Editorial

Features

Reports

What Will Tomorrow Hold?

./Steven Toaddy

Between when I write this and it goes live, I don't know how the world will change yet again. That's always the case, I suppose, but I suspect that you suspect that it is more the case in these days than it was a year ago. Presently we are experiencing both the aftereffects of a sudden and unbidden shift from that with which we had all grown accustomed to some new and relatively static world on the one hand and perhaps the beginning of a gradual and (in my opinion) too-long-coming shift from the world that we had accepted as inevitable to the one that, with the advantage of hindsight, seems to have been so obviously the one that everyone deserves.

I am seeing a strange mix of activism and isolation, of self-education and self-care. I see people being called upon to do more than they ever have in my lifetime, excepting those tasks that fall in the categories of attire and commute.

My dumbfoundedness aside, we all have work to do—for pay or otherwise—so let's get to it. In this issue, we have a good number of "well, COVID-19 is a thing, so let's get back to work" pieces, like the TIP-TOPics piece, Max Classroom Capacity, and the Local Groups piece. We have some recommendations on how to move forward, largely irrespective of the ongoing pandemic, in Opening Up and an engaging piece about memes in I-O. For my money, the Foundation Spotlight piece in this issue best captures the times in which we are living and gives us some valuable advice as to how to make this world a better one using those I-O skills that bring us all together in the first place.

Catch you in 3 more months. Let's see if we can make them count.

President's Column: Moving Forward

Georgia T. Chao

If you can't fly, run
If you can't run, walk
If you can't walk, crawl
But by all means, keep moving.

Martin Luther King, Jr. 1967 speech to students
at Barrot Junior High School in Philadelphia, PA

We are living in tumultuous times. The COVID-19 pandemic has claimed over 100,000 American lives, job losses are at a historic high, and racism continues to plague our country. It is with these thoughts that I write my first President's Column. My overwhelming reaction is that we need to move forward, to keep moving to improve our current situations with our health, our livelihoods, and our hearts. Thus, I decided that my presidential theme would be "Moving Forward." Moving forward, I-O psychology should address how the pandemic may leave us with new and permanent changes in many jobs and organizations. Moving forward, I-O psychology should address how we can tackle racism at work, not only with cases of police brutality but with all kinds of discrimination that harm individuals and organizations. Moving forward, SIOP itself needs to rebuild from the cancelled conferences that bring us together. Recovery will be slow, but I am reminded of Martin Luther King Jr.'s words above—to be persistent and to focus on progress.

As the premier organization of I-O psychology, SIOP will keep moving forward. One giant step forward occurred when we hired Tracy Vanneman this year as SIOP's fourth executive director. Under Tracy's leadership, we were able to minimize financial losses from three cancellations: the SIOP Annual Conference, the Leading Edge Consortium, and the People Analytics conference. These cancellations were unprecedented. However, thanks to the hard work from **Eden King**, **Scott Tonidandel**, **Elizabeth McCune**, **Alexis Fink**, and others, a virtual conference was born that made many offerings from the annual conference available in June.

Another example of moving forward is SIOP's statement against racism. After George Floyd was killed by police officers in Minneapolis, MN, several members wondered if SIOP should release a statement. Within 4 days: (a) this was discussed by the Executive Board, (b) several drafts were circulated, (c) a formal proposal was brought to a vote for all 17 members of the Executive Board, (d) this was discussed again, (e) a unanimous vote to support the statement developed, and (f) the statement was emailed to all members. I have served on many SIOP committees and boards, but I have not seen such quick action before! Many thanks to all who helped make that statement a reality. Our statement stands with similar statements from many professional organizations, including APA, APS, and AoM. The protests related to Black Lives Matter and to George Floyd's death might signal that this time, things might be different in how America deals with racism. It is important to SIOP because it involves organizations and people who are at work. This speaks directly to our mission to monitor and address "challenges to the understanding and practice of industrial-organizational psychology in organizational and work settings." Police organizations can benefit from good research and practice in I-O psychology. We can help police organizations move forward with good selection, good training, good supervision, good leadership, and good organizational cultures that can heal the harm from racism. Moving forward, SIOP can further advance our science and practice related to all forms of discrimination at work and build a more diverse and inclusive work environment for everyone.

As we continue to endure the problems related to our health, economy, and society, I'd like to close this column with a positive story. Before our annual conference was cancelled, **Modern Hire** sponsored the production of 5,000 conference bags for SIOP 2020. What does one do with 5,000 conference bags that are no longer needed? SIOP and Modern Hire partnered with U.S. MakeIt Labs to convert the bags to face masks. The nonwoven polypropylene material of the bags is an ideal material for commercial, medical-grade masks. These masks were donated to help fight against the COVID-19 pandemic. It's a great example of moving forward!

Stay safe, stay healthy.

Max. Classroom Capacity: What I Learned by Failing Homeschool

Loren J. Naidoo
California State University, Northridge

Perhaps you've noticed that we are living in remarkable times. This realization may have been prompted by several related observations, as it was for me: maybe the tipping point was your hands, chapped from frequent washing and sanitizing; maybe it was the credit card statement with 15 purchases from "Amazon.com," 10 from "AMZN Mktp," and nothing from anywhere else; maybe it was the fact that you haven't hugged your parents, grandparents, siblings, and so on, for too long. I sincerely hope it's not because you lost your job or because a friend or family member got sick or died.

In terror management theory (TMT) terms, most of earth's population has received a giant mortality salience induction (read Goldenberg et al., 1999, for example, to understand what TMT theorists might predict as a result—I watched *Chernobyl* on HBO…). However, despite (or maybe because of) the challenges we face as individuals and as a global community, this crisis presents a great opportunity to reflect on what is important to us and why we are here, and to strengthen our commitment to our values and personal missions—a "Big Reset Button." For the readers of this column, that probably involves our identities and roles as teachers.

Nothing has made me question my identity as a teacher more than my bumbling attempts to homeschool my own children. It's incredible how much more difficult it is to be an elementary school teacher of my own kids than to be a university professor to adults who I barely know! This experience has reinforced for me three insights about teaching that are applicable to teaching under/graduate I-O psychology. But first, some context: I have three kids, two of whom are home from elementary school but are still participating in Zoom class meetings several times per week. My third child is home from daycare. My wife (who is also an academic) and I trade off work and kid time, so when she's working, I'm watching the kids alone and vice versa. We consider ourselves to be extremely fortunate to have two stable jobs and to be living in a safe location.

1. Support autonomy

As any parent knows, there's almost nothing more difficult than trying to make a young child do something that they don't want to do. You might "win" that battle (e.g., "Brush your teeth or no more dessert!"), but there's a price to pay, and kids usually find creative ways to even the score (at least mine do)! My early insistence on my kids completing their schoolwork in an order and manner that happened to be convenient to ME resulted in angry protests, threats, counterthreats, frustration, hurt feelings, and ultimately very little actual schoolwork completed. Then I realized that my approach was a complete failure, and we started having morning meetings in which the kids would map out what they were going to work on each morning and in what order. I'd be lying if I said it's been smooth sailing ever since, but this nonetheless represented a massive improvement.

Although the consequences are perhaps less visible in a university classroom, I think there's *always* a price to pay for undermining a person's autonomy. A pessimist might say that the students we see in our university classes arrive after having been subjected to an entire primary and secondary education system that has eroded their desire and/or expectations for autonomy, and that may have "weeded out" the students with the strongest need for autonomy. I'm not that pessimistic. I think that our students do want autonomy, and therefore we should try to support that need. We know from research in I-O psychology

that increased job autonomy generally has many benefits for workers (e.g., Humphrey et al., 2007), and there seem to be many benefits of instructor autonomy support including student academic success and well-being (e.g., Gutierrez & Tomás, 2019). There are many ways that we can increase student autonomy (or at least, to minimize how much we undermine it). For example, we can provide students with choices for topics of their assignments. Yes, this might make grading student assignments more challenging, but, arguably, the primary purpose of education is to educate, not simply to differentiate students by assigning grades. We can encourage students to participate in class discussions in which they can raise issues or questions that are important to them. More extreme options include involving students in curriculum decisions—for example, reserving the last weeks of class for topics of students' choosing based on their interests. We can also try to avoid course design decisions and communication strategies that result in a punitive or competitive classroom environment. For example, it's much more difficult for students to feel that they are autonomously pursuing their educational goals when their instructors emphasize how hard the class is, how poorly the class is performing, how most students will fail the upcoming exam, and so forth. In other words, it's harder for students to focus on their own learning when the instructor emphasizes normative standards for performance and the dire consequences of poor performance. Especially in a time when many people feel that their lives are out of control due to Covid-19, providing our students a modicum of autonomy seems like an easy thing to do.

2. Be flexible

My 6-year-old was required to watch YouTube videos of teachers who were very slowly and carefully reading books that he was able to read easily. He was bored—it was torture for him! He figured out how to skip ahead in the video, but in doing so, he would miss some helpful tips on how to read (i.e., how to use pictures to understand the story). I went through a whole cycle of encouraging, cajoling, arguing, (deep breath, deep breath…), distracting, reopening, before my wife had the brilliant idea of simply showing him how to watch videos at faster speeds. Problem solved! Of course, that kind of individual accommodation is easier when you have only three students to worry about, but I think there's tremendous value in trying to put ourselves in the shoes of our students and reflecting on how we may reasonably accommodate their requests. Our students are facing a lot of the same adjustment issues that we are, but they face additional challenging circumstances with which most professors don't have to deal. For example, some students were forced to leave their friends and move back home with their parents—the horror! Some few were left isolated in their otherwise deserted dorms. The less fortunate ones were rendered homeless. Many of my students have lost the jobs they need to support themselves financially. They may be struggling with mental illness without access to the on-campus resources that help them cope. On the academic side, many student research projects, theses, and dissertations are in limbo due to suspended research subject pools or other disruptions. Remember the excitement and uncertainty that surrounded your college graduation and having to decide what to do with the rest of your life? How much worse must it be to graduate into a massive global recession/depression? As discussed earlier, unlike their professors, students generally don't get to choose how their classes are structured or what work is required of them. They do have to follow the rules that are imposed on them or accept lower grades, risk losing their financial aid, risk failing to graduate, and so on.

Most universities moved to a virtual learning modality in which many classes required interaction via video conference. But, depending on their circumstances, students may not have easy access to the computers, webcams, and high-speed Internet necessary for video conferencing. They may not have a quiet room in which to attend online meetings. They may have family circumstances that make them leery of turning on their webcams out of embarrassment of their living conditions or for other privacy reasons. They may have financial burdens that have forced them to work more hours, making it increasingly difficult to attend scheduled classes. I think it's more important than ever to be as flexible as possible with

our students. For example, when a couple of my students recently expressed discomfort at the prospect of taking part in an exercise in which small groups of students would practice engaging in certain leadership behaviors in a Zoom meeting, which they would record and submit, I created an alternative assignment for those students which didn't require them to be recorded. Yes, it was a bit more work for me, but it didn't fundamentally change the educational outcome and probably made a huge difference to those students. I didn't understand exactly why they felt uncomfortable, and I didn't ask, but I trusted that students would not ask for such accommodations frivolously.

3. *Make it relevant*

Teaching a 4-year-old the abstract principle of subtraction is close to impossible. Asking the same 4-year-old "if we gave you five chocolate covered berries, and you ate one, how many would you have left?" is relevant, salient, and fun! This kid can't tell you anything about subtraction, but he probably could prove Fermat's last theorem if we could figure out how to express it in terms of chocolate covered berries. Similarly, asking my middle child to practice his handwriting was like pulling teeth. Suggesting that he and I coauthor our own Star Wars choose your own adventure book was the greatest idea ever! A final example: Fractions are boring for my 9-year-old. Deciding on which water-to-flour ratio to use for the baguettes that we bake weekly and how to apply that ratio to figure out how many grams of each ingredient we need—sooo interesting!

Given how applied our field is, I-O psychologists certainly aren't new to the concept of incorporating "real-world" examples in our classes. However, not all of our undergraduate students have significant work experiences to fall back on to understand workplace examples. In contrast, all of our lives have rapidly and radically changed as a result of Covid-19. You couldn't ask for a more universally salient work-related issue to talk about in class right now. On top of that, as I-O psychologists, we have so much to offer to our students at this moment! Here are just a few examples off the top of my head of aspects of Covid-19 that are potential discussion topics in I-O classes:

- *Leadership*: What principles of effective leadership do you see being enacted or ignored by prominent national and local leaders in their efforts to contain the spread of Covid-19?
- *Decision making*: What biases and heuristics may underly individuals' decisions to follow or ignore social-distancing directives?
- *Communication/persuasion*: In what ways are principles of effective persuasion evident in communications about social-distancing guidelines in your state, and in what ways might they be improved?
- *Work–family balance*: What are the likely effects of forcing most of the workforce to work from home on spillover and well-being? Do I edit out of my video lecture my 4-year-old busting into my home office and telling me I HAVE to see the caterpillar he just found or keep it in as an illustration of just how blurred the lines between family and life have become?
- *Selection:* Will we see wide-ranging changes to selection practices if large segments of the workforce continue to work from home? Will organizations reconsider their selection criteria given the changing nature of the work environment?
- *Remote work and virtual teams:* What are some key best practices in remote work? What adjustments do teams need to make to the virtual modality? How many times should someone be allowed to loudly answer their cell phone during a Zoom meeting before the meeting host mutes them? (Answer: zero times! Get on the ball, meeting hosts!)
- *Workplace safety:* What responsibilities do employers have to ensure the safety of their workplaces during a pandemic and what actions can they take to do so?

- *Careers*: What issues should our undergraduate and graduate students consider when contemplating entering the workforce after graduation?

By the way, SIOP has a really nice web page with links to white papers by I-O psychologists on practical advice for adjusting to Covid-19. If the decision of my employer, the California State University system, is any indication of future decisions by other universities, many of us will be working from home for the rest of 2020. I have written Max. Classroom Capacity columns on preparing to teach online, April 2016, and teaching hybrid and online classes, April 2017. I hope you consider reading those in preparing for your next virtual class.

A special thanks goes to my wife and three children for inspiring, contributing to, and editing this column!

In the meantime, dear readers, please send me your comments, questions, and feedback. Stay safe and healthy! Loren.Naidoo@CSUN.edu

References

Goldenberg, J. L., Pyszczynski, T., Johnson, K. D., Greenberg, J., & Solomon, S. (1999). The appeal of tragedy: A terror management perspective. *Media Psychology, 1*(4), 313.

Gutiérrez, M., & Tomás, J. M. (2019). The role of perceived autonomy support in predicting university students' academic success mediated by academic self-efficacy and school engagement. *Educational Psychology, 39*(6), 729–748. https://www.tandfonline.com/doi/full/10.1080/01443410.2019.1566519

Humphrey, S. E., Nahrgang, J. D., & Morgeson, F. P. (2007). Integrating motivational, social, and contextual work design features: A meta-analytic summary and theoretical extension of the work design literature. *Journal of Applied Psychology, 92*(5), 1332–1356.

**SIOP Award Winners: Meet the Team Who Won the M. Scott Myers Award
for Applied Research in the Workplace!**

Liberty J. Munson

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

This quarter, we are highlighting the M. Scott Myers Award for Applied Research in the Workplace awarded to a team: **Debby Gebhardt** and **Todd Baker** from HumRRO and Marilyn A. Sharp, Stephen A. Foulis, Jan Redmond (not pictured), Peter Frykman, and Edward J. Zambraski from the U.S. Army Research Institute of Environmental Medicine.

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

Deborah Gebhardt (principal scientist) and Todd Baker (senior scientist) are members of the HumRRO (Human Resources Research Organization) staff. Our backgrounds are in biomechanics, anatomy, and industrial and organizational psychology. We have been developing, validating, and implementing physical performance, ergonomic, and work environment assessments for over 25 years. During that time, we have provided services in the public, private, and military sectors to clients such as *Fortune* 500 companies (e.g., AT&T, Union Pacific Railroad, Walmart), U.S. Army, U.S. Air Force, TSA, and numerous state and county organizations.

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

In 2013, the United States Secretary of Defense and the chairman of the Joint Chiefs of Staff for the Department of Defense (DoD) rescinded the 1994 Direct Ground Combat Definition and Assignment Rule, thus providing women the opportunity to serve in direct combat roles. The U.S. Congress mandated that the standards for each combat arms job be based on documented job requirements and that there should be no "artificial barriers" to women's entry into a combat arms career field. We conducted a 4-year study to develop and validate an entry-level assessment that all personnel entering the army must pass to be placed in a specific military occupational specialty (MOS) job. The project involved participation of over 6,000 soldiers across the phases of the study. The job analysis included observations of over 400 soldiers performing combat arms tasks, focus groups, job analysis surveys, and biomechanical and physiological assessments. Following the job analysis, we developed tests and criterion measures, and conducted reliability, concurrent validation, and predictive validation studies.

What do you think was key to winning this award?

The key to winning the award was the impact of this project on the future of the army personnel and the care and detail put into the study.

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

We have always known that the success of a validation project requires input from all parties who will be affected by the outcome and the cooperation of the client, staff, and participants. However, the magnitude of this project and the detailed data collection was a once-in-a-lifetime opportunity in which interdisciplinary backgrounds provided the means to generate a product that has already reduced attrition in basic military training and reduced injuries.

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, etc.?

The army can recruit and place personnel into the MOSs commensurate with their physical capabilities, which in turn will decrease attrition from military training. This project demonstrated the need for an interdisciplinary approach to achieve an assessment that provides a substantial return on investment.

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

This project received not only the M. Scott Myers Award, but also multiple awards from the Army. Others became aware of it through SIOP publications and the SIOP conference. HumRRO also published the award on its website, and the army published its awards in their publications.

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?

Paul Sackett wrote a letter of recommendation as did several army personnel, such as Mike McGurk who is the director of research, U.S. Army CIMT at the Training and Doctrine Command (TRADOC).

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

This project was multidisciplinary from the start. To develop physical performance assessments, one needs backgrounds in I-O psychology, biomechanics, and exercise physiology. The HumRRO and army team had personnel with this expertise. We also added army disciplines related to operations, training, epidemiology, and combat deployment.

There were two major challenges. One involved developing assessments that addressed the physical demands across the MOSs and that met the army's constraints for administering the assessment with limited resources and space. The second challenge was acquiring subjects ($n =$ 6,000+) for each project phase while meeting the human subjects' requirements. This challenge was made more difficult because women were not in combat arms MOSs and had to be recruited from other MOSs. The army has a very rigorous human subjects process that was adhered to

for each phase. Although we had to learn new army acronyms, a primary challenge centered around gathering data in a manner that ensured the safety of the subjects.

Research in the 21st century that benefits an organization must be interdisciplinary to ensure that we provide the best outcomes. The quality of this project reflects the use of an interdisciplinary approach.

Our recommendations include (a) gain a background knowledge of the other disciplines; (b) respect their discipline as equal to yours; (c) share approaches and discuss combining approaches to yield the best outcome; and (d) learn as much as you can about the other discipline, be curious, ask questions.

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?

We have several projects in this area with the U.S. Air Force, State Department, and several cities/counties.

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

We (Debby and Todd) were locked in a county jail during a site visit (accidentally).

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

Never assume you are the smartest person in the room…you are not. Further, learn from everyone around you regardless of their job title.

About the author:

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

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

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

SIOP Award Winners: Sidney A. Fine Grant for Research on Job Analysis

Liberty J. Munson

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

This quarter, we are highlighting the winner of the Sidney A. Fine Grant for Research on Job Analysis, **Evan Mulfinger.**

What award did you win? Why did you apply (if applicable)?

The award was the Sidney A. Fine Grant for Research on Job Analysis. This grant was an opportunity to fund a project I have been interested in for several years that I believed had the potential to make a quality contribution to I-O and other fields that rely on O*NET data. I believed providing better access to the O*NET could encourage it to be used more frequently by groups such as researchers. ***Note:*** *This project is ongoing and is to be completed by January 2021.*

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

I am a 4th year PhD student in I-O psychology at Rice University. My research interests include measurement development and validation, personnel selection, individual differences (especially personality), and job performance (especially counterproductive work behavior).

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

o   Emphasizing the practical utility of creating this application by describing how it will provide unparalleled access to the rich information provided within the O*NET database
o   Emphasizing that it will be useful for multiple audiences including researchers and practitioners within and outside of I-O (e.g., career counselors)
o   Providing detailed steps as to how I will accomplish this task such as a description of the R Shiny training I plan to complete
o   Providing a detailed description of what the final application will look like
o   Emphasizing that this tool will be user-friendly, free to use, and openly accessible

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

I see this app as having the potential to increase the number of people that use the O*NET database in research and practice. I also believe it has the potential to serve as a popular method used to access O*NET data for purposes outside of research.
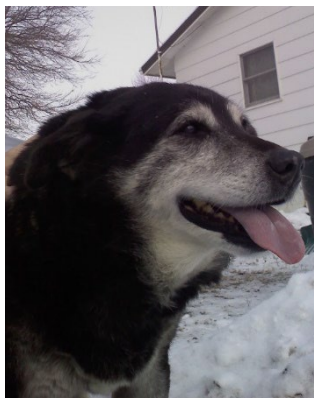
What's a fun fact about yourself (something that people may not know)?

I grew up in the country and was fortunate to have a pond on our property. As a kid, I frequently walked down to the pond to fish, catch frogs, climb trees, and

skip rocks. During one solo trip, a dog with no collar approached me and the farm cats that accompanied me. It first seemed that the dog was being aggressive toward the cats. I attempted to scare the dog away, so it wouldn't attack me or my cats. Despite my efforts, the dog continued to approach me and my cat company. As I left the pond, the dog continued to follow our brigade and eventually arrived at my house. It was there that I realized the dog was not a threat and was simply trying to befriend me and my cats. Soon after, I named the dog Skye, and she spent an amazing 13 or so years with us. In Skye's later years, she became less mobile and often settled in a particular place on our property for long periods of time. This resulted in my dad building multiple dog houses to ensure she had shelter wherever she lay. Skye will forever be remembered as a first ballot Hall of Fame pooch.

