Volume 59
Number 1
Summer 2021

Editor: ./Steven Toaddy

Editor's Column: Looking Forward

./Steven Toaddy

I'm not certain, but I think that those of us who are left are in the process of coming out of this thing. I think that I realized that as I read this issue's edition of Max Classroom Capacity, strangely.

Where, where next? I'm struck by how much content in this issue of *TIP* is about both the past and the future but not, refreshingly, the present—I, for one, am tired of the present.

Some examples of those past/future articles—SIOP UN is 10 years old, and boy has it done some amazing things! That work is itself oriented toward the future of our species, and that article serves to inspire and to call me to get involved going forward.

The TIP-TOPics team—in their final issue—provides yet another great resource, this time in terms of where we've been and where we *can* go with surveys. Clever work there, and a resource that I intend to use when teaching my own graduate students. I try but fail to express how impressed I have been with that team; I am grateful to them for their diligence over these past 2 years, and I look forward to seeing them continue to succeed in the coming decades.

On the topic of graduate students, the Foundation piece reports on the impact of graduate student scholarships—how those awards impacted those who received them and how those individuals will go forward in the world and with SIOP to continue to make their own impact felt.

Just one more clear example—the Local I-O Groups piece from this issue gives us the history of the Committee and empowers and encourages us to (if not redundant) start our own local group. The past, the future.

If you read through everything in this issue, perhaps you'll get into the same mindset as I am—a focus on setting things up for the future, of looking forward and orienting our work toward not just survival but flourishing, toward continuity but also growth. I am inspired to contemplate (and this issue has already helped me) what I can do to help move us toward that future. In my rôle, my greatest opportunity for influence may come in the form of the next cohort of graduate students, who are on their way to begin graduate study.

Hmm.

President's Column

Steven Rogelberg

I have so much to say in my first Presidential Column but am under such a tight word count. Let me start my musings…

I have a presidential theme, *Better Together.* I have a set of ambitious aspirations. I unpack both of these in this short video from the closing plenary (below). If you have a few minutes, please take a look. I am hoping my view count exceeds 3: me (yes, I watched myself), my mom (Jane), and my wife (Sandy). I am not counting on my kids to get me to 5.

https://vimeo.com/536815351/93d9516ceb

What I want to spend some time chatting about next is how to make SIOP feel small. We are nearly 10,000 strong of wonderful people who share a common set of values around working to understand and improve the world of work by promoting individual and organizational health, well-being, and effectiveness. This is a lot of folks, and SIOP can at times feel quite large. But, it does not have to feel that way. I want to share two easy paths to make SIOP feel smaller.

The first way is through volunteering for a committee. We have over 700 volunteers and really want to include you in this. When you received the call for volunteering, I hope you found something that could excite you. At the very least, please join the program-reviewing brigade when that notice comes out in the coming weeks; that can feel very rewarding and is so helpful and needed.

Second, there are so many diverse SIOP activities and opportunities that can increase the feelings of smallness. I want to highlight one that I just love. It is the SIOP Women's Inclusion Network (WIN) chaired by **Vanessa Gaskins**. WIN was established as an ad hoc committee in 2017 and a standing committee in 2019—and has accomplished a great deal in their short time. WIN has (a) established an active and wide-reaching social media presence; (b) developed a valuable mentoring initiative for members; (c) conducted a climate survey to understand member experiences of bias, exclusion, and harassment at SIOP conferences in partnership with the CEMA and LGBTQIA+ Committees; (d) developed and received approval to offer a family caregiving grant to facilitate conference attendance; and (e) focused on making awards and the award process more visible to members with the goal of increasing applications from qualified candidates. WIN is always looking for new and fabulous volunteers to join the team. The WIN team is composed of around 30 volunteers, and they have over 900+ members on their very active Facebook group. I encourage you to join the fun; I did last year. WIN is a winner 😊. Both of these paths exemplify my hope in my *Better Together* presidential theme. Hey, did I mention to check out the video link above where I unpack this more—we are up to 5 views.

Same Degrees, Different Requirements: The Variety of Comprehensive Requirements ("Comps") in I-O Psychology Master's and Doctoral Programs

Rebecca M. Brossoit
Oregon Health & Science University/Colorado State University

Jacqueline R. Wong
Colorado State University

Gwenith G. Fisher
Colorado State University/Colorado School of Public Health

Contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention or the Department of Health and Human Services.

In 1985, 1999, and 2016, the Society for Industrial and Organizational Psychology (SIOP) published the *Guidelines for Education and Training in Industrial-Organizational Psychology* (SIOP, 2016). These guidelines assist faculty as they develop and update curricula for I-O graduate programs at both the master's and doctoral level. Twenty-six competencies, as well as seven training methods for instilling I-O content knowledge (e.g., formal coursework), are included in the guidelines. However, the *Guidelines for Education and Training in I-O* do not identify the process by which graduate programs ought to evaluate mastery of I-O psychology knowledge and skills.

Comprehensive, preliminary, or qualifying requirements (also known as "comps," "prelims," or "quals") are used by many graduate programs to assess students' knowledge and skills, qualify students to advance from master's to doctoral degree training, and evaluate graduate training methods or curricula. These requirements are not unique to I-O psychology programs; many areas of psychology administer comprehensive exams to graduate students (e.g., Kostohryz, 2016). A common goal of I-O psychology graduate training is to develop students as scientist–practitioners with a breadth of knowledge and skills that can be applied across a wide range of jobs and settings. Unlike clinical and counseling psychology, graduate training programs in I-O psychology are not accredited by the American Psychological Association, and I-O psychology program graduates are not all required to pursue licensure for practice. Thus, comprehensive requirements may help ensure that graduate students can demonstrate sufficient mastery of I-O psychology knowledge and skills across the recommended 26 competencies (SIOP, 2016).

Anecdotally, we are aware that various comprehensive requirement formats (e.g., written exams, applied experiences) are used across I-O graduate programs. Although SIOP offers guidelines about education and training content, little has been specified regarding assessment methods. For example, comprehensive requirement(s) or exams are not mentioned as a training method in the *Guidelines for Education and Training in I-O* (SIOP, 2016). In lieu of formal recommendations, individual programs have developed their own unique comprehensive requirements and processes, relying on previous experiences and/or feedback from students and faculty in the field. Therefore, we undertook an exploratory empirical study to investigate the types of comprehensive requirements in master's and doctoral I-O programs, as well as the intended purpose of the comprehensive requirements, in a more systematic manner. We sought to identify the comprehensive requirements used in I-O graduate programs and report results to I-O psychology program faculty as well as current and prospective graduate students.

Methods

In the spring of 2020, we sent email invitations to 143 I-O master's and doctoral program directors with a request to participate in a 10-minute survey about the curriculum and educational requirements in their program. We gathered graduate program director contact information via the online SIOP *Graduate Training Programs in I-O Psychology and Related Fields* search engine. Next, we checked the information we obtained with information available on I-O graduate program websites. To account for the possibility that program director information was not up to date, faculty who received the invitation email were asked to forward the survey to the current program director (if applicable). We reported results specific to graduate training in ethics from this data collection in the winter 2021 issue of *TIP* (Brossoit et al., 2021).

In the survey, we asked I-O master's and doctoral program directors to share information about whether their program has a comprehensive/preliminary/qualifying exam or project requirement for graduate students. Those who indicated that their graduate program has a comprehensive requirement then answered follow-up questions regarding the type of requirement (e.g., written exam, oral exam, applied experience) and related details about the requirement(s) (e.g., whether reading lists are provided to students, what happens if a student fails). Given that the authors did not presume to know all possible purposes of these requirements, we asked program directors to describe the intended purpose(s) of the comprehensive requirements via an open-ended question. Program directors also indicated the extent to which they believe the comprehensive requirement fulfills its intended purpose and the extent to which it could be improved.

Results

Half of the I-O program directors that were contacted completed the survey (i.e., 71 of 143 program directors). Program directors represented master's only (63%), doctoral only (15.5%), and combined master's/doctoral (32%) programs[1] that were conducted primarily in person (68%) compared to online (4%), or a hybrid of in person and online (20%),[2] prior to COVID-19, and were predominantly located in the United States (86%). When examined by degree type offered, 87% of I-O master's program directors and 90% of I-O doctoral program directors (i.e., master's/doctoral combined and doctoral-only programs) reported having a comprehensive or qualifying requirement.

Perceived Purpose and Quality of Comprehensive Requirements

I-O program directors listed several different purposes of the comprehensive requirements, including testing the breadth and depth of students' mastery of content knowledge across core I-O competencies and evaluating students' abilities to integrate and apply theory and content across domains of I-O. Other program directors reported that the purpose is for students to gain practical experience (e.g., in capstone projects) or to ensure students can demonstrate skills ranging from those needed for research and/or practice to more general skills (e.g., communication, networking, professionalism, problem solving) in preparation for different career paths. Further, some program directors identified that comprehensive requirements were intended to identify whether students are sufficiently prepared to complete doctoral work (e.g., the dissertation) as a form of "quality control." See Figure 1 for a visual depiction of the variety of comprehensive requirement purposes that were identified by program directors.

Figure 1

Purposes of the Comprehensive Requirement in I-O Graduate Programs

Note. Figure includes words that were mentioned at least twice. The size of a word reflects the frequency of times the word was mentioned, with larger words being mentioned at a higher frequency. Some words (e.g., "students," "although," "other") were filtered out for clarity.

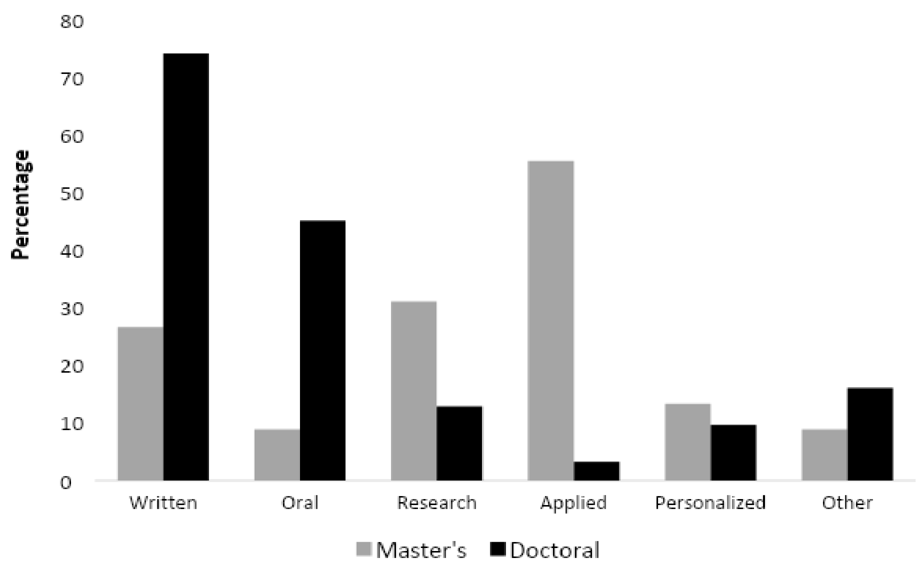
Across master's and doctoral programs, most (85%) program directors indicated that they believe their I-O program's comprehensive requirement(s) accomplishes the intended purpose. However, slightly more than half of program directors indicated that they believe their I-O graduate program's comprehensive requirement(s) could be improved (58% of master's programs and 54% of doctoral programs).

Comprehensive Requirements in Master's Programs

Of the 45 master's programs represented in this study, 27% have a written exam requirement, 11% have an oral exam requirement, 31% have a research project requirement, 55.5% have an applied experience requirement, 15.5% have a personalized requirement for each student, and 4% have an "other" requirement[3] (e.g., portfolio, analytic exam, see Figure 2). Of note is that some program directors indicated that their program has multiple requirements. The most common combination of requirements for master's programs was to have an applied requirement and a research requirement. It was also somewhat common to have a combination of a written exam requirement and an applied requirement or an applied requirement with a personalized aspect.

Figure 2

Types of Comprehensive Requirements by I-O Graduate Program Degree



Written Exam Requirement

Of the 12 master's programs with a written exam, most written exams are completed in person (83%) rather than take home (17%). Most in-person written exams occur within 2 days or less (90%), and the two programs with take-home exams give students 14 days to complete the exam. In most programs, the faculty schedule the exam date (92%). Most programs do not offer access to a reading list (67%), although two programs reported that they provide a reading list from faculty, and two programs allow students to compile the reading list. In most programs (67%), students are not allowed to use resources (e.g., notes, books, articles) when they take the written exam. In two programs, some questions on the written exam are tailored for individual students according to their minor and/or content area. If a student fails the written exam, programs either give students an opportunity to retake the full written exam the next time it is offered or give students an opportunity to rewrite the question(s) they failed. In one program, students are asked to leave if they fail. Some program directors shared additional details about what happens if a student fails the written exam (e.g., student retakes the section they failed with new questions, student writes an extended response to failed questions, the decision depends on a performance review).

Oral Exam Requirement

Among the five master's programs that have an oral exam requirement, two programs have some questions on the oral exam that are tailored for individual students according to their minor and/or primary content area. Only one program provides students with a reading list. If a student fails the oral exam, programs either give students an opportunity to retake the full oral exam or give students the opportunity to provide written responses to the question(s) they failed. In one program, students are asked to leave if they fail.

Research Project Requirement

Of the 14 master's programs with a research project requirement, no programs *require* a manuscript to be submitted for publication, though 36% of program directors reported that a manuscript submission is expected or highly encouraged.

Applied Experience Requirement

Of the 25 master's programs with an applied experience requirement, such as an internship or practicum project, most (88%) require a minimum time commitment, ranging from 120–500 hours. Some programs require a supervised applied/consulting experience whereas others require a formal internship. Additionally, some programs require students to write a literature review as part of the applied experience requirement.

Comprehensive Requirements in Doctoral Programs

Of the 31 doctoral programs, 74% have a written exam requirement, 45% have an oral exam requirement, 16% have a research project requirement, 3% have an applied experience requirement, 13% have a personalized requirement for each student, and 10% have an "other" requirement (e.g., consulting simulation, portfolio, see Figure 2). Similar to master's programs, doctoral program directors often indicated that their program has multiple requirements. The most common combination of requirements for doctoral programs is to have a written exam and an oral exam.

Written Exam Requirement

Of the 23 doctoral programs with a written exam, most written exams are completed in person (74%), rather than take home (22%) or a combination of in person and take home (4%). Most in-person written exams occur within 3 days or less (94%), take-home exams range from 2–21 days, and one program director indicated that students have "months" to complete the combined in-person and take-home written exam. In most programs, the faculty determine the exam date (65%). Approximately half of programs do not offer access to a reading list (48%), although 35% provide a reading list from faculty, and 17% allow students to compile the reading list. In most programs (69.5%), students are not allowed to use resources (e.g., notes, books, articles) when they take the written exam. Questions on the written exam are typically not tailored for each student (65%), though about one-third of doctoral programs (35%) have at least some questions on the written exam tailored for individual students according to their minor and/or content area. If a student fails the written exam, most programs give students an opportunity to retake the full written exam (74%). Otherwise, programs give students an opportunity to rewrite the question(s) they failed, give students the opportunity to orally defend the question(s) they failed, or determine retakes on a case-by-case basis. No programs ask students to leave the program if they fail.

Oral Exam Requirement

Of the 14 doctoral programs that have an oral exam requirement, most have some questions on the oral exam tailored for individual students according to their minor and/or content area (86%). Students are typically not provided with a reading list (71%). If a student fails the oral exam, most programs give students an opportunity to retake the full oral exam (86%) or give students the opportunity to provide written responses to the question(s) they failed. No programs ask students to leave if they fail.

Research Project Requirement

Of the five doctoral programs with a research project requirement, one program requires students to submit a manuscript for publication. However, the paper does not need to be accepted for publication to meet the research project requirement. Three doctoral programs with a research project requirement do not *require* a manuscript to be submitted for publication, though two program directors reported that a manuscript submission is expected or highly encouraged. One program director did not respond to the question about required manuscript submissions.

Applied Experience Requirement

Only one doctoral program has an applied experience requirement (e.g., internship or practicum project), which requires students to complete six credit hours.

Discussion

Comprehensive Requirements in I-O Graduate Programs

Overall, through our survey among I-O program directors in master's and doctoral programs, we identified that comprehensive requirements (e.g., exams) are very common in I-O graduate programs. However, program directors within and between master's and doctoral programs listed varied purposes for the comprehensive requirements. For example, the intended purposes ranged from demonstrating a mastery of I-O content and competencies to demonstrating skills needed for research or practice. Additionally, the formats for comprehensive requirements vary widely across programs and include written exams, oral exams, research requirements, applied experiences, personalized requirements, and other requirements like consulting simulations. Applied experiences are the most common comprehensive requirement in master's programs, followed by research project and written exam requirements. In contrast, written exams are the most common comprehensive requirement in doctoral programs, followed by oral exams and research project requirements. We also found variability in the process for administering each of the requirements (e.g., tailoring of exam questions for individual students, procedure if a student fails). Taken together, the purposes, specific requirements, and formats of the comprehensive requirements differ substantially across I-O graduate programs.

Recommendations for the Field of I-O

Based on the findings from this study, we believe it is critical to first determine whether comprehensive requirements should be unique to each I-O graduate program (e.g., to meet specific program goals, for program evaluation) or if there should be some degree of standardization across programs. Answering this question could be achieved by surveying SIOP members, developing a subcommittee or task force within the SIOP Education and Training Committee, and/or creating panel discussions at future SIOP conferences. Regardless of whether the comprehensive requirements are developed by individual I-O graduate programs or standardized across the field, the purpose and goals of the requirement(s) should be thoughtfully and intentionally defined, aligned with the process, and communicated to students.

If the determination is that the comprehensive requirements in I-O graduate programs ought to be designed and implemented in a similar way across the field, then it may be worthwhile for the SIOP Education and Training Committee to systematically review the options for comprehensive requirements in I-O graduate programs (e.g., surveying program directors, students, and/or alumni, content analyzing formal program documents like manuals). From there, evidence-based recommendations could be developed and included in a revised version of the *Guidelines for Education and Training in I-O.* The establishment of common guidelines for the comprehensive requirements may foster more consistency across graduate programs regarding why and how comprehensive requirements are administered, assist program directors in determining how to effectively evaluate students, improve perceptions of procedural justice by prospective and current I-O graduate students, and ultimately improve the extent to which graduate students are prepared for success in their I-O careers.

Limitations and Future Research

Although this study advanced our knowledge and understanding about the comprehensive requirements in I-O graduate programs, it is not without some limitations. First, the survey questions were specific to I-O graduate program *comprehensive* requirements rather than *general* program requirements. Thus, some of the variability in responses may be due to the comprehensive requirement process being separate from broader program requirements. For example, a doctoral program may not require an internship as a comprehensive requirement to progress from master's to doctoral training but may require students to gain applied experiences as an additional requirement of the program.

Second, the 50% response rate among program directors presents the possibility that not all programs were sufficiently represented. Program directors who chose to complete the survey may differ from those who did not in some systematic manner related to the questions or variables of interest. For instance, those who responded may be more involved in the comprehensive requirement process or more focused on or dedicated to improvements of I-O program curricula. Although having data from the other half of I-O graduate programs would be necessary to depict the full array of purposes, formats, and processes involved in the comprehensive requirement, our study sheds light on the range of requirements across programs, which may be even more varied if all programs were represented.

Third, we used single-source data collected from I-O program directors. It would be worthwhile to understand how comprehensive requirements are perceived by current students and alumni. Future work could examine what the experience of participating in the comprehensive requirement process is like for current students or the extent to which alumni believe that completing the comprehensive requirement prepared them for their doctoral and/or postgraduate work or relates to other criteria of interest (e.g., time to degree completion, employment or career outcomes).

Finally, we explored different types of comprehensive requirements in I-O graduate programs but did not investigate which methods are the most useful or effective for achieving the intended purpose(s). It is critical that future work examines which types of comprehensive requirements best prepare students for potential doctoral work and/or their future careers. Relatedly, more than half of the I-O program directors who participated in the study indicated that their program's comprehensive requirement could be improved. Unfortunately, however, we do not have data to understand how they think the process could be improved. Therefore, future work should seek to identify which types of comprehensive requirements have the strongest predictive validity for outcomes of interest (e.g., graduation rates, student experience, alumni employment, career satisfaction) and how to improve I-O graduate programs' current practices and processes.

Conclusion

We found that most I-O psychology graduate programs have comprehensive requirements (e.g., exams), but the intended purpose(s), formats, and process for administration varied widely. It is important for the field to determine whether comprehensive requirements should be distinct or consistent across I-O graduate programs. We recommend that the SIOP Education and Training Committee conduct a systematic assessment of the comprehensive requirement process with data from multiple sources (e.g., faculty, students, alumni) to offer specific recommendations to I-O graduate programs.

Notes

[1] Some participants selected more than one option for the type of graduate program. In all subsequent analyses, the denominator included all participants that selected a given response.
[2] If the total percentage is greater than 100%, this reflects questions with a "select all that apply" response option and/or cases where the rounding of decimals equated to a value greater than 100. If the total percentage is less than 100%, this reflects questions that some participants chose not to answer.
[3] When appropriate, authors recoded written "other" responses into the preexisting categories.

References

Brossoit, R. M., Wong, J. R., Robles-Saenz, F., Barber, L. K., Allen, T. D., & Britt, T. W. (2021). Is that ethical? The current state of industrial-organizational psychology graduate training in ethics. *The Industrial-Organizational Psychologist, 58*(3). https://www.siop.org/Research-Publications/Items-of-Interest/ArtMID/19366/ArticleID/4888

Kostohryz, K. (2016). The doctoral comprehensive examination in counselor education: Faculty members' perception of its purposes. *Journal of Counselor Preparation and Supervision*, *8*(3), 6–30.

Society for Industrial and Organizational Psychology, Inc. (2016). *Guidelines for Education and Training in Industrial-Organizational Psychology.* Bowling Green, OH.

I want to close with a reflection on one key reason I love SIOP, besides the kind and amazing people who are part of it. I love SIOP because we have the courage to do what almost no other professional organization in the world attempts to do—bring science and practice together under one roof. It is something we should be so proud of. It is much easier to segregate the science and the practice, but not us; we try to integrate it for the benefit of all. We do this because we know that we are all better when we work together—better together (see video). It can create messiness and even tension at times, but this means we are trying to do something incredibly special. I am so proud to be part of team SIOP.

Ok, that was a false close. I want to close with a bit of gratitude. As I look forward to taking on the presidency of SIOP and serving our members and our profession, I can't help but to look backwards as well. This starts with my graduate school chair, **Janet Barnes-Farrell**. Janet, what a pain in the tush I was! I stank at writing, and my ideas and passions were all over the place. But you were still good at mentoring that mess of me. I thank you for your support, kindness, friendship, patience, and guidance.

Ok, I will stop here for now. Talk to you soon SIOP.

