AMERICAN PSYCHOLOGICAL ASSOCIATION

# ESSENTIAL SCIENCE CONVERSATIONS: ARE PSYCH SCIENTISTS PUBLISHING TOO MUCH? (SEPTEMBER 18, 2024)

## TRANSCRIPT

**Shandol Hoover:** Hello, everyone, and welcome. Thank you for joining us today. I'm Shandol Hoover, APA Director of Science Special Projects and Implementation. This program is part of an AP series called Essential Science Conversations, where panelists and audience members can engage in an open dialogue about emerging topics in psychological science. Before we get started with today's session, I want to share a few quick announcements.

First, we hope you will visit apa.org/science to learn how APA is elevating psychological science, and that you'll subscribe to *Science Spotlight*, a free newsletter delivered to your inbox every two weeks that has the latest news, funding opportunities, upcoming events, and more. We also hope you'll subscribe to *Editor's Choice*, a free weekly newsletter that delivers articles directly to your inbox for free.

Second, thanks to those of you who submitted questions for today's program when you registered. You can ask a question as the program is taking place in real time. There's a Q&A feature on the dashboard. Please enter your questions there. We'll be monitoring those questions throughout the program. Finally, this program is being recorded. Once it ends, everyone who registered will receive an email with a link to the recording in about two to three weeks. I'll now turn things over to Dr. Mitch Prinstein, Chief of Science.

**Mitch Prinstein, PhD:** Hi, everybody. Thank you so much for joining us for what is sure to be a very fun and captivating discussion. Thanks also for sending in those questions in advance and do check out that Q&A button as needed. There's so many people on and everyone has done so much, it could take the entire hour just to introduce them. Let me just very quickly say that I am so thrilled that we have Dr. Joanne Davila, Dr. Andy De Los Reyes, Dr. Ellen Fitzsimmons-Craft, Dr. Melissa Hunt, Dr. Tom Olino, Dr. Tom Rodebaugh, and Dr. Jason Washburn, as well as our very own Chief Publishing Officer here at APA, Jasper Simons.

Let's go ahead and get started. We've all heard about Publish or Perish. We have all been under the pressure, implicit expectation that we should publish as much as we can but maybe this has gone too far. Where are we at? Let me start with you, Joanne. Why are we needing to talk about publishing too much? That seems just the opposite of what we've all been raised to think about in the field.

**Joanne Davila, PhD:** Thanks, Mitch. I think there's a number of key reasons why we are thinking about this now and it's important now. Let me just say that psychological science is very much about contributing to advancing human welfare, public interest, benefiting society. If you look at the websites of APA and APS, this is what we say psychological science is about.

One of the things that is becoming clear is that despite the many important advances that have been made to people's lives and to society by psychological science, we still are not where we need to be in that regard. There's lots of ways in which our science is not reaching the people we would want

it to reach, and it's not advancing well-being or reducing the burden of mental illness in the way we would want it to.

Despite the fact that, for example, in 2022 NIMH spent $1.7 billion funding grants and APA alone was publishing 90 journals, and a PsycInfo search of peer-reviewed articles written in English published in 2022 and 2023 yielded over 90,000 articles. We're actually not doing the things we need to do and reaching the people and changing things.

If that's the case, where's our science going? What are we doing with it? Couple that with the fact that it's just become increasingly clear that such a focus on productivity is really unhealthy for students, for trainees, for the scientists who are conducting this work. There's tons of research on the stressors that come with this, on burnout, on problems on work-life balance, on mental health issues among psychological scientists.

If psychological scientists, trainees, students, faculty are suffering and we're not having an impact the way we want to, why are we publishing so much? I'll start there.

**Mitch:** Thank you so much, Joanne. There's so many pieces there that I want to make sure we get to, but let's talk a little bit about the students. When I got my first faculty job, I had three publications. Two of them had only been cited by my mother. Now I'm not sure that you could get into graduate school with three publications. Melissa, what are some of the thoughts here about how is this all playing out for early career psychologists and students? Are they feeling that pressure, do you think?

**Melissa Hunt, PhD:** They absolutely are. Thanks so much for giving this a little bit of a platform. A few years ago, encouraged by our very own Jason Washburn and with Joanne's help, CUDCP launched a task force to examine burnout, workload, time pressure, and mental health challenges in our clinical psychology PhD students. That paper has recently been published in *Training and Education in Professional Psychology,* but I just want to give you guys a couple of the highlights.

