Volume 60

Number 1

Summer 2022

Editor: Adriane M. F. Sanders

EDITORIALS

FEATURES

REPORTS

Editor's Column: Introductions, Gratitude, & Looking Ahead

Adriane M. F. Sanders

Hello dear *TIP* readers! I am so pleased to introduce myself in my first official issue as the new editor of *TIP*. I'm still pinching myself a bit. I have loved *TIP* since I first discovered it in grad school, and though my readership has waxed and waned (and waxed again) over the years as busyness has permitted, my fondness has never changed. In my early readership, it was a way to feel connected to others in training like me and learn about the field. With time, it became an easily accessible way to get a sense of what topics/issues were trending in our field. Later, as I became more interested and active in the SIOP organization, it was a place to stay informed via insider news and reports. And now, as I sit "behind the desk" of the publication, it feels very much like all three of these stages have come together. Once again, I feel that connection that originally drew me in, only now it goes much further, to include such a wide array of people and topics. It feels like new terrain and, yet, home at the same time.

Before getting too far along in this inaugural column, I must give thanks. Our former editor, **./Steven Toaddy**, so generously spent the past year training me, gradually letting me take on a more active role in administrative and editing responsibilities, and continues to provide encouragement and support; thank you. I'd also like to thank everyone who contributed to or participated in the chair training sessions held at this year's annual conference. By the time it rolled around (after the conference closing lunch), I was already in that euphoric-exhausted stage of the conference, but the presenters and facilitators kept it light and relevant; I learned so much! Though it's not my first time serving on a SIOP committee, it is my first time "chairing" one and thus, participating in the annual chair training sessions. It truly felt like I had been granted a backstage pass to I-Opalooza—mysterious and exciting—and what I found was the most welcoming, supportive group of extended I-O family; thank you. And I can't miss a chance to profess my unyielding gratitude and love (yeah, I said it!) for my immediate I-O fam. The ones who have been with me since my training at The University of Memphis. I was one of the lucky ones who found a strong network of peers in my PhD program and still count them as colleagues, collaborators, and best of friends to this day. And I absolutely would not be where I am today if it were not for the ongoing guidance, support, and friendship of my mentor, **Ron Landis**. I also want to give sincere thanks to the outgoing and incoming SIOP Presidents, **Steven Rogelberg** and **Mo Wang**, for helping me feel welcomed and empowered in this new role.

As with any leadership transition, one must evaluate the current landscape. In doing so, I'd like to share some immediate and future plans for the publication. First, I'd like to share my vision for *TIP*—it's actually the same vision I have for SIOP as an organization and the authority on workplace psychology—to promote and embody a more diverse and inclusive culture in the practice, science, and teaching of industrial and organizational psychology. Adequately representing the full range of humans for whom we, as a discipline, work to support with science is simply best practice. I hope to promote DEI in the broadest sense—certainly in terms of racial and ethnic identity, gender identity, sexual orientation, and disability, but also for greater levels of program stakeholders (e.g., faculty, including adjuncts; students; and alumni), program types (e.g., master's level; nontraditional, including online and hybrid;

international; and I-O adjacent programs), and our practitioners in the field. I know that our professional community cares about these issues and wants to see them rise to the forefront of our ideals as a discipline. As such, *TIP* will be joining the ongoing conversations and actions occurring in various grassroots and official efforts such as the I-O Program Directors Alliance (IOPDA), SIOP's Anti-Racism Grant program, Diversifying I-O Psychology (DIP), and several of SIOP's standing and ad hoc committees, just to name a few. The nature of *TIP*, in terms of mission and quick publishing timeline, puts it in a unique position to promote such efforts in real time. Additionally, *TIP* has the potential to reach a greater range of readership as it serves a different purpose than other journals in our field. I believe these are the greatest strengths of this publication, which can help to unify the movement towards the change we hope (need) to see. Examples of how we could progress on such a vision include prioritizing submissions by BIPOC and otherwise diverse researchers and practitioners, DEI-forward content, and encouraging non-DEI submission authors to address how their research/content may relate to or impact DEI efforts or marginalized groups within organizations or training programs. These are actions *TIP* has already begun to set in motion with this issue (see Oki & Johnson and Castille et al. for two excellent examples of these approaches).

In addition to this immediately actionable shift, I'd like us to also consider the future. That is, what is *TIP* already doing well (e.g., in terms of content, structure, frequency) and what could we do to leverage that goodness into a new era of the publication? What would *TIP* look like if we were completely open to change? That's the question I want to pose to you, dear readers, and the SIOP membership. In a near-future issue of *TIP*, you will be asked to contribute to this new era by sharing your ideas. After all, we know the key to any organizational change is gathering stakeholder input and buy-in. I believe the vision of a more diverse, equitable, and inclusive publication will provide strong scaffolding for any future iteration of *TIP*. I'm excited to see what we come up with!

To help realize and enhance these plans, I am fortunate to have an all-star team serving on the *TIP* editorial board. I reached out to my dream contributors and scored big! Thank you so much **Lars Johnson, Clair Reynolds Kueny, Ho Kwan Cheung, Katrina Burch,** and **Jeanie Whinghter** for making space for yet another volunteer role in your very full schedules. Every one of these editorial board members brings a unique set of experiences, expertise, and perspective to the publication. I look forward to their continued contributions in the coming issues.

With time and the plans noted above, my goal as editor is threefold: to help our longtime readers continue to feel at home with *TIP*, while adventuring through new terrain together; for those who have taken a break from *TIP* to find new reason to travel with us again; and to increase the reach and awareness of *TIP* for new and yet-to-be readers to discover our publication and find a reason to join our expedition of all things I-O psychology. Let's go!

President's Column

Mo Wang

Happy Summer, SIOPers 😊

Before I start my first presidential column, I would like to thank my predecessors, **Eden King, Georgia Chao,** and **Steven Rogelberg**, who have made SIOP a better organization through their vision and agility, and navigated SIOP through the challenging time of the COVID-19 pandemic. As a result, after 2 gap years, we were able to successfully hold our conference in person this April in Seattle and reengage with our great I-O community. Thank you!

I hope to continue my awesome predecessors' paths to move SIOP forward with my presidency. We are transitioning into a postpandemic world, and with that, I would like to commence a new era for our organization. A critical task for this new era is to help forge a content-driven SIOP. The past 2 years have demonstrated the importance for SIOP to deliver its content and promote its brand beyond our traditional channels, such as conferences.

Therefore, my presidential theme is to "*Go Beyond*." With that, I believe we can continue SIOP's growth and influence by focusing on three things in this postpandemic era. First, we need to cultivate an international landscape for SIOP's operation and expansion. To date, SIOP has largely focused its operations in North America, whereas science and practices in I-O psychology have been developing rapidly in other parts of the world as well. Thus, to promote our brand and deliver our content to other parts of the world is of strategic importance, especially in terms of nurturing the organic growth of our profession.

Second, I would like to focus on I-O psychology's involvement in shaping the postpandemic era of working and organizing. As the world begins to find a new "normal" in all aspects of life, I hope that SIOP can be a leading/guiding organization for the new ways of working and organizing. This will require us to better disseminate our knowledge and expertise in those areas. This will also require us to be more user driven and more public facing.

That leads me to my third goal, which is to focus on generating signature educational content to help SIOP continue to grow. I envision leveraging our expertise to influence the future of I-O psychologists by putting our content and brand in front of them while they are still in college or just started participating in the workforce. I am confident that our content will be the best ambassador of SIOP to connect with people and groups all over the world.

In closing, I would like to express my gratitude to our members, our volunteers, our Executive Board, and our community. I feel so fortunate to be a part of SIOP, and I am looking forward to leading our organization to enter this new era. At the same time, I would like to use this space to thank my mentors from graduate school, **Michael Zickar,** Yiwei Chen, **Scott Highhouse, Steve Jex,** and **Milt Hakel**. Without them, I would not be here to devote my service to SIOP. I thank them for their kindness, friendship, patience, and guidance. BGSU rocks!

The Bridge: Connecting Science and Practice

Apryl Brodersen
Metropolitan State University of Denver

Sarah Layman
DCI Consulting Inc.

Tara Myers
American Nurses Credentialing Center

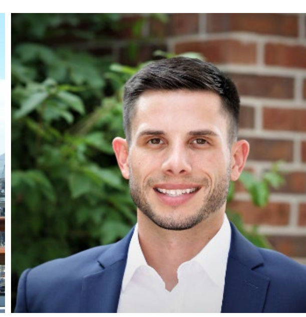


"The Bridge: Connecting Science and Practice" is a TIP column that seeks to help facilitate additional learning and knowledge transfer to encourage sound, evidence-based practice. It can provide academics with an opportunity to discuss the potential and/or realized practical implications of their research 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, Cameron Klein, James Longabaugh, Sheena Lyons, and Lisa Wager highlight key factors that have impacted employee commitment/intent to stay over the course of the pandemic and into the Great Resignation. The goal is to start a conversation about areas for potential collaboration between academics and practitioners to help establish evidence-based recommendations.

Retaining Employees Amid the "Great Resignation"

Workforce Science Associates (April 2022)
Lisa Wager, Cameron Klein, James Longabaugh, and Sheena Lyons






Dire predictions and broad speculations about the "Great Resignation" have saturated the headlines and popular press, warning of impending issues of employee turnover, leaving organizational leaders to scramble with limited direction as they also deal with a once-in-a-lifetime global health pandemic and mounting pleas for social justice, inclusion, and equity.

Over time, different reasons have been hypothesized as the cause of the Great Resignation. Early on, when countless organizations went fully remote in response to the COVID-19 pandemic, many posited that it was the lack of early socialization and onboarding of “pandemic hires” that led to skyrocketing voluntary turnover rates. Later, many pointed to the fact that people became accustomed to working remotely and, because of the shifting way in which people are able to work, they have more options to work remotely with competitors if their current company required them to return to the work site. A more traditional notion is that the demand placed on workers, such as nurses, fast food workers, and other “essential employees” is an acute driver of voluntary turnover. Other reasons point to the current inflation level, which is rising faster than wage improvements. Thus, the rationale suggests, people are leaving one job to do similar work at another company for a little bit more money or to accommodate their lifestyle preferences.

Employee turnover comes with an immense cost, which SHRM estimates to be between 90%–200% of an employee’s salary (Fox, 2012), hitting both the talent landscape and organizational bottom lines. With a lot on the line, it is important for employers to connect science and practice to make the best decisions about how to proactively retain employees.

To help bridge this gap, Workforce Science Associates (WSA)—a research organization based in Lincoln, Nebraska that specializes in studying organizational engagement, employee experience, and talent assessment—has leveraged its considerable database to answer pertinent questions regarding employee commitment trends, and why employees choose to stay. For example, how has employee commitment varied during the pandemic? What have been the greatest influencers for why employees have stayed loyal to their employers? Which of the theories highlighted in the press hold the greatest merit? In this article, we examine employee commitment trends over time, along with several drivers of employee commitment. We conclude with some research-driven suggestions for organizations seeking to retain their employees amid the Great Resignation.

Commitment Trends

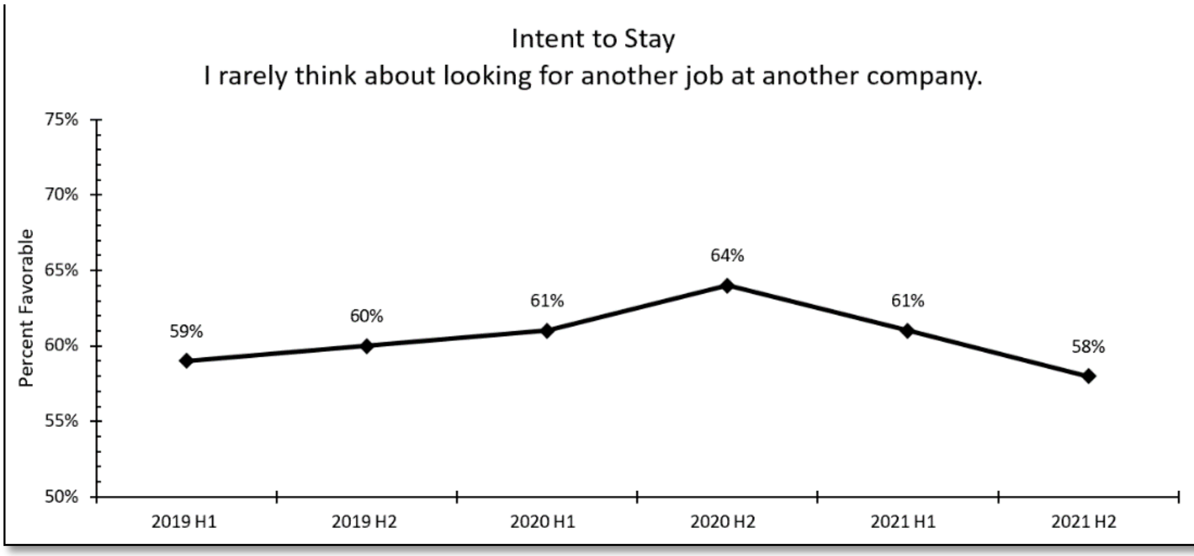
Leveraging data collected from over 115 million survey responses collected between 2018–2021 across 400+ census survey projects, WSA recently sought to understand trends related to retention and turnover amid the pandemic by examining employee “intentions to stay”—an important precursor to employee retention. Among the key research findings, WSA saw employees’ intent to stay increased substantially to 63% favorable[1] in 2020, up from 60% in both 2018 and 2019. This increase is not surprising given that the COVID-19 pandemic began in March 2020 and brought about significant uncertainty and insecurity. It is likely that employees felt even more committed to staying than in the past due to this uncertainty, a trend witnessed during other major crises (e.g., 9/11 terrorist attack and 2008 economic collapse). As expected, though, as time went on—and perhaps employees felt like they had weathered the storm and gained some clarity about their priorities and the path forward—employees’ intent to stay dropped back to prepandemic levels by the end of 2021, at 60% favorable.

Specifically, when we break the data down at the biannual level from 2019 through 2021 (Figure 1), we see that employee intentions to stay subtly increased during the second half of 2019 and first half of 2020, and then spiked during the second half of 2020 to 64% favorable. Employee intentions to stay subsequently declined in 2021, ending the year at 58% favorable. This indicates a 6% difference over the course of just one year, reflecting the state of the workforce as being an employee’s market.

Given the headlines around the Great Resignation and the all-time high number of resignations and worker shortages, one might have expected to see the percent favorable even lower than 58% at the end of 2021. To gain further insight, we broke the data down by industry (see Table 1), where we see the picture changes a bit based on context. Specifically, in analyzing employee data representing the five largest industries within the WSA Benchmark Database (finance & insurance, manufacturing, professional, scientific, & technical services, and retail trade), plus healthcare, we see cross-industry increases in intentions to stay in 2020 but variability in whether these increased, stayed the same, or decreased from 2019 to 2021. Table 1 provides intention-to-stay observations and trends by industry.

Figure 1

Source: Bi-annual average employee intent to stay scores. WSA's Benchmarking Database.



Note: Difference between 2020 and 2021 is statistically significant at $p < 0.05$.

Table 1

Intentions to Stay: Industry Observations and Trends

Industry	Percent favorable intention to stay						Industry summary
	2019	2020	Δ 2019 to 2020	2021	Δ2020 to 2021	Δ2019 to 2021	
Finance & insurance	64%	71%	+7	64%	-7	0	An increase in 2020 might be related to the industry boom in 2020 as well as the fact that the nature of the role allows for the majority of employees in this industry to work remotely
Manufacturing	59%	61%	+2	59%	-2	0	U.S Bureau of Labor Statistics (BLS) show a similar story with quit rates increasing from 1.5% in 2020 to 2.6% in early 2022. Most jobs were onsite during the pandemic so increases could be related to job security or other factors.

Professional, scientific, & technical services	62%	64%	+2	63%	-1	+1	Intention to stay has seen minimal changes in this industry, but BLS data indicate a different story showing quit rates in December 2020 (2.8%) were lower than December 2021 (3.5%).
Retail trade	55%	58%	+3	60%	+2	+5	Counter to expectations, intention to stay has increased year over year while annual quit rates have increased (3.1% in 2020 to 4.2% in 2022). Hire rates of a traditionally high-turnover industry may explain the optimistic sentiment we are seeing as it may be coming from a large portion of newer employees. Across all industries, first year employees have an 8% higher positive sentiment toward staying than average.
Healthcare	60%	62%	+2	54%*	-8	-6	*Data were limited and not definitive compared to other industries reported but trending is reflective of what is seen in a very stretched, frontline workforce having endured the worst of a pandemic.

With this enhanced understanding of global and industry-based trends in mind, we turned our attention to better understanding *top drivers of* employees' intentions to stay. Part of this examination focused on perceptions before and after the key March 2020 dividing line between prepandemic and the current state of the workforce. Insights gained are provided in the subsection below.

Key Drivers of Employees' Intent to Stay

Using the WSA Benchmark research cited above, we examined data across hundreds of organizations to identify key retention drivers and whether these changed during and/or following the height of the pandemic. What we found, surprisingly, is that there are few differences in key drivers of retention (i.e., those ranked in the "top 10") between prepandemic and up through the end of 2021 when it comes to employees' intent to stay at their organizations. It appears there are a handful of universal and timeless factors that are important to employees when they think about their commitment to their employers (e.g., recognition, trust, career growth). We did, however, observe that the relative importance of the key drivers differed across time periods, as is illustrated in Table 2, and that three new drivers emerged.

Table 2

Rank Order List of Commitment Drivers Pre and Post March 1, 2020

Rank	Before 3/1/2020	After 3/1/2020
1	Recognition and feel valued	**Feel career goals can be met**
2	Trust & confidence in senior leadership	Trust & confidence in senior leadership
3	Open & honest two-way communication	Recognition and feel valued
4	Future vision, hearing motivating message	Future vision, hearing motivating message

Rank	Before 3/1/2020	After 3/1/2020
5	Support to adapt to org changes	Open & honest two-way communication
6	Job makes use of talent/skills	Link between work & company's vision
7	**Diverse perspectives are valued**	Support to adapt to org changes
8	**Managers/leaders are role models of values**	Job makes use of talent/skills
9	Link between work & company's vision	**Behavior of leaders consistent with values**
10	**Opportunities for advancement**	**Ideas & suggestions count**

*unique drivers are listed in **bold**

Key insights we drew from Table 2 are expounded upon below, starting with drivers that remained consistent over time, followed by factors that decreased or increased in importance before and after the March 2020 dividing line.

Drivers that Have Remained Consistent Over Time

Recognition/Feeling Valued

Prior to the pandemic, the most important factor affecting employees' intent to stay was feeling that their contributions were valued and that they were acknowledged for helping the organization be successful; this has remained a strong and consistent motivator throughout the pandemic (ranked as the #3 factor post-March 2020). Relatedly, perceptions that employers make use of an employee's unique skills also made the top 10 list both before and after March 2020.

Trust/Confidence in Senior Leadership/Open Communication

Trust in senior leaders and believing leaders are making the right decisions for the company is another critical component that has not deviated in its importance throughout the pandemic (ranked as the #2 most important factor in both time periods), highlighting the impact strong leadership can have on employee commitment. Interestingly, employees' confidence in senior leaders to make the right decisions has increased markedly from 68% favorable prepandemic to 76% after March 2020 suggesting that many employers rose to the occasion with regard to communication and transparency during these unprecedented times.

Future Vision/Motivating Message

Another area that has remained constant in driving employees' intent to stay is related to being motivated by the employer's vision. Sharing an inspiring vision to all levels of the business continues to be paramount, despite a shaky economy. Simply put, employees' intent to stay is often greater when they know (a) where the company is going, (b) how it intends to get there, and (c) how they're own personal work aligns to the strategy and vision.

