects of organizational efforts to prevent and correct workplace sexual harassment. These categories are sexual harassment policy, complaint filing procedure, training and other preventive measures, complaint investigation, and corrective action.

### Item Assignment to Categories

After the five major categories were identified, the 45 individual items were assigned to the most applicable category. Table 2 shows the final distribution of items across the five categories.

### Instrument Scoring

To enhance ease of use and interpretability, a scoring system was created by allocating 100 points across the five categories. Differential weighting of the five major instrument categories was based on three criteria: Supreme Court decisions establishing legal requirements, emphasis across the five content domains, and strength of relevant behavioral science research findings. Members of the research team assigned points to each of the five major instrument categories, summing to 100 total points. The distribution of available points for each of the five major categories is provided in Table 3.

These same criteria were used to assign points to individual items within each major category. The final instrument provides an overview of each item, the documents to review, and the allotted points, along with a break out of which knowledge domains are pertinent to individual items on the profile (the full profile is available here, via the authors' weblink).

### Potential Applications

There are several potential applications of the profile. First, the profile could be useful in adjudicating or settling workplace sexual harassment complaints. The diligence and effectiveness of an organization's efforts can be objectively and comprehensively measured with the profile. It can also provide a framework for agreement on needed remediation.

Second, the profile can be used for self-assessment and improvement. An initial score on the profile can demonstrate how well a firm is currently performing in its prevention/correction efforts, as well as identify areas for improvement. Progress can be measured by completing the profile multiple times and comparing scores.

Third, the profile could be employed as a mechanism to estimate organizational risk

Table 2
*Item Distribution Across Categories*

| Major category | Number of Items |
|---|---|
| Sexual harassment policy | 15 |
| Complaint filing procedure | 9 |
| Training | 8 |
| Complaint investigation | 7 |
| Corrective action | 6 |

Table 3
*Distribution of Points Across Categories*

| Major category | Available points |
|---|---|
| Sexual harassment policy | 15 |
| Complaint filing procedure | 15 |
| Training | 20 |
| Complaint investigation | 20 |
| Corrective action | 30 |

associated with sexual harassment claims for purposes of purchasing employment practices liability insurance. Profile scores could be utilized in the calculation of premiums and to provide client firms with specific advice to reduce both risks and premiums.

Finally, the profile provides researchers with an objective, comprehensive, content-valid assessment tool to measure the diligence and effectiveness of organizational efforts to prevent and correct workplace sexual harassment. The availability of such a tool should help stimulate and guide future research on this topic.

### Future Research

Further research in testing and developing the profile would be useful. Although the profile is a content-valid representation of preventive/corrective measures contained in the five relevant informational domains, additional research would be useful in empirically examining the profile. The availability of a large sample, along with important outcome variables (i.e. sexual harassment reported incidence rates, internal complaints filed and resolutions, EEOC complaints filed and resolutions, and court rulings) would allow one to conduct a factor analysis to confirm the statistical appropriateness of the profile's five major dimensions, use multiple regression analysis to calculate dimension and item weights, assess dimensional and overall scale reliability, estimate criterion–related validity coefficients, and construct organizational norms, including percentiles, measures of central tendency, and measures of dispersion.

Further research would also be helpful in assessing the utility of three applications of the profile discussed above, namely its effectiveness in settling/adjudicating complaints of workplace sexual harassment and formulating appropriate remedies, its effectiveness as an organizational self-assessment and improvement tool, and its value in organizational risk assessment/minimization and the calculation of premiums for employment practices liability insurance.

### Conclusions

The Hobson, Szostek, and Fitzgerald Organizational Sexual Harassment Prevention Profile fills an important void in the field of workplace sexual harassment. It is based upon a rigorous analysis of five important informational domains and provides a comprehensive, objective, content-valid, easy-to-use instrument to assess the adequacy of an organization's sexual harassment preventive and corrective actions. As such, it can be useful to both practitioners and researchers in law and human resource management.

[1] "[T]hese guidelines, while not controlling upon the courts by reason of their authority, do constitute a body of experience and informed judgment to which courts and litigants may properly resort for guidance." (General Electric Co. v. Gilbert, 1976).

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# Who Bought Who? A Look at the M & A History of IBM

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Over the last few years, there has been a whirlwind of mergers, acquisitions, and name changes among consulting organizations. Tracking the changes can be dizzying. In an effort to map those changes, we developed a series of consulting firm merger charts. Our first is for IBM. We started with their two largest acquisitions, PricewaterhouseCoopers Consulting and Kenexa, and we branched from there. Notice that IBM has transitioned from a computer company to a firm with a dominant footprint in management consulting.

The map is based on a search of the IBM website, the PwC website, and SEC filings for both IBM and Kenexa. In addition, we contacted SIOP members to help us fill in

some gaps. The result is a selected history of the firms that are relevant to I-O psychology and human resources.

A high-resolution copy of the map can be downloaded here.

Next issues: Corporate Executive Board, Korn Ferry, and the independents.

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# SIOP Unveils New Government Relations Webpage!

To help keep members informed of various government relations efforts being pursued by the Society, SIOP has recently unveiled a new Government Relations page.

This page, found under the new "Advocacy" drop-down menu of SIOP's homepage, will serve as the hub for all announcements, news, and resources related to SIOP's advocacy efforts on Capitol Hill and with various governmental agencies. SIOP encourages its members to stay informed and involved with the Society's government relations through the resources on this page as well as the "SIOP in Washington" column in TIP and regular updates in the monthly Newsbriefs e-newsletter.

## http://www.siop.org/Advocacy/

# Identifying the Competencies, Critical Experiences, and Career Paths of I-O Psychologists: Consulting

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This article, the third in a series on the SIOP Careers Study, discusses the career paths of those working as external consultants hired to give professional advice to organizations *outside* of their own organization. We present results from both qualitative subject matter expert (SME) interviews and the quantitative SIOP Careers Study data. The basic consulting career path, including competencies (i.e., a skill developed that is necessary for success on the job) and critical experiences (i.e., on-the-job experiences that define what is required to perform to prepare for the career level), are discussed. For more information on the study's background, please refer to the *TIP* Practitioner's Forum by Zelin, Doverspike, Oliver, Kantrowitz, and Trusty, 2014; the Academia *TIP* feature article by Zelin, Oliver, Doverspike, Chau, Bynum, and Poteet (2015, January); and the project's technical report will be posted here when it becomes available.

## Qualitative Data: SME Interviews Participants

Seventeen SIOP members who work in the consulting sector were interviewed for this study. The SMEs for 14 of the 17 interviews averaged 19.54 years of experience in the consulting sector, with a range of 8–36 years (years of experience was not available for three of the SMEs). Senior consultant, senior scientist, director, senior director, vice president, partner, and CEO/president/founder represent a selection of the job titles held by participants.

Acknowledging that there are many different sizes, organizational structures, and focuses of consulting organizations, we interviewed SMEs within many different organizational settings. Consulting firms represented included those who were primarily government focused, primarily nongovernment focused, and those which focused on both. With regard to size, the consulting organizations represented in the SME interviews ranged from seven employees to thousands of employees and included a wide range of managerial levels.

### Methodology

Similar to the academia data collection (Zelin et al., 2015), structured interviews were conducted to identify competencies and critical experiences necessary for success. See Appendix A for sample questions used during the interview. The initial job-level structure used to examine the career paths contained five levels for competencies and critical experiences to be identified: individual contributor, expert individual contributor, manager, manager of managers, and executive.