Our students are really, really, really stressed. About half of them are reporting significant symptoms of depression, anxiety, and stress. About two-thirds of them, 67%, are reporting a high degree of emotional exhaustion burnout. Most of those trainees fall into what is called the frenetic subtype. Meaning they are running faster and faster and faster, trying harder and harder to achieve everything that we are asking them to achieve. It's taking a huge toll on their mental health and their wellbeing.

I agree with Mitch 100%. The data suggests that the expectations for productivity have grown enormously to the point where it almost feels like an arms race, and it feels unsustainable. In 2014, the average student applying to internship had three publications. That's coming out of their fourth or fifth year of grad, right at the beginning of their fifth year of grad school. They've already got three publications.

Those numbers are even more dramatic for trainees from PCSAS-accredited programs, where the mean number of publications for people applying to internship is 9.4, with three first-authored publications. I think that used to be enough to get you tenure at pretty good programs. Now you have to have that at the beginning of your fifth year to even get into internship.

What we know is that that's taking a huge toll on our students. They're overwhelmed, they're distressed, they're exhausted, they're frenetic. A lot of them are talking about leaving the field, at

least leaving clinical science because it feels totally unsustainable. We really need some systemic solutions to this problem.

**Mitch:** Thanks, Melissa. I know we have some editors and former editors who are on this call. Andy, with so many pubs, that means you need a lot of reviewers. The last time I guest edited a special issue, I was begging reviewer selection number 17 and 18, please, please review this paper because I've had so many people say no already. That very well could be my experience only. What's your sense from the editorial role and trying to handle the volume that sounds like it's increased over time?

**Andres De Los Reyes, PhD:** Thanks, Mitch, and thanks again for inviting us all to this crucial conversation. When I think about all of the labor that goes in to evaluating these papers and then figuring out which ones should enter into the published literature, I think a lot about what Joanne was talking about. Thinking about if we are producing so much, and then by extension, if we're relying so much on ourselves to execute the labor, to make the production happen.

The question we should all be asking ourselves is, what's the incremental value? What's the value in putting all this labor in? Each of these papers is an attempt from one of us to communicate what we've learned to each other, to the public. You can make the argument that we're all speaking too fast. If we're speaking too fast, that means no one can follow what we're saying, and no one knows what we're saying. We overlay what we value in this business to any other industry. It just doesn't look anything like it. I would like to think that any of us who are producing work in this space aspire to be like Regina King, like Jessica Chastain, like Wes Anderson, like the Coen Brothers. We want to be able to have space to produce work that has value, not pat ourselves on the back every time we have a line credit.

**Mitch:** Jasper, you have such a wonderful perspective on this as a publisher, understanding how publishing is working across many disciplines. What is your take on how this is looking from the publisher's perspective?

**Jasper Simons:** Thank you, Mitch. It's a real pleasure to be here with everyone and some wonderful colleagues here that work with the APAs publishing program. Thank you. One thing that I'd like to add from the publisher's perspective is that the growth in publications is actually not as dramatic as it might appear. This does not mean that therefore the workload is not increasing across the board for scholars or that the time that's available to do work is increasing.

I just looked at some NSF data from 2010 to 2022, and the average growth of the number of publications in the US is less than 3% per year. There's no exponential growth. It is even including '21 and '22 when we did see within the APA journalist portfolio increases in growth. The US publications are not growing as fast, and particularly the Chinese institutions or scholars from institutions in China are growing faster.

That definitely is true, faster than in the US. I just wonder what is that. Why is it that the actual number of publications is not growing as dramatically as I would perceive from this conversation? Where is that pressure coming from? Are there other demands on the scholars? Instead of answering your question, Mitch, I would like to post it as a question to the panel.

**Mitch:** Jasper, an answer to your question has just come through the chat as you were speaking. I wanted to kind of get your reflections on whether you've seen in the publishing world a proliferation of online paid journals. Whether that might be increasing changing the landscape as a

piece of this. I know that's not happening with APA journals, for instance, but any thoughts about that?

**Jasper:** Yes, two points there. Absolutely we've seen up until recently strong growth in content published through these large general publications in the field of psychology, but also in other fields. That is true. We've also seen a dramatic drop-off in the number of submissions and publications to those large general open-access newer publications in the last two years.