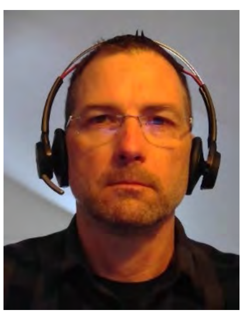
The Bridge: Connecting Science and Practice

Tara Myers
American Nurses Credentialing Center

"The Bridge: Connecting Science and Practice" is a *TIP* column that seeks to help facilitate additional learning and knowledge transfer to encourage sound, evidence-based practice. It can provide academics with an opportunity to discuss the potential and/or realized practical implications of their research as well as learn about cutting-edge practice issues or questions that could inform new research programs or studies. For practitioners, it provides opportunities to learn about the latest research findings that could prompt new techniques, solutions, or services that would benefit the external client community. It also provides practitioners with an opportunity to highlight key practice issues, challenges, trends, and so forth that may benefit from additional research. In this issue, SIOP member **Joseph A. Jones** delves into the recent perceived threats to I-O psychology and the sense of languish many in the field currently feel, recommending a focus on our impact as an effective path forward.

It's Time to Focus on Impact, Not on Existence

Joseph Andrew Jones



Joseph Andrew Jones, PhD is a senior advisor for Planning and Performance Analysis in the Community, State, and National Affairs department at AARP. In this role, he helps AARP leaders develop strategy, measure group performance, and build and test consumer innovations. Prior to AARP, he was director of Research Insights and Applications for the Society for Human Resource Management, and he has held positions in talent management, consulting, and research for a number of small and large companies over the past 20 years, including American Institutes for Research, PDRI, Booz Allen Hamilton, DDI, and SRI International. In addition to presenting professionally on multiple topics, he has published work in the *Talent Management Handbook,* the *Cambridge Handbook on Community Engagement and Outreach*, and *Industrial and Organizational Psychology: Perspectives on Science and Practice*. As a consultant, he served clients such as the DoD, GM, BP Solar, Merck, the PGA, and the Washington Area Metropolitan Authority. He has a PhD in I-O psychology and lives in Alexandria, Virginia. The opinions shared by Dr. Jones in this article are his own and may not reflect those of AARP.

The Existentialist Dilemma

I-O psychology seems to be having a profession mid-life crisis of sorts.

In 2017, Ones et al. (2017) wrote a thought-provoking article asking us to consider whether I-O psychology was "losing its way." Things were happening within the field that made us wonder:

What is happening to I-O and what does the future hold? These included an overemphasis on theory, fixation on "trivial" micromethodological issues, lack of innovation, ignoring practical issues while obsessing on publication, and distraction by fads and the loss of "real-world influence" to others. We appeared at serious risk as a profession, with threats from both inside and outside the ranks.

Not too long after, Rotolo et al. (2018) implored our profession and other practitioners to "clean up our act" around talent management. They coined the term *anti-industrial-organizational psychology* (AIO) to reflect the use of talent management that possibly contradicted our theory and research in ways that have "significant potential to damage the field of I-O psychology and potentially undo all of the positive efforts and outcomes associated with our work over the last 60 odd years." Although they recognized the value of some scientifically and theoretically sound (i.e., derived from I-O psychology) talent management, they took issue with the use of simplistic, trendy, and "quick hit" approaches, which appeared more about scoring points with organizational leaders than with driving real change. Although the article may have fallen short in balancing our response to threats with our response to the needs of employers and employees (see Jones et al., 2018), it effectively called out the impact poor practice can have on our field.

Two years ago, Landers (2019) described some of the existential threats to I-O brought on by rapid changes in technology. He warned we were "poised to plunge headfirst into our own obsolescence" because of journal editors insisting on only publishing works on novel theories, I-Os treating technology as "stimuli and not complex phenomena," I-O researchers viewing technology as a psychological construct, poor I-O education in technology, and the ease with which I-Os ignore these issues instead of working to correct them. He then provided a series of helpful tips on how we can manage these threats.

There appears to be a theme here: We are threatened as a profession and are not adapting as a field quickly enough, while maintaining the fundamental principles that make us who we are. I-Os have been hinting at these existential threats for years through essays such as the several called to light by Landers, going as far back as Highhouse and Zickar in 1997. Much of this current sense of impending doom for the I-O profession (and professions in general) was foreshadowed in 2015 when Richard and Daniel Susskind (2015) published *The Future of the Professions: How Technology Will Transform the Work of Human Experts*. They suggested that *most* professions were heading toward their eventual obsolescence, to be replaced by technology or *other* professions. But even this bellwether book could not truly predict where our specific profession, or even the world in general, would be in 2020. So here we are again.

The existential dilemma is that we feel threatened as a profession, but this threat seems like a fuzzy, moving enemy on the horizon that changes form as soon as we build our defenses. So that makes us feel even more at risk.

It's time we stopped. Change is inevitable, but the foundation and impact of I-O psychology holds firm. Whether we are still called I-O psychology and whether it's a clearly defined profession or field, with defined borders, is irrelevant. What is relevant is the impact of our work.

Change and the Everyday Life of an I-O

> And the very texture, or colour, or taste of the collective awareness in which they were experienced—the worlds to which they have belonged—have faded, diluted by the changes that have ultimately given birth to the world that surrounds the present moment, with the light shining on the screen where this sentence is advancing towards its full stop. (Raymond Tallis, *Of Time and Lamentation,* 2017)

The world has changed so much in the past (insert time period here). There is always something new that we need to learn, that we need to master. Something that has happened in society, a new technology, some new way to look at data. Some new book, new "influencer," new model. It's as though the minute we think we are caught up, something new pops up on our LinkedIn feeds.

If we embrace this change, though, and combine lessons learned from technology with our I-O basics, our impact will be immense. Recent *TIP* articles from Poeppelman and Sinar (2018) and Adams et al. (2021) provide helpful tips in this direction. No doubt, in the time since **Bruce Moore** took the reins of a small group of professionals banding together for support, sharing, and resources, I-O psychology has gone through many transitions. For example, 30 years ago, a wood block test of spatial visualization may have seemed cutting edge for the field. Still, we remained, because we found ways to adapt.

For most I-O psychologists, all of this change, as overwhelming as it may seem, as much as it raises our anxiety, has primarily enriched our work. We have better tools to visualize data, more ways to capture the data, and more ways to connect quickly with each other to share our thoughts and our conclusions. Not least importantly, we have opened our borders in a way that allows us to connect with, learn from, collaborate with, and build a better workplace and world with a broader group of non-I-Os around the world than ever before. Thus, as with other fields, we stand on our foundation and use the new tools to evolve our approach to the work.

Back to the Basics or Building New Basics?

To move beyond our existentialist dilemma, the first thing we need to do is decide to what extent we stick to our basic principles and whether we believe that changes nullify I-O psychology. That is, what kind and degree of change would make I-O obsolete?

Even with all of the change, there are basic principles in I-O psychology as a scientific discipline that remain:

- knowing that the best way to measure behavior is to observe it, but that there are things we can't observe directly and need to infer

- validating the inferences we make
- maintaining a deep passion for understanding, predicting, and helping influence individuals' cognitive and behavioral traits as they relate to work
- seeking reliability but recognizing there is always error in our ability to predict behavior
- doing what we do because we want to make the world of work better

These basic principles are the same for anyone who studies and practices the work that we do. Whether you are a researcher working on a grant to study small team behavior or a practitioner running a strategy session with sales leaders in a *Fortune* 500 company, these principles apply. The key is what we do with the principles and how we continue to develop them.

Typically, when work changes, I-O psychologists begin to study and refine what it means, work to better understand it, and take the lead in predicting the associated behavior. Businesses, though, want to predict the future of work (i.e., the changes) to reduce risk, save money, and get a competitive advantage. Perhaps it would be good for I-O psychologists to be more in front of this cycle. We know that prediction can be flawed, but we have a lot to offer in getting ahead of turbulent times.

So, stick to the basics or create new basics? The answer, it seems, is a bit of both. I-O psychologists need to get out of our comfort zones and adapt, yet each of us needs to find that core that allows us to add value and enjoy our work, and the responsibility falls to both the science and practice of I-O.

The Many Paths of the I-O Future

"When I pronounce the word Future the first syllable already belongs to the past." Szymborska, *The Three Oddest Words*, 1996.

So, what does I-O psychology need to do to keep pace while keeping its roots?

Many of us fear that our careers as I-Os are faltering because we feel that we have not kept pace. Yet when we look around us, most other professionals seem just as lost. **Adam Grant** (2021) recently wrote about this space we are in right now as humans, somewhere between depression and happiness, that is best called "languishing." Many I-Os might argue that we, as a profession, are languishing. We aren't in a state of despair, but we are also not happy about where we stand.

Still, there is hope. It's just not in the form you might think.

Let's stop thinking of I-O psychology as one thing. I-O psychologists come in many different forms. Pinning I-O down to one "type" is problematic. Even pinning down to two, the "academic" and the "practitioner," has its problems. "Profession" is a continuum, and it has very thin borders (Caza & Creary, 2016). That is okay, and in today's business world, that may be true with many professions.

Despite our suffixes and prefixes and academic credentials splashed across resumes and bios, when others outside of I-O look at many of us (without any indicator of our having studied under the such-and-such renowned psychologist and produced dissertations on topics such as *Differential Functioning of Items and Tests*) they would probably tag us as marketers, strategists, data scientists, product launch specialist, researchers, HR experts, or a plethora of other "titles." *Not* "I-O psychologist." Any one of those titles could be and likely are true. We should be comfortable with that.

Success in any of these roles, and in I-O, requires an understanding of and training in a variety of areas and a view of the broader context and system that our work resides within and impacts. It's a lot to follow, but it is fascinating.

Let's continue to collaborate across fields instead of building barriers. We are not alone. We know that others are struggling as well, and that is the beauty of the "organizational" side of our field of study. We don't need to know it all, and do it all, as it constantly changes around us. We have others who can help.

Let's embrace the new world order. Innovation is a critical way for companies to compete (Lengnick-Hall, 1992). If nothing else, businesses must change to meet the changing needs of consumers. I-O psychologists need to understand how they, as individuals, play a key role. We need to have a firm grasp of innovation and change and the interaction between people, technology, and change, not only for our own work but to support those we serve.

This doesn't mean understanding every technology that pops up. It means understanding what change and new technology means psychologically. A logical step is to learn about technology relevant to the field and to our specific work. Of course, we can't know it all. But we need to be confident we can apply what we learn in concert with our basics to make a real difference. This will take intentional effort to meld science and practice.

Let's step back and focus on the good we do for the world. Rather than worrying about job titles and professional affiliations, take a step back and really focus on the impact of our work. There is much we can learn from mindfulness practices and reduced fixations on self-identity to help us during this state of professional anxiety. Let's stay centered on "who are we helping?" and "how are we impacting the lives around us in positive ways?", rather than "who are we?"

Then maybe we can concentrate on the work, quit languishing, and let all the other noise go.

References

Adams, K., Myers, T., & Zajac, S. (2021, March 25). The Bridge: Surviving and thriving in uncertain times: Transforming to meet future needs. *The Industrial-Organizational Psychologist, 58*(4). *https://www.siop.org/Research-Publications/Items-of-Interest/ArtMID/19366/ArticleID/5037/preview/true/The-Bridge-Surviving-and-Thriving-in-Uncertain-Times-Transforming-to-Meet-Future-Needs*

Caza, B. B., & Creary, S. (2016). The construction of professional identity. In A. Wilkinson, D. Hislop, & C. Coupland (Eds.), *Perspectives on contemporary professional work* (pp. 259–285). Edward Elgar Publishing.

Grant, A. (2021, April 19). There's a name for the blah you're feeling: It's called languishing. *New York Times*. https://www.nytimes.com/2021/04/19/well/mind/covid-mental-health-languishing.html

Highhouse, S., & Zickar, M. J. (1997). Where has all the psychology gone? *The Industrial-Organizational Psychologist*, *35*(2), 82–88.

Jones, J. A., Miller, A. A., Sarette, M. J., Johnson-Murray, R. M., & Alonso, A. (2018). Critical reflection or existential trap: Are we making too much of scientific rigor in a dynamic business world? *Industrial and Organizational Psychology: Perspectives on Science and Practice, 11*(2), 262–266.

Landers, R. (2019). The existential threats to I-O psychology highlighted by rapid technological change. In R. Landers (Ed.), *The Cambridge handbook of technology and employee behavior* (Cambridge Handbooks in Psychology, pp. 3–21). Cambridge University Press. doi:10.1017/9781108649636.002

Lengnick-Hall, C. A. (1992). Innovation and competitive advantage: What we know and what we need to learn. *Journal of Management, 18*(2), 399–429.

Ones, D. S., Kaiser, R. B., Chamorro-Premuzic, T., & Svensson, C. (2017). Has industrial-organizational psychology lost its way? *The Industrial-Organizational Psychologist, 7(2),* 136. http://www.siop.org/Research-Publications/ Items-of-Interest/ArtMID/19366/ArticleID/1550/Has-Industrial-Organizational-Psychology-Lost-Its-Way

Poeppelman, T., & Sinar, E. (2018, September 28). Modern App: Digital megatrends 2018: What they are, how to act. *The Industrial-Organizational Psychologist, 56*(2). https://www.siop.org/Research-Publications/TIP/TIP-Back-Issues/2018/October/ArtMID/20676/ArticleID/1348/Modern-App-Digital-Megatrends-2018-What-They-Are-How-to-Act

Rotolo, C. T., Church, A. H., Adler, S., Smither, J. W., Colquitt, A. L., Shull, A. C., Paul, K. B., & Foster, G. (2018). Putting an end to bad talent management: A call to action for the field of industrial and organizational psychology. *Industrial and Organizational Psychology, 11(2),* 176–219. https://doi.org/10.1017/iop.2018.6

Susskind, R. E., & Susskind, D. (2015). *The future of the professions: How technology will transform the work of human experts.* Oxford University Press.

Szymborska, W. (1996). The three oddest words. *New York Times Magazine, 1*.

Tallis, R. (2017). *Of time and lamentation: Reflections on transience.* Agenda Publishing.

Opening Up: Success Stories Implementing Open Science Practices Into Scholarly Activities: A Virtual Q&A

Christopher M. Castille
Nicholls State University

Author Note: Thanks to Cort Rudolph, Don Zhang, and Jonas Lang for sharing their experience adopting open science practices!

If you are interested in contributing to "Opening Up," *TIP's* column for all things open science, please contact christopher.castille@nicholls.edu. We are considering topics such as diversity and inclusivity, teaching open science, and areas where there may be value in spurring different kinds of replication projects (registered reports vs registered replication reports).

In this entry of "Opening Up," we highlight the work **Cort Rudolph, Don Zhang,** and **Jonas Lang,** who have been kind enough to share how they have incorporated open science practices into their scholarly activities. We'll sample a body of their work they have opened up, take a look at some advice for adopting open science practices, point out interesting challenges, and find out whether adopting open science practices has caused them to rethink any assumptions about I-O psychology! Our virtual discussion was fascinating, and I hope you enjoy it!

Introducing Our Virtual Panel

Let's start with brief introductions. First up is Cort Rudolph. He is an associate professor of industrial-organizational psychology at Saint Louis University where he studies the aging workforce, including applications of lifespan development theories, well-being and work longevity, and ageism. He is also consulting editor for *Work, Aging and Retirement* and serves on the editorial review boards of the *Journal of Managerial Psychology*, the *Journal of Occupational and Organizational Psychology*, the *Journal of Vocational Behavior*, *Consulting Psychology Journal: Practice and Research*, and the *Journal of Organizational Behavior*. He is committed to open science because he believes that making psychological science more transparent and accessible will maximize its impacts on society.

Next is Don Zhang. He is an assistant professor of psychology at Louisiana State University (LSU) who studies judgment and decision making, risk taking at work, and how to better communicate research findings to consumers of applied psychology (e.g., managers, policymakers, executives). He serves on the editorial boards of *Journal of Behavioral Decision Making, Journal of Business and Psychology,* and the *International Journal of Selection and Assessment.* He is particularly interested in the role of open science in the classroom and ways to ease students into open science practices.

Last, we have Jonas Lang. He is an associate professor in the Faculty of Psychology and Educational Sciences at Ghent University and a research professor at the Department of Management at the University of Exeter where he studies adaptability, cognitive abilities, personnel selection, and the influence of motivation on performance. He currently serves as an associate editor for the *Journal of Applied Psychology*; he is also the editor of the *Journal of Personnel Psychology* and is on the editorial boards of *Psychological Assessment* and *Human Performance*.

A Virtual Q&A for Implementing Open Science Practices

As it pertains to open science, what body of your work would you like to highlight and what are you proud to say about it? Also, is there anything that drove you to implement open science practices with this particular body of work?

Cort Rudolph: I am proud of successes with open science on a couple of fronts: One of my proudest pieces of work is a meta-analysis published in the *Journal of Organizational Behavior* on “thriving” at work (Kleine et al., 2019). We preregistered our hypotheses and analysis plan, and as far as I know (at least at the time), this was the first preregistered project that *JOB* had published. Teachingwise, I try to push students to consider open science practice in various ways in all of my statistics and research methods courses (i.e., univariate, multivariate, SEM, meta-analysis). To this end, we talk a lot about “forking paths” in analysis workflows and the need to make these decisions explicit. I try to drive home the point that our culture prioritizes telling clean and compelling narratives over transparently communicating how an insight was generated. I also want them to see how we are still exploring new terrain rather than rigorously testing theory and even here preregistration is valuable (see Rudolph, 2021). Even in small ways I try to normalize the language of open science when teaching, too (e.g., instead of saying, “when making a hypothesis,” say “when preregistering a hypothesis”).

Regarding your follow-up question, as a meta-analyst, I always tell my collaborators that being a meta-analyst is like being a detective who investigated methodological/statistical shortcomings in the literature. It’s always interesting to see “what you find” when coding studies for a meta-analysis. In grumbling about this, it finally occurred to me, “why don’t meta-analysts hold themselves to higher standards, too.”

Don Zhang: For two semesters, I incorporated open science into the lab component of my research methods course where undergraduate students worked in groups to conduct a real experiment (data collection and all!). To streamline the process, I gave them one of two papers to replicate as their in-class project. Thanks to the extreme efficiency of LSU’s IRB (at one point, I was PI on over 20 IRB applications simultaneously) and a team of hard-working TAs, the majority of the students were able to recreate the experiment, preregister it on OSF, obtain IRB approval, and collect/analyze real data. By the time I was done, I had over 10 groups that all conducted preregistered direct replications on what turns out to be a pretty influential prereplication crisis *Psychological Science* paper (Balcetis & Dunning, 2010), where the authors found that visual perception is influenced by top-down processes (e.g., motivation).

As luck would have it, the phenomenon we studied turns out to be quite controversial in cognitive science (Firestone & Scholl, 2016). Being an opportunist and an amateur cognitive psychologist, I saw a great opportunity for an actual paper, so I enlisted a star undergraduate student to help collate and meta-analyze the student replication data. We then conducted another high-powered replication study in my lab and wrote up results. The resulting paper is currently under review at *Cognition and Emotion*. It is one of my favorite projects to date, even though it has nothing to do with I-O psychology. I think the students also benefited tremendously in the process by seeing that even published research may not replicate!

Jonas Lang: One success story was a piece on modeling group processes like emergence and group extremity with multilevel models that we recently published in the APS journal *Advances in Methods and Practices in Psychological Science* (see Lang et al., 2019). My coauthors were able to convince the organization to allow us to post the data on the OSF (https://osf.io/849kq/). Because the paper is focused on teaching people a new technique, the availability of the data (and also the code) was really important for making the work understandable and usable for other researchers (they can run the analyses using the data themselves). Regarding your second question: I have been involved in methodological work for some time, and especially as an AE at *Organizational Research Methods* (a role I had before I switched to the *Journal of Applied Psychology*), I noticed papers that shared materials tended to be more popular with readers as well as reviewers.

Were there any resources that helped you to implement these practices in this body of work?

Cort: I echo the Open Science Framework (osf.io) as a wonderful resource to facilitate open science (especially data and material sharing), but also PsyArxiv (https://psyarxiv.com) for posting preprints that are linked directly to OSF projects. I also use Github (github.com) for collaboration and hosting websites. I also want to mention that using open source statistics software, such that data and code that can be reproduced by anyone, is a key engine behind open science. Thus, R and RStudio are key resources for open science work. To this end, the ideas of "open" and "reproducible" science are, to me, inextricable.

Don: OSF is a great resource for students and myself. I also drew inspiration from a couple of great papers on open science and pedagogy (Chopik et al., 2018; Hawkins et al., 2018). One of my (and students') favorite lectures drew heavily from Bill Chopik's work. Most students have not been exposed to open science or the replication crisis. I think the lecture worked particularly well because college students still have a strong anti-establishment way of thinking, so stories about "bringing down the establishment" are naturally appealing to them, I think. The Hawkins et al. paper outlined some great ways to involve undergraduate students in open science, and it was great knowing I'm not alone in recognizing the value of pedagogy in the open science movement.

Jonas: The OSF and related websites are certainly useful. I also tend to learn a lot about these initiatives at European psychology conferences and colleagues in other fields of psychology (especially personality and clinical).

Were there any challenges that you had to overcome to implement open science in this body of work and, if so, what helped you overcome these challenges?

Cort: I think this is still a pretty new space for a lot of people, and especially so in I-O, so my challenges so far have largely been in educating reviewers (and editors) about “why we are doing what we are doing” open science-wise (e.g., the value of preregistration, open data, and code, etc.). Still, and honestly this is a bit discouraging if I am being honest, what I have seen so far (especially with preregistration and sharing data/code) is that reviewers and editors often do not comment on this!

Don: I don’t think what I did is possible unless you have an extremely efficient IRB system. At one point, the IRB administrator was reviewing over a dozen IRB applications and turning them around within 24 hours or less. Personally, my team of TAs and I had to manage over 20 IRB applications and tried to obtain approval within 2 weeks just so the students had enough time to collect data. It was very hectic and took a lot of coordination. Looking back now, I’m surprised it worked out so well!

Jonas: It is generally not easy to convince organizations to share their data. This was not European data, but normally I am based in Europe, and I observed that sharing data or making it available is challenging, particularly in Europe where General Data Protection Regulation recently made people very cautious sharing their data.

Did implementing open science practices cause you to rethink any assumptions in our field?

Cort: To some extent, yes. I see this as the future that our field is headed in. A lot of this open science “movement” has bubbled up from the credibility crisis in social psychology. I think at some level we all know that I-O is equally susceptible to such a crisis, and I would rather be out in front of this thing than lagging. I think as a field we would benefit greatly from being a bit more self-critical about what we know and how we know it.

Do you have any wishes regarding the adoption of open science in our field?

Cort: I think it’s really important to recognize that open science is not a uniform prescription; it’s not “one thing.” Everybody can participate at some level in open science, and each incremental contribution thereto increases the broader credibility of our field as a whole. Moreover, there is not a one-size-fits-all approach to open science for each project; researchers can (and should) adopt principles of open science to the extent that they are practical and make sense for the goals of one’s work.