Adapting to Change

The pandemic brought a whole new meaning to what the word "adaptability," as many employees had to learn to work virtually nearly overnight. For others, new policies and practices dictated how work could be performed and how they would interact face-to-face with customers. Not surprisingly, employees' perceptions of being supported by their employer through organizational change made the top 10 list both before and after March 2020.

Shifts in Drivers Before and After March 2020

Although many drivers of intentions to stay remained consistent before and after March 2020, we also observed a few interesting changes. For example, prepandemic, the belief that an employee's company values diverse perspectives was a prominent driver of intentions to stay. Yet, even with the social unrest that continues to highlight disparities, this particular driver did not rank in the top 10 after March 2020, contrary to what we might have expected.

In addition, although in the past direct managers have had a substantial impact on employees' intentions to stay, it now seems that senior leadership behaviors are having a greater impact on employee commitment than the direct supervisor.

Last, post 2020 we see a brand new factor, not previously in the top list, as the #1 ranked factor driving intentions to stay: "Feel career goals can be met." Whereas prepandemic, "opportunities for advancement" was ranked as the 10th most important factor, post-2020, we see employees focusing more specifically on their career goals and ensuring that they are working at an organization at which they can achieve them.

Conclusion

Data informs action and allows us to move away from mere speculation and media hype to supported conclusions and data-driven recommendations. Having reviewed the data, what have we learned about the Great Resignation and how can it inform practice?

- After the predictable increase in intentions to stay during the height of the pandemic, we saw intentions-to-stay levels were significantly lower in 2021. Essentially, what went up, did come down, and the current state suggests indeed that individuals' commitment to stay with their organizations is on a downward trend.
- This up and then back down pattern was largely consistent across industries. Though the employee experience has differed greatly from one industry to the next, most of the industries we analyzed saw increases in commitment in 2020 followed by a sharp decrease in 2021, with the exception of the retail trade.
- Key drivers of intent to stay were generally consistent over time, with some differences beginning to emerge. Specifically, the importance of career growth and meeting career goals has arisen as the number one most important driver of intentions to stay, and more than ever, employees want to see that their senior leaders are living up to the values of the company.

Based on our research, organizations seeking to retain their employees amid the Great Resignation should:

1. Value and recognize their employees consistently for their efforts and how they are contributing their skills and talents to making the organization successful and achieving the organizational vision;
2. Encourage leaders to build trust through communication, transparency, and showing employees they care;
3. Build confidence and inspire purpose by sharing the organizational vision, the strategy to achieve it, and communicating how every role and employee is important to achieving organizational goals;
4. Support employees through change by equipping them with the right tools, training and team/manager support to enable performance as well as a healthy sense of well-being at work; and
5. Offer employees opportunities to learn and develop to enhance their career growth, achieve their goals, and advance within the organization.

One thing is for certain, and that is that the world of work has experienced a rapid shift unlike any other in our lifetimes. The fundamentals still matter but staying on top of the latest trends in employee sentiment is more important than ever.

Acknowledgements: Special thanks to Robert Weldon and Hanna Rucker for providing the support and analysis from the WSA Benchmark Database.

Note

[1] Percent favorable refers to the percentage of employee respondents who indicated "Agree" or "Strongly Agree" to "intention to stay" sentiments

References

Fox, A. (2012, July). Drive turnover down. *HR Magazine: Society of Human Resource Management (SHRM)*. https://www.shrm.org/hr-today/news/hr-magazine/Pages/0712fox.aspx

U.S. Bureau of Labor Statistics (2022, March). *Quits levels and rates for total nonfarm by state, seasonally adjusted*. U.S. https://www.bls.gov/news.release/jltst.t04.htm

Workforce Science Associates LLC. (2022, January). *Workforce Science Associates benchmarking database reflecting employee sentiment from over 116 million employees from 402 projects across 142 countries (2018-2021)*, H12022. Lincoln, NE.

Opening Up:
Tips for Fostering Belongingness in Our Scholarly Communities While Encouraging Open Science

Christopher M. Castille
Nicholls State University

Haley R. Cobb
Saint Louis University

Jaclyn A. Siegel
San Diego State University

Candice L. Thomas
Saint Louis University

Author Note: This article was made possible with the support of **Larry Williams,** director of the Consortium for the Advancement of Research Methods and Analysis (CARMA), who created an Open Science Topic Interest Group (TIG) for the Spring of 2022. Four authors (Chris, Haley, Jaclyn, and Candice) met during the April meeting of the Open Science TIG, where the ideas for this article first emerged.

For this entry into *Opening Up*, *TIP's* column on all things open science, we discuss the relation between two broad domains of interest to scholars in our community: (a) diversity, equity, inclusivity—which we use to define the term "belongingness" as a point of focus—and (b) open science. We refer to the former, belongingness, as a universal need to be accepted, interacted with in an equitable manner, and valued by others (Thau et al., 2007). We refer to the latter, open science, as a movement broadly aimed at encouraging scholars to apply principles, enact scientific values, or use tactics aimed at enhancing transparency and replicability in our science (see Castille et al., 2022). Examples of open science in practice include preregistration of study methods and hypotheses or openly sharing data and code for data analysis, and some of these practices are easier to adopt with certain methodologies and epistemologies than others. We examine the relation between belongingness and open science because over the past several years, scholars have debated whether open science can meaningfully address the needs of individuals from diverse backgrounds (e.g., demographic, such as race, sex, and their intersection; philosophical, such postpositivist, critical theory) or if historical biases and disadvantages will be passed on (unless large scale systemic change takes place). In other words, open science as a movement has sought to increase openness and transparency in scholarly research. However, whether scholars feel included in this movement, and whether those who want to participate in science feel empowered to do so, demands attention (Ledgerwood et al., 2022). For instance, scholars have coined the phrase "bropen science" to characterize certain male scholars whose tactics exclude others from our scientific community (Whitaker & Guest, 2020). Leaders across a variety of scholarly domains agree that there are many praiseworthy aspects to the open science movement (Antonakis, 2017; DeCelles et al., 2021; Eby, 2022; Pratt et al., 2020). We hope to shed light on small ways scholars (as well as the populations they serve) might foster a greater sense of belongingness in our work (or at least provide tactics worthy of debate).

In our aim to foster a sense of belongingness in our academic communities, we refer not only to our *scholarly* communities (e.g., our academic departments, SIOP, the committees we serve on) but also the communities that we impact or serve (e.g., the populations we sample and notably our participants who provide us with data). In order to create an open science that is truly open and equitable to all, respecting the wishes and prioritizing the safety of underrepresented academics, as well as participants, is essential (see Siegel, 2022). To that end, we offer the following tips.

Be Proactive Within Your Department/College About Flexibly Adopting Open Science, and Ask What Will Be Rewarded

Ask whether open science can be rewarded flexibly. For instance, although open science badges are in vogue in a variety of journals (e.g., *Psychological Science*), there are areas of scholarship where there are no such signifiers of open science practice, which may unwittingly be construed as less rigorous in our community (e.g., qualitative research; see Pratt et al., 2020; Siegel & LaMarre, 2019). Although we laud efforts to praise open science practice to promote transparent, rigorous, and reproducible research, it is important to keep in mind that open science can take many forms (see Castille et al., 2022). It is possible that practices that reward certain types of scholarship may inadvertently signal what is valued by the academic community. Scholars, professionally motivated to conduct research that is regarded as high quality, may be incentivized to conduct research that "fits the mold" of open science (see Grzanka & Cole, 2021). Therefore, it is essential that we expand the mold and carve out a variety of different options and templates for scholars doing various types of scholarship.

Open science practices can be time intensive and often fall outside of traditional promotion requirements (see Briker & Gerpott, 2022). This often means that when there is high publication pressure, engaging in open science may directly compete with publication (i.e., taking time to provide quality open research products such as code or data may reduce the time to work on other data collections or manuscripts). As a key aim of the open science movement is to separate the process of science (e.g., explaining how decisions were arrived at) from its products (i.e., conclusions, insights, publications; see Grand et al., 2018), it is therefore important, particularly for junior faculty, to ask their superiors if existing structures and decision-making processes (e.g., merit increases, tenure and promotion) will reward a scholar for enacting open-science practices (e.g., preregistering study hypotheses, sharing analysis code). Although practicing open science is not the same as earning badges upon publication (which may not apply to certain areas of scholarship), it is important to consider what will and will not be evaluated favorably.

The combination of time investment for quality open science and lack of inclusion of open science within many organizations' performance evaluation may be considered as a significant barrier for junior faculty or researchers outside of academia, particularly if open science is represented as all or nothing or as requiring "gold standard" levels of participation to receive recognition. To sustainably incorporate open-science practices into our research, we need to weigh the benefits of particular open-science practices with the logistical demands of our jobs (e.g., promotion, time restraints, or resources). How can we best align our open science practices with our job requirements? How can we engage in open science in a way that both supports the open science principles *and* our own career trajectories? Conversations with supervisors and mentors about this is a good first step. But it is also important, in building a more inclusive community, that we recognize a more flexible view of open science practices and understand that a researcher's ability to engage in open science is likely influenced by their job level, resources, and demands.

Notably, this first tip dovetails nicely with our second tip.

Be Selective in Which Open Science Tactics You Adopt

There is a broad buffet of open-science tactics that scholars can choose to enact (or not to; see Castille et al., 2022), some of which can be more time and labor intensive than others (e.g., registered reports, learning a new tool for openly sharing data and reproducible code). Especially as a graduate student, early career researcher, or someone who conducts research with underrepresented methodology or explores phenomena within marginalized or protected populations, it is important to consider how realistic it will be to adopt open science practices. Although the all-or-nothing approach to open science is often championed, scholars face understandable constraints on their ability to engage in open-science practices, and due to misconceptions around open science, scholars also hope to avoid being unduly punished for adopting tactics selectively. For instance, sharing data openly can potentially compromise research ethics and study integrity, particularly for qualitative scholars (Pratt et al., 2020). Though there are efforts to strengthen research practices (e.g., providing templates for preregistering both quantitative and qualitative works), it is worth considering which tactics are worthwhile to pursue or help a scholar to enact their core values (see Castille et al., 2022).

To that end, consider the many tactics available for practicing open science, as well as sharing insights via the published scholarly literature. Although open science may seem rigid and inflexible at first blush, we view open science as a set of tools that allows us to communicate more effectively about the scholarship that we contribute to our fields. To us, this is not rigid and inflexible but rather something that aligns with our values as academic scholars, and we attempt to put values into practice where possible, ethical, and reasonable. We encourage readers to consider adopting an open-science mindset, where one actively considers open-science practices (or values) throughout the research process as well as advocates for open science broadly (Hagger et al., 2022). Being committed to the open-science movement, and understanding how it aligns with one's values as a scientist, may ease the transition into practicing open science in light of the challenges one may face, thus upholding a sense of belonging despite any hurdles.

As stated, there are many ways to practice open science and publish insights. For instance, several journals have adopted registered reports (where articles are conditionally accepted before data are gathered), including *Leadership Quarterly, Journal of Organizational Behavior, Journal of Personnel Psychology,* and the *International Journal of Selection and Assessment*. Although registered reports are a rigorous way of practicing open science, such a high bar need not be met by every scholar or every project for us to progress in our journey of opening up our science. There may be particular areas where a registered report is useful, such as (a) where a high-powered replication study is relevant regardless of the outcome because it provides deeper insight into phenomenon discussed in the literature and (b) for topics that hold society or practical relevance (e.g., employee reactions to artificial intelligence; Briker & Gerpott, 2022). However, as an alternative, several journals use results-blind reviews where only the literature review and methods of a study are evaluated and, if accepted by reviewers, then the findings will be published regardless of whether study hypotheses are supported (e.g., *Journal of Business and Psychology, European Journal of Work and Organizational Psychology*, *Leadership Quarterly*, *Organizational Research Methods*).

Although both registered reports and results-blind reviews are important tactics in the open science skillset, they are merely two tactics we are sampling from the broader buffet. The key idea is to pick something that fits with your aims as a scholar, as well as what is reasonably feasible for you, your research team, your research, and your participants, and to explain or justify why these tactics were chosen.

Find Allies in Your Efforts to Open Up (There May Be More Out There Than You May Think)

When finding small ways to put widely shared values into practice, it's important to find allies. In that spirit, we put ourselves to you as colleagues who are willing to support you in your efforts to enact open science, so we encourage you to reach out to us if you are in need of allies. We have also been fortunate to experience the support from other more senior members of our community who have sought to open up our science, notably **Fred Oswald, Steven Rogelberg, George Banks,** Larry Williams, (who have supported Chris in his work), **Cort Rudolph** (who has supported Haley Cobb and Candice Thomas), and Lorne Campbell (who has supported Jaclyn Siegel). These scholars have played such a supporting role in our work and have also sought to enhance the uptake of open science practices within our community. Reforming the academy to be more open and transparent while also helping scholars and historically disadvantaged populations is no easy feat. If each of us actively commits to doing something small, then a rising tide will lift all boats. These small efforts become more manageable with the support of senior scholars who can validate our work, as well as dispel myths and rumors about practicing open science. For instance, Briker and Gerpott (2022) find that there are many myths surrounding registered reports (e.g., it is a myth that registered reports are suitable for experimental studies only).

In addition to finding experts who may serve as champions of open science, we also find value in open science communities, such as SIOP's Open Science and Practice Community, the Society for the Improvement of Psychological Science (SIPS), and ReproducibiliTea (reproducibilitea.org). Connecting with or joining these communities may also help foster a sense of belongingness, as these are established groups that one can be part of to learn more about open science.

Include Members From the Populations We Serve in Your Efforts to Open Up

Thus far, we've considered tips for fostering a sense of belongingness in our academic communities (e.g., department, college, university). However, there is an important stakeholder to our work that must be considered when deciding to enact almost any open science tactic: participants from the populations that we serve. Not only must data sharing involve gaining their enthusiastic consent and be considered with regard to impacts on study quality (see Pratt et al., 2020), our participants can be important sources of insight into the very phenomena we wish to probe directly. For example, in a recent qualitative project on lactating employees on which coauthor Candice Thomas is working, de-identified interview transcripts were reviewed prior to publicly sharing and then shared collectively to all study participants. Participants were given the link to the "raw results" and encouraged to review and provide commentary. Through this process, participants engaged in conversation with the researchers and each other about their experiences. By including participants in the data sharing process, we were able to build a richer understanding of the study phenomena and simultaneously foster a sense of community within the population our research is trying to support.

A Note for Practicing Open Science…as a Practitioner

Much of the open science literature centers around academia and academic scholarship. However, a large portion of SIOP members are not, or do not plan to stay, in the academy, and because the central tenet of this article is to support belongingness in open science, we hope to contribute some sense of belongingness to all of our potential readers and not just those in the academy. We also recognize that academic work informs applied work, and bridging the scientist-practitioner gap can be challenging due to a lack of access to academic scholarship (e.g., paywalls). For students intending to pursue careers in practice, being committed to rigorous, transparent, and reproducible research is something in which we believe practitioners can (and should) also engage. We encourage practitioners to consider what open science practices allow them to enact their values and make their work any more rigorous, transparent, and reproducible. Find mentors and communities of support; and consider what is feasible with the work you do. For example, for many, openly sharing data will not be possible (e.g., protected employee data), but sharing reproducible code with colleagues or sharing important descriptive statistics can increase the transparency of one's work.

A Note on Positionality

We wish to conclude this piece by acknowledging the ways in which our scope as a team broadens and narrows our capacity to meaningfully engage with topics such as diversity and belongingness. Notably, we represent a fairly gender and career-diverse team: Our research team comprises three cisgender women and one cisgender man ranging in career stages from graduate student to assistant professor. However, as an exclusively White group of scholars, we recognize that individuals from minoritized racial backgrounds likely face additional barriers to full engagement and sense of belonging in open science, and academia more broadly, that we as a team cannot conceptualize or fully understand (see Ledgerwood et al., 2022). It is our hope that scholars of color will generously continue to build on these ideas and supplement our commentary with their own. We also hope that our entry into opening up helps our readers, especially those from marginalized backgrounds, find allies. We offer tips for other scholars who, like us, want to play a productive role in fostering a sense of belongingness in our communities. Although we do not pretend to solve all the systemic issues that make a truly open science, we hope that this conversation makes an important contribution in the right direction.

Conclusion

Although open science may not currently be perceived as a highly inclusive endeavor, we think most scholars would agree that so long as the core values that differentiate science from pseudoscience are held, then everyone—regardless of philosophy or background—deserves to belong in this community. Open science advocates may agree that the movement can be perceived as not an inclusive one, but certainly aspire for it to be inclusive. We also encourage our readers to reach out and connect with us. If you wish to contribute or comment on this article anonymously, we offer the following Qualtrics link: https://slu.az1.qualtrics.com/jfe/form/SV_7aFEPWcG30rPzAa

References

Antonakis, J. (2017). On doing better science: From thrill of discovery to policy implications. *Leadership Quarterly*, *28*(1), 5–21. https://doi.org/10.1016/j.leaqua.2017.01.006

Briker, R., & Gerpott, F. H. (2022). Publishing registered reports in management and applied psychology: Myths, truths, and best practices. *Manuscript in preparation*.

Castille, C. M., Kreamer, L. M., Albritton, B. H., Banks, G. C., & Rogelberg, S. G. (2022). The Open Science Challenge: Adopt one practice that enacts widely shared values. *Journal of Business and Psychology*, 37, 459-467. https://doi.org/10.1007/s10869-022-09806-2

DeCelles, K. A., Howard-Grenville, J., & Tihanyi, L. (2021). From the editors-improving the transparency of empirical research published in *AMJ*. *Academy of Management Journal*, *64*(4), 1009-1015. https://doi.org/10.5465/amj.2021.4004

Grand, J. A., Rogelberg, S. G., Banks, G. C., Landis, R. S., & Tonidandel, S. (2018). From outcome to process focus: Fostering a more robust psychological science through registered reports and results-blind reviewing. *Perspectives on Psychological Science*, *13*(4), 448-456. https://doi.org/10.1177/1745691618767883

Grzanka, P. R., & Cole, E. R. (2021). An argument for bad psychology: Disciplinary disruption, public engagement, and social transformation. *American Psychologist, 76*(8), 1334-1345. https://doi.org/10.1037/amp0000853

Eby, L. T. (2022). Reflections on the *Journal of Applied Psychology* in times of change. *Journal of Applied Psychology*, *107*(1), 1-8. https://doi.org/10.1037/apl0001000

Hagger, M. S. (2022). Developing an open science "mindset." *Health Psychology and Behavioral Medicine*, *10*(1), 1-21. https://doi.org/10.1080/21642850.2021.2012474

Ledgerwood, A., Hudson, S. T. J., Lewis, N. A., Maddox, K. B., Pickett, C. L., Remedios, J. D., Cheryan, S., Diekman, A. B., Dutra, N. B., Goh, J. X., Goodwin, S. A., Munakata, Y., Navarro, D. J., Onyeador, I. N., Srivastava, S., & Wilkins, C. L. (2022). The pandemic as a portal: Reimagining psychological science as truly open and inclusive. *Perspectives on Psychological Science.* Advance online publication. https://doi.org/10.1177/17456916211036654

Pratt, M. G., Kaplan, S., & Whittington, R. (2020). Editorial essay: The tumult over transparency: Decoupling transparency from replication in establishing trustworthy qualitative research. *Administrative Science Quarterly*, *65*(1), 1-19. https://doi.org/10.1177/0001839219887663

Siegel, J. A. (2022, May 12). Open science, closed doors. https://doi.org/10.31234/osf.io/sv8qh

Siegel, J. A., & LaMarre, A. (2019, October 10). Navigating "publish or perish" as qualitative researchers. *Nature behavioural and social sciences*. https://socialsciences.nature.com/posts/54648-navigating-publish-or-perish-as-qualitative-researchers

Thau, S., Aquino, K., & Poortvliet, P. M. (2007). Self-defeating behaviors in organizations: The relationship between thwarted belonging and interpersonal work behaviors. *Journal of Applied Psychology*, *92*(3), 840-847. https://doi.org/10.1037/0021-9010.92.3.840

Whitaker, K., & Guest, O. (2020). #bropenscience is broken science. *Psychologist, 33, 34-37.* https://thepsychologist.bps.org.uk/volume-33/november-2020/bropenscience-broken-science

Max. Classroom Capacity: On Conducting Teacher Peer Evaluations

Loren J. Naidoo, California State University, Northridge

Dear readers,

When **Marcus Dickson**, my colleague and mentor, and the creator of this column, asked me to fill his oversized shoes in writing this column, he explained that Max. Classroom Capacity is about helping all of us realize our potential as instructors of I-O psychology. As a collective, part of this endeavor involves each of us mentoring other instructors. You may think that this kind of mentoring should be limited to very experienced instructors—I disagree! I can remember being asked to evaluate classes taught by graduate students and adjunct instructors as early as my third year as an assistant professor. Although I wasn't very experienced, I had probably taught two dozen classes at that point (including throughout grad school)—a lot more than many of the graduate students whose classes I evaluated. Plus, I wanted to help and enjoyed talking about teaching—conversations that don't happen as often as they should in many places. As the years went by, I realized that conducting teaching evaluations was also teaching me an awful lot about my own teaching, not least from younger, more tech-savvy, and innovative grad student instructors (my evaluations of Baruch College PhD graduates **Elliott Larson** and **Rachel Omansky** stand out in my mind). I am now into my third decade as a teacher, yet I still receive valuable feedback from peer teaching evaluations that makes me question my assumptions, reflect on the reasons why I do things the way I do, and consider new techniques and perspectives. I'm a better teacher for it, and I'm very grateful to the many colleagues who have evaluated my teaching. If you are at an institution where you are not required to undergo peer teaching evaluations, I encourage you to (a) seek out accomplished instructors in your department and ask them if they would observe you and give you feedback on your teaching, and/or (b) offer to observe and provide feedback to a colleague on their teaching.