Particularly in the wake of the issues with my friends and colleagues in work at Wiley with Hindawi and some of the other publishers in that area. There are a lot of dynamics here. Then maybe that is my main point that I think that there's a complex environment that we're operating in. We do see growth in certain areas and in certain markets, but it's not all growing across the board in all areas.

**Mitch:** Thank you. Jason, what are you thinking?

**Jason Washburn, PhD:** I find that to be curious, Jasper. I'm glad that you brought that data point in. I would argue that even if that's the case, I think the expectation among students to be admitted into programs, students as discussed just a minute ago, to apply for internships. Students to get their first job, students to keep their first job with tenure, that those expectations have changed dramatically at least during my career.

When I got into graduate school, I had one presentation and people thought that was awesome because most people had no presentations when I looked at our data alone. To be clear, the program that I'm affiliated with is a scientist-practitioner program. Not I'm even talking about a PCSAS program. I'm not talking about a clinical science program. I'm talking about a strongly focused science-based practitioner program.

We had a large number of applications last year, about a little less than 900 an average of 1.1 publications. Now when I look then at our top tier applicants, which is still about 150, 200 people. Then to those who we actually interviewed, it went from 3.3 to 3.7 publications. We had one applicant with 40 publications. Obviously, that's a standout. We don't want to get too excited about an outlier such as that but the expectation is that if you haven't published at least a couple publications, don't even bother.

That's for applying to graduate school. Then we look at the expectations for getting tenure, which perhaps is starting to change a little bit. It's starting to move away from number of publications to number of grants.

Maybe that's a good thing. Maybe that's not a good thing. What I'm starting to think about is, okay, so what is then some of the alternatives? How do we calm down this arms race?

How do we start to look towards other means? I would say even if we're not seeing an exponential growth in terms of publications overall, certainly, it feels like it when I get requests to review articles. What I'm seeing very much from the admissions all the way to the hiring side is that our expectations have gotten very high over the last two decades.

**Mitch:** Andy, before going to you, I want to bring in Thomas Olino and Ellen, and just follow up on that point about expectations. Do you think it's possible that there are people who work in a training environment who see a paper and think, I don't know that this is that important a

publication? We got a few significant things, and my student really needs to get more pubs out there.

Let's go ahead and write it up because without it, they won't be able to get into internship or to postdoc or what have you. Are we all, and I'm going to say I think I am, complicit in encouraging publications that we know maybe this wasn't going to change all of science. We're doing it because we're all raising each other's watermarks? What do you think, Tom Olino?

**Thomas Olino, PhD:** I had just jotted down that there's an imbalance of focusing on skills for scientists, and the process of science for producing science. That the evaluation of why on the one hand the numbers, you want to count the numbers, you want to have good numbers. At the same time, you want to be able to document what your skills, competencies, and expertise are, and having some documentation of that that you're able to communicate and papers being the coin of the realm it pushes things in that direction.

Figuring out what's an alternative way of documenting skills? Are there other ways of conducting science communication for scientists that will be able to make that clear of what those contributions are? Then in terms of focusing on the process of science, that it's not really the findings that necessarily should be celebrated. The methods that we're using that are able to have us say, okay, so we just read this paper, and you know what, we got negative findings.

Those negative findings are impressive because of the process that went into it. Without some eye of that balance, we're reinforcing rewarding those high-profile, flash-in-the-pan, replication crisis, inspiring findings that really slow us down in having us chase our tails for years, where it's oops, that effect wasn't quite there to begin with.

**Mitch:** Tom, Ellen, you want to get in there before we go back to Andy?

**Tom Rodebagh, PhD:** Sure. I'm just reflecting that I try very hard not to put this pressure on my mentees, but it becomes very difficult because I also of course want them to succeed and want them to get jobs. If one of them were saying, well, I really want to get this paper out, but I don't think it's ready yet, then I feel like I need to say, "Look, it's not ready yet."

I could see someone else making another choice. How can we as Tom Olino was saying turn the evaluation more to be about the quality of what people are doing as opposed to just the quantity? I do think that a lot of us in the field are trying to look at quality, but there's the temptation always to look at the quantity. It's easier to do.