Don: I wish editors and reviewers would all get on the same page about what “good” papers under this model look like and be more accepting of transparently flawed papers. I remember a story on Twitter where an author’s paper was rejected because they preregistered their hypotheses. The reviewer noted that had the study *not been preregistered*, there was a way to reframe the paper to allow it to be published. I think this type of story makes it hard for early career authors to commit to open science. It is too risky for early career authors to play Russian roulette and hope to get the right editor/reviewers that will sympathize with open science especially when getting the wrong reviewer means your paper may be punished instead. The incentive structure needs to be changed.

Jonas: I think our field in the past tended to sometimes (but not always) put the editorial shotgun on the author's chest and request: "For the revision to be successful, you need to show that there is a theoretical mechanism linking your predictor A to your outcome B." What should the poor authors do in a situation like this? I think there is real change and the *Journal of Applied Psychology*, for instance, has a practice to not ask for new analyses per se but require some assurance that the particular finding is there. With open science policies in general, I think it is important that people can decide depending on their research context and research question and that we do not uniformly require everybody to do the same. In some research areas, it would not be wise to share everything. It would be quite unfortunate, for instance, if we forced assessment firms to share items for their instruments as they relate to employee selection. Forcing open science into practice in this manner might backfire for our field—we may not see research from these organizations anymore. However, in many cases, something can be shared (e.g., covariance matrixes) that can improve the science so long as we all take care that people get credit for their work.

What advice do you have to offer to scholars who are either on the fence about adopting open science practices or are just getting started?

Cort: Just dive in. There are simple steps that any researcher can do to implement open science into their work. For example, posting preprints ensures open access and takes less than 5 minutes. Another example is developing a simple preregistration. The templates provided by OSF make this fairly easy, but it's still a time commitment. Even easier, an https://aspredicted.org/ preregistration can be completed in about a half an hour.

Don: I would love to see senior scholars model open science practices and advocate for open science in search committees, tenure evaluations, and publications. I would like all scholars to be more open minded about what a "good" paper looks like when they review papers and recognize that a lot more papers will not "look" as good in the superficial sense (clean story, supported hypotheses) if open science is successful, and not to punish authors for it. I think reviewers sometimes run into the "like goes with the like" fallacy where "good" papers look like other papers published in the same journals. But with preregistration, papers don't always tie themselves into a perfect bow, and reviewers need to recognize this. I think when incentives are aligned to promote and reward open science as much as they do novelty and "theoretical contribution," junior scholars will respond accordingly. As any self-respecting armchair economist will tell you: People respond to incentives.

Jonas: I think there are clear benefits because it makes one's work more accessible. I think one concern that people tend to have is that some discussions around open science on social media and at some conferences were somewhat difficult for younger scholars. I think it is important that the community is critical about findings and data but always supportive of people and that the field develops a culture where it is fine to sometimes not be right or have different opinions.

A Closing Reflection

A round of virtual applause for our panelists! In reflecting on their responses to my questions, two themes stand out: the importance of educating others (e.g., editors, reviewers, students) about the value of thinking critically about our science and how implementing open science practices go above and beyond more traditional or conventional scholarly contributions in our field. Those with a penchant for leading by example may, I think, see quite a bit of value in incorporating open science practices into their work. Starting small, making incremental changes (e.g., preregistering a hypothesis), will make our science more transparent and accessible, enhancing the already excellent impact we are having on society.

References

Balcetis, E., & Dunning, D. (2010). Wishful seeing: More desired objects are seen as closer. *Psychological Science*, *21*(1), 147–152. https://doi.org/10.1177/0956797609356283

Chopik, W. J., Bremner, R. H., Defever, A. M., & Keller, V. N. (2018). How (and whether) to teach undergraduates about the replication crisis in psychological science. *Teaching of Psychology*, 45(2), 158–163. https://doi.org/10.1177/0098628318762900

Firestone, C., & Scholl, B. J. (2016). Cognition does not affect perception: Evaluating the evidence for "top-down" effects. *Behavioral and Brain Sciences*, *39*.

Hawkins, R. X. D., Smith, E. N., Au, C., Arias, J. M., Catapano, R., Hermann, E., Keil, M., Lampinen, A., Raposo, S., Reynolds, J., Salehi, S., Salloum, J., Tan, J., & Frank, M. C. (2018). Improving the replicability of psychological science through pedagogy. *Advances in Methods and Practices in Psychological Science*, 7–18. https://doi.org/10.1177/2515245917740427

Kleine, A. K., Rudolph, C. W., & Zacher, H. (2019). Thriving at work: A meta-analysis. *Journal of Organizational Behavior*, 40(9–10), 973–999.

Lang, J. W. B., Bliese, P. D., & Adler, A. B. (2019). Opening the black box: A multilevel framework for studying group processes. *Advances in Methods and Practices in Psychological Science*, 2(3), 271–287. https://doi.org/10.1177/2515245918823722

Rudolph, C. W. (2021). Improving careers science: Ten recommendations to enhance the credibility of vocational behavior research. *Journal of Vocational Behavior*, *126*, 103560. https://doi.org/10.1016/j.jvb.2021.103560

TIPTopics for Students: Beyond Psychometrics: Building Better Surveys

**Andrew Tenbrink, Mallory Smith, Georgia LaMarre,
Laura Pineault, Tyleen Lopez, and Molly Christophersen**

The world is overrun with surveys. Today, you can barely walk out the door without hearing the "ping" of your phone asking you to give feedback about something. How clean was this airport bathroom? Did you enjoy your shopping experience today? Fill out this 5-minute survey for your chance to win a $50 gift card! For social science graduate students, especially in I-O psychology where self-report surveys dominate research and practice, collecting behavioral data online is a mainstay. Although we acknowledge recent arguments that survey research is overused (Einola & Alvesson, 2020; Lonati et al., 2018), it seems that surveys are not going anywhere any time soon, especially as the events of the past year have forced more socially distanced and online data collections (Wood, 2021).

Although some worry about the potential negative effects of survey overabundance, we instead choose to frame the phenomenon of survey proliferation as a fantastic opportunity for the field of I-O psychology. It is time for us to put more thought into how we build surveys and ask some important and somewhat neglected questions. For example: If surveys are becoming more and more common, what can we do to stand out? If participants are becoming increasingly hesitant to participate in surveys and disinterested when they do, how can we encourage and motivate them? As future academics and practitioners, we should be thinking seriously about how we can answer these questions. If surveys continue to be a focal research methodology, we should strive for them to be great.

Why Should Graduate Students Care?

In our experience, I-O graduate students receive far more training on psychometrics and content development than on actual survey creation and implementation. This can leave students feeling like they're stumbling around in the dark when it comes to navigating the complexities of survey software, design elements, and user experiences. This results in a survey curating process that is far more focused on what goes into a survey than how it looks and functions. We argue that a focus on both content and construction is essential for the advancement of our science, not only for cosmetic reasons, but because survey design has real implications for the quality of the data we collect (see interventions listed in GESIS' survey methods evidence map). More broadly, training around survey construction fits into the agenda for graduate students to prioritize their technological self-efficacy and computer science skills to compete in the modern realm of research (e.g., Cornelius et al., 2020).

What Can You Expect From This Article?

The purpose of this article is to shed light on aspects of survey design and construction that we feel have been neglected and undervalued in both I-O training and research. As the future of survey research is trending to be more frequent and more online, we call on I-O graduate students to incorporate these evidence-based practices into their survey design process. To achieve these goals, we break down our discussion of survey design into four broad sections: (a) user experience, (b) careless responding, (c) fraud detection, and (d) administration logistics.

A. User Experience

The easiest aspect of a survey to neglect is how participants perceive the *look and feel* of the survey. Publishing outlets provide strong incentives for us to select, document, and justify the content of our survey stimuli (e.g., valid measures). However, we are held less accountable, if at all, to how that content is presented. Whether we realize it or not, survey design decisions impact the nature and quality of participant responses (Callegaro et al., 2015, p. 98). Therefore, we should take the necessary steps to leverage the benefits of careful survey design in ways that will facilitate a more positive experience for users.

Thinking about the participant.

Unless you've done applied work focusing on product design, you may not be familiar with the acronym "UX." UX refers to *user experience*, which is a term to describe the *look and feel* of a product, solution, or in our context, surveys. In a recent SIOP panel discussion titled "UX for I-O: Key Principles for Employee User Experience in I-O Tools," **Muriel Clauson, Dr. Karl Kuhnert, Dr. Young-Jae Kim**, and Rumaisa Mighal discussed techniques for being more user focused when creating surveys and other tools. Among the basic principles of UX that they discussed, "focusing on real users," "reducing cognitive load," and "making products accessible" stand out as particularly relevant for survey design in I-O psychology. Simply put, UX involves developing an understanding of users and leveraging that knowledge when making design decisions. A great first step toward creating a positive user experience is to set aside time during survey development to think about who will be participating and how you can better craft your survey to meet their needs.

Attitudes toward surveys.

A substantial proportion of respondents are known to prematurely quit or invest little effort when responding to long, meandering, and seemingly redundant surveys (Callegaro et al., 2015, p. 101). Research suggests that making surveys more enjoyable can lead to positive outcomes for respondents and researchers. When creating a measure of survey attitudes (e.g., "I enjoy filling out surveys"), survey enjoyment was found to influence participant behavior including item-response rates, following directions, timeliness of survey completion, and willingness to participate in additional survey research (Rogelberg et al., 2001). For those conducting web surveys, these findings should serve as a strong incentive to make surveys more enjoyable, not only to benefit participants but also to facilitate the collection of high-quality data. Beyond the effect that positive attitudes have on our ability to reach our goals as researchers, Rogelberg and colleagues also point out that improving participant attitudes towards surveys is an ethical imperative. Because of heavy reliance on surveys in conducting human research, "it is our responsibility to work to improve attitudes towards surveys" (p. 5).

Unfortunately, we do not have a detailed understanding of how to make surveys more enjoyable. Thompson and Surface (2009) provide some guidance in this respect, finding that participants rated surveys as more useful when they were provided with feedback regarding their responses. Although informative, providing personalized feedback is only one UX design element, and we are left questioning: What other design elements are associated with a positive user experience? How does positive survey experience predict the propensity to participate in future surveys? How malleable are global attitudes about surveys; can a single "poor" experience deter prolonged non-response to future survey invitations; can a single "amazing" survey experience restore positive global attitudes about surveys? Conducting future research in these areas will enable researchers and practitioners to take a more intentional approach to building surveys that participants enjoy.

Survey length.

We all know the frustration of investing upward of 30 precious minutes to complete a so-called "short" survey. In addition to causing boredom for participants, survey length can also impact data quality. As participants become exhausted or cognitively drained, they are likely to begin responding differently to the stimuli presented to them (e.g., Tourangeau, 2017). This can contribute to an overall negative survey experience and is counterproductive to the goals of the researcher. Gibson and Bowling (2019) found support for this hypothesis in online research where longer surveys had a higher incidence rate of careless responses than shorter ones. In a related study, careless responding rates increased exponentially as the number of items increased (Bowling et al., 2020). For example, they estimated that for an online survey with 117 items, careless responding would occur 10% of the time, compared to just 1% of the time for an online survey with 33 items.

Although some have come to accept long surveys as a necessary evil, there are things we can actively do to shorten surveys. One straightforward solution is to explore the use of abbreviated measures or single-item indicators (Furnham, 2008). Initial work also speaks to the potential benefits of splitting long questionnaires into shorter subquestionnaires (Andreadis & Kartsounidou, 2020). Beyond directly reducing length, other techniques such as warnings and in-person proctoring show promise in mitigating the negative effects of survey length (Bowling et al., 2020). Overall, taking steps to streamline survey content is a practical strategy to enhance the quantity and quality of surveys returned.

Mobile surveys.

Researchers and practitioners are beginning to transition traditional desktop surveys to function in mobile environments, and for good reason. A report conducted by the Pew Research Center states that 85% of U.S. adults own a smartphone, with 15% of U.S. adults being "smartphone-only" Internet users. These numbers increase when we look at younger individuals, who are commonly targeted for research in the social sciences (e.g., undergraduates). For individuals aged 18–29 in the U.S., 96% own a smartphone, and 28% are "smartphone-only" Internet users. Given that so many Americans rely on a mobile device for Internet access, it is important to design surveys for optimal functioning in these environments.

A great first step for researchers is to make sure that surveys are mobile optimized, meaning surveys can be easily accessed on mobile devices without seeing differences or disruptions in the content compared to desktop access. As we become more experienced with mobile surveys, researchers will be encouraged to create mobile-first surveys (Grelle & Gutierrez, 2019), developed specifically for completion on mobile devices, and adapt existing assessments for a more user-friendly experience on mobile devices. For example, Weidner and Landers (2019) adapted traditional personality measures to be used with swipe-based responses, commonly utilized by popular dating apps.

B. Careless Responding

One notorious validity threat when using Internet-based surveys is careless responding (CR). CR occurs when participants, regardless of their intention, respond to surveys in a manner that does not reflect their true scores (e.g., Meade & Craig, 2012). CR can distort results and weaken conclusions via psychometric problems (e.g., Arias et al., 2020). It is advised that researchers take action to detect and prevent it, which can be achieved through intentional survey design.

Preventing CR through living surveys and immediate, personalized feedback.

One emerging CR prevention mechanism that holds significant promise is creating a *living survey*, which exploits the interactive capability of web surveys. In living surveys, respondents receive an immediate, personalized pop-up notification or prompt to verify their response when they incorrectly respond to a quality-check item, provide a nonsensical open-ended response, or answer a question on a page in an unrealistic amount of time. Preliminary evidence suggests this strategy effectively reduces CR behaviors such as speeding, straightlining, and inaccuracy (e.g., Conrad et al., 2017). Living surveys have the potential to evoke compliance through various social power strategies (Gibson, 2019) despite the absence of a human proctor. Conrad et al. (2017) demonstrated the viability of this approach via a series of experiments. Participants who responded faster than a realistic response time threshold on any given item were immediately shown a message encouraging them to answer carefully and take their time. This intervention reduced speeding and straightlining following the prompt and increased response accuracy on a later simple arithmetic question (e.g., Zhang & Conrad, 2016). It is worth noting that the *living survey* approach runs the risk of producing socially desirable bias in survey answers, as respondents feel monitored by an “artificially humanized” interaction with the survey system (Zhang & Conrad, 2016; Conrad et al., 2017).

We argue the benefits of immediate feedback in surveys outweigh the risks, serving as a valuable intervention for establishing data quality. Even respondents who are genuinely motivated to provide accurate data may accidentally provide nonsensical responses (e.g., mistakenly entering 99 instead of 9). There are mechanisms to create a survey experience that allows respondents, careless or not, the opportunity to correct or reconsider their response. Take for example, a question from the Pittsburgh Sleep Quality Index (PSQI) that asks participants to indicate how many hours they slept each night over the past week. Beyond setting the validation for this question to be a numeric response with 1 to 2 digits, you can go one step further to ascertain the quality and accuracy of your data by creating an “oops” loop within your survey notifying participants that their response exceeds a realistic number of hours and asking them to verify their response (see demonstration here by entering 16 hours per night).

Detecting careless responding.

Despite the advantages of building interactive web surveys, it is not common practice for researchers to prevent CR using the interventions described above. Instead, researchers seem to prefer more passive approaches of detecting CR. For example, researchers include quality check items, strongly worded instructions, or embedded data fields to capture paradata such as response times per page, total response times, mouse movements, and IP addresses (e.g., DeSimone & Harms, 2018; Huang et al., 2012; Niessen et al., 2016). Researchers then use these indices and analytical tools (e.g., *careless* package in R; Yentes, 2021) to identify and screen for CR.

From our collective experience creating and taking surveys for psychological research, the most common method to detect careless respondents is quality check items that come in the form of either bogus items (e.g., ''I am paid biweekly by leprechauns") or instructed-response items (e.g., "Please select the circle under 'neutral'"). Although using a validated bogus items scale (e.g., Hargittai, 2008; Huang et al., 2014; Meade & Craig, 2012) in its entirety can be appealing—for their novelty and humor factor—doing so can come with the risk of producing false-positive careless responders (Curran & Hauser, 2019). For example, Curran and Hauser (2019) found that someone responded *yes* to the bogus item "I eat cement" because they remembered there was cement in their braces and thought they must have eaten that. Considering these disadvantages, we instead encourage selectively using (a) simple known truth items (e.g., "Trees are a source of wood") or (b) instructed-response items as quality check items.

In-depth discussion of CR indices and methods for addressing CR once detected go beyond the scope of this article. Interested readers may consult Arthur et al.'s (2021) coverage of this topic, along with others (e.g., Curran, 2016; Denison & Wiernik, 2020). Of note, the treatment of CR is debated in the literature, with some arguing for their removal and others not (see Porter et al., 2019).

C. Fraud Detection

With online surveys comes limited and more distant interaction with participants. This reality creates opportunities for unwanted participants to gain access to your survey. Luckily, there are design features that you can implement to fight against these intrusions and ensure that you are only analyzing responses that are relevant for your purposes.

Verifying the identities of respondents.

Bernerth et al. (2021) argue data-cleaning and quality-checking methodologies currently in use (e.g., instructed-response items, similarly worded items, and time spent on the study) may be insufficient means of detecting problematic web-based respondents. Even if participants respond carefully, this does not guarantee that they are part of the target sample, which limits the utility of their high-quality responses. Particularly if compensation is offered as an incentive, unsolicited respondents may gain access and make every effort to “pass” the necessary check boxes to receive compensation (Hauser et al., 2019). To overcome the limitations of *solely* relying on CR indicators, they propose a novel approach of using information obtained from Internet protocol (IP) addresses to detect web-based participants that may need to be excluded from a study due to false identities (see Figure 1, Bernerth et al., 2021).

Bots and fraudulent data.

Our web surveys are increasingly preyed upon by web bots, whether data are sourced from social media, MTurk, Prolific, or other crowdsourcing or panel sources. Aguinis et al. (2020a, b) offer recommendations on how to thwart web robots from infiltrating your web surveys, including having respondents complete an informed consent form with a “CAPTCHA” verification or using a separate intake survey to prescreen for inclusion criteria prior to distributing your primary research survey.

D. Administration Logistics

Once survey construction has been completed, researchers are still faced with administering their survey to the target population. Much like the rest of the survey design process, steps can be taken to ensure administration maximizes the likelihood that a representative sample of participants complete a survey within a theoretically meaningful timeframe.

Use automation to save time, redirect energy, and advance goals.

Demerouti (2020) calls on us to “turn digitalization and automation into a job resource.” One salient way to do this in your research process is by taking advantage of the automation functionalities in your survey software. These functions not only save you time, but they remove human error that may threaten the rigor, reproducibility, and validity of your research findings. For example, you can set automatic reminders for participants to take the survey. Reminders are most effective when sent 3 or 4 days after the initial invitation (Callegaro et al., 2015, p. 152). If you are conducting a longitudinal survey, consider collecting respondents’ email addresses and creating an action to send them a personalized invitation to participate in the subsequent survey(s) at the exact time interval prescribed by your research design.

Timing matters.

The timing of soliciting survey respondents has an impact on response rates, with general advice being to invite potential participants when they are “not too busy” (Callegaro et al., 2015, p. 152). As organizational scholars, there are additional factors to consider when timing the release date of your survey given known fluctuations in employee attitudes, behaviors, and cognitions across days of the week (e.g., Pindek et al., 2020). Intentionally distributing surveys on a certain date and fielding for set duration (e.g., 5 days) increases the likelihood that respondents will have a common frame of referent when responding. For example, if you send out a survey on a Sunday to employees working a “traditional” schedule (9 to 5, M through F), are questions’ asking about “today” going to elicit the same response as an employee answering these same questions on a Monday?

Other aspects of a respondent's context or situation may introduce measurement error. Respondents who indicate their employment status as "Employed full-time (30 hours or more per week)" may not have worked a conventional schedule the week or month prior at the time of survey. In our own personal research during COVID-19, we have paid particular attention to this possibility given the precarity of employment and work hours (Collins et al., 2020). We made attempts to detect fluctuations in respondents work or life circumstances through targeted questions like, "What was the main reason you were absent from work LAST WEEK?" as they relate to the recall window used to frame psychological measures (e.g., "In the past week" vs. "In the past month"). This decision mirrors an argument for more widespread inclusion and consideration of major life events in I-O survey research, which despite being low base rate events (Bakker et al., 2019), can systematically distort or explain meaningful variability in responses.

Conclusion

We ought to invest time, energy, and effort into carefully crafting surveys that respondents enjoy. As we have established, intentional survey design is beneficial for researchers, practitioners, and participants. The process of turning a web survey from an idea into a deliverable product involves several hundred decisions. In this article, we did not provide a comprehensive road map to guide each of these decisions, knowing that they are driven in part by budget, use case, and software available. Instead, we called attention to four neglected areas of survey design, (a) user experience, (b) careless responding, (c) fraud detection, and (d) administration logistics, as they hold tremendous promise to move I-O web surveys from good to great.

Many scholars driving research on the science of web surveys are housed in non-I-O programs (e.g., the University of Maryland's Joint Program in Survey Methodology, Michigan Program in Survey and Data Science). For thorough reviews of methodological research on web surveys, we recommend adding "The Science of Web Surveys" to your library, bookmarking available resources on evidence-based survey methodology from GESIS, and expanding the academic journals on your watch lists (*Field Methods*; *Social Science Computer Review*; *Survey Research Methods*; *Public Opinion Quarterly*). Implementing evidence-based survey design principles holds promise for improving the quality, reach, and replicability of our science. To reap these benefits, we must actively consume web survey methodology research published outside of our typical journals, commit to implementing the evidenced-based practices documented in those texts, and be incentivized to continue doing so through our academic publishing processes.