My goal for this column is to present some ideas for providing mentorship to colleagues in the form of peer teaching evaluation. By peer teaching evaluations, I mean the formal process where instructors receive feedback from peers, typically for the purposes of job performance evaluation. Of course, we know that there are deep literatures on performance evaluation and feedback giving that are relevant but which I won't review here. Also, I discussed best practices in providing feedback to *students* in a previous Max. Classroom Capacity column. Although the present column focuses on peer teaching evaluations, many of the ideas are also applicable to more informal teacher mentoring.

I'm going to start by describing how I tend to conduct peer teaching evaluations. But first let me say that I don't assume that my way is the only or best way to do it, and I would love to hear about how you may conduct peer teacher evaluations differently—email me! My first step in conducting a peer teaching evaluation is to communicate with the instructor (i.e., the person whose teaching you will evaluate) to develop a shared understanding of the objectives of the evaluation. My first question is this: "Have you ever been evaluated like this before?" It is not unusual to be assigned an instructor who is new to your institution or new to teaching. In these cases, instructors may be apprehensive about taking part in a formal performance evaluation with a more senior evaluator, especially when that evaluation may play a role in determining their future employment. Moreover, the classroom may be a safe place for many instructors where they are in positions of authority relative to their students. Having an evaluator in class can flip this power dynamic on its head, which may be disorienting and anxiety provoking for the instructor. Explaining the purpose of the evaluation and your own goals as the evaluator is really important here, in part to avoid misunderstandings later on, in part, ideally, to set the instructor at ease so that their performance during the evaluation is not undermined by nervousness.

The classic dilemma of practitioners of performance management applies to peer teacher evaluations: How can we reconcile the developmental and evaluative purposes of the evaluation? In other words, how can we expect instructors to provide a representative sample of their teaching and be open to developmental feedback when the result of the evaluation may be used in ways that could threaten their job security? Some would argue that we should get rid of performance evaluation entirely and just focus on development. Whether or not you agree, as academics few of us can institute such systemic changes even if we wanted to, at least not in the short term. The vast majority of peer teaching evaluations that I have been involved in did not result in any negative personnel actions but did (I hope) result in some developmental benefit. Therefore, my approach is to emphasize the developmental purpose of the evaluation. When broaching the issue with the instructor, I usually say something along the lines of

> We all have different ways of teaching, there isn't one single way to teach effectively, and I certainly don't have all of the answers when it comes to what is or isn't effective in the classroom. I will do my best to offer you developmental feedback that I hope you will find useful.

A good initial topic of discussion is the instructor's class syllabus. The syllabus can provide some insight into the instructor's approach and philosophy, and can also highlight aspects of the class that they may be teaching in a way that is not aligned with how the class was conceived or intended to be taught. It is often the case that the class description in the syllabus must be identical to the class description in the university catalog. The same may be true of the course learning objectives and other information, depending on your institution. At CSUN (I learned from writing this column that) there are 10 items that must appear on every syllabus! I have had experiences where I reviewed an instructor's syllabus only to find that they were essentially teaching a substantially different class than the one that students had signed up for—a losing situation for everyone. Often this comes about because the instructor simply wasn't aware of how the class was intended to be taught. Maybe they had taught a similarly titled class at another institution and assumed that the content was similar. Many adjunct instructors receive little to no guidance when teaching a class for the first time. The peer teaching evaluation is a great way to detect and (hopefully) nip such problems in the bud. There may be other aspects of the syllabus that are required or encouraged by your department or that you think the instructor may benefit from adding to their syllabus, including statements about academic integrity, accommodations and services, and other resources for students.

The syllabus also may provide you with valuable context for evaluating the lesson that you will later observe. You can develop a sense of what topics have been taught prior to the lesson, where the instructor is going, and where s/he wants to end up. You can have a conversation about what goals the instructor has for the class you will evaluate and how they plan to assess whether they met them. I find in my own teaching that I usually have a fuzzy sense of what I want students to walk away with after each class. Articulating specific goals and thinking about how I will assess them comes less naturally to me. Consequently, as an instructor, I find this to be a very useful exercise in clarifying my own goals and building into each class meeting some form of informal assessment, at least. One simple way to do this, as I learned recently from my colleague and brilliant teacher, Rick Moore, is to reserve the last 5 minutes of class to ask students: "What did you learn today? What do you walk away from this class knowing or understanding better than when you walked in?"

In the initial meeting, you can also ask the instructor if there is anything in particular on which they want you to provide them feedback or any concerns that they have about the course, their class, or their teaching. For example, I have had instructors tell me that they have a very quiet group of students and they want ideas on how to increase class participation in discussions. Their own goals may play a role in determining which specific class meeting they want you to observe depending on the activities they have planned for that day. Finally, I ask instructors to share with me whatever materials they plan to use in the class you will observe, if they are comfortable doing so, including slides, activities, assignments, and so on. I also mention that during the class visit, I will sit at the back of the class where I can observe both the instructor and the students, I will have my laptop open so that I can take notes during the class, and that they can introduce me and involve me in the class or completely ignore me, depending on their preference.

During the class visit I find it very useful to arrive early so as to get a sense of the environment. I enjoy seeing how instructors interact with their students informally before class (if they do) though I'm not sure it is at all predictive of teaching effectiveness. Taking attendance has been mandatory in most places I have worked. There are many ways to take attendance, some of which present opportunities to develop a positive classroom environment. For example, in small classes I take attendance as students enter the room by greeting each student by name and marking them present. Most of the attendance is done before class starts, saving precious class time, and it allows me to show students that I see them and appreciate their attendance. In a prior column, I've described one way to efficiently take attendance and learn students' names in very large classes.

Here are some things I try to take note of while observing a class. I jot down the number of different students who participated by answering questions posed by the instructor. I take note of the number of students who failed to participate in any group activities that may have taken place. I record the number of students who look clearly disengaged—reading or texting on their phones, laptops, and so forth. I also listen for students' comments to each other that might indicate that, for example, students didn't hear the instructor's question and consequently cannot answer it (always repeat questions to the class at least once and wait a slightly uncomfortably long time before calling on a student to answer—this ensures that students understand the question and gives them more time to process their answers).

I like to give instructors feedback on their nonverbal behavior when I think I can help them. I remember a class where the instructor spent nearly the entire time with her back to the class so that she could look at her slides, which were projected on a screen at the front of the class. In that case, I encouraged her to project her slides to her laptop as well and position the laptop so that she could see her slides and the class at the same time. Sounds obvious but not necessarily to a new instructor. A different instructor had the habit of speaking clearly at first, and then trailing off so that the ends of his sentences were barely audible. In other examples, instructors never looked at individual students, looked only at one half of the class ignoring the other, or gazed off into the distance with an inscrutable, faraway look in their eyes! I think directing one's gaze at individual students provides them with a sense of being seen and of being personally accountable to whatever is going on in class at the time, though perhaps others would disagree. Anyway, I think we are rarely aware of our own nonverbal behaviors, and we rarely receive feedback on them. Yet, to the extent that the nonverbal behaviors are relevant to our job performance, we can benefit from feedback on them.

A lot of the observation notes from a class visit will concern the content of the class (too much/little, too deep/shallow, need more/fewer examples, need more/less theory, etc.), visual aids (organization of slides, amount of detail, relevance and appropriateness of videos, etc.), pace of presentation, effectiveness of in-class exercises, management of student participation and disruptive classroom behaviors, and so on. Some of my notes will focus on areas where I think I can suggest changes that will help the instructor. Other parts of my notes will focus on areas where I think the instructor was particularly innovative, effective, attention grabbing, thought provoking, or fun.

Sitting in someone else's class can be a humbling experience, both for the instructor and the evaluator. I recall a recent evaluation of an instructor who I considered to be a thoughtful and caring instructor who was also a reasonably entertaining presenter. Nonetheless, from my vantage at the back of the classroom, I watched one student spend the entire class using her laptop to buy tickets to Coachella (a popular music festival in Southern California) and several new outfits/costumes, presumably for the event! It made me wonder about how much attention my students pay to me. Prior to COVID-19, I had a policy of no electronic devices in class to limit students' access to distraction. As an instructor I try to be engaging and encourage active participation. But at the end of the day, you can't force students to pay attention to you: You always rely on students' consent to the learning process. As an instructor, you can try your hardest and still fail. In my mind, this is one compelling reason to focus on continuous development as an instructor—I don't think one ever reaches a point where teaching has been mastered, and no further development is needed. As COVID-19 has demonstrated, teaching new students with different life experiences in evolving external environments requires constant adaptation. This can be difficult, but I think it's a good thing—if you are constantly adapting and improving, then teaching will never be boring!

The last step I'll talk about is the follow-up meeting with the instructor in which your observations and feedback are discussed. I usually start these meetings by asking the instructor how they thought the class had gone. I find that listening first to the instructor's own views of their class often brings up some of the issues that you as the evaluator noticed, as well as other issues that you didn't. Some instructors will be very self-aware, whereas others will be less so. Regardless, respectfully asking the instructor to share their views on how the class went rather than, for example, immediately telling them everything that you think they did wrong reinforces the developmental objectives of the evaluation. When it's time to offer my observations, I first reiterate that my views and feedback are offered humbly and with the intention to help them become a better instructor. When sharing my observations, I try to establish agreement with the instructor about the observation itself to make sure that there are no factual disagreements about what happened in the class. It's hard to imagine developmental feedback being adopted when the instructor doesn't agree with the observation that prompted the feedback. When sharing ideas for solutions or changes to teaching practices, I find that that process works best when it's a two-way discussion. I try to keep in mind that even if an instructor bombs the evaluation, that all of us have the capacity to improve, and what that instructor needs most from you is honest feedback, a clear path forward, and enough support and encouragement to walk that path. On the other hand, some instructors will be so fantastic that they will blow your mind! I think it's just as important to discuss aspects of the class that you think were fun, innovative, and/or effective as those for which you identified potential problems. Discussing the instructor's successes can be incredibly beneficial for everyone involved. Beyond providing support and encouragement to the instructor, this is a great way of developing collegial relationships in which everyone can share teaching ideas, challenges, techniques, and opportunities for collaboration that can benefit both instructors and the evaluators. Mentoring can be a two-way street, and everyone wins!

Readers, as always, please email me with comments, feedback, or just to say hi! Loren.Naidoo@csun.edu.

About Inclusion, and "Liberty and Justice for All"

Milt Hakel

The Pledge of Allegiance to the Flag, recited dutifully at public gatherings and on national holidays, affirms that the nation for which the flag stands deserves allegiance because it offers "liberty and justice for all." Think about that.

It is an amazingly liberal and startlingly conservative claim—in all, quite a mashup. What was meant by the "for all" phrase has clearly evolved over the decades.

I-O psychology has just as certainly evolved during its decades. What started over a century ago with a strong focus on selection and rejection has broadened into a field of applied science about the entire world of work. A major focus of late has been on "inclusion," or more particularly, diversity, equity, and inclusion (DEI).

So let's consider three domains in which the I-O profession is evolving and has become more inclusive during the turmoil of the past 2 years.

1. Visionary Projects
   Two years ago, SIOP's first $100,000 Visionary Grant concerned gig workers and was awarded to **Susan Ashford, Briana Caza,** and **Brittany Lambert**. You can learn about the project at https://www.thegigworklife.com/.

   In the previous issue of *TIP*, the four finalists for this year's $100,000 grant were announced. Interestingly, DEI was the primary theme for two of the finalists and a coincidental theme for the winner. This year's wining project, announced April 19 at the kick-off event of the Seattle conference, is

   We Are in This Together: When an AI Agent Becomes Your Teammate
   Submitted by:
   Eleni Georganta, Technical University of Munich
   Anna-Sophie Ulfert, Eindhoven University of Technology
   Myrthe Tielman, Delft University of Technology
   Shanee Honig, Ben-Gurion University of the Negev
   Tal Oron Gilad, Ben-Gurion University of the Negev

Can human and artificial intelligence (AI) teammates ever trust each other? More importantly, what is the meaning of trust in teams consisting of human and AI teammates? Although human–AI teams reflect the future of organizations, and trust is essential for effective teamwork and human–AI collaboration, these questions remain unanswered. To provide first insights into trust in human–AI teams, we adopt a multidisciplinary and multilevel approach, and propose an initial theoretical framework and two experimental studies. Our goal is to investigate how interpersonal trust and team trust develop in human–AI teams. In two experiments, we will explore the impact of (a) AI teammates' trustworthiness, (b) AI trustworthiness reactions, and (c) interpersonal relationships between human and AI teammates on interpersonal trust and team trust. Synthesizing the insights from our project with existing work from industrial and organizational psychology and computer science, we will then present a refined theoretical model of team trust in human–AI teams. Further, we will build a formalized computational framework and present practical guidelines for the design and implementation of trustworthy AI teammates. We hope that providing a theoretical foundation and a practical roadmap can act as a catalyst for further interdisciplinary work on human–AI teamwork.

It is not too much of a stretch to imagine an AI teammate as one of "them."

2. Anti-Racism Grants
The Anti-Racism Grants program stimulates and supports projects intended to promote our understanding of racism and eliminate it from the workplace. I-O psychologists conduct and apply "research that improves the well-being and performance of people and the organizations that employ them." Beginning in June of 2020, the Foundation asked SIOP members to contribute immediately to fund one or more grants, with proposals to be sought in July and the winner(s) to be selected in August. Donors responded quickly, raising $50,000; 35 proposals were submitted by the July 27 deadline; and the pool was split into five grants, awarded on August 24. Awards Committee Chair **Jeff Cucina** and Subcommittee Chair **Sarah Walker** managed this special, out-of-cycle grant offering and then repeated it out of cycle again in January–April of 2021. Substantial contributions from the National Academy of Human Resources and the Society for Human Resource Management, plus many additional SIOP members, yielded another $50,000. Twenty two new proposals were submitted, and four more small grants were awarded on April 14. The nine grant winners are identified in the Foundation's Annual Report.

3. Artificial Intelligence
One year ago, the SIOP Foundation convened some conversations about the use of artificial intelligence (AI) technologies in the workplace. It became evident that SIOP's Executive Board was the appropriate body to issue any public statement, and in January that statement was approved.

In April the U.S. Department of Commerce appointed **Fred Oswald** as a member of its National Advisory AI Committee. In part, the announcement reads: "AI is already transforming the world as we know it, including science, medicine, transportation, communications and access to goods and services," said Alondra Nelson, the head of the Office of Science and Technology and deputy assistant to the president. "The expertise of the NAIAC will be critical in helping to ensure the United States leads the world in the ethical development and adoption of AI, provides inclusive employment and education opportunities for the American public, and protects civil rights and civil liberties in our digital age." Notice the words "ethical" and "inclusive" in Nelson's statement. I-O (in the person of Fred Oswald) has a seat at the table.

That brings me to an announcement: At its meeting in Seattle, the Foundation Board unanimously invited **Alex Alonso** and **David Rodriguez** to join the Board as Trustees. Both are SIOP Fellows, and both now serve on the Board.

Alexander Alonso

A prolific writer with hundreds of credits to his name in professional and academic journals, technical reports, and popular and social media, Dr. Alexander Alonso is known for using I-O principles as the foundation for advances in human resource management and practice. As chief knowledge officer at the Society for Human Resource Management, he is a leader in the development, validation, and implementation of competency-based credentialing for the HR workforce. Dr. Alonso has been called upon by policymakers in two presidential administrations as well as both houses of Congress to provide evidence-based advice on issues including military retirement benefits, childcare tax incentives for employers, and employment initiatives for the formerly incarcerated.

David Rodriguez

Dr. Rodriguez was CHRO and "Lead I-O" for Marriott, the world's largest hotel company until his recent retirement. He guided research and practice across areas such as culture, leadership, and well-being. He installed the industry's first global selection program featuring nonverbal but high-fidelity assessment for hotel staff and an executive assessment program, featured at SIOP's Leading Edge Consortium. He served on the SIOP Foundation's HORIZON initiative and is coauthoring a chapter on DEI in SIOP's *Handbook of Practice in I-O Psychology*. He currently serves as a public company board director and was the longest tenured director on the executive committee of the HR Policy Association. He was awarded the APA's Organizational Excellence Award, elected a Fellow of the National Academy of Human Resources, and named HR Executive of the Year by *Human Resource Executive* magazine.

The Trustees welcome your comments and suggestions. Become a member of the next Visionary Circle cohort. Or talk with any Trustee about making a gift to the Praxis Fund.

The SIOP Foundation's mission is to connect donors with I-O professionals to create smarter workplaces. Let's make sure that SIOP is inclusive.

Milt Hakel, President, mhakel@bgsu.edu, 419-819-0936
Rich Klimoski, Vice-President, rklimosk@gmu.edu
Nancy Tippins, Secretary, nancy@tippinsgroup.com
Leaetta Hough, Treasurer, leaetta@msn.com
Adrienne Colella, Communications Officer, acolella@tulane.edu
Alex Alonso, Trustee, alexander.alonso@shrm.org
Mirian Graddick-Weir, Trustee, mgraddickweir76@gmail.com
Bill Macey, Trustee, wmacey9@gmail.com
David Rodriguez, Trustee, davidrodriguezphd@outlook.com
John C. Scott, Trustee, JScott@APTMetrics.com

The SIOP Foundation
440 E Poe Rd Ste 101
Bowling Green, OH 43402-1355
419-353-0032 Fax: 419-352-2645
Email: SIOPFoundation@siop.org

Highlights From the 37th SIOP Annual Conference

Whitney Botsford Morgan
University of Houston-Downtown

Though much has changed in our world the past few years, thanks to the SIOP Administrative Office, Executive Board, and Conference and Program Committees, our commitment to providing a SIOP Annual Conference that builds community for I-O psychology practitioners, educators, researchers, and students from around the world has remained the same.

Over 4-plus weeks, more than 4,000 registrants explored virtual *and* in-person professional development opportunities, 200 live presentations, and more than 500 research posters. The conference offered high-quality, peer-reviewed content, diversity in perspectives and topic areas, and a blend of science and practice.

