

ESSENTIAL SCIENCE CONVERSATIONS

Mixed Feelings and Mixed Methods in Psychological Science – February 16, 2022

Peggy: Hi, everyone, and welcome. I'm just making sure that my audio works. One second. Give me a second, folks. I'm having a tiny bit of a technical difficulty here. Can you all hear me? Mitch, can you hear me?

Mitch: I can.

Peggy: Okay. Great. Thank you. All right, everyone. Hello and welcome, and thank you for joining us today. This program is part of an APA series called Essential Science Conversations, where panelists and audience members can engage in an open dialogue about emerging topics in psychological science. Today's conversation will focus on the ongoing debates and biases regarding quantitative versus qualitative research methods. This topic often elicits strong opinions within the scientific community. Today's panelists are well versed in this topic, and I really look forward to hearing what they have to say.

Before we get started I just need to go over a few housekeeping details. First, thank you to all of you who submitted questions for today's program when you registered. We're going to try to get to as many of those questions as possible. You also can ask a question as the program is taking place in real time. There's a panel that's labeled questions in your webinar dashboard. Just click on that panel and type your question into the box, and I'll be monitoring those questions throughout the program.

Secondly, this program is being recorded. Once it ends everyone who registered will receive an email link to the recording, and you should receive that email a few hours after the webinar ends. That email is also going to contain a certificate of participation just in case you need something like that as well.

Finally, I have to plug our web page, the Essential Science Conversations webpage, where you can find recordings, slides, and written transcripts of all our programs. Be sure to bookmark the link, check in often. There is the link on the slide, but I'm also going to share that in the chat box in just a second. Before I do that, I would like to introduce our host who will be leading today's conversation. Let's welcome Dr. Mitch Prinstein, who is APA's Chief Science Officer. Welcome, Mitch. At this point I'm going to hand it over to you and you can take over.

Mitch: Great. Thank you, Peggy, so much for your help with this. Always so helpful and terrific, Wes Baker too. Thank you so much for everyone for attending. I'm really excited about today's conversation. I'm also really excited about the terrific panel that we have. I'd like to introduce them.

Our first panelist is Dr. Elizabeth Creamer. Elizabeth is Professor Emerita from the Educational Research and Evaluation Program in the School of Education at Virginia Tech. She served on the board of the Mixed Methods International Research Association for four years, including in the role of president. Her latest writing project

involves a new textbook called *Leveraging Visual Displays During Analysis in Mixed Methods Research*.

I'm also really excited that today we have joining us Dr. Joseph Gone. Joseph is a Professor of Anthropology and Global Health & Social Medicine at Harvard University. He is an international expert in the psychology and mental health of American Indians and other Indigenous peoples. He's collaborated with tribal communities for over 25 years to critique conventional mental health services, harness traditional culture and spirituality for advancing Indigenous wellbeing.

Our third panelist today is Dr. Eric Youngstrom. Eric is a Professor of Psychology and also Psychology and Neuroscience and Psychiatry at the University of North Carolina at Chapel Hill, where he's also the Acting Director for the Center of Excellence in Research and Treatment of Bipolar Disorder. He's the co-founder and executive director of Helping Give Away Psychological Science, which is a nonprofit organization that's dedicated to disseminating free information about psychological science.

Wow, what an amazing panel. Thank you all so much for being here. I am really excited and I'm excited for us to have an essential science conversation. This is a interesting topic because this is a topic that many people have very strong feelings about. Some people have really been brought up, as it were, in their science training to think that quantitative or that qualitative research might be a preferred method or the way in which we're supposed to be doing science. There are even ways in which that has affected what journal articles are published in what outlets, what's considered rigorous science.

All of this is really in the midst of change for a variety of reasons. One reason is because we are beginning to talk more and more about the way that our science has really reflected a dominant viewpoint that has really been reflecting those with privilege and those who have been really leading the science conversations for a long time.

Joe, I wanted to start with you. What are the ways in which we might want to start thinking differently about qualitative versus quantitative research now that we're trying to work so hard towards equity, diversity, inclusion, and justice in our research?

Joseph: Well, thanks, Mitch. It's really great to join you all here today. I appreciate that question a lot because, as you know, I'm the co-chair of the APA Task Force on Strategies to Eradicate Racism, Discrimination and Hate. We're thinking a lot about the APA apology for racism and the commitment to do different going forward in the future. My work, as you mentioned, is about Indigenous community mental health, and I've been doing that work for 25 years. There's a lot of ways in which I think opposition of quantitative and qualitative approaches to research is not helpful at all in that space or domain.