**Ellen Fitzsimmons-Craft, PhD:** I would just add on top of that, I think I completely agree focusing on the quality, yet we're hit with these pressures of trying to help our trainees succeed in this ever-increasing environment. How to give them that practice of the publication process I think is important to some degree as well while again still balancing it with this number issue.

How do you emphasize quality? The fact remains they do need experience in that publication process. As a trainee, you're probably not going to be the first author on a giant RCT that's going to change the entire field. How do you balance them still being able to publish something meaningful, and appropriate for their stage of training, and getting that practice in the publication process and all of that?

**Mitch:** Thank you. Andy, thanks for your patience.

**Andres:** Jason, you raised a really important point about our standards and guidelines, and implicit in that comment is the idea that we have control over the kinds of incentives that we place upon each other and by extension our students, and that can go in both directions. Our department chair a few years ago, Mike Doherty, retrained in bibliometrics, he's a cognitive scientist by training.

His question was really simple. If we applied the same kind of psychometric standards we do to evaluating the scores thinking from our instruments, how would the metrics we use to understand tenure promotion and hiring what they look like? The answer is simple. We wouldn't put these metrics in our studies if we saw how badly they performed. From a score validity standpoint, they just don't reflect anything we think we care about, citations, impact factor, number of publications, garbage.

Garbage, garbage, garbage, not sacrament sound. Sorry, that's what the data say. What's the implication of this? Mike approached us, faculty and said, "I think we should revise our tenure promotion standards. What would they look like?" The end of it is not that much different than what our standard dossiers look like, statements, evaluation letters, all that stuff. Well, we de-emphasize are how much we produce and where you produced it.

We emphasize, tell us what you're proud of in the years you spent here, and now you're campaigning to keep your job. What are you proud of? That looks exactly how it looks now. In the tenure.ca you're the four or five best articles, the stuff you're most proud of. Now we're evaluating quality. We're emphasizing quality of everything else. Those tenure promotion policies, they're all on our department page. Just look at the resources, policy, and practices. Mike gives them all like candy. If somebody wants them, he just emails back and says, "Here they are."

**Mitch:** That's great. Thank you. It sounds like there are at least a couple of ways that pub counts are being used. One is as several of you were saying is, as a proxy for competence, skills, training, and maybe there are different ways of doing that. Of course, the other is to actually communicate science. In other disciplines, not all scientific findings turn into a pub. There are posters. There are presentations.

There are working papers, and then there are full peer-reviewed publications. This all predates me. Of course, I don't know how we got where we are, but I could say in my short period of time, there are more undergrads presenting papers at conferences that I remember used to happen. There are more things turning into papers when we used to say, "That's a good poster, but I don't know if I'd pursue it as a full paper."

It feels like everything now has to become a full pub. I'm wondering what's best for science. What's the best way for us to communicate our science and move our field forward, and is the tail wagging the dog if everything is becoming a pub? I'm just kind of curious what people's thoughts might be there. Joanne, I see you nodding, so I'm going to ask if you have any thoughts. [laughs]

**Joanne:** I'm nodding largely because I agree with what you're saying. Obviously, it's based in the idea that the publication is what counts. That actually is a very individual promotion approach to it that is built into our systems of science. I think it's also in some ways guided by a hope that this is how we reach people. More people will see it now. The people who came to the conference hear my poster, but they're never going to get it.

They're never going to read it, but now they will, which is also misguided. Because I can't tell you the last time I actually just read a journal, just because I read things that I want to read are important to me. If I'm writing something, I read about it, but I don't just read a journal. This idea

that if it gets to publication it's actually going to make an impact is wrong, and so we need to be thinking about that.

**Mitch:** Thank you, Tom O.

**Thomas:** On that comment about poster presentations, the dynamics of that for me and the way that I've been working with trainees recently has been shifting a bit where particularly for students as they're in trainings, as they're applying for graduate school. OSF is a really nice place where students can highlight their work and be able to demonstrate for folks who they're applying to, what they've been doing, and being able to post posters in that forum.

At least the folks who are reviewing applications, who they're trying to make an impression of, this is the skill that I've been trying to develop. They're able to make that pitch in that kind of way if they have it posted, if they have the links on their CVs. Depending upon the goal, whether it's truly advancing science or helping them demonstrate some of their learning and competencies, there might be some intermediate processes that can be helpful in the short term.