More than 3,000 registrants gathered in Seattle the last week of April 2022, which was the first in-person annual conference since 2019. In-person registration included attendance at any of the in-person live and virtual live sessions, the Opening Plenary and Closing Lunch Event, general receptions, breakfasts, coffee breaks, and the exhibit hall. Virtual registration included access to virtual live sessions, select simulcast in-person live sessions, and virtual networking. Either registration granted attendees access to select virtual live session recordings the week of May 2. You may view the Opening Plenary here.

In addition to the peer-reviewed content, the Theme Track, named by then SIOP President **Steven Rogelberg,** was "Better Together," featuring five informative, interactive, and inspirational sessions on various ways we can collectively use our talents to be better together in our organizations and in our professional society.

There was also an incredible opportunity to hear from Representative Derek Kilmer (D-WA-06), the chairman of the U.S. House of Representatives Select Committee on the Modernization of Congress, who shared an update on the work of the select committee while engaging with SIOP President Steven Rogelberg, **Lilia Cortina**, **Jeff McHenry**, and **Scott Tannenbaum**, who each have expertise in collaboration, civility, teams, and organizational culture. This was a unique opportunity for the SIOP community to engage in-person with Representative Kilmer, positioning the science and practice of I-O psychology at the forefront of improving the work of the federal government.

There was strong interest in add-on events during the 4 weeks of conference programming:

- The Natural Language Processing Advanced Professional Development was completely full with 50 participants.
- There were three virtual and seven in-person Workshops, with 368 participants in total!
- The Conference Career Center (formerly the Placement Center) provided a forum for organizations to find I-O talent and for job seekers to find roles for the next phase in their careers. There were 239 participants (virtually or in-person) who engaged in a practitioner track or academia track with virtual coffee break sessions and an open house for in-person attendees.
- Three of the four consortia (Doctoral, Master's, and Early Career Faculty) were held completely virtually. The Early Career Practitioner track was held in person in Seattle.

- The tradition of the Frank Landy 5K Fun Run continued! More than 150 attendees took a short bus ride to beautiful Lake Union to complete the scenic run.

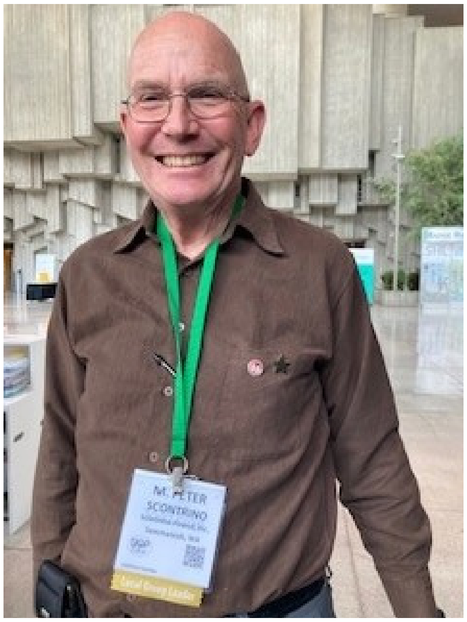
The conference concluded with a Closing Lunch Event that includes lunch stations with market-style entertainment, featuring the Pike Place Market fish mongers! Attendees could shop local from 12 entrepreneurs in support of Ventures Marketplace, which serves as an incubation program for product-based business. Attendees were able to pick up souvenirs while supporting the Seattle community. We connected with the entrepreneurs afterward who reported strong sales and that they felt it was "a smashing success"!

SIOP took numerous precautions to provide a safe meeting environment for more than 3,000 people, including vaccination or negative test verification, daily health screenings, optional masking, and color-coded lanyards to demonstrate social distancing comfort. Although SIOP does not have the ability to conduct formal contract tracing, we were interested in the health impact of this event and can use this data to better understand the situation. It is likely that, moving forward, COVID-19 will continue to exist in some form. It will take all of us in the SIOP community working together to protect the health and safety of all who participate in SIOP events.

Planning for the 2023 SIOP Annual Conference is already underway. A working group to develop the 2023–2027 Conference Charter met in June to discuss the future of the annual conference. The Conference Committee will hold its summer planning meeting in July. More details about the look ahead to 2023 will be shared this fall.

Conference Photos

Seattle 2022



Left: M. Peter Scontrino shows off his gold star pin, commemorating 50 years as a SIOP member
Below: SIOP Fellows Class of 2021

Committee on Ethnic and Minority Affairs (CEMA) Reception

SIOP Diversifying I-O Program Scholars Reception

Former SIOP President Eden King (left) and SIOP Diversity & Inclusion Officer Derek Avery (right) attend the SIOP Diversifying I-O Program Scholars reception.

Above and right:
Newcomers Reception

Above: The Membership Analytics Subcommittee

Below: Isaac Sabat and Alexandra Zelin are glad to be back in person at the SIOP conference!

Above: Lisa Kath (R) gets into the spirit of President Rogelberg's theme.

Below: Pike Market fishmongers display the fine art of fish throwing...and catching!

Left: Inception? Julie Olson-Buchanan visits the Commons and finds herself on the banner.

Below: The family-friendly WIN reception featured a make your own ice cream sundae/cone bar.

Above: Sessions were well attended during all three days on site in Seattle.

Above: The hottest ticket at the 2022 Annual SIOP Conference was to the tour of The Spheres, Amazon's workspace that are home to more than 40,000 plants from the cloud forest regions of over 30 countries.

Above: At the Local I-O Groups table in the SIOP Commons, the place to be for committee information.

Take the Challenge: Five Recommendations to Advance DEI Efforts in the I-O Field

Tunji Oki, Lars U. Johnson, Victoria Mattingly, Tracy Powell-Rudy, and Tem Lawal

Diversity, equity, and inclusion (DEI) continues to be a complex, layered topic in the I-O field. From understanding how to measure and evaluate it within companies to knowing the most relevant interventions to enact change, broad DEI goals often include finding ways to amplify historically marginalized voices to effect change through increased sharing and perspective taking. As organizations continue to push past and dismantle barriers that hinder or inhibit widespread belonging, two points are abundantly clear: (a) many organizations lack the structure, systems, and institutional knowledge to edge against the rigid structuring of yesterday's standard; and (b) interests in, and need for, sustainable DEI processes and integration are of increasingly high interest to students, academics, and practitioners. I-O psychology has evolved from the early days of signaling diversity values (e.g., adding racial/gender-diverse pictures to the company's website) to at least attempting equity work that stems beyond adverse impact analyses (with varying degrees of success). That is, we see some evidence that the I-O field has expanded its approach, shifting inclusion from an afterthought to the focus of top-down conversations, addressing macro issues related to culture and such micro issues as intersectional experiences and microaggressions. This shift stems from the field's craving for more knowledge, research, understanding, and nonperformative behavior as evident by the over 100 SIOP submissions that centered diversity and inclusion as the main content area (the largest volume for a content area by far). This paper seeks to spotlight several industry leaders in this space to call out reflections of the DEI field after attending the 2022 SIOP conference. These leaders represent a wide variety of professions in the academic and applied sectors of our field and are all committed to seeing SIOP, and I-O psychology more generally, lead the charge in transforming organizations and institutions to be more inclusive, equitable, and representative. With our collective belief that organizations and institutions are not actively seeking to do things counter to DEI and the belief that "closed mouths don't get fed," the current authors wanted to leave you with personal challenges for academia, organizations, and SIOP as a whole on ways **WE** can step it up in terms of being better DEI allies, researchers, and practitioners. (Note: The viewpoints of the authors are their own and not the viewpoint of their respective companies and/or university affiliation.)

Challenge 1: Allies Need to Get in the Game to Impact the Score (Victoria Mattingly)

Something that was disappointing about the DEI sessions I attended was low overall attendance, especially when it comes to allies (those from a majority group who seek to learn more about other identity groups, the challenges they face, and strategies allies can use to leverage their status/power to support underrepresented/marginalized groups). We cannot place the burden of diversifying SIOP and creating a truly inclusive and equitable community on those who have been historically left behind. It's not just a numbers game; there needs to be a redistribution of resources and power to more effectively support and elevate these groups who bring so much value to SIOP by substantially diversifying our community, and with that, bring all the other advantages of a more heterogeneous membership base. My personal goal for next year's conference is to encourage everyone who attends a DEI session to bring along 2–3 potential allies, as research shows that explicitly inviting allies to the table is an effective strategy to get more DEI involvement from majority group members who don't typically see themselves as part of these efforts (Sherf et al., 2017). We ALL must contribute to DEI efforts if SIOP is ever going to reach its goal of diversifying and growing our SIOP community and fostering a culture where EVERYONE has the opportunity to feel like they belong.

Challenge 2: Don't Forget Neurodivergence in Your Inclusion Strategy (Tracy Powell-Rudy)

After attending my first SIOP conference, I was impressed with the focus on diversity, equity, and inclusion in presentation topics, content, and representation within panels. As a late-diagnosed autistic woman who has held leadership positions in the corporate arena and now serves as vice president of Corporate Engagement for Integrate Autism Employment Advisors, I found this quite encouraging. I would challenge the SIOP conference planners and the attendees to increase their focus on disability, more specifically, *hidden disability*, in the planning and execution of the event itself. Furthermore, I challenge the conference planners and attendees to establish a neuroinclusive standing committee (not merely an "*adhoc committee*" as exists today for disability in general), with a *specific focus on and inclusion of neurodivergent individuals* to consider and make recommendations regarding the following:

1. How can the conference be more considerate of and inclusive for neurodivergent (and/or autistic) individuals?

    a. For example, the "best poster" cocktail event—the sensory stimulation (noise, extremely crowded space) can be overwhelming for an individual with sensory sensitivities. How might the event be set up to be more conducive for those who want to engage in conversation but cannot focus in the space? Similarly, for an attendee with social anxiety, speaking up in a large or small ballroom can be daunting. Could a QR code allow them to raise their question (in writing) during the session without calling all eyes upon them?

2. Identify the barriers and opportunities for both research and practices around autism at work.

    a. For example, how can we facilitate a connection between corporations and researchers at SIOP to address the problems we presented in "Studying Autism, Hiring and Tech from Many Perspectives: Mashup + Research Incubator" session (Willis et al., 2022). Some of these challenges include accessing the neurodivergent population for research, ensuring neurodivergent individuals are invited to participate as researchers, and identifying and measuring successful hiring, job, and departure outcomes to ensure the workplace is equitable for all people regardless of neurodivergent status.

In support of creating a more neuro-inclusive event, the SIOP planning committee and presenters/attendees could participate in a brief training on autism sensitivity and awareness. For example, Integrate Autism Employment Advisors (the company for which I work) consults to corporations interested in starting autism employment hiring programs. We provide assessment, education/training, sourcing and employment support that enables companies to successfully identify, recruit and retain autistic professionals.

Challenge 3: Organizations Need to Examine Within to See Outward Change (Lars U. Johnson)

I challenge organizations to step away from an “economies of scale” approach when addressing the often-concerning intersection of homology and homophily. Organizational leaders must look within to identify how structure and lack of heterogeneity within and between units undermine current and post diversity efforts. Namely, I-O psychologists must support organizations in identifying how business practice of yesterday continues to affect current and future employees. Organizations lacking in diversity may create an environment wherein employees feel forced to restrict social engagement to similar others, ultimately reducing their access to institutional knowledge, networking opportunities, or peer support. Organizational homology must shift toward endorsement of a shared vision and mission, and homophily within organizations should be a function of choice rather than survival. Transitioning to equitable and inclusive practices that facilitate social integration among groups requires significant resources. Because the stakes are high, centering efforts in equity and inclusion requires organizations to raise the bar on their efforts. In addition to challenging organizations, I challenge I-O psychology to push forward in measure, evaluation, and systems/process-based approaches that support organizations in targeting this intersection.

Challenge 4: Don’t Forget the Belonging in DEI (Tem Lawal)

I challenge organizations to make sure they have a “belonging” strategy. Sometimes considered an afterthought, belonging has been a recent addition to the DEI space. In the age-old analogy of D&I and the “dance,” diversity is being invited to the dance, equity is having room to dance, inclusion is being asked to dance, belonging is being able to choose the music. Belonging is achieved when there is harmony between our competing needs to feel distinctly unique in who we are while also believing that we fit into the groups in our work environment. Organizations and leaders that effectively balance these competing yet fundamental needs are able to create an environment where people of all backgrounds feel like they belong. It's also important for organizations to intentionally incorporate opportunities for belonging early in the employee experience and understand the evolving factors that influence an employee's sense of belonging as they gain tenure. It would be great to see more research exploring the intersection of belongingness and remote work, particularly for historically minoritized groups. It would also be interesting to see if there are differing factors that contribute to belonging for minority employees with frequent in-person interaction versus those who are entirely remote.

Challenge 5: Let Our (I-O) Science Set DEI Industry Standards (Tunji Oki)

I challenge the field of I-O psychology, with specific focus to academics, to take charge in being the industry leaders in best practices for mitigating bias in hiring, attrition, performance management, promotion, and overall workplace experiences. As a field, we have many statistical techniques of assessing bias across multiple people processes, but our recommendations as to how to mitigate those discrepancies often fall in statistical manipulation and not practical solutions. We could learn a bit from a systems-thinking approach and how certain systems can and will continue to perpetuate bias, which may explain why sometimes we don't see a change even after an intervention. As a field, I would love to be able to provide more concrete recommendations, solutions, and frameworks that can be applied to address DEI concerns in the workplace. I challenge DEI academics and researchers to think beyond cut-score adjustments and training, and into more inclusive design, systems thinking, and radical change that drives improvements in the DEI space.

References

Sherf, E. N., Tangirala, S., & Weber, K. C. (2017). It is not my place! Psychological standing and men's voice and participation in gender-parity initiatives. *Organization Science, 28*(2), 193–210.

Willis, C., Powell-Rudy, T., Colley, K., & Prasad, J. (2021). Examining the use of game-based assessments for hiring autistic job seekers. *Journal of Intelligence, 9*, 53.

Author Bios

Dr. Tunji Oki works at Google as a People Analytics manager and holds a PhD in Industrial-Organizational Psychology from the University of Houston. He is currently responsible for managing a team that conducts research to drive analytical efforts to increase the equity of Google's people processes. Prior to Google, Dr. Oki worked as a consultant for Applied Psychological Techniques, where he consulted with *Fortune* 100 companies in the areas of job analysis, employee selection, test development, test validation, and legal issues. He has a plethora of experience serving as an external consultant for areas such as 360-feedback, test development/validation, and job analysis.

Dr. Lars U. Johnson is an assistant professor of Management in the College of Business at the University of Texas at Arlington. He earned a BA in Psychology from Tougaloo College and PhD in Industrial-Organizational Psychology from the University of Houston. His primary research areas include leadership; employee well-being and engagement; and diversity, equity, and inclusion. His research is published in such peer-reviewed journals as the *Journal of Organizational Behavior, Journal of Business and Psychology, Journal of Leadership and Organizational Studies, Small Group Research,* and the *Journal of Research in Personality*. Lars has received funding on multiple grants through the National Science Foundation and has experience as an NSF reviewer and external grant evaluator. He conducts his research through partnerships with several private- and public-sector organizations. He is a research fellow with the Department of Defense's (DoD) Defense Equal Opportunity Management Institute (DEOMI), supporting research and analysis on race- and gender-based inequity and harassment issues. Recently, Lars became Whole Foods Markets' first academic research collaborator and will work with Whole Foods' global engagement team to support their internal research processes and publish in scholarly journals.

Dr. Victoria Mattingly is founder and CEO of Mattingly Solutions, a workplace inclusion consulting firm. Her life mission is to use organizational science to improve the human experience at work, especially for underrepresented groups. Based in Pittsburgh, Pennsylvania, Dr. V leads a fully remote team and serves clients including Duracell, DICK's Sporting Goods, Sargent & Lundy and other non-profits, professional associations, and educational institutions. She earned her doctorate from Colorado State University, specializing in the science of workplace learning as a key lever for sustainable behavior change, especially when it comes to emotional intelligence, caregiver support, and allyship. Dr. V is currently focused on bringing more scientific rigor to the diversity, equity, and inclusion (DEI) space, enabling organizations to track and assess progress toward reaching their goals. To this end, she recently published a book titled *Inclusalytics: How Diversity, Equity, and Inclusion Leaders Use Data to Drive Their Work*. She currently chairs SIOP's Electronic Communications Committee and hosts the Conversation Series. Connect with Dr. V on LinkedIn: https://www.linkedin.com/in/vpmattingly/

Tracy Powell-Rudy is Integrate Autism Employment Advisors' vice president of Corporate Engagement and contributing author for their latest book *The Neurodivergent Candidate: Recruiting Autistic Professionals*. She is also co-author of the recently published *Journal of Intelligence* article, *Examining the Use of Game-Based Assessments for Hiring Autistic Job Seekers*. Prior to joining *Integrate*, Tracy was vice president of a premier global executive search firm focused on CEO/board through VP level searches. Earlier in her career Tracy worked in technology and telecommunications managing the Northeast Internal Tel organization for a *Fortune* 100 corporation. Tracy graduated summa cum laude from Manhattanville College with a BS in Psychology and has an MS in Telecommunications Management from NYU Polytechnic School of Engineering. She is the mother of an autistic daughter and identifies as late-diagnosed herself.

Dr. Tem Lawal is the director of Leadership and Organizational Effectiveness at Gartner where he focuses on employee engagement, succession planning, leadership development, 360 assessments, performance management, and competency modeling. Dr. Lawal started his career at eBay Enterprise and has since held a number of roles developing and implementing people strategies for organizations such as FedEx, as well as other private, public, and nonprofit organizations, enabling them to meet and exceed their talent needs. He earned his master's and PhD in Industrial-Organizational Psychology at Florida Institute of Technology. Tem is passionate about developing leaders and organizations to positively impact the people and communities around them.

Tech Talk: 2022 SIOP Annual Conference Takeaways From I-O Professionals in Tech

**Tunji Oki, Stephanie Murphy, Catie Jacobson, Jimmy Mundell,
Hannah Markell-Goldstein, Laura Joiner, and Sharon Li**

SIOP returned to an in-person annual conference in Seattle but maintained a virtual option as well, with over 4000 registrants. It held double meaning as academics, practitioners, and students held virtual and in-person sessions, workshops, and networking events to better answer the question "How can we do work better?", especially in this new age of work. As organizations and companies like SIOP have moved to remote or hybrid work, there's been an increased dependency on technology to keep people connected and productive using clouds and servers, personal devices (e.g., laptops and cell phones), and social media platforms and tools. The information technology (IT) industry is not only growing exponentially, but it's leading the way in understanding and creating the future of work. Industrial-organizational psychologists (I-Os) are playing a substantial role in these companies to lead the charge to support aggressive hiring targets; establish, maintain, and measure company culture and employee engagement; use people analytics to solve and understand key problems and drive strategy; and bring in theory and research to help create inclusive and thriving workforces.

I-Os in the IT industry are at the forefront of innovating the new way of work, which heightens the need to bridge the gap between academia and practice more critical now than ever. This is evident by the increase of IT presence in the I-O community and in the attendance at this year's SIOP annual conference. We asked several IT professionals that attended the conference to highlight what key topics stood out to them this year and what they are looking forward to in the future. These professionals work across the IT industry in a variety of different I-O-related occupations at Dell, Google, Amazon, Meta, and Twitter. In no particular order, here are the top three most impactful trends and insights for these IT professionals from the 2022 SIOP Annual Conference. (The opinions of the discussants are solely their own and do not represent the position of their company.)

Meaningful Work and Well-Being

Across multiple sessions, we saw that the benefits of purposeful work are numerous: higher engagement, satisfaction, intent to stay, employee health, and resilience. One panelist even mentioned creating meaningful work lessened the impact of the "Great Resignation" on their company. However, there can be a "dark side" of meaningful work where highly purposeful workers may be vulnerable to burnout and can experience unsustainable careers by relying on purpose as a sole motivator.