### Results

Within the consulting sector, we found that regardless of consulting organization, I-O psychologists followed three main job responsibility tracks: project consultant, research consultant, and management. Some consulting organizations combined the research and project career paths such that consultants were responsible for *both* client-facing and research-based projects, whereas others maintained a separation between the two career paths.

Where there was separation between the two paths, project consultants were mainly responsible for client-facing duties, whereas research consultants often conducted internal-facing work and did not regularly interact with clients. Some project and research consultants chose not to, or were not provided the opportunity to, move into management roles and instead focused on becoming an expert within their particular area or domain. Thus, their career paths included moving from an individual contributor position to an expert individual contributor position. Project consultants who were considered expert individual contributors worked directly with and were responsible for maintaining strong relationships with large, long-term clients. Research consultants, however, became experts within a particular domain (e.g., selection, coaching) and reported working with project consultants on specific client needs.

Other project and research consultants took a management track and followed the career path of individual contributor → manager → manager of managers → executive. For project consultants, this path meant responsibility for creating and maintaining portfolios with clients, building more rapport with clients as they moved up their career ladder, and managing other consultants. For research consultants, this path meant overseeing various research projects and having multiple subordinates.

Participants noted that the size of the consulting firm often dictated the complexity of the management structure. Many of the smaller organizations (fewer than 50 employees) often only had two (project/research consultant and CEO) or three (project/research consultant, manager, CEO) levels. CEOs in the smaller organizations often directly oversaw individual contributors, provided direct feedback, and also had a hand in many of the projects.

The size of the consulting firm also dictated the scope of clientele. Small consulting firms (e.g., approximately 50 or fewer employees) often sold their services locally and throughout a region, midsized firms (e.g., approximately 51–250 employees) increased their sales throughout a region and expanded nationally, whereas large consulting firms (e.g., usually greater than 250 employees) often engaged in global consulting in addition to national, regional, and local consulting projects. As a result, employees of medium- and large-sized consulting firms were typically required to be willing to travel on a regular basis and, in the case of large global consulting firms,

may have been presented with opportunities to become an expatriate.

Frequently, project consultants were promoted based on how successful they were interfacing with clients, whether they could independently generate business with new clients, whether they could obtain client referrals, and whether they could expand the services provided to current clients (i.e., offer training services after successfully creating a selection system). The higher one moved up the career ladder within the organization, the larger their client portfolios became. As a consultant's client portfolio increased, he or she became involved in a wider range or projects in which he or she was the lead or was in charge of assigning someone else to be the lead. Within both the managerial and expert individual contributor tracks it was expected that consultants would bring in new clients and accounts prior to receiving promotions.

In contrast, some organizations noted that their research consultants were more involved with the statistics, analyses, and item/content development and were typically more likely to have a PhD than a master's degree. Limited information was available for promotion in the research consultant track, but one organization noted that the career-level hierarchy is flatter for research consultants than for project consultants as the work requirements were similar and the primary difference was in the number of subordinates.

SMEs also noted that most consulting organizations primarily promoted employees from within; it became less common

to hire from outside the organization at the manager of managers and executive levels. In some organizations, the manager of managers and executive roles were not filled by I-O psychologists. This often occurred in large organizations, especially government-focused consulting firms, where the services offered were broader than the field of I-O psychology alone.

Having competency in financial management was critical throughout all levels of the organizations, but it was especially important for manager of managers and executive roles. In addition, innovation, creativity, planning, organization, and attention to detail were essential skills to being a successful consultant at all levels. Performance criteria often included the extent to which client needs were met, the extent to which high quality deliverables were produced in a timely manner, number of billable hours, and the demonstration of required competencies.

**Quantitative Data: Careers Study Survey**

### Methodology

The University of Akron's Center for Organizational Research (COR) graduate students produced a master list of competencies and critical experiences specific to consulting by organizational level from the SME interviews. To facilitate comparisons across levels, survey respondents were asked to rate all competencies and experiences across the consulting sector regardless of their current level (e.g., self-identified individual contributors rated the same competencies as other levels within

consulting). For further information about the Careers Study Survey methodology, please see Zelin, Oliver, Doverspike, Chau, Bynum, & Poteet (2015, January) and the project's technical report posted on the SIOP webpage.

### Participants

The SIOP Careers Study included a total of 477 participants who identified as working in consulting and who completed at least a portion of the survey. Participants had an average age of 48 years ($SD = 14.9$ years). Slightly fewer than half (46.6%) of the participants were female, and the majority (89.5%) self-identified as White, with the next highest participant identification being Asian/Pacific Islander (3%). Three participants had previously, or concurrently (see Zelin et al., 2015), worked in academia, and one participant indicated previously working within the industry sector. Approximately 12% of respondents indicated having top-secret government-issued security clearances, and a few participants indicated having additional certifications or licensures, most commonly including certifications from the Society for Human Resource Management. Approximately 80% of participants received their PhD and 20% received their master's degree.

### Results

After analyzing the results from both the qualitative and quantitative data, we determined that the consulting career path model was accurately represented using the five initial job levels following two separate routes: expert individual contributor
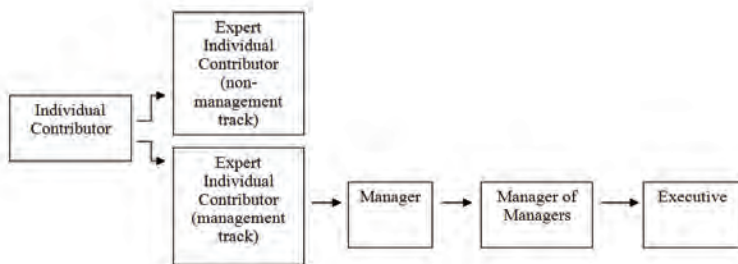
*Figure 1*. Consulting career path.

or managerial. Oftentimes the decision on which career path to take was dependent on the individual employee, but other times it depended on the organization's needs and structure. For instance, some organizations did not have the need for someone to take an expert individual contributor position, and thus the individual would need to move into a managerial position to remain with the organization or move to a different organization which offered such a position.

### *Competencies*

Information regarding all of the competencies (including mean importance ratings, standard deviations, and information about the career stage in which the competencies were learned) can be found in the technical report. Tables 1 and 2 list the top-10 competencies necessary for success within each of the five job levels and the top-five competencies aggregated across all of the levels, respectively.

Many of the competencies necessary for success as an individual contributor continued to be important when moving up the consulting job ladder. However, there were differences with the competency's importance ranking across the levels. For instance,

written communication was rated by individual contributors as the most important competency for success. However, it dropped to third most important competency at the expert individual contributor and managerial levels, disappeared completely for manager of managers, and reemerged as the ninth most important competency at the executive level.

An interesting trend appeared when analyzing where participants indicated they learned the critical competencies necessary for success at each level. At the earlier stages in their career, participants noted that they learned certain competencies during their graduate school career. However, a greater percentage of participants at higher levels in the organization noted that they learned the *same competencies* on the job rather than during graduate school. For instance, for oral communication, 62.5% of individual contributors indicated they learned the competency in graduate school versus 18.8% on the job, whereas only 12.5% of managers of managers indicated they learned the competency in graduate school versus 62.5% on the job. Leadership was another example of the trend, as 43.8% of individual contributors indicated developing the competency in graduate school versus 28.1% on the job, whereas no manager of managers reported developing the competency in graduate school, but 87.5% reported developing the leadership competency on the job.