I think that's not helpful for several reasons. One reason is because the kinds of questions you ask really should be driving the kinds of methods that you adopt. It seems silly to me in a practical and pragmatic frame of mind about knowledge production to, if you will, metaphorically say, "Well, we only use saws around here,

no hammers allowed. Sorry, we're building a house, but we're not allowing hammers." In my mind, these are tools. Tools are adopted to accomplish particular objectives.

It gets back to these big questions you have to ask in Indigenous mental health, which is understudied and has been understudied for a very long time, particularly in terms of lots of questions that we might have in which Indigenous people with specific histories and cultural diversity and so on might have and require inquiry beyond what is typically done in the mainstream.

We don't know a lot of answers to questions. A lot of that work is in its early phases. A lot of early scientific work requires more observational and descriptive approaches, which often fall to qualitative inquiry. The kinds of questions we ask at this point may require more of that. Maybe we can get the RCTs and mental health interventions at some point, which of course are great tools for trying to unpack cause and effect relationships with treatments and outcomes.

The final thing I'll say is in work with Indigenous communities, there is increasingly an interest among community members themselves in calling researchers to accountability for the work that we do and in trying to harness Indigenous approaches, knowledges, and even methodologies in the work that we do. There's often a stated objective, explicit commitment from community partners who say, "We want storytelling, we want narrative methods and analysis," and so on. When it comes to diversity, equity, inclusion, I think hearkening to our community partners is it's really important if they say they want qualitative inquiry. That's even another reason to want to make room for that in psychology.

Mitch: Thank you so much. That's incredibly helpful. Elizabeth, I've heard people say that if you adopt a quantitative or qualitative methodological approach, you have already accepted epistemological assumptions and a framework that is guiding your approach. Most people are not aware of that. Most people feel like, "Well, this is the way you're supposed to be doing research." There is no assumption that I've already adopted in choosing a quantitative approach or qualitative approach.

Actually, there's a lot of work on theoretical psychology, on humanistic psychology that speaks to that in different ways. Can you speak at all to the different approaches and assumptions that we make when we adopt a qualitative versus a quantitative perspective?

Elizabeth: Sure. The question really is a pervasive and longstanding one. It was raised in the '80s, in the '70s when it was talked about the paradigm wars where qualitative was beginning to gain a foothold and mixed methods behind it. It is a long and pervasive argument, the idea that qual and quant are two different epistemologies. I think that is a mistaken assumption because a method doesn't really have an epistemology independent tied to the tool. If you pick up Joe's metaphor, a hammer is a hammer. A saw is a saw. It doesn't have assumptions about reality embedded in the hammer. It doesn't have assumptions embedded in reality in the saw.

The people that bring those assumptions are part of a social philosophical movement that is both individual and social. Let me take that just a little bit further. A positivist

coming out of the postwar years, where there's an objective truth and a reality, really struggles with qualitative traditions. As soon as you move over one notch on the timeline, for instance, you move into constructivism, I consider myself a constructivist, a social constructivist.

Mitch: What does that mean?

Elizabeth: It means you believe reality is constructed, that there may be a reality out there, but we all perceive it in very unique ways. When I approach a research, some days I'm a pragmatist, some days I'm a constructivist. Grounded Theory Kathy Charmaz was a constructivist. I see all research, qualitative and quantitative, as having a subjective element. We make decisions and choices as we move through our research methods.

Mixed methods researchers can see them as opposing paradigms, and some of the designs allow the qual and quant tracks to run parallel but independent so they never really talk to each other. The constructivist approach is like you wear one hat and I try to be as skeptical about numbers as I am about text. Hopefully that gets to some of the issues because it's a very big question.

Mitch: Thank you for that. That was really helpful. Eric, what do you see as the pros and cons?

Eric: The first time that I've heard both of you speak, and I'm so excited about the perspectives and what-- Both of you know a lot more about the application of qualitative methods than I do. I've been a co-investigator, I've been a sidekick, but I haven't been the person. Both are talking about, thinking about what's the question and what's the best tool for the question.

Also thinking about pragmatism, the concrete example, my wife had me hanging pictures and I didn't bring a hammer up onto the ladder. I'm looking around and I'm like, "Do I need to start over?" I had a tape measure and I'm like, "I think I could." I bap, bap, bap, and that was not the best tool for that. If I'd known what I was getting into when I went up the ladder, I would've picked a different toolkit, but I was able to get that done. I'm obviously not writing a paper about hanging pictures, but in future directions, next time that you're approaching this sort of problem, you might want to use a different approach.