Relying heavily on purpose can also lead to blind loyalty to companies. In one session, they discussed that blind loyalty can have both positive and negative outcomes. Positive attributes of these workers include the need for a personal bond both with an organization and a leader whose values they believe in to imbue their work life with meaning and purpose. Negative attributes assigned to blind loyalty in-clude lack of boundaries between work life and personal life, discomfort, fear, inability to question au-thority, personal insecurity, and need for a powerful role model. It can be a hindrance for innovation.

Although meaningful work is important, balance, boundaries, and well-being are key to mitigating the negative impacts purpose can have on work. Many sessions focused on well-being, stress, and burnout. One key call from a session was the caution to not overemphasize one of these topics over others. For instance, companies are spending a lot of time focusing on engagement and burnout, but oftentimes engagement can be high but so can stress. Highly engaged employees may still be dealing with high levels of negative emotions.

Creating Impact While Relying on the Tried and True

Although many things have changed, I-O best practices have stayed relatively stable. The tools we have used and tested over time are still essential in this evolving way of working. Research, however, is suggesting adjustments and different use cases to drive greater impact. Surveys and assessments need to become more integrated into the natural flow of work and to feel like an experience in order to align with the push toward a more humanistic approach to work. Also, with technology and market interest in surveys and assessments increasing rapidly, we as I-Os need to ensure we build trust with our stakeholders to help educate them on ethical issues related to employee data collection, ensure we are measuring the right outcomes, and help with change and data management.

Feedback should also be embedded into everyday life at work so when it "formally" happens, it's not as "scary." Light 360-degree feedback can be collected on an ongoing basis to get real-time behavioral insights and drive timely performance improvement. Also, regular feedback in remote or hybrid work environments is especially important. When interacting face to face, feedback is everywhere. Workplace standards are more apparent, and employees can pick up on cues to figure out how to be successful. With remote work, cues and insights from the environment are not as frequent and may not be that obvious. Ongoing feedback can provide vital signals to remote employees regarding expectations and how they may be performing against those expectations.

The I-O statistical skill set in general may also need some adjustments. People analytics has become the source of many company decisions, and I-O has traditionally focused statistically on training on point-and-click (not to mention expensive) tools such as IBM SPSS or MPlus. However, in most of our IT companies, other software like R are used and are more effective in large organizations to analyze and visualize data. In several sessions, there was a call to teach I-O graduate students how to use open source code software (Python, R, SQL) to analyze data. This is a much more realistic way to apply their content expertise in the workplace. Unfortunately, I-O psychology seems to be ceding ground to other disciplines in people/workforce analytics, despite our content expertise. The consensus seems to be that this is the result of a lack of scalable data analysis techniques.

Virtual and Hybrid Work Is Here, and We're Still Learning

It's clear that the nature of work has likely changed more in the past couple years than in any other modern time period, as seen by the multitude of sessions at this year's conference on remote/virtual work and its impact. Because of the velocity of these changes, research is still catching up, and that is ok. It seems more important than ever to confirm what we may have assumed to be true in the past, either by reevaluating seminal works in the field or redoing internal studies within organizations.

There were a lot of interesting sessions about the impact of meetings. We know Zoom fatigue is real, but it is a completely separate construct from traditional fatigue and burnout that needs deeper investigation. Research is showing the notion many companies have that culture is "not shining through" virtually may not be true. Initial findings show that there may be a heavier dependence on the leader and immediate teams to enable the culture. Emphasizing what aspects of the culture you want leaders to bring through may be key. We also saw some initial findings about creativity being stronger in an office but decision making actually being more effective virtually.

We’re seeing great initial findings as we learn from this uncharted territory. For practitioners, there were several interesting sessions about practicing I-Os needing to take time in nontraditional roles: Roles in the business, finance, different HR functions, expatriate roles, and so forth will enable us to learn more about what are key problems being faced in varying industries, countries, and fields, and how we can use our unique skills to contribute to the solutions.

Suggestions for Future Research

As a close, and an ode to the research curiosity that many I-Os share, we asked our discussants to share future research ideas sparked by their learnings at this year’s annual conference. The hope is that these ideas can yield a sizable impact on the collective knowledge of our field.

Algorithm and NLP Aversion or Acceptance

Many sessions focused on using machine learning and algorithms to increase the impact of people-related decisions, while simultaneously their use has been given more negative attention in mainstream news with potential upcoming legislation. The use of these methods for various people-related purposes may be focused on in the coming years (performance evaluations, promotions, etc.); as such, future research will need to focus on how these techniques will be viewed (both positively and critically) and what types of findings (validation evidence, research on bias, etc.) may be most useful to respond to the likely attention it will receive.

During one of the sessions’ Q&A, there were questions regarding the validity of natural language processing (NLP). In practice, analyzing qualitative data can be extremely time consuming, and NLP provides an opportunity to assess large amounts of qualitative data quickly and systematically. Further investigating the extent to which NLP tools *correctly* identify relevant themes (including performance trends and potential biases) in open-ended feedback would be beneficial to practitioners. Researchers should also investigate the use of NLP at the point of submission (e.g., prior to submitting feedback) as a way to ensure feedback is constructive, unbiased, and consistent with quantitative measures of performance.

Active and Passive Data Collection

Data collection is a consistently key topic area within the I-O community. This year’s sessions focused a lot on passive data collected real time through productivity systems (e.g., Microsoft Suite, Slack, Zoom). There is mixed research on the benefits of passive data, with some sessions focusing on how it can be too much information and does not often lead to action. Others mentioned how it can sometimes conflict with active data received directly from workers. Further research is needed to understand the long-term effects and benefits of relying on this type of information to drive decisions.

For active data, sessions focused on how to concretely define holistic outcomes like employee potential, well-being, and belonging. But more research is needed to understand how to measure these concepts, such as when and how to measure them. For example, what are the most efficient methods for collecting data from workers in shorter bursts while maintaining scientific rigor? What types of technology can help create more experiential and realistic assessments that employees can go through as we collect data from them?

Deeper Unpacking of the “O” Side of I-O

With the onset of the pandemic, we know there has been a heavier emphasis on more soft concepts and skills. Several sessions focused on hybrid work, but diving deeper into the impact remote work has on topics such as DEI and meaningful work will be key. One of the biggest unanswered questions is at the intersection of remote work and DEI (specifically inclusion). A few sessions touched upon the increased inclusion scores of minority workers in a remote environment, but it would be helpful to understand more about why that is and what are the associated drivers of inclusion for different groups in remote environments.

We know that meaningful work is key, but how can organizations leverage and develop meaning and purpose in work for their workers? Can there be a standardized set of practices for helping workers develop and find their purpose at work? As organizations move toward practices that seek to treat employees as holistic people (e.g., with families, personal interests), research should be done to see if developing personalized ideas of meaningfulness and purpose can become a central component of promoting work commitment and sustainable careers.

Discussant Bios

Caitie Jacobson is a senior People Insights & Assessments advisor at Dell Technologies, where she focuses primarily on selection and assessments. Prior to joining Dell Technologies, Caitie was an external consultant who specialized in conducting job analyses, creating hiring tools, and examining the psychometric properties of developed assessments.

Dr. Laura Joiner is a program manager at Twitter where she designs talent management programs to drive employee performance and development. Prior to Twitter, she worked as a talent management consultant for Publix Super Markets, creating hiring, promotion, and performance management programs. While completing her doctorate at the University of Houston, she consulted with organizations in the public and private sectors, including the Hobby School of Public Affairs, the City of Houston, and FMI Consulting. In her free time, Laura enjoys spending time with her husband, 3-year-old son, and Tampa friends. She is also a tropical plant and mid-century design enthusiast.

Sharon Li is a PhD candidate in industrial-organizational psychology at Purdue University and a current intern on the People Analytics team at Google. She received her BS degree from the University of Toronto in 2018 for psychology and employment relations. Her research interests are primarily in diversity and inclusion, with a focus on immigrant worker well-being and Asian American stereotypes at work.

Dr. Hannah Markell-Goldstein earned her PhD in industrial-organizational psychology at George Mason University, where she focused on advanced methodological techniques and diversity/discrimination among women and people of color in the workplace. She worked as a business manager on the People Strategy & Analytics team at Capital One, where she focused on enterprise diversity, inclusion, and belonging analytics. Some of her projects included understanding new-hire inclusion over time, developing additional measures of inclusion indicators, such as belonging, and presenting representation data to inform executive-level goals for representation. She is now an analytics business partner in Diversity Recruiting at Meta.

Dr. Jimmy Mundell is a research scientist at Amazon working on their People Experience and Technology (PXT) Central Science team, focusing on research relating to employee experience and recruitment/selection. He has experience working with public and private companies across a variety of industries with an emphasis on hiring, assessment, job analysis, and performance evaluation. Before joining Amazon, Jimmy was an assessment specialist at The D. E. Shaw Group and a people analyst at Google, where he designed hiring assessments focusing on validity, equity, and fairness.

Dr. Stephanie Murphy is currently head of People Insights & Assessments at Dell Technologies where she leads global projects reaching over 140,000 team members. This includes leading Dell's employee engagement survey, conducting research and designing listening tools to inform Dell's talent decisions, and developing and implementing assessments to enable Dell's leaders and team members to do their best work. Stephanie aided in the culture integration efforts as Dell Technologies made history with one of the largest acquisitions in the tech industry. She also teaches management courses to graduate students at McCombs School of Business at The University of Texas at Austin. Stephanie holds a BS in psychology from the University of New Orleans and a PhD and MA in industrial-organizational psychology from Louisiana Tech University.

Dr. Tunji Oki works at Google as a People Analytics manager and holds a PhD in industrial-organizational psychology from the University of Houston. He is currently responsible for managing a team that conducts research to drive analytical efforts to increase the equity of Google's people processes. Prior to Google, Dr. Oki worked as a consultant for Applied Psychological Techniques, where he consulted with *Fortune* 100 companies in the areas of job analysis, employee selection, test development, test validation, and legal issues. He has a plethora of experience serving as an external consultant for areas such as 360 feedback, test development/validation, and job analysis.

2022 SIOP Consortia—Thank You to Our Presenters and Attendees!

Debbie Diaz-Granados

Wow, it was so great to have the opportunity to be back in person for 2022 SIOP! The SIOP Consortia provided virtual and in-person programming this year, and once again, the consortia team put together an outstanding docket of presentations and speakers for the professional development at varying career levels of our membership base. We are happy to provide a summary of what was offered and invite you to consider this as part of your SIOP conference experience next year.

Master's Consortium

The Master's Consortium this year was completely virtual, **Christopher Rosett** and **Brandon Riggs** hosted four 2-hour sessions spread out across the 2 weeks prior to the SIOP conference with an overall attendance of 35 SIOP members.

This year's consortium consisted of five keynote speakers representing internal and external I-O practitioners who spoke about experiences serving as consultants and I-O experts in both the private and public sectors. Sebastian Unger spoke about experiences as a VP and HR global leader with Prudential Financial, and Ashley Keating provided her own perspective on the best practices and pitfalls she has encountered as she has made her journey from I-O master's student to VP of Global Functions Talent for Citi. **Daniel King** provided his perspective on working in the assessment space, and Neena Kaur spoke about her experiences as a consultant working with and for consulting giants such as McKinsey and EY. Finally, **Ferry Fleurimond** spoke about an I-O career in government and offered a fun and lighthearted but informative presentation for the last session of the consortium.

Several additional presentations were developed and delivered by Chair Chris Rosett and Cochair Brandon Riggs. The consortium kicked-off with a speed networking activity, and later Chris presented on the best practices and considerations for newly graduated students as they begin the interview process, while Brandon presented on several key points for ensuring your work aligns with the strategic objectives of the business.

Postevent feedback was positive. Attendees were asked what they enjoyed most about the consortium; one student responded, "Networking and hearing all the speakers! I really appreciated their answering our questions within their presentations. I also really enjoyed learning from them through their storytelling of their lives." An overwhelming proportion of participants felt the content was relevant to their career and future needs and goals. Attendees also offered helpful feedback for future opportunities. SIOP is pleased to participate in the launch of new I-O careers, and the Master's Consortium is one of the great ways SIOP is able to contribute. From all the members of the Master's Consortia Committee, thanks for participating, and we wish you all the best in the future!

Lee Hakel Doctoral Consortium

The Lee Hakel Doctoral Consortium celebrated another successful year, with 56 doctoral students from over 30 programs participating in a series of virtual professional development sessions. Students interacted with panelists from academic and applied backgrounds to discuss how to build a successful career in I-O psychology.

Consortium week 1 kicked off with two sessions where attendees learned how to create professional impact through their work (with insights from **Herman Aguinis, Ben Butina**, and **Janice Gassam**) and then collaboratively set their own professional impact goals (facilitated by consortium chairs **Manny Gonzalez** and **Elliott Larson**). On Day 2, attendees gained insights on how to create new research ideas from **Derek Avery, Winny Shen,** and **Louis Tay** (together with the Early Career Faculty Consortium), and then learned from **Anthony Boyce**, **Sandra Hartog**, and **Kathryn Niles-Jolly** about the array of possible applied career paths that I-Os could pursue. Attendees rejoined the ECFC on Day 3 to meet editors from some of the top outlets in our field (Erich Dierdorff, **Lillian Eby, Brian Connelly,** Morela Hernandez, Maryam Kouchaki, **Lisa Lambert Schurer, Christian Resick**, and Laszlo Tihanyi) and receive advice on the publication process.

Consortium week 2 then drilled down into the nuts and bolts of navigating grad school, the field of I-O, and careers. On Day 1, **Nitya Chawla** and **Jeff Dahlke**—whose dissertations were both recognized by SIOP—discussed how to thrive during the dissertation process. Then, attendees were able to discuss what life as an I-O psychologist looks like after graduation and how to stay connected to the field, with insights from **Lawrence Houston III, John Scott**, and **Emilee Tison.** Day 2 was "Academia Day" with students getting tips and insights about how to find an academic job (**Alicia Grandey, Kevin Ford**, and **Tony Kong**) and how to have a strong start to an academic career (Rachel Jang, **Jorge Lumbreras**, and **Logan Watts**). The virtual part of the consortium then wrapped with Day 3: "Practitioner Day." Attendees heard advice on finding applied jobs (John Agosta, Leah Ellison, and Tiwi Marira) and how to successfully kick off an applied career (**Shannon Cheng**, **Soner Dumani**, and **Andrea Valentine**). Of course, a consortium is not complete without opportunities to network, so we gathered for an in-person social hour and networking reception in Seattle!

After an eventful Doctoral Consortium in 2022, we're even more excited for what next year's consortium will have in store for SIOP's late-stage doctoral students! Anyone interested in participating should keep an eye out for an announcement toward the end of 2022 with details on how to be nominated by your program chair.

Thanks to the attendees, panelists, and everyone that made this year's Doctoral Consortium a success!

Early Career Faculty Consortium

We are pleased to share that the 2022 Early Career Faculty Consortium was a success! Panelists shared valuable insights in response to participants' thoughtful questions related to Teaching and Mentoring Tips and Tricks (led by **Jose Cortina** and **Talya Bauer**), Funding and Data Collection Strategies (led by **Eden King** and Beth Campbell), and Networking for Successful and Efficient Publishing (led by Klodiana Lanaj and Laurie Barclay). It was also great to join forces with the Doctoral Consortia to learn about generating new research (led by Derek Avery, Winny Shen, and Louis Tay) and best practices in publishing from the editors at top journals in our field. To the panelists and participants, thank you for generously sharing your valuable time and insights with us!

Early Career Practitioner Consortium

The 2022 Early Career Practitioner's Consortium returned as an in-person event and was attended by over 20 practitioners. This year's ECPC emphasized the importance of SIOP's professional skills competency (i.e., communication, project management, business development) in becoming a successful practitioner. The consortia included a full program of I-O experts who shared their career trajectories, career blunders, and ways to further develop behaviors related to the professional skills competency.

Attendees and presenters engaged in discussion, formed connections, and had fun! Participants completed the Hogan Personality Inventory prior to attending the consortia. **Jessie McClure** (Hogan Assessment System) set the day's tone with her opening presentation on using personality to predict performance in the workplace along with a group debrief of assessment results. Her presentation helped frame a positive perspective of self-awareness and embracing self-development as the program moved to skills needed to be successful practitioners.

Scott Erker (Korn Ferry), **Alexis Fink** (Meta), Tyrone Smith (Udemy) and **Amanda Muoneke** (Amazon) next shared their personal early career experiences and discussed skills not taught in graduate school but critical to success. They shared the importance of remaining curious, operating with purpose, learning to influence and obtain buy-in, telling stories with data, forming connections, and balancing depth of experience with breadth.

Rawn Santiago (YSC Consulting), Rachel Callahan (Humu), **Robert Stewart** (Amazon), and **Caitie Jacobson** (Dell) 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 developing a career brand and approaching new opportunities in relation to one's 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 attendees to practice applying skills needed to become successful practitioners along with forming connections with each other. ECPC 2022 was a success, and we hope to see you next year at ECPC 2023!

And just like that, my role as Consortia Chair comes to an end. I have absolutely enjoyed meeting new colleagues and making new friends as I've chaired the Consortia Committee these last few years. I'm excited to hand the baton over to **Amber Burkhart** and know that next year's consortia will also be a success. A sincere thank you to all the co-chairs of the consortia (Chris Rosett and Brandon Riggs—Master's ; Elliott Larson and Manny Gonzalez—Doctoral; **Andrea Hetrick** and **Lauren Locklear**—Early Career Faculty; and **Stephanie Murphy** and **Nchopia Nwokoma**—Early Career Practitioner), the AO, the presenters, and all the attendees. We ended the consortia with an in-person reception in Seattle for all those attendees who were in person at the conference. We had a great time connecting and getting to know one another! See you next year at SIOP in Boston!

Tutorial for Integrating and Hosting Experimental Lab Studies Through Amazon Web Services

Anthony Naranjo
University of Central Florida

Ezequiel Gioia
University of Central Florida

Samuel Donnelly
Saint Louis University

Dustin Jundt
Saint Louis University

Shiyang Su
University of Central Florida

Mindy Shoss
University of Central Florida

Abstract

There has been a recent urgency to leverage modern technology to facilitate virtual experimental research and data collection across various social science disciplines. Various platforms have emerged to help transfer experimental lab software to virtual lab environments. However, the existing aids are limited by the degree of task complexity they can accommodate (e.g., dynamic simulation tasks), as well as the adherence of various data security governance they can provide to researchers. In an effort to alleviate these discrepancies, we present a comprehensive technical tutorial for transitioning software-based experimental tasks into the more dynamic and secure platform, Amazon Web Services. We also illustrate the strengths and weaknesses of administering virtual lab sessions and provide various solutions for optimizing security, controllability, user experience, and data collection speed. To support these objectives, we provide a detailed set of open source resources to aid researchers in extending experimental lab studies to geographically dispersed and, ideally, more generalizable sample populations.
Keywords. Amazon Web Services; experimental research; virtual lab studies; cloud computing; virtual machines

Author's Note: The current tutorial utilizes a windows-based application (.exe) hosted on a Windows virtual machine. However, AWS/Appstream 2.0 can host a number of different types of applications (.exe, .msi, .iso, etc.) and can be connected to with commonly available web browsers for PC and Mac that support HTML 5.