**Mitch:** Jasper, I want to turn to you. I know that there are many folks who think about this issue and say this is because of evil publishers who are somehow making money based on the hard work of academics. Really pushing this whole process to get us to publish more and more. As a publisher, I'm really curious about how you see it, and what you understand that we may not as authors and scientists for what is the role of the publisher here. In fact, are all publishers making profit in the same way?

**Jasper:** There's typical, Mitch, to pack about trend questions into one.

**Mitch:** Sorry.

**Jasper:** I'll try to unpack that a little bit. I think, first of all, I can speak for APA. We really do not judge the success of the publishing program, and the journals by volume metrics. We definitely look at the impact distribution, how many people can read it. If they can read it with the right information there, and to fully update it, and correct it if necessary. Growth in the journals of APA is not something we seek, there is no inherent benefit for APA to drive or incentivize growth for growth's sake.

Now that is also part of the model that we use for the distribution of our journals, which is working with academic institutions and subscriptions, and those who can support APCs or author processing fees to choose that path. We're not incentivized by taking any more content. We don't have a pure open-access model across the APA journals. I've always worried about the change in incentives if a publisher would move to that model.

I think everybody can speak for themselves about the quality of the content. I think there's really good content in lots of different places, but we don't seek or drive towards volume. We really look for good content, and for the breadth of the field to be reflected. Really look for making sure that we have all the major areas covered in our portfolio, that new and upcoming fields are sufficiently paid attention to.

That we have diverse editors, editorial boards and authorship that we address new and upcoming areas in the field. Anything that we do is for that quality. If you're also interested in the notion of the difference between for-profit publishers and non-profit publishers, I think one thing to point out

is that good content can be published by any publisher. The primary objective of a for-profit organization is of course to serve its customers.

In the end to maximize their value for their community, which is often their shareholders. Those can coexist, good quality content and financial gain. Of course, for non-profit publishers, it all goes back into the community that we serve. That's the purpose for which we live and we publish and it's a real pleasure to be able to do that.

**Mitch:** Thank you, Jasper. Ellen, what are some of your thoughts?

**Ellen:** I think what you describe about what's happening at APA sounds wonderful. I also worry about the juxtaposition of what seems like the increasing number of the for-profit open access outlet and bringing that into the conversation, the number of those outlets, the incessant requests that we and the scientific community get from those outlets to publish, how that is also contributing to this arms race.

In addition, I think another issue we haven't talked about yet is how then the demands on the peer review system further fit into this equation. I'm sure the rest of this very illustrious panel like me gets multiple requests now a day. What does that mean, and how is that increasing it seems demands for reviewing, how does that fit into the arms race? Everything you said about APA makes a lot of sense, Jasper, and I just also wonder what that juxtaposition of these other types of outlets and how that fits into the equation.

**Mitch:** Any thoughts on that?

**Jasper:** Anyone would like to respond to that?

**Mitch:** If you've got a thought, Jasper, go for it.

**Jasper:** There's so many thoughts that I have on that, Ellen. I think that for newly started journals, they will always seek to do a lot of outreach. It takes years, if not a decade, for a journal to really just crest those waves and get in some stability and see some regular inflow of articles by themselves. It's brutal for nonprofit or for-profit for journals and publishers to start a new journal. We work with societies and divisions, want to think about journals.

We're very thoughtful and careful in making sure that everybody understands this is not, "Oh, yes, you start a new journal, you send out a couple of invitations, and they will come." That's not the case. I do think that some of the pure open-access publishers who do such excessive outreach that I think it is both distracting at times. There's also a very hard to distinguish for scholars, editors, reviewers what is what.

Is this a legitimate new journal from a small university press that I support or is this yet another spin-off of the journal of the journal of the journal of the journal? You don't know where to spend your time. I wonder if this conversation is not only about the pure numbers that we see in growth in certain areas, but it's the confusion about what can be trusted. I think that the trust factor is a really important piece here.

**Mitch:** Agreed. I am invited to do keynotes for conferences that don't actually exist and to submit to journals that I'm sure are not real, all for hefty sums of money, as I'm sure everyone else is invited to do too. These are scams and confusing. Tom R, what are you thinking? You're on mute right now.

**Tom:** After how many years still leaving myself on mute? First, the confusion is now a conversation I have with pretty much every graduate student that I mentor. How do you figure out whether this is actually a publication that you won't have anything to do with or not or want to review for? I also just wanted to mention having known people who have been editors in some capacity at for-profit publishing journals.