**Table 1**
*Top-10 Competencies for Each Level Within Consulting*

| Top Competencies | | | | |
|---|---|---|---|---|
| **Individual contributor** | **Expert individual contributor** | **Manager** | **Manager of managers** | **Executive** |
| **1.** Communication: Written[a] | **1.** Communication: Verbal[a] | **1.** Communication: Verbal[a] | **1.** Communication: Verbal[a] | **1.** Integrity[a] |
| **2.** Critical thinking[a] | **2.** Ethical behavior[ab] | **2.** Ethical behavior[a] | **2T.** Decision making[a] | **2.** Trustworthiness[b] |
| **3.** Communication: Verbal[a] | **3.** Communication: Written[a] | **3.** Communication: Written[a] | **2T.** Problem Solving[a] | **3.** Communication: Verbal[a] |
| **4.** Interpersonal skills[a] | **4T.** Critical thinking[a] | **4T.** Interpersonal Skills[a] | **2T.** Strategic thinking | **4.** Ethical behavior[b] |
| **5T**. Knowledge of validation principles | **4T.** Integrity[a] | **4T.** Adaptability[a] | **5T.** Critical thinking[a] | **5.** Interpersonal skills[a] |
| **5T.** Initiative[a] | **4T.** Trustworthiness[ab] | **6.** Trustworthiness[a] | **5T.** Ethical behavior[ab] | **6T.** Critical thinking[a] |
| **5T.** Problem solving[a] | **7.** Interpersonal skills[a] | **7T.** Customer Service | **7.** Prioritization | **6T.** Initiative[a] |
| **8.** Attention to detail | **8.** Conscientiousness[a] | **7T.** Ethical behavior[a] | **8.** Interpersonal skills[a] | **8.** Adaptability[a] |
| **9.** Conscientiousness[a] | **9.** Problem solving[a] | **7T.** Project management | **9.** Adaptability[a] | **9.** Communication: Written[a] |
| **10.** Ethical behavior[a] | **10.** Self-discipline | **10.** Decision making[a] | **10T.** Initiative[a] | **10.** Decision making[a] |
| | | | **10T.** Integrity[a] | |

*Note:* T indicates same means. Superscripts reflect potential mean differences for the same competencies across levels. The same competency across levels sharing the same superscript had means that did not differ from one another (e.g., (e.g., Communication: Written compared across individual contributor, expert individual contributor, manager, manager of managers, and executive). The same competency across levels with a different superscript reflected a significant mean difference (e.g., trustworthiness between executive and manager differed; trustworthiness for expert Individual contributor did not differ from manager or executive as it shares the same superscript with both).

It should be noted that participants rated some of the competencies as learned most often in graduate school across all levels, whereas other competencies were mostly learned on the job. Knowledge of multiple content areas in psychology, data analysis, critical thinking, knowledge of test development, knowledge of validation principles, research skills, and psychometrics were all rated highly as competencies developed in graduate school regardless of level within the organization. Business development, coaching, creating a vision, customer service, decision making, delegation, political savvy, and product knowledge were all rated higher as developed on the job rather than in graduate school or structured training. Overall, most of the participants indicated that the majority of competencies were developed either in graduate school or on the job, whereas very few were learned through structured training.

### Critical Experiences

As with all of the listed competencies, means and standard deviations for *all*

**Table 2**
*Top-Five Consulting Competencies Across Levels*

| Overall top-five competencies | | |
|---|---|---|
| **Competency** | *M* | *SD* |
| **1.** Communication: Verbal | 4.65 | 0.59 |
| **2.** Ethical behavior | 4.58 | 0.66 |
| **3.** Critical thinking | 4.57 | 0.60 |
| **4.** Integrity | 4.56 | 0.65 |
| **5.** Trustworthiness | 4.54 | 0.65 |

critical experiences can be found in the technical report. Tables 3 and 4 display the top-10 critical experiences for success in consulting at each level, and the top-five critical experiences for success across all levels, respectively.

Although participants rated many of the same critical experiences as important for success across all levels, they noted a few differences in the critical experiences necessary for success across the levels. Employees at the nonmanagement or lower management levels reported that, to be successful, an employee should be able to contribute to multiple projects, work

independently with minimal supervision, follow timelines and budgets, and assist on project delivery. As an employee was promoted to higher managerial levels, his/her ability to work directly with clients, effectively allocate resources, and expand and maintain his/her client contacts was increasingly important for success.

## Final Career Path Models and Future Directions

Interview and Careers Study Survey results indicated that five levels best capture consulting careers: individual contributor, expert individual contributor, manager, manager of managers, and executive. Often, individuals within the consulting sector can choose whether to take a management track or an expert individual contributor track, frequently based on their career goals and/or individual capabilities. However, this choice can also be limited by an organization's hierarchical structure and current positions available. Of the top-10 competencies across career levels, most of the competencies an individual contributor needed to master for success were found throughout all levels, with the differences appearing in rank of importance at different levels. In contrast, although some of the top-10 experiences were similar across levels, others showed marked differences. Employees in individual contributor and lower management levels suggested that one needs to contribute to multiple projects and work independently for success, whereas employees in higher managerial positions were expected to work directly with clients and expand and maintain their client contacts for success.

These findings on consultant career paths have implications on the education of consultants by graduate schools, employers, and professional organizations. The relative importance of competencies, and where they were learned, differed somewhat across job levels. Specifically, experience on the job appeared to take on increased importance for development as one moves to higher-level jobs throughout his/her career. The emphasis placed on on-the-job experience for development reinforces the importance for consulting firms to identify and provide purposeful assignments and experiences that help grow their consultants' capabilities. At the same time, this finding may also highlight the benefit of graduate programs helping students to find practical experiences that they can utilize to start developing consulting skills that are not the traditional focus of graduate school training.

The extent that formal and structured development opportunities could be leveraged even more to help consultants gain the skills needed for broader, higher job levels may also be worth consideration. Specifically, as skills such as business development, delegation, coaching, creating a vision, and decision making were reported to be learned more on the job, there may be opportunities for consulting firms, academic institutions, and professional organizations to identify opportunities for structured training or continuing education activities for I-O psychologists to develop these consulting skills and for I-O psychologists take advantage of these opportunities. The upcoming preconference workshops at the 2015 SIOP Annual Conference entitled, "Half-Day MBA: Sharpen