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

Don't forget about psychology's old friend—measurement. We can do all sorts of fancy statistical analyses, but they will provide no utility if the measures being analyzed are terrible. If you are using existing measures, evaluate existing evidence for its reliability, validity, and fairness. If you are developing a new scale, give due attention to item writing, and remember the importance of piloting more items than you intend to use. Before developing a measure, pay particularly close attention to content validity by remembering that you are trying to adequately sample from the domain of all possible content for that construct. Think of the content domain as a circle and the items as smaller circles that take up space inside the larger content circle (and overlap to varying degrees). It is also important to remember that validation is an ongoing process (i.e., an argument) that is often iterative.

Another piece of advice is to carefully plan out your research studies prior to collecting data. Give due attention to your research questions, hypotheses, relevant theories, and methods. Discuss with colleagues why you believe the research is important and why the work could be considered a contribution to the field. Last, try to develop a deep understanding of the role of theory within psychology as early in your studies as possible. Understand the viewpoints of those criticizing psychological theories, and be able to discern good theory from bad.

About the author:

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

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

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

Local I-O Groups Managing Through COVID-19

**Peter J. Rutigliano, Ginger Whalen, Anna Erickson, Lindsay R. Perez, Lori Wieters,
Comila Shahani-Denning, Roza Jankovic, and Kevin Nilan**

It is hard to believe how much has changed since the last *TIP*. Our usual means of staying connected with friends, family, and colleagues has changed quite a bit. But through any great tragedy, we show our strengths and sense of resolve. The Local I-O Groups are doing just that.

Local I-O Survey

As I-O geeks, let's start with some data. Earlier in the year, the Local I-O Committee, and new chair Anna Erickson, collected feedback from local I-O group leaders to learn more about how they would like connect with each other. This first of its kind survey was sent to leaders throughout the US with whom we have created alliances.

The results were quite encouraging. Of 31 leaders, 21 leaders responded to the survey resulting in a strong 68% response rate. Leaders voiced strong agreement in the desire to connect with other group leaders via technology:

- 100% expressed interest in an email discussion list
- 95% expressed interest in a phone conference
- 95% expressed interest in meeting in person at the annual SIOP conference
- 89% expressed interest in using a social media platform
- 84% expressed interest in using a video conferencing technology

What makes these results interesting is this survey was conducted *before* COVID-19 was rearing its ugly head. We think that there has been a growing trend in our profession to connect with like-minded people at local and regional levels. Having the option to meet virtually as well as in person has been a topic of conversation for quite some time for group meetings, and having the ability to meet virtually is also true for the leadership.

Why do the I-O group leaders want to meet? The most common reasons for wanting to connect include

- Sharing best practices, tips, lessons learned, and tools for creating and sustaining an effective group
- Discussing ideas for engaging and providing value to group members
- Networking
- Finding areas for mutual support across groups

Local I-O Response to COVID-19

Our desire to meet with our I-O colleagues remains strong, but as can be seen in our survey results, many of the reasons for gathering do not have to be thwarted by a pandemic, whether it be the desire to share recent trends or the need to simply interact with one another. At this time, increased communication is paramount. Many organizations are conducting COVID-19-specific surveys. At the beginning of the pandemic we needed knowledge about people's reaction to the virus and to create plans should things go badly. After our situations had changed, there was need for communicating with employees on work-from-home policies and investigating if people had the tools and information they needed to

continue working in their job. Additionally, we needed to characterize the context of increased pressures with children home and with technology difficulties. Most recently organizations have been communicating about returning to work; how can we do this with the new ways of working while remaining safe and avoiding additional outbreaks?

All of these issues are important considerations. As I-O professionals we need to meet now more than ever. This unprecedented event requires us to think in different ways and to share what we have learned. What works? What hasn't worked? How are things different by industry? To that end, a number of groups have been forced to get creative to continue to meet. Below we have a few examples of local I-O groups who took the initiative to continue to meet to share and continue our network.

Arizona Collaborative—Virtual Meetings Increase Participation

The Arizona Collaborative is designed to bring practitioners, academics, and students together to provide monthly professional development opportunities, share best practices, network with other professionals, and provide actionable insights that drive positive change in organizations. They have approximately 200 followers on LinkedIn and a steady group of full-time members who participate each month. Just like the rest of the nation, when COVID-19 entered the scene in Arizona, they had to make a shift from meeting primarily in person with a small virtual component to exclusively virtual connections. The board of the Arizona Collaborative places a high value on connection and relationship, so the thought of indefinite online meetings was a bit discouraging, at first. However, what has blossomed out of the virtual meetings was something that they could have never imagined. Through the actions of the meeting facilitator placing an emphasis on connection and community during this time, they have increased their attendance/participation, continued to foster collaboration, and broadened the scope of businesses and professionals they can support through monthly meetings. What could have interrupted a collaborative and supportive community instead brought more opportunities and connections to the table. When the "new normal" arrives, the Arizona Collaborative will continue to practice the virtual lessons they have learned and ensure this aspect remains an integral part of their organization.

MIOP—Hosts Virtual Happy Hour

Memphis Industrial and Organizational Psychologists meets quarterly and serves around 40 I-Os in the Memphis and surrounding area. In lieu of their regular post-SIOP conference "data dump" meeting, MIOP hosted a virtual MIOP Happy Hour. While sipping on the adult beverage of their choice, MIOP members participated in a Zoom conference call and discussed how COVID-19 has impacted work in academic, organization, and consulting settings. Highlights included

- A significant **increase in meetings** required to keep up with the constantly changing news regarding health and the economy to discuss impact on day-to-day actions and returning safely to work.
- Use of **surveys** to find out employee engagement and perceptions about work productivity.
- Perception that **productivity has increased**—less fuss getting dressed or showering!
- Perceptions of a **new normal** and that many professionals may choose to continue working from home in the future.
- An **increase in collaboration** due to use of technology that people are being "forced" to use due to virtual settings (e.g., Microsoft Teams, OneDrive, Skype, SharePoint).

- Discussion about whether folks are "**playing hooky**" (Most think not!) and how to handle vacation hours.
- **More corporate-wide webinars** to communicate news *en masse* using moderators to feed questions from chat to leaders. Perception is that questions and ideas are better.
- **A perception that introverts are more engaged**; they like the ability to think about their questions and ask in online chats versus in person.
- **Creative team engagement** strategies, such as hosting work-related happy hours, planning time for some non-business-related discussions, and playing online games.
- **Leaders and employees feel closer** due to the personalized nature of video conferencing, as they catch a glimpse of someone's cat walking across their lap or overhear their kid asking for lunch.

Finally, the meeting was attended by two members who were out of state, thus showing another benefit of virtual meetings.

METRO—Engaging Members With Virtual Speakers

METRO (Metropolitan New York Association for Applied Psychology) is the distinguished, oldest professional organization of applied psychologists in the United States, being in existence for over 80 years. METRO serves 236 members with a mailing list of over 2,000 people. They meet once a month from October to June, from 6–8pm, socializing before and after the presentations. The METRO Board comprises the president (Comila Shahani Denning), the vice president (**Christina Fleck**), the treasurer (Roza Jankovic), and the secretary (**Dan Simonet**). Although their prior model has worked very well, they have been exploring different options for reaching a broader base, considering virtual options while not detracting from the live experience.

With New York at the forefront of the crisis, METRO had to adjust early and swiftly. Even before the NY governor instituted a shelter-in-place order, the METRO board shifted to a virtual format. They rescheduled speakers who preferred in-person engagements and reached out to others who may have been initially more difficult to schedule due to travel and financial constraints. METRO is a nonprofit, thus they strive to uphold the organization's financial integrity, ensuring funds serve members and further their mission. Their modest dues cover speaker expenses, space, and food and wine at events. Given that METRO's mission is to bring high quality research to the widest audience possible, and the virtual event meant that they were not incurring these costs, they were excited to offer this first virtual presentation at no cost, with **Richard Landers** from the University of Minnesota as their speaker. Registrations surpassed 200, over double the usual. Further ensuring that members received full value this year despite disruption, they extended current paid membership an additional 2 months. The Zoom presentation was smooth and engaging. Following best practices, they made it shorter and moderated questions using the chat feature. The event generated wide interest, running over the time allotted, which prevented the facilitators from getting to all questions—not unlike their live events. They're fortunate to have thought-provoking speakers and topics that stir up lively discussion. While it is their plan to reconvene in person once it is safe again, this crisis let them test technology. Moving forward, it is their plan to offer in-person meetings supplemented by remote options and/or recordings for members. COVID-19 taught the world we may not merely adapt to a more digital environment but also thrive and grow in it. Digital offerings allow them greater flexibility as they strive to offer more while maintaining METRO's long-term financial health.

MPPAW—Benefits From Local Virtual Meeting Experts

Minnesota Professionals for Psychology Applied to Work (MPPAW) canceled their March meeting in response to health concerns and the state's "stay-at-home" order. The organization came back strong in

May with support from local consulting firm MDA Leadership. MDA founder and SIOP Fellow **Sandra Davis** was the featured speaker for MPPAW's first ever Zoom-based meeting. A second virtual meeting is planned for June as the previously scheduled March meeting was moved to June 16 and will feature **Karen Grabow**, Joy Hazucha, and **Stu Crandell** discussing their experiences working with boards to select CEOs.

MPPAW President Kevin Nilan offers the following tips for other local groups wishing to hold their own virtual meetings during this pandemic.

1. Rich application at your ready.
Zoom has much functionality that casual users might not realize. That functionality would not be needed in a two- or three-person Zoom meeting. However, for a large group (say *N* of 25 or more), knowing what is available in the application you are using might change the dynamics available in the meeting. In MPPAW's case, MDA's learning enabled MPPAW to take advantage of that via the depth of planning MDA staff put into our session.

2. Requires more staff than you might expect.
Multiple operators might be needed if you are broadcasting content and want to also have a rich two-way exchange during the session with participants. MDA offered MPPAW not only Sandra Davis but also an in-session host to staff the chat function and to read the participant written exchanges. Sandra relied upon this individual to read and bring to her important nuggets from either the written exchanges or from the chat function.

3. Preparation.
MDA staff worked on the preparation and delivery of this session. On the preparation end, the visuals were multiple (whereas a solo act might work to minimize time dedicated to developing good visuals). The content used in a virtual presentation is important and often different from what might work in an in-person presentation. Seeking advice and feedback from colleagues who are seasoned as remote presenters can ensure that the content is on target for the medium.

4. Time management.
Timing is crucial in order to keep participants engaged and maximize learning. The MDA cohost Erik Williams recommended setting up breakout groups, which could be done while inside the virtual session. He noted that our original block of time allocated to the session (i.e., 90 minutes) might only accommodate one such high-quality breakout event.

5. Experience pays dividends.
Clearly MPPAW was advantaged by the depth of experience held by the MDA staff involved in the session. We might not know what we did not know, but they did. In the end, our participants benefited from that awareness.

The SIOP Income & Employment Report Is Here!

Kristl Davison, Chantale Antonik, Alyssa Kaszycki, Amy DuVernet, and Scott Oppler

Last fall, many SIOP members participated in the 2019 Salary Survey. Well, the results are in, and we have some really interesting findings! You probably received the email from SIOP in late April announcing the publication of the Income & Employment Report on the SIOP website, but in case you missed it, here is a little background on the survey and some of the key findings that can be found in the report.

Survey History, Design, and Administration: It Takes a Village

Since 1982, SIOP has been regularly surveying the membership about their income and employment information. The survey is done every 3 years and represents a great historical snapshot of how the I-O profession has evolved over nearly 40 years.

Although the survey has been conducted by different vendors over time, currently it represents a coordinated effort across many players within the SIOP community. Specifically, SIOP's all-volunteer Institutional Research Committee (IRC) is tasked with developing the survey and coordinating the administration and data collection. However, the process for this survey administration required a partnership among

- SIOP's Administrative Office to promote and distribute the survey as well as the final report;
- Mercer|Sirota personnel, who programmed the survey and collected the data;
- Training Industry, Inc. personnel, who cleaned and analyzed the data, and prepared the final report;
- Other SIOP committees, who provided feedback during the survey development and promoted the survey to their members;
- SIOP's IRC subcommittees, who developed and reviewed the survey, tested the survey platform extensively, and provided feedback on the report;
- Members of SIOP's Executive Board, officers, and the Administrative Office who reviewed the survey and the report.

SIOP members, Associate members, International Affiliates, and Fellows with active email addresses were sent an email invitation to complete the survey. The 2019 Salary Survey opened on October 3 and closed on October 21. Of the 4,362 invitations sent, there were 1,605 respondents before data cleaning. The 36.8% response rate was an improvement from the last survey in 2016. After cleaning the data, the final sample for analysis consisted of 1,403 full-time working professionals. Analyses revealed that this sample closely mirrors the characteristics of SIOP membership as a whole and included both doctorate-level as well as master's-level members.

New Features and Some Key Findings

The survey covered SIOP members' sources of income and benefits in 2018. Beyond the traditional salary survey topics, for the first time the survey also investigated important and timely topics such as remote work and work–life issues, as well as the effects of different specializations on salaries.

Here are a few noteworthy findings from the executive summary of the report. For more specific details, please read the report [here](#).

- Salaries for I-O psychologists continue to grow—median incomes were 5.2% higher in 2018 than in 2015, roughly on par with inflation rates.
- The two most commonly reported industries for doctorate-level respondents are consulting organizations (18%) and doctoral universities (31%).
- On average, practitioners earn 24% more than academics.
- Within applied positions, doctorate-level independent consultants have the highest reported median income at $167,000.
- Within academic positions, I-O psychologists in business and management departments have a higher median income than those working in psychology departments ($160,000 and $95,000, respectively, for doctoral institutions).
- Of master's-level respondents, psychologists working in federal government reported the highest median income ($107,000), followed by I-O psychologists working in the manufacturing industry ($100,000).

How to Use the Report

The report is well over 60 pages long, but it is organized into different sections to help you identify the benchmarks that best reflect your own characteristics. Below highlights where to look for some common information:

- Effects of qualifications, experience, and credentials: pp. 8–13;
- Effects of specialization and industry: pp. 14–20;
- Academic employment: pp. 20–25;
- Applied employment: pp. 26–30;
- Geographic differences: pp. 31–37;
- Other income, including bonuses and secondary employment: pp. 37–38 & 48–49;
- Raises: pp. 39–41;
- Benefits: pp. 42–47;
- Demographics & wage gaps: pp. 50–58.

Future Initiatives

Over the coming months, the IRC will continue to delve into the data to examine questions of interest to SIOP members, so look for future *TIP* articles on these topics. And don't miss our presentation—*Know Your Worth: Results From the 2019 SIOP Salary Survey*—at SIOP's virtual conference in June, where we will also seek input from members on what other pressing questions we should be addressing.

Finally, we are interested in keeping on the cutting edge of what SIOP members need to know for the benefit of our career field. The IRC is open to ideas for what to include on the next salary survey, which will be conducted in a couple of years. Please contact siopincomesurvey@siop.org with your ideas.

I-O Can Has Meme? Using Memes to Engage Others With I-O Psychology Content

William P. Jimenez
Old Dominion University

Lisa M. Kath
San Diego State University

Sayeedul Islam
Farmingdale State College/Talent Metrics

Gordon B. Schmidt
Purdue University Fort Wayne

Figure 1
Titular Meme

Note. This is an example of an Internet meme, specifically an image macro. It was adapted from one of the earliest Internet memes depicting a cat asking for a "Cheezburger" (n.d.).

Memes are ubiquitous, and they have become a major part of online interactions (Kitchener, 2018). Memes may be an accessible medium that organizations can use to connect with potential employees, customers, and the general public. Not only have memes been used by companies for marketing (e.g., Murray et al., 2014), but they also have been used for outreach by organizations as diverse as academic libraries (e.g., Woodworth, 2018), government influence campaigns (e.g., Zakem et al., 2018), and political campaigns (e.g., Graham, 2020). In this paper, we discuss the current state of Internet memes in the I-O psychology community as well as the potential that memes have as a communication medium for the field's outreach efforts. Indeed, one of the challenges that I-O psychology faces is its obscurity (Nolan et al., 2014; Gasser et al., 2001).

We analyzed intentional efforts to share I-O psychology ideas on the @iopsychmemes social media accounts. We identified which memes garnered the most engagement with social media users and examined differences across Facebook, Twitter, and Instagram. Additionally, we explored how those outside I-O on the popular website Reddit engaged with memes that reflect core I-O psychology concepts. The Reddit users who created and engaged with these memes are likely unconnected to our field, but their engagement with such memes suggests that they are interested in topics germane to I-O psychology and that they find such topics personally relevant. We examined Reddit users' comments and incorporated topic modeling to uncover themes in conversations Reddit users were having regarding I-O-relevant memes. In both cases, we examined I-O

psychology concepts that seem to resonate with these audiences so as to potentially inform future I-O psychology outreach efforts—especially with regard to reaching out to younger audiences, who are especially avid meme consumers (Fink, 2020) yet who have little direct exposure to our field. This paper's thesis is that memes have the potential to be a valuable tool for I-O psychology's outreach efforts.

What exactly is a meme? Recent definitions of *Internet meme* from media and communication scholars include *"*a unit of information . . . , which replicates by passing on via Internet (e-mail, chat forum, social networks, etc.) in the shape of a hyper-link, video, image, or phrase" (Castaño Díaz, 2013, p. 97) and "a piece of culture, typically a joke, which gains influence through online transmission" (Davison, 2012, p. 122). Oftentimes, when Internet users share memes, they are not simply copying and pasting identical pieces of content (Börzsei, 2013). Many adapt others' memes to express their own ideas—effectively creating new iterations of memes as a result (e.g., Figure 1).

We begin with a personal account from the Meme Queen herself, our very own Lisa Kath, about her experience running the @iopsychmemes accounts—followed by an analysis of memes from Reddit.

Initial Analyses of Engagement for @iopsychmemes

My (Lisa Kath) high school senior taught me to make memes, and with encouragement from my graduate students, I made @iopsychmemes accounts on Instagram, Twitter, and Facebook around November 11, 2019. I did some simple analyses on followers and posts from the start of the accounts until March 6, 2020 (approximately 4 months). My follower count over this time increased on average 2 followers/day on Facebook (281 total), 7.5 followers/day on Twitter (856 total), and 12 followers/day on Instagram (1,469 total). The Instagram account got an early bump in followers for being highlighted by another popular account: @orgpsych. I also got encouraging comments such as, "It's like I found something I didn't even know was missing" and "This ticks all the boxes. You're doing a public service." This seems to be a good indication of interest in the content.

The majority of my Facebook and Instagram followers are women between the ages of 25–35 in the US, but 15% of my followers on Facebook are under 25, and 32% of my followers on Instagram are under 25 years old. This was great news, because, with **Keaton Fletcher** at Georgia Tech, I cochair the SIOP Visibility Committee's Students and Academia subcommittee, where we aim to increase the visibility of I-O psych and SIOP to students and teachers. Based on advice I got from the aforementioned high school senior in my house, I include #APpsych in my captions to better reach high school students. Although I thought this memes account would be a brief hobby, I now conceptualize it as part of my SIOP service.

Finally, first author Wil Jimenez and I analyzed the content of the posts. I took the top 10 memes (based on engagement metrics) from each platform (identified by date of posting) and indicated overlap using a Venn diagram. Wil came up with the coding of the content into three broad categories: posts that (a) share a tidbit of information from our field that we wish people would know, (b) celebrate/disparage some best/worst practices, and (c) note the relative obscurity of I-O psychology. Each of these is color coded in Figure 2 (see Figure 3 for examples of engaging memes).

One observation that comes up right away is the relatively low overlap in high-engagement posts across the platforms, which may be old news to social media analysts. The low overlap may be an artifact of the way engagement is measured or the algorithms that place posts in viewers' feeds. Another observation is that the earlier posts seemed to do better on Twitter, whereas more recent posts did better on Facebook. Popular Facebook posts had more overlap with Instagram and Twitter, whereas Twitter and Instagram only had one top 10 post in common.

Figure 2

Venn Diagram Depicting Engaging Memes Posted by @iopsychmemes
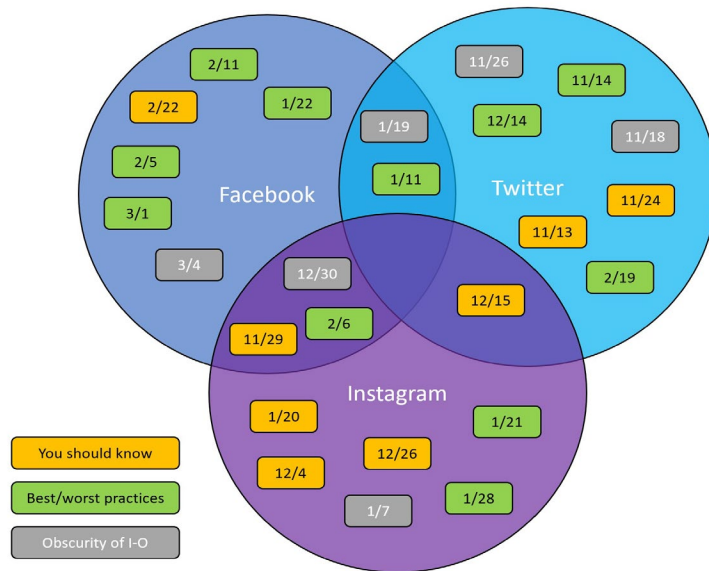
Note. Each box with a date represents a meme that was posted across all social media accounts on that date. Each meme was highly engaging within a platform or across two platforms.