Thinking about I'm trained as a clinical psychologist, and I look at quantitative measures that everybody's using, like the PHQ-9, and I'm like, "Where did the number nine come from? Why are those the magic nine symptoms that decide whether someone has depression or not?" You look at the field and we're like, "If we had it to do over again, there are a lot of important things that may have gotten left out."

Then you talk to people from other countries, other languages, and you're like, "OMG, why aren't we starting over again? Why aren't we having qualitative methodologists really unpacking? What is the lived experience of depression for you? How is that different than the lived experience of being in social isolation during quarantine?" There's so many rich questions once you start thinking about what would be the best way of approaching it.

Mitch: That's helpful. Thank you. I can imagine people listening and saying, "All right, I don't get it. If you want to study depression in, let's say, a native tribe or community that's rarely been studied, you go to the literature, you read about the symptoms. Feeling disconnected, feeling for a shortened sense of future, and just develop a questionnaire, and just go give it out. Then you can have quantitative of data, and then you can use that quantitative of data." What would be the problem with that, Joe? Why can't we just do quantitative data to learn about new cultures, or why do we have to switch to qualitative?

Joseph: Well, you might recall of course the differentiation that cross-cultural psychologists have made based on anthropology and linguistics actually between etic and emic approaches to research. Etic, of course, is to take an external top-down driven template and apply it wherever you go. Emic means trying to investigate and inquire in an open-ended fashion from the ground up.

The problem with a construct like depression is that we don't really know to what degree it exists as an entity in nature that would apply across all of human experience both across time and across place. Because we don't really know what depression is, psychiatrists and psychologists will tell you, right now we do phenomenological symptoms to try to identify what a disorder is as opposed to construct validity that will be gauged by causal things and treatment responses, and so on.

In this instance, we don't know what depression is and how it varies. What you might want to do if you're working with people from around the world is to try to investigate what does something that looks casually like depression really translate into? In various native communities, the very best psychiatric epidemiology has revealed low rates of so-called internalizing disorders and higher rates of externalizing disorders.

There is an epidemiological discrepancy. Whereas depression is often seen to be one of the most prevalent disorders in mainstream America, for example, that doesn't appear to be true in Indigenous communities. The question then becomes, is it a measurement problem? We're not picking up the right ways to inquire about that, or is the actual experience and expression of distress different because of cultural reasons? I can suggest to you some cultural reasons which have to do with interdependence that then leads to less of a focus on one's inward-looking symptoms and more distress that is between people, for example. That might be one way to look.

All of that requires a different approach that doesn't presume so much, which is why an etic approach that simply takes depression screeners or DSM criteria and goes into Indigenous community and simply ticks off, "Yes, they have it. No, they don't," and then reports the numbers, might not actually be illuminating. It might result in what my colleague here at Harvard Arthur Kleinman called a category fallacy, that maybe depression doesn't exist in the way we formulated in the professions in some of these communities.

Eric: Even if it did, the etic approach, if there were some things that were consistent across human experience everywhere, it would get that part right. Where it's hopelessly lost is figuring out what else, what are the edges, what are the other

contexts? It's not 100% wrong. It's just occasionally you get a bull's-eye and the rest of the time help.

Mitch: How do you know that the information you're getting from qualitative research is appropriately representative, or that the conclusions that you get are not nearly due to chance? What do we do with the quantitative training that we've had, and how do we reconcile those things we've been taught when we think about a qualitative approach?

Elizabeth: If I'll jump in here, you really are using a different purpose with a qualitative approach than representativeness. Of course, you could use a representative sample with qualitative research, but the idea of generalizability is not something inherent in qualitative research.

What you're interested in qualitative research particularly when you put it together with quantitative is depth and breadth. You're trying to expand your understanding to develop a more holistic multi-layered image. Really, the issue of sampling, the logic is quite different. You're going for more breaths to understand the phenomenon.

Mitch: That's helpful. Ideally, it sounds like there would be some crosstalk between the qualitative research and the quantitative research. My experience so far has been that these are published in different places, and they're different researchers talking in different subgroups. What do we need to do to create more crosstalk? Joe, I'd be curious what your experiences or thoughts are about creating outlets and opportunities for that crosstalk. Also, Elizabeth, very curious to hear more about mixed methods approaches. Joe, any thoughts about the outlets?