Having been involved in a nonprofit open-access journal myself and an APA journal, the big difference, it seems to me, in terms of people feeling stressed and harried and squeezed and not appreciated is what's the motive. Is it profit or not? I'm sure they're great for-profit publications, but it seems like that makes a big difference in the experience of the people who are expected to do the work.

**Mitch:** Thank you. I wanted to turn to discuss diversity and some of the areas in which we need to be thinking about more publishing because I want to make sure our comments are put into a context. While the panel has been talking about publishing less, there are some areas where we need to be publishing more. We are predominantly a discipline that has been reflecting white males research about white males, mostly from America and the Netherlands.

We have a lot of the world's population that we need to better understand and capture and hear voices if we truly want to be the science of all human behavior. Does anyone want to speak a little bit to the ways in which some of this hyperfocus on publications affects the entire system, the H-index and the impact factor? Is that ultimately making it harder for us to hear from voices that are outside of who has been published the most before? Andy, do you want to say something about that?

**Andy:** I do. Thanks, Mitch, and thanks for raising this question timely, because I was teaching today, and the focal article for the class today was Steven Robert's fantastic paper in 2020, Perspectives in Psychological Science, that I think highlighted this issue for a lot of us. We sensed it was there, and he gave us numbers to attach to it. I feel fortunate that I was an editor when it came out. The sample of papers that were referenced in the article didn't include clinical journals, like the one that I added, but we weren't doing much better than the journal sampled in those articles.

For me, the issue here is, yes, we definitely need to allocate more resources in the way of funding to work on the issues to which you refer, Mitch. I think one of the equally important issues is trying to ensure that the journals that our field thinks of as mainstream journals publishes this work and elevates this work, like so many other areas have been elevated in the past. The other piece of work that's the follow-up to Roberts' paper is that he now has experimental evidence to support what any editor knows.

That there are selection effects that editorial boards create among prospective contributors. If you're a contributor and you don't see your work represented in the people who are part of the editorial board, you're less likely to submit. Now, Roberts has experimental field data to support that notion. The good news is that, and this is one of the downsides, a lot of us are doing pro bono reviewer work, it turns out that big chunks of editorial boards, the editorial consultants, you can change the composition of those boards overnight.

I know, because I did that with my journal. We had an unequivocally low proportion of folks who do work in the broad, just an equity inclusion diversity space. We drafted an invite to folks that let them know, folks we invited to be on the board, that we wanted to change the structure of the

journal. We wanted to give folks an idea that they could get a fair evaluation of that work if they submitted it to the *Journal of Clinical Child & Adolescent Psychology*.

A bunch of my colleagues said yes, and now that broad set of areas of expertise is the most dominant area of expertise in the journal. I can tell you from personal experience, we're getting a lot of really great papers in that space because I think now people feel that they have a fair view there.

**Mitch:** That's fantastic. Thank you so much for your example, Andy. I will just say for Jasper because he's too modest to say it himself, that you should totally check out APA's amazing editor's toolkit for thinking about equity, diversity, and inclusion, and also apply for editorial fellowship programs that are making sure that we have scholars from minoritized backgrounds on the editorial boards of so, so many APA journals. Do check those out. I want to turn to some of the questions that are in the chat, and Melissa, I'm coming to you first.

Several actual editors who I know and recognize are here in the chat, and I want to read some of their questions. Here's one. Given the pressure for students to publish, I question what value and skill sets are we trying to instill in them, especially since one of our major goals is to create competent mental health providers. What are we thinking? Melissa, any thoughts about how this pressure to get students to publish, publish, publish is taking away from other things that we could be training them on, and where you see the balance?

**Melissa:** That's a tricky question, but I can certainly speak a little bit to that. This is going to be a slightly oblique answer but just go with me on this. I think one of the main issues is not only the pressure to publish more and more articles, it is also the pressure to accrue more and more hours of clinical training in hopes that that will make one more competitive for internship. Of course, that's not really true. More hours isn't necessarily better because it often means that the ratio of supervision to direct client service really suffers.

We also know, interestingly, that one of the best predictors of getting lots of internship interviews is not hours. It's not clinical competency. It is actually number of publications. I do believe, coming from a clinical science program or a scientist-practitioner program that, obviously, we want our mental health practitioners, our health service psychologists, to be really knowledgeable and sophisticated about the underlying clinical science.