Tutorial for Integrating Experimental Lab Studies Online Through AWS

Recent efforts have sought to facilitate online experimental research when in-lab research is restricted (e.g., COVID-19; see http://www.movingresearchonline.info/) and to increase the generalizability of inferences beyond student samples (cf., Henrich et al., 2010). To these ends, we provide a technical tutorial for a flexible and secure virtual resource: Amazon Web Services (AWS). AWS requires minimal programming background, supports programs that run on a local device, and offers hundreds of security features. First, we demonstrate how to integrate experimental tasks into AWS. Second, we outline the operational steps needed to conduct virtual lab sessions using AWS in conjunction with communication services (e.g., Zoom). Third, we address potential decision points that researchers may face when employing these resources. Although this tutorial is designed to guide readers with varying levels of programming experience, we anticipate that individuals with at least some foundational programming knowledge will be able to follow along with this tutorial successfully. However, to the extent that researchers want to leverage this tutorial for various lab simulations or modify the nature of the task, this will require more advanced programming experience.

Amazon Web Services

AWS is a cloud computing platform that enables researchers to virtually host experimental tasks. Specifically, AWS contains a suite of applications, including AppStream 2.0, which allows users (e.g., participants) to access a lab task application (e.g., ATC-lab Advanced) using a web browser and Internet connection. The application runs on a virtual machine within AWS, which allows for bidirectional communication, thus sending input from the user's mouse and keyboard actions to the streaming application.

Whereas other platforms generate tasks (e.g., PsychoPy, jsPsych) to be hosted and distributed on virtual networks (e.g., Pavlovia), AWS provides multiple benefits. AWS can accommodate any task or programming language (e.g., C++, Ruby, Java, Python) that runs on a local device rather than being limited to tasks written in JavaScript (in jsPsych and lab.js) or Python (in PsychoPy). AWS also offers higher base security and compliance with a number of data regulations (e.g., HIPPA, FISMA, GDPR). As such, AWS is a prime candidate for hosting tasks and storing data across a number of research disciplines with diverse research needs (e.g., psychology, management, economics). Given the extensive benefits provided by AWS, there is a cost associated with utilizing AWS, see https://aws.amazon.com/appstream2/pricing/. However, the monthly users fee can be discounted for universities and schools.

Running Example: Air Traffic Control Simulation Task

We will first provide a brief background on the task we'll employ as a running example. ATC-lab Advanced (Fothergill et al., 2009) is a publicly available air traffic control simulation task that has been used in numerous research domains such as intelligence and working memory (e.g., Loft & Remington, 2013); ocular movements (e.g., Marchitto et al., 2012); motivation and decision making (e.g., Gee et al., 2018); affect (e.g., Yeo et al., 2014); and performance (e.g., Wilson et al., 2020). Its objectives are highly customizable but may include actions such as accepting/handing-off aircraft that enter/leave one's designated air space and preventing conflicts between aircraft. The ATC-lab Advanced task environment and scenarios are created in customizable XML scripts, and data are stored in a working directory as a metadata log and .csv file.

Tutorial for Integrating Lab Tasks Into AWS

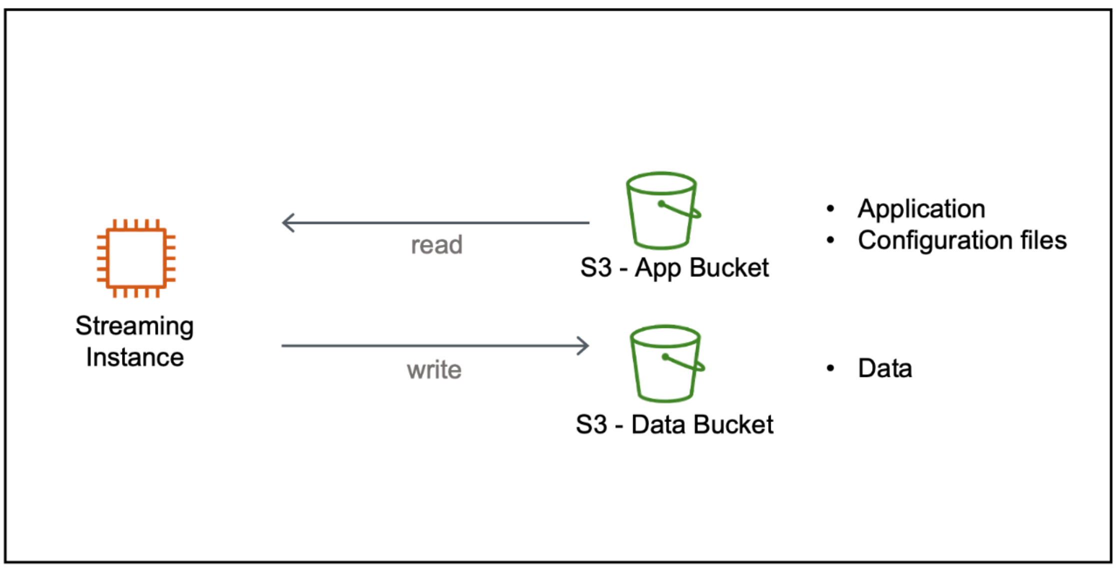
This tutorial is designed to be referenced in conjunction with an integral vignette containing screenshots, code, tables, and more detailed instructions accessible via Open Science Framework (https://osf.io/4hqsm/?view_only=2747a3cf69c54297a0842651c262062f). To reference specific sections of the vignette in this tutorial, we denote text line numbers within brackets corresponding to numbered text lines in the vignette. For example, [4-18] contains a table describing common AWS terminology. Note, carrying out the tutorial will require an AWS account with administrative access. Instructions for creating an account are available here:
https://aws.amazon.com/premiumsupport/knowledge-center/create-and-activate-aws-account/.

Creating S3 Buckets

We start by setting up Amazon's S3 service, which houses the task software and stores task data. Two S3 buckets are created; the first bucket is to store the ATC-lab task application, its XML scenario files, and scripts that are part of this example solution. The second bucket is where the task data are stored, which is the output of the ATC-lab .csv and log files. We refer to these as the "app bucket" and "data bucket." Buckets can be thought of as folders or "containers" to store files. S3 is a data storage service, which can be interacted with through the command line interface (see resource: https://aws.amazon.com/cli/), a programming language, or web browser. S3 can be thought of as somewhat analogous to services like DropBox or OneDrive. Two S3 buckets are necessary for separating the application and configuration from the data following the AWS security "least privilege access" best practice (https://docs.aws.amazon.com/IAM/latest/UserGuide/best-practices.html#grant-least-privilege). With this approach, the task application can download the latest version of the application and configuration files from the app-bucket and write the data output into the data bucket (see Figure 1 below).

Figure 1

Illustration of Security Permissions



Note: One policy defines permission to read the task (application, configuration files), whereas a second defines permission to write the output (data) in a separate S3 bucket. Separating where the task is accessed from where the data are stored, along with the permissions to access each, increases security so users (participants) are unable to make any modifications to the task or access data.

On the Amazon Web Console, search for "S3" and select the S3 service (accessible here; https://console.aws.amazon.com/) [19]. Once in the S3 management console, select "Create bucket" [20]. The default bucket settings are sufficient to start; these settings can be customized at a later point based on one's requirements. Simply enter a name for the first bucket in the text box [21] (keeping the below default settings [22-24]), then scroll to the bottom of the page and select "Create bucket" [24], and repeat this same process for the second bucket. The following bucket names are used for the purpose of this tutorial: atc-lab-app and atc-lab-data. It is important to consider that S3 bucket names are global with regard to the AWS cloud; thus, if the proposed bucket name is already taken, a different name must be chosen. For instance, making a slight modification to your proposed bucket name to make it unique is a suitable approach (e.g., atc-lab-app-university).

Configure Permissions

Here we introduce the Identity and Access Management (IAM) service, which allows users, groups, and roles to be created and provides control to the access of resources and other services in AWS. The following sections will outline how to configure permissions of the S3 buckets by creating two IAM policies and one IAM role, both of which are described in detail below.

Create IAM Policies

On the Amazon Web Console, search for the "IAM" service, select "IAM" and click on "Policies" on the left-hand side of the screen [25], and then select the "Create policy" option on the upper portion of the screen [25]. Once on the "Create policy" page [26], select the "JSON" tab [27]. Two policies must be created to independently control access to each bucket, one defining permission to read: atc-lab-app (application/task configuration or input to AppStream 2.0), and the second defining permission to write: atc-lab-data (data or output from AppStream 2.0). For the first policy [28], simply copy and paste the corresponding JSON scripts for the "read policy" (copy code from [31-47] into the JSON tab) and replace your unique read bucket names created in the S3 section [21] into the highlighted "Resource" lines [42-43]. After the JSON code has been updated, select "Next: Tags" (tags are optional so we skip) [28], then select "Next: Review" [29], and last, fill in the name for your read IAM policy (e.g., lab-app-s3-read-policy) and click "Create policy" [30]. Then repeat the steps [25-30] for the write IAM policy, this time copy and pasting the code from [48-58] and replacing the S3 write bucket name into the highlighted text line [55]. The names chosen for the "read" and "write" policies in this tutorial are atc-lab-app-s3-read-policy and atc-lab-data-s3-write-policy, respectively. An IAM policy is a JSON (JavaScript Object Notation; https://www.json.org/json-en.html) document that defines the access to resources in AWS. Defining one S3 bucket for strictly running the task and a second for strictly storing data increases security and controllability.

Create an IAM Role for AppStream 2.0

Once the JSON policies are created, the IAM policies need to be associated to the streaming machines so that both S3 buckets can be accessed from AppStream 2.0. IAM roles will be used to create this association. An IAM role is an entity where permissions can be defined attaching policies to a specific IAM role and later a user or a service can assume this role, granting access to the resources specified in the policies. In the current solution, the role will be assumed by the AppStream 2.0 service to access the S3 buckets that were created above. One of the main advantages of using IAM roles is that it circumvents the necessity to embed credentials in our scripts or configuration files, which is beneficial as this is often a security concern. On the IAM console, click on "Roles" [59] on the left side of the screen, and then click "Create role" [59]. Follow the four steps in Table 1 below to create the IAM role.

Table 1

Steps for Creating IAM Role

Step	Description of step
Step 1	Select “AWS service” for trusted entity [60], and then select service “AppStream 2.0” [61] and click “Next: Permissions.”
Step 2	Search for the two policies previously created, check their boxes, and select “Next: Tags” [62].
Step 3	Select “Next:Review” [63] (can leave “Key” and “Value” blank).
Step 4	Create a “Role name” (e.g., atc-lab-appstream-role) [64] before selecting “Create role.”

Configure AppStream 2.0

Create an Image Builder

The next step is to create an Image Builder, which is a virtual machine where the task will be installed, configured, and tested. Once our sought-after results are achieved regarding configuration and testing, then the image can be created. This image will be the template that AppStream 2.0 service will use every time a new streaming instance is requested by experimenters. On the Amazon Web Console, access the “AppStream 2.0 service.” Then, on the navigation menu, click on “Images” [65], select the “Image Builder” tab [66], and click on the “Launch Image Builder” button. This launches the Image Builder wizard. Follow the four steps in Table 2 below to create an Image Builder.

Table 2

Steps for Creating Image Builder

Step	Description of step
Step 1	**Choose Image:** Select “Microsoft Windows 2019 Base” and “General Purpose” from the drop-down lists, and then select the latest version offered of Microsoft Windows Base (e.g., AppStream-WinServer2019-12-28-2020) and select “Next” [67].
Step 2	**Configure Image Builder:** Choose a “Name” and “Display Name” (e.g., atc-lab-imagebuilder) to call the Image Builder [68]. Select General Purpose: “stream.standard.small” under “Family” [68], and under “IAM role (Advanced)” select the role created previously (e.g., atc-lab-appstream-role) [69]. Note that it is important to select the IAM role during the creation of the Image Builder because it cannot be modified once the Image Builder has been created (i.e., after “Launch” has been selected).
Step 3	**Configure Network:** Check “Default Internet Access” [77], select a “VPC” (e.g., default; see [70-71] for VPC details), and for “Subnet 1,” select any of the subnets available [77]. Next, select “Create new security group” on [77], which will open a new tab [78] from which “Create security group” on the top right may be selected. Come up with a security group name (e.g., atc-lab-private) and description (e.g., private sg) [79]. Then select the same VPC in the drop-down list from the previous step [77]. No modifications need to be made for inbound or outbound rules [80] (see [72-76] for details). Scroll down, select “Create security group,” and close this tab [80]. Go back to the “Create Image Builder” tab, refresh the list of security groups, and select the newly created security group (e.g., atc-lab-private) [81] before clicking “Review.”
Step 4	**Review:** Review the configurations, and then select “Launch” [82].

Once you have selected "Launch," it will take some time for the status to change from "pending" to "running." While this process is ongoing, move on to the "Create an Image" section below.

Create an Image

Prepare the App Bucket

The "app bucket" must now be prepared by first cloning or downloading the repository template (e.g., download task source code). To aid in this process, we created a repository template that may be updated to accommodate any task or program, which is accessible on our OSF page linked above in a zip file titled "bucket-template." The directory structure is displayed here [83-92]. Note that in order for the code provided below to function correctly, the folder names used must match the folder names provided in the repository template. The /app is simply the directory (folder) housing the executable file(s) for the task [83]. Once a copy of the repository template is obtained, the application files will need to be copied into the /app directory [93] (delete existing files used for ATC-lab in /app if using another task program). This conjunction of the application, configuration files, and scripts will be distributed to each streaming instance. Two of the script files will need to be modified to your custom bucket names. Open and edit install.bat and run.bat files from /scripts in a text editor (e.g., notepad on Windows, or TextEdit on Mac) [94]. In both of these files, replace the names of the bucket with your own bucket names into the highlighted sections [96, 97, 114, 115, 116]. Then in the run.bat file, replace the highlighted section in [125] with the executable file name of your task, and then replace the output file names for your task in the highlighted code chunks on line [133] (assuming you're using a task other than ATC-lab). The download.bat file [137-148] does not require any modifications. If you are running more complex tasks, such as those utilizing other scripting languages (e.g., https://github.com/lukestrickland/ATC_XML_generator), this [125] is where you would specify those files. Last, make sure all files are saved as .bat files.

Once the two files have been configured (highlighted sections have been replaced), access the AWS S3 web console in order to upload all the files into the S3 application bucket (search and select your app bucket; e.g., atc-lab-app). You can drag and drop the directory directly into S3 [149], select "Upload" at the bottom of the screen [150], and confirm the upload was successful for all files [151].

Connect to Image Builder

Now go back to the AppStream 2.0 service, select Images, open the Image Builder tab, and once the status shows as "Running," connect to it [152-153] by clicking "connect" (a new tab should now load, if not make sure your pop-up blocker is turned off). Note that once the Image Builder is running, you will start being charged by AWS. As a cost-saving suggestion, stop the Image Builder in the AppStream 2.0 service if you want to disconnect before finishing the image creation. Image Builder serves three different roles: (a) administrator, (b) template user, and (c) test user [154]. The "administrator" and "test user" roles will be utilized to install the application, its dependencies, create default Windows settings, and finally test the application. Upon accessing the Image Builder [154], select the administrator role [155]. Note you are now on a virtual machine desktop [156].

Install the App

The files that were previously uploaded to the app bucket in "prepare the app bucket" section will be used as a source to install the application, scripts, and scenarios into the Image Builder instance. For this, open a Windows command prompt as administrator (go to the start menu and search "cmd," then right click, and select "Run as administrator"). Once in the command prompt, copy and paste the line of code on [157], and hit "enter" to execute the code. Next, copy and paste the line of code on [158]; however, make sure to replace the name of the bucket with your app-bucket name into the highlighted syntax on [158] before executing the code line. Last, copy, paste, and execute the code on [159] (once complete, command prompt should look like the screenshot) [160]. The first command [157] changes the directory to the root folder, and the second command [158] downloads the installation script from the app bucket. On the third command [159], we execute the installer, which will download the rest of the files (e.g., ATC-lab task, scripts, and scenarios) from S3 into C:\Apps directory.

Configure Image Assistant

Now, double click on the "Image Assistant" icon located on the Image Builder's desktop (not your local desktop) [161]. This will launch a six-step wizard that communicates to AppStream 2.0, which application and application settings to stream.

Step 1. Add Apps. Click on "Add-App" [161], and follow the directory path to open the executable file in Apps/ (C:\Apps\ATCLab\run.bat) [162]. Then fill in the corresponding "Name," "Display Name," (note names are arbitrarily created for "Name" and "Display Name"), "Launch Path," and "Working Directory," and click "Save" [163] and "Next" [164].

Step 2. Configure Apps. Keeping the Image Assistant open to Step 2 [165], open a Windows File Explorer and browse to C:\Apps, right-click on the Apps/ folder, and then select "Properties" and the "Security" tab [166]. Then select "Edit" [166], and after making sure you have "Users" highlighted, grant "Modify" permission under the "allow" column [167] and click "OK." Now back in the Image Assistant window under "configure apps" tab [165], click on "Next."

Step 3: Test. Under the "test" tab [168], switch user to "Test User," reopen the Image Assistant, and click on your application (e.g., ATC-lab) [169] to test the task [170]. Next, in the AppStream 2.0 Image Assistant window [169], switch users again to "Administrator" and click on "Next" under the "test" tab [168].

Step 4: Optimize. Under the "optimize" tab, select "Launch" [171], wait for the application to load (once script stops loading in background) before selecting "Continue" and then "Next" in the Image Assistant.

Step 5: Configure Image. In step 5, enter a name and display name (e.g., atc-lab-image) for the image, and click "Next" [172].

Step 6: Review. Last, under the "Review" tab, click on "Disconnect and Create Image" [173]. The connection to the Image Builder will be closed (this will cause the image assistant to fail; this should happen), and the Image Builder status will transition to "Snapshotting" (note this process will take up to an hour and needs to be completed before proceeding). Now the Image Builder is finally creating the image, and it will be stopped once the image is ready.

Create a Fleet

A group of streaming instances is called a "fleet," and each streaming instance in the fleet is ephemeral. The streaming instances will be discarded after use and cannot be shared between users. This design decision of AppStream 2.0 helps in maximizing security. On the AppStream 2.0 main menu, click on "Fleets" and then on the "Create Fleet" button [174]. AWS AppStream 2.0 Fleets are created through the following five steps.

Step 1: Provide Fleet Details. Add a name and description (e.g., atc-lab-fleet), and click "Next" to advance to Step 2 [175].

Step 2: Choose an Image. This is where we are going to select the image (e.g., ATC-lab-image) [176] created in the previous section and then click "Next."

Step 3: Configure Fleet. Select the "streaming.standard.small" type of general purpose instance [177]. After scrolling down, make sure "On-Demand" is selected for "Fleet type" [178]. Then under "User session details," specify the desired durations in minutes of the session, disconnect timeout, and idle disconnect timeout (see our example inputs in [178]). These parameters are referring to the actual task to be accessed in URLs, so be sure to provide adequate time based on the duration of the experiment. Next specify the capacity for the fleet [179]. Capacity refers to the number of users (participants) within each virtual lab session. At the bottom of the "Step 3: Configure Fleet" page [180], make sure "Application" is selected for the "Stream view" and that the IAM role created earlier is selected before clicking "Next."

Step 4: Configure Network. Make sure "Default Internet Access" is checked and that the same VPC as the one selected in "Create an Image Builder" section is selected from the drop-down list [181]. Both subnets may be chosen arbitrarily, and the security group created previously (e.g., atc-lab-private) should be selected from the drop-down menu before selecting "Next."

Step 5: Review. Last, review the fleet configuration and click on "Create" [182]. A pop-up message will alert us regarding how the pricing model works (see [183-186] for more details on pricing). The fleet is created with two default scaling policies; delete both following the steps described in [187-191] because we will manage the number of streaming instances manually.

Create a Stack

Stacks are the last main component of AppStream 2.0; these are configuration sets to specify the fleet, the user access policies, and the storage that will be used in our solution. It is also where one may customize the appearance of AppStream 2.0 to apply any specific branding. Click on the "Stacks" option on the AppsStream 2.0 main menu [192] and then on the "Create Stack" button. From here follow the four steps outlined below in Table 3.