Joseph: Yes. I think it depends a bit on the sociology of psychology as a field. A lot of gains have been made over the time that I've been a psychologist, I graduated in 2001, with larger acceptance and familiarity with qualitative inquiry. One of the biggest contributions, I think, was the development of Division 5's the Society for Qualitative Inquiry in Psychology, which is a section of Division 5, quantitative and qualitative methods. Those folks labored for a very long time to get that division in place, and then now it's representing and carrying the flag for qualitative inquiry in a way that expresses and resonates with my career.

My career for the past 20 years has been heavily marked by qualitative inquiry. Again, not because I favor it necessarily, but because that's where the state of the research is in the research that I do. I don't think it would have been possible even 10 years before for someone who did primarily qualitative inquiry to be able to make it through tenure and so on in the way that I did.

Things are on the move in a way that I think is good. I think that having people become more familiar and more engaged with it is one way to help. I do think that journal editorial policies that blanketly prescribe qualitative inquiry are really short-sighted and harmful in this respect. I encountered one of those recently in an APA flagship journal.

The problem with it is that it's a very narrow view of science that presumes that we know we can make clear distinctions in what scientific and what's not scientific, and what's pre-scientific. Actually, any philosopher of science that you consult over the

past 60, 70 years, who've questioned the logical empiricists, what they were doing in the '30s in the way Elizabeth talked about, we don't really have clear boundaries between what's scientific and what's not scientific. If we look at the range of sciences, astronomy, paleontology, the methods that they employ are really suited and fitted to the inquiry they're engaged in.

I think it's not a hard thing to grasp for people to recognize that questions should determine methods and not vice versa. Also to point out that we do have a methodological parochialism in our discipline. There is a hegemony of certain forms of variable analytic analysis that comes with our training. If you start to push people a little bit on that, they usually haven't thought through it enough to be able to adequately defend it and they can become more open-minded with some conversation. The more you go into philosophy of science or silos about you have to embrace this particular approach to even do this work, I don't think that's helpful in this respect.

I do think that we talk about method, which is embedded in methodology, which is really the logic or rationale for inquiry. Epistemology is way high order. I don't go there very often, because I actually think all of university-based inquiry, whether it's scientific or humanistic, has shared epistemology around it's rational, you have to have peers critique it, and it's refined in that way. I think, even if it's science or not science, that's shared. That may be the epistemological stuff, but I don't think it's helpful when you're talking qualitative and quantitative.

Eric: I agree completely. I was thinking getting ready for this, when was the last time I cited Kant in a paper? [laughs]

Elizabeth: Things change. I think part of the issue, you asked, Mitch, about training. Well, you asked about-- Let's just go to the training point. I think the real trick in training is to get over this binary logic that somewhere early in our careers we need to declare, raise the flag, I'm quant, I'm qual, as if you get to just use one method. As you go out in the world, get engaged in these large real-world projects, you start doing funded research, you start doing research in the field, you start trying to communicate with different audiences.

When you get in the business of wanting to communicate with stakeholders, they're not really interested in your fancy statistics and your regression, they're much more interested in the stories. I think the whole training idea that we have qual courses and then a few quant courses, and heaven forbid, we should have a mixed methods course, but I think people nowadays in facing the complexity that we are facing these worldwide problems, you cannot afford to say, "Well, this is my area of specialty and this is what I study," because that's not where the funding is, that's not where the future is.

I think you really have to see yourself as being competent in qualitative and quantitative. I'm not saying an expert, I'm saying competent. You don't overly trust that the qual person knows what they're doing, but you don't overly trust the quant person knows what they're doing either. I think we really have to move away from this binary idea that qualitative and quantitative are different. Most people characterize they have more in common than they differ, and Joe touched on some of those. We share many academic values about empirical research. He's totally

right. When you survey faculty, they don't spend much time thinking about epistemology. They're just trying to get their research done.

Mitch: Are qualitative or mixed methods approaches taught in the psychology departments where you are all that?

Elizabeth: Not mixed methods.

Mitch: Harvard, UNC?

Eric: They're available at Carolina but not taught under the roof of Davie Hall all the time. You would have to go to Odum Institute or the School of Nursing. They're there if you know where to look or how to find them.

Mitch: Should it be part of training that happens under the roof of a psychology department?

Eric: I really loved what Elizabeth said about being conversant and familiar with the methods. Thinking about the framework, do you have exposure, do you have competence, do you have expertise in this? I think that at a minimum having exposure would be a great thing. I appreciated Joseph shout out to Heidi Levitt and Linda and the group that got the SQIP, the Society for Qualitative that's part of Division 5, and a very vibrant, very active part of it. Kudos to APA for publishing the guidelines. Right up next to the JARS and the MARS criteria for meta-analysis, there are the guidelines for qualitative.