Andrew Tenbrink is a 5th-year PhD student in I-O psychology. He received his BS in Psychology from Kansas State University. His research interests include selection, assessment, and performance management, with a specific focus on factors affecting the performance appraisal process. Currently, Andrew has a 1-year assistantship working as a quantitative methods consultant in the Department of Psychology's Research Design and Analysis Unit at Wayne State University. Andrew is expected to graduate in the summer of 2021. After earning his PhD, he would like to pursue a career in academia. andrewtenbrink@wayne.edu | @AndrewPTenbrink

Mallory Smith completed her Master of Arts in I-O Psychology in the spring of 2020. Prior to graduate school, she earned her BA in Psychology and German from Wayne State University. Her interests include factors influencing employee attitudes, efficacy, and perceptions of justice during organizational change. After graduation, Mallory started a new job in the healthcare industry, leveraging both her I-O skillset and background in information technology to support digital transformation, enhance work processes, and encourage employee adoption of new innovations. smithy@wayne.edu | @mallorycsmith

Georgia LaMarre is a 4th-year PhD student in I-O psychology. She completed her undergraduate education at the University of Waterloo before moving over the border to live in Michigan. Georgia is currently working as an organizational development intern at a consulting firm while pursuing research interests in team decision making, workplace identity, and paramilitary organizational culture. After graduate school, she hopes to apply her I-O knowledge to help solve problems in public-sector organizations. georgia.lamarre@wayne.edu

Laura Pineault is a 5th-year PhD candidate in I-O psychology. Her research interests lie at the intersection of leadership and work–life organizational culture, with emphasis on the impact of work–life organizational practices on the leadership success of women. Laura graduated with Distinction from the Honours Behaviour, Cognition and Neuroscience program at the University of Windsor in June 2016. Currently, Laura serves as the primary graduate research assistant for a NSF RAPID grant (Work, Family, and Social Well-Being Among Couples in the Context of COVID-19; NSF #2031726) and is a quantitative methods consultant for the Department of Psychology's Research Design and Analysis Unit at Wayne State University. Laura is expected to graduate in the spring of 2021. laura.pineault@wayne.edu | @LPineault

Tyleen Lopez is a 3rd-year PhD student in I-O psychology. She received her BA in Psychology from St. John's University in Queens, New York. Her research interests include diversity/inclusion, leadership, and well-being in the workplace. Tyleen is currently a graduate research assistant and lab manager for Dr. Lars U. Johnson's LeadWell Research lab at Wayne State University. Tyleen is expected to graduate in the spring of 2023. After earning her PhD, she would like to pursue a career in academia. tyleen.lopez@wayne.edu | @tyleenlopez

Molly Christophersen is pursuing a Master of Arts in I-O Psychology. She earned her BA in Sociology from Michigan State University in 2016. Her interests include workforce training and employee development. After graduate school, she has her sights set on an applied career in the private sector—ideally in a role where she can help businesses train and develop their employees, effectively helping individuals to grow within their organization. mollychristophersen@wayne.edu | @molly_kate32

Max. Classroom Capacity: An Interview With Dr. David Costanza

Loren J. Naidoo
California State University, Northridge

Dear readers,

Welcome! I am thrilled to spend this column talking about teaching with SIOP's 2021 Distinguished Teaching Contributions Award winner, **David P. Costanza**. Dr. Costanza is an associate professor of Organizational Sciences and of Psychology at The George Washington University and has served as department chair and program director. He is also a Senior Consortium Fellow for the U.S. Army Research Institute. His research, teaching, and consulting are in the areas of generational differences; leadership; culture; organizational performance, decline, and death; as well as statistics and research methods. Dr. Costanza's work has been published in journals including the *Journal of Business and Psychology, Personnel Psychology,* and *Work, Aging and Retirement.* He has authored work for Slate as well as numerous book chapters and conference presentations, and has been interviewed by the *Washington Post, The Wall Street Journal,* the *Financial Times, TIME* magazine*, VOX,* and *Yahoo! Finance.* He is a member of the Society for Industrial and Organizational Psychology and the Academy of Management and serves on the editorial boards of the *Journal of Business and Psychology* and *Work, Aging and Retirement.* In 2009, Dr. Costanza was given the Distinguished Alumni Award in I/O Psychology by George Mason University and was awarded the 2020 Robert W. Kenny Prize for Innovation in Teaching of Introductory Courses by the Columbian College at GWU.

Loren Naidoo: David, welcome to Max. Classroom Capacity! Thanks for taking the time to talk with me, and congratulations on receiving SIOP's Distinguished Teaching Contributions Award! Let me begin by asking you, how did you get your start as an I-O psychology academic?

David Costanza: Thanks for inviting me. As for my start in I-O, in undergrad, I tried economics, sociology, government, and business before happening upon an Intro to I-O Psychology course. It was that simple—I was hooked on I-O. After taking Intro, I cobbled together a concentration with courses from different departments since the psychology department only offered the one course. After that, I knew I'd be headed to grad school sooner or later.

As for where, I seemingly cannot get away from the DC area. I did my undergrad at the University of Virginia in Charlottesville (Wahoo-wa!), did a national job search, and ended up accepting a position at Contel (a local telephone company that was acquired by Verizon) in Northern Virginia. I did my master's at George Mason University in Fairfax, VA, and then applied at schools all over the country, but ended up staying at Mason for my PhD. I then did a national job search, eventually accepting a position at The George Washington University in DC. So, from undergrad to now, I've made three major changes but never moved more than 25 miles or so.

LN: DC is a great place to live! What made you choose to pursue a career in academia rather than industry?

DC: Both my parents were teachers, my mom for preschool/kindergarten, and my dad was a professor at Ohio State. As such, I am pretty sure that I was destined for teaching. After undergrad, I did work in the corporate world in operations and office management. Although I enjoyed the experience and learned a lot about business, management, and organizations, I also learned that an 8–5 job where I had to wear a suit, tie, and wingtips every day was not for me. Getting my master's and then PhD and working with some terrific professors at George Mason solidified my choice to become an academic. That and not having to wear a tie.

LN: That sounds very familiar. I am also the child of teachers and was attracted to academia partly due to realizing at a young age how difficult a regular 9–5 job can be. Receiving the Distinguished Teaching Contributions Award this year, of all years, is interesting because the timing coincided with arguably the biggest and fastest set of changes to teaching practice in modern history. Like the 2019–2020 NBA championship (go Lakers!), I would argue that the achievement is even more significant given the unique challenges that we faced this year. How would you describe the impact of the COVID-19 pandemic on your teaching? What adjustments (if any) did you have to make to your approach?

DC: The most immediate impact was that I had to re-prep all my courses. I have never used or liked using PowerPoint slides in class. I'm an old school, draw-on-the-board type. Beyond developing slides, I had to reimagine a lot of what I do. When teaching, I rely on connecting with the students, real-time reactions and responses, and building off what happens in class to make points, bring up examples, or raise questions. Because of the pandemic, I, and all my colleagues, had to figure out how to engage the students over video, keep track of how they were doing, create online assessments, and manage the tech, all while taking care of ourselves, families, and everything else that was happening in the world. Honestly, at times, it was exhausting.

As with every course and teaching technique, some worked, some didn't. I tried to elicit as much feedback and reactions from the students as I could, using it to gauge how things were going. I also quizzed my own two college-aged daughters, Zoe and Thalia, who themselves were transitioning to taking online courses. They were terrific SMEs for me.

LN: Did you notice any pattern to what worked and what didn't? In other words, would you say that there are any fundamental principles that determine success in online teaching?

DC: Not really in terms of teaching techniques per se. What worked in some classes didn't work in others. What did seem to make a difference was focusing on being available, supportive, and offering the students options. Being available was pretty easy because rather than just fixed office hours, which I still held, I could meet with them at other times. I also shared my cell number with them in case of emergency. I was a little hesitant, but no one abused it, and it did allow a couple of kids with last minute emergencies to connect with me. Being supportive was just that. Coming to class early, staying late, offering extensions when appropriate and not when it wasn't. All this took a lot of emotional labor, but it was worth it.

As for offering the students options, I took aspects like class participation, which had been based on, well, class participation in class, and broke it down into smaller pieces. Students could earn participation credit by coming to office hours, attending scheduled individual meetings, presenting in class, and participating during synchronous sessions. I offered fewer major exams and more quizzes, small weekly assignments, and regular short assessments—things like weekly learning checks. Doing so allowed them to spread out their assignments and demonstrate incremental progress and made it a little bit harder for them to fall behind because I could keep track of how everyone was doing on a more regular basis.

LN: That's a very interesting idea to break up your assessments into smaller pieces—more feedback and fewer high-stakes, high-pressure exams (I will take this opportunity to plug a past Max. Classroom Capacity column on the topic of quizzes). I completely agree with you about the importance of being supportive, in regular times, yes, but especially now.

At the moment (Mid-April, 2021), we seem to be in a strange place when it comes to COVID. Vaccinations are in full spring, with about 40% of the U.S. population having received at least one dose, but the number of cases seems to be creeping up in several states. Many universities are anticipating at least a partial return to in-person instruction in the fall of 2021. For the year+ we've been on this great adventure (glass half full!), we have had to rapidly modify our teaching while dealing with a number of new personal and professional stressors. Now we are, perhaps, at long last seeing the beginning of the end and contemplating a return to normalcy. What, if anything, will you change about your approach to in-person teaching based on your experiences of the last year? Are there any technologies, techniques, or practices that you learned during COVID that you think you will continue to use once we are back in the classroom?

DC: There are a few things I can see continuing for sure. I really thought that online testing worked well and makes grading a lot easier. Offering a 24-hour window when students can take a quiz or exam, and a time limit within that once they start, offers flexibility and options. The grade distributions for online assessments were pretty much the same as in-person and paper and pencil, and the students seemed to like it. I had to modify the questions so that they were less Google-able, but that's done so I will probably continue with online exams.

Weekly learning checks and feedback also worked well, and they kept me in touch with how things were going for the students in almost real time. I was also able to have guest speakers come into my courses from all over, not just those folks in DC whom I could get to come to campus. That is a huge plus, and I'll keep doing that. Recording class so the students can review later makes sense too.

As for what I won't do? Trying to monitor chat, watch students, and teach all at once is too much. I am not sure if GW will allow synchronous distance students, and I hope everyone is in person. By the way, GW just joined the parade of schools requiring vaccinations for on-campus students and has vowed to be in person to the greatest extent possible (yay!). Not sure what that means for in-person versus online preferences, but I won't miss a lot of the online overhead.

I'm torn on using slides. They seem less organic and flexible than writing on the board and less fun. I like to use lots of different colors of markers, drawing diagrams and underlining important points. That said, my handwriting is not great, the pens dry up, and the students do like the structure that slides offer. So, not sure on that. Check back with me in October.

LN: Earlier you touched on some very interesting issues that pertain to potential changes that are larger and more systemic in nature, such as how universities should handle students who would like to continue taking classes in a fully online format. I have heard concerns expressed about the possibility that traditional brick-and-mortar universities may be increasingly replaced by online ones. I'm not sure this is something you've thought a lot about, and maybe it's premature to discuss given that we are still in the midst of the crisis, but I wonder whether you anticipate any larger changes happening in higher education in general, or psychology and management departments specifically, resulting from COVID?

DC: There has certainly been a lot of talk about the future of higher education but, because we're still in the pandemic, it has been mostly talk. My opinion, for what it's worth, is that the pandemic has demonstrated how important and in demand the residential college experience is. Sure, there may be some smaller, less financially secure colleges and universities that do not survive or transition to online education. However, I am more sure than I was before the pandemic that in-person, residential colleges and universities will be around for quite some time. The students want them, the parents want them, and the faculty and staff want them.

As for psychology and management departments, my prediction is that they will all morph into interdisciplinary organizational sciences departments! Just kidding (sort of). I do think that more cross-collaborations and interdisciplinary efforts among I-Os, management, education, and other organization-related disciplines are in the cards. Today's organizations and the kinds of questions that need answering are more amenable to being addressed by cross-disciplinary efforts. Plus, not every school can offer every discipline to every student, so there is bound to be some consolidation and focusing in the academy. I-O should be leading the way on that.

LN: I know we've covered a lot of ground so far, but I want to try to distill for the readers the main aspects of your philosophy of and approach to teaching. From what we've discussed so far, it seems like you consider forming relationships with students as critical to teaching/learning—making connections with students in real time, offering support, and providing flexibility. Is there anything else that we haven't talked about yet that you consider a core part of your teaching philosophy/practice?

DC: As noted, there is no one trick, tip, or technique for teaching across levels, across areas, across topics. Instead, I focus on a goal rather than a technique. What I have concluded is that what matters to most students is relevancy. Across courses, topics, or student levels. It could be the relevance to becoming educated adults, to advancing careers, to developing programs of research, or getting a job after college. I believe that if I put forth the effort to make connections, to prepare and be involved, students will find the material engaging, interesting, and yes, relevant.

LN: David, thanks so much for a great conversation about teaching!

Readers, as always, please send me your comments, questions, and feedback: Loren.Naidoo@CSUN.edu. Stay safe and be well!

Navigating the Expansion of Virtual Communication at Work

Alejandro Albedrop, Diana R. Sanchez, and Tamara Skootsky
San Francisco State University

Over the last year, COVID-19 has initiated a period of rapid adoption of virtual technologies for both social and work-related activities of companies and employees across the globe. Considering how COVID-19 will impact the future of work has remained a critical topic for researchers and practitioners in I-O. As pandemic restrictions begin to subside, many organizations will be making decisions regarding the virtualization of their workforce. To help understand the potential implications of remaining virtualized or returning to in-person work, we conducted a literature review of empirical research on in-person versus virtual interactions. We aggregate these results into themes and present a set of recommendations based on these research insights that may be beneficial for practitioners seeking resources to help guide clients through this time of decision making.

As the threat of the COVID-19 pandemic spread, organizations rapidly developed and implemented technological innovations and infrastructure to support alternative work, which often included telecommuting options and technology-based collaboration tools (Branscome, 2020; LaBerge et al., 2020). Much of this change was to support companies in their ability to sustain normal business functioning. As the number of vaccinations administered increases, many organizations have begun to consider what changes their company will make as business returns to relative normalcy (PwC, 2021). Companies will be weighing the potential pros and cons of virtualized work systems. From some perspectives, technology improvements may have improved efficiency and productivity or enabled other benefits (e.g., removed commute time for employees). However, some organizations may have difficulty replicating critical benefits of in-person interactions in the virtualized world of work and may want to avoid some of the unforeseen pitfalls of virtual work (e.g., Zoom fatigue).

Although the future of work is uncertain, the relative success of increased virtualization suggests technology-based work interactions will continue to some extent (Akala, 2020; PwC, 2021). Therefore, it will be helpful for I-O researchers and practitioners to understand how organizations may benefit from continuing and increasing virtual work while understanding the potential risks of eliminating or reducing in-person work arrangements. In this report, we summarize research-based information on the benefits of virtualized (e.g., competitive outcomes for productivity; Credé & Sniezek, 2003; Furumo & Pearson, 2006; Hiltz et al., 1986; Shin & Song, 2011) and in-person (e.g., unique and intangible feeling of connectedness and belonging; Credé & Sniezek, 2003; Okdie et al., 2011; Sprecher, 2014) interactions in the workplace. We highlight the impact each may have for organizations and employees and conclude with recommendations for each, including envisioning possibilities for a future of hybrid work arrangements.

Benefits of Virtualization at Work

Improved Accessibility

One of the more prominent benefits of virtual workplaces is the increase of accessibility options. Virtualization enables organizations to work with individuals across space and time because employees may no longer be required to travel to a physical office or regularly attend work meetings and events at specific times (Ekberg et al., 2016). This enables organizations to attract individuals with talents and skills that may have otherwise been inaccessible when requiring in-person workspaces (Rau & Hyland, 2002). Apart from permanent virtualized work alternatives, organizations can also offer flexible virtualized workspaces that can accommodate individuals with specific needs or life circumstances (Beigi et al., 2018). Drafting policies and guidelines that allow employees the flexibility and possibility to use virtual work to accommodate particular barriers can create a more equitable playing field for employees (Kelly & Kalev, 2006).

Productivity Outcomes

A notable consideration of virtual work is the amount of research that has highlighted the productivity benefits that can come from a virtualized workspace. In part, this productivity benefit is enabled by the number of workplace technology tools, applications, programs, and solutions that have been designed and implemented over the years to facilitate effective virtualized workspaces (Cascio & Montealegre, 2016). Research on virtual interactions has generally shown that productivity often meets or exceeds that found within in-person workspaces (Credé & Sniezek, 2003; Furumo & Pearson, 2006). For example, when evaluating productivity in a team context, the quality of decisions made by virtual teams has been shown to be as effective as decisions made by in-person teams (Hiltz et al., 1986; McLeod et al., 1997). In other instances, virtual teams have demonstrated better outcomes (e.g., task focus and efficiency), particularly when informal conversations are limited and technological tools are available to assist with work processes (Shin & Song, 2011). Based on these findings, increasing the frequency of virtualized interactions can maximize employee productivity without compromising the quality of work, which could provide overall cost savings opportunities for companies and time-saving processes for employees.

Social Impact

Research has also demonstrated a potential benefit to social interactions within virtualized workspaces, particularly for underrepresented groups. Although some research has conceptualized the reduced number of social cues in virtual communication as a drawback (e.g., App et al., 2011), a positive consequent is that these reductions may lead to mitigating social anxiety and interpersonal biases (Lundy & Drouin, 2016; Straus, 1997). One explanation for this is that virtual interactions often limit the amount of information that is accessible about the person's gender, race, or visible disability status, demographics that have been tied to unconscious social bias and prejudice (Chin, 2004). When these cues are less prominent, they may have less impact on the virtual exchange by reducing social pressure and allowing individuals to express themselves more authentically than with in-person interactions (Connell et al., 2001). In addition, some researchers have found greater equality of participation among group members when interacting virtually. Specifically, virtual interactions demonstrated greater participation from minority group members with unpopular opinions (Ho & McLeod, 2008; McLeod et al., 1997; Straus, 1997; Walther, 1995). Considering these results, virtualized interactions may provide an added social benefit, particularly when considering populations that have traditionally been underrepresented or less recognized in conventional, in-person workspaces.

Benefits of In-Person Work

Richness of Experience

Although virtual interactions offer important benefits in terms of accessibility, equitability, and productivity, our modern technologies are still incapable of replicating the rich interpersonal experiences offered by in-person interactions (Bavelas et al., 1997; Reader & Holmes, 2016). These enriched experiences of in-person interactions likely provide inherent value for organizations and individuals, especially when relationship building is core to the business goal. To elaborate, in-person interactions encompass higher levels of visual fidelity, which can intensify emotions through eye contact (Ponkanen et al., 2011; Reader & Holmes, 2016). When comparing virtual interactions with in-person interactions, recent advances in social cognition research have demonstrated that the areas of our brain that allow us to process other people's behavior, thoughts, and emotions (Aihara et al., 2015) are more highly activated when we are interacting face to face (Jarvelainen et al., 2001; Prinsen & Alaerts, 2019). In essence, in-person interactions neurologically heighten our senses and amplify our experience of others when compared to virtual interactions. This leads to the possibility of unique benefits for specific workplace processes such as gaining organizational commitment from employees or fostering high-quality leader–member exchanges (Eisenberger et al., 2010).

Social Needs

Human beings are a social species that place value on connecting with others. Psychology has long studied these aspects of the innate human need to belong (Baumeister & Leary, 1995). I-O psychology has devoted much focus to the social aspects of the workplace and on research regarding the development of employees' sense of belonging, affiliation, and group commitment (e.g., McClure & Brown, 2008). The science of how we communicate various emotions suggests that in-person interactions may be essential to effectively achieving our interpersonal needs. Although facial features can adequately communicate anger, disgust, fear, happiness, and sadness, research has shown that the natural expression of embarrassment, guilt, pride, and shame requires the use of our whole body (App et al., 2011). Although video and voice enabled technologies do offer nonverbal cues, and more advanced technologies such as VR interactive workspaces are providing a stronger sense of *presence* in the virtual environment for users (Sanchez-Vives & Slater, 2005), there are still aspects within virtual interactions that are lacking when compared to the benefits of in-person interactions. In-person interactions offer higher fidelity facial information and nonverbal gestures displayed by the whole body (Bavelas et al., 1997). Furthermore, physical touch may be necessary to effectively express deeper feelings of care, such as love and sympathy (App et al., 2011). Although these may initially seem like less pertinent experiences for the workplace, the potential lack of these opportunities to connect with fellow employees and coworkers in the workplace can lower an employees' feelings of closeness and care, which provide essential social and emotional benefits, leaving those who interact virtually at a disadvantage (Prager, 1995). Due to the pandemic, many individuals may be feeling the long-term effects of these distanced interactions through fatigue, exhaustion, and burnout.

Making Better Impressions

The impressions that individuals make upon others have also been found to produce better outcomes when in person. Research suggests that people tend to perceive themselves as more similar to and understood by others when they interact in person as opposed to virtually (Okdie et al., 2011). Individuals also report that when meeting in person, this experience offers an easier to navigate interpersonal interaction (Shapka et al., 2016) and a higher reciprocity of positive regard (Credé & Snizek, 2003; Okdie et al., 2011; Sprecher, 2014). The research for positive impressions has been extended in a comparison of work groups where in-person groups demonstrated greater consideration of others' ideas (McLeod et al., 1997) and less interpersonal conflict when compared to virtual groups (Hobman et al., 2002). These results could represent the influence of healthy and functional impression management strategies (Leary, 2019). In person, individuals may be able to interpret a wider array of social cues and use those to adjust to others' needs more effectively, offering an environment that creates unique connections between people. It is pertinent for the future of work to discover how the unique qualities of in-person interactions constrain our behavior and self-expression yet foster a valuable sense of connection and understanding that is difficult to achieve in other formats (Leary, 2019). These aspects are often critical for the workplace, especially in roles where networking, building relationships, and forming connections is crucial to the services and practices of the business.

Recommendations for Moving Forward

With government restrictions and health concerns continuing to subside, some organizations have expressed an eagerness to understand the benefits and detriments of in-person and virtual work interactions. It is imperative for organizations to consider and prepare the work arrangements (e.g., flexible work hours, telecommuting options, compressed work schedules) they plan to offer employees in a post-pandemic world. Below we provide a set of guiding recommendations focused on improving in-person, virtual, and hybrid work environments.

1. Build on What We've Started

Despite consistent growth in virtualized work options, in-person work arrangements have continued to be the norm in the world of work. Because of this, I-O psychologists continue to focus on improving in-person work interactions by default. As mentioned, in-person work environments excel in their potential to create connection, a sense of belonging, and positive interpersonal impressions (Credé & Snizek, 2003; Okdie et al., 2011; Sprecher, 2014). To follow in the footsteps of researchers and practitioners specialized in diversity, equity, and inclusion (DEI), there is value in utilizing this transformative period to continue to evaluate the way biases arise in the workplace and how employee technologies can mitigate these adverse events (Ellsworth et al., 2020). Maintaining and improving accessibility and work–family balance can support this through the continuance of remote or flexible work arrangements. Regarding productivity, several virtual tools (e.g., learning management systems, cloud file hosting services) were already commonplace for in-person offices, and these tools should continue to be utilized due to their effectiveness at enhancing productivity and collaboration. We recommend that organizations build on what has been initiated by the pandemic and promote progressive policies and standards to further support flexibility and accessibility for employees.

2. Counteract Limitations as They Arise

Subtle nonverbal signals (e.g., nodding one's head) are essential for effective interpersonal communication and tend to be less noticeable in virtual environments (Bavelas et al., 1997). These signals may be less important for casual conversations, but for crucial conversations (e.g., performance reviews, discussing sensitive topics), nonverbal cues may be increasingly critical to communicate empathy and understanding (Holstead & Robinson, 2020). Sensitive conversations, which were a common in-person business practice, are now more commonly practiced virtually due to the pandemic. Reducing these signals by moving communication online may inhibit people from fully expressing thoughts that seem unimportant or minor (Bavelas et al., 1997; Shapka et al., 2016). Managers can help promote improved communication by offering to have sensitive conversations in person when this is possible again and promoting the improvement of more casual communication within the workplace. Employers and team members can foster a productive and collaborative work environment by encouraging others to react to messages, acknowledge a message was received, and communicate frequently to share progress updates, ask questions, or offer insights (Walther & Bunz, 2005). Clear, frequent communication is a pillar to workplace effectiveness, establishing this need in advance can increase trust and satisfaction within interdependent group members (Bos et al., 2002; Furumo & Pearson, 2006; Zaheer et al., 1998). We recommend that organizations address the limitations of virtual communication by promoting frequent and improved virtualized communications in low-stakes situations and offering in-person availability, when possible, in high-stakes situations.