Figure 3

Examples of Engaging Memes Posted by @iopsychmemes
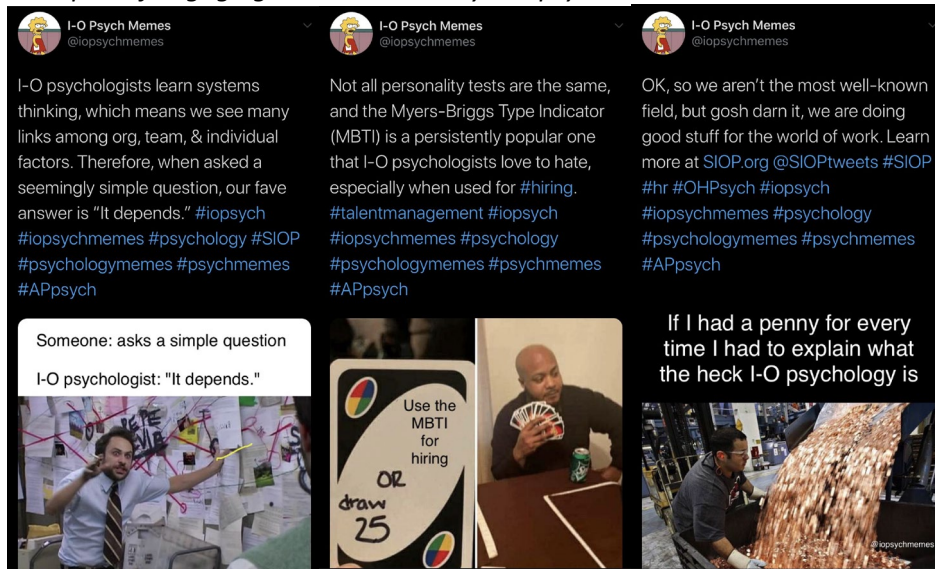
Note. These screenshots are from @iopsychmemes's Twitter. Left panel: Example of a "You should know" meme (posted on December 15, 2019). Middle panel: Example of a "Best/worst practices" meme (posted on January 11, 2020). Right panel: Example of an "Obscurity of I-O" meme (posted on December 30, 2019).

With the content coding, it seems that popular posts were relatively evenly spread across the three content categories. It would be interesting to see if there were demographic differences across the three content categories in terms of engagement. It would also be interesting to see if there were other ways

of coding the content that would better predict engagement. For example, there are several ways in which meme templates are quantified in terms of their popularity or worth (Coscia, 2013). It is possible that some of these metrics could predict engagement based on the template alone. Not surprisingly, finding the right metrics to include in the model is a thought-provoking and time-consuming challenge.

Takeaways From Managing @iopsychmemes

Running the @iopsychmemes accounts has been a great adventure so far. I've been supported by several followers who will submit memes, and my graduate students and a colleague (Hi **Lacie Barber**!) have helped workshop memes before posting. But the question remains: Why?

First, I am passionate about increasing the visibility of our field. I have anecdotal evidence (the worst kind, I know) that these accounts do help increase the visibility of I-O psychology. Through Twitter, we were invited to give a presentation at a neighboring high school, so now those students can be considering I-O psychology before they've even gotten their high school diplomas! I've had a few students, both high school and undergrad, reach out through the account direct messages for career advice. So far, the requests have been very manageable, but long term, our subcommittee is working with **Roni Reiter-Palmon**, chair of the SIOP Education & Training Committee's Bridge Builders Subcommittee. We are working on building a database of I-O psychologists who might be willing to talk or email with students about our field, individually or in a group setting.

Second, I love sharing what we (as I-O psychologists) know with others. I am collaborating on some research with an MD who follows my meme account. She told me that one of my memes came to mind at work, and she asked herself, "Is our diversity plan focused only on recruitment, or are we also paying attention to retention?" That memes can stick in people's heads long enough for them to be useful to non-I-O psychologists is amazing to me.

Third, I love supporting the broader I-O community. I have encouraged educators and practitioners to use these memes in their classes, newsletters, and the like. I also enjoy comments that indicate bonding over shared experiences, like how often we say "it depends" in response to a question (I-O Psych Memes, December 15, 2019) or the pain of having cross-loaded items in an exploratory factor analysis (I-O Psych Memes, February 20, 2020).

In sum, so far, the minimal time invested in this outreach effort has been well worth it. I think the role of scientific communication in the sciences is starting to get its due, especially during the COVID-19 pandemic. Granted, I know I'm not out here saving lives with my spicy memes, but I do think it's been a worthwhile adventure. I invite you to send me your memes at iopsychmemes@gmail.com or start your own accounts! In my mind, there's never too much I-O psychology.

Analyzing Comments on Work-Related Reddit Memes

"IF YOUR EMPLOYEES HAVE TO BREAK RULES TO MEET PRODUCTION QUOTA YOU ARE MISMANAGING YOUR COMPANY" in a sans-serif font superimposed on a picture of a mallard duck. A still from a popular adult cartoon television series edited to look like a superhero is recommending that employers disclose salary ranges when they post job openings. This past winter, in just 1 week, these two images (see AcidActually, 2020; Elranzer, 2020) made it to "the front page of the Internet" and collectively garnered approximately 128,000 upvotes and 4,000 comments. These are examples of work-related memes post-

ed on Reddit—specifically, on the subreddit r/AdviceAnimals—and they demonstrate how relatable I-O psychology is to laypeople.

Reddit is a popular social media platform comprising a multitude of online communities of interest, called subreddits, in which users share and engage with content.[1] In December 2019, Reddit was the fifth most visited website in the United States; it had more than 130,000 active subreddits and, on average, 430 million monthly active users and 21 billion monthly screen views (Reddit, 2019). According to Pew Research Center, most Redditors are male, White, between the ages of 18 and 29, and college educated (Barthel et al., 2016). The subreddit r/AdviceAnimals is a community with more than 8.4 million members (as of April 2020) who engage with memes generally in the format of a "two line joke over a re-usable character" ("Advice Animals," n.d.).

We used the *PRAW* Python package (Boe, 2016) to scrape top-level comments, which we processed and analyzed in R using *data.table* (Dowle & Srinivasan, 2019), *textmineR* (Jones, 2019), *tidytext* (Silge & Robinson, 2016)*, tidyverse* (Wickham et al., 2019), and *wordcloud* (Fellows, 2018). Stopwords, punctuation, and numbers were removed from the comments, and each comment was tokenized as a maximum of two words. We used latent Dirichlet allocation (LDA) in our topic modeling of the comments (see Blei et al., 2003).[2] We also searched the comments for words that were most characteristic of a topic to aid in topic interpretation.

Production Quota Meme's Comments

We found that extracting 29 topics from the production quota meme's 432 top-level comments resulted in the greatest topic coherence (see Appendix A). Of these topics, we interpreted 15 with seven consolidated into a triad and two pairs—ultimately resulting in 11 retained topics. Multiple Redditors discussed the following:

- Topic 1: Reduced work quality
- Topic 2: Employees cutting corners
- Topic 3: Prevalence of phenomenon in sales jobs
- Topic 4: Examples of high-profile organizations that perpetrate the phenomenon
- Topic 5: Workers compelled to break not only rules, but also laws
- Topic 6: Employers discouraging or not allowing overtime work
- Topic 7: Employer apathy
- Topic 8: Employers intentionally encouraging employees to break rules and consequently making it easier to terminate rule-breaking employees
- Topic 9: Broken societal and managerial systems
- Topic 10: Prevalence of phenomenon in food service—in particular, fast food
- Topic 11: Employers' disregard for employee health and safety

See Figure 4 for word clouds depicting the words that constitute the topics we retained in our analysis of the production quota meme's comments.

Figure 4

Word Clouds of Production Quota Meme's Topics

Panel A: Topic 1 (Reduced work quality). Panel B: Topic 2 (Employees cutting corners). Panel C: Topic 3 (Prevalence of phenomenon in sales jobs). Panel D: Topic 4 (Examples of high-profile organizations that perpetrate the phenomenon). Panel E: Topic 3. Panel F: Topic 5 (Workers compelled to break not only rules, but also laws).

Panel G: Topic 4. Panel H: Topic 6 (Employers discouraging or not allowing overtime work). Panel I: Topic 7 (Employer apathy). Panel J: Topic 4. Panel K: Topic 8 (Employers intentionally encouraging employees to break rules and consequently making it easier to terminate rule-breaking employees). Panel L: Topic 9 (Broken societal and managerial systems).

Panel M: Topic 10 (Prevalence of phenomenon in food service—in particular, fast food). Panels N-O: Topic 11 (Employers' disregard for employee health and safety).

Note. Word size indicates probability that a given word belongs to a given topic.

Salary Meme's Comments

We found that extracting 27 topics from the salary meme's 506 top-level comments resulted in the greatest topic coherence (see Appendix B). Of these topics, we interpreted 20, with seven consolidated into a triad and two pairs—ultimately resulting in 16 retained topics. Multiple Redditors discussed the following:

- Topic 1: Factoring benefits into compensation
- Topic 2: Being lowballed during interviews
- Topic 3: Feeling like not advertising salaries generally results in wasted time for both applicants (e.g., candidates offered uncompetitive salaries given their current ones) and employers
- Topic 4: Employers not advertising salary in job postings to prevent causing tension with current employees
- Topic 5: Skepticism over salaries advertised as "competitive" and annoyance with having to provide an "expected salary" on a job application
- Topic 6: Recruiters' willingness to discuss salary during a phone interview
- Topic 7: The importance of knowing what you are "worth"/the market rate for a position
- Topic 8: Employees keeping their own salaries a secret
- Topic 9: Hiring managers' perspectives
- Topic 10: Negative views toward recruiters
- Topic 11: Negative views toward employers who do not advertise salaries
- Topic 12: Negative views toward job openings advertised as "entry level"
- Topic 13: Recruiters' justification that not advertising salaries results in better quality hires
- Topic 14: Salary being based on experience and skills
- Topic 15: Minimum wage and legal matters

See Figure 5 for word clouds depicting the words that constitute the topics we retained in our analysis of the salary meme's comments.

Figure 5
Word Clouds of Salary Meme's Topics

Panel A: Topic 1 (Factoring benefits into compensation). Panel B: Topic 2 (Being lowballed during interviews). Panel C: Topic 3 (Feeling like not advertising salaries generally results in wasted time for both applicants [e.g., were offered uncompetitive salaries given their current ones] and employers). Panel D: Topic 4 (Employers not advertising salary in job postings to prevent causing tension with current employees). Panel E: Topic 5 (Skepticism over salaries advertised as "competitive" and annoyance with having to provide an "expected salary" on a job application). Panel F: Topic 6 (Recruiters' willingness to discuss salary during a phone interview).

Panel G: Topic 7 (The importance of knowing what you are "worth"/the market rate for a position). Panel H: Topic 8 (Employees keeping their own salaries a secret). Panel I: Topic 9 (Hiring managers' perspectives). Panel J: Topic 10 (Negative views toward recruiters). Panel K: Topic 11 (Negative views toward employers who do not advertise salaries). Panel L: Topic 12 (Negative views toward job openings advertised as "entry level").

Note. Word size indicates probability that a given word belongs to a given topic.

Panel M: Topic 13 (Recruiters' justification that not advertising salaries results in better quality hires). Panels N-O: Topic 7. Panel P: Topic 3. Panel Q: Topic 14 (Salary being based on experience and skills). Panel R: Topic 15 (Minimum wage and legal matters). Panel S: Topic 2. Panel T: Topic 3.

r/AdviceAnimals Meme Topics in I-O Terms

The topics that emerged from comments on both of the r/AdviceAnimals memes clearly overlap with I-O psychology topics. In this section, we discuss example topics from each of the memes. Topic 11 of the production quota meme indicates that, from the perspective of some Redditors, some companies are neglecting occupational health and safety when they are compelling employees to break rules for the sake of productivity. This is a poignant finding given that safety climate (i.e., *shared perceptions* regarding how much of a priority safety is compared to other priorities, such as productivity) seems to be a particularly important determinant of safe behavior—potentially even more so than the prevalence of occupational risks and hazards in the workplace (Nahrgang et al., 2011). Another example from the production quota meme is Topic 7, which suggests that some employers discourage or even prohibit employees from working overtime. Ironically, paying overtime work is generally more affordable than hiring more employees, and there is empirical evidence that suggests, on average, the more hours per week employees work at an organization, the lower the lost-time injury rate at the organization (Kaminski, 2001).

Unsurprisingly, several of the example topics from the salary meme imply negative job applicant reactions. For example, Topic 3 indicates that some Redditors believe that the employer practice of not advertising salaries often results in wasted time. Topics 5 and 12 indicate that some Redditors react negatively when the job opening advertises a "competitive" salary or an entry-level position, yet the requirements listed suggest otherwise or a job application requires providing an expected salary. Our field understands the importance of applicant reactions in the context of personnel selection (see Bauer et al., 2012). For example, previous research suggests that positive reactions during the selection process impact applicants' perceptions of the organization, intentions to accept a job offer, and intentions to recommend the employer to other job seekers (Hausknecht et al., 2004). Moreover, findings from a simulation study suggest that the level of information a job seeker receives, even during the initial recruitment stage, impacts applicant reactions and that the more favorable experiences an applicant has throughout the selection process, the more positive their reactions are (Saks & Uggerslev, 2009). Given the example salary meme topics that we discussed and the literature on applicant reactions, it would be prudent of employers to consider the impressions they are making through their job openings.

Discussion

The results of the present study indicate that there is an interest in I-O psychology topics beyond traditional settings. Memes and other social-media-related strategies are underused in I-O psychology outreach (Armstrong et al., 2020), and these results indicate their potential efficacy. The authors wish to share some key takeaways from this study:

1. *Memes are a highly useful tool for sharing information*. The present study indicates that memes can prove engaging to a wide audience. Memes are exciting because they can be shared easily and created easily. We recommend that the I-O psychology community—academics, practitioners, and students alike—share these as a way to conduct outreach. Most importantly, anyone can share and anyone can create a meme, so crowdsourcing memes may be a useful form of outreach for I-O. Another application is asking students to share or create memes as part of a class assignment.
2. *I-O psychologists can join the conversation or just listen*. The results from the r/Advice Animals subreddit analyses indicate that everyday people are interested in what I-O psychologists study. The gap appears to be in how I-O psychologists approach these topics. Memes can distill concepts into easily accessible formats that lay people can engage with. Additionally, these memes can provide insight into the experiences of everyday workers outside of the traditional practitioner realm of I-O. For I-O psychologists who are prominent in our field on social media, such as **Adam Grant** and **Steven Rogelberg,** memes might be another way in which they share the field with a general audience. As evidenced by the @iopsychmemes accounts, memes can also be used to build an active online community that laypeople can engage with online.

3. *Memes are measurable*. Using the social media data from @iopsychmemes, practitioners and researchers can track the impact of I-O psychology on people inside and outside the field. This information is invaluable as SIOP and other organizations in the realm of work strive to be heard. We can also track how laypeople are discussing work on public forums such as Reddit—allowing for a more measurable "pulse" of the world of work.

4. *Memes are fun!* Memes can inject a bit of fun into the world of I-O. The authors of the present study had enormous fun writing this piece and believe that other I-O psychologists would enjoy the fun world of memes as well.

Notes

[1] For more information on Reddit, see Gordon Schmidt's (2019) entry in *The SAGE International Encyclopedia of Mass Media & Society*.

[2] See Tang's (2019) topic modeling guide that we adapted for analyzing Reddit comments.

References

AcidActually. (2020, January 28). *You need to know* [Image attached] [Online forum post]. Reddit. https://www.reddit.com/r/AdviceAnimals/comments/ev7zh7/you_need_to_know/

Advice Animals. (n.d.). In *Reddit*. https://www.reddit.com/r/AdviceAnimals/

Armstrong, B., Schmidt, G. B., Islam, S., Jimenez, W. P., & Knudsen, E. (2020). Searching for I-O psychology: How practitioners, academics, and laypeople engage with the I-O brand online. *The Industrial-Organizational Psychologist*, *57*(3). https://www.siop.org/Research-Publications/Items-of-Interest/ArtMID/19366/ArticleID/3300

Barthel, M., Stocking, G., Holcomb, & Mitchell, A. (2016). *Nearly eight-in-ten Reddit users get news on the site*. Pew Research Center. https://www.pewresearch.org/wp-content/uploads/sites/8/2016/02/PJ_2016.02.25_Reddit_FINAL.pdf

Bauer, T. N., McCarthy, J., Anderson, N., Truxillo, D. M., & Salgado, J. F. (2012). *What we know about applicant reactions to selection: Research summary and best practices* (SHRM-SIOP White Paper Series). Society for Industrial and Organizational Psychology. https://www.siop.org/Portals/84/docs/SIOP-SHRM%20White%20Papers/SIOP-Applicant_Reactions_to_Selection_final.pdf

Blei, D. M., Ng, A. Y., & Jordan, M. I. (2003). Latent Dirichlet allocation. *Journal of Machine Learning Research*, *3*, 993–1022. http://www.jmlr.org/papers/volume3/blei03a/blei03a.pdf

Boe, B. (2016). PRAW [Python package]. https://github.com/praw-dev/praw

Börzsei, L. K. (2013). Makes a meme instead: A concise history of Internet memes. *New Media Studies Magazine, 7*. https://works.bepress.com/linda_borzsei/2/

Castaño Díaz, C. M. (2013). Defining and characterizing the concept of Internet meme. *CES Psicología*, *6*, 82–104. http://www.scielo.org.co/scielo.php?script=sci_arttext&pid=S2011-30802013000200007

Cheezburger. (n.d.). In *Know your meme*. https://knowyourmeme.com/memes/sites/cheezburger

Coscia, M. (2013). Competition and success in the meme pool: A case study on quickmeme.com. *Proceedings of the Seventh International AAAI Conference on Weblogs and Social Media*, 100–109. https://www.aaai.org/ocs/index.php/ICWSM/ICWSM13/paper/view/5990/6348

Davison, Patrick. (2012). The language of (Internet) memes. In M. Mandiberg (Ed.), *The social media reader* (pp. 120-134). NYU Press.

Dowle, M. & Srinivasan, A. (2019). *Data.table: Extension of "data.frame."* The Comprehensive R Archive Network. https://cran.r-project.org/web/packages/data.table/index.html

Elranzer. (2020). *Job recruiters and human resources, this means YOU* [Image attached] [Online forum post]. Reddit. https://www.reddit.com/r/AdviceAnimals/comments/ezdk46/job_recruiters_and_human_resources_this_means_you/

Fellows, I. (2018). *Wordcloud: Word clouds*. The Comprehensive R Archive Network. https://cran.r-project.org/web/packages/wordcloud/index.html

Fink, J. L. W. (2020, February 6). The role of memes in teen culture. *New York Times*. https://www.nytimes.com/2020/02/06/well/family/memes-teens-coronavirus-wwiii-parents.html

Gasser, M., Butler, A., Anderson, K., Whitsett, D., & Tan, R. (2001). Advertising industrial-organizational psychology. *The Industrial-Organizational Psychologist*, *38*(4), 50–53.

Graham, M. (2020, February 13). *How Mike Bloomberg's meme blitz was engineered to go viral.* CNBC. https://www.cnbc.com/2020/02/13/how-mike-bloombergs-meme-blitz-was-engineered-to-go-viral.html

Hausknecht, J. P., Day, D. V., & Thomas, S. C. (2004). Applicant reactions to selection procedures: An updated model and meta-analysis. *Personnel Psychology*, *57*, 639–683. https://doi.org/10.1111/j.1744-6570.2004.00003.x

I-O Psych Memes [@iopsychmemes]. (2019, December 15). *I-O psychologists learn systems thinking, which means we see many links among org, team, & individual factors. Therefore, when asked a* [Image attached] [Tweet]. Twitter. https://twitter.com/iopsychmemes/status/1206197515932049408/

I-O Psych Memes [@iopsychmemes]. (2019, December 20). *OK, so we aren't the most well-known field, but gosh darn it, we are doing good stuff for the world of work.* [Image attached] [Tweet]. Twitter. https://twitter.com/iopsychmemes/status/1208009437312667649

I-O Psych Memes [@iopsychmemes]. (2020, January, 11). *Not all personality tests are the same, and the Myers-Briggs Type Indicator (MBTI) is a persistently popular one that I-O* [Image attached] [Tweet]. Twitter. https://twitter.com/iopsychmemes/status/1215981835710279680

I-O Psych Memes [@iopsychmemes]. (2020, February 20). 1-O psychologists work hard to test that their survey measures are working well, and sometimes the test results are dishearteningly complicated [Image attached] [Tweet]. Twitter. https://twitter.com/iopsychmemes/status/1230477589841575938

Jones, T. (2019). *textmineR: Functions for text mining and topic modeling.* The Comprehensive R Archive Network. https://cran.r-project.org/web/packages/textmineR/index.html

Kaminski, M. (2001). Unintended consequences: Organizational practices and their impact on workplace safety and productivity. *Journal of Occupational Health Psychology*, *6*, 127–138. https://doi.org/10.1037/1076-8998.6.2.127

Kitchener, C. (2018, January 18). How memes became the voice of a generation. *The Atlantic*. https://www.theatlantic.com/membership/archive/2018/01/how-memes-became-the-voice-of-a-generation/550805/

Murray, N., Manrai, A., & Manrai, L. (2014). Memes, memetics and marketing. In L. Moutinho, E. Bigné, & A. K. Manrai (Eds.), *The Routledge companion to the future of marketing* (pp. 331-347). Routledge.