Elizabeth: And mixed methods. The most recent edition includes mixed methods.

Eric: The mixed methods thing, I have a very practical pragmatic reaction. It's hard. If you send it to a journal, part of the peer review process is they send it out to multiple people and there are memes on the internet about getting reviewer three. The chance of getting two being like, "This looks like good science," and then reviewer three is common and hating on that if you show qualitative methods and you get a quantitative dyed-in-the-wool reviewer three, that's a problem. How do you navigate reviewer three is a very, very practical issue.

Every time that I have been a part of it, I've been part of a team. I'm counting on other people to have expertise, but I also think that it's important for the field to hear that this is important, so thank you for organizing this podcast, and for editors to be like, "Hey, I heard on this webinar that the reviewers might have strong opinions and be split and that doesn't mean it's bad science." We need editors to feel empowered to be like, "It's okay that we have some tension or disagreement about this." All those things I think are practical issues and ways that we could speed the change.

Elizabeth: Let me give a specific suggestion here on this topic. Most journals, and I checked this recently because I'm co-editor of the *Methods in Psychology*, but if you go to the aim statements of the APA journals, they are usually quite clear on the priority, whether it's quantitative, quantitative or qualitative, quantitative qualitative and mixed methods, they usually spell it out.

One of the ways to choose the journals to publish in is be sure to check that aim statement. If it doesn't mention mixed methods, you might want to find a journal, for

instance, that mentions mixed methods. If it only mentions quantitative, I think I would save my qual publication for another venue. That's one way to get some sense where there's an openness to it.

Joseph: There's one other thing I want to just put on the table because I think it helps to explain to people why there is differentiation between quant and qual in this way that endures in ways that I think it sounds like our panelists are agreeing are problematic. It starts with the logical empiricists or the logical positivists from the '30s who are trying to access reality somewhat directly in their research. I think we've all abandoned, they abandoned that within years of even positing it.

We recognize now we don't have unvarnished perception of reality. All statements about reality are representational and therefore actually have "bias" or perspective or positionality as part of them. Really the question then becomes, how is it that scientists should manage and account for their positionality? I think variable analytic and interpretive research do this differently. Variable analytic research, or we could say quantitative research to be more familiar, really offloads a lot onto the procedures by which knowledge is created.

If you assess for proper variables and you apply these statistical procedures to them, assuming the assumptions hold and you get interpretable outcomes, we have decided by consensus that we know what that means. What offloads the concern about perspective and bias into the procedures themselves that we agree that there's certain ways that you can interpret and then we go on to say things about it, I think interpretive, or if you want to say qualitative inquiry, is much more trying to get at human meaning making in much more rich and in-depth ways.

The best way humans make sense of other people's understandings is to interpret them. Interpretations, of course, are a part and parcel of one's position and one's perspective. You need to be able to offer an account that is compelling and plausible to critics as to why you've arrived at that interpretation from these interviews or focus groups or whatever you're doing. There are criteria that people have come up with to try to help ensure that, but it's a different endeavor that is aimed at different knowledge kinds of production.

There are even forms of qualitative inquiry, not so much in psychology, where the goal is almost literary. Take personality research, psychobiography, where those folks have been interested sometimes in offering the most compelling interpretation of a life that is possible. Now, what makes a compelling interpretation might not be replicable. Maybe you want four and five brilliant people taking a reading of "The Meaning of Hitler" and watching a documentary lately. They're not going to agree at all, but they might have brilliant takes that are really insightful and they're not by design because you've got brilliant interpretations going on.

Now, that's not what psychology often does so much in the mainstream, but at lower levels, focus groups and so on, there are criteria that help to guide whether an interpretation should be accepted as compelling or not.

Elizabeth: I'll add one thing to that, and I know you need to move on, but I think the relic of positivism exists in mixed methods too. Joe is talking about this idea that you do a procedure, and because you do the procedure systematically, that means

quality. In mixed methods, the assumption historically, though it's shifting, has been if you pick one of the conventional designs, that therefore you have established the quality of your research, which I think is a relic of positivism and it's totally shallow.

Eric: I'm struck by, in all of our answers, we talk about the importance of story and narrative. There's a book by Randy Olson, *Houston, We Have a Narrative: Why Science Needs Story*, which is highly recommended by the National Science Foundation. Andy De Los Reyes is the person that put it under my nose. Even the National Science Foundation agrees, science needs story.