Table 3

*Top-10 Critical Experiences for Each Level Within Consulting*

| | | Top critical experiences | | |
|---|---|---|---|---|
| **Individual contributor** | **Expert individual contributor** | **Manager** | **Manager of managers** | **Executive** |
| **1.** Contribute to the success of projects or consulting assignments[a] | **1.** Contribute to the success of projects or consulting assignments[a] | **1.** Contribute to the success of projects or consulting assignments[a] | **1T.** Monitor outcomes of assigned projects[a] | **1.** Develop strong relationships with client contacts[b] |
| **2.** Work independently with minimal supervision[a] | **2.** Work independently with minimal supervision[a] | **2**. Interact with clients regarding requests, inquiries, and questions[a] | **1T.** Manage relationships and networks with others in the organization[a] | **2.** Maintain composure under pressure[a] |
| **3**. Maintain composure under pressure[a] | **3.** Maintain composure under pressure[a] | **3.** Assist with project delivery[a] | **1T.** Oversee and guide projects of others | **3.** Attend client meetings to build client relationships[a] |
| **4.** Collaborate with others on various projects[a] | **4.** Present information at client meetings[a] | **4.** Develop strong relationships with client contacts[ab] | **4.** Manage performance of subordinates | **4.** Contribute to the success of projects or consulting assignments[a] |
| **5.** Present information at client meetings[a] | **5.** Attend client meetings to build client relations[a] | **5.** Present information at client meetings[a] | **5T.** Attend client meetings to build client relations[a] | **5T.** Present information at client meetings[a] |
| **6.** Develop strong relationships with client contacts[ab] | **6.** Develop strong relationships with client contacts[a] | **6T.** Attend client meetings to build client relations[a] | **5T.** Serve as a subject matter expert in a given area[a] | **5T.** Interact with clients regarding requests, inquiries, and questions[a] |
| **7.** Attend client meetings to build client relations[a] | **7.** Interact with clients regarding requests, inquiries, and questions[a] | **6T.** Follow timelines and budgets on project work[a] | **5T.** Allocate resources effectively | **7.** Manage relationships and networks with others in the organization[a] |
| **8.** Follow timelines and budgets on project work[a] | **8.** Serve as a subject matter expert in a given area[a] | **8.** Maintain composure under pressure[a] | **8T.** Present information at client meetings[a] | **8.** Maintain high client retention rate |
| **9.** Monitor outcomes of assigned projects[a] | **9.** Follow timelines and budgets on project work[a] | **9.** Manage relationships and networks with others in the organization[a] | **8T.** Contribute to the success of projects or consulting assignments[a] | **9.** Expand number of clients |
| **10T.** Assist with project delivery[a] | **10.** Collaborate with others on various projects[a] | **10.** Understand how to apply I-O psychology consulting skills in a way that enhances business[a] | **8T.** Provide developmental opportunities to subordinates | **10T.** Work independently with minimal supervision[a] |
| **10T.** Manage relationships and networks with others in the organization[a] | | | | **10T.** Understand how to apply I-O psychology consulting skills in a way that enhances business[a] |

*Note* : T indicates same means. Superscripts indicate mean differences, if any, for the same experiences that appeared across the levels (e.g., Mean ratings for "Maintain composure under pressure" compared across individual contributor, expert individual contributor, manager, and executive did not differ from one another as they share the same superscript). The same experiences across levels with a different superscript reflected a significant mean difference (e.g., Means ratings for "Develops relationships with client contacts" differed between executive and expert individual contributor as they had different superscripts).

Table 4

*Top-Five Consulting Critical Experiences Across Levels*

| Overall top critical experiences | | |
|---|---|---|
| **Competency** | *M* | *SD* |
| **1.** Contribute to the success of projects or consulting assignments | 4.67 | 0.66 |
| **2.** Develop strong relationships with client contacts | 4.55 | 0.79 |
| **3.** Maintain composure under pressure | 4.54 | 0.72 |
| **4.** Present information at client meetings | 4.50 | 0.78 |
| **5.** Attend client meetings to build client relations | 4.49 | 0.83 |

Your Business Acumen" and "Coaching for Change: Practical Tools for I-O Psychologists" are examples of such structured learning opportunities.

Results from the study can help students and early career individuals decide whether a career path in consulting is a good fit for them, and, if so, which career paths within consulting are most attractive. We suggest examining the profile of critical competencies by position and level while realistically assessing one's own competency profile and interests. In addition, lifestyle preferences

and career aspirations should be considered when selecting the specific firms at which to seek employment. There are a multitude of successful consulting organizations within the United States, and they vary widely on a plethora of dimensions that drive the work experience. These dimensions include, for example, number of employees, areas of focus, travel requirements, and managerial structure. SMEs suggest that one should consider their ultimate career goals before deciding on the organizations to which to apply. For instance, is national or international travel of interest? If yes, perhaps selecting a larger organization with locations across the United States and in other countries would be a better fit than an organization that works with local businesses. How hierarchically flat or tall an organization's managerial structure is can also impact whether an individual can advance in expert individual contributor roles and/or in managerial positions. Thus, if becoming an expert individual contributor is an ultimate career goal, it would be in the interest of the individual to seek out employment opportunities that offer those positions.

This study provides insight into the competencies necessary for success at various levels within the consulting sector. Our study also offers direction to academic institutions, consulting firms, and professional organizations such as SIOP on critical experiences and structured training programs to help prepare consultants for the next step in their careers. As with the other three sectors, we recognize that the current study only captures basic career path moves for consulting as a whole. Future researchers may want to expand on this study to examine if career paths and competencies required for success vary across different types (e.g., size, government vs. nongovernment) of consulting organizations.

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# Philadelphia Conference Highlights

**Kristen Shockley**
**Program Chair**

**Eden King**
**Conference Chair**

Here are some not-to-be missed highlights from the SIOP 2015 conference! (Please see the January 2015 issue of *TIP* and the online program for more comprehensive descriptions.)

## Wednesday

Preregister for the excellent set of preconference activities-- including workshops, consortia, and a local tour—or join us in celebrating the start of the conference at the all-conference welcome reception from 6-8pm.

## Thursday

Opening Plenary: Congratulate award winners, hear the presidential address of **Jose Cortina**, and kick the conference off in style!

The conference program gets off to a rousing start with the day-long Theme Track, "Pursuing Better Science in Organizational Psychology" in the Independence Ballroom, three distinguished awards presentations (Distinguished Teaching Contributions, Professional Contributions, and Career Contributions to Science), the first-ever Dunnette Prize (winner will be announced to attendees for the first time in the session, but trust us, you don't

want to miss honoring this celebrated SIOP member!), and two Executive Board special sessions (Data-driven Approaches to Improving SIOP and A Conversation with SIOP Leadership).

6:00: Thursday Evening Reception: Snack on hors d'oeuvres and chat with the top poster winners!

## Friday

Friday's many highlights include four Friday Seminars (Statistical and Methodological Procedures for Meta-Analysis, The Science of Diversity at Work, Longitudinal Data Analytic Techniques Using Latent Variables, Dark Triad and Socially Aversive Personality Traits in the Workplace) and the two Distinguished Early Career Contributions to Practice Awards. The day also offers an Executive Board session (Improving International Testing Practice With the International Test Commission) and two Alliance sessions (Ethics and Malpractice in I-O Research: Problems, Solutions and Prospects and Building Cross-Cultural Research Teams–Practical Advice From the Experts). Last, you won't to miss the Invited Session on the "Future of HR from the Perspective of Technology" or our first ever HR Practitioner Track sessions (all day in Grand C!).

### Saturday

Saturday will close the conference programming just as strongly as it started, so make sure to stay the whole day! Saturday features the 5th annual Invited IGNITE session (Research This! Casting Aside the Publication Chains to IGNITE Organizations) and another exciting Invited Session panel (You Think You Can Solve an I-O Problem?). Take strides toward SIOP's science–practitioner mission by attending the Master Collaboration (Global I Meets Global O–Research and Practice) and check out the several Executive Board and Alliance sessions throughout the day (SIOP Living History Series With **Frank L. Schmidt**; Revision of SIOP's Master's and PhD Education Guidelines; I-O Without Borders: Our Impact in a Multidisciplinary World; Working With Mental Health Issues).

4:30: Closing Plenary With Keynote Address by Amanda Cox: Be simultaneously dazzled and informed by the data visualization strategies of an award-winning member of the *New York Times* graphics team. We'll also have a chance to hear the vision of incoming president **Steve Kozlowski.**

6:00: Closing Reception: End the conference on a high (and peppy!) note with the American Bandstand-themed closing reception. We will celebrate the 30th anniversary of the SIOP conference in Philadelphia style.