Ideally, we'd love to be producing mini-me's who are going to go out and produce new clinical science that's going to inform advances in treatment in the world. We also know that publishing in journals is not the best way to advance treatment in the world. When it comes to things like dissemination and implementation, and particularly in educating the public about what works and what doesn't.

Publishing either behind a paywall or spending a lot of money to publish in an open-access journal does not necessarily improve outcomes for the vast majority of people. We have such amazing treatments that are so helpful. Let's just acknowledge that like 85% of people with mental health issues don't get any form of evidence-based treatment. There's my thought on that. Not a direct answer to the question, but I think a series of really important issues.

**Mitch:** Thank you. Jason, what are you thinking?

**Jason:** Real quick. What Melissa brought up I think is really important. I think one of the things for us to consider as a field, and I think we're starting to grapple with this, is how we move away

from the bifurcation, at least in health service psychology, I'll just be specific there, between are you going to be a clinician? Are you going to be a researcher? There's so much more that we prepare PhDs in clinical psychology, PsyDs in clinical psychology, that they can do beyond just research or political work because it's often seen as you pick one or the other.

I think when we think about what is the impact, what is the quality, when we use those terms, I think we have to get better at operationally defining those. I think that can be impact in a community. That can be impact in education and impact in policy. There's lots of ways that we can think about what we consider to be success that go way beyond publication counts, that go way beyond number of grants that you get.

I think there are a lot of things that we can consider in terms of expanding who is included in what we consider to be success. I think that also gets to underrepresented groups who may consider impact very differently than how people who look like me have set up the system to be identified. In that sense, I think there is a lot of growth in terms of expanding what we consider to be impact and quality.

**Mitch:** Thank you. Tom?

**Tom:** Just a brief point that if you look historically, when did people start saying publish or perish? It seems like one of the first people to talk about it was saying it because people in his field weren't publishing and therefore that was the only way that you could get any information out there at the time.

You're saying we have to publish or we're going to perish because no one's going to know what we're doing and what our big ideas are. That's just not-- Publication is one way to get ideas out there. We have so many ways to have an impact on the world now. Why emphasize one or two? Why not look at all of them that have an impact?

**Ellen:** Maybe just to add on that really quickly, Mitch, is we know that in the current system, to Melissa's point, 85% of people aren't getting any kind of mental health help. Also that there's that 17-year gap from what we're finding and the findings that were published in the literature and being translated to practice. Clearly, the current system isn't resulting in that more near-term impact like we would hope.

**Mitch:** This, of course, then raises the question of whether in order to have that impact, we need a faster publication system, which quickly gets to, do we need peer review? Which quickly gets to, should peer reviewers be paid. The whole system very quickly starts to unravel in a way. I think if you were building the system today to do what was best for science and to not create an arms race, but to allow students to learn the skills they need and be evaluated based on what's most predictive of their career contributions.

What's one thing you might want this brand-new system to include? I think we can end with everyone making a comment to that. What might be one thing you would like in a system if it were to be built today that accomplishes the objectives of what's best for science and best for evaluating students? Jason?

**Jason:** I'll be real quick with this. We're already doing it. Open science is starting to address this. I think one of the things if I was to redesign the system, it would be to do high-quality methodology resulting in high-quality data that is then open and available for people to see how it is analyzed and for people to analyze it themselves. If we move to that system with brief discussion of results, I

think we'd see an acceleration of the field much, much more amplified than what we're seeing right now.

**Mitch:** Thank you. Joanne?

**Joanne:** What I'm going to say is also happening now in certain ways, but I want to highlight a move towards collaborative science and an appreciation of collaborative science. Meaning also a move away from the focus on you must make your own independent contribution. If you work with anyone else, it's not clear that you're really making the contribution. Focus on people coming together to work on important problems together where they are contributing what they can contribute and everyone getting credit for that.

**Mitch:** Great. Andy?

**Andy:** Science is a culture. It's a culture that passes information down from generation to generation. There's an author, Randy Olson, who's had a profound impact on my career. He's written some really great books on narrative structure. *Houston, We Have a Narrative* is one of those books and *Narrative Is Everything* was a follow-up of his. He has a hypothesis that he calls narrative selection.