The interesting thing, I don't know if we're allowed to ask each other questions, but I'm going to. The psychology is we're coming out of a reproducibility crisis. We've looked at our 100 greatest hits and tried to replicate them. The failure to replicate has been interpreted as a major issue for psychology as a scientific field. I'm really curious, everything else I've been nodding and I'm like, "Yes, I love this. I'm so relieved to hear this," but I'm curious about, does reproducibility have a different role epistemically or is that not something that we should be considering?

Joseph: My thoughts on that are, it depends again on what you're interested in and what your goal is. I think that there are whole domains of psychology in which the replicability results matters a lot because the claims are about things like patterns, almost laws of mind and behavior. We usually don't have laws anymore. Patterns of mind and behavior that we want to postulate are universal. They're part of how humans are made up. For that kind of work, if that's what you're interested in furthering or advancing, the replicability matters a lot.

One problem I'd say, though, with that approach, just to reinforce, why offloading into the procedural in a consensus-based way what the meaning of results is, is that it very strictly limits the kinds of questions you can ask. If we're basically saying, "We only use saws here," then you have to be wanting to cut wood. There are lots of questions that are psychological questions in which applying a saw wouldn't be the most interesting thing to do. There are different domains that there have been from the beginning.

Usually, if we take history and systems as clinical programs have been required to do for APA accreditation for a long time, you learn a story of psychology that's about scientific aspirations and endeavors. Wundt himself had two kinds of psychology, including a *völkerpsychologie*, which is what we might loosely translate as a cultural psychology today, which is a more human sciences approach rather than a natural or positivist approach to psychology.

There are these interesting trends and fashions and they persist today, even though some are more hegemonic than others. Replication matters for certain endeavors and I think not so much for others. For someone like me, who probably takes more of a human sciences approach, which is to say that the interesting aspects of psychology to me are not universal, are not stable, that there are those things, but I think that that's low-level stuff like brain function and things like that.

The things that I care about are meaning-making, personality, emotions, things that are constituted by the meanings we make. Therefore, I think a human science approach to that, which is not necessarily replicable or universal, can be very

illuminating at least not replicable across all of psychology. I would contest, for example, that there are six basic emotions.

I would think that actually, in the communities I work with, social emotions are a lot more salient, because people in socializing interdependent kinds of **[unintelligible 00:38:31]** Jealousy or resentment, love, pity, or compassion. These are the emotions that are important to people in Indian families and communities. Not the abstract, detached, individualist kinds of emotions. I'll stop there.

Elizabeth: I'll take just a little--

Mitch: [crosstalk] Please, go ahead.

Elizabeth: I was going to just take a medium ground in between the two positions about replication. I think there's a value and I want to say that crosses methods and methodological transparency, and providing enough information about your research methods that your viewer or reader can make a judgment if the conclusions are something that they find credible.

The emphasis on methodological transparency, which is in the guidelines, you'll see it in the APA guidelines, it's really about being transparent about your research methods. That's not the same as replication. I'm not saying it's replication, but I'm saying that it leaves the breadcrumb trail about your research methods, so people can decide if your conclusions are really empirical.

Eric: I love that.

Mitch: It's very little, yes. Eric, I wanted to follow up on that and just ask the thought about replicability, the talk about transparency and methods, in many ways circles an issue that I know most psychological scientists feel, and that is respect for the rigor of psychological science.

One of the questions that we got so often when people signed up for this webinar today was, why is qualitative research considered less rigorous? Or a different way of asking a similar question would be, is there a difference between highly rigorous qualitative research and less rigorous qualitative research, so we can still uphold our desire to be a rigorous science? What would you say to that?

Eric: Yes.

Elizabeth: Yes, of course.

Mitch: What does that look like?

Joseph: One thing I have-- I'm sorry, go ahead, Elizabeth.

Elizabeth: I was going to say, of course, there's a difference. There's good qualitative research, there's rigorous qualitative research that they don't like that word, and there's not so good. One of the big sticking points in terms of credibility is sample size. Even the word sampling isn't appropriate here, but the number of participants and how homogeneous the participants are, that's been a big problem, a big critique of grounded theory, the use of grounded theory of qualitative tradition.

There are issues of rigor even though that's not language that qualitative people use. Joe, you were going to say something.