Table 3

Steps for Creating a Stack

Step	Description of step
Step 1	**Stack Details:** Create a "Name" and "Display Name" (e.g., atc-lab-stack) [193]. Then in the "Fleet" drop-down menu, select the fleet created previously (e.g., atc-lab-fleet) and click "Next."
Step 2	**Enable Storage:** Under "Home Folders," uncheck the option "Enable Home Folders" [194] and click "Next."

Step 3	**User Settings:** Enable/disable the following sections: Clipboard: Disabled, File transfer: Disabled, Print to local device: Disabled, Password sign in for Active Directory: Enabled, Smart card sign in for Active Directory: Disabled [195], and ensure "Enable application settings persistence" is unchecked and "Settings group" displays your stack name [196] before selecting "Review."
Step 4	**Review:** Confirm configuration, then click "Create" [197-198].

Generating and Distributing Streaming URLs on AWS

In order to access the AWS console and AppStream 2.0 application, researchers will need to login into the AWS web console using their provided credentials. Once at the home screen, researchers will need to search for the AppStream 2.0 application using the search bar located at the top of the home screen. On the AppStream 2.0 home screen, configure the desired capacity for the AppStream 2.0 fleet. Capacity refers to the number of virtual machines (e.g., number of participants) that AppStream 2.0 will launch. For example, if you are hosting two simultaneous sessions (two experimenters) each consisting of three participants, then the desired capacity should be configured to six. This can be done under the "Fleets" tab by selecting your task under the "Items" list and editing desired capacity under the fleet details section.

Once the desired capacity has been set, under the same Fleets tab, researchers will start the fleet by selecting the "Actions" drop-down menu and selecting "Start." This startup process takes approximately 10 minutes and researchers will know that the fleet is running via the status column, which will display "Running." The web page can be refreshed periodically to check the status of fleet startup. After the fleet is running, the task simulation streaming URLs can now be created. Researchers will navigate to the "Stacks" tab on the left-hand side of the web page, select their lab task under the "Items" list, click the "Actions" drop-down menu, and select "Create streaming URL." A menu box will pop up prompting for a "User ID" and URL expiration time. Researchers should follow a standardized naming convention for user IDs (e.g., user-01, user-02) and reuse these IDs across different lab sessions as the number of IDs used is one pricing dimension considered in the AWS pricing model. With regard to URL expiration time (how long the URL link is active), researchers should select a time that best suits their research needs (e.g., 1 hour, 2 hours, etc.). Once this information is provided, click "Get URL," and a URL will be produced that may then be distributed directly to participants. The process of creating URLs will have to be repeated to accommodate the number of participants in a single lab session. For instance, if a researcher has three participants in a single lab session, then they should plan on creating three separate streaming URLs to share with each participant.

Prior to sharing the URLs with participants, researchers should be sure to launch the URLs in their personal web browser to start the actual simulation, as this takes about 2 minutes. At this point, researchers can begin their study and will be able to have access to all streaming URLs.

Considerations for Conducting Virtual Lab Sessions

Although both AWS and video conference software can support dozens of users simultaneously, technical, situational, and cognitive demands may limit the number of participants a single experimenter can practically run at a time. For instance, when participants and experimenters are connected via virtual conferencing software (e.g., Zoom), having numerous participants with unique technical or comprehension issues that require remediations one at a time would substantially increase session length. Experimenters using video conference software also need to be cognizant of and plan for dealing with potential environmental limitations (e.g., participants may not be alone, anonymity may be difficult to preserve). Potential solutions include requiring video cameras to be turned on, encouraging participants to be in a well-lit room by themselves, communicating contingency plans to participants if they were to experience technological issues (e.g., Internet connection is lost), and requiring participants to change their Zoom name within the video conference to an anonymous research identifier prior to joining lab sessions. In order to successfully monitor and interact with participants, we have found the ideal number of participants per experimenter should be kept relatively low (approximately 3–4 participants, although this may vary with the complexity of the chosen task). However, given that AWS allows for multiple experimenters to be running simultaneous virtual lab sessions, this provides a substantial benefit for studies with multiple research assistants.

Conclusion

The current paper provides a technical tutorial for integrating lab simulation tasks into Amazon Web Services, complete with an online example, using a highly generalizable example task. It is our hope that the current manuscript serves as a useful blueprint as researchers conduct the technical integration and design of an effective virtual experimental lab study that ideally reaches more diverse and generalizable populations.

Declarations

Funding

Research was sponsored by the Army Research Institute for the Behavioral and Social Sciences (ARI) and was accomplished under Grant Number W911NF-19-1-0453. The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the official policies, either expressed or implied, of the Army Research Institute for the Behavioral and Social Sciences (ARI) or the U.S. government. The U.S. government is authorized to reproduce and distribute reprints for government purposes notwithstanding any copyright notation herein.

Conflicts of interest/Competing interest: We disclose no conflicts or competing interests.

Availability of data and materials: All supporting materials are available to the public via OSF. https://osf.io/4hqsm/?view_only=2747a3cf69c54297a0842651c262062f

Code availability: All code is available to the public in a knit R markdown on OSF. https://osf.io/4hqsm/?view_only=2747a3cf69c54297a0842651c262062f

References

Fothergill, S., Loft, S., & Neal, A. (2009). ATC-lab Advanced: An air traffic control simulator with realism and control. *Behavior Research Methods*, *41*(1), 118–127. https://doi.org/10.3758/BRM.41.1.118

Gee, D. G., Bath, K. G., Johnson, C. M., Meyer, H. C., Murty, V. P., van den Bos, W., & Hartley, C. A. (2018). Neurocognitive development of motivated behavior: Dynamic changes across childhood and adolescence. *Journal of Neuroscience*, *38*(44), 9433–9445. https://doi.org/10.1523/JNEUROSCI.1674-18.2018

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? *Behavioral and Brain Sciences*, *33*(2–3), 61–83. https://doi.org/10.1017/S0140525X0999152X

Loft, S., & Remington, R. W. (2013). Wait a second: Brief delays in responding reduce focality effects in event-based prospective memory. *Quarterly Journal of Experimental Psychology*, *66*(7), 1432–1447. https://doi.org/10.1080/17470218.2012.750677

Marchitto, M., Di Stasi, L. L., & Cañas, J. J. (2012). Ocular movements under taskload manipulations: Influence of geometry on saccades in air traffic control simulated tasks. *Human Factors and Ergonomics in Manufacturing & Service Industries*, *22*(5), 407–419. https://doi.org/10.1002/hfm.20320

Wilson, M. D., Strickland, L., Farrell, S., Visser, T. A., & Loft, S. (2020). Prospective memory performance in simulated air traffic control: Robust to interruptions but impaired by retention interval. *Human Factors*, *62*(8), 1249–1264. https://doi.org/10.1177/0018720819875888

Yeo, G. B., Frederiks, E. R., Kiewitz, C., & Neal, A. (2014). A dynamic, self-regulatory model of affect and performance: Interactions between states, traits and task demands. *Motivation and Emotion*, *38*(3), 429–443. https://doi.org/10.1007/s11031-013-9376-z

2022 Membership Survey Summary

SIOP Membership Committee Survey Subcommittee: Victoria Stage, Victoria Hendrickson, Harry Kohn, Stephen King, Brett Guidry, Erik Zito, and Duncan Jackson

SIOP regularly conducts a membership survey in order to understand the experience of all members and identify areas for improvement. Prior to 2021, the survey was conducted on a triennial cadence; this is now an annual cadence. This change in cadence was made to have more current data in order to respond to membership and take action in a timely fashion. The most recent survey was sent to membership from mid-January to early February of 2022. Approximately 13% of members participated (1,160), steady with 2021's response rate of 13%. Participants included 531 Members, 110 Associates, 185 Student Affiliates, 103 Fellows, and 33 Retired members. The detailed results of the 2022 Membership Survey can be found on the SIOP Survey website. This survey is the "voice of our membership," and the SIOP leadership team will continue to review and analyze the results to identify areas for action and improvement over the coming year. An executive summary is provided below.

Overall Findings

- Membership satisfaction, a key component to engagement, is strong objectively (75%), though down four points from 2021. SIOP has committed to investigating member engagement over the next year, including areas of volunteering, conference attendance, and other opportunities for individuals to connect.
- Commitment to maintain SIOP membership is high, at 89%, which has not wavered from last year's survey.
- Drivers of engagement suggest the importance of maintaining an inclusive environment while still promoting I-O psychology more broadly. There is an additional need for SIOP to focus on and promote the resources that are available to members.
- Although improvements have been made to the SIOP website, this topic continues to be the lowest scoring item on the survey. Additional focus should be given to the navigation, search functionality, look/feel, and continuous updates around the I-O community. Since the last survey, SIOP's Administrative Office has been working with an IT consultancy to evaluate the needs of our internal and external data storage and presentation systems. The findings of this work will support an RFP for new vendors and, ultimately, a new website that is in direct response to this sentiment.
- Although SIOP members value the connection within surrounding communities, participation in local I-O events remains very low.
- A majority (80%) of members are willing to recommend a SIOP membership to a colleague. However, this has dropped slightly since last year's survey (86%).

Connection to SIOP's Strategic Goals

Goal 1: Collaborate with organization leaders, communities, and policymakers to understand and confront relevant real-world problems and translate scientific knowledge to promote individual and organizational health and effectiveness.

- Scores suggest an opportunity to provide resources to better communicate the impact I-O can have in business settings.
- Comments suggest a need for more opportunities to connect with communities of interest and community development.
- Action since previous survey: SIOP is continuing ongoing work with advocacy firm Lewis-Burke Associates LLC. The firm works to influence legislation to benefit I-O and ensure I-O expertise is included in legislation impacting the workplace or the research enterprise. See PPT here for more information.

Goal 2: Build a diverse, inclusive, and agile SIOP that maximizes our impact through effective people, process, technology, and data infrastructure.

- Scores on technology resources (including the website) are lower compared to previous years, identifying room for much improvement.
- Comments suggest that SIOP can be more active in connecting different groups and including practitioners and academic professionals.
- Action since previous survey: As described above, SIOP has been working with an IT consultancy to characterize needs and identify possible resources to support a new website.

Goal 3: Use and strengthen our ability to gather, energize, and align all those invested in understanding and improving work and workplace issues in ways that inspire action and inclusive dialogue.

- Results show that the Annual SIOP Conference is the most favorable way members connect with the community. Outside the conference, SIOP could do more to support greater interaction and connection between all levels of members.

Goal 4: Create an ecosystem that generates future I-O psychology capabilities to advance and advocate for both science and practice by guiding education and lifelong learning.

- Comments suggest that SIOP could support educational programs (undergraduate and graduate) to build a stronger, more diverse pipeline.
- Comments also discuss a need for developmental resources, designed for both academic and practitioner audiences.
- Action since previous survey: The DIP recently completed its first year, with the mission to increase diversity within the field of I-O psychology, and ultimately SIOP, by increasing the diversity of students who are applying to and accepted into funded I-O doctoral programs. Additionally, the CARMA (Consortium for the Advancement of Research Methods and Analysis) Affiliate Programs are a set of free programs offered in partnership with professional

associations and groups from fields of management. Although their focus is educating faculty and graduate students on discipline appropriate research methods, they are available to all SIOP members through August 31, 2022.

SIOP's Reputation

Survey results suggest that respondents believe that I-O may need some marketing or public relations outside of I-O. Being a member of SIOP is highly regarded as follows:

- Other psychologists (70%)
- Professional setting (56%)
- Outside of I-O (22%)

Additional Results

- 59% of respondents are satisfied with the resources that are given to them as a part of their membership with SIOP.
- 77% of respondents agree that SIOP supports an environment where everyone is welcomed, respected, supported, and valued.
- 89% of respondents intend to renew their SIOP membership before the next conference.
- 81% of respondents are proud to be a part of SIOP.
- 66% of respondents are practitioners.
- 63% of respondents are satisfied with SIOP's effort in promoting I-O psychology.

We truly appreciate and thank all who participated in this year's survey! We ask all SIOP members and leaders to review the full results.

SIOP Fellow Nomination Package Requirements

Stephanie Payne
Former Chair

Neal Schmitt
Chair (2022–2023)

Alexis Fink
Associate Chair

Karen Grabow
Chair-in-Training

SIOP recognizes the outstanding contributions of our members in a wide range of employment settings with election to Fellow status. Detailed instructions and pointers can be found on the SIOP website: https://www.siop.org/Membership/SIOP-Fellowship

On March 15, 2022, SIOP's Executive Board approved a proposal to modify the nomination package for SIOP Fellow. The primary intention for these changes was to reduce the amount of redundant materials submitted. The criteria remain the same.

Eligibility for Fellow (no changes)

- Must be a current Society Member (see SIOP bylaws, Article II: Membership) at the time of nomination and for the previous 2 years and have accumulated 10 years of professional membership in SIOP, inclusive of the year in which the candidate is nominated. (For example, current Members who joined or upgraded to professional membership status no later than 2013 and have accumulated 10 years of professional membership by maintaining their membership since 2013 would be eligible to be nominated no earlier than 2022, at which point they would have the required 10 years of accumulated professional membership. However, nominators are urged to consider whether the potential nominee has made substantial contributions to the field in those 10 years.)
- Must demonstrate evidence that the individual's contributions have had meaningful, sustained, and unusual impact on the field of industrial and organizational psychology.
- Must be nominated by another Society Member or Fellow. Self-nomination is not permitted.

Package Requirements (bolded text reflects changes)

- Nominee CV or resume (with R next to refereed publications)
- **Nominee standalone bio** (1-page limit)
- Nominee self-statement (**extension to bio; 3-page limit**)
- Nomination letter from SIOP Member (2-page limit)
- **Three letters of endorsement (2-page limit each)**
  - At least **2 of the 4 total letters** (1 nomination letter, 3 endorsements) must be **from SIOP Fellows**
- List of contact information for nominator and endorsers

Portal for submission of materials opens August 1, 2022.
The nominator submits all materials to the portal.

Deadline: **November 1, 2022**

2022 Award Winners and Fellows

The following members were honored at the 2022 Annual SIOP Conference. Complete information is available at https://www.siop.org/Portals/84/docs/Awards/2022_SIOP_Salutes.pdf

Dunnette Prize: Robert Hogan

Distinguished Scientific Contributions: Michele J. Gelfand

Distinguished Service Contributions: Evan Sinar

Distinguished Early Career Contributions – Practice: Philip T. Walmsley

Distinguished Early Career Contributions – Science: Joel Koopman

Distinguished Early Career Contributions – Science: Kai Chi (Sam) Yam

Distinguished Teaching Contributions: José-María Peiró

SIOP Humanitarian Award: Walter Reichman

S. Rains Wallace Dissertation Award: Yi-Ren Wang

Honorable Mention: Charlene Zhang

William A. Owens Scholarly Achievement Award: Allison S. Gabriel, Sabrina D. Volpone, Rebecca L. MacGowan, Marcus M. Butts, and Christina M. Moran

Honorable Mention: Nathan T. Carter, Megan Lowery, Rachel Williamson Smith, Kate M. Conley, Alexandra M. Harris-Watson, Ben Listyg, Cynthia K. Maupin, Rachel T. King, and Dorothy R. Carter

M. Scott Myers Award for Applied Research in the Workplace: Josh W. Allen, Jacqueline E. Carpenter, Christopher T. Frost, David Futrell, Carter Gibson, Nick C. Koenig, and Kendrick Settler

Raymond A. Katzell Award in I-O Psychology: David Chan

Joyce and Robert Hogan Award for Personality and Work Performance and Jeanneret Award for Excellence in the Study of Individual or Group Assessment: Adam W. Meade, Gabriel Pappalardo, Phillip W. Braddy, and John W. Fleenor

Wiley Award for Excellence in Survey Research: Robert E. Ployhart, William J. Shepherd, and Sam D. Strizver

Schmidt-Hunter Meta-Analysis Award: Christina Guthier, Christian Dormann, and Manuel C. Voelkle

Joel Lefkowitz Early Career Award for Humanistic Industrial-Organizational Psychology: Alexander Glosenberg

Douglas W. Bray and Ann Howard Research Grant: Christoph Nils Herde, Louis Hickman, Filip Lievens, and Louis Tay

SIOP Small Grant Program:

Liza Y. Barnes, Kristen P. Jones, Alex P. Lindsey, Brent J. Lyons, Sabrina D. Volpone, and Lynda Zugec

Allison S. Gabriel, Jamie J. Ladge, Danielle E. Bradley, Elizabeth E. Stillwell, and Rebecca L. MacGowan

Caitlin M. Porter, Katelyn Cavenaugh, and Kristin L. Cullen-Lester

SIOP International Research and Collaboration (IRC) Small Grant: Yihao Liu, Tianjun Sun, Pauline Schilpzand, and Jack Ting-Ju Chiang,

James L. Outtz Grant for Student Research on Diversity: Karoline M. Summerville

Hebl Grant for Reducing Gender Inequities in the Workplace: Rui-Ling Lee

Zedeck-Jacobs Adverse Impact Reduction Research Grant: Emily D. Campion, Michael A. Campion, James Johnson, Thomas R. Carretta, Sophie Romay, Bobbie Dirr, Andrew Deregla, and Amanda Mouton

Graen Grant for Student Research on Leaders and Teams: Anwesha Choudhury

Leslie W. Joyce and Paul W. Thayer Graduate Fellowship: Tiffany M. Bisbey

Lee Hakel Graduate Student Scholarship: Daniel M. Ravid

Mary L. Tenopyr Scholarship: Yiduo Shao

Irwin Goldstein Scholarship by Macey Fund: Felix George, Jr.

Graduate Student Scholarships: Monique Alexandria Alvarez Domingo, Joseph Regina

Best Lesbian/Gay/Bisexual/Transgender (LGBT) Research Award: Lindsay Y. Dhanani, Taylor Kipp Hall, Carolyn Pham, and Rebecca Totton

SIOP Best International Paper Award: Felix Bölingen, Alejandro Hermida Carrillo, and Ingo Weller

John C. Flanagan Award for Best Student Contribution at SIOP: Mahira Ganster

HRM Impact Award: SeaWorld Parks and Entertainment

Honorable Mentions: NYC Health + Hospital; PepsiCo

2022 SIOP Fellows

Marcia Avedon	Cornelius König
Susanne M. Bruyére	Megan Leasher
Marcus Butts	Liberty Munson
Olexander (Sasha) Chernyshenko	Patrick Gavan O'Shea
Charles Handler	Nathan Podsakoff
Veronica Schmidt Harvey	David Rodriguez
Sarah Hezlett	Cort Rudolph
Jenny Hoobler	Mindy Shoss
Samuel Hunter	Jerel Slaughter
Jeffrey Jolton	Louis Tay

SIOP Award Winners:
Meet Louis Hickman, Douglas W. Bray and Ann Howard Research Grant Winner

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 SIOP's 2022 Douglas W. Bray and Ann Howard Research Grant for research into assessment center methods: **Louis Hickman**.

Louis and his daughter Harper

Share a little a bit about who you are and what you do.
I am currently a postdoc at The Wharton School of the University of Pennsylvania, and in the fall, I will be an assistant professor at Virginia Tech. I research the implications of technology, including machine learning, for workplaces. The focal project is a collaboration with **Christoph Herde, Filip Lievens,** and **Louis Tay**.

Describe the research/work that you did that resulted in this award. What led to your idea?
In this work, we investigate the feasibility of applying machine learning to automatically score assessment center simulations. I learned of some archival data held by our collaborators (Filip Lievens and Christoph Herde) that could be used to investigate this.

What do you think was key to you winning this award?
There is tons of interest in machine learning applications, yet we know very little about what makes a given assessment or dataset amenable to machine learning scoring. This particular assessment center included 18 "speed" role plays that were 3 minutes each, allowing us to investigate not only the validity of machine learning scores for the role plays but also investigating how various factors influence the validity of the machine learning scores. I think that our focus on factors that affected the validity of machine learning helped us a lot.