Nahrgang, J. D., Morgeson, F. P., Hofmann, D. A. (2011). Safety at work: A meta-analytic investigation of the link between job demands, job resources, burnout, engagement, and safety outcomes. *Journal of Applied Psychology*, *96*, 91–94. https://doi.org/10.1037/a0021484

Nolan, K. P., Islam, S., & Quartarone, M. (2014). The influence of vocational training on the brand images of organizational consultants. *Psychologist-Manager Journal*, *17*, 245–278. https://doi.org/10.1037/mgr0000022

Reddit. (2019, December 4). *About*. https://www.redditinc.com

Saks, A. M., & Uggerslev, K. L. (2009). Sequential and combined effects of recruitment information on applicant reactions. *Journal of Business and Psychology*, *25*, 351–365. https://doi.org/10.1007/s10869-009-9142-0

Schmidt, G. B. (2019). Reddit. In D. Merskin (Ed.), *The SAGE international encyclopedia of mass media & society*. Sage. https://sk.sagepub.com/reference/the-sage-encyclopedia-of-mass-media-and-society/i14003.xml

Silge, J., & Robinson, D. (2016). tidytext: Text mining and analysis using tidy data principles in R. *Journal of Open Source Software*, *1*(3). https://doi.org/10.21105/joss.00037

Tang, F. (2019). *Beginner's guide to LDA topic modelling with R: Identifying topics within unstructured text*. Towards Data Science. https://towardsdatascience.com/beginners-guide-to-lda-topic-modelling-with-r-e57a5a8e7a25

Wickham, H., Averick, M., Bryan, J., Chang, W., D'Agostino McGowan, L., Francois, R., Grolemund, G., Hayes, A., Henry, L., Hester, J., Kuhn, M., Pederson, T. L., Miller, E., Bache, S. M., Müller, K., Ooms, J., Robinson, D., Seidel, D. P., Spinu, V., . . . Yutani, H. (2019). Welcome to the Tidyverse. *Journal of Open Source Software*, *4*(43). https://doi.org/10.21105/joss.01686

Woodworth, A. (2018). My body is ready: Best practices for using memes on library social media. *Reference & User Services Quarterly*, *58*(2). https://doi.org/10.5860/rusq.58.2.6928

Zakem, V., McBride, M. K., & Hammerberg, K. (2018). *Exploring the utility of memes for U.S. government influence campaigns*. CNA. https://www.cna.org/CNA_files/PDF/DRM-2018-U-017433-Final.pdf
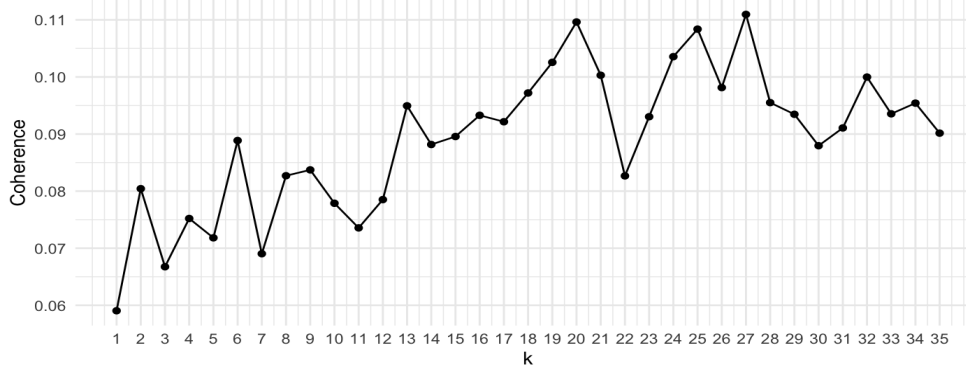
Appendix A
Coherence of Production Quota Meme's Comment Topic Models
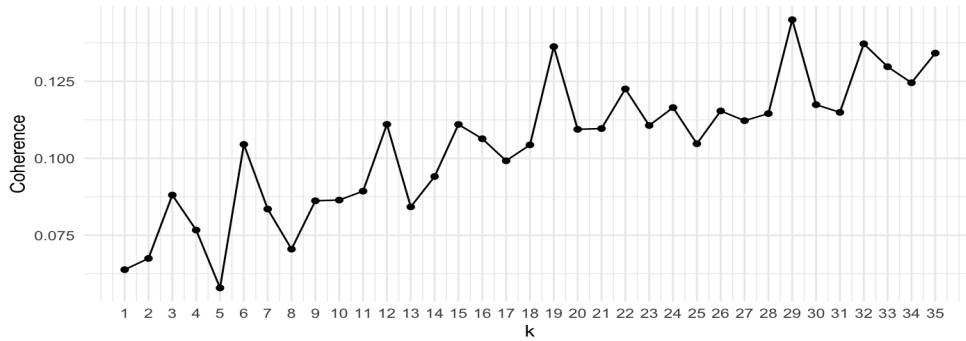
Note. Coherence = average coherence for each model; *k* = number of topics in a model.

Appendix B
Coherence of Salary Meme's Comment Topic Models

Note. Coherence = average coherence for each model; *k* = number of topics in a model.

TIP-Topics: Virtually Indestructible:
How to Thrive in the Digital World as a Graduate Student During COVID-19

Andrew Tenbrink, Mallory Smith, Georgia LaMarre, Laura Pineault, and Tyleen Lopez
Wayne State University

In the wake of the COVID-19 pandemic, students at all stages of their studies are feeling especially uncertain about the future. This is compounded by the additional demands of adjusting to routines that have been modified for a new reality. Current circumstances (e.g., closed campuses; remote learning, research, and work) leave us isolated from our peers and mentors. Milestones that were previously defining features of the graduate experience (defending one's thesis/dissertation, commencement, attending conferences and symposia) have been cancelled, postponed, or converted to virtual formats. The elimination of in-person opportunities to showcase work and engage in networking poses additional barriers for graduate students who rely on these events to disseminate their research and make valuable connections in their field.

It is not yet clear what the longstanding impact of COVID-19 will be on future of I-O psychology (and the world of work, more generally). To what extent will work-from-home arrangements, online learning, and virtual milestones become the "new normal"? How well will our past experiences equip us to meet these new realities? Although it's normal and understandable to get overwhelmed with the uncertainty of the future, I-O psychologists are in a unique position to offer insight and engage in conversations about the new nature of work. Many of these "new" demands of a virtual world were, in fact, trends that existed prior to this global pandemic (e.g., the "changing nature of work," shifts to flexible work ar-rangements, online networking, job searching, and interviewing). We as I-O psychologists have been studying the advantages, best practices, and implications of virtual work on employee job performance and well-being for decades. Now, we have an opportunity to leverage and embody these recommenda-tions to hone our "virtual work" skills and build competitive advantage in a post-COVID labor market.

Our approach in this article is to acknowledge the realities of the changed circumstances in which we find ourselves while offering resources to build resilience and cope with these new demands in adaptive, empowering ways. In the following sections, we summarize advice from experts in virtual communication to help graduate students get the most out of their remote work situations.

Becoming a Virtual Meeting Expert

Effectively leveraging technology to reach others is an essential skill for thriving in virtual spaces. However, interacting in virtual environments for the first time can be a huge adjustment for graduate students. Many of us already feel the negative side effects of synchronous (i.e., real-time) online activities, such as Zoom fatigue, frustrations with tech, and managing the distractions of working at home. As *New York Times*' Op-Ed columnists Michelle Goldberg and Frank Bruni rightfully called out, "to zoom or not to zoom" is truly "the quarantine question." Although video conferencing has been marketed as the blanket solution to various challenges posed by physical distancing measures, both in peoples' professional and personal lives, this method of communication poses its own challenges. Most of us have discovered first-hand how unnatural and uncomfortable on-screen interactions can be, in addition to being cognitively draining and uniquely challenging to get right.

Counteracting the adverse effects of these digital stressors is possible by implementing best practices for being "present" online and setting clear boundaries around virtual interactions.

Brittany Ernst, organizational scientist at University of North Carolina at Charlotte (whose master's thesis and dissertation focused on virtual communication), provided actionable tips for effectively connecting and interacting with others in virtual meetings:

- **"Be present in the meeting."** During synchronous meetings, Ernst advises to "focus on the agenda and devote all your attention to the current conversation." Avoid the temptation to multitask during virtual meetings, both out of courtesy to your colleagues and to reduce the cognitive load of competing demands for your attention.
- **"Enhance your social presence** with visual and auditory cues." Realistically, we are not always able (or comfortable) enabling video in web conferences. Instead, strategically using different features of these technologies can help approximate the socially fulfilling aspects of in-person interactions. Consider enabling video for small meetings of close colleagues. In situations where using video or speaking up is not feasible, Ernst recommends "us[ing] the chat box, hand raising, and sending reactions such as the "thumbs up" to indicate that you're actively listening."
- **"Enhance *others'* social presence**." To achieve a "mutual sense of social presence" in your virtual interactions, make sure that you acknowledge the contributions of others as well. Ask and answer questions, share feedback, and generally encourage others to engage in the interaction.
- **"Match the complexity** of your task to the communication medium." Not everything needs to be a Zoom meeting! Quick questions or updates can be achieved using email or instant messaging (e.g., Slack). Conversely, a chain of back-and-forth emails may be better suited for a phone conversation. "Matching the communication medium to the task at hand will save time and improve productivity."

These strategies will allow you to preserve your reputation as an engaged graduate student and make progress towards your academic/professional goals. That said, we would be remiss not to acknowledge the conflict that exists about when to enable video. If you are able (in terms of technology access, the nature of your work-from-home environment, and personal comfort level), enabling video may help you connect better with others. Conversely, no one should feel pressured to enable video when they choose not to.

Many organizations are sensitive to these issues. IBM's "Work from Home Pledge" includes a clause to "support 'not camera ready' times":

> I will not ask people to turn their cameras on while on video calls. While I encourage the use of video during meetings so we can feel more connected, there will naturally be times when it's just not feasible given home circumstances. During these times, I want everyone to feel comfortable that they can simply turn the video off as needed.

In response to the rising prevalence of [video fatigue](#), IBM's pledge also highlights the importance of setting boundaries around meetings while working remotely [by decreasing meeting time (e.g., 20- and 45-minute meetings over 30-minute and 1-hour meetings)](#).

Although the ability to collaborate on interdependent tasks is certainly important in determining team effectiveness (particularly so in [virtual](#) formats), we know that being present and connected at all times can be exhausting. Graduate students must judiciously invest their finite time and energy resources in order to meet a number of competing demands. Therefore, we call on academic advisors and administrators to follow IBM's example by communicating and reinforcing similar expectations around video conferencing with their graduate students. Overemphasizing virtual "face-time" may indivertibly drain energy that could otherwise be directed more productively.

Although we graduate students are accustomed to completing work on our computers, we are not used to relying on technology to achieve other personal and professional goals (e.g., building relationships, developing new skills, marketing yourself, and disseminating your research). Having established the general importance of building a virtual presence synchronously through live video conferencing, we now turn our attention to cultivating your virtual presence when you're not live on video screen.

Virtually Networking on Social Media

Face-to-face networking has historically been considered the "gold standard" method of forming professional connections. Meetings for professional associations, career-development workshops, and large-scale conferences pride themselves on providing convenient, personal access to valuable relationship-building opportunities. Now, graduate students are missing out on in-person networking, especially with professional associations having been forced to cancel in-person programming (e.g., the SIOP, AOM, and APA annual conferences). In light of this, we face the challenge of developing online networking skills amid uncertainty about whether our efforts will provide us with the same access to social capital that is important both in our training and job-search efforts. Fortunately, virtual networking isn't entirely uncharted territory: with the rise of professional social media like LinkedIn, networking was becoming increasingly digital, even before the COVID-19 pandemic. The best approach to networking in any context requires strategic leveraging of the breadth and depth of the connections you create, understanding that each relationship will offer opportunities for unique exchanges of mutual value.

Many graduate students (us, included!) find the thought of networking to be daunting, not to mention logistically challenging. Thankfully, social media has made modern networking much less confronting by decreasing the perceived power imbalance between I-O newcomers and experienced pros in the field. With a bit of thoughtful ingenuity, the virtual world provides myriad platforms and channels through which to connect with knowledgeable, influential people—even from the comfort of your bed or couch! The following tips will help you kickstart your networking efforts in a targeted way.

- **Think about your virtual networking objectives**. Are you trying to get more broad knowledge of possible career paths in I-O? Alternately, do you want to target your search to connect with thought leaders in a particular area? Articulating your goals up front will help you focus your efforts productively. Brainstorm the names of people and/or organizations that you'd like to connect with. Do an Internet search for key words to find virtual spaces where you might find opportunities to connect. Social media has many groups dedicated to specific areas of practice, such as the RaceAhead LinkedIn group for people with an interest in diversity and inclusion.
- **Find others with shared interests** by perusing industry publications (e.g., *TIP*, *IOP*, annual reports) that provide in-depth information about current trends in I-O psychology. This is good practice both in terms of professional development and for scoping out new potential network contacts. When you find an article, podcast, or social-media post that you find insightful, reach out to the author and let them know! Send a Tweet, a LinkedIn message, or use good old-fashioned email with a note acknowledging the work they put into the piece, and ask if they're willing to continue the conversation one-on-one. This is a great way to enhance the social presence of others while also communicating your shared interests.
- **Attend (or host) virtual events**. From formal webinars and virtual conferences to informal Zoom "coffee chats" and happy hours, there are many opportunities to stay informed, get involved, and engage with new people in a virtual space. In larger events where it may not be feasible to

interact directly with individuals, make note of who is giving interesting presentations and making insightful comments. Then, reach out afterward with a thoughtful question or compliment on their work.

If you can't find an event that interests you, why not host your own? Find contacts in other I-O programs in your area who may want to virtually "get together" to discuss a topic, or simply get to know one another. Here is a sampling of different virtual events and opportunities bringing the I-O community together:

- SIOP 2020 has gone virtual, and still offers opportunities for emerging I-Os to connect.
- Dr. Juliet Aiken (University of Maryland) hosts a weekly "Coffee House" every Wednesday at 10am EST to discuss diversity, equity, and inclusion during COVID-19. All are welcome! Email iocoffeehouse@gmail.com to receive a calendar invitation.
- The Otherwise Invisible Consulting has an open call for I-O graduate students to provide pro bono consulting for organizations and individuals impacted by COVID-19 globally. If you're interested in learning more, please email theotherwiseinvisible@gmail.com.
- Attend virtual events hosted by your local I-O groups and related organizations, such as the Society for Evidence Based Organizational Psychology.

Leveraging Your Virtual Network for Skill Development and Self-Learning

Social media (e.g., Facebook, Twitter, LinkedIn), academic social networks (e.g., ResearchGate), and open-source online platforms (e.g., Open Science Framework; OSF) are not just beneficial for facilitating e-networking and increasing your visibility as an emerging scholar. Being active on these platforms can also enhance your self-directed learning. The field of I-O has an active e-community, with researchers constantly crowdsourcing ideas on Twitter and LinkedIn, publishing preprints or open-access course materials on OSF, and conversationally engaging with each other's ideas. Building your network on these platforms provides access to a living library of curated research and learning materials.

Without diminishing the personal and professional challenges brought on by COVID-19, we see a silver lining—arguably, there has been no other time in recent history that academic content has been so widely accessible. These changes represent long overdue reform around information access, which can be seen as a benefit to us in academia. In the age of open access and social media, students' learning opportunities are less tied to their finances, geography, or pedigree. The virtual world today is a portal to a wealth of free and low-cost resources, such as statistics seminars/self-teaching materials, online conference presentations, and podcasts. The onus is on you to engage with the content! Here is a sampling of open-access materials and virtual talks that you can leverage to bolster your skills:

- The *Organizational Design Community* and *Skills for Mars* have released a limited video-podcast series, "Making Remote Work", where leading experts discuss the research and practice of remote work.
- Presentations from the National Academy of Sciences 157th Annual Meeting are available online for all to watch, including an "Attracting & Retaining A Diversity Workforce" session.
- Open-access materials and preprints are available on OSF, PsyArXiv Preprints, and Research Gate, including emerging I-O research related to COVID-19 (e.g., the future of work, role blurring, and division of household labor).

- Challenge yourself to <u>learn about and begin adopting open-science practices</u>. To get started, we recommend <u>10 Simple Rules for Innovative Dissemination of Research</u> and <u>Dr. Chris Chambers "registered reports" PhD workshop materials</u>.
- Tune-in to an I-O and statistics podcasts. Some of our favorites are <u>Department 12</u>, <u>Amplified Research</u>, <u>Leadership Next</u>, and <u>Quantitude</u>.
- Dr. David Kenny's statistics <u>webinars and PowerPoints</u> are available on his website for a $3 fee.

Holding Up Your End of the Bargain by Translating and Disseminating Your Research Online

Social media interactions bear the same <u>inherent reciprocity expectations</u> as other interpersonal relationships; "taking" your network's posted content (whether that be reading a posted article, learning about events, or directing your own online self-education using open-access course materials), "giving" your own curated content, and the cycle continues. One way to curate your own content is to share a simple, easy-to-read summary of your recent research. Due to widespread disruptions in organizational operations and people's lives more generally, many research projects and data-collection efforts have stalled or become <u>infeasible to continue during a pandemic</u>. In an effort to remain productive, many of us early scholars have shifted our attention to writing, whether that be developing a conceptual review for research or *finally* writing up that manuscript (or two) that sat dormant, half-written for too long. As you spend more of your "research" time in the writing phase, consider writing up your research findings twice: once in a traditional academic-focused format (i.e., for an academic audience, including peer-reviewers and other scholars) and another "translated" version for a broader, lay audience. Why, you ask? The latter can be used as the foundation of a brief article for social media or even be transformed into a YouTube video to explain your work.

As author of several successful <u>LinkedIn articles</u>, Dr. Ernst provided two trade secrets to translating your own research into practical insights: (1) remove any jargon, technical language, and extra fluff; and (2) add a sentence or two to clearly highlight the value and/or primary contribution of your work (referred to informally as the "So what, who cares?"). By "translating" your research and making it publicly available online, you move from being a passive recipient of online academic content to an active contributor.

Looking to the Future of Virtual Graduate Work

The COVID-19 pandemic has caused major disruptions in the lives of many across the world. Overall, we are lucky if adapting to virtual school, remote work, and online community building are the greatest challenges we contend with in these times. That said, we believe that this period of change represents an excellent opportunity to revitalize the spirit of a professional community that can offer social support and the open sharing of resources. As the past few months (and the entire body of organizational change literature) have demonstrated, it is impossible to fully anticipate the obstacles we will encounter. Nevertheless, we forge ahead into the future, acknowledging the ambiguities, opportunities, and challenges that are yet to be perceived. This is at once a heartening testament to the resilience of our field as well as an indication that we have reached an important juncture where we must stop and reflect on how best to proceed. Although some aspects of the future may be uncertain, taking action to build personal resilience while elevating our community through mutual support is sure to illuminate the path forward to better times.

The content for this article was inspired by e-interviews with Dr. Brittany Ernst and **Dr. Juliet Aiken.** *See* <u>this PDF</u> *for a full transcript of Dr. Ernst's interview.*

Team Biographies

Andrew Tenbrink is a 4th-year PhD student in I-O psychology. He received his BS in Psychology from Kansas State University. His research interests include selection, assessment, and performance management, with a specific focus on factors affecting the performance appraisal process. Currently, Andrew has a 1-year internship working as a research, development, and analytics associate at Denison Consulting in Ann Arbor, MI. Andrew is expected to graduate in the spring of 2021. After earning his PhD, he would like to pursue a career in academia. andrewtenbrink@wayne.edu | @AndrewPTenbrink

Mallory Smith is pursuing a Master of Arts in I-O Psychology. She earned her BA in Psychology and German from Wayne State University in 2017. Her interests include factors influencing employee attitudes, efficacy, and perceptions of justice during organizational change. Following graduation, she is interested in an applied career in the private sector—ideally in a role where she can help employees and businesses anticipate, prepare for, and navigate periods of uncertainty. smithy@wayne.edu | @mallorycsmith

Georgia LaMarre is a 3rd-year PhD student in I-O psychology. Originally from Canada, she completed her undergraduate education at the University of Waterloo before moving over the border to live in Michigan. Georgia is currently working with an interdisciplinary grant-funded team to study the workplace correlates of police officer stress in addition to pursuing interests in team decision making, workplace identity, and paramilitary organizational culture. After graduate school, she hopes to apply her I-O knowledge to help solve problems in public-sector organizations. georgia.lamarre@wayne.edu

Laura Pineault is a 4th-year PhD candidate in I-O psychology. Her research interests lie at the intersection of leadership and work–life organizational culture, with emphasis on the impact of work–life organizational practices on the leadership success of women. Laura graduated with Distinction from the Honours Behaviour, Cognition and Neuroscience program at the University of Windsor in June 2016. Currently, she serves as a quantitative methods consultant for the Department of Psychology's Research Design and Analysis Unit. Laura is expected to graduate in the spring of 2021. After graduate school, she hopes to pursue a career in academia. laura.pineault@wayne.edu | @LPineault

Tyleen Lopez is a 2nd-year PhD student in I-O psychology. She received her BA in Psychology from St. John's University in Queens, New York. Her research interests include diversity, inclusion, and leadership—particularly regarding ethnic minority women in the workplace. Tyleen is currently a graduate research assistant and lab manager for Dr. Lars Johnson's Leadership, Productivity and Wellbeing Lab at Wayne State. Tyleen is expected to graduate in the spring of 2023. After earning her PhD, she would like to pursue a career in academia. tyleen.lopez@wayne.edu

Opening Up: Credibility Multipliers: Simple Yet Effective Tactics for Practicing Open Science Principles

Christopher M. Castille
Nicholls State University

Fred Oswald
Rice University

Sebastian Marin
University of Minnesota–Twin Cities

Tanja Bipp
Heidelberg University

Before diving into the main topic for this installment of *Opening Up*, we'd like to point out how some important advances and lessons in open science have been motivated by the devastating crisis of the coronavirus pandemic. Since the beginning of the year, research to understand the coronavirus and the disease of COVID-19 has been conducted in earnest, with over 7,000 papers produced in the past 3 months (*The Economist*, 2020), across a wide range of disciplines (e.g., virology, epidemiology, healthcare). Considering how slow and steady the scientific publishing process tends to be (ranging from a couple of weeks to over a year), what do we make of this vast output? What lessons might we take away in thinking further about open science?

First, note that a large volume of this research has been made publicly available in the form of **preprints**—manuscript drafts that have not yet undergone peer review—that are made available via online archives (e.g., bioArxiv and medArxiv are key repositories for this research; PsyArxiv is a similar repository for psychological research). Preprints allow scholars to share their work more rapidly and widely compared to journals, helping researchers get quick and wide-ranging feedback on their work outside the more formal peer review process. Thus, this opens up the potential for scholarly work as a whole to advance more rapidly. The word *potential* is key here. Submissions, particularly to bioArxiv and medArxiv, may be given cursory checks to weed out nonscientific work (e.g., opinion pieces), but the quality of the scientific value is expected (hoped, in fact) to be heavily, appropriately, and quickly examined and critiqued by the scholarly community. For instance, a paper falsely suggested that the coronavirus was created in a lab, a message that was quickly picked up by the press but was nearly equally quickly dismantled by the scholarly community, who pointed out genetic evidence and animal research that strongly supported more natural causes. Another preprint, shared as of this writing via news outlets and discussed particularly on *The Daily Show with Trevor Noah* (May 21, 2020-Taraji P. Henson), suggested that marijuana may have coronavirus-fighting benefits. Turns out this preprint was supported by a CBD company. Thus, the speed at which preprints are produced for scientific, media, and public consumption carries both real benefits and serious drawbacks. However, press representation of scientific work has always been a problem, even in traditional publishing, so there needs to be a continued examination of the tradeoffs of providing large volumes of scientific work that have not been fully vetted.