Joseph: Yes, I just wanted to say that again, from a certain perspective within psychology, some of the replicability crisis is not only not so concerning, it's expected. The idea, for example, from a human sciences perspective, that human psychology, human behavior are modes of life that are diverse across different cultural communities and over time, that actually our modes of life are always on the move, they're always evolving, and that psychology, therefore, research will produce findings that are historically contingent. They're tied to modes of life in times and places and don't necessarily generalize.

In that sense, if you imagine that psychology has mainly been undertaken with Western-educated, industrialized, rich, and democratic societies, and we've all been taught in recent years, then the work that has been done is on a very small swath of humanity. The fact that those findings are starting to come apart in the wake of maybe further inclusion or just over time is not surprising from that vantage point.

In terms of replicability, the one last thing I want to add here is rigor is important. I think that all the work that psychological scientists do needs to be rigorous. What counts as rigor is tied in part to the methodological endeavor that you're engaged in, and so there might be very different criteria. Rigor is no guarantee that psychological scientists will accept the findings. The proof of this historically, and even pretty good currently, is parapsychology.

When I was a grad student, *Psych Bulletin* had an article by Bem and Honorton that reviewed the autoganzfeld experimental procedures on psi or ESP. They had 20 studies or whatever, man. I think was actually 11. 11 studies that showed that ESP exists. Do psychological scientists think that ESP exists? No. Could you poke a hole in the methodology and the rigor to show that they were wrong? No, you can't. Just like Daryl Bem published in *JPSP* not a decade ago now about psi.

Parapsychology is an illuminating lesson because it reminds us that the knowledge we want to undertake is actually very, very difficult. You don't want to become nihilist about knowledge, but it's very hard to know stuff. Science is probably the best tool we have for certain kinds of questions, but even then, it's very limited. Parapsychology teaches us that.

Eric: I'm sorry. To Elizabeth talking about looking at the methods and figuring out are they credible, I realized that I'm a little lost in how to evaluate whether they're credible. I've written many, many, many methods papers for quantitative papers. If I'm just reading, I smile and nod, I'm like, "Yes, that makes sense." When I actually sit down and try to replicate it or apply the method, I'm like, "This is actually a black box." It's a good-looking black box, but this was in no way adequate for me to evaluate the quantitative methods.

I'd be curious if you have any pro tips about what are signals of quality or markers of transparency. If you know what you're looking at, or what you're looking for, what does it look like?

Elizabeth: Let me just hit a couple. I'm going to make it sound simple, but it's not. I think in this case, the use of figures and tables that link findings or results or conclusions which are different to the data sources and the literature are critical to building that argument. I also think it's extremely helpful to adopt the mindset that you're talking to a very suspicious audience in general, all researchers. We have skeptical audiences, they want to challenge our research methods, regardless what our research methods are.

If you go to a conference, what they pick apart is the research methods. You may have discovered the cure for cancer, or you think you have, but what they're going to argue about is your research methods. In mixed methods, it's extremely important to trace, to document to your viewer that these are the conclusions that came from qual, these are the conclusions that came from quant, and lo and behold, when I put them together, here's some another layer of information that came out. Tracing the evidence to the source of data, I'm giving you just one way that I think is critical to quality.

Joseph: I would add one other thing, which is to say that it's very difficult across qualitative inquiry. There's so many different forms. It's like saying that there's some way to evaluate this across quantitative, but there's no way to do it. Heidi Levitt and colleagues, the American Psych Guidelines, which are helpful. Thank God someone did that, but it's very hard to amass across all forms of inquiry.

One inquiry I use a lot is thematic analysis, and my go-to article is by Braun and Clarke from 2006, *How to Conduct Thematic Analysis in Psychology*. They have six phases that you follow. They have 15 criteria for whether it's a good thematic analysis. In addition, because I often publish in health journals, I default to the COREQ criteria by Tong et al. I'm not going to remember what COREQ stands for, C-O-R-E-Q, but it's a 52-item checklist that if you're doing interviews and focus groups in health sciences, and it's qualitative or interpretive inquiry, that you should include to help make sure that your method is transparent.

I think we can all agree that making your method transparent is key. The challenge is in qualitative inquiry to do that, you need a lot more space, or at least some more space. Increasingly, especially in medical journals, the space requirements are so tight. When I evaluate those, I don't know what to say sometimes, because when I'm reviewing the methodological details are not adequate, but if they only allow 10, 15 pages, there's no way they can put that in there. Now, there's appendices that you might be able to, but anyway, that's a problem.