What did you learn that surprised you? Did you have an "aha" moment? What was it?
We were surprised to find how well machine learning worked considering the small sample size—this assessment center included only 96 assessees. Yet, we were able to capture the majority of variance in the assessment center scores by applying machine learning and natural language processing to all of the 18 role plays. I knew that this process *could* work but did not expect it to work this well.

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?
Well, first, it does seem that assessment center simulations can be automatically scored. This is ex-

citing because it could give many more people access to the formative and developmental feedback provided by assessment centers. Second, even though other factors had minor effects, interrater reliability was by far the largest effect on machine learning score validity. As the machine learning assessment area matures, this can hopefully be a foundational piece of evidence that researchers build upon to understand the factors that influence machine learning model validity.

To what extent would you say this work/research was interdisciplinary?
I believe that all machine learning research is interdisciplinary. What's challenging is that there are no standards yet for appropriate machine learning methods, so you may get opposite perspectives from two reviewers on the same paper (e.g., I love that you used this method; why didn't you try method X). I encourage everyone to engage in interdisciplinary research because many other fields are researching the same topics as us, and we ignore their findings at our own peril.

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?
Many more projects to come on machine learning… Additionally, I am beginning to look at new areas where technology has a major influence on workplace experiences, such as electronic performance monitoring of remote workers.

What's a fun fact about yourself (something that people may not know)?
I love to see/hear live music and have attended about 30 camping music festivals.

What piece of advice would you give to someone new to I-O psychology? (If you knew then what you know now…)
Be patient with and kind to yourself. "I do enough, I am enough." - Dopapod (one of those bands I like to go see live).

About the author:

Liberty Munson is currently the director of Psychometrics of the Microsoft Worldwide Learning programs in the Worldwide Learning organization. She is responsible for ensuring the validity and reliability of Microsoft's certification 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!

SIOP Award Winners: Meet Adam Meade—DUAL Award Winner

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 SIOP's 2022 Joyce and Robert Hogan Award for Personality and Work Performance AND Jeanneret Award for Excellence in the Study of Individual or Group Assessment Awards. Quite the accomplishment!

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

I'm a professor of psychology at NC State University as well as founder of PerSight Assessments. My focus is on innovations in measurement and data analytics using both traditional I-O tools for analysis as well as web development and other programming skills. My coauthors are **Gabriel Pappalardo** (then at NC State), **John Fleenor** (Center for Creative Leadership), and **Phillip Braddy** (then at Center for Creative Leadership).

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

We first presented research on rapid response measurement (RRM) at SIOP way back in 2014. Rapid response measurement presents a stimulus (such as a personality adjective) on screen one at a time and asks the respondent for a simple dichotomous response (e.g., "like me" or "not like me"). The system then immediately presents the next stimulus and the process repeats. On average, responses take about a second each, and with 6–20 stimuli, we can get highly reliable and valid measures. This means we can administer a 20-facet Big Five measure in around 6 minutes. Also, we capture response time and weight responses by the speed of response so that faster responses count more towards the trait score. This allows us to get a lot of information very quickly.

I was led to the idea by being frustrated with the lack of technology in traditional assessment and from seeing innovations in other areas of psychology (like the implicit attitudes test and other assessments making use of response time in interesting ways).

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

I think it was the novelty of the approach, the benefit of huge time savings, as well as the fact that we spent years collecting data supporting the validity and faking resistance of the process over traditional Likert-type responses.

What did you learn that surprised you? Did you have an "aha" moment? What was it?

I initially experimented with using the Implicit Association Test (IAT) to measure personality but didn't find it to be very reliable or valid. The aha moment was realizing that it was just too complicated to try and balance blocks and compute difference scores in the IAT scoring. I realized a simpler approach might be better, especially given that concepts more core to self-image are more accessible (and thus you might expect faster responses to things more core to your self-concept).

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?

I hope the RRM serves as a general framework used to measure all kinds of traits and attitudes. We have already expanded to things like job satisfaction and some other areas of research where faking is likely (e.g., "dark personality"). I have set up an online system that researchers can use to design and test their own RRMs. I hope it will be widely used.

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

Mostly through presentations at SIOP and the journal article in *Organizational Research Methods*. I also try and tell anyone who will listen.

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?

Honestly, me. One thing I have learned is that just having a good idea is not sufficient to have it catch on. You also have to promote it via talks, papers, publications, and so on.

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

A tiny bit in that it uses technology that psychologists are not trained on. I had to take a lot of time to learn how to program in multiple computer languages, learn principles of web architecture and design, and many other things normally associated with computer science. However, I wouldn't call it interdisciplinary at all.

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, absolutely! My lab group continues to develop new RRMs for different traits and constructs. I'm continuing to build web tools to allow researchers from around the world to use the RRM in their own studies and to integrate with things like Qualtrics, MTurk. I have some videos on my home page for anyone interested. I'd love to see more people use it.

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

I have kids as old as 20 and young as 3. I had no idea if I'd be able to get tenure or be any good at this job as I didn't have a long record of publications coming out of graduate school. I only got into 1 (Georgia) of the 10 graduate I-O programs I applied to so I barely made it into the field at all!

Interviewer's comment: So, the message seems to be "never give up, never surrender!"

Interviewee comment: I love Galaxy Quest!

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

Focus on the core foundational stuff rather than more recent research, innovations, and so on. All of the newer stuff (including my work) goes back to the foundations.

About the author:

Liberty Munson is currently the director of Psychometrics of the Microsoft Worldwide Learning programs in the Worldwide Learning organization. She is responsible for ensuring the validity and reliability of Microsoft's certification 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!

SIOP Award Winners: Meet Walter Reichman—2022 SIOP Humanitarian Award Winner

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 SIOP's 2022 Humanitarian Award Winner: **Walter Reichman**. Read on to learn more about his amazing humanitarian work… even better, watch him discuss it! SIOP Humanitarian Award - Reichman - YouTube

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

I am a partner and vice president at OrgVitality, an I-O-based management consulting firm. I am emeritus professor of psychology at Baruch College and the Graduate Center of the City University of New York. I am the main NGO (nongovernmental organization) representative to the Economic and Social Council of the UN from the International Association of Applied Psychology and an honorary member of the SIOP UN team.

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

I won the award for my work at the UN and for my work in establishing employee assistance programs in its early days—employee assistance programs developed from alcoholism programs in the workplace. This was the beginning of management's recognition that the well-being of their employees impacted their success as a business and began focusing on employees with problems.

What do you see as the lasting/unique contribution of your work to our discipline?

I believe my work at the UN brings psychology to the deliberations of the UN and I-O to the workings of the UN itself. I believe I-O in the US has become less US centered and more aware of the needs of working people all over the world and especially in developing countries where work is tenuous, unemployment and poverty high, and exploitation of workers rampant. We have provided awareness of these conditions to SIOP.

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

Colleagues involved with the UN who are leaders at SIOP and my partners at OrgVitality who have always supported and contributed to my work at the UN. I also assisted SIOP in obtaining credentials at the UN 10 years ago.

To what extent would you say your work was interdisciplinary?

My colleagues at the UN are from multiple areas of psychology. We worked together to bring psychology to the UN when we were writing papers about psychology to the commissions of the UN. Every type of psychology has something to offer. Behavior is complex, and we all have something to offer to promote well-being and decent work.

What recommendations would you give to others if they are doing interdisciplinary research?

Learn and listen.

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

I am focusing on working on the precarious workforce: those without steady jobs and vulnerable to unemployment and with very little control over their work lives.

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

I'm old, still alive, vertical, and energetic.

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

Think about ways of improving the lives of workers and recognize the interaction between worker well-being and organizational success. They are intertwined.

About the author:

Liberty Munson is currently the director of Psychometrics of the Microsoft Worldwide Learning programs in the Worldwide Learning organization. She is responsible for ensuring the validity and reliability of Microsoft's certification 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!

Announcement of New Officers for the Alliance for Organizational Psychology

Elections to appoint new officers for the Alliance for Organizational Psychology (AOP) were recently held. Joining the AOP Board are Barbara Kożusznik (President), **Sharon Glazer** (Secretary-General), and Janneke Oostrom (Communications). **Mark Poteet** will continue as Treasurer for a 2-year appointment to assist with continuity of the AOP's activities. The new officers' terms began July 1, 2022, succeeding past President **Gudela Grote** and Communications Officer Bonnie Cheng. Congratulations to the new officers!

Barbara Kożusznik
(President)

Sharon Glazer
(Secretary-General)

Janneke Oostrom
(Communications)

Mark Poteet
(Treasurer)

Obituary: Dr. Robert William Eisenberger

Dr. Robert William Eisenberger, a professor of Psychology and Management & Leadership at the University of Houston, passed away peacefully on May 2, 2022. He was 79 years old.

Bob was a Fellow of five divisions of the American Psychological Association, including the Society for Industrial and Organizational Psychology (Division 14). He was also elected to the Society of Organizational Behavior in 2014. Bob's research on the employee–organization relationship has had a tremendous impact on our scientific community. His most recognized scientific contribution to I-O psychology was his foundational work on perceived organizational support (POS), which refers to the employees' perception of how much the organization values their contribution and cares about their well-being. Since Bob and his students published the first article on POS in the *Journal of Applied Psychology* in 1986, over 1,000 publications on POS, including several meta-analyses, have shown consistent and robust evidence that POS is an important antecedent of employee job attitudes, performance, and well-being. Bob's research on POS has been published in top journals, such as the *Journal of Applied Psychology, Journal of Organizational Behavior,* and *Annual Review of Organizational Psychology and Organizational Behavior*. His original work on POS remains one of the most cited articles in the *Journal of Applied Psychology*. Beyond the scientific community, Bob's research on POS provides HR professionals and managers with evidence-based tactics to maintain an engaged and productive workforce.

In addition to POS, Bob conducted research on employee moral emotions and unethical behaviors in organizations. As a social psychologist, his early work on learned industriousness and the impact of reward on creativity and intrinsic motivation was also impactful and has been published in prestigious journals, such as *Psychological Bulletin*, *Journal of Personality and Social Psychology*, and *American Psychologist*. Bob's refereed articles and chapters have been cited more than 50,000 times, placing him in the top 1% of all scholars in business and management. His research has been funded by several agencies, such as the U.S. Army Research Institute for the Behavioral and Social Sciences, the National Park Service, and the National Institute of Mental Health.

Bob received his bachelor's degree from the University of California, Los Angeles, and his PhD from the University of California, Riverside. Prior to joining the faculty at the University of Houston in 2010, Bob was a faculty member at the State University of New York at Albany (1971–1978) and the University of Delaware (1978–2009).

Bob's academic passion was also reflected by his patient and tireless mentorship of junior colleagues and students, many of whom are now professors and practitioners around the world. Bob taught his students to think deeply and held them to high standards of excellence. Despite his significant achievement, Bob was humble and self-deprecatingly humorous. He will be greatly missed by his family, friends, colleagues, and students.

SIOP Needs Editors: Apply Now

SIOP is now soliciting nominations for the positions of editor of the Professional Practice Series and the Organizational Frontiers Series. The new editors will be selected by the Publications Board and approved by the Executive Board. The selected editors will begin working with incumbent editors beginning **December 2022** and will assume duty beginning **April 1, 2023.**

An editor must be a SIOP Fellow or Member. Any SIOP Fellow or Member can nominate individuals for the editorship. Self-nominations are also welcome. SIOP is committed to diversity, and to that end we encourage nominations involving historically underrepresented groups and international members.

The complete call with nomination instructions can be found on the SIOP website.

Professional Practice Series
Organizational Frontiers Series

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 6, 2022, through June 8, 2022. We share them on our social media and in this column, which you can use to find potential collaborators, spark ideas for research, and keep up with your fellow I-O colleagues.

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.

Post-Pandemic-Related Items

Lynda Zugec on workplace changes postpandemic: https://theshow.kjzz.org/content/1763745/covid-19-restrictions-are-easing-some-workplace-changes-are-here-stay

Joseph A. Allen on getting the most from modern meetings: https://corp.smartbrief.com/original/2022/03/hybrid-meetings-3-tips-to-get-the-most-out-of-this-format

Allen Gorman on the changing workforce: https://www.uab.edu/news/youcanuse/item/12697-how-the-covid-19-pandemic-changed-society

Gena Cox on the postpandemic workplace: https://www.bizjournals.com/bizjournals/news/2022/03/27/covid-pandemic-workday-remote-small-business.html

Joe Allen on modern workplaces, meetings, and not taking expertise for granted: https://player.fm/series/my-favorite-mistake-careers-business-growth-lessons-learned/meetings-and-speaking-experts-karin-reed-and-joe-allens-favorite-workplace-mistakes

Gena Cox on proximity bias: https://www.bizjournals.com/bizjournals/news/2022/03/22/remote-work-hybrid-proximity-bias.html

Eric Sydell on how employers and employees are reworking work together: https://medium.com/authority-magazine/the-great-resignation-the-future-of-work-author-dr-eric-sydell-on-how-employers-and-employees-ar-cf95837b7c7a

The Great Resignation

Gena Cox on employee retention: https://www.fastcompany.com/90702017/5-strategies-for-retaining-a-valued-employee-whos-thinking-about-leaving

Anthony Klotz on the status of the Great Resignation: https://www.msn.com/en-us/money/markets/the-great-resignation-has-changed-the-workplace-for-good-were-not-going-back-says-the-expert-who-coined-the-term/ar-AAX74R8

Workplace Wellbeing
Michael Leiter on how to deal with burnout: https://www.wpr.org/listen/1923626

Ludmila Praslova on how to build a healthy workplace: https://www.fastcompany.com/90730688/to-build-a-healthy-workplace-you-need-a-toxic-culture-alarm?partner=feedburner&utm_source=feedburner&utm_medium=feed&utm_campaign=feedburner+fastcompany&utm_content=feedburner

Melissa Doman on how to handle well-being shaming at work: https://player.fm/series/hurdle/hurdlemoment-an-expert-on-how-to-handle-wellbeing-shaming-at-work

Tammy Allen and **Xinyu (Judy) Hu** on workplace strain and anger: https://money.yahoo.com/angry-now-132742445.html

Gena Cox on burnout: https://fortune.com/2021/11/23/workplace-employee-burnout-patterns-behavior/

Denise Rousseau and Tammy Allen on salary transparency: https://www.msn.com/en-us/lifestyle/lifestyle-buzz/is-salary-transparency-the-answer-to-workplace-stress/ar-AAWepF8

Allison Gabriel on anxiety and strategies to reel it in: https://player.fm/series/hurdle/hurdlemoment-how-to-navigate-the-anxiety-trap

Tammy Allen, **Gwenith Fisher, Leslie Hammer, Jeff McHenry,** and **Fred Oswald** on making employee health a priority: https://www.apa.org/topics/workplace/organizations-improving-employee-mental-health

Yon Na on overstimulation: https://www.msn.com/en-us/health/wellness/if-youre-feeling-overstimulated-by-life-right-now-youre-not-alone/ar-AAXI6u4

John Kello on workplace cultures that support and sustain mental, emotional, social, physical, and financial wellness: https://medium.com/authority-magazine/working-well-paulette-ashlin-dr-john-kello-of-ashlin-associates-on-how-companies-are-creating-7c92bce26116

Melissa Doman on how to cope with tragic news when you're at work: https://www.buzzfeed.com/meganeliscomb/coping-with-tragic-news-at-work?origin=web-hf

Diversity, Equity, and Inclusion
Cort Rudolph on generational prejudice in the workplace: https://hbr.org/2022/03/is-generational-prejudice-seeping-into-your-workplace

Beverly Tarulli on gender differences and perceptions of pay: https://www.foxbusiness.com/economy/young-women-are-making-more-money-than-young-men-in-nearly-2-dozen-us-cities-study

Ludmila Praslova on ensuring marginalized workers get time to recharge: https://www.fastcompany.com/90741054/resting-while-stigmatized-7-ways-to-ensure-marginalized-workers-get-time-to-recharge

Miscellaneous

Michael Frese on personality traits toxic company founders may share: https://www.wellandgood.com/personality-traits-toxic-founders/

Gena Cox on leadership: https://www.forbes.com/sites/edwardsegal/2022/03/24/leadership-lessons-from-madeleine-albright-the-first-female-secretary-of-state/?sh=15729ede7b5e

Neil Morelli and **Maia Whelan** on validity in hiring assessments: https://www.recruiter.com/recruiting/myth-busting-the-truth-about-validity-in-hiring-assessments/

Jack Wiley on what employees want most from their manager: https://www.wishtv.com/news/unphiltered/unphiltered-what-employees-want-most-from-their-manager/

Membership Milestones

Jayne Tegge, Volunteer and Member Services Manager

Please welcome these new SIOP professional members:

Francine Avinger	Julia Grove	Rachel Pascall-Gonzalez
Sheena Barlow	Amy Gurske	Cyriac Pattathil Joy
Heinz Bartnick	Nicole Howard	Rob Patterson
Ian Bazzoli	Dafne Huacuz	Elizabeth Pears
Greg Beecher	Rachel Ingel-Champion	Vernita Perkins
Ethan Bernstein	Jermaine Irby	Erik Pesner
Martin Biskup	Md Rashedul Islam	Nivedita Prabhu
Angela Blake	Alisha Jasmer	Jennifer Ray
Katie Boyd	Constance Jensen	Laura Rees
Jamie Brisbin	Emery Johnson	TauWana Robinson
Courtney Bryant	Laura Jordan	Aspen Robinson
Kevin Campbell	Anne Kato	Maura Roggero
Daniel Caro	Cynthia Kelly	Daniel Samosh
Min Carter	Gary Kesling	Bailey Schrock
Robin Chetri	Steven Khazon	Latrice Scott
Patrick Clark	Jeffrey Kiel	Emily Shaffer
Kathleen Coelho	Tracy Kincaid	Nicholas Simmons
Joshua Cole	Kahlil King	Nic Snyder
Melissa Cordero	Edward Klink	Sarah Stawiski
Mary Danielak	Eugene Koh	Alexander Stemer
Amanda Deacon	Mikhail Koulikov	Jessica Strayer
Zechariah Dice	Nicholas Kovacs	Tianjun Sun
Rachel Dreibelbis	Rick Laguerre	Larry Thomas
Susan Drobka	Brittany Lambert	Asmi Vohra
Victor Ellingsen	Nicole Landowski	Carol Wallsworth
Brenda Ellis	Lauren Locklear	Christina Walsh
Erika Esbri	Emilea Lopez	Yi-Ren Wang
Paola Evies	Carson Lopez	Scott Weaver
Audrey Faine	Gabrielle Lopiano	Zoe Weller
Teodora Fedirko	Megan Lowery	Karen West
Erin Finley	Christine Lukban	Tiffany Wheet
Patrick Gallen	Aaron Manier	Sam Wilgus
Quentin Gao	Michael McKenna	Jason Wilkins
Rebecca Garden	Jessica McKenzie	Taylor Wolgamott
Mingang Geiger	Nikita Mikhailov	I-Heng Wu
Florence Georgeamiekumo	Mitchell Miller	Heng Xu
Richanne Gerstner	Pati Montojo	Futoshi Yum
Ryan Gertner	Nicole Morales	
Leya Ghai	Brett Neely	
Michelle Goettsche	Shenica Nelson	

We also welcome these new Sterling Circle members.

Mindy Bergman Wendy Boswell Kimberly Cummings Bryan Edwards Michael Fetzer Jennifer Frame Hans Froslee Amy Hayes	M. Audrey Korsgaard Keith McCook Lorin Mueller Morrie Mullins Carnot Nelson Larry Norton Tatana Olson Richard Posthuma	Larry Richard Teresa Rothausen Janine Waclawski Michael West James Westaby Jane Williams D. Carol Wynne

Congratulations to the following former Associate members who have upgraded to full professional membership!

Sertrice Grice Daniel Maday	Margi Williams Christopher Stone	Erica Barto