As you might have guessed by now, this leads us to **preprints** as one of the "simple yet effective" tactics we wish to highlight for opening up I-O psychology research.[1] *The Economist* surmised that the practice of posting preprints will only become even more widespread, and, thus, we should become more active participants in the preprint community, getting in the fray of open science as it were, so that we can connect with other disciplines and help to manage how preprints can best serve our discipline. As a re-

cent and pertinent example, consider a 42-author perspective piece by Van Bavel et al. (2020), which was posted as a preprint to PsyArxiv and then was published as a perspective piece in *Nature Human Behavior.* The authors, a collection of esteemed scholars in a variety of behavioral and social science areas, including SIOP's own **Michelle Gelfand**, highlights psychological insights to be gained from several key areas of empirical work (e.g., leadership, threat perception, stress, and coping) that may be *potentially* relevant for guiding policy during the pandemic. A quick response to this preprint can be found in another preprint (IJzerman et al., 2020), which details why psychological science may prove helpful in handling the pandemic but is generally not "crisis ready" whenever life or death is at stake.

The point of these examples is that you now can undoubtedly appreciate how preprints can present opportunities for us as a field, and we should start discovering how. In a similar vein, the *Journal of Applied Psychology* has recently made a call for rapid research into COVID-19, and other psychology and management journals are making similar calls. Many of these journals plan to make their pandemic-relevant journal articles freely accessible to the scientific community and to the public, at least for a limited time. Like many others, we cannot help but think, "This is great! ...Can we do more open access so that I-O psychology can have an even bigger impact on the scientific community, policy makers, and the public?" This is not a simple question, actually. Certainly publishers seek to protect their assets, but they also promote professions, researchers, and the science we produce. They do assure a level of peer and editorial review that is not found in preprints. Furthermore, open science issues intersect with a wide range of scientific, professional, legal, and ethical concerns, and stakeholders who require continued discussions (Grand et al., 2018). In other words, and in brief, open science is not simply a matter of flipping a switch.
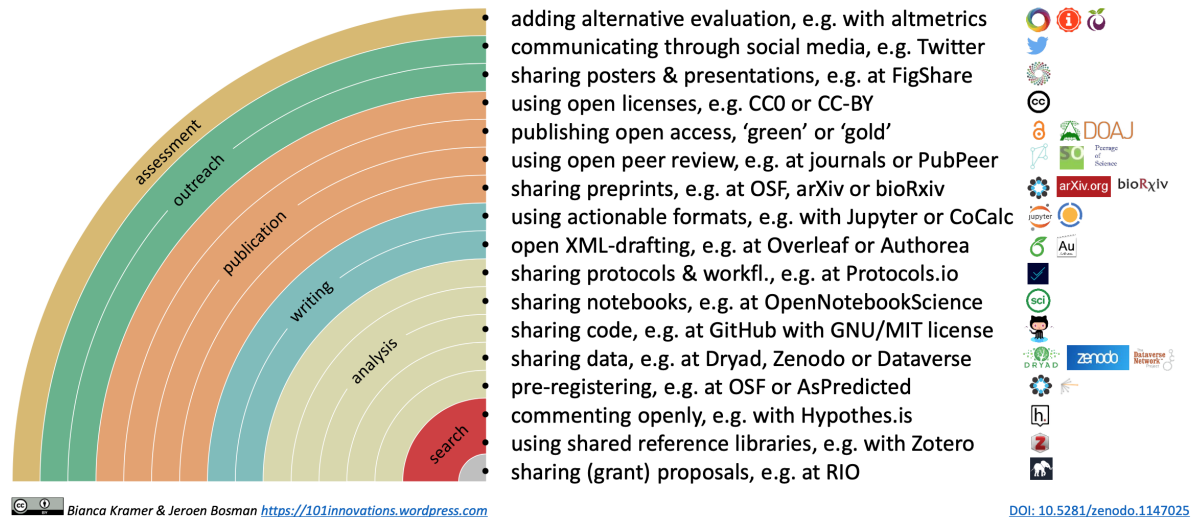
Even with all the aforementioned issues, and even as open science itself evolves, we are confident that almost every I-O psychologist can engage in a set of what we will call **credibility multipliers** (named as such in hopes that you will use them!). Credibility multipliers refer to a set of simple-yet-effective open science activities that almost always improve the process and outcomes of research and practice. Taking this approach, our goal is to inspire simple behaviors that stand not only to improve I-O research and practice but even our professional reputations over time. Sometimes a little extra detail goes a long way in helping to enhance the credibility of one's work, and we are taking this stance so that I-O psychology will enter the stage and the growing community of open science in greater numbers and with capability and enthusiasm.

Fortunately, as beta testers of open science for I-O psychology, we are hardly starting from scratch. Scholars from a wide range of disciplines have offered a number of open science tools and points of guidance for shifting our culture toward greater openness and transparency in how we conduct and share our work (e.g., Kramer & Bosman, 2018; Nosek et al., 2015; Nuijten, 2019; Wicherts et al., 2016). One visual that captures the cornucopia of available practices across disciplines is the open science rainbow (Kramer & Bosman, 2018; see Figure 1), which includes a variety of open science practices and tools. Some of these tactics for practicing open science are relatively easy to put into practice almost immediately; for example, creating and sharing reference libraries via Zotero can allow scholars and practitioners to share articles rather seamlessly. Other practices would require much more additional training to implement, such as using Jupyter notebooks, a practice that might speak best to specialized audiences (e.g., data scientists in organizations).

Figure 1

The Rainbow of Open Science Practices (Kramer & Bosman, 2018).

You can make your workflow more open by …

- adding alternative evaluation, e.g. with altmetrics
- communicating through social media, e.g. Twitter
- sharing posters & presentations, e.g. at FigShare
- using open licenses, e.g. CC0 or CC-BY
- publishing open access, 'green' or 'gold'
- using open peer review, e.g. at journals or PubPeer
- sharing preprints, e.g. at OSF, arXiv or bioRxiv
- using actionable formats, e.g. with Jupyter or CoCalc
- open XML-drafting, e.g. at Overleaf or Authorea
- sharing protocols & workfl., e.g. at Protocols.io
- sharing notebooks, e.g. at OpenNotebookScience
- sharing code, e.g. at GitHub with GNU/MIT license
- sharing data, e.g. at Dryad, Zenodo or Dataverse
- pre-registering, e.g. at OSF or AsPredicted
- commenting openly, e.g. with Hypothes.is
- using shared reference libraries, e.g. with Zotero
- sharing (grant) proposals, e.g. at RIO

What we will call specific attention to from the rainbow of open science are (a) minimally, preregistering a study on the Open Science Framework (OSF) and then at least considering the registered report publishing format, (b) ensuring analytical and computational reproducibility, (c) using checklists to avoid questionable research practices, and (d) sharing work via preprints.[2]

Preregistration and Registered Reports

Preregistration is similar to a project proposal or thesis proposal; it is the process of writing out and committing to your research questions and analysis plan *prior* to conducting the study and observing the outcomes of research. Turning to a quote by Richard Feynman, "The first principle is to not fool yourself — and you are the easiest one to fool." Simply put, the intent is to distinguish which aspects of research were confirmatory (as planned beforehand) versus exploratory (as discovered, in follow-up), thus helping to guard against confirmation bias, the process of constructing theories, findings, or beliefs from findings retrospectively (Nosek et al., 2018). Preregistration can be as simple or as detailed as one would like. On the simple side, the website www.aspredicted.org provides a form asking nine questions (e.g., specifying the research question, dependent variable, and sample size), and this form can be kept to oneself or shared publicly. We hope most I-O psychologists will use this sort of form because it is easy, a nice beginning to get in the habit of preregistration and planning. I-O psychologists should also review other preregistration forms that are publicly available; although they are more intensive, they might prove even more useful (see templates provided by the OSF: https://osf.io/zab38/wiki/home/). Depending on how detailed you wish to be, it can take anywhere from 30–60 minutes to preregister a study (Aguinis, et al., 2020), which makes it easy to place into your workflow. Also, it allows your lab to collaborate in jointly discussing, forming, and committing to a well-formed research plan.

What should be made extremely clear is that preregistration does *not* lock a research into any particular approach to the work; in fact, the preregistered plan *itself* might contain aspects of the work that are known *a priori* to involve exploratory or qualitative work of the sort featured in inductive research (e.g.,

Dirnagl, 2020; Haven & Van Grootel, 2019; see also the Special Issue on Inductive Research by the *Journal of Business and Psychology* edited by Paul Spector, 2013). Essentially, preregistration can front-load a project because investing greater time in planning on the front end generally makes execution on the back end easier (e.g., analysis and writing up results). As authors select and write up their preregistration forms, they would benefit from consulting the American Psychological Association's Journal Article Reporting Standards (i.e., JARS; see https://apastyle.apa.org/jars/). JARS are provided for quantitative, qualitative, and mixed methods studies. Research might be viewed as more credible when preregistration details are specified *a priori* (e.g., data-cleaning procedures, outlier detection tools) because by committing to a research process readers are reassured that authors are not mucking around with their research procedures *post hoc* to achieve a set of desired results. Of course, the more detail that is included, the more time this will take. However, many individuals are sharing their procedures for preregistration online (e.g., program scripts for screening outliers, scripts for screening inattentive responding), making easier the inclusion of such methodological details in a preregistration.

A **registered report** is a detailed preregistration plan submitted to a journal for review, where submitting scholars can gain constructive feedback and insights into the conceptual and methodological limitations of their study, while ideally earning an agreement to have their work accepted for publication, conditional on completion of the study as planned (study design, data analysis, etc.). I-O psychology journals that currently accept registered reports include *The Leadership Quarterly; International Journal of Selection and Assessment*; *Journal of Personnel Psychology*; *Stress & Health*; *Work, Aging, and Retirement*; and the *Journal of Occupational and Organizational Psychology*. We are big fans of the approach of working together with journals and editorial boards more collaboratively to develop great research before the work is executed, given that an ounce of prevention in the form of a well-designed research study is worth a pound of cure in terms of needing to apply statistical corrections in hopes for the best (Oswald, et al., 2015) or needing to wait for additional data in a replication or meta-analysis (Aguinis & Vandenberg, 2014). Registered reports can help to remedy the sort of psychological research that has fallen prone to endogeneity bias (Antonakis, 2017), low statistical power (Aguinis et al., 2020; Fanelli, 2010, 2012; Fraley & Vazire, 2014; Murphy & Russell, 2017), and the misuse of control variables (Bernerth & Aguinis, 2015; Spector & Brannick, 2011). Thus, the preregistration process can improve research and the training of researchers; prevent the escalation of commitment to poorer research practices; and help place important research criticisms up front, before a lot of time, reputational, and ego investments are made.

Furthermore, should a preregistration or registered report call for a larger sample than you originally anticipated, do not let that deter you. Sometimes it might make sense to consider simpler models that require less power, but in other cases, we suggest you become inspired to gather vastly more data via a **multisite collaboration**. In fact, one of the authors (Chris) is currently a part of a large-scale collaboration involving over 100 labs around the world investigating the universality of moral intuitions across the world. This multisite project is being sponsored under the umbrella of the Psychological Science Accelerator (PSA; see https://psysciacc.org/).[3] The lead authors required a sample of almost 10,000 participants, which would often be well beyond a single author's ease of sampling. By submitting a paper to the PSA, not only were they able to recruit labs from around the world to collect the necessary data, they were able to collect the data faster in parallel while also ensuring that the data were internationally more diverse than that found in any individual lab. In addition to data collection, scholars are also collaborating on the manuscript itself, producing a paper that is conditionally accepted by the journal *Nature Human Behavior* as part of a registered report, where data collection is ongoing (see Bago et al., 2019).

Notably, in the previous entries to *Opening Up*, a few other such multisite collaborations were highlighted (i.e., Many Labs, the Open Science Collaboration). Multisite collaborations have become a powerful vehicle for leveraging our collective expertise to make robust contributions. They are even currently occurring at the undergraduate level (see Wagge et al., 2019). What if they happened at the graduate level in I-O psychology? At the doctoral level? What if I-O psych programs leveraged their resources (e.g., access to organizations) to study phenomena (e.g., psychological reactions to COVID-19) that made a practical impact (e.g., studying how employers navigate COVID-19)?

Ensuring Analytic and/or Computational Reproducibility

Analytic and computational reproducibility refers to "the ability of other researchers to obtain the same results when they reanalyze the same data" (Kepes, et al., 2014, p. 456). To do so involves applying analyses to **publicly shared data** in some public repository (e.g., OSF, GitHub), while clearly indicating the variables, how the data were cleaned, and so on. Ideally, authors will also **publicly share code/syntax,** thereby facilitating independent reproducibility. Research suggests that studies with publicly available data are cited more frequently and also characterized by fewer statistical errors and more robustness (Piwowar et al., 2007; Piwowar & Vision, 2013; Wicherts et al., 2011). Of course, in some cases sharing data and code may prove insufficient. For example, maybe data and code were shared, but bootstrapping was conducted, and this cannot be reproduced exactly for lack of a random number seed (the solution is evident here: use random number seeds, or in machine learning in R, use caret [Kuhn, 2008] or other packages to manage modeling efforts). Or perhaps there is "code rot," where software becomes unusable because it is outdated or the operating system on which the software depended has been upgraded and is now incompatible. Fortunately, the open science community is concerned about this issue and has created ways to preserve the functionality of past code and analyses (e.g., containerization via Docker; Peikert & Brandmaier, 2019). The interested reader is encouraged to pursue these and other resources for ensuring analytic and computational reproducibility. If data themselves cannot be shared, perhaps summary data that enters into analyses can be shared (discussed further below). Assuming you are allowed to do so as a researcher or practitioner, sharing of data and code can be done relatively easily using "quick files" within the Open Science Framework (which we routinely use). A complementary or alternative option involves creating an online mailing list (e.g., Google) for a paper that allows interested readers to discuss the paper in a public forum even in the absence of the original author (Masuzzo & Martens, 2017).

Data sharing does not come without drawbacks. Organizations are rightfully concerned about proprietary issues and loss of competitive advantage when disclosing any of their research efforts; we hope that through continued academic–practice partnerships and negotiations (e.g., embargo periods, de-identification approaches) that forward-thinking organizations will see the competitive advantage of thought leadership through open science. Furthermore, there is the legitimate concern of re-identification of research participants, even after the data are appropriately de-identified (Culnane et al., 2019). As such, we recommend **reporting the adequate descriptive statistics for reproducing an effect**. This means ensuring that reported descriptive statistics allow for independent reproducibility. For example, Bergh and colleagues' (2017) advice to authors includes (a) disclosing variable values in all empirical models (coefficient estimates, standard errors, *p* values in decimals); (b) reporting a correlation matrix that includes means, standard deviations, correlations, and sample sizes for all variables in all models (including product terms, squared terms, and transformed variables) and for all subgroups if appropriate; (c) describing all data-related decisions, including how missing values and outliers were handled; and (d) attesting to the accuracy of the data and that the reporting of analytical findings and conclusions are based only on the reported data. Indeed, most statistical packages (e.g.,

IBM SPSS, SAS, R) offer the capability to analyze descriptives and reproduce modeling and results that rely on those descriptives (e.g., regression, structural equation modeling).

A Checklist for Avoiding Questionable Research Practices (QRPs)

One of the most pervasive issues highlighted by research into questionable research practices concerns hidden analytic flexibility. In other words, the analysis that is reported in a manuscript is occasionally not the one that was planned in advance (Crede & Harms, 2019; Wicherts et al., 2016)—and this can render analyses and reported p values suspect or meaningless. Sometimes these behaviors are unintentional, enacted out of näiveté, or even well-intentioned. For instance, imagine researchers who engage in an initial analysis plan, following which the research results were not as one hoped, causing greater scrutiny than if results were aligned with one's hypotheses. This scrutiny reveals that the analysis approach was flawed; a subsequent, and thus a seemingly superior, one is adopted. Although seemingly innocuous (and perhaps even recommended in some circles), such behavior does render the results subject to confirmation bias (Chambers, 2017), because even if research results had been supportive, the original analysis approach was found to be incorrect.

Fortunately, Wicherts and colleagues have provided a checklist that can be used to avoid post-hoc reasoning on the basis of statistical results, also known as p-hacking (Wicherts et al., 2016). Their checklist includes tactics such as (a) making sure to have an outlier exclusion protocol in advance, (b) reporting all measures of independent and dependent variables (not administering a ton of measures and focusing only on statistically significant relationships), and (c) proposing well-specified hypotheses and being open about other hypotheses that are exploratory and less closely specified.[4] In addition to Wicherts et al.'s checklist, we again encourage authors to use the JARS to guide preregistration and the conduct of research (https://apastyle.apa.org/jars/).

The Search for Credibility Multipliers Continues

One might think of a continuum of researcher and practitioner guidelines where open science might contribute. One end of the continuum is prescriptive, things we definitely should do (e.g., report sample sizes and descriptive statistics) and things we definitely should not do (e.g., p-hacking, such as peeking at data until findings are statistically significant; misreporting results to appear more favorable). The other end of the continuum is descriptive, where we can learn from the decisions and behaviors of researchers and practitioners "in the wild" to see how (a) new types of prescriptive behaviors emerge (e.g., habitually reporting the multiplicative terms in correlation tables so that interactions can be reproduced; Bergh et al., 2017); (b) a more qualitative understanding and appreciation of judgment calls can be made (e.g., when data privacy must overrule data sharing, or when aggregated data and statistics can be shared as a productive compromise). Building an open science community will take time, but together, to the extent we all participate in open science, we can improve our science and our practice. By adopting even a few of the practices we've shared here, the small changes we make can compound over time for each of us as researchers and practitioners.

We are sharing and revising our knowledge about how to conduct research; we are contributing to our own "lifelong learning" efforts; we are mentoring others and cultivating our relationships with other scientists and practitioners. Is this not what SIOP conferences are all about? Is this not why we meet annually at SIOP? Well, I-Open science can do that! Yes, there are challenges to open science. These include (a) restrictions on flexibility (e.g., HARKing—we have to be open about mistakes), (b) the time cost (e.g., takes time to plan the hypotheses, research design, and analytic details of a study), and (c) the open science culture and external incentive structures are not yet firmly in place (Allen & Mehler, 2019). Tips for overcoming these challenges include (a) using registered reports and preregistration to clarify what is and is not

planned, (b) identifying outlets that value preregistration or asking editors at major journals if they would be willing to accept such a proposal, and (c) being strategic with the open science practices that you adopt (e.g., focus on quality of inference rather than quantity of inferences; see Allen & Mehler, 2019). In spite of these many challenge, there are many benefits, including (a) greater trust in the claims that we make (and therefore enhanced credibility to the scholar making a claim), (b) use of novel systems to help promote collaboration in the spirit of open science (e.g., storing code in the OSF), and (c) investment in the our collective future (e.g., career advances, securing funding through open-science-backed resources). We should emphasize that not all deviations from a preregistration are bad. The point is to be open about what was committed beforehand, what was exploratory, what deviations were made, why data could be shared or could not be shared (the latter is okay, but disclose your rationale), and so on.

Next Time on *Opening Up*

We examine ways to improve how we review empirical work and highlight tools that are helpful for more critically evaluating empirical claims. We'll take a step back and consider different perspectives—those of a practitioner and that of academics—and illustrate how to ensure the reproducibility of common claims. We'll dive more deeply into **peer review** as a key area of inquiry in the open science movement. There are a variety of tools that have become publicly available for helping scholars more carefully scrutinize empirical work. We'll highlight a few here to whet your appetite. These include tools that scan documents for errors reporting sample statistics, such as the StatCheck (http://statcheck.io/; see Nuijten et al., 2016), granularity-related inconsistency of means (GRIM) test (see Brown & Heathers, 2017), sample parameter reconstruction via iterative techniques (SPRITE; see Heathers, et al., 2018), and DEscriptive BInary Test (DEBIT; see Heathers & Brown, 2019). Such tools have been used to detect questionable work in the literature (see Chawla, 2019).

Notes

[1] It is worth pointing out that the APA is supportive of preprints. If you share a preprint via PsyArxiv, then the preprint could be submitted with relative ease to an APA journal with a few button clicks.

[2] One other practice we lacked the space to mention includes drawing on Curate Science (https://curatescience.org/app/home), which helps researchers to identify quality research with transparency and credibility metrics. This tool may serve as a useful vehicle for accelerating the development of cumulative knowledge in I-O psychology.

[3] It is worth noting that the PSA also started a collaboration to identify ways in which psychological science can be brought to bear on the COVID-19 pandemic.

[4] This can be much easier said than done. Landy et al. (2020) found that hypotheses in psychology often have sufficient verbal ambiguity that can influence design choices, making it difficult to test an effect. Similar issues with regard to models that are commonly tested in our literature (i.e., models involving mediation and moderation) have also been identified (see Holland, et al., 2017). Sometimes we need a good reminder of the basics. To this point, Daniël Lakens has an amazing and free course on statistical inference that features the application of open science principles to hypothesis testing (https://www.coursera.org/learn/statistical-inferences).