The degree to which an idea, a piece of information gets passed through a culture from generation to generation is dictated by whether or not that information is housed in a story. If I were to change one thing, I'd be a conscious, intentional, authentic training of our students to think about science as a story rather than just something you do and do a lot of from now until when you retire.

**Mitch:** Tom?

**Tom:** This ties into a couple of different things that people have raised. It might seem oblique at first, but how do I hear about important things that are going on in my subfields? For a while, it was Twitter. Twitter's not Twitter, of course, anymore. Now it's Bluesky, just fewer people on Bluesky. Bluesky is also at the whims of whoever owns it.

Why isn't there a great way for all of us to be interacting with each other and hear from each other so that everything doesn't have to be a publication or to get out the door? That is not at the whims of someone who's trying to make money off of all of our free work, free from their point of view.

**Mitch:** Great point also. Melissa.

**Melissa:** This is a little pie in the sky, but what I would love for the cultivation support and protection of the next people in our workforce is that we significantly reduce the burdens of graduate school. That means fewer required courses. That means maybe more specialization earlier on, if that's what makes sense for people. It means capping the number of hours that you're allowed to report on internship. It means that people, like the folks who review for NRSA grants don't reject somebody because they don't already have three first-author publications.

If we really want to be cultivating young people and keep them in the field, and particularly folks who hold minoritized identities of every kind. Which I should point out in our task force survey, they were the folks who had the most difficulty with program culture, with depression, with time pressure, and with low feelings of personal accomplishment. If we want to keep those people in the field and keep science advancing, I think we really need to take better care of our graduate students.

**Mitch:** Amen. Tom.

**Thomas:** The interface of what Jason and Andy were mentioning, I think that returning to thinking about the philosophy of science ends up being something that we've gone so far towards the empirical end. That we're losing sight of what the philosophy of science is, what the construction of knowledge actually means. If we think about the way that our science is developing and if we're more patient with it, we can see what's been done previously and really engaged more successfully moving ourselves forward in a more intentional kind of way.

**Mitch:** Great. Jasper.

**Jasper:** Yes, I think I really appreciate that Tom sort of his construction of knowledge really resonates with me. I love publishing. It's a fantastic way to communicate really the bricks, the components of knowledge. I always worry that we're trying to overhaul a system where there are aspects or areas that can be improved. Of course, they can be improved, they need to be adapting to new environments.

For all those who are arguing purely for, in this case, open access, for instance, I would also say that it is a wonderful, wonderful opportunity for everyone to be able to submit content without having to pay for that content to be considered in their particular journal. It is okay to have different models being standing side-by-side, and if you can't pay for it, wonderful.

I also don't think that every scholar needs to be a fantastic presenter of their research to the broader community. There are people who are really good at it I will be terrible at. Everybody finds their own space, and I think together we can really, really make that work. I would take Joanne's collaborative nature and say, well, let's apply it across all of the aspects of the scientific knowledge production engagement.

**Mitch:** Fantastic. Ellen.

**Ellen:** Yes, I think these are all super comments, and I think I would just add that if we were doing at least some, maybe not total overhaul of the system Jasper, but some tinkering with it, I think I would continue to go back to, I don't know quite how to do it, but elevate quality and impact. How do we keep that front and center in what we want to be disseminating both within our scientific community? Also finding those better ways to disseminate that more quickly to the public and to the audiences that we really want to impact with our work.

**Mitch:** Thank you all for these incredible suggestions. Everyone who is listening has an opportunity coming up to evaluate somebody for admission, for tenure, for promotion. You therefore have the power to suggest to not just look at pub counts. If just the people listening to this were to say that once in the coming academic year, a year from now we would have a very different dialogue in our field about pub counts as being the end-all-be-all for how we evaluate our science and our progress as professionals.

I respectfully charge you all to think deeply about this issue and think about how you can make a difference and can contribute. I also want to thank so much all of our panelists for these amazing comments and thoughts about how we can do best for our science and not get caught up in this arms race as it's been called. I want to thank everybody who's listening as well.

Please do check out our page on Essential Science Conversations to access this recording as well as a transcript. Don't forget to subscribe to *Science Spotlight.* You'll get a quick evaluation at the end

of this broadcast so you can give us ideas for topics that you would like to see in future Essential Science Conversations. Thank you all very much. Take care.