### Throughout the Program

- Posters (20 different sessions this year, including over 500 posters!)
- 5 Master Tutorials
- 5 Debates (on the role of theory in I-O, performance ratings, mindfulness in the workplace, and ethical issues with identified employee surveys)
- 13 Communities of Interest
- 18 Alternative Session Types featuring creative and high-energy formats conceived by submitters
- Over 800 sessions and posters total!

Our amazing conference is just around the corner. Opportunities for learning, networking, and inspiration await you in Philadelphia!

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# Professional Practice Committee Updates

**Mark Poteet**
**Organizational Research & Solutions, Inc.**

Greetings SIOP! At the time of this writing, the SIOP Contemporary Selection Practice Recommendations task force, being facilitated by Professional Practice Committee (PPC) members **Eric Dunleavy, David Dubin,** and **Kyle Morgan**, has created and submitted for final review a series of white papers on the topics of Minimum Qualifications and Data Aggregation in Adverse Impact Measurement, and a Review of the Scientific Reference Manual. These papers are the culmination of several months of hard work by task force members and, once reviewed, will be submitted to the EEOC in order to facilitate ongoing dialogue regarding potential policy updates and best practices.

The Practitioner Mentoring subcommittee has wrapped up the 2014 group mentoring program and has put together a terrific program of mentoring topics for the 6th annual speed mentoring event at the 2015 Annual Conference in Philadelphia, PA. Thanks to the efforts of **Maya Garza**, **Meredith Ferro**, **Lizzette Lima**, **Megan Leasher**, and **Cole Napper**, the speed mentoring event continues to evolve. For example, the length of spend mentoring sessions has been extended, and building upon a successful pilot at last year's conference, students looking to enter a practitioner-oriented career path can participate in addition to early-career practitioners. The subcommittee tasked with developing a business acumen-oriented competency model for practitioners has concluded its focus groups, created a draft model, and is currently creating a validation survey that it plans to have submitted to SIOP membership by the publication date of this article. Thanks to **Matthew Minton, Beth Bynum, Samantha Chau**, Kyle Morgan, and Cole Napper for their stellar work on this initiative.

The Practitioner Review Database is going through its final stages of testing, revision, and review. The subcommittee of Beth Bynum, Meredith Ferro, Kyle Morgan, and **Ben Porr** is working diligently to ensure a user-friendly and accurate system to capture the interests of potential practitioner journal reviewers. SIOP members will first be notified by email when the database is ready for population, followed by an extensive "marketing" plan through various online and social media venues.

The Practitioner Needs Survey team of **Joy Oliver**, Meredith Ferro, Cole Napper, and Ben Porr is in the final stages of reviewing its survey and plans to submit it to SIOP membership within the next week or two of this writing. If you receive the survey invitation, please take the time to complete the survey as its results will likely influence the PPC project agenda for the next several years.

Two new SHRM–SIOP Collaborative Educational Series white papers, one entitled "Social Science Strategies for Managing Diversity: Industrial and Organizational Opportunities to Enhance Inclusion" and the

other entitled "Putting the 'Performance' Back in Performance Management" were recently completed and posted to the respective websites. You can view the white papers at the URLs: http://www.siop.org/SIOP-SHRM/ or http://www.shrm.org/research/pages/shrm-siopscienceofhrseries.aspx. Many more papers are in various stages of production so look forward to more contributions from this excellent se-

ries, and thanks to **Jim Kurtessis** and David Dubin for their leadership on this project.

As usual, if you have any ideas, questions, or recommendations on other initiatives that the PPC should consider to advance our goals of promoting and advancing the practice of I-O psychology, please let me know at mlpoteet@verizon.net. Thanks for reading!
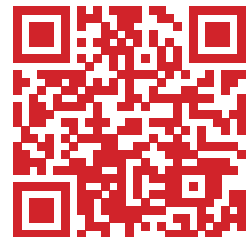
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# Attention All I-O Programs:
# It's Time to Join the United Nations Global Compact!

**SIOP Representatives to the United Nations:**

**Drew Mallory, Purdue University**
**Deborah E. Rupp, Purdue University**
**John C. Scott, APTMetrics**
**Lise Saari, New York University**
**Lori Foster Thompson, North Carolina State University**
**Mathian Osicki, IBM**
**English Sall, North Carolina State University**

Purdue University, working as a test case for the SIOP-UN Committee, has become the world's first I-O psychology program to sign the United Nations Global Compact, a global strategy for decent work, setting the stage for I-O programs around the world to more formally engage in the active promotion of I-O psychology for the greater good. Launched in 2000, the Global Compact is a global strategic policy initiative aimed at aligning businesses and other organizations with 10 accepted principles in the areas of human rights, labor, the environment, and anticorruption. Recognizing that businesses and business-related organizations are the drivers of globalization, signatories of the Global Compact work to improve markets, commerce, technology, and finance in ways that benefit economies and societies around the world. The Global Compact is the world's largest voluntary corporate responsibility initiative in the world, with over 12,000 signatories across more than 145 countries.

Although business participation is meant to directly affect activities in the global marketplace, the UN recognizes the need for participation at multiple levels throughout society. Global Compact nonbusiness membership is open to a wide range of participation, including cities, civil society, and public-sector organizations. Academic and business association participation is especially emphasized by the UN:

Through thought leadership, research, educational resources, learning know-how, and educational infrastructure, this sector can increase knowledge and understanding of corporate responsibility, and thereby advance the agenda of the Global Compact at the local and global level (Global Compact, 2015).

This type of endorsement allows academic signatories to evidence Global Compact principles through curriculum, research, and training, ensuring that tomorrow's thought leaders in organizational research and practice internalize values of human rights and justice. As part of the rapid move toward global integration and the

prosocial application of I-O psychology, SIOP joined the Global Compact as a nonbusiness participant in 2013. *TIP* has previously featured [a discussion with SIOP member Sean Cruse](#), from the Global Compact department of Communications and Public Affairs, on the important role I-O psychology can play with the Global Compact. However, until now, although top business programs have actively participated in the Global Compact, I-O psychology has not been represented in Global Compact activities.

Signatories to the Global Compact formally commit to aligning activities with the 10 principles.  In return, the UN offers participants access to a variety of work groups and connection forums to engage with business and institutions similarly interested in activities pertaining to the Global Compact's core purpose. Signatories are also able to engage directly in Global Compact events and display Global Compact logos and affiliations. Participation is free of charge for academic signatories, and annual reporting requires nothing more than submitting a list of what the program has done over the course of the year that aligns with the principles.

As the first academic I-O signatory, Purdue's program has provided a plan of action to ensure its students, and faculty are aware of the Global Compact Principles and have opportunities to engage in activities that align with them. Such activities include a humanitarian work psychology graduate seminar, brownbag speakers who focus on prosocial I-O sorts of topics, and an across-faculty research focus on justice, social responsibility, and employee well-being.