References

Aguinis, H., & Vandenberg, R. J. (2014). An ounce of prevention is worth a pound of cure: Improving research quality before data collection. *Annual Review of Organizational Psychology and Organizational Behavior*, *1*(1), 569–595. https://doi.org/10.1146/annurev-orgpsych-031413-091231

Aguinis, H., Banks, G. C., Rogelberg, S. G., & Cascio, W. F. (2020). Actionable recommendations for narrowing the science-practice gap in open science. *Organizational Behavior and Human Decision Processes*, *158*, 27–35. https://doi.org/10.1016/j.obhdp.2020.02.007

Allen, C., & Mehler, D. M. A. (2019). Open science challenges, benefits and tips in early career and beyond. *PLOS Biology*, *17*(5), e3000246. https://doi.org/10.1371/journal.pbio.3000246

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

Bago, B., Aczel, B., Kekecs, Z., Protzko, J., Kovacs, M., Nagy, T., Hoekstra, R., Li, M., Musser, E. D., Arvanitis, A., Io-nes, M. T., Bayrak, F., Papadatou-Pastou, M., Belaus, A., Storage, D., Thomas, A. G., Buchanan, E. M., Becker, B., Baskin, E., … Chartier, C. R. (2019). *Moral thinking across the world: Exploring the influence of personal force and intention in moral dilemma judgments* [Preprint]. PsyArXiv. https://doi.org/10.31234/osf.io/9uaqm

Bergh, D. D., Sharp, B. M., & Li, M. (2017). Tests for identifying "red flags" in empirical findings: Demonstration and recommendations for authors, reviewers, and editors. *Academy of Management Learning & Education*, *16*(1), 110–124. https://doi.org/10.5465/amle.2015.0406

Bernerth, J. B., & Aguinis, H. (2015). A critical review and best-practice recommendations for control variable us-age. *Personnel Psychology*, *69*(1), 229–283. https://doi.org/10.1111/peps.12103

Brown, N. J. L., & Heathers, J. A. J. (2017). The GRIM test: A simple technique detects numerous anomalies in the reporting of results in psychology. *Social Psychological and Personality Science*, *8*(4), 363–369. https://doi.org/10.1177/1948550616673876

Chambers, C. (2017). *The seven deadly sins of psychology: A manifesto for reforming the culture of scientific prac-tice*. Princeton University Press.

Chawla, D. S. (2019, November 26). Quintet of study retractions rocks criminology community. *Science.* AAAS. https://www.sciencemag.org/news/2019/11/quintet-study-retractions-rocks-criminology-community

Crede, M., & Harms, P. (2019). Questionable research practices when using confirmatory factor analysis. *Journal of Managerial Psychology*, *34*(1), 18–30. https://doi.org/10.1108/JMP-06-2018-0272

Culnane, D., Rubinstein, A., Benjamin, I. P., & Teague, A. (2019). *Stop the open data bus, we want to get off* [Pre-print]. arXiv. arXiv:1908.05004. https://arxiv.org/abs/1908.05004

Cummings, J. A., Zagrodney, J. M., & Day, T. E. (2015). Impact of open data policies on consent to participate in human subjects research: Discrepancies between participant action and reported concerns. *PLoS ONE*, *10*(5), e0125208. https://doi.org/10.1371/journal.pone.0125208

Dirnagl, U. (2020). Preregistration of exploratory research: Learning from the golden age of discovery. *PLoS Biolo-gy*, *18*(3), e3000690. https://doi.org/10.1371/journal.pbio.3000690

Fanelli, D. (2010). "Positive" results increase down the hierarchy of the sciences. *PLoS ONE*, *5*(4), e10068. https://doi.org/10.1371/journal.pone.0010068

Fanelli, D. (2012). Negative results are disappearing from most disciplines and countries. *Scientometrics*, *90*(3), 891–904. https://doi.org/10.1007/s11192-011-0494-7

Fraley, R. C., & Vazire, S. (2014). The N-Pact Factor: Evaluating the quality of empirical journals with respect to sample size and statistical power. *PLoS ONE*, *9*(10), e109019. https://doi.org/10.1371/journal.pone.0109019

Grand, J. A., Rogelberg, S. G., Allen, T. D., Landis, R. S., Reynolds, D. H., Scott, J. C., Tonidandel, S., & Truxillo, D. M. (2018). A systems-based approach to fostering robust science in industrial-organizational psychology. *Industri-al and Organizational Psychology*, *11*(01), 4–42. https://doi.org/10.1017/iop.2017.55

Haven, T. L., & Van Grootel, L. (2019). Preregistering qualitative research. *Accountability in Research*, *26*(3), 229–244. https://doi.org/10.1080/08989621.2019.1580147

Heathers, J. A., Anaya, J., van der Zee, T., & Brown, N. J. (2018). Recovering data from summary statistics: Sample Parameter Reconstruction via Iterative TEchniques (SPRITE) [Preprint]. *PeerJ Preprints.* https://doi.org/10.7287/peerj.preprints.26968v1

Heathers, J. A. J., & Brown, N. J. L. (2019). *DEBIT: A simple consistency test for binary data*. OFS. https://t.co/uritVVlKxA?amp=1

Holland, S. J., Shore, D. B., & Cortina, J. M. (2017). Review and recommendations for integrating mediation and moderation. *Organizational Research Methods*, *20*(4), 686–720. https://doi.org/10.1177/1094428116658958

IJzerman, H., Lewis, N. A., Weinstein, N., DeBruine, L. M., Ritchie, S. J., Vazire, S., Forscher, P. S., Morey, R. D., Ivory, J. D., Anvari, F., & Przybylski, A. K. (2020). *Psychological science is not yet a crisis-ready discipline* [Preprint]. PsyArXiv. https://doi.org/10.31234/osf.io/whds4

Kepes, S., Bennett, A., & McDaniel, M. (2014). Evidence-based management and the trustworthiness of cumulative scientific knowledge: Implications for teaching, research and practice. *Academy of Management Learning and Education, 13*, 446– 466.

Kramer, B., & Bosman, J. (2018, January). *Rainbow of open science practices*. Zenodo. http://doi.org/10.5281/zenodo.1147025

Kuhn, M. (2008). Building predictive models in R using the caret package. *Journal of Statistical Software, 28*(5), 1–26. doi:http://dx.doi.org/10.18637/jss.v028.i05

Landy, J. F., Jia, M. (Liam), Ding, I. L., Viganola, D., Tierney, W., Dreber, A., Johannesson, M., Pfeiffer, T., Ebersole, C. R., Gronau, Q. F., Ly, A., van den Bergh, D., Marsman, M., Derks, K., Wagenmakers, E.-J., Proctor, A., Bartels, D. M., Bauman, C. W., Brady, W. J., … Uhlmann, Eric L. (2020). Crowdsourcing hypothesis tests: Making transparent how design choices shape research results. *Psychological Bulletin, 146*(5), 451–479. https://doi.org/10.1037/bul0000220

Masuzzo, P., & Martens, L. (2017). Do you speak open science? Resources and tips to learn the language [Preprint]. *PeerJ Preprints*. https://doi.org/10.7287/peerj.preprints.2689v1

Murphy, K. R., & Russell, C. J. (2017). Mend it or end it: Redirecting the search for interactions in the organizational sciences. *Organizational Research Methods*, *20*(4), 549–573. https://doi.org/10.1177/1094428115625322

Nosek, B. A., Alter, G., Banks, G. C., Borsboom, D., Bowman, S. D., Breckler, S. J., Buck, S., Chambers, C. D., Chin, G., Christensen, G., Contestabile, M., Dafoe, A., Eich, E., Freese, J., Glennerster, R., Goroff, D., Green, D. P., Hesse, B., Humphreys, M., … Yarkoni, T. (2015). Promoting an open research culture. *Science*, *348*(6242), 1422–1425. https://doi.org/10.1126/science.aab2374

Nosek, B. A., Ebersole, C. R., DeHaven, A. C., & Mellor, D. T. (2018). The preregistration revolution. *Proceedings of the National Academy of Sciences*, *115*(11), 2600–2606. https://doi.org/10.1073/pnas.1708274114

Nuijten, M. B. (2019). Practical tools and strategies for researchers to increase replicability. *Developmental Medicine & Child Neurology*, *61*(5), 535–539. https://doi.org/10.1111/dmcn.14054

Nuijten, M. B., Hartgerink, C. H. J., van Assen, M. A. L. M., Epskamp, S., & Wicherts, J. M. (2016). The prevalence of statistical reporting errors in psychology (1985–2013). *Behavior Research Methods*, *48*(4), 1205–1226. https://doi.org/10.3758/s13428-015-0664-2

Oswald, F. L., Ercan, S., McAbee, S. T., Ock, J., & Shaw, A. (2015). Imperfect corrections or correct imperfections? Psychometric corrections in meta-analysis. *Industrial and Organizational Psychology, 8*(2), e1-e4. https://doi.org/10.1017/iop.2015.17

Peikert, A., & Brandmaier, A. M. (2019). *A reproducible data analysis workflow with R Markdown, Git, Make, and Docker* [Preprint]. PsyArXiv. https://doi.org/10.31234/osf.io/8xzqy

Piwowar, H. A., Day, R. S., & Fridsma, D. B. (2007). Sharing detailed research data is associated with increased citation rate. *PLoS ONE*, *2*(3), e308. https://doi.org/10.1371/journal.pone.0000308

Piwowar, H. A., & Vision, T. J. (2013). Data reuse and the open data citation advantage. *PeerJ*, *1*, e175. https://doi.org/10.7717/peerj.175

Spector, P. E., & Brannick, M. T. (2011). Methodological urban legends: The misuse of statistical control variables. *Organizational Research Methods*, *14*(2), 287–305. https://doi.org/10.1177/1094428110369842

Spector??? 2014

The Daily Show with Trevor Noah—May 21, 2020—Taraji P. Henson. (2020, May 21). Comedy Central. http://www.cc.com/episodes/kegsvm/the-daily-show-with-trevor-noah-may-21--2020---taraji-p--henson-season-25-ep-25111

The Economist. (2020, May 7). Scientific research on the coronavirus is being released in a torrent. https://www.economist.com/science-and-technology/2020/05/07/scientific-research-on-the-coronavirus-is-being-released-in-a-torrent

Van Bavel, J. J., Baicker, K., Boggio, P., Capraro, V., Cichocka, A., Cikara, M., Crockett, M., Crum, A., Douglas, K., Druckman, J., Drury, J., Dube, O., Ellemers, N., Finkel, E. J., Fowler, J., Gelfand, M., Han, S., Haslam, S. A., Jetten, J., … Willer, R. (2020). *Using social and behavioural science to support COVID-19 pandemic response* [Preprint]. PsyArXiv.

Wagge, J. R., Brandt, M. J., Lazarevic, L. B., Legate, N., Christopherson, C., Wiggins, B., & Grahe, J. E. (2019). Publishing research with undergraduate students via replication work: The Collaborative Replications and Education Project. *Frontiers in Psychology*, *10*, 247. https://doi.org/10.3389/fpsyg.2019.00247

Wicherts, J. M., Bakker, M., & Molenaar, D. (2011). Willingness to share research data is related to the strength of the evidence and the quality of reporting of statistical results. *PLoS ONE*, *6*(11), e26828. https://doi.org/10.1371/journal.pone.0026828

Wicherts, J. M., Veldkamp, C. L. S., Augusteijn, H. E. M., Bakker, M., van Aert, R. C. M., & van Assen, M. A. L. M. (2016). Degrees of freedom in planning, running, analyzing, and reporting psychological studies: A checklist to avoid *p*-hacking. *Frontiers in Psychology*, *7*. https://doi.org/10.3389/fpsyg.2016.01832

The Bridge: Connecting Science and Practice

Co-Editors: Kimberly Adams, Lead Path Solutions, LLC; Stephanie Zajac, UT MD Anderson Cancer Center; and 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, **Will Shepherd** describes Wendy's evidence-based employee engagement program and how employee engagement surveys can be used to provide managers with a variety of resources to improve the engagement of employees and reduce turnover.

The "Voice of Wendy's" Program: Human Resource Management Impact Award Winner

Will Shepherd
Director—Talent & Organizational Effectiveness

Wendy's was pleased to be honored by the Society for Industrial and Organizational Psychology (SIOP) and SHRM (Society for Human Resource Management), along with their foundations, as one of the winners for the 2019–2020 Human Resource Management (HRM) Impact Award. This award recognizes or-

ganizations with outstanding evidence-based HR management practices. Wendy's was recognized for its Voice of Wendy's (VOW) program.

Wendy's was founded in 1969 by Dave Thomas in Columbus, Ohio. Dave built his business on the premise, "Quality Is Our Recipe®," which remains the guidepost of the Wendy's system. Wendy's is best known for its made-to-order square hamburgers; using fresh, never frozen beef; freshly prepared salads with hand-chopped lettuce; and other signature items like chili, baked potatoes, and the Frosty® dessert. The Wendy's Company is committed to doing the right thing and making a positive difference in the lives of others. This is most visible through the company's support of the Dave Thomas Foundation for Adoption® and its signature Wendy's Wonderful Kids® program, which seeks to find every child in the North American foster care system a loving, forever home.

Because front-line quick service restaurant jobs are so fast paced and challenging, it is important for Wendy's to have an ongoing program to measure employee attitudes to ensure we have an engaged workforce that will "Delight Every Customer." As part of its strategic planning process, the Wendy's human resources organization committed to building a new program to gain greater insight into employee engagement. The new program was called the "Voice of Wendy's" (or VOW for short). The VOW program was a new core required program for company-owned restaurants. Wendy's is a franchisor that has relationships with independent franchisees that operate Wendy's restaurants. Franchisees—as independent organizations responsible for their own employment practices—could choose to opt in or opt out of the VOW program.

Wendy's wanted to take a data-driven approach to understanding and optimizing its service-profit chain by measuring employee engagement and linking it to turnover and organizational performance. We wanted to know the answers to questions such as

- What are the key drivers of employee engagement at Wendy's?
- What is the relationship between employee engagement and restaurant performance?
- What are the keys to successful onboarding to ensure new hires are engaged and productive?
- What is the impact of employee turnover, and how can we reduce it?

The VOW employee engagement program was implemented in 2016, and since then, over 250,000 respondents, 5,000 restaurants, and 150 franchise organizations have participated. Each restaurant receives a customized report with item-level results and two areas of focus for action planning. The two areas of focus are generated based on the restaurant's aggregate response pattern to the items on the survey that were determined through analytics to be key drivers of employee engagement. The reports also contained comparative norms to the local division as well as national quick service restaurant norms. The survey asks respondents to provide ratings in multiple content areas, including employee engagement, job characteristics, the work environment, and Wendy's organizational values. The survey also has a series of questions related to Wendy's Employment Value Proposition. The survey is completed by both restaurant employees and people who work in roles supporting the restaurants.

In addition, to gain further insight beyond multiple-choice ratings, respondents are prompted to provide follow-up comments on certain multiple-choice questions. For example, one such item was "I find that my work is rewarding." According to a relative-weights analysis, this item was one of the highest predictors of overall employee engagement. To gain more insight into this finding, we incorporated a follow-up open-text item asking respondents to explain what made their work rewarding (if they indicated it was) or conversely what would make work rewarding (if they indicated it was not). We used text analyt-

ics to detect themes in the responses. We found that employees who feel their work is rewarding say they find their jobs are rewarding because (a) they get to help customers, (b) they enjoy their interactions with coworkers, and (c) they get recognition from management. Employees who do not feel their work is rewarding say to make it rewarding they need (a) more pay and (b) more benefits. This insight helped reinforce the importance and financial impact of employee recognition by supervisors.

The survey also included four questions for new hires who had been employed 90 days or less. New hires were asked about their overall satisfaction with the hiring process, whether they felt welcomed by the manager and coworkers, whether the job duties matched what was described during the interview, and whether the manager invested time in building a relationship with them. Over time, these questions were expanded and spun off into a new hire onboarding survey that was administered to every new hire 2 weeks after hire. We found that restaurants with employees who reported higher onboarding survey satisfaction had lower turnover, higher employee engagement scores, and higher overall customer satisfaction.

Conducting an employee engagement survey has little impact unless there is subsequent follow through by the managers. We focused heavily on action planning. We provided a variety of resources for managers to utilize as part of action planning, including sample discussion guides, action planning templates, and an online training video on how to interpret and take action on VOW results. In year 2 of the survey program, we began to ask three questions of the employees: Did your manager share the VOW results? Did your manager take any initial action to improve based on the results? Have there been any subsequent check-in conversations over time on progress against the VOW results? We found that managers whose employees rated them highest on these three items had dramatic gains of 18% from year 1 to year 2 on employee engagement. However, failure by the managers to follow through on VOW in year 1 resulted in significant declines in engagement in year 2. Managers who received the lowest employee ratings on the three items saw employee engagement declines of 21%.

As the VOW program was launched, we began a series of predictive linkage studies connecting employee engagement to the customer satisfaction data. We began to track the customer satisfaction results of restaurants with high engagement versus low engagement. More highly engaged restaurants had higher customer satisfaction results in the subsequent months on dimensions such as taste, friendliness, speed, accuracy, and cleanliness. We were able to replicate these longitudinal results over a 2-year period. In addition to conducting linkage studies related to customer satisfaction, we also examined restaurant performance. We found that highly engaged restaurants had subsequent superior operational results, including pick-up window speed, sales, and transaction counts. Customers also reported a higher likelihood to return and fewer problems during their visits. Company restaurants with high employee engagement had 14% lower turnover than low-engagement restaurants.

One aspect of the VOW program is that we focus on "Top Box" percentages (the percent of employees who select the "strongly agree" option on the 1–5 agreement scale). Traditionally, employee survey results have reported a combined percentage for the "agree" and "strongly agree" options. However, because our customer satisfaction data were reported as "Top Box" percentages, we decided to align with this reporting approach. We did this so there would be comparability and consistency when managers reviewed their customer satisfaction and employee engagement results. Our research supported that "Top Box" ratings are meaningfully different. For example, employees who respond "strongly agree" to engagement items are three times more likely to recommend Wendy's as a great place to work than those who only respond "agree."

As part of its commitment to evidence-based human resources practices, Wendy's established a long-term research partnership with **Rob Ployhart** at the University of South Carolina to gain deeper insights into the VOW data. This research program is contributing to theory and the scholarly understanding of talent, turnover, and strategic business unit effectiveness. To date, the VOW program data has been used in the following presentations:

- Kautz, J., Ployhart, R. E., Shepherd, W., & Hale, D. (2017). *Employee emotional influences on the service-profit chain*. Symposium presented at the annual conference of the Academy of Management, Atlanta, GA.
- Ployhart, R. E. (2019). *New insights and surprising findings on talent mobility.* Invited presentation to chief HR officers at the Center for Executive Succession annual meeting, hosted by Blackstone, New York, NY.
- Ployhart, R. E., Hendricks, J. L., & Shepherd, W. J. (2019). *Complementarities between human capital resource flows and psychological resources.* HR Divisional Paper session at the 79th Annual Meeting of the Academy of Management, Boston, Massachusetts.
- Ployhart, R. E., Shepherd, W. J., & Hendricks, J. L. (2018). *The impact of collective psychological resources on business unit sales.* Symposium presented at the 33rd Annual Conference of the Society for Industrial and Organizational Psychology, Chicago, IL.
- Porr, W. B., Chambers, B., Kuyumcu, D., Shepherd, W. J., and Ployhart, R. E. (2019). *Cultural fit: Are we just trying to predict engagement?* Panel discussion at the 34th Annual Conference of the Society for Industrial and Organizational Psychology, National Harbor, MD.
- Shepherd, W. J. (2018, Cochair). *The impact of talent on collective turnover, performance, and profit*. Symposium presented at the 33rd Annual Conference of the Society for Industrial and Organizational Psychology, Chicago, IL.
- Shepherd, W. J., Ployhart, R. E., & Kautz, J. (2018). *Customer perceptions and employee attitudes as determinants of collective turnover*. Poster presented at the 33rd Annual Conference of the Society for Industrial and Organizational Psychology, Chicago, IL.
- Ward, W., Ployhart, R. E., & Shepherd, W. J. (2019). *The impact of inclusion practices on generational cohort differences in engagement.* Symposium presented at the 34th Annual Conference of the Society for Industrial and Organizational Psychology, National Harbor, MD.

In addition to the previously mentioned conference presentations and journal submission, this work bridges the gap between practice and academia further by providing applied research experience for multiple doctoral students. This research is also influencing practice through education, development, and outreach. The models and frameworks developed in our research have become a central part of a HR Business Partner Executive Education program cotaught by Dr. Ployhart to a wide range of firms and HR managers; they are presented to CHROs and talent leads as part of the University of South Carolina Center for Executive Succession and Center for Human Resource Research, and they have been reported in practitioner-oriented outlets (e.g., *Corporate Research Forum; Talent Quarterly*).

We continue to evolve the VOW program. As we look ahead, we are increasing our focus on our new hire onboarding survey which contains overlapping items with the core VOW annual survey. This provides us continuous tracking of new hire employee engagement. We also look to expand the program internationally into the 20+ countries in which we operate. Finally, we continue to expand the scope of VOW content beyond job attitudes to include reactions and feedback about restaurant operations.

Two Shocks Provoking a Question—*Quo Vadis?*

Milt Hakel

The first I-O presidential address I ever read was entitled "Quo Vadis?" Latin for "Where are we going?" by Brent Baxter. Back in the early 1960s, Baxter spoke about our lack of theory and the need for it: "With our lack of emphasis on a fundamental and broad psychological approach, we have drifted towards becoming technicians and not scientists. We are better known for our techniques than for fundamental insights." Baxter noted that we produce a seemingly endless stream of fragments leading nowhere and that our publications do not reflect fundamental advances but more often a multiplicity of minor tinkerings in a wide variety of settings.

Shock #1

The world has changed rather dramatically in the months since the Foundation Spotlight for April was drafted. It was the _TIP_ article in which **Adrienne Collella** announced the four finalists for the $100,000 Visionary Grant. Not only have we encountered lockdowns to shelter in place, followed by astonishing drops in employment and economic activity, but the personal shock was that the Austin SIOP conference was cancelled. It left everyone wondering what the future will bring.

To cope with the cancellation, the Foundation went online on April 29 to broadcast an "online plenary" via Zoom. **Susan Ashford**, **Brianna Caza**, and **Brittany Lambert** won the $100,000 grant, and their project kicks off on July 1. Read about "Working Off the Grid: Building Resilience in the GIG Economy" in this SIOP Newsbriefs article and watch Ashford's presentation on Vimeo.

Gig work looks like it will increase vastly in the coming decades. Resilience will surely be needed, regardless of our personal employment circumstances.

The Visionary Circle and its maiden grant is an initiative intended to move I-O ahead by **asking the right questions and gathering evidence meant to resolve them**.