3. Match the Technology to the Intended Purpose

A paramount difference between virtual and in-person interactions is the intensity of the experience one has when they are truly in the presence of another person (Baumeister & Leary, 1995; Jarvelainen et al., 2001; Ponkanen et al., 2011). By assisting clients in understanding the specific benefits of each technology, they can effectively choose the optimal mode of communication while considering the culture, experience, and goals of the organization or team.

Through the use of video and voice-enabled tools, organizations can potentially increase engagement, positive regard, and feelings of recognition and connection (Sherman et al., 2013). Take time to provide resources to employees to learn about and practice using various tools available to them in the workplace. If a meeting's goal is to foster connection, encourage people to identify themselves using names, images, or avatars, and designate time and structure for people to interact in smaller group contexts (Lowry et al., 2006). Conversely, these same elements may be distracting (Jarvelainen et al., 2001) or add unnecessary social dynamics (McLeod et al., 1997) for meetings in which interpersonal connection is not a primary goal. For many situations, video-off calls or simple phone calls may be the most effective in producing desired work outcomes (Brodsky, 2020). We recommend that organizations focus on thoughtful consideration of different technologies and utilizing the specific type of technology that meets the scope and needs of the intended interaction.

4. Considering Virtualization Moving Forward

All things considered, much remains unknown about the impact of in-person, hybrid, and virtual work interactions on individual-, team-, and organizational-level outcomes (LaBerge et al., 2020). At present, virtual environments offer a unique medium for productive work activities, as well as unparalleled access across time, money, ability, personality, and social status (Connell et al., 2001; Credé & Sniezek, 2003; Furumo & Pearson, 2006; Hiltz et al., 1986; Shin & Song, 2011; Straus, 1997). As individuals become more accustomed to virtual communication, they may develop more nuanced strategies to generate positive regard, develop trust, communicate efficiently, and work productively. Concurrently, improvements in technology design (e.g., to allow for organic small group interactions) and facilitation in virtual environments (e.g., to structure, focus, and encourage frequent and meaningful communication) will help bring the possibility of these types of meetings and events to fruition. We recommend that organizations embrace technology to the level that meets their organizational needs and to actively integrate new forms of technology to continue to promote employees' skills and connectivity through virtualized workspaces.

Final Considerations

Nevertheless, in-person work environments still offer their own unique benefits, especially for relationship building and impression making (Credé & Sniezek, 2003; Okdie et al., 2011; Sprecher et al., 2014). Whether it is due to certain emotions and affections that can only be expressed through body language and touch (App et al., 2011), or simply because in-person interactions activate some unique phenomenon that cannot yet be achieved through distanced communication (Aihara et al., 2015; Jarvelainen et al., 2001; Ponkanen et al., 2011; Prinsen & Alaerts, 2019), the sense of connection and belonging we feel in person is nonetheless difficult to approximate online. When maximum functionality, productivity, and creativity is needed, virtual interactions can assist organizations in facilitating these conditions by reducing the counterproductive social dynamics that would otherwise occur in person. When attempting to foster more personal connections between managers and team members, in-person interactions may still prevail in reaching these goals. As we trudge through this transformational and ever-shifting period, I-O psychologists must learn from both past research and present experiences what practices and technologies can aid in building systems, infrastructures, and cultures that promote highly effective and inclusive work environments within any context.

This article was adapted from a white paper sponsored by HeadBox, which investigates the affective outcomes of virtualized interactions within the context of corporate meetings and events. This white paper can be accessed at the following link: https://resource.headbox.com/whitepaper/

References

Aihara, T., Yamamoto, S., Mori, H., Kushiro, K., & Uehara, S. (2015). Observation of interactive behavior increases corticospinal excitability in humans: A transcranial magnetic stimulation study. *Brain and Cognition, 100*, 1–6. https://doi.org/10.1016/j.bandc.2015.09.003

Akala, A. (2020, May 1). More big employers are talking about permanent work-from-home positions. *CNBC*. https://www.cnbc.com/2020/05/01/major-companies-talking-about-permanent-work-from-home-positions.html

App, B., McIntosh, D. N., Reed, C. L., & Hertenstein, M. J. (2011). Nonverbal channel use in communication of emotion: How may depend on why. *Emotion, 11*(3), 603–617. https://doi.org/10.1037/a0023164

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*(3), 497–529. https://doi.org/10.1037/0033-2909.117.3.497

Bavelas, J. B., Hutchinson, S., Kenwood, C., & Matheson, D. H. (1997). Using face-to-face dialogue as a standard for other communication systems. *Canadian Journal of Communication, 22*(1), 5–8. https://doi.org/10.22230/cjc.1997v22n1a973

Beigi, M., Shirmohammadi, M., & Stewart, J. (2018). Flexible work arrangements and work–family conflict: A metasynthesis of qualitative studies among academics. *Human Resource Development Review*, *17*(3), 314–336. https://doi.org/10.1177/1534484318787628

Bos, N., Olson, J., Gergle, D., Olson, G., & Wright, Z. (2002, April 20–25). *Effects of four computer-mediated communications channels on trust development* [Conference session]. SIGCHI Conference on Human Factors in Computing Systems, Minneapolis, MN, United States. https://doi.org/10.1145/503376.503401

Branscome, M. (2020, April 14). The network impact of the global COVID-19 pandemic. *The New Stack.* https://thenewstack.io/the-network-impact-of-the-global-covid-19-pandemic/

Brodsky, A. (2020). Virtual surface acting in workplace interactions: Choosing the best technology to fit the task. *Journal of Applied Psychology.* Advance online publication. https://doi.org/10.1037/apl0000805

Cascio, W., & Montealegre, R. (2016). How technology is changing work and organizations. *Annual Review of Organizational Psychology and Organizational Behavior, 3*(1), 349–375. https://doi.org/10.1146/annurev-orgpsych-041015-062352

Chin, J. L. (Ed.). (2004). *The psychology of prejudice and discrimination.* Praeger Publishers.

Connell, J. B., Mendelsohn, G. A., Robins, R. W., & Canny, J. (2001, September 30–October 3). *Effects of communication medium on interpersonal perceptions* [Paper presentation]. International ACM SIGGROUP Conference on Supporting Group Work, Boulder, CO, United States. https://dl.acm.org/doi/10.1145/500286.500305

Credé, M., & Sniezek, J. A. (2003). Group judgment processes and outcomes in video-conferencing versus face-to-face groups. *International Journal of Human-Computer Studies, 59*(6), 875–897. https://doi.org/10.1016/j.ijhcs.2003.07.001

Eisenberger, R., Karagonlar, G., Stinglhamber, F., Neves, P., Becker, T. E., Gonzalez-Morales, M. G., & Steiger-Mueller, M. (2010). Leader–member exchange and affective organizational commitment: The contribution of supervisor's organizational embodiment. *Journal of Applied Psychology*, *95*(6), 1085–1103. https://doi.org/10.1037/a0020858

Ekberg, K., Pransky, G. S., Besen, E., Fassier, J.-B., Feuerstein, M., Munir, F., & Blanck, P. (2016). New business structures creating organizational opportunities and challenges for work disability prevention. *Journal of Occupational Rehabilitation, 26*(4), 480–489. https://doi-org.jpllnet.sfsu.edu/10.1007/s10926-016-9671-0

Ellsworth, D., Imose, R., Madner, S., & van den Broek, R. (2020). Sustaining and strengthening inclusion in our new remote environment. *McKinsey & Company.* https://www.mckinsey.com/business-functions/organization/our-insights/sustaining-and-strengthening-inclusion-in-our-new-remote-environment

Furumo, K. & Pearson, J. M. (2006, January 4–6). *An empirical investigation of how trust, cohesion, and performance vary in virtual and face-to-face teams* [Paper presentation]. International Conference on System Sciences, Kauai, HI, United States. https://doi.org/10.1109/HICSS.2006.51

Hiltz, S. R., Johnson, K., & Turoff, M. (1986). Experiments in group decision making communication process and outcome in face-to-face versus computerized conferences. *Human Communication Research, 13*(2), 225–252. https://doi.org/10.1111/j.1468-2958.1986.tb00104.x

Ho, S. S., & McLeod, D. M. (2008). Social-psychological influences on opinion expression in face-to-face and computer-mediated communication. *Communication Research, 35*(2), 190–207. https://doi.org/10.1177/0093650207313159

Hobman, E. V., Bordia, P., Irmer, B., & Chang, A. (2002). The expression of conflict in computer-mediated and face-to-face groups. *Small Group Research, 33*(4), 439–465. https://doi.org/10.1177/104649640203300403

Holstead, R. G., & Robinson, A. G. (2020). Discussing serious news remotely: Navigating difficult conversations during a pandemic. *JCO Oncology Practice*, *16*(7), 363–368. https://doi.org/10.1200/OP.20.00269

Jarvelainen, J., Schurmann, M., Avikainen, S., & Hari, R. (2001). Stronger reactivity of the human primary motor cortex during observation of live rather than video motor acts. *NeuroReport, 12*(16), 3493–3495. https://doi.org/10.1097/00001756-200111160-00024

Kelly, E. L., & Kalev, A. (2006). Managing flexible work arrangements in US organizations: Formalized discretion or "a right to ask." *Socio-Economic Review*, *4*(3), 379–416. https://doi.org/10.1093/ser/mwl001

LaBerge, L., O'Toole, C., Schneider, J., & Smaje, K. (2020, October 5). How COVID-19 has pushed companies over the technology tipping point—and transformed business forever. *McKinsey*.

https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/how-covid-19-has-pushed-companies-over-the-technology-tipping-point-and-transformed-business-forever

Leary, M. R. (2019). *Self-presentation: Impression management and interpersonal behavior*. Routledge.

Lowry, P. B., Roberts, T. L., Romano, N. C., Cheney, P. D., & Hightower, R. T. (2006). The impact of group size and social presence on small-group communication. *Small Group Research, 37*(6), 631–661. https://doi.org/10.1177/1046496406294322

Lundy, B. L., & Drouin, M. (2016). From social anxiety to interpersonal connectedness: Relationship building within face-to-face, phone and instant messaging mediums. *Computers in Human Behavior, 54*, 271–277. https://doi.org/10.1016/j.chb.2015.08.004

McClure, J. P., & Brown, J. M. (2008). Belonging at work. *Human Resource Development International, 11*(1), 3–17. https://doi.org/10.1080/13678860701782261

McLeod, P. L., Baron, R. S., Marti, M. W., & Yoon, K. (1997). The eyes have it: Minority influence in face-to-face and computer-mediated group discussion. *Journal of Applied Psychology, 82*(5), 706–718. https://doi.org/10.1037/0021-9010.82.5.706

Okdie, B. M., Guadagno, R. E., Bernieri, F. J., Geers, A. L., & Mclarney-Vesotski, A. R. (2011). Getting to know you: Face-to-face versus online interactions. *Computers in Human Behavior, 27*(1), 153–159. https://doi.org/10.1016/j.chb.2010.07.017

Ponkanen, L. M., Alhoneimi, A., Leppanen, J. M., & Hietanen, J. K. (2011). Does it make a difference if I have eye contact with you or with your picture? An ERP study. *Social Cognitive and Affective Neuroscience, 6*(4), 486–494. https://doi.org/10.1093/scan/nsq068

Prager, K. J. (1995). *The psychology of intimacy.* Guilford Press.

Prinsen, J., & Alaerts, K. (2019). Eye contact enhances interpersonal motor resonance: Comparing video stimuli to a live two-person action context. *Social Cognitive and Affective Neuroscience, 14*(9), 967–976. https://doi.org/10.1093/scan/nsz064

PwC. (2021). *It's time to reimagine when and how work will get done.* https://www.pwc.com/us/en/library/covid-19/us-remote-work-survey.html

Rau, B. L., & Hyland, M. A. M. (2002). Role conflict and flexible work arrangements: The effects on applicant attraction. *Personnel Psychology*, *55*(1), 111–136. https://doi.org/10.1111/j.1744-6570.2002.tb00105.x

Reader, A. T., & Holmes, N. P. (2016). Examining ecological validity in social interaction: Problems of visual fidelity, gaze, and social potential. *Culture and Brain, 4*, 134–146. https://doi.org/10.1007/s40167-016-0041-8

Sanchez-Vives, M. V., & Slater, M. (2005). From presence to consciousness through virtual reality. *Nature Reviews Neuroscience, 6*(4), 332–339. https://doi.org/10.1038/nrn1651

Shapka, J. D., Domene, J. F., Khan, S., Yang, L. M. (2016). Online versus in-person interviews with adolescents: An exploration of data equivalence. *Computers in Human Behavior, 58*, 361–367. http://dx.doi.org/10.1016/j.chb.2016.01.016

Sherman, L. E., Michikyan, M., & Greenfield, P. M. (2013). The effects of text, audio, video, and in-person communication on bonding between friends. *Journal of Psychosocial Research on Cyberspace, 7*(2), Article 3. https://doi.org/10.5817/CP2013-2-3

Shin, Y., & Song, K. (2011). Role of face-to-face and computer-mediated communication time in the cohesion and performance of mixed-mode groups. *Asian Journal of Social Psychology, 14*(2), 126–139. https://doi.org/10.1111/j.1467-839X.2010.01341.x

Sprecher, S. (2014). Initial interactions online-text, online-audio, online-video, or face-to-face: Effects of modality on liking, closeness, and other interpersonal outcomes. *Computers in Human Behavior, 31*, 190–197. https://doi.org/10.1016/j.chb.2013.10.029

Straus, S. G. (1997). Technology, group process, and group outcomes: Testing the connections in computer-mediated and face-to-face groups. *Human-Computer Interaction, 12*(3), 227–266. https://doi.org/10.1207/s15327051hci1203_1

Walther, J. B. (1995). Relational aspects of computer-mediated communication: Experimental observations over time. *Organization Science, 6*(2), 186–203. https://doi.org/10.1287/orsc.6.2.186

Walther, J. B., & Bunz, U. (2005). The rules of virtual groups: Trust, liking, and performance in computer-mediated communication. *Journal of Communication, 55*(4), 828–846. https://doi.org/10.1111/j.1460-2466.2005.tb03025.x

Zaheer, A., McEvily, B., & Perrone, V. (1998). Does trust matter? Exploring the effects of interorganizational and interpersonal trust on performance. *Organization Science, 9*(2), 141–159. https://doi.org/10.1287/orsc.9.2.141

Local I-O Group Relations Committee: Local Group Update

Anna Erickson

As our extended schedule for the virtual SIOP conference has drawn to a close, and many classrooms also pause for summer, does it feel like something is missing? That sense of belonging, comradery, and common purpose feels a little further away as we return to our day-to-day schedules, leaving us wanting to continue the experience. It is likely that it is out of these very moments that many local groups are born.

What Is a "Local Group"?

Although SIOP does not have a local chapter structure, communities of I-O psychologists have emerged to form "grass-roots" organizations. There are dozens of local groups that have formed across the US and around the world. Some are formal and highly structured; others are informal and more casual. All share a common purpose in connecting like-minded individuals to share ideas, research, and practice, while networking and learning from each other. Local groups are the "boots on the ground" that can expand I-O's impact into the communities where the work gets done. For many they provide a safe space to build comradery, support one another, and explore new ideas. For many years, these groups have met in restaurants, hotels, and classrooms within their respective communities and regions. With the onset of COVID-19, many local groups extended their reach, welcoming professionals from the wider I-O community via virtual events and meetings.

The Local I-O Group Relations Committee

In 2013, under **Tammy Allen's** leadership, the SIOP Executive Board created the *Local I-O Group Relations Committee*, an ad hoc committee with a goal to "create a strong connection between SIOP and locally operated I-O groups." Rather than *creating* local groups, the committee set out to *discover* them. In the fall 2015 issue of *TIP* the committee reported that "until recently, there has been little known about these groups, their needs, and the role they play in our growing profession." (Farmer, et al., 2015).

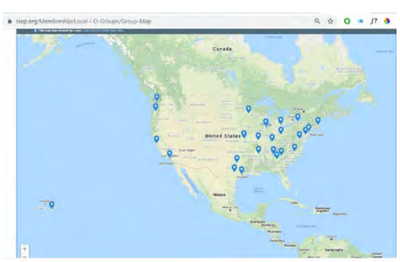
Local I-O Group Relations Committee volunteers ask conference participants "Where do you I-O?" during the 2019 SIOP Conference at National Harbor: **Nazanin Tadjbakhsh, Michael H. Chetta, Anna Erickson, Lindsey Bergin, Donna Sylvan, Ginger Whelan, Peter Scontrino,** and **Sharon Glazer**.

Beginning with a survey of 4,570 SIOP members in 2014 (Farmer et al., 2015), followed by a global survey in 2017 (Erickson et al., 2017), the committee learned more about existing groups, their purpose, their activities and events, and the benefits provided to their members. From this beginning, the committee began to compile a list of local groups, locations, and contact information. Building on this work, they set out to learn more. The committee hosted sessions at the annual conference to solicit input from conference attendees about their own local groups. Setting up tables, maps, and booths at both the SIOP and EAWOP conferences, the committee posed the question “Where do you I-O?” while coaxing those conference attendees willing to listen to post a pin on the map representing local groups and/or desire to join a local group. The information gathered at these conferences helped the committee gain a better perspective of the landscape.

How Do I Join a Local Group? Is There a Group Near Me?

Probably. Maybe. Well, it depends. There are dozens of groups across the US and around the world. These groups vary greatly in age, size, and membership requirements. The oldest local group, New York Metropolitan Association of Applied Psychology, aka METRO, is more than 75 years old, created long before SIOP was founded. But there are not groups in every city.

The Local I-O Group Committee maintains a listing of local groups on the SIOP website, https://www.siop.org/Membership/Local-I-O-Groups. There you will find the name and location of each local group along with a description and link to the group’s website (if applicable). You can also look for upcoming activities on the event calendar. With COVID restrictions, many groups have moved to virtual meetings and events, providing you with opportunities to attend meetings hosted by groups far from your physical location. Some groups offer continuing education credits as well. If your local group has an upcoming event, is not included on the website, or if there’s outdated information about your group, please let the committee know via email at Local_IO_Groups@siop.org.

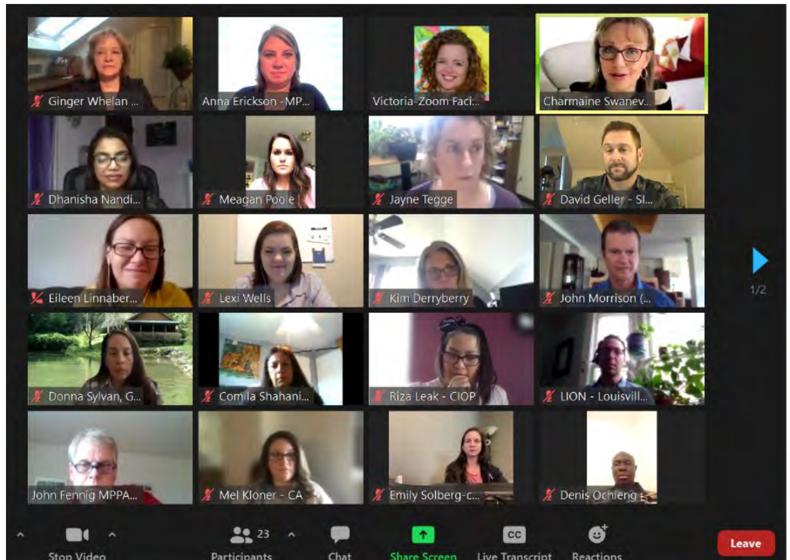


When Will You Start a Group Near Me?

Neither SIOP nor SIOP’s Local I-O Group Committee has the authority to establish local groups. Every local group has been started by volunteers—like you! So how do you get started?

Have no fear! SIOP’s Local I-O Group Committee is here to help! The committee offers support for those who want to start a local group.

- A list of existing groups. Check to see if a group exists before starting a new one. Reach out and share your ideas, your passion, and your time! The existing group will probably welcome your interest and leadership.
- A local group toolkit. There are lots of things to consider when starting a local group. The toolkit pulls together resources and recommendations gathered from those who have started groups already. It includes information about choices, options, and lessons learned.
- Local leader forums. The Local I-O Group Committee hosts quarterly meetings to connect local leaders. These 90-minute Zoom calls focus on specific topics relevant to local group leaders.
- Discussion platforms. The committee maintains communication platforms including a listserv and a LinkedIn group. These vehicles make it easier for us to communicate with local leaders and for local leaders to communicate with each other.



Screen shot from “Fishing for the Best of 2020: How Local I-O Groups Address Emerging Challenges”, an alternative session hosted by the Local I-O Group Committee during the 2021 Virtual Conference.

Whether you are starting a new local group or leading an existing local group, we would love to have you join us! If you would like to participate in any of these activities, please email the committee at Local_IO_Groups@siop.org and we’ll be happy to add you to the list. All are welcome—whether you’re just starting out, have been going strong for years, or are trying to revive a struggling group!

The Academics' Forum: On (Hopefully) Publishing Your Dissertation

Cindy Maupin
Binghamton University

These past few months have been a whirlwind: My coauthors and I got some R&Rs back under review, we got some new R&Rs, and I submitted another manuscript for its debut into the peer-reviewed world. Although all of these accomplishments are exciting (and each represents another step closer to tenure!), the one I'm most proud of is that manuscript. As you may have guessed from the title of this column, this new manuscript is the product of my dissertation. As a new assistant professor, getting my dissertation published has been a primary goal, but it hasn't always been easy to stay focused on that path. Today, I'd like to share about my journey, with the hope that sharing my experiences encourages other new (and future) faculty members to take those final steps towards achieving this goal as well.

The last big milestone of any I-O doctoral program, oftentimes even *after* finding a job, is completing your dissertation. I know in my case "the dissertation" felt like a huge undertaking, and I was so thankful when it was "over" after my dissertation defense (even knowing that publication was the *real* end-goal). I was especially grateful that I got great feedback and ideas during my defense from my fantastic committee members—shout out to Dorothy Carter, **Malissa Clark**, **Nathan Carter**, and Jay Goodwin—and that those ideas were primarily geared toward preparing my dissertation for eventual publication. I eagerly wrote down all of their ideas—and then hid from my dissertation for several months (I'm sure I'm not the only one!). Afterall, I was transitioning to my new job as an assistant professor at Binghamton University, and I had a lot on my plate, but of course that wasn't the *only* reason for not immediately picking my dissertation back up.