Joining is simple. All that is required to apply is a letter of application by the I-O program (both PhD and MA/MS programs are welcome) but signed by the department head and/or dean. For most programs, joining will not require any restructuring of existing policies or practices but rather concretely linking the Global Compact principles to existing activities.  The SIOP-UN Committee has prepared a **Global Compact Application Kit** that will make application to the Global Compact quick and easy for I-O programs interested in joining. It contains a sample application letter; a slide deck "pitch" presentation for faculty, students, and department/college leadership; FAQs; a sample annual report; and other useful information. The SIOP-UN will also be rolling out similar tool kits for corporations, consulting firms, and public-sector organization. For more information or to solicit the committee's help on Global Compact applications and/or annual reports, please contact them at [SIOPUN@siop.org](mailto:SIOPUN@siop.org).

By training new generations of I-O psychologist, I-O graduate programs have enormous impact on the future of our field. We therefore encourage them to formally affirm the Global Compact principles and actively take part in the promotion of human rights, labor, the environment, and anticorruption through student education and scholarly practice. Formal endorsement sets a standard of accountability, ensuring that the values espoused by the Global Compact and already reflected in institutionalized codes, such as [the APA Ethical Principles of Psychologists and Code of Conduct](#), take an explicitly central role in I-O's future.

# "Ebola, Goals and Fire, Oh My": Three Great Reasons to Go to the 2015 American Psychological Association Convention

**Ann Huffman**
**Division 14 APA Program Chair**

What do the Ebola outbreak, primed goals, and fire departments all have in common? These are the topics of the invited speakers at Division 14's program at the American Psychological Association Convention in Toronto this August! The APA conference committee is very excited about our sessions and the rest of the APA program line up. The invited speaker on Thursday is Toronto's Fire Chief Jim Sales from the fifth largest fire department in North America. He will discuss issues the fire service faces including recruitment, leadership, and human resource management. He will pose the challenge: How can psychology help? On Friday, the invited speaker is our own **Dr. Gary Latham**. Dr. Latham is the Secretary of State Professor of Organizational Effectiveness Professor of Organizational Behaviour and HR Management at University of Toronto. His presentation will examine the enduring effect of a primed goal on organizational behavior, replication experiments, and their congruence with Bargh's automaticity model and Locke and Latham's goal setting theory. For Saturday's invited address, Dr. Amy Adler will discuss Walter Reed Army Institute of Research's support to units deploying in response to the Ebola outbreak in West Africa and will share results concerning the mental health and resilience of deploying troops. In her talk, she will discuss some of the work stressors related to soldiers who

are deployed in response to the Ebola outbreak. The talk will provide lessons learned in conducting rapid response research on behalf of a large organization and also demonstrate findings regarding the mental health and resilience of troops deployed in support of humanitarian emergencies.

But the fun does not stop there! Division 14 has 16 other talks and two poster sessions that focus on workplace and organizational issues. The paper sessions range in topics from ethical issues in the workplace, leadership, work–family issues, cross-cultural issues, and mindfulness. There is a diverse offering of topics with a focus on research, application, and teaching. Some examples of symposia and panels are Award Winning Faculty: Applications for Teaching Applied Psychology and Management; Work Trends in the Military: Making Tomorrow's Research Agenda Today; and Environmental Sustainability at Work: Understanding Workplace Behavior and Motivations. I should note that this impressive line up would not be possible without the amazing APA Div. 14 committee and reviewers. Thanks to them and last year's committee chair, **Dr. Autumn Krauss**, for all the help that they provided in developing our program.

Last and definitely not least, Division 14 has organized a social that is not to be

missed! With the help of **Dr. Ron Myhr**, vice president of Professional Services for the Canadian operation of CEB's SHL Talent Management Solutions, we have put together an incredible Division 14 social. The social will take place at the Steam Whistle Brewery (right next to the conference center) Thursday night at 6:30 pm. The Brewery is located in a 1929 historical building at the old Canadian Pacific Rail steam locomotive repair facility that helped pioneer the nation. We hope that Division 14 colleagues, friends, and future friends will find this the perfect location to see old friends, meet new friends, and talk anything (or nothing) I-O! This social hour is sponsored by SIOP, CEB's SHL Talent Management Solutions and MHS Talent Assessment Solutions. We look forward to networking and developing future relationships at the Steam Whistle Brewery

I want to close this update with a reminder of why I appreciate APA, a conference with a very different focus than our traditional SIOP. I really appreciate APA because of the interdisciplinary nature of the conference. I am a work–family researcher, with interests in environmental sustainability, diversity, and military research. APA is a "one-stop shop." I can attend relevant talks in many different divisions that help broaden the way I think about I-O issues. Getting different perspectives outside of the typical I-O focus can be refreshing and is really helpful for generating new and creative ideas, both for my research as well as in the classroom.

APA is August 6–9 at the Toronto Conference Center. Registration for APA begins April 15th. You can learn more about the conference, registration, and lodging at the conference website (http://www.apa.org/convention/). Hope to see you there!

SIOP Foundation

*BUILDING FOR THE FUTURE*

# Allan Jones (1940–2014)

### by Trevor Self (TCI)

It is with deep sadness that we note that Allan Jones passed away on July 6, 2014 at the (all too young) age of 73. Allan was a professor emeritus in the University of Houston's Industrial-Organizational Psychology program where he challenged, nurtured, and enlightened a generation of grateful students.

Allan was born July 30, 1940, in St. Louis, Missouri, and was raised in Nevada. He married Phylis Pritchard and they had four children, who provided them with four grandchildren and two great grandchildren. One of Allan's passions was flying and he spent many hours working on his plane, even taking some of his (somewhat nervous) doctoral students on flights.

After a stint in the U.S. Marine Corps, Allan earned his BA in Psychology from the University of Nevada in 1967. He earned his MA in 1969 and his PhD in 1971 in Social and Personality Psychology from the University of Colorado. He subsequently worked at the Institute of Behavioral Research at Texas Christian University (1971–1976), the Naval Health Research Center (1976–1981), and the University of Houston (1981–2007), where he retired as professor emeritus. Allan was a strong and accomplished scholar who published over 60 papers and was probably best known for his work in psychological and organizational climate. His professional accomplishments include selections as a Fellow of the Society for Industrial and Organizational Psychology, the American Psychological Association, and the American Psychological Society.

During his tenure at the University of Houston, Allan served as director of Graduate Education (1986-1990) and was well known as a highly respected, challenging, and supportive mentor and teacher. Allan's students and colleagues greatly admired his formidable intellect and strong work ethic. His doctoral students have fond memories of his challenging graduate seminars, deceptively concise questions, and impressively diverse intonations of "OK." His Socratic style, high expectations, and strong focus on integrative thinking deeply influenced his many undergraduate and graduate students. He chaired over 30 dissertations and theses, working patiently and diligently with his protégés to build skills that were hallmarks of his own career: systemic thinking, rigorous analyses, meaningful effort, and clear communication.

Perhaps Allan's greatest attribute was his caring. Those of us fortunate enough to have been mentored by him know that he helped us develop ourselves—perhaps sometimes in spite of ourselves—because he was a caring soul, a gentle man who valued quality.

He had an enduring, positive impact on many of us, as well as those we now mentor, attempting to emulate him as best we can.

Allan, you have been and will be much appreciated, and you will be dearly missed. To his family—especially Phylis—thank you for sharing him with us.

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# IOTAs

**Lauren Kenney**
**Xavier University**

### Transitions, New Affiliations, Appointments

SIOP Member Dr. **Morrie Mullins** was recently promoted to the rank of professor at Xavier University. Morrie has been an active member of SIOP since finishing his graduate work at Michigan State University and was previously a member of SIOP's Awards and Education and Training committees. He teaches in Xavier's MA program in I-O psychology, along with fellow SIOP members Dr. **Dalia Diab** and Dr. **Mark Nagy**.