Shock #2

On Memorial Day 2020 in Minneapolis, the world changed rather dramatically yet again. George Floyd died under the knee of an on-duty police officer **doing his job**. **It was a brutal death**.

At the very least Mr. Floyd's death was another one in a way-too-long list of shocks. Will it mark a tipping point for the United States as a nation, founded on a principle of "liberty and justice for all"? Closer to our day jobs, when and how will we bring I-O praxis to bear on **workplace** violence? It is without doubt a question that we must address. There is a need for I-Os to be researching the work-facing facet of this frequently repeating shock.

Present in the original purposes of the SIOP Foundation, and approved by the IRS, is a provision for what are called "term gifts." Term gifts may be given for approved scientific, educational, or cultural purposes allowed under section 501.C.3, and they need not be endowments. They are what we call pass-through funding; that is, the tax-deductible gift is given to the SIOP Foundation which, in turn, immediately passes the funds through to the entity that will enact the approved purpose of the gift.

Think of grants addressing **systemic racism at work**. Think outside of our usual I-O preoccupations and categories because so much of the world of work comprises social and cultural context. We all are well experienced in taking context for granted and working within the limited scope implicit in that context. We are all sometimes too quick to grant assumptions that simplify our research designs and interpretations of evidence. Testing and breaking those assumptions happens when current explanations do not fit the evidence.

Since Brent Baxter's presidential address at the end of the age of dustbowl empiricism, I-O has grown substantially in so many ways. We bring psychological science to workplace issues and concerns. At this point we need to draw deeply and broadly from all disciplines to strengthen I-O praxis because we are more than just scientists or practitioners or scientist–practitioners. As the global pandemic shows starkly, we need diversity and inclusion because **we are all in this together**.

The SIOP Foundation Trustees welcome your comments and suggestions. Become a member of the next Visionary Circle cohort. Or talk with any of us about making a larger gift to the Fund for the Future. This is the time for creativity AND action.

The SIOP Foundation's mission is to connect donors with I-O professionals to create smarter workplaces. Let us get on with it in these challenging times.

Milt Hakel, President, mhakel@bgsu.edu, 419 352 0983 or 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
Mirian Graddick-Weir, Trustee, mgraddickweir76@gmail.com
Bill Macey, Trustee, wmacey9@gmail.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
E-mail: SIOPFoundation@siop.org

Reference

Baxter, B. 1965. *Quo vadis?* President' s Address, Division of Industrial-Organizational Psychology. American Psychological Association.

SIOP in Washington: Advocacy During a Pandemic

Bill Ruch

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

As the COVID-19 outbreak rapidly evolved from a public health crisis into a broader threat that has fundamentally disrupted our nation's civic and economic structures, the thoughts of SIOP leadership, the Government Relations Advocacy Team (GREAT), and Lewis-Burke have been with the victims, the first responders, and anyone else who has been adversely impacted by the pandemic. During this time, there has also been a laser focus from SIOP advocacy leaders on supporting our members and partners, and seeking ways to leverage SIOP's unique knowledge of evidence-based workforce solutions to support policymakers as they address rapid disruptions as a result of the virus. Some examples of recent SIOP advocacy to address COVID-19 are provided below.

Institutional Support for the Society

SIOP, as well as hundreds of other nonprofit societies and associations, are feeling the financial strain of COVID-19 and are collectively pursuing inclusion in economic recovery legislation. To this end, SIOP leadership and Lewis-Burke have been supporting efforts by the American Society for Association Executives (ASAE) to educate federal lawmakers about the important role professional associations play in supporting the economy and to ask that 501(c)(6) organizations like SIOP be included in future federal aid packages. To date, most current support streams for nonprofits set up in response to COVID-19 have been limited to 501(c)(3)s and other specific groups.

SIOP's business activities support several of the hardest hit industries, including travel, hospitality, and event management. Sources cited by ASAE confirm that more than 250 million people annually attend conferences like SIOP in the US and that these meetings contribute over $446 billion to the GDP, supporting nearly 6 million jobs. This direct contribution to the economy complements the immeasurable indirect professional benefits these engagements provide for our members. Annual events like SIOP connect researchers, practitioners, publishers, and other vendors in the I-O and human resources space. This is augmented by the year-round publication of academic journals, scholarly books, and member information.

SIOP and ASAE began communicating with congressional leaders as soon as discussion of federal relief for economic harm from the pandemic began. ASAE sent its first open letter to the bipartisan leaders of Congress on March 10. SIOP followed suit with letters to elected members of Congress from our home base in Ohio on March 11 and emails to congressional staffers on March 12 and 24. Subsequent ASAE communications included Treasury Secretary Steven Mnuchin and the chairs of several relevant Senate committees. When it appeared that relief for nonprofit entities included in the most recent legislation passed by Congress would not include 501(c)(6) groups like SIOP, the Society and Lewis-Burke began preparations to be on the ground floor of future recovery bills anticipated by congressional leaders.

On May 21, the House passed the Heroes Act, which would greatly expand support streams to all nonprofits. After this encouraging development, advocacy efforts will be targeted to the Senate for the

adoption of this provision in future stimulus measures. SIOP leadership and its advocacy partners will continue working to assure recognition of and support for the valuable role that professional associations play in the career development and success of the global workforce.

Remote Work Resources

One of the main goals of SIOP advocacy is to ensure federal decision makers have access to evidence-based I-O psychology when considering workforce/workplace legislation. SIOP members have relevant expertise on navigating sudden workforce changes, as well as virtual work practices. Guidance on these areas is sorely needed during this disruptive time. To this end, Lewis-Burke worked with **Richard Landers**, lead of the Technology-Enabled Workforce Advocacy Area, as well as **Tammy Allen** and **Kristen Shockley** to put together a [brief summary](#) of SIOP advocacy and examples of relevant I-O psychology expertise in areas like telework, virtual meetings, work–life balance, and so on. This complemented a number of [online resources](#) on remote work provided on the SIOP website.

Lewis-Burke shared these resources with the Senate Homeland Security and Governmental Affairs Committee (HSGAC) during a virtual meeting. The committee has oversight over federal workforce issues for the chamber. The materials were well received, and senior staff members were interested in being connected with SIOP experts to inform federal workforce decisions, especially in the area of telework. Lewis-Burke has also sent the materials to HSGAC's counterparts in the House and is working to set up a meeting to further discuss. Efforts have also been made to position the Society to support policy makers as they make plans for "returning to work" policies. This latter phase will involve collaboration with the Technology-Enabled Workforce Advocacy Area, as months of remote work have exposed new opportunities and challenges for the future of work.

This exercise was extremely time sensitive and the efforts of SIOP volunteers to quickly offer best practices and advocacy support is greatly appreciated by Lewis-Burke, GREAT, and the Society as a whole. Lewis-Burke will continue to identify opportunities for SIOP to provide expert guidance to address pressing workforce questions facing policy makers.

Funding for I-O Research

On April 9, Lewis-Burke worked with SIOP leadership to submit a response to a request for information (RFI) from the House Science Committee related to community ideas for research investments at agencies within the agency's purview as part of future stimulus legislation. SIOP's response requested additional funding for research at the National Science Foundation (NSF) through the agency's Directorate for Social, Behavioral, and Economic Sciences (SBE), Education and Human Resources Directorate (EHR), and cross-agency Future of Work at the Human-Technology Frontier (FW-HTF) Big Idea to support studies that deepen our understanding of the impacts of sudden, large-scale shifts to telework, and identify best practices for effective virtual work, including virtual teaming, upskilling/reskilling needs, and other I-O psychology research areas of national need.

The letter was complemented by examples of funding from NSF and other federal agencies for I-O psychology that has resulted in the development of data-driven methods to predict successful teams, address workplace dysfunction, improve the work experience of individuals, and enhance job performance and employee engagement. It closed by noting that our researchers stand ready to address the new and large-scale workforce challenges generated by the COVID-19 pandemic, and we look forward to timely federal investments to support their critical work.

Regular Federal Updates

Lewis-Burke compiles regular updates on the ever-changing federal guidance and funding opportunities related to COVID-19. They can be found on the SIOP website here.

SIOP Advocacy Guide Is Live

On May 13, SIOP's Government Relations Advocacy Team (GREAT) released a comprehensive guide, summarizing SIOP's approach to advocacy at the federal level and providing advice and resources for members who wish to pursue advocacy work. The guidebook, which was created with extensive support from Lewis-Burke, lays out two paths to advocacy: "Personal advocacy, in which members advocate on their own, and advocacy as a representative of SIOP with the support of GREAT." The document also includes primers on science-informed advocacy, the legislative process, engagement strategies, managing expectations, and many more useful insights and resources for active SIOP members interested in leveraging their unique expertise to advance evidence-based policy.

The complete SIOP "Guide to Federal Outreach and Advocacy" will have a standing place on the SIOP website here.

SIOP Begins Diversity & Inclusion Outreach

At a government relations planning retreat last summer, SIOP leadership suggested that Lewis-Burke and GREAT work with the SIOP Diversity and Inclusion Officer to assist in promoting the application of I-O to policy making related to diversity and inclusion (D&I). To inform this effort, Lewis-Burke had a few meetings with some key congressional committees interested in this space to gauge potential areas for SIOP to immediately engage. During a meeting in March with staff from the House Financial Services Diversity and Inclusion Subcommittee, the staff expressed interest in getting a list of select D&I experts from SIOP to help inform their influential policy reports on the need to expand D&I in America's businesses, a priority for Chairwoman Maxine Waters (D-CA). Lewis-Burke worked with past president and D&I expert **Eden King** to compile the initial list and **Derek Avery**, SIOP's new D&I Officer, to approve it, before sending to the subcommittee.

This was a successful first effort, but SIOP is still in the early stages of building out this advocacy thrust, and GREAT is interested in working with members who have ideas for future engagement and/or expertise to share.

For questions regarding SIOP advocacy, please feel free to contact **Alex Alonso** at alexander.alonso@shrm.org or Bill Ruch at bill@lewisburke.com.

Two Years of the Getting I-O Into Intro Textbooks (GIT SIOP) Task Force

Nicholas P. Salter
Hofstra University

Joseph A. Allen
University of Utah

We are now at the 2-year anniversary of the Getting I-O Into Intro Textbooks (GIT) Task Force. As you may know, at the 2018 SIOP Conference then-SIOP President **Talya Bauer** launched this effort with the charge to work toward increasing coverage of I-O content in Intro to Psychology textbooks and awareness of I-O among early psychology learners. Many SIOPers know this has been an issue many have tried to tackle for years. This includes efforts to present at conferences, encouraging members to give talks at local high schools and community colleges, many efforts to build resources and share them, and so on. GIT built on this previous work while directing concentrated effort on the issue through a variety of means, including all the original tasks/goals from President Bauer, and new ones encouraged by now SIOP President **Georgia Chao**. Last year, we published a *TIP* article chronicling what we accomplished in our first year. Given that President Chao renewed the task force charter for one more year, we feel that now is a good time to reflect on what we did in our second year.

Our Impact on Textbooks and Intro Classes

The big question of how GIT is doing really comes down to this: Is there more I-O in intro classes than before? In January of 2020, we highlighted our progress on this in the GIT blog; we have seen a lot of positive momentum in this area!

After spending a lot of time creating and collating resources, a letter was sent to Intro Psych textbook authors and publishers last fall detailing the resources available to them—and to encourage them to add more I-O to their textbooks. The response was all positive. Many of them agreed that I-O is an under-represented topic within intro textbooks (one author said it was a "shortcoming of the books that are out and around"). Some of the responses were from authors who were really interested and excited about the resources we offered them (one author called it "enormously helpful" and an "impressive accomplishment"). One author even mentioned the possibility for change in textbook content in the future saying, "*I use I-O as an example of how textbooks can change over time . . . sometimes by growing a whole new branch when a new area becomes so important.*"

Some authors reported that they hope to use this material in the next revision of their textbooks. In fact, we just heard back from one textbook in particular that is doing this! Specifically, we heard back from a contact at Wiley publishers that three Intro Psych textbooks (*Psychology Around Us, Psychology in Action*, and *Real World Psychology*) would be using materials either directly taken from the GIT resources or adapted from them. This came about because of a conversation started after they received the letter from our committee. In other words, these books are incorporating I-O because of the work of GIT!

But, before we pat our collective selves on the back and declare the work is done, this is just the beginning. We hope to see more I-O in more intro textbooks in the coming years!

Other Ways GIT Is Making an Impact

GIT has been very busy thinking about other ways of promoting I-O for intro classes, and we've seen progress in many of those areas.

In September of 2019, GIT unveiled three new videos to advertise SIOP. These videos featured SIOP members talking about I-O: what it is, what they do, and what can be done with it. You can check out the videos here:

- 30 second version
- 60 second version
- 5 minute version

These videos can be used for a variety of purposes. For instance, instructors can use these videos to introduce our field to students who don't yet know about I-O but want to learn about it. But we don't have to limit ourselves just to students; these videos can be used to help convey what our field is to others including colleagues and organizations—even friends and family! Please share these videos on your social media and with any who might be interested.

GIT's cause of spreading the word about I-O psychology got some notice in December when SIOP member **Clemente Diaz** won an award at the Society for the Teaching of Psychology 4th Annual Twitter Poster Conference! Check it out here. The big takeaway as to why intro instructors don't include I-O in their classes is because it isn't in the textbook, which is the primary goal of GIT! Let's hope that as progress continues to be made in getting more I-O into intro textbooks, we'll see more intro instructors choosing to cover the topic!

In March of 2020 when Covid-19 caused so much of higher education to move to virtual classes, GIT worked closely with members of the SIOP Education and Training Committee to develop a set of tools for transitioning classes online, including a resource guide, a webinar, and a set of virtual office hours. The Online Teaching Survival Guide collated best practices for teaching online that can be used by all instructors—whether they are teaching Intro Psych, I-O Psych, or anything else.

Further, to help all our friends (and all SIOP membership) find all these resources for introductory psychology, the GIT SIOP Team created a new URL. Although we love SIOP.org, the new URL is much more keyword friendly and links directly to the teaching tools under the educators tab on the SIOP website. Here's the URL: www.teachiopsych.com. Click it and suddenly you're on the SIOP.org educators page, ready to explore these amazing resources. Please share it with your friends, search it out on Google, and post it on social media. Only together will GIT be successful and help younger learners at least be aware and know that I-O psychology is an option for their future!

What's Next for GIT?

As previously mentioned, SIOP President Georgia Chao recently recharged this task force to carry on the work. Thus, GIT will continue to work to spread awareness about I-O psychology in intro classes! On a personal note, I (Nick Salter) will be stepping down as the GIT blog writer; consistent readers know I have been writing here from the start. After 2 years of this work, I am passing on the torch to **Ben Butina** who is going to do an awesome job of maintaining the blog and spreading the word. But the work of GIT will continue!

One project on the near horizon: Members of GIT are designing a quasi-experiment to see if telling Intro Psych instructors about the resources we offer will cause them to then use the materials and incorporate I-O into their classes. We will begin collecting data this summer and plan to collect for at least a year. We will of course keep you all posted here on the GIT blog and hope to share preliminary results at our next SIOP conference.

Besides that, we are of course always open to people's suggestions! So, if any SIOP member has any thoughts as to how GIT's mission can be pushed forward, feel free to reach out any GIT member!

- Joe Allen (Chair)
- Ben Butina
- Georgia Chao
- Debbie DiazGranados
- Jen Gibson
- Roni Reiter-Palmon
- Nastassia Savage
- Marissa Shuffler Porter

2020 SIOP Exit Survey Executive Summary: Issues, Possible Solutions, and Actions Taken

Richard M. Vosburgh
SIOP Survey Subcommittee Cochair, RMV Solutions LLC

Melissa G. Keith
SIOP Survey Subcommittee Member, Bowling Green State University

Background and Method

To better understand why SIOP members chose not to renew their membership with SIOP, members who did not renew during the June 2019 call for membership renewal (*N* = 2,973) were surveyed by the SIOP Survey Sub-committee during March 4–26, 2020. The online survey was sent by email and consisted of seven quantitative questions, eight write-in questions, and two demographic questions. Mercer|Sirota conducted the analysis and generated the 2020 Exit Survey report.

Summary of Results

A total of only 88 people (3%) responded to the survey, so caution should be used in interpreting the results. Demographics of the respondents were as follows: 65% female, 34% male, 67% White, 10% Black, 7% Asian, 7% Hispanic. Immediate response to the survey resulted in 92 renewals. Of the 88 respondents, 17% intended to rejoin SIOP, 50% might rejoin, 11% did not intend to rejoin, and 22% were currently unsure.

Of the 88 respondents, 47% and 39% were Student Affiliates and Members, respectively; Associate (10%) and Retired (5%) respondents had minimal representation; no Fellows were in this group. The majority had been members of SIOP for fewer than 5 years (35% for under 1 year and 38% between 2 and 5 years).

Common reasons for not renewing are portrayed in Table 1. When examining the "primary reasons" mentioned by the 88 respondents, "The cost of SIOP dues is too high" was the most frequent primary reason mentioned for not renewing (28%) followed by "The SIOP membership benefits were not meeting my needs" (16%). These re-sults mirror those from 2019, which also had dues and benefits as top primary reasons. Other less common rea-sons not included in Table 1 include not being clear about the benefits of SIOP membership (6%), joining for the conference rate (6%), perceiving an academic focus instead of a practitioner focus (5%), and joined or continued membership with another organization instead of SIOP (5%). Of those who joined or continued membership with another organization instead of SIOP, four respondents listed three groups (Academy of Management, American Sociological Association, and International Humanistic Management Association).

Table 1
Most Common Primary Reasons Given for Not Renewing Membership

Reason	Percentage 2020	Percentage 2019
Dues are too high	28%	15%
Benefits not meeting needs	16%	14%
Just forgot to renew	11%	2%
Other	11%	17%
Retired	7%	10%

When asked to specify "additional reasons" for not renewing, a number of responses were given that mirrored results from the 2019 Exit Survey including membership benefits not being understood or not meeting individual or organizational needs and dues being too high (see Table 2 for most common additional reasons). Of those who named membership with another organization instead of SIOP as an additional reason, five respondents listed seven groups (Canadian Society for Industrial and Organizational Psychology, Division 13 Consulting Psychology, Society for Human Resource Management, Southern Management Association, Association for Experimental Education, Association of Community College Trustees, and SIA), and each of those with only one person each. There appears to be no strong competitor organization pulling people away from SIOP at this time.

Table 2

Most Common Additional Reasons Riven for Not Renewing Membership

Reason	Percentage 2020	Percentage 2019
Benefits for me not clear	33%	28%
SIOP dues too high	26%	23%
Benefits not meeting my needs	20%	27%
Too much focus on academic issues	17%	18%
Just forgot to renew	17%	6%
My organization does not value SIOP	14%	20%

In addition to the quantitative responses, the exit survey allowed respondents to share any other information about why they were not renewing and provide information about what would make a membership more appealing. Some of these qualitative responses provided useful insights for SIOP to consider. For example, beyond suggestions to make dues cheaper, one respondent mentioned allowing dues to be paid in monthly installments rather than in full. A number of respondents also made recommendations for making SIOP content more "user friendly," including updating the SIOP website, marketing the I-O psychology field more effectively, and making content produced (e.g., white papers) more visually appealing and easily digestible. Finally, a number of suggestions centered around interaction with other members including increasing efforts surrounding diversity and inclusion, hosting workshops and webinars throughout the year for practitioners to learn from academic members and other practitioners, providing opportunities for virtual networking or mentorship programs, and utilizing platforms such as Riipen or Candoit to connect student members to project-based work.

Discussion

Taken together, the 2020 Exit Survey largely mirrors many of the responses from the 2019 Exit Survey suggesting a number of areas for the Membership Committee to further explore. Specifically, issues surrounding benefits to members, value to employer, a lack of focus on practitioner needs, and dues were common reasons for not renewing membership across 2019 and 2020 exit surveys. Here we highlight some of the possible solutions and actions taken to address these issues as well as an additional set of recommendations based on SIOP's diversity and inclusion initiative (see Table 3 for a summary of this information).

Table 3
Issues, Possible Solutions, and Action(s) Taken

Issue	Possible Solution(s)	Action(s) Taken
Benefits unclear or not meeting my needs.	Work with other committees to provide more user-friendly content, networking opportunities (e.g., virtual mentoring, affinity groups), and increase efforts to promote a more inclusive SIOP experience.	Members are now sent an onboarding email spelling out benefits. Working on a "new member" web page. The Membership Experience Subcommittee has undertaken a number of actions including

		a conference session on communities of engagement and a new onboarding process.
Employer does not value SIOP.	Continue efforts to market the field to both organizations and society. Explore possibility of videos and other media to increase visibility. Member call to action: Advocate for I-O psychology in our communities and organizations.	SIOP has written this letter that expresses the SIOP value proposition. The letter can be revised to pitch SIOP to one's company.
Too academic focused.	Increase benefits for practitioner members including networking activities, affinity groups at the conference based on industry, easily digestible content, and workshops. Practitioner call to action: Get involved in SIOP to direct the future goals of this organization and reach out to fellow practitioners.	The Analytics Subcommittee shared a report with the Executive Board detailing membership and continues to seek ways to meet the needs of all SIOP members.
Dues perceived as too high.	As dues continue to be the primary reason respondents do not renew, SIOP may want to consider options such as installments rather than payment in full.	Recommendation that SIOP consider quarterly installment payments for hardship cases. The Dues webpage will now include information about the extended student rate.
Diversity and inclusion	Work with Diversity and Inclusion officer to ensure recruitment is inclusive. Member call to action: Look for opportunities to promote belonging.	In 2019, SIOP President Eden King announced the formation of an Inclusion Task Force aimed at using existing data to create a more inclusive SIOP. Diversity and Inclusion Officer added to the Executive Board.