After spending countless hours on the same paper that was the one thing standing between "graduate student Cindy" and "Dr. Cindy Maupin," I needed a *break*. Of course, this probably sounds entirely reasonable to many of you, but it made me feel guilty. Why couldn't I just get it under review in a month? What's a little bit more effort? But for me, giving it some time helped me to have a little distance from my own ideas and to see things a bit more clearly, which I think has made all the difference in terms of having genuine confidence in the resulting manuscript. For today's column, I'm going to cover pieces of advice that helped me to get my dissertation under review and (hopefully) published:

1. A Small Break From Your Dissertation Can Help Reignite Your Spark

One of the unfortunate outcomes for many doctoral students is they spend so much time and energy on their dissertation, that they end up forgetting why they even liked their original ideas in the first place. Yet, as someone who is now on the other side of things, I can honestly say how blown away I have been by the dissertation ideas I have seen doctoral students present. For instance, I recently served as an outside dissertation committee member for **Elisa Torres** at George Mason University (chaired by the amazing **Steve Zaccaro**), and not only were her proposal ideas incredibly innovative, but she was also passionate about her work's future contributions to the field, and it showed. We need to be able to harness our dissertation proposal excitement—like what I saw from Elisa—and be able to tap back into it again, even when we've experienced challenges along the way. If it takes a small break from your dissertation to help you reignite that excitement, then do it! Just make sure your break isn't too long, or it might be difficult to remember that spark.

2. Try to Think of Your Dissertation Manuscript as "Just Another Paper"

For me, this was very difficult to do. Although I've become very familiar with the publishing process at this point, and even somewhat comfortable with rejections, I kept holding my dissertation manuscript to an unreasonable standard. It felt like more than "just another paper"—like its eventual publication or rejection would somehow be tied to my overall worth as a scholar. However, this was only due to the additional emotional baggage I attached to it because of how important it was during my *graduate* career and isn't an accurate reflection of its place in my *academic* career. Once I got back to revising my final paper, diving back into the data, and reframing it to better align with the mission of my target journal, I realized the steps that had to be taken to get it ready for peer review were entirely familiar and totally doable. From there, it was just executing on a plan and doing my best while remembering to hold myself to a standard of "good enough" as opposed to "perfection." By reframing your perspective of the dissertation manuscript as "just another paper," you can give yourself more reasonable expectations and set yourself up for success, instead of constantly moving your own goal posts farther down the field.

3. Remember to Be Proud of All That You Accomplished, Even if the Journey Has Twists and Turns

Like the saying "Nothing worthwhile is ever easy," it's totally okay (and somewhat expected) for your path to publishing your dissertation to have unexpected challenges and setbacks. The most important part though is that you work through the adversity, learn from your mistakes, and keep pushing forward. For some, your dissertation might find a home at the very first journal to which you submit it; for others, your dissertation might take a few attempts to refine and improve it before you find a perfect match. However, this is no different from the rest of the research process to which we all have grown accustomed, and once you've gotten started, you can let your momentum carry you through to the end. Regardless of the final outcome, the accomplishment of the dissertation itself is still an impressive undertaking and one that should continue to make you feel proud. Publication of the dissertation is simply the cherry on top of the magnificent sundae you've already created!

To my fellow assistant professors (or even associate professors) who have yet to go back and get that dissertation under review: I promise you it's not as painful as you might think! You've already done 90% of the work, and armed with these lessons learned, I know you can do it. Plus, I'll be here to cheer you along every step of the way.

SIOP Award Winners:
Meet 2021 Lee Hakel Graduate Student Scholarship Award Winner: Min Geiger

Liberty J. Munson

As part of our ongoing series to provide visibility into what it takes to earn a SIOP award or grant, we highlight a diverse class of award winners in each edition of *TIP*. We hope that this insight encourages you to consider applying for a SIOP award or grant because you are probably doing something amazing that can and should be recognized by your peers in I-O psychology!

This quarter, we are highlighting the winner of the 2021 Lee Hakel Graduate Student Scholarship Award: **Min Geiger** for her paper, *Feeling Depleted? If English Is Not Your First Language, You Might Be Experiencing Stereotype Threat.*

Why did you apply (if applicable)?

I applied for the award to see if my dissertation topic, research questions, and research design, were interesting and rigorous enough to be recognized by the SIOP community—the leading institution in the I-O psychology field. Thus, I am so honored and grateful to receive the award, as I feel my dissertation is recognized by the leading scholars in the field.

Share a little a bit about who you are and what you do.

I am a PhD candidate at the John Chambers College of Business and Economics, West Virginia University. My primary research examines implicit bias and how it influences marginalized groups in the workplace. In addition, some of my research explores how the use of artificial intelligence might perpetuate bias in the workplace. I am also interested in how big data can contribute to a better understanding of organizational phenomena. I am currently working on my dissertation and planning to be on the job market this fall.

Describe the research/work that you did that resulted in this award. What led to your idea?

My dissertation, which led to the award, examines non-native English speakers' daily experience of stereotypes about their stigmatized identity at work. Initially, my personal experience as a non-native English speaker in the US sparked the idea. Then, I dived into the literature on implicit bias and how it might affect non-native English speakers in English-speaking environments. I found several theoretical frameworks that fit well with my research questions, and the initial idea was developed into my dissertation topic.

What do you see as the lasting/unique contribution of this work to our discipline? How can it be used to drive changes in organizations, the employee experience, and so on?
An estimated 67.3 million people are non-native English speakers in the US, which is one in five U.S. residents. Although non-native English speakers may face overt and subtle discrimination

at work because of their non-nativeness, these individuals have been out of the spotlight in the discussion on diversity and inclusion. I believe examining non-native English speakers' experience as language diversity is important to obtain a complete picture of workplace diversity. I hope my research will help organizational leaders understand the challenge that non-native English speakers may face at work.

Are you still doing work/research in the same area where you won the award? If so, what are you currently working on in this space?

Yes, I am currently working on other stigmatized individuals' experience in the workplace. For example, my colleagues and I are working on research that examines how negative stereotypes about women's ability in STEM affect female scientists who are currently working for STEM organizations. I am also working on research with my colleagues that explores whether employees with mental illness anticipate discrimination at work, which in turn affects their feelings and behaviors. I hope my research will be able to provide evidence-based recommendations that help organizational leaders improve workplace diversity and inclusion.

What's a fun fact about yourself (something that people may not know)?

I have not eaten at a restaurant since the pandemic started. I recently got vaccinated, and I am so excited to explore restaurants and eat all types of yummy food—it's been more than a year!

What piece of advice would you give to someone new to I-O psychology? (If you knew then what you know now…)

One thing I learned from my experience from being a member of SIOP and the broader I-O psychology community, everyone is so friendly and willing to offer advice and lend a hand in any way possible. As a graduate student, it may seem to be somewhat intimidating to reach out to other researchers and/or practitioners to ask for help or advice—at least I felt that way when I started my PhD. However, once you reach out, you would immediately realize how amazing our community members are, and there is nothing to be afraid of.

About the author:

Liberty Munson is currently the principal psychometrician of the Microsoft Technical Certification and Employability programs in the Worldwide Learning organization. She is responsible for ensuring the validity and reliability of Microsoft's certification and professional programs. Her passion is for finding innovative solutions to business challenges that balance the science of assessment design and development with the realities of budget, time, and schedule constraints. Most recently, she has been presenting on the future of testing and how technology can change the way we assess skills.

Liberty loves to bake, hike, backpack, and camp with her husband, Scott, and miniature schnauzer, Apex. If she's not at work, you'll find her enjoying the great outdoors, or she's in her kitchen tweaking some recipe just to see what happens.

Her advice to someone new to I-O psychology?
Statistics, statistics, statistics—knowing data analytic techniques will open A LOT of doors in this field and beyond!

2021 Exit Survey

SIOP Survey Subcommittee: Richard Vosburgh, Victoria Stage, Victoria Hendrickson, Harry Kohn, Stephen King, Brett Guidry, and Erik Zito

SIOP members who did not renew during the June 2020 call for membership renewal (*N* = 3,000) were surveyed by the SIOP Survey Subcommittee March 8–29, 2021, to better understand why they chose not to renew their membership with SIOP. One hundred thirty-eight people renewed their membership as a result of sending the Exit Survey. Of those who chose not to renew, 100 responded to the survey. The online survey was sent by email and consisted of seven quantitative questions, eight open-ended questions, and two demographic questions. Mercer|Sirota conducted the analysis and generated the full report, which can be found on the SIOP Survey website.

Our focus in this article is to share an executive summary of the results. Upcoming articles will focus on actions that are planned and underway. Caution is warranted when interpreting these results due to the small sample size (*n* = 100).

Overall Findings

- Most members who decided not to renew cited the cost of membership (20%), whereas 15% indicated that the impacts of COVID-19 were the primary reason.
- Of the respondents, 1,231 (43%) were SIOP Members and 1,088 (38%) were Student Affiliates.
- The majority of respondents (57%) had been members of SIOP for 5 years or less when they chose not to renew their membership.
- Open-ended responses revealed that many respondents had multiple reasons for terminating their memberships.
- Unlike previous years, the absence of an in-person SIOP annual meeting affected many respondents' decisions to renew.
- Over half of respondents either indicated renewing within a year or intended to consider rejoining in the future.

Comment Analysis

There were 140 comments across all of the eight open-text questions. These comments were analyzed and categorized as follows.

Topic	Example	Count
Cost	*I am under a salary reduction. I would have stayed if SIOP reduced the fees for those of us with reduced salaries.*	58
Engagement and inclusion	*I find the community and network insular.*	26
Conference	*Once the in-person conferences start back up, I will likely rejoin.*	22

Resources and research	*SIOP has increasingly focused on practitioner issues…I go elsewhere for high-quality research now.*	19
Politics and environment	*SIOP messages drag in their personal politics… We should stick to the science.*	15

Actions Based on the Survey

The annual Exit Survey is one way we garner insights for retaining SIOP members. In concert with the many other SIOP committees, we continue to look for ways to serve the field of I-O psychology and the members of SIOP. Here are just a few of the things we are working on based on Exit Survey results.

Dues

Dues continue to be a primary reason expressed for not renewing a SIOP membership. Roughly half of the respondents had been student members and many of the comments were from them as they faced the higher dues when upgrading to Associate or Member. They may not have been aware that they can continue at the student rate for 1 year beyond graduation, so that has been added to the Dues webpage. Although the dues structure for SIOP is consistent with or lower than comparable professional organizations, we sympathize with members who find dues to be too expensive, particularly members who are currently experiencing a hardship. Therefore, we are recommending that SIOP consider allowing dues to be paid in quarterly installments or a monthly subscription rather than as a lump sum to ease the burden on certain members.

Engagement

SIOP is committed to championing diversity and inclusion efforts within our Society. The volunteer committee members within SIOP are dedicated to including all members. As of 2020, a Diversity and Inclusion Portfolio Officer was added to the Executive Board. This portfolio is comprised of the Committee on Ethnic and Minority Affairs (CEMA); Disability, Inclusion, and Accessibility (DIAC); International Affairs (IAC); Women's Inclusion Network (WIN); LGBTQIA+; and Military and Veteran's Inclusion Committees.

In addition, the Membership Committee has been working to support SIOP's strategic goal 2.3, *Improve the visible/invisible diversity of our membership and encourage more diversity within our profession,* by developing an action plan to be implemented during the '21 –'22 SIOP year.

Similar themes have emerged between the Exit Survey and the research done with the D&I Portfolio Committee Chairs to begin this work, such as lack of inclusion, representation, and respect for MA/MS members as compared to PhD members; lack of support for financial issues; and lack of consistency and transparency in award criteria and decisions. Additionally, we continue to look for ways to create a sense of "belonging" in SIOP. A future *TIP* article will detail the action items to be taken once they have been established.

SIOP Conference

There have been many unfortunate effects of the pandemic that have affected our members in a variety of ways. The financial impact is addressed above in the discussion of dues. In addition, we are optimistic about a return to an in-person conference in 2022, with the potential of keeping some virtual aspects that went well in 2021 in order to expand our reach. We hope that this will have positive impact on SIOP members in the coming years.

The SIOP Membership Committee seeks to create an inclusive membership for all I-O-related professionals and focuses on the attraction, selection, and retention of all SIOP members. For additional feedback or questions, please contact Victoria Stage at vstage31@gmail.com.

We would like to thank Jayne Tegge in the SIOP Administrative Office and SIOP leaders who reviewed and contributed to this article.

SIOP in Washington: Advocating for I-O in Federal Public Policy

Jack Goodman and Alex Alonso

Since July 2013, SIOP and Lewis-Burke Associates LLC have collaborated to make I-O science and research accessible to federal and congressional policy makers. SIOP has embedded a foundational government relations infrastructure within the organization, enabling SIOP to develop an authoritative voice as a stakeholder in science policy in Washington, DC and to promote SIOP as a vital resource for evidence-based decision making.

SIOP Advocates for NSF Funding as Congress Considers Reauthorization

As Congress moves forward with the annual appropriations process to determine federal agency funding for the next fiscal year, SIOP has submitted testimony to the House Appropriations Subcommittee with oversight of the National Science Foundation (NSF). In the testimony, SIOP urges the subcommittee to provide $10.2 billion in funding for NSF in fiscal year (FY) 2022, including strong support for the NSF Directorate for Social, Behavioral, and Economic Sciences (SBE). Additionally, the testimony requests that the subcommittee include language in their accompanying report that encourages NSF to implement the science of team science in the agency's funding strategies for large-scale and multidisciplinary research projects. SIOP also joined the broader science advocacy community in signing on to a letter from the Coalition for National Science Funding (CNSF) advocating for robust funding to NSF, raising SIOP's profile and establishing it as an invested party in the science advocacy space.

In addition to determining annual funding, both the House of Representatives and the Senate have begun working on legislation to reauthorize the National Science Foundation (NSF) this year. Although differences remain in their respective legislative frameworks, both focus on broad themes of utilizing research and development to increase domestic competitiveness, making STEM education and careers more accessible to underrepresented groups, and creating a new directorate within NSF to focus on technology transfer. Of specific interest to I-O psychology, the House's *NSF for the Future Act* directs NSF to ensure the participation of social, economic, and behavioral science researchers in cross-cutting programs and to award grants to study "the factors that influence growth, retention, and development of [the STEM] workforce." The Senate's NSF reauthorization bill, the *Endless Frontier Act*, includes a requirement that NSF and other agencies assess how federal support can be used to expand workforce development and employment systems, as well as strategies for upskilling workers. As Congress continues to work on reauthorizing NSF over the course of the year, Lewis-Burke will monitor for issues of relevance to I-O psychology.

Policing Outreach Continues as Congress Considers Reform Legislation

In the fall of 2020, House Democrats and Senate Republicans released draft policing bills that were accompanied by a series of executive orders from the Trump White House. Party leaders were unable to come to an agreement on the issue, leading both bills to fail. Now that

Democrats control the House, Senate, and presidency, there is a renewed interest in policing-reform legislation. The House considered and passed the *George Floyd Justice in Policing Act* earlier this year. The Senate is still working on developing their policing bill, which is expected to be released in the coming weeks. Senators Cory Booker (D-NJ) and Tim Scott (R-SC) are reportedly working on a bipartisan policing bill that they hope will be able to pass the Senate. SIOP established a working group of I-O experts in policing and has met with congressional staff of the House and Senate Judiciary Committees and other congressional leaders in policing reform to provide I-O insight on issues such as recruitment, promotion, performance management, and diversity and inclusion, along with other I-O topics found in policing bills. The working group plans to continue engagement with Congress, the Biden administration, and the National Academies of Science, Engineering, and Medicine as movement on policing reform progresses. An overview prepared by the working group with examples of how I-O can contribute to the conversation is available here.

Health and Well-Being Advocacy Area Holds Introductory Meetings With Congressional Committees

The SIOP Health and Well-Being Advocacy Area held several introductory meetings with senior staff on the House Oversight and Reform Committee Government Operations Subcommittee and the Senate Homeland Security and Governmental Affairs Committee Government Operations and Border Management Subcommittee. The meetings focused on issues facing the federal workforce as employees begin to return to in-person work. **Cris Banks,** SIOP member and leader of the Healthcare Advocacy Area, discussed with staff how I-O psychology can help federal agencies lay out a comprehensive strategy as they begin returning to work after more than a year working remotely. The committees are considering drafting legislation that will instruct the federal government on how to return to in-person work, and staff were welcoming of SIOP's expertise in this space. In addition, committee staff also asked about using I-O to better recruit and retain employees as part of the federal workforce. SIOP will continue to be a resource to congressional staff as committees begin considering various pieces of legislation relating to these issues.

SIOP Meets With NSF Education and Human Resources Directorate

Steve Kozlowski, SIOP Research and Science Portfolio Officer, and **Richard Landers,** SIOP Technology-Enabled Workforce Advocacy Area lead, met virtually with National Science Foundation (NSF) Directorate for Education and Human Resources (EHR) agency officials, including Dr. Karen Marrongelle, NSF Assistant Director for EHR. During the call, Kozlowski and Landers discussed several areas of potential collaboration between EHR and SIOP members, including artificial intelligence impacts on the workforce, institutional change as a component of education reform, modifying undergraduate education curricula to meet emerging and future workforce needs, and how to better equip K–12 students with workplace experience and information needed to make career choices, among other topics. Dr. Marrongelle and other EHR officials emphasized that although EHR programs are not specifically focused on social science approaches, there are many opportunities within their programs for I-O psychologists to participate and potentially win research awards or host workshops and other convenings. Finally, the EHR participants encouraged interested SIOP members to reach out to an NSF program officer for relevant programs to discuss submitting a proposal related to these topics and receive feedback. **If you believe your work could align with EHR priorities, email Jack at Lewis-Burke for more information: Jack@lewis-burke.com.**

SIOP Advocacy on Workforce and Education Opportunities

In response to a request for stakeholder input, SIOP submitted a set of recommendations to the Senate Health, Education, Labor, and Pensions (HELP) Committee as they consider a reauthorization of the Workforce Innovation and Opportunity Act (WIOA) and other workforce-focused legislation. SIOP's evidence-based policy recommendations were developed with input from SIOP members and include proposals to include I-O psychologists on state workforce development boards, create best practices and other support resources for conducting skills-based needs assessments, and increasing thought diversity at the U.S. Bureau of Labor Statistics. This action complemented a comment drafted by APA and SIOP to the same RFI on workforce disruptions due to COVID-19. SIOP will continue to engage with Congress as workforce-related legislation advances.

SIOP additionally engaged the U.S. Department of Education (ED) following the release of ED's fiscal year (FY) 2021 Graduate Assistance in Areas of National Need (GAANN) competition. The GAANN program provides funding to graduate education departments for the establishment of fellowships in certain in-demand fields of study identified by ED. For the first time, the FY 2021 GAANN competition included I-O psychology as an eligible field of study, underscoring the importance of and demand for I-O professionals. In response, **Georgia Chao**, in her role as SIOP president, sent a letter to Dr. Michelle Asha Cooper, ED Acting Assistant Secretary for Postsecondary Education, thanking her for designating I-O psychology as an area of national need and offering SIOP as a future resource. This designation will be used by Lewis-Burke to advocate for the inclusion of I-O in other federal programs.

New Policy Newsletter

Lewis-Burke and GREAT have partnered to launch the Washington InfO, a new monthly newsletter to provide SIOP members updates on pressing federal news of interest to the I-O community, including updates on emerging workforce/workplace policies and funding opportunities. For questions regarding SIOP advocacy or to subscribe to the newsletter, please feel free to contact SIOP's GREAT Chair **Alex Alonso** at alexander.alonso@shrm.org or Jack Goodman at jack@lewis-burke.com.

Hold the LEC Workshop Dates: September 30–October 2, 2021
AND
Hold the LEC Conference Dates: October 7–9, 2021

Leading Edge: Leadership Development

Registration Now Open!

Karen B. Paul, 3M, Chair of 2021 Leading Edge Consortium

Do you want to see how your leadership development programs compare to others? Do you want to hear the latest and greatest in leadership development from practitioners and researchers? Then attend SIOP's 2021 Leading Edge Consortium (LEC) this fall. *Leading Edge: Leadership Development* includes a fantastic array of thought leaders and interactive sessions all focused on helping leaders be more effective. Some of our corporate speakers include **Peter Fasolo**, the CHRO of Johnson & Johnson; **Michael Arena**, Vice President of Talent & Development at Amazon Web Services; **Bob Lockett**, Chief Diversity and Talent Officer, ADP; **Adam Bryant**, Managing Director of Merryck & Company; **Elliott Masie** of the MASIE Center; and **Karishma Patel Buford**, Chief People Officer for OppLoans. Those from academia include **Tomas Chamorro-Premuzic**, Harvard Business School; **Jay A. Conger**, Claremont McKenna College; **Rob Cross**, Babson College; **Amy Edmondson**, Harvard Business School; **Francesca Gino**, Harvard Business School; and **Stefanie Johnson**, University of Colorado Boulder. It would be hard to find this collection of heavy hitters in leadership development in any other forum.

In addition to our keynote speakers, this year's LEC includes 1.5- and 3.0-hour practitioner-oriented "how to" workshops as well as 30-minute "quick hit" sessions on specific leadership development topics. The speakers, workshops, sessions, and program for this virtual event are the result of a design team that includes SIOP members with deep expertise in leadership development:

- **Mike Benson**, General Mills
- **Allan Church**, Pepsico
- **Gordon (Gordy) Curphy**, Curphy Leadership Solutions
- **David V. Day**, Claremont McKenna College
- **Alexis Fink**, Facebook
- **Samantha Guerre**, 3M
- **Laura Mattimore**, Procter & Gamble
- **David B. Peterson**, 7 Paths Forward

We'd love for you to join us, so please hold the dates on your calendar! More information about the workshops and main conference, as well as registration details, will be coming out in future announcements.

Leading Edge: Leadership Development

Virtual Workshops: September 30–October 2, 2021 (Thur–Sat)
Virtual Conference Event: October 7–9, 2021 (Thur–Sat)

Please keep checking the website for addition details and for when early registration begins:
https://www.siop.org/Leading-Edge-Consortium

2021 SIOP Consortia: Thank You to Our Presenters and Attendees!

Debbie DiazGranados
Consortia Chair

SIOP was able to provide virtual opportunities for networking and professional development at varying career levels for our membership base during this year's SIOP conference. We are happy to provide a summary of what was offered and some initial reactions of attendees.

Master's Consortium

The SIOP Virtual Master's Consortium officially kicked off #SIOPSeason on Friday March 19, 2021. Over 2 weeks, **Christopher Rosetti, Jacob Hollander**, and **Matisha Montgomery** hosted four sessions for 109 registered students from 44 different programs. The students and speakers generated a great deal of energy, enthusiasm, and new connections.

This year's program included a diverse group of presenters and topic areas. Attendees had the opportunity to hear from master's-level presenters in a variety of practices, engage on topics that aren't commonly covered in formal education curriculum, and better prepare for the job market. All presentations were recorded and made available to registrants.

The excellence of our five fantastic keynote speakers, Dalyn C. Allen, Tyra L. Gray, Destiny Mercado, **Rachel Reichman, Cody Warren** and invited guest **Amber Burkhart** made for an agenda that was chock full of everything you need to know when preparing to transition from student to professional. With this year's addition of new content types and technology approaches, like augmented breaks and virtual speed networking, participants were able to gain perspective on topics ranging from common I-O career paths to nailing your interview, negotiating your first salary to getting involved with SIOP, and even communicating effectively with non-I-O audiences.