### Honors and Awards

**Wendy S. Becker** was selected by Shippensburg University for the 2015 Award for Innovative Excellence in Teaching, Learning, and Technology at the International Conference on College Teaching and Learning (ICCTL). The award is given to the full-time faculty member who has contributed in the most highly creative ways to teaching, learning, and technology in higher education. Candidate selection must be based on an institution-wide search.

**In-Sue Oh** received the 2014 Early Career Achievement Award from the HR Division of the Academy of Management (http://www.hrdiv.org/awards/early-career-achievement-award/). He is currently an associate professor in the Department of Human Resource Management at Temple University. In-Sue serves as associate editor of the *Journal of Occupational and Organizational Psychology*, in addition to serving on the editorial review boards of the *Academy of Management Journal*, *Journal of Applied Psychology, Personnel Psychology*, and *Journal of Organizational Behavior*.

### Good luck and congratulations!

Keep your colleagues at SIOP up to date. Send items for IOTAS to Morrie Mullins at mullins@xavier.edu.

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# SIOP Members in the News

## Clif Boutelle

Generally when we think of the media, it is the major newspapers, magazines, and network radio and television that come to mind. Although they still remain important to any organization seeking to generate awareness about itself, the Internet has created a whole new vista of media outlets that cannot be overlooked. In fact, more and more organizations are utilizing sites on the Internet to disseminate their news.

A growing number of SIOP members are finding their way on to Internet sites because writers still need credible resources. In addition, SIOP members are being asked with increasing frequency to author articles for a variety of sites, including trade journals, newsletters, and specialized publications.

So, the opportunities for media mentions are expanding, and that is good for the field of I-O psychology.

Following are some of the press mentions, including Internet sites, that have occurred in the past several months:

**Ben Dattner** of Dattner Consulting in New York City was quoted in a February 27 *Harvard Business Review* article about helping a team bounce back from failure and see the experience as an opportunity for growth. "It's more important to focus on what's to blame rather than who to blame. If the fault really does lie with one person

or a few people, then talk to those individuals in private and focus on their actions, not their character," he said.

Impression management was the focus of a research project led by **Joshua Bourdage** of the University of Calgary and reported February 26 in several media outlets including the Canadian Broadcasting Corporation. The study showed that employees are often less than adept at detecting manipulative and dishonest behaviors in their coworkers. "Dishonest people can be charming and extroverted and more likely to engage in self-promotion and ingratiating behavior," said Bourdage. "We're not saying that everyone who uses impression management behaviors in the office is dishonest. A lot of us tend to do those things to some extent. But it's useful to know that dishonest people are more likely to engage in impression management techniques and some of those behaviors do lead to long-term career success."

A February 25 National Public Radio report discussed the growing use of behavioral science techniques that give employers more insight into hiring the person best suited for the job. **Natalie Baumgartner,** founder and chief psychologist at Round-Pegg, a Colorado-based firm that uses behavioral tests to help employers, noted that, when a person is required to function in a way that's misaligned with his or her skills, over time they get tired of it and no

longer want to do it. The goal, she said, is to reach deeper into a person's innate abilities revealing traits that can help increase productivity and reduce turnover. **Fred Morgeson** of Michigan State University agreed that some tests do predict performance. But, he said, "whether the claims that companies are making are in fact true and they are measuring what they say they are measuring—that is a question that can really only be answered by research."

**Michael "Dr. Woody" Woodward** of Human Capital Integrated used Valentine's Day for a February 11 *Fox Business News* report to consider how demonstrating love can impact and teach people to be helpful to others and appreciate the contributions of those who have helped make us successful. "Take a moment every day to catch someone doing something right and thank them for it. It's a small investment of time that can yield a lifetime of positive returns," he said.

**Adam Grant** of the Wharton School at the University of Pennsylvania and Sheryl Sandberg, Facebook's chief operating officer, have been collaborating on a Women at Work series for the *New York Times*. The initial article in December discussed discrimination at work, and in January they focused on the tendency of women to stay quiet at work. The topic for February 6 was about how women are expected to do tasks around the office and receive less recognition for their efforts than male counterparts. They cited a study by **Madeline Heilman** of New York University who found that when both women and men decline to help within the office, women are rated less favorably than men. When giving identical help, men were significantly more likely to be recommended for promotions, important projects, raises, and bonuses.

**Jeff Conte** of San Diego State University was quoted in a February 3 *Wall Street Journal* story focusing on why people are chronically late. His research has found there are some personality differences that can contribute to chronic lateness. Type A individuals, he found, tend to be more punctual while the more laid-back Type B people are likely to arrive later. Across three studies he found a difference of 18 seconds in how the two types regard one minute. "So if you have an 18-second gap…that difference can add up over time," he said.

**Nathan Bowling** of Wright State University, **Brian Lyons** of Elon University, and **Paul Spector** of the University of South Florida contributed to a January 29 *Dayton Daily News* story about the costs of workplace theft and misbehavior. Bowling said three types of personality traits are linked to workplace behavior: Conscientiousness, Agreeableness, and Neuroticism. Although Conscientious and Agreeable employees tend not to engage in counterproductive behaviors, "we're finding pretty consistently that people who are high on the Neuroticism scale tend to engage in a lot of counterproductive work behavior," he said. "No matter what an organization does it is likely there's still going to be some misbehavior. It's such a rampant problem."

The focus of a January 29 *NPR Radio* feature was poorly run meetings that are not conducive to employee engagement

and make organizations less effective. When employees doodle, email, read reports, and generally pay little attention to a meeting, it provides a "tremendous amount of feedback," said **Steve Rogelberg** of the University of North Carolina at Charlotte, who was interviewed for the piece. "You're getting feedback that you are running a really bad meeting," he said, adding that meetings often last longer than they need to because managers do not understand Parkinson's Law, which is the idea that tasks take as long as the time allotted. He said cut the allotted time in half, and "lo and behold, when given half as much time at the onset, the meeting is finished in half the time and the quality of the meeting is just as good."

That workers really do fake a positive outlook when the boss is around was one of the research findings of a study by **Jane Thomas**, a doctoral candidate at the University of North Carolina at Charlotte, reported in the January 29 *Wall Street Journal*. The study found that employees tended to feign upbeat emotions in meetings when higher ups were present. In contrast, when they held meetings with peers they were able to express themselves more honestly. Those who feigned positive feelings felt less satisfied when a meeting ended, said Thomas.

 The January 27 issue of *Money Magazine* included an article entitled "The Five Best Jobs You've Never Heard Of" and I-O psychology is one of them. In addition to I-O psychology, nuclear medicine technology, medical equipment repairer, digital risk officer, and health and wellness educator are listed among the fastest-growing, high-paying options for people looking for a career change in 2015. The article referred to the Bureau of Labor Statistics last year listing I-O psychology as the fastest-growing occupation.

**Lynda Zugec** of The Workforce Consultants authored an article that appeared in the January 6 issue of *Workforce Magazine* describing the results of a survey of the 500 fastest growing private companies in the United States conducted by her organization. The survey found that just over 50% of respondents were looking for innovative ways to attract and retain talent. Topping the list was leadership development. Also cited as challenges were creating promotion strategies as well as career development opportunities and ensuring a talent pipeline, including identifying relevant competency standards for advancing careers. The survey listed communication, interpersonal relationship building, and collaboration as the greatest strengths of the respondents that have a key impact upon their success.