Member Benefits

To begin, former members continue to express that benefits are not clear to them. For example, qualitative responses indicated that it is not always clear how SIOP "benefits the everyday member" and SIOP could "make a better case for why membership benefits me." To address this issue, new members are now sent a series of onboarding emails that spell out membership benefits. This ensures that members are made more aware of the benefits afforded by a SIOP membership from the beginning. The SIOP Administrative Office is also working on a "New Member" web page to engage new members and has updated the Member Benefits page with a chart that defines benefits based on member type. The Membership Experience Subcommittee has also proposed a number of initiatives that include leading a future SIOP conference session on "Communities of Engagement" where members can network with prominent I-O scholars and practitioners that share their specific interests. The subcommittee has also outlined a new onboarding process that details strategies for engagement, education, and retention. SIOP continues to learn a lot this year by taking the conference online, which may prove beneficial to International Affiliates or those who would have difficulty traveling. Additionally, based on suggestions from the qualitative responses, we recommend working with other committees to (a) provide more user-friendly content that can be used by busy practitioners, (b) provide additional networking opportunities (e.g., virtual mentoring, affinity groups) outside of the annual SIOP conference, and (c) increase efforts to promote a more inclusive SIOP member experience.

Value to Employers

Some respondents indicated that their employer does not know about the field of I-O psychology and/or does not reimburse SIOP dues. We view this as both a visibility and marketing issue. Although SIOP has already written a value proposition letter for members to pitch SIOP to one's company, we also see that companies unfamiliar with the field of I-O psychology may be resistant to supporting a SIOP membership. Thus, we plan to continue efforts to market the field to both organizations and society in general. To do so, we recommend exploring

possibilities of video and other media to increase the visibility of our field. Additionally, we urge our fellow SIOP members to advocate for this field in their workplaces and communities.

Academic Focus

Another ongoing concern is that SIOP is oriented strongly toward the academic, with not enough focus, content, or rewards for practitioners. For example, one respondent expressed that "the content is far too academic and less relevant for me" while another noted that "academic interests are what drive strategic decisions." The SIOP Membership Committee seeks to continue its mission to understand the needs of all members—whether practitioners or academicians. For example, the Analytics Subcommittee recently submitted a 58-page Executive Board report detailing SIOP membership trends and plan to use these trends to inform how membership can be best served. We also wish to issue a call to action for practitioners to get more actively involved in SIOP. For example, many SIOP committees recruit members to serve as volunteers who will have the opportunity to direct the future of SIOP. For practitioner members who are already actively involved, we recommend reaching out to other practitioner members (or nonmembers) who may not be as aware of the many opportunities to serve the SIOP community.

Dues

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

Diversity & Inclusion Efforts

Finally, though anecdotal, at least one survey respondent noted that "The membership of SIOP is very demographically homogenous, the leadership even more so." SIOP as well as the Membership Committee is committed to championing diversity and inclusion efforts within SIOP. In 2019, SIOP President **Eden King** announced that "belonging" is a top priority, and a new Diversity and Inclusion Task Force was tasked with utilizing existing data to look for ways to promote inclusion within our organization. As a result, a new ad hoc committee, Disability, Accessibility, and Inclusion, will begin addressing more of these issues. Additionally, the SIOP membership recently voted to add a Diversity and Inclusion Officer position to the Executive Board. For our part, the Membership Committee has proposed efforts to work with the new Diversity and Inclusion Officer to ensure future recruiting efforts are more inclusive. Finally, we echo Dr. King's challenge to SIOP members to look for opportunities to be more inclusive and promote belonging.

Conclusions

The SIOP Membership Committee seeks to create an inclusive membership for all I-O-related professionals and to focus on the attraction, selection, and retention of all SIOP members. The annual Exit Survey is one way we garner insights for retaining SIOP members. In this executive summary we have highlighted a number of consistent reasons former SIOP members give for not renewing their membership, proposed potential solutions, and noted where actions have been taken. In concert with the many other SIOP committees, we continue to look for ways to serve the field of I-O psychology and the members of SIOP. Members who have additional suggestions for improving SIOP membership should contact the authors.

A Decade of SIOP Membership: Insights for Newer I-Os

Michelle Goro
Membership Committee Chair-in-Training

As I sat down to write this piece for *TIP*, it definitely took me more than a few minutes to figure out how to begin. I wanted to give it the priority it deserves, but in the midst of the global pandemic we are all facing, I wasn't sure how to approach the topic of what membership means to me so that it would be meaningful to you. Right now, the world is not able to function the way it was just a few months ago. With the undeniable strain that every individual is facing, your first question as a reader is, probably, "Why should I give this article more than 30 seconds worth of attention?" Well, let me try and answer that for you now.

SIOP membership is composed of about 10,000 members annually, of which about 1,500 are volunteers. Nothing resonates more with me than an organization being supported nearly entirely by people who are so passionate about their field that they give up their free time to keep it moving forward. SIOP has changed over the past decade, and in the process it changed our community and how I think about I-O; if you are early or mid career like myself, keep reading!

So who am I? No full life history here because this isn't about me at all, but rather, what my relevance is to SIOP. After more than one failed undergraduate attempt at organic chemistry, a guidance counselor visit, and many psychology classes later, I found my passion for I-O. Sound familiar? Many of us stumbled into this amazing field after a few attempts at finding our passion.

During my first semester in graduate school, I was lucky enough to have a professor who encouraged us to join SIOP. He said that his first annual conference (AC) was incredibly career affirming for him, and he really saw the value in joining the society (So much so, that "What does SIOP stand for?" was one of our comps questions!). Even though I only attended a few sessions those early years of being a member, I really enjoyed being in a new city with a few people I knew (and many I didn't) who all knew what I-O was!

Despite the fact that my younger self wasn't great at making connections that resulted in any future AC session mates, I have been lucky to work with many great fellow I-Os and more recently began to think about submissions to give back some useful insights to our Society. I also began volunteering for the Membership Committee and have been able to apply my analytical skills as the Membership Analytics (MA) Subcommittee cochair. The MA team is the first group to get their hands on the SIOP membership data and actually start to process it! As those insights filter out to the rest of the membership over the next year (Keep an eye out!), I'm incredibly excited to be transitioning to the Membership Chair-In-Training role for the 2021 SIOP year.

Alright, that's enough about me. I hope that provided some useful background as to how I came to actually care about SIOP. I wasn't sipping the Kool-Aid from day one but rather was a passive member. I personally didn't buy into what being a member could provide me until later, but I was a member nonetheless all the while.

One anecdotal trend I've noticed is fewer of my fellow I-Os seem to be renewing their SIOP memberships, stating they don't see the value. Additionally, the most recent exit survey (see also this article in this issue of *TIP*) even included multiple reasons for nonrenewal of membership, such as "I am not clear

what the SIOP benefits are for me." As I reflected on my history with SIOP, I came up with a few things that I hope you find of value to this earlier time in your career, as I have over the years.

SIOP reviews help keep me current on the latest research: Since graduating with my master's degree in 2009, I have been an annual reviewer of AC submissions. From my perspective, this was my only real contribution to the Society because I didn't even submit a session with my name on it until the 2018 conference. For me, the reviews were my way of being able to help and give back just a bit of my time to our ever-expanding knowledge base. They are really easy to do; just look out for the sign-up email from the Administrative Office (AO) when it comes around early September of each year. The reviews take about 30 minutes each to complete, and you are contributing to the whole of our Society. You also gain some unique insights into what others are doing, because as a reviewer, you are the first to read these submissions.

***TIP* articles have modernized the way I get I-O info:** Even if you don't join SIOP, you get some cool stuff for free...like this *TIP* publication! I remember the ol' days when this was actually printed with some nice cover artwork, but because nearly everything is available online now, we can get this to everyone at the same time, without wasting printing and mailing resources. And of course, we can include hyperlinks to other referenced information to help save your valuable time!

White papers provide quick and current I-O insights: There are numerous white papers available for you to peruse on the SIOP website. Want to learn about mobile device usage in selection? There's a white paper about that! Want to review telecommuting best practices, especially given our current global situation? There's a white paper about that! White papers, written by committees of SIOP, are well organized by topic for easy navigation. These have come in handy for me when I want to quickly review a hot topic before I discuss it with others because it has been a few years since I completed graduate school.

A well-organized website guides your search for the right jobs: Speaking of graduate school, this web page provides several useful resources for student members. I haven't visited this page in a while, but some of the newer things that are available include career tips and tools. One of the more useful links appears to be "What's in a Name? Job Title for I-O Psychologists," which gives multiple lists of the various job titles that could help as you enter the workforce. When I was looking for my first I-O job, I did not know that "research assistant" was an I-O role, until I got that job myself! This list would have helped expand my search results and potential job offers.

Valuable access to scientific and practice-enhancing research: Another great benefit of the website, the SIOP Research Access (SRA) service, allows members to sign up to gain access to enriching publications via three EBSCO Host databases. The Publication Index provides complete lists of the content available from the Business Source Corporate, Psychology and Behavioral Science Collection, and SocIndex. Members can also search The Learning Center for past conference video and audio files, so if there were sessions you weren't able to attend, you are likely to find them here. When you consider the price of just one annual journal subscription that could cost several hundred dollars, the value you gain from $50 for a full year of accessibility to the content of these databases is an incredible bargain.

Everyone can save money right now: Once you join SIOP, you receive a discounted registration fee for the annual conference (AC) itself and any of the preconference workshops too. I was quite surprised to recently learn that members also have access to additional discounts. More than a dozen companies, from Budget Rent a Car to 1-800-Flowers.com to ADP, offer discounts that are exclusive to our members. I know that next time I'm sending someone a thank you gift, I won't have to scour the Internet for "1-800-Flowers.com coupon codes" and can instead use our membership discount.

I potentially lost out on free money over the years: On a related note, the SIOP Foundation offers ways for donors to connect with our members to further create smarter workplaces. Funding opportunities are available via nearly 30 annual awards, grants, or scholarships. This is another area of our Society that I haven't had too much of a chance to explore, which seems like a big miss on my part, if you consider the number of funding offers I have ignored in more than 10 years. As an early career I-O, I would encourage you to take time to become familiar with these opportunities, so you can work towards leveraging your next few years to apply for and maybe even earn some rewards.

SIOP is more than just the (one) conference: The AC, for me, has become a place where I get to connect and reconnect with fellow I-Os and just generally have camaraderie rooted in a society where we all actually know what others do for a living. Although I've not had the opportunity to attend the Leading Edge Consortium, the idea of learning from a small diverse group of industry thought leaders sounds like an enriching use of 2 days. Perhaps, in our new virtual world, we can have greater attendance the next time it is hosted, if it were to be conducted via the web.

Connect with I-Os with similar (or different!) interests: The member directory is another resource available only to current members. You can of course search for a specific member by name, residence, or employer, but the coolest feature I've found is searching by primary interest. If a member has filled in this field of their profile, you can quickly access all other I-Os who have shared interests. Conversely, I can see it being especially useful if you need to reach out to SMEs in topic areas in which you aren't quite as well versed. Sure, you can spend hours combing LinkedIn one profile at a time, but why not use this built-in feature of the directory instead?

Let's connect on social! It is 2020 after all: On the topic of social media, SIOP has definitely worked to make their presence known on the web over the past few years. Considering that Instagram didn't launch until 2010, SIOP has worked to keep up with the changing trends and helping us stay in touch and informed all year round. Follow @siopofficial on IG, Society for Industrial and Organizational Psychology (SIOP) on LinkedIn, @siop.org on Facebook, and even SIOPofficial on YouTube. Yes, YouTube! There are helpful videos from the AO such as "Making the Most of SIOP as a Student" as well as past conference highlights and SIOP presidential addresses. Use these resources for your own enrichment and to find other I-Os who are staying current and connected.

SIOP members love SIOP: My last personal benefit from SIOP I already noted as I began. In order to sign up as a volunteer within our Society, you need to be a paid member. Aside from the AO staff of 12 people, all of SIOP is run by volunteers. As I am a "numbers person," this next point bears repeating: SIOP's nearly 10,000 person organization is coordinated, has multiple annual conferences, provides educational and career resources to students, and helps to provide monetary awards entirely by volunteers. If it weren't for the volunteers, how would we have been able to advance our field's research and spread the ever-changing knowledge amongst ourselves? For me, just your average early/mid-career I-O practitioner, I know the last decade would have been much more challenging without SIOP.

Please consider renewing your membership before the end of June, and while you're on the site, complete your member profile. Who knows how your completed profile will help to lead the future of our Society!

New Alliance for Organizational Psychology (AOP) White Paper:
The Work–Family Interface Around the World:
Implications and Recommendations for Policy and Practice

Access the white paper here: https://img1.wsimg.com/blobby/go/0567b461-ac8d-411b-b8fe-abb7b43bd87d/downloads/AOP%20W-F%20Final%20White%20Paper.pdf?ver=1588127884615

Aims and objectives of the white papers

The aims of the Alliance for Organizational Psychology (AOP) white paper series are to

1. Address globally relevant topics that are of interest to policy and decision makers
2. Highlight key areas where organizational psychology can make a substantial contribution to practice
3. Feature contributors offering international perspectives and viewpoints

The intended purpose of these white papers is to share information about the value of organizational psychology (OP) and how OP can be used to improve the well-being and performance of people and organizations with non-OP HR and business practitioners and leaders.

Special thank you to the Alliance White Paper Subcommittee members (**Angela Carter, Hazel McLaughlin, Maree Roche,** and **Lynda Zugec**) for their efforts and support in making the white paper series a reality.

Membership Milestones

Jayne Tegge

I joined SIOP over 37 years ago and it continues to be the one and only professional society that meets the needs of both academics and practitioners in industrial/organizational psychology; and encourages the interaction between both for the benefit of both science and organizations. If you are a serious I-O professional and are not actively contributing in SIOP then you are missing a great opportunity.

Richard M. Vosburgh
President, RMV Solutions LLC & Past Chairman of the Board, HRPS

Please welcome our new professional members

Rudolf Siegel	**Ryan Todoroff**	**Simone Wilson**
Funda Sinani	**Chelsea Velez**	**Wright Wilson**
Robert Sleight	**Pooja Vijayakumar**	**Marcus Wolf**
Erica Solove	**Bimi Wallang**	**Iseel Yanez**
Ryan Stebbins	**Roberta Wegner**	**Richard Yentes**
Mary Sully de Luque	**Eric West**	**Fan Zhou**
Jenna Thomas	**Sara Willis**	

Please congratulate those who completed the new pathway to member upgrade

Paul Kramer	**Bahareh Soltani**	**Kelly Switzer**	**Daniel Russell**

Also, please congratulate our new Sterling Circle members, who have been SIOP members for more than 25 years!

Ramon Aldag	**Jeanne Czajka**	**Andrew Passen**
Mahfooz Ansari	**Michael Gold**	**Norm Perreault**
Bradford Bell	**Aaron Graczyk**	**Jennifer Robin**
Judith Blanton	**Marjory Kerr**	**Gerard Seijts**
Maynard Brusman	**James LeBreton**	**Evan Sinar**
Wendy Casper	**Cybelle Lyon**	**Donna Sylvan**
Jason Colquitt	**Charley Morrow**	**Christian Vandenberghe**

Members in the Media

Mariah Clawson and Jen Baker

Awareness of I-O psychology has been on the rise thanks to articles written and featuring our SIOP members. Many of these articles and other mentions are in reference to the coronavirus pandemic. These are member media mentions found from March 1, 2020 through June 30, 2020.

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 send them to us! We push them on our social media and share them in this column, which you can use to find potential collaborators, spark ideas for research, and keep up with your fellow I-O practitioners.

Covid 19 Related Items

Work From Home

Kristen Shockley says it's important to create boundaries while working from home: http://ow.ly/OjNG50yMIil

Nancy Doyle gives advice for managing remote working: http://ow.ly/HLra50yPcia

Sara Petty says stick to a work schedule and take breaks while #WFH: https://baylor.edu/mediacommunications/news.php?action=story&story=218174…

Brent Stevenor says it's important to give yourself time to recover during the evenings so that you may feel refreshed and ready to work the next day: http://ow.ly/vRJ650zdDbS

Laura Hambley suggests trying the best you can to recreate the office environment while #WFH: http://ow.ly/ebcR50zfeE8

Alex Milam discusses the good and bad of working from home: https://bit.ly/3fMMECr

Rachel Williamson Smith gives tips on work from home spaces: https://bit.ly/3fMBb5T

Alyssa Westring and co-author Stewart Friedman created a set of guidelines to help parents manage school and daycare closures: http://ow.ly/4SxE50yPc6x

Christina Maslach says one of the most important resources is to stay connected at a distance: http://ow.ly/HK5350zfeg1

Kimberly Adams talks motivation when working at home: https://cnb.cx/3dV5UwH

Catherine Swody says we should keep some of our Covid-era habits: https://yhoo.it/382Plxn

Organizational Information

Patrick Hyland explains four steps organizations can use to plan for the affects of COVID-19: http://ow.ly/uBlM50yPccN

Marissa Shuffler explains workplace changes brought on by coronavirus: https://bit.ly/3geBaIo

Alice Eagly hopes COVID-19 changes attitudes to the standing of some work, like nursing: https://bbc.com/worklife/article/20200422-will-coronavirus-change-how-we-define-heroes…

Timothy Golden returning to the office won't be business as usual: http://ow.ly/60Ty50zzEBa

Adam Grant predicts there will be more face-to-face contact at the office: http://ow.ly/S2VQ50zzF8c

Coping, Cooperation, and Conflict

Cort Rudolph says the pandemic will not solve intergenerational conflicts: http://ow.ly/bIiZ50yXuv7

Denise Rousseau is fascinated by how people are responding to the pandemic by lifting each other up and being compassionate: http://ow.ly/cvD850yZCWY

Mitchell Marks talks about how to cope during the pandemic: http://ow.ly/PHmh50yZD3X

Adam Grant discusses how to bond virtually with coworkers: http://ow.ly/df6850zzDzn

Betsy Shoenfelt says the HERO Model is a simple and straightforward way to explain effective coping: http://ow.ly/MhOf50zqCM9

David Waldman is critical of the CDC: https://bit.ly/2VBFglY

Leadership

William Gentry says bosses must teach new leaders to navigate the transition from being part of the team to leading the team: http://ow.ly/djZm50yPdBE

Tomas Chamorro-Premuzic says incompetent leaders result in anxious, alienated workers who are underproductive and toxic: http://ow.ly/IJrP50yPdH6

Adam Grant says most bosses are horrible at hiring: https://bit.ly/381ZIBf

Valentina Bruk-Lee and **Nathan Hiller** provide insights on how leaders can be effective, even when telecommuting: http://ow.ly/jaYz50z2wqo

Timothy Franz and co-author Seth Silver say give advice to leaders wanting to be helpful to their followers during this crisis: http://ow.ly/q9Bn50zfeYR

Justin Black says it's important to identify your main priority: http://ow.ly/dy0w50zfetN

Productivity and Motivation

Tomas Chamorro-Premuzic says low engagement can play a large part in the loss in productivity seen worldwide: http://ow.ly/vhwB50yPdaK

Manuel Gonzalez and **John Aiello** explore whether listening to music at work is a distraction or a performance enhancer: http://ow.ly/CdiP50yPdp3

John Kello says video conferencing comes with challenges that can make colleagues less engaged: http://ow.ly/oGs750zzE2M

Psychological Issues in the Workplace

Cathleen Swody says uncertainty and ambiguity leads to physical and psychological health concerns: http://ow.ly/t7n250z2wJJ

Adam Grant and co-author Rob Rebele urge us to think of others instead of just ourselves: http://ow.ly/7SvR50yPcys

Cathleen Swody says employers who want to retain their employees need to take care of them in their time of need: http://ow.ly/lKaQ50zfeon

Adam Grant says we are often better at giving advice to people other than ourselves: http://ow.ly/Hodp50zfePU

Cathleen Swody says we are learning what affects our mood and becoming more in touch with emotions: http://ow.ly/IgWP50zqCWj

Tunji Oki says managers should be more transparent about allowing their employees to take paid mental health days: http://ow.ly/9JFX50zzEr7

Alyssa Westring says it's okay to acknowledge the fact that dealing with uncertainty is hard: http://ow.ly/EKLy50zzEZZ

Marie Mitchell and **Kevin Cruz** say being kind and helpful is good for your mind: http://ow.ly/Z50I50zzFrh

Diversity and Inclusion

Bernardo Ferdman hopes inclusion will still be a priority for businesses when the crisis is over: https://apa.org/members/content/small-business-loans-struggle…

Tomas Chamorro-Premuzic talks racism in the workplace: https://bit.ly/2NOIvlr

Economic Issues

Nancy Doyle says the economy will need to be restarted from scratch: http://ow.ly/EVY250zfekv

Christiane Spitzmueller and co-authors share results from a survey of industry workforce workers: http://ow.ly/gN9o50zffiP

Bernardo Ferdman explains that he is a businessman as well as an I-O psychologist: https://bit.ly/37RZ3lP

Interviews and Hiring

Adam Grant advises asking behavioral questions in job interviews: http://ow.ly/ldvy50zzEK4

Mike Hudy is on the cutting edge of virtual hiring: https://bit.ly/3fK7G4P

Charles Handler says it's important to ask if AI is really needed or if you're trying to join the crowd: http://ow.ly/xIfm50yPcXs

Other Media Mentions

Alice Eagly discusses the meaning of heroism: https://bbc.in/2zUBP1X

Fred Oswald reveals the importance of cognitive and soft skills: https://bit.ly/2zb57Jp

George Alliger shows the limits of Zoom for teaching: https://bit.ly/3g01R43

Madalyn Blair is named an Empowered Woman of the Year: https://bit.ly/2Nxkr6x

Kevin Eschleman explains the value of hobbies: https://bit.ly/3euGw1z

Orin Davis has tips for planning your path: https://bit.ly/2Zn2Qnv

Deniz Ones talks screenings for police officers: https://bit.ly/3galg1u

Dale Rose writes on the importance of peer feedback: https://bit.ly/2YLEqop

IOtas

Jen Baker

SIOP wants to let everyone know about good things happening for our members. If you or a colleague have won an award, received a commendation, has been named to a new position, or any other accolade, send the information to Jen Baker at jbaker@siop.org for publication in IOtas.

SIOP Fellow **Michael A. Campion** was just named Distinguished Professor at Purdue University. His title is now Herman C. Krannert Chair and Distinguished Professor of Management.

Congratulations!