The postevent survey was completed by 29.3% of attendees (*n* = 32), with most participants who provided feedback being in their first (*n* =14) or second year (*n* = 10) of a master's program and a small group of respondents being part-time students (*n* = 6). Overall, students rated the event as being very effective as a virtual event: 88% of respondents (*n* = 28) said they agreed or strongly agreed that a virtual environment worked well for this event, and only half (*n* = 16) indicated they would have preferred the event to be live. Further, items asking participants if the content was presented in an interesting manner and if the environment was interactive scored very well (4.28/5.00 and 4.38/5.00 respectively). 84% of respondents (*n* = 27) agreed or strongly agreed that they will be able to apply what they learned.

Lee Hakel Doctoral Consortium

The Lee Hakel Doctoral Consortium celebrated another successful gathering this year as doctoral students from over 30 programs participated in development and networking events.

Taking place over a series of virtual sessions, students interacted with panelists experienced in the field and their peers to discuss best strategies for building a successful career in I-O psychology.

The fun kicked off with a social hour where attendees discussed their inspiration for getting into I-O psychology and what life has been like in grad school this past year. Plus, we daydreamed about our future vacations (Lots of beaches and mountain hiking are hopefully in our future!). Then it was time to get down to business as panelists from across the field came together to share their experiences and advice. **Rick Jacobs** led a workshop about what makes an impactful elevator pitch and guided students in creating and practicing their own pitches. **Allison Gabriel** and **Daisy Chang** shared excellent advice on generating new research ideas, and editors from five(!!!) different journals shared strategies for getting research published. There was a refreshing conversation with **Abby Corrington, Trevor Watkins,** and **Martin Yu** about finishing the dissertation while maintaining your own health and well-being. Of course, a doctoral consortium isn't complete without discussing the next step: the job market! **Richard Landers** and **James LeBreton** shared tips for preparing to enter the academic market, and **Kristin Saboe, Jimmy Davis**, and **Marty Alber** offered unique perspectives about applying for applied jobs in government, consulting, and private companies.

Next year's Doctoral Consortium has some big shoes to fill, but we're ready for the challenge! If you're interested in participating, keep an eye out for an announcement near the end of 2021 with details for how to be nominated by your program chair.

Thanks to all the attendees and panelists for making this year's Doctoral Consortium an engaging and insightful experience!

Early Career Faculty Consortia

We are pleased to share that the 2021 Early Career Faculty Consortium was a success! We had a great cohort of 14 SIOP members attend the ECFC consortia who represented psychology, business and applied programs. Panelists shared valuable insights in response to participants' thoughtful questions related to data collection strategies (led by **Jason Dahling** and **Amanda Thayer**), obtaining tenure (led by **Derek Avery** and **Sam Hunter**), and teaching and mentoring best practices (led by **Alicia Grandey** and **Tyree Mitchell**). It was also great to join forces with the Doctoral Consortia to learn about generating new research ideas (led by Daisy Chang and Allison Gabriel) and best practices in publishing from the editors of top journals in our field.

To the panelists and participants, thank you for generously sharing your valuable time and insights with us. Among our favorite pieces of advice was from Derek Avery, who spoke of the importance of declining an institution's requests to take on senior faculty responsibilities before you are granted tenure. Dr. Avery noted, "Just like Beyoncé says, if you like it then you should put a ring on it." In other words, as junior faculty it is important to know our worth and not settle for long-term responsibilities before a long-term commitment is guaranteed.

SIOP's Early Career Practitioner Consortium

Early Career Practitioner Consortia 2021 included a full program of I-O experts from multiple career tracks and backgrounds, sharing insights for navigating those unique realities we face early in our career journeys. Although this year's event was fully virtual, participants and presenters engaged in discussion, formed connections, and had fun!

Maya Garza (BetterUp) set the day's tone with her opening presentation on planning one's career from a place of self-compassion. She proffered self-compassion as a secret weapon, describing the benefits of cultivating one's inner coach. Her insights helped frame a positive perspective as the program moved to tackling common challenges early career I-Os may face. **Alli Besl** (Amazon), **Gary Travinin** (PDRI, an SHL company), and James De Leon (Worcester Polytechnic Institute) next shared their personal early career experiences. They offered lessons learned for navigating large organizations, gaining buy-in, and forming connections across business functions. This included advice for selling one's work and building credibility with a non-I-O audience, as well as selling oneself and advocating for growth opportunities.

Emilee Tison (DCI Consulting), **Jake Forsman** (Slalom), **John Fernandez** (Johnson & Johnson), **Madhura Chakrabati** (Syngenta), and **Ryan O'Leary** (PDRI, an SHL company) served as mentors for the day. These senior-level leaders walked through the career paths leading to their current roles. They described the decisions made and trade-offs balanced at each major career step, from finding a first job through climbing the ranks. Although no one expert's path was the same, they shared perspectives for approaching new opportunities in relation to one's own personal and career goals.

Attendees spent much of the time joining breakout groups with the mentors and presenters. They had the chance to ask their top-of-mind questions, linking the day's content to their own paths. This time also allowed connections to form with both the mentors and each other. They completed the Hogan Personality Inventory and met with **Jessie McClure** (Hogan Assessment Systems) in separate debrief sessions to interpret their results, apply them to their career journeys, and see how their group benchmarked with other I-Os.

Best of all, ECPC 2021 didn't stop with the formal event. Through connections made during the time together, attendees continued the conversation in separate 1:1 calls with presenters that they met. ECPC 2021 was a success, and we hope to see you next year at ECPC 2022!

As they say, that's a wrap! A sincere thank you to all the cochairs of the consortia (Matisha Montgomery, Chris Rosetti, and Jacob Hollander—Master's; **Emily Hunter** and **Elliott Larson**—Doctoral; **Megan Nolan** and **Andrea Hetrick**—Early Career Faculty; and **Robert Stewart** and **Stephanie Murphy**—Early Career Practitioner), the AO, the presenters, and all the attendees!

See you at next year's consortia!! If you have any questions regarding the consortia and how it fits into your professional development plans, please feel free to reach out to me: diazgranados@vcu.edu.

2021 SIOP Annual Conference: Highlights by the Numbers

Whitney Botsford Morgan
University of Houston-Downtown

Emily Solberg
SHL

SIOP Season allowed the Conference and Program Committees to bring you an expanded schedule (7 weeks) which included workshops, consortia, live synchronous sessions, professional development opportunities, and interactive receptions and breaks, alongside a rich array of asynchronous sessions. This was no small undertaking, so many thanks to the team of conference organizers—staff and volunteers—who realized this innovative approach to the annual conference during this pandemic year.

Although it is unfortunate that we were not able to gather in person in New Orleans, we kept the festive feel of the city alive! We hope you were able to join our New Orleans-themed virtual venue for one of the many events or receptions that allowed for the I-O-community building we all love about the annual conference.

The postconference evaluation was operated by Mercer|Sirota from April 26–May 11, with the final report expected soon. Results will be disseminated to the SIOP community in a future *TIP*. Until then, conference organizers wanted to share numerical highlights of the 2021 SIOP Annual Conference in Table 1.

Table 1

Numerical Highlights of the 2021 SIOP Annual Conference

	Quantity
Registrants	
Conference	3,151
Preconference workshops	277
Consortia	197
Conference Career Center	15 employers, 134 job seekers
Advanced Professional Development	40
Friday Seminars	234
Sessions	
Live synchronous (Whova)	149
Asynchronous (Whova)	140
Live posters (Virtual Chair)	17 sessions (485 posters)
Live interactive breaks (Whova)	29

Session attendance	
Opening Plenary	611 (live viewers)
Live synchronous (Whova)	600–1000 concurrent unique viewers at any given time (average of ~80 per session)
Live posters (Virtual Chair)	200–300 concurrent participants at any given time
Closing Plenary and event	213 (live viewers)
Events and engagement	
Internal events (Zoom)	8
Internal events (Virtual Chair)	11, 115–250 concurrent participants across events at any given time
Affiliate events (Virtual Chair)	9, 115–250 concurrent participants across events at any given time
Whova messages sent	9,861 (private and community)
Conference organizers	
SIOP Administrative Office staff	11
SIOP committee volunteers	94
Zoom technical facilitator volunteers	66

Thank you to you, the I-O community, for trusting conference organizers and for many of you showing up to make the inaugural SIOP Season a success.

Mark your calendar for the 37th Annual Conference April 28–30, 2022, in Seattle!

We're 10 Years Old! Celebrating SIOP's Partnership With the United Nations

Lori Foster, Julie Olson-Buchanan, Mark Poteet, Deborah Rupp, and John Scott

Note: This article was based on an Executive Board block presentation given at the 2021 SIOP Annual Conference by representatives from the SIOP UN Committee.

This year, SIOP is celebrating its 10-year anniversary of being granted nongovernmental (NGO) special consultative status by the United Nations (UN) Economic and Social Council (ECOSOC). The ECOSOC is one of six principal organs of the UN System and serves as the central forum for formulating policy recommendations regarding international economic and social issues.

Achieving NGO status, spearheaded and supported by Past President **Gary Latham**, was the result of a comprehensive application process that spanned several years. Key to receiving this status was highlighting the unique skills, expertise, research, and practice that SIOP members bring that align with the UN's vision and mission, and that can be leveraged to drive societal change.

Having NGO consultative status allows SIOP to make direct contributions to the programs and goals of the UN by accessing and participating in the work of the ECOSOC and other UN entities. SIOP representatives are able to register for and participate in events, conferences, and activities of the UN, and SIOP may designate authorized representatives to sit as observers at public meetings of ECOSOC and its subsidiary bodies, General Assembly, Human Rights Council, and other UN intergovernmental decision-making bodies.

Since being granted NGO consultative status, SIOP has undertaken several efforts to provide strong partnership and service to the UN. This article will review these achievements across multiple levels, including efforts to build a strong infrastructure for SIOP's UN work, working directly with the UN on critical initiatives, and advocating for the UN's agenda internally and externally. We will also highlight future goals, plans, and initiatives, and close by describing ways that SIOP members can contribute to advancing the UN's goals and agenda.

Building the Infrastructure

The first task to move forward with its partnership was for SIOP to form a committee dedicated to this initiative. The original committee, based out of the UN's New York City (NYC) Headquarters, included SIOP members **Herman Aguinis,** Lori Foster, **Ishbel McWha-Hermann,** Deborah Rupp, and John Scott. Given the high visibility and potential impact of SIOP's participation with the UN, the committee hit the ground running and quickly worked to create a charter that outlined its mission and responsibilities and established the organization around which UN activities would be conducted. This charter, approved by the SIOP Executive Board in 2012, links the SIOP UN Committee's mission to the UN's global vision and initiatives and ensures that the SIOP UN Committee's work is aligned with SIOP's agenda and strategic goals as well.

Several advancements have occurred since the original formation of the SIOP UN Committee. First, in 2014 the committee became an official SIOP Standing Committee. Second, in 2017, the committee aligned its strategic planning with the UN's Sustainable Development Goals (SDGs) and SIOP's Strategic Goals. This step further enhanced the positive impact that the committee's efforts and initiatives could have on both organizations. In recent years, under the leadership of Julie Olson-Buchanan, the committee has worked to align its annual strategic planning cycle to that of other SIOP committees.

Although many original members of the SIOP UN Committee stayed (and remain) active for several years, the team has made efforts to expand the opportunities for SIOP members to contribute to the work of the UN. This includes the work of **Morrie Mullins** and Mark Poteet to create onboarding materials to bring new members up to speed and navigate the UN system. In 2018, SIOP was able to add an "International" team to its committee roster. This team, consisting of five UN-badged representatives to the headquarters in Geneva (to complement the five UN-badged representatives to the NYC headquarters team), allows for SIOP to have broader global representation of our field and to expand the reach of its work. This team currently includes SIOP members **Stuart Carr**, **Drew Mallory,** Ishbel McWha-Hermann**, Ines Meyer**, and Lori Foster.

Given the scope of the work to be accomplished, the complexity of the UN in general, and the limitation of having five UN-badged representatives on each team, it has been important to involve additional SIOP members to assist with the committee's efforts. One of the ways in which we have achieved this is through the use of student interns. Since its inception, the committee has leveraged the talents of SIOP student members to assist with its efforts, including Drew Mallory, **Dan Maday**, **Alex Gloss**, and **Aimee Lace**. Building on this, over the past couple of years the committee has created a formal internship process that supports using a greater number of interns for 6-month appointments. This provides more opportunities for interested students, such as **Irina Kuzmich, Lauren Moran, Maria Whipple, Jenna McChesney, Gonzalo Munoz,** and **Sharon Li** to gain experience working both with the UN and within a SIOP committee.

In addition to receiving assistance from interns, SIOP members not on the UN Committee are sought out and involved in initiatives with the UN. For example, several of the accomplishments listed in the next section, such as speakers for the Learning and Innovation Series and participants in sounding boards for UNDP representatives, included many SIOP members whose expertise, research, and/or practice aligned with the needs of the UN initiative.

Another way that SIOP members have contributed to strengthening the UN Committee's capabilities is through the creation of annotated bibliographies for the UN's SDGs. Specifically, groups of faculty and students summarize I-O research and practice related to the SDGs, which then allows the committee to quickly create or speak to position papers or statements within the UN. At this point, a number of contributors from different universities have created, or are in the process of creating, bibliographies for several of the 17 SDGs.

Working With the UN

Through the work of the UN Committee and its members, SIOP has undertaken several steps to contribute to the goals and mission of the UN. The range of specific initiatives where SIOP has served as thought partners through providing guidance, expertise, and assistance to the UN has been documented in various *TIP* articles over the years (see https://www.siop.org/About-SIOP/Advocacy/SIOP-and-the-United-Nations/Press-and-Publications for a compilation of related publications). Presented below is a summary of some of these accomplishments.

Publications

The SIOP UN Committee has authored, coauthored, and cosponsored written and oral statements on several UN organizations, such as the UN Commission on the Status of Women and United Nations Economic and Social Council's High-Level Segment of the Annual Ministerial Review. The committee has also contributed to several reports for the UN. For example, members coauthored a foundational report on poverty reduction developed by the UNDP's Istanbul International Center. A founding team member, Lori Foster, also authored a report entitled "Behavioural Insights at the United Nations," providing guidance on ways in which these insights can be leveraged to address UN challenges. Beyond direct publications from the UN Committee, it is worth noting that the UN's Joint Inspection Unit recently published a review of change management within the UN system, which involved and drew heavily from the work of SIOP members. This example reinforces the role and impact that the work and research of SIOP members outside of the UN Committee has on advancing the UN agenda. Thank you SIOP members!

Thought Leadership and Consulting Services

Several SIOP members have worked with the UN Committee to provide consulting services and guidance to different UN organs. Examples of these initiatives include

- Revising leadership competencies and providing guidance on talent management activities for the United Nations Children's Fund.
- Assisting the Psychology Coalition at the United Nations (PCUN) with team building and goal setting.
- Reviewing the performance management system and practices of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), highlighting effective features of ESCAP's current process and opportunities for improvement, along with providing several recommendations to help ESCAP streamline and improve its system and processes.
- Participating in two sounding board discussions with UNDP representatives to provide expertise and direction on ways to revise and enhance the UNDP's Rewards and Recognition Program.
- Preparing and presenting the latest research and best practices on using engagement surveys to the UNDP.
- Conducting a half-day session on Best Practices in Talent Acquisition for Human Resources Services Division.

Education

In 2017, members of the UN Secretariat worked with SIOP UN Committee members Lori Foster, **Nabila Sheikh**, and Aimee Lace to develop and launch a Learning and Innovation Series. This initiative has SIOP experts conduct brown bag presentations to UN HR personnel on important issues, such as survey design, performance management, talent assessment, and 360-degree feedback. SIOP members **Chris Rotolo**, **Doug Reynolds**, Gary Latham, **David Bracken**, Lori Foster, and **Deniz Ones** have all presented and helped to make this a very valuable and well-received initiative.

Leadership and Connection With the Broader Field of Psychology and the UN

Original members of the SIOP UN Committee, as well as current representatives, led in the work to create the PCUN. This coalition draws together psychology and psychology-related NGOs with special consultative status with the UN. **Mathian Osicki** (SIOP UN Committee member) continues to serve on the PCUN board. Also, two IAAP members/SIOP members, **Walter Reichman** and **Mary O'Neil Berry**, have served as liaisons on our team to further facilitate coordination. We have benefited greatly from connections with SIOP members who work within the United Nations, including **Anton Botha** and **Leila El-Haig**. Members have also contributed to, and cochaired, PCUN's Psychology Day at the UN meetings for multiple years. UN Committee members have also served on the Board of Directors for UN groups, such as Americans for UNESCO. On top of this, committee members have attended and represented SIOP in several UN conferences and meetings related to the SDGs.

Advocating and Supporting the UN Agenda

In addition to working directly with the UN on relevant projects, SIOP and the UN Committee have actively supported and advocated for the UN mission, goals, and agenda. Several of these efforts are focused on helping SIOP members understand and pursue opportunities for contributing to the UN. Example efforts are described below.

- UN Committee members have consistently raised awareness among SIOP members of the UN ECOSOC's agenda items through presentations at its annual conference and publications in *TIP*.
- The SIOP UN Committee partnered with UN staff to discuss SIOP's projects, highlight job and internship opportunities at the UN, and outline how I-O psychologists can get involved with the New York Metropolitan Association for Applied Psychology.
- In 2012 SIOP joined the UN Global Compact. By signing the Compact, SIOP has agreed to follow its voluntary code of conduct consisting of 10 operating principles for business organized around human rights, labor, environment, and anti-corruption categories. Many of the humanitarian and pro-social initiatives undertaken by SIOP and its members align well with the principles and categories.

- The SIOP UN Committee has also taken on an initiative to advocate for the Compact's 10 principles through encouraging and assisting I-O graduate programs to join the Compact by weaving the 10 principles into their graduate curricula and encouraging practitioners to advocate to their employers to join. To date, multiple I-O graduate programs have joined.
- In 2016, SIOP hosted the Corporate Social Responsibility Summit, whereby 50 researchers and practitioners from across the globe came together for a 1.5-day pre-SIOP conference meeting for presentations and discussions. Several presentations from the summit evolved into chapters for Oxford's *Handbook of Corporate Social Responsibility*, and the summit led to the development of SIOP's CSR and Prosocial/Humanitarian I-O Registry. Both of these outcomes advance knowledge and practice in several areas directly related to UN's SDGs.
- In recent years, the UN Committee embarked on a Jobs, Internships, and Volunteer Experiences (JIVE) Initiative initially spearheaded by **Lise Saari**. In this effort, committee members and interns scan UN job postings to identify jobs where I-O psychologists may qualify, and then list these on the SIOP I-O Job Network.
- SIOP Committee members arranged for two members of the UN External Outreach team to be at the Baruch University Career Fair in November 2018, where multiple resumes were collected for the UN.
- Most recently, interns for the UN Committee have taken on a significant role in recording short videos whereby they discuss and share examples of the ways that SIOP members can leverage their expertise, research, and work, to help advance the 17 SDGs. These videos are currently available on SIOP's official YouTube channel (https://www.youtube.com/user/SIOPofficial).

Looking Ahead

In its first 10 years, SIOP has accomplished a great deal in helping the UN with its mission and goals. Still, there is a great deal more that can be done. The SIOP UN Committee already has a few new initiatives being considered or in the initial stages of planning. These include expanding the Learning and Innovation Series to broader audiences and UN organs, as well as establishing a network of individuals that can scan the UN and broader environment for any emerging global work-related issues and crises, and quickly review the scientific and practical literature to provide organizations with expertise, support, and insight. However, if you have additional ideas for ways in which SIOP, or the UN Committee, can partner with the UN, please pass them along: siopun@siop.org.

Also, there are several ways in which you can express your desire to help. You can sign up on the SIOP Corporate Social Responsibility Registry to signal your interest. If you're on the Consultant Locator Service, indicating your interests can also help, as the UN Committee uses this as a resource to locate members to assist on relevant projects. You could also volunteer to write an annotated bibliography for one of the SDGs. Encouraging and helping your organization or graduate program join the Global Compact is another opportunity to contribute.

Thanks to all of the SIOP UN Committee members and interns who have contributed immensely to this valued and impactful partnership over the years. These individuals include Herman Aguinis, Mary O'Neil Berry, Stuart Carr, Lori Foster, Alex Gloss, Irina Kuzmich, Aimee Lace, Sharon Li, Dan Maday, Drew Mallory, Jenna McChesney, Ishbel McWha-Hermann, Ines Meyer, Lauren Moran, Morrie Mullins, Gonzalo Munoz, Julie Olson-Buchanan, Mathian Osicki, Mark Poteet, Walter Reichman, Deborah Rupp, Lise Saari, John Scott, Nabila Sheikh, and Maria Whipple.

SIOP Award Winners:
Meet Distinguished Scientific Contributions Award Winner: Herman Aguinis

Liberty J. Munson

As part of our ongoing series to provide visibility into what it takes to earn a SIOP award or grant, we highlight a diverse class of award winners in each edition of *TIP*. We hope that this insight encourages you to consider applying for a SIOP award or grant because you are probably doing something amazing that can and should be recognized by your peers in I-O psychology!

This quarter, we are highlighting the winner of the Distinguished Scientific Contributions Award: **Herman Aguinis (see www.hermanaguinis.com).**

Share a little a bit about who you are and what you do.

I am a professor of management at The George Washington University School of Business in Washington, DC. My research is interdisciplinary and is about the acquisition and deployment of talent in organizations and organizational research methods. Recent projects include star performance; corporate social responsibility and business sustainability; domestic and international workforce diversity; leadership, staffing, training and development; performance management; and innovative methodological approaches for developing and testing theories. On a more personal note, my professional and life agenda is to have an impact on the academic community but also on society at large.

Describe the research/work that you did that resulted in this award. What led to your idea?

I received this award for lifetime contributions rather than an individual project.

[Note from Liberty Munson: Below I include information on five(!) of his research streams. The articles mentioned below are available at http://www.hermanaguinis.com]

> **Corporate social responsibility.** He put the topic of corporate social responsibility (CSR) on the radar screen of industrial and organizational psychology (IOP) with his 2011 article in the *APA Handbook of Industrial and Organizational Psychology* titled "Organizational Responsibility: Doing Well and Doing Good." There was virtually no IOP research about CSR prior to the publication of this very influential work. Subsequently, he published additional research linking IOP and CSR in *Journal of Management* (Aguinis & Glavas, 2012, 2019), and *Industrial and Organizational Psychology* (Aguinis & Glavas, 2013). Also, he co-edited a special issue of CSR in *Personnel Psychology* (Morgeson et al., 2013). A more recent article on CSR, published in *Personnel Psychology* (Ng et al., 2019), received the IACMR-Responsible Research in Management Award "recognizing excellent

scholarship that focuses on important issues for business and society using sound research methods with credible results." It is no exaggeration to say that his work on CSR has been foundational and served as a pivotal catalyst for an entire research stream linking CSR and IOP.