Zugec also contributed to a February 15 *Fast Company* article discussing signs, like being bored, of when it might be best for an employee to leave his or her job. If a person is not  learning and anticipates what is happening at work and already has the answers, it may be time to "take on new projects, try a completely different role within the company or gain experience in a new area," she said.

The January issue of *Glamour Magazine* cited a study by **Hannes Zacher** of the University of Groningen in the Netherlands that found employees in their late 20s to early 40s experience lower job satisfaction and higher emotional exhaustion than their older and younger peers. He called it The Slump and described it as normal and said it is something most workers are able to overcome.

**Tomas Chamorro-Premuzic** of Hogan Assessment Systems and University College London authored an article entitled "How and Why We Lie at Work" in the January 2 *Harvard Business Review*. He classified liars in two broad categories: frequent and infrequent liars. He said the key point with frequent liars is not to pinpoint whether they are telling the truth but whether it can be predicted what they are likely to do, especially if they lying about objective facts, like saying they graduated from Stanford when they did not. These lies are self-defeating and damage the reputation of the liar when they are found out. Infrequent lies are the product of insecurity and are often an attempt to gain status. The best way to deal with insecure liars is to make them feel accepted. Show them you value them for who they are rather than who they would like to be, he said.

Developing a personal brand was the subject of a January 2 *Wall Street Journal* interview with **Paul Winum** of RHR International (Atlanta). Career success often depends upon what others think of you, and Winum advised executives and workers at any level to do an inventory and ask,

"What do I want to be known for?" and "How do other people see me?" Is there a gap between aspiration and reality? If so, take steps to burnish your reputation and take such actions as becoming a student of manners and active listening, paying attention to other people's feelings, and communicating more effectively, he said. "Rebranding requires genuine commitment…and is communicated through one's actions, including how one speaks and dresses," he said. For example, Steve Jobs' black turtleneck conveyed simple elegance—brand attributes that he wanted to convey about Apple as well as himself.

That women, more so than men, are likely to take on additional assignments at work, is one of the findings from a study by **Katharine O'Brien** of the Baylor College of Medicine. That's because women find it more difficult than men to say "no" to extra assignments, she said. "For many employees, choosing whether to take on additional work can be a difficult dilemma because their decision can affect how their employer perceives them," O'Brien said. Her research was reported in the December 11 issue of *Business News Daily.*

Research on forceful leaders by **Samuel Hunter** of Pennsylvania State University and Lisa Cushenbery of Stony Brook University appeared in the December 10 *Human Resource Executive Daily* as well as other news outlets including *Science Newsline*, the *News Reporter,* and *Science Daily*. They investigated the relationship between disagreeableness and the innovation process. Results of the research found

that being obnoxious and overbearing doesn't necessarily give birth to brilliant ideas, but belligerence may actually be an asset in environments where new ideas aren't exactly welcomed with open arms. In other words, it helps to be a bit of a jerk to spawn and advance new ideas in the workplace, they said.

Research by Northern Illinois faculty members **Larissa Barber** and **Alecia Santuzzi** on employees' preoccupation with responding immediately to workplace emails regardless of being at work or not was featured in several media outlets, including the November 18 *Chicago Tribune* as well as the *Wall Street Journal*, *Forbes*, *Talent Management Magazine, Toronto Globe and Mail,* and *Human Capital Magazine*. Flexibility is a benefit of relying on email or texting, but it often leads to employees, "starting to feel like they should be available and responsive to work requests at all times…which does not allow people enough time to recover from work," said Barber. The researchers found that one of the major causes of "telepressure" appears to be social cues within a workplace culture. "Employees may get both overt and subtle cues from their work environment that high responsiveness is both valued and expected from good employees," said Santuzzi.

Please let us know if you, or a SIOP colleague, have contributed to a news story. We would like to include that mention in SIOP Members in the News.

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# Conferences and Meetings

**Please submit additional entries to Marianna Horn at**
Marianna.Horn@Sodexo.com

## 2015

April 15–19
Annual Convention, National Council on Measurement in Education. Chicago, IL. Contact: NCME, www.ncme.org.

April 16–20
Annual Convention, American Educational Research Association. Chicago, IL. Contact: AERA, www.aera.net.

April 23–25
Annual Conference of the Society for Industrial and Organizational Psychology. Philadelphia, PA. Contact: SIOP, www.siop.org. (CE credit offered.)

May 6–9
Work, Stress, and Health Conference. Atlanta, GA. Contact: www.apa.org/wsh.

May 14
Meeting of the Metropolitan New York Association of Applied Psychology. New York, NY. Contact: METRO, http://metroapppsych.com/

May 17–20
Annual Conference of the American Society for Training and Development. Orlando, FL. Contact: ASTD, www.astd.org.

May 21–24
Annual Convention of the Association for Psychological Science. New York, NY. Contact: APS, www.psychologicalscience.org (CE credit offered.)

May 28–29
International Conference on Applied Psychology. Tokyo, Japan. Contact: www.icap2014.com.

June 4–6
Annual Conference of the Canadian Psychological Association. Ottawa, Ontario. Contact CSIOP: www.psychology.uwo.ca/csiop.

June 10
Meeting of the Metropolitan New York Association of Applied Psychology. New York, NY. Contact: METRO, http://metroapppsych.com/

June 28–July 1
Annual Conference of the Society for Human Resource Management. Las Vegas, NV. Contact: SHRM, www.shrm.org. (CE credit offered.)

July 2–July 4
The 11th Industrial and Organisational Psychology Conference of the Australian Psychological Society. Melbourne, Australia. Contact: APS http://www.iopconference.com.au/.

Aug. 6–9
Annual Convention of the American Psychological Association. Toronto, Ontario, Canada. Contact: APA, www.apa.org (CE credit offered.)

Aug. 7–11
Annual Meeting of the Academy of Management. Vancouver, BC, Canada. Contact: AOM  www.aom.org

Aug. 8–13
Annual Convention of the American Statistical Association. Seattle, WA. Contact: ASA, www.amstat.org
(CE credit offered.)

Sept. 21–25
Annual Conference of the International Military Testing Association. Stockholm, Sweden.
Contact: http://www.imta.info/Home.aspx.

Oct. 2–3
SIOP Leading Edge Consortium. Boston, MA. Contact: www.siop.org.

Oct. 23–24
Annual River Cities I-O Psychology Conference. Chattanooga, TN. Contact: http://www.utc.edu/psychology/rcio/

Oct. 26–30
Annual Conference of the Human Factors and Ergonomics Society.  Los Angeles, CA. Contact: The Human Factors and Ergonomics Society: http://www.hfes.org/web/HFESMeetings/meetings.html
(CE credit offered.)

Nov. 9–14
Annual Conference of the American Evaluation Association.  Chicago, IL. Contact: AEA, www.eval.org.

## 2016

Feb. 24–28
Annual Conference of the Society of Psychologists in Management (SPIM). Atlanta, GA. Contact: www.spim.org.
(CE credit offered.)

April 14–16
Annual Conference of the Society for Industrial and Organizational Psychology. Anaheim, CA. Contact: SIOP, www.siop.org
(CE credit offered.)

May 26–29
Annual Convention of the Association for Psychological Science. Chicago, IL. Contact: APS, www.psychologicalscience.org
(CE credit offered.)

Aug. 4–7
Annual Convention of the American Psychological Association. Denver, Colorado. Contact: APA, www.apa.org
(CE credit offered.)

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