Star performers and the distribution of performance. His research in this domain has challenged the decades-long view that performance is normally distributed and has implications for selection, training, performance management, and all other domains interested in performance—which is virtually all areas in IOP. His work in this area has been published in *Personnel Psychology* (2012, 2014, 2016) and *Journal of Applied Psychology* (2017, 2018) and has also been funded by the National Science Foundation ("Understanding the Gender Performance Gap Among Star Performers in STEM Fields"). This work is leading to new empirical as well as conceptual and methodological research by him and his students and coauthors, as well as many other teams of researchers. The fact that there is such a heated debate on this issue is a sign of the foundational nature of these contributions, which will influence research and practice in IOP for many decades to come.

Test bias and fairness. His research reignited the dormant domain of test bias (i.e., differential prediction; e.g., Aguinis et al., 2010, *Journal of Applied Psychology*; Aguinis et al., 2016, *Journal of Educational Psychology*). Clear evidence of his impactful contributions in this domain is that the recently published 5th edition of the *SIOP Principles for the Validation and Use of Personnel Selection Procedures* refer to five of his articles on test bias and fairness in several places. Moreover, this research led to an important reaction on the part of the testing industry. For example, his 2010 *Journal of Applied Psychology* article was followed by a response also in *JAP* by chief scientists from the College Board, the organization that develops and administers tests such as the SAT, GRE, and GMAT. The SAT alone is administered to about 1.7 million individuals in the United States each year. His has also been cited in Justice Ginsburg's dissenting opinion (with which Justices Stevens, Souter, and Breyer concurred) in the U.S. Supreme Court in its decision in the *Ricci v. DeStefano* case involving firefighters in New Haven, CT (p. 29). Also, he coauthored an amicus brief regarding this same case with Cascio, Outtz, Zedeck, and Goldstein.

Methodological best-practice recommendations. Dr. Aguinis has written several articles addressing recommendations on methodological best practices. These contributions are particularly timely and relevant given current concerns about the credibility and trustworthiness of IOP research. His work in this domain has been published in *Personnel Psychology* (e.g., on control variables, 2016), *Organizational Behavior and Human Decision Process* (i.e., on open science, 2020), *Organizational Research Methods* (e.g., on outliers, 2013; on experimental vignette studies, 2014; on data collection and preparation, 2021), *Journal of Management* (e.g., on self-reported limitations, 2013; on multilevel modeling, 2013; on meta-regression, 2018), *Journal of Organizational Behavior* (e.g., on interaction effects in regression, 2010; on interaction effects in meta-analysis, 2011), *Academy of Management Annals* (i.e., on transparency, 2018), *Journal of International Business Studies* (i.e., on meta-analysis, 2021), and *Strategic Management Journal* (i.e., on interviews, 2019), among others. This body of work has been influential in shaping submission and review policies of several journals—as well as the training of future IOP scholars.

State-of-the-science contributions. Dr. Aguinis has authored several influential articles addressing the state of our science. For example, his 2008 *Journal of Applied Psychology* article titled "Research in Industrial and Organizational Psychology from 1963 to 2007: Changes, Choices, and Trends" (with **Wayne Cascio**) has been cited in four of the five articles by past *JAP* editors who contributed to the centennial issue published in March 2017. His 2014 focal article in *Industrial and Organizational Psychology* addressing the movement of I-O psychologists to business schools generated quite a debate, and his 2015 *JAP* article distilling effect size benchmarks based on about 150,000 correlations from *JAP* and *PPsych* is the #1 most cited article among all those published in *JAP* in 2015. His research published in *Industrial and Organizational Psychology* (2017) and other journals (e.g., *Academy of Management Learning and Education*, 2014, 2019; *Academy of Management Perspectives*, 2012, 2020) has addressed the definition and measurement of scholarly impact. Taken together, these important scientific contributions are shaping the conversation about desired and less desired futures for IOP programs, journals, professional organizations, and individual careers.

What do you think was key to you winning this award?

Sustained research productivity over time—about 30 years.

What do you see as the lasting/unique contribution of this work to our discipline? How can it be used to drive changes in organizations, the employee experience, and so on?

Our research on performance management has been useful for IOP practice. For example, my latest book on this topic titled *Performance Management for Dummies* has reached a very large audience of practitioners. Also, textbooks have had an important impact on students who, for the most part, are future practitioners. For example, *Applied Psychology in Talent Management* (8th edition, 2019, with Wayne Cascio), and *Performance Management* (4th edition, 2019). In terms of researchers, our work on methodological best practices and state-of-the-science issues has been useful to both junior and not-so-junior scholars—including journal reviewers and editors. This includes articles, but also the books *Regression Analysis for Categorical Moderators* and *Opening the Black Box of Editorship*.

How did others become aware of your award-winning work/research?

Our research has been published in widely read journals—as well as books used in the classroom and by practitioners. For more information on articles, please see: http://www.hermanaguinis.com/pubs.html

For more information on books, please see: http://www.hermanaguinis.com/Books.htm

Who would you say was the biggest advocate of your research/work that resulted in the award? How did that person become aware of your work?

Chuck Pierce, who nominated me. He and I went to graduate school together and have been friends and research collaborators for 3 decades.

To what extent would you say this work/research was interdisciplinary?

- ***What was the "turning point" moment where you started thinking about the problem/work through the other disciplines' lenses?***
  Since high school, when I connected dots between philosophy, math, and social sciences.

- ***How do you think the work benefited from having multiple disciplines involved?***
  It allows me to think more broadly and to import and export theories and methods across disciplines. My research on methodology was a great springboard to do so because it forced me to read journals from different fields.

- ***What recommendations would you give to others if they are doing interdisciplinary research?***
  Read journals from different fields.

Are you still doing work/research in the same area where you won the award? If so, what are you currently working on in this space? If not, what are you working on now, and how did you move into this different work/research area?

Yes, I am still working on the same streams—but different projects.

What's a fun fact about yourself (something that people may not know)?

I play drums.

What piece of advice would you give to someone new to I-O psychology? (If you knew then what you know now…)

Follow your passion, but also be aware of the market and what is rewarded.

About the author:

Liberty Munson is currently the principal psychometrician of the Microsoft Technical Certification and Employability programs in the Worldwide Learning organization. She is responsible for ensuring the validity and reliability of Microsoft's certification and professional programs. Her passion is for finding innovative solutions to business challenges that balance the science of assessment design and development with the realities of budget, time, and schedule constraints.

Most recently, she has been presenting on the future of testing and how technology can change the way we assess skills.

Liberty loves to bake, hike, backpack, and camp with her husband, Scott, and miniature schnauzer, Apex. If she's not at work, you'll find her enjoying the great outdoors or in her kitchen tweaking some recipe just to see what happens.

Her advice to someone new to I-O psychology?
Statistics, statistics, statistics—knowing data analytic techniques will open A LOT of doors in this field and beyond!

Foundation Spotlight: Working Smarter

Milt Hakel
Foundation President

In the past 2 years, the SIOP Foundation has distributed $250,000 to fund grants, scholarships, and awards. This funding comprises the yield from Foundation endowments and also proceeds from current contributions passed directly to grantees. That adds up to a suitable commemoration of the Foundation's 25th anniversary. Not bad for a venture that the SIOP Executive Committee (EC) initially turned down when **Bill Owens** offered $25,000 contingent on its being tax deductible—the EC reconsidered that opportunity during the same meeting, and SIOP Foundation, Inc. has been creating history ever since.

Lately the trustees have been thinking about how to work smarter within the SIOP Foundation in particular and the world of SIOP and I-O praxis in general. Praxis is the key, and it is what makes I-O unique: We value theory and practice equally without giving greater status to either. Knowledge without action is inert, and thoughtless action is more apt to be damaging than beneficial.

Recent trends shout out the need for working smarter as I-Os. Social discord compounded by employment insecurity and hyperpartisanship poses a severe challenge. If that is not a sufficient challenge for us, now HBO Max and CNN Films have issued a documentary on personality tests (see SIOP's recent statement). That individual differences matter is not news to I-Os. But the world of work is more complicated than bumper stickers and sound bites.

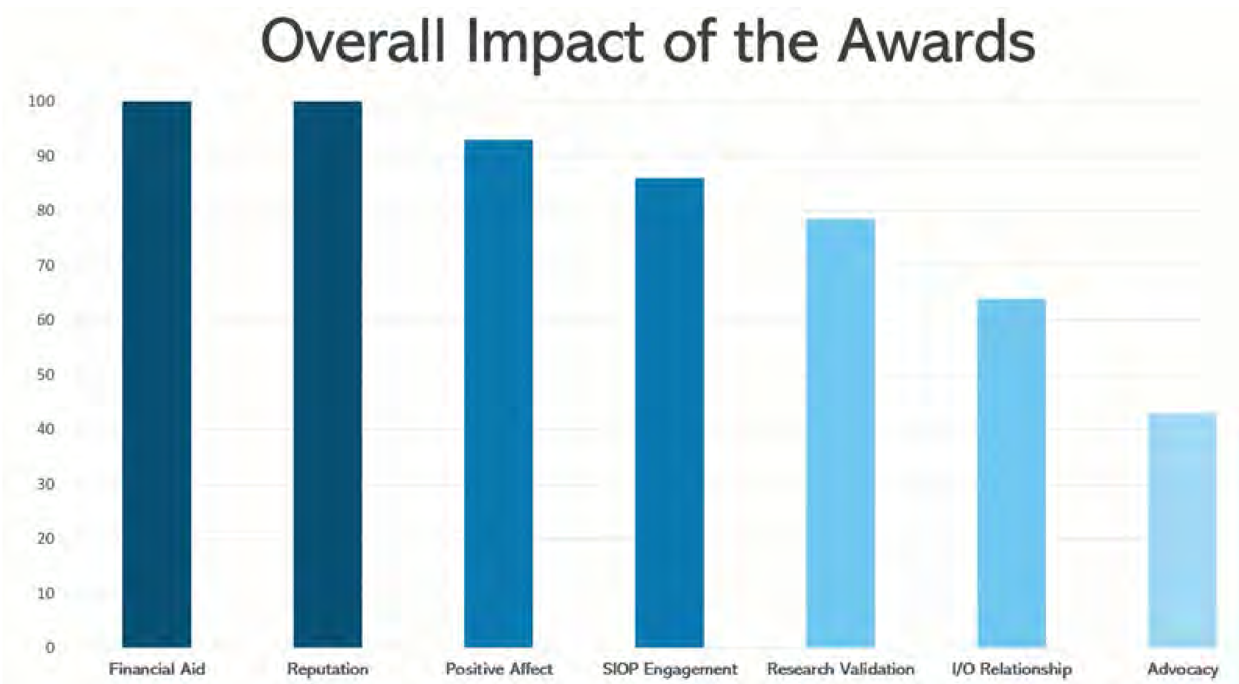
"Praxis" is a fine description of what I-Os do. Implicit in the conjunction of theory and practice is continuing examination of outcomes: Does what we do actually work? What does evidence show about the extent to which intended outcomes are achieved? Are there additional and desired collateral outcomes? Are there unwanted side effects? What are the lessons of experience?

To date, the Foundation has been mostly content to trust the "smiles test," but we have now embarked on a much more articulated evaluation. A student-led team at Middle Tennessee State University on April 20 briefed the Foundation Trustees via Zoom about their findings from a 10-week investigation of the impact of graduate student scholarships on both individual achievement and also the advancement of SIOP and I-O psychology.

Impact of Scholarships

Let us start with the smiles. Noted one scholarship winner, "The award meant a lot to me and my family. During that time, we just had a baby, and my wife was having medical problems, so this was a big impact on me and my family." Another said, "Getting the award allowed me to have research and practical experience, as this is something that the job market looks for, so it helped. Also having a strong SIOP affiliation helped the consulting position's hiring team make their decision to hire me." Said another, "It gave me a confidence boost. This career path has a lot of rejection in it, so it is easy to get discouraged. I received the award at a pivotal point when I was getting ready for my dissertation and for the job market. Getting the award validated my confidence, how I felt about my work, and how confident I was on the job market." One more quote: "Receiving the award tied me to SIOP in a permanent way. I don't take that amount of money lightly nor the principle of reciprocity. SIOP is a place I want to continue to be active and involved. Now I want to get even more involved in SIOP in the future."

Altogether, 14 scholarship winners (of 29 invitees, a 48% response rate) talked with MTSU team members. Here is a glimpse of the overall results:



The discussion between Trustees and MTSU team members was lively and impactful. A special delight was to receive the full detailed written report of the team's work immediately after the briefing.

The Trustees will continue and expand this work, both digging deeper into the impact of scholarships and also into the impact of grants and other awards.

Due to the excellence of the method and reporting of this initial evaluation project, the full MTSU report is posted on the Foundation website. Despite the fast pace and compressed timeline, the MTSU team also interviewed 9 (of 16, 60%) donors to scholarship funds. To read about their views as well as the team's recommendations, browse to www.siop.org/Foundation/Bulletin.

The SIOP Foundation Trustees welcome your comments and suggestions. An immediate way to help would be to become a member of the next Visionary Circle cohort. Or talk with any of us about making gifts to the Fund for the Future. This is the time for creativity AND action.

Our mission: connect donors with I-O professionals to create smarter workplaces. Let us get on with working smarter in these challenging times.

The SIOP Foundation
440 E Poe Rd Ste 101
Bowling Green, OH 43402-1355
419-353-0032
Email: SIOPFoundation@siop.org
Website: SIOPFoundation.org

Membership Milestones

Jayne Tegge, Member Engagement Manager

Please welcome the newest members of the Sterling Circle, members of SIOP for 25 years!

Othman Alkhadher	Megumi Hosoda	Quinetta Roberson
Soon Ang	Cabot Jaffee	Charles Scherbaum
James Brooks	Eyran Kraus	Robert Schmieder
James Connolly	Chris Kubisiak	Joann Sorra
Paul Damiano	Linda Montgomery	Piers Steel
Mark Ehrhart	Joan Pastor	Matthew Such
John Hausknecht	Kathie Pelletier	Jennifer Verive
Wanda Hayes	Kevin Reindl	David Watterson
Anne Holloway-Lundy	Janet Rhoton	Guillermo Yaber Oltra

"I love how SIOP offers unique networking opportunities at the annual conference…those informal meetings in particular could lead to promising collaborations."

Shahnaz Aziz, PhD
I/O Psychology Program Director
East Carolina University
Distinguished Professor for Teaching
SIOP Member since 1999

Please welcome these new professional members of SIOP.

Ayesha Abdulla	Alice Edwards	Kermit Olson
Joshua Andrews	Kevin Galliers	Kelsey Perkins
Jessalyn Arnold	Elizabeth George	Matt Piszczek
Jeffrey Auerbach	Katherine Gerson	Tim Quesnell
Jonah Bader	Angeline Gordon	Chantal Ramirez Tapia
Henning Bang	Katherine Green	Mark Richards
Cheryl Batchelor	Bethany Grubbs	Ariel Roberts
Lucy Beaumont	Elizabeth Guth	Kecia Rome

Gary Behrens	Cynthia Halliday	Tariq Shaban
Sreyoshi Bhaduri	Alanna Harrington	Linda Singh
Poppy Boothroyd	Nikola Hartling	Rebecca Sledge
Jacqui Brassey	Josanna Herman	Douglas Smith
Danielle Braunstein	Greg Horan	Jonathan Stubblefield
Cassandra Brennand	Rachel Hutchinson	Britany Telford
Emily Burnett	Heather Ikin	Gina Thaxton
Hunter Carlin-Ledrich	Ruth Imose	Benjamin Theisen
Randall Carman	Natasha Jordan	Lisa Thomas
Prithviraj Chattopadhyay	Emily Killham	Joe Travoglino
Theresa Chika-James	Jack Kostal	Andrew Trechsel
Anika Cloutier	Jennifer Lam	Julie Truong
Johanna Collier	Jenny Landsman	Yvonne Van Rossenberg
Keri Collins	Julia Levesque	Erin Walker
Crystal Connors	Andrea Lewis	Yongyue Wang
Natalie Cori	Joi Lin	Shaun Wehle
Michelle Corman	Hannah Liss	Jonathan Weller
Johnna Cortopassi	Yukun Liu	Myra West
Monique Daigneault	Pamela McLean	Ashley Williams
Jenna Daily	Danielle McWhirter	T. Anika Wilson
Hatim Daoud	Mary Mescal	Kimberly Wilson
Nicole Dennis	Betsy Moore	Joseph Wohkittel
Veronica Derricks	Frank Mu	
Natalie Despiau	Patti Naas	
Chaston Dixon-Well	Sandra O'Connor	

Members in the Media

Amber Stark
Marketing and Communications Manager

Awareness of I-O psychology has been on the rise thanks to articles written by and/or featuring our SIOP members. These are member media mentions found from March 20, 2021, through June 6, 2021. We scan the media on a regular basis but sometimes articles fall through our net. If we've missed your or a colleague's media mention, please email them to astark@siop.org! We push them on our social media and share them in this column, which you can use to find potential collaborators, spark ideas for research, and keep up with your fellow I-O practitioners.

COVID-19-Related Items
Elizabeth Kolmstetter on how COVID-19 altered NASA: https://www.fastcompany.com/90616684/nasas-culture-chief-reveals-how-covid-19-altered-the-agency

Matthew Crayne on lessons business owners can learn from President Biden's response to the COVID crisis: https://www.forbes.com/sites/edwardsegal/2021/04/25/10-lessons-business-leaders-can-learn-from-how-biden-is-responding-to-covid-crisis/?sh=1ba3795e7e8b

Zoom
Tammy Allen and **Emily Campion** on Zoom fatigue: https://www.themuse.com/advice/tips-fight-zoom-fatigue

Marissa Shuffler on the Zoom wave: https://www.nbcnews.com/news/us-news/unable-resist-urge-wave-end-zoom-calls-you-re-not-n1267260

Remote Work
Theresa Glomb on an emerging job: director of remote work: https://www.dailypress.com/business/careers-finance/vp-bz-career-connection-0404-20210404-klcdnpc5hfg3td4arw6ruvwafy-story.html

Tammy Allen**, Kelsey Merlo, Roxanne Lawrence,** and **Cheryl Gray** on how remote work has changed our lives and our health: https://www.discovermagazine.com/health/how-remote-work-changed-our-lives-and-our-health

Cathleen Swody on hybrid work: https://www.voanews.com/usa/all-about-america/next-big-disruption-us-society-hybrid-work

Sertrice Grice on how to convince your boss to let you keep working remotely: https://www.latimes.com/business/newsletter/2021-05-11/how-arrange-work-from-home-permanently-business

Chelsea LeNoble on what it takes to be a good remote worker: https://www.bostonglobe.com/2021/06/01/business/what-does-it-take-be-good-remote-worker/

The Workplace After the Pandemic
Adam Grant on the name for the blah you're feeling: https://www.nytimes.com/2021/04/19/well/mind/covid-mental-health-languishing.html

Chu-Hsiang Chang on the rush to return to "normal": https://www.aol.com/lifestyle/whats-behind-rush-return-normal-161548735.html

Ted Kinney on the chance to reimagine the talent life cycle: https://www.recruiter.com/i/talent-life-cycle-covid-19-upskilling/

Joe Mazzola on the workplace after the pandemic: https://www.wraltechwire.com/2021/04/06/north-carolina-ranks-no-2-for-working-from-home-new-study-says/

Derek Avery on the post-pandemic work environment: https://www.nbcsandiego.com/news/business/money-report/1-in-4-workers-is-considering-quitting-their-job-after-the-pandemic-heres-why/2581041/

Cathleen Swody and **Timothy Golden** on transitioning back to the office: https://www.voanews.com/usa/all-about-america/returning-office-after-covid-could-be-stressful

Cathleen Swody on the mental health fallout from COVID as workers return: https://www.crainsnewyork.com/coronavirus/employers-brace-covids-mental-health-fallout-workers-return

Denise Rousseau on the long-term challenges that come with long-term unemployment: https://www.marketplace.org/2021/06/03/with-long-term-unemployment-comes-long-term-challenges/

Athletic Identity
Gary Burns makes new discovery while studying athletic identity and moral development: https://spacecoastdaily.com/2021/03/florida-tech-researcher-make-new-discovery-while-studying-athletic-identity-and-moral-development/

Work Performance
Cabot Jaffee on winning back your boss after a lousy performance review: https://www.bloomberg.com/news/articles/2021-03-26/hr-experts-explain-how-to-improve-on-your-bad-year-end-evaluation

Cabot Jaffee with seven top strategies for managing employee performance: https://lattice.com/library/top-strategies-for-managing-employee-performance

Diversity and Inclusion
Phani Radhakrishnan on why the quest for good soft skills can often be the same as looking for "whiteness": https://www.theglobeandmail.com/business/careers/article-why-the-quest-for-good-soft-skills-can-often-be-the-same-as-looking/?fbclid=IwAR2xHMqb0Z8YbgKjl4XpNwSZQkzEzc0P5DD0Iq-akmA-rI-OPJ4nNdM-W4E#comments

Gena Cox with five strategies to infuse diversity and inclusion into your organization: https://hbr.org/2021/05/5-strategies-to-infuse-di-into-your-organization

Hiring
Cherie Curtis on crucial steps for SMBs to develop a successful hiring process: https://www.hrmorning.com/articles/smb-recruiting-hiring/

Personality
Chia-Huei Wu on the interplay between work and personality change: https://www.forbes.com/sites/traversmark/2021/03/30/do-our-jobs-make-us-who-we-are-a-new-book-examines-the-interplay-between-work-and-personality-change/?sh=2f68a3f4631f

Employee Turnover
Natalie Baumgartner on employee turnover: https://www.recruiter.com/i/employee-turnover-is-on-the-rise-heres-how-to-make-them-stay/

Well-Being
Tammy Allen on how working long hours could be more serious for your health than you realized: https://www.kpax.com/news/national/working-long-hours-could-be-more-serious-for-your-health-than-you-realize

Sharon Glazer on several factors that can affect a person's happiness, including their career: https://wallethub.com/edu/happiest-places-to-live/32619#expert=Sharon_Glazer

Veterans in the Workplace
Kristin Saboe and **Nathan Ainspan** on how to hire and retain veteran talent:
https://www.military.com/veteran-jobs/new-book-teaches-employers-how-hire-and-retain-veteran-talent.html

Kristin Saboe and Nathan Ainspan on how to hire and retain veteran talent:
https://www.conference-board.org/Blog/podcasts/Nathan-Ainspan-and-Kristin-Saboe-on-their-new-book-Military-Veteran-Employment

Gaming
Matt Howard on the use of gaming technology for improving physical ailments:
https://www.nytimes.com/2021/04/21/health/virtual-reality-therapy.html

IOtas

Jen Baker

Honors and Awards

Scott Highhouse was named "Distinguished Research Professor" by the BGSU Board of Trustees.

Books

SIOP Fellow **Michael Buckley,** University of Oklahoma, has published a new book, *HR Without People? Industrial Evolution in the Age of Automation, AI, and Machine Learning,* with Anthony R. Wheeler, Widener University.

The IOtas column is designed to publicize the honors, accolades, and career milestones of SIOP members. Send word of your accomplishments or those of your colleagues to Jen Baker at jbaker@siop.org.