Elizabeth: Well, on the opportunity through open-access journals. I used to be very skeptical about open-access journals, but I've become quite a fan. The *Methods in Psychology* is open-access. You can have supplemental materials that the word limits are much more expansive. For instance, in supplemental material, you can actually have some of your data to support your conclusions.

Mitch: We've gotten some great questions in the chat. We're not going to have time for all of them and I think we've covered a number of them, but I wanted to make sure we had time for some. Do you have any advice for faculty who are navigating in department politics around this issue regarding qualitative versus quantitative approaches?

Elizabeth: I'm sorry to hear it's still a problem. [laughs] You would think it wouldn't be a problem anymore, but I guess by that question, it's still a problem.

Joseph: It is still a problem, I think. I think that you want to be brushed up in arguments and explanations for why you're doing what you're doing. You need to be able to support your approach, to offer an account, and to offer it in an accessible manner. I think plenty in the SQIP, Society for Qualitative Inquiry in Psychology, there's a website, there's a conference, great people involved.

That's one way that you could help to learn that, because I had to do that myself. In fact, I published an article once that was only an explanation and justification of a particular approach I was using that I never thought needed to be explained, but I heard from senior colleagues on the tenure track that that might be a problem.

Mitch: Do you think that the pandemic or any of the events in the last few years is going to change the trends that you're seeing in the movement towards or away from a diversity of methodological approaches?

Elizabeth: This is strictly an opinion. I'll just jump in and say in one way, maybe, and this is just off of my head because it's something I've been thinking about. With the rise of Zoom and YouTube, and I know we think that's hardly a top-tier journal, but I've been working with an article that was published a month ago, and it had cutting-edge mixed methods. In less than a month it had 800 reads. I can tell you that many longer journal articles that I've spent months and months on did not get 800 reads.

I am inclined to think, I'm not saying it's good or bad, but I am saying, people want the YouTube videos, they get watched hundreds and hundreds of times. People invest hundreds and hundreds of hours on articles, and they get less attention than a YouTube video about the article. Maybe. I'm not going to dismiss the idea. Certainly conferences on Zoom, certainly people have found that virtual conferences are great. They have pluses. What do the two of you think?

Joseph: I will quickly add that I think the main driver of diversity in methodology and psychology is going to be diversification ethnically, racially, gender, sexual minority. All of those kinds of diverse social identities that are increasingly coming into the field, that's what's going to drive the shift.

Elizabeth: In the faculty? You're talking about in the faculty?

Joseph: In the legitimacy of qualitative inquiry and psychology as a field expanding. That's because people who hail from our communities want to ask questions and need to ask questions that require those methods to answer.

Eric: Is there a professional society or a listserv that people could join? I obviously would think first of SQIP. To Mitch's question about how do you get advice, how do you get consultation, how do you make your case, I wonder first about a listserv. I genuinely didn't think to do this piece of homework, but what do the Wikipedia articles look like on these methods? Are they any good? I haven't looked.

Elizabeth: Doubt it.

Eric: If they could be better, please let HCAHPS know. We would love to work with people that actually have expertise. The Association for Behavioral and Cognitive Therapy is talking with HCAHPS about the Cognitive Behavioral Therapy page on Wikipedia because it gets 2 million views a year, and they're like, "It could be better." SQIP, I feel shameless, you should consider joining SQIP, but that would be a great one. Are there other ones that you guys know about?

Elizabeth: Let me suggest to that. It's not a listserv, but SAGE is the biggest publisher about research methods. I don't know about psychology, but it's the biggest publisher about research methods. They have enormous online resources available for training about methodology. That's another difference that I think people aren't only relying on the classroom for their training and research methods, but a lot of that training is occurring above and beyond the classroom.

Mitch: We will be posting some--

Eric: [crosstalk] remember the greenies, the SAGE methodology monographs.

Mitch: That's right.

Elizabeth: I thought they were blue. [laughs]

Mitch: We will be posting some recommended readings and resources along with the recording of this Essential Science Conversation on the APA webpage. I just wanted to take a moment to thank you all so much for your participation on this panel and for talking about a topic that sometimes is only talked about in whispers. I'm glad that we're talking about it openly and boldly, and helping to educate people about the changing science that we are a part of, and the different ways to think about how it is that we're seeking the truth, which is what we're all trying to do.

Thank you so much to everybody also who joined. Thanks again to Peggy and Wes for your help in coordinating these. I really appreciate your time.

Elizabeth: Enjoyed it. Thank you so much.

Mitch: Thank you.

Eric: Thank you all. Thank you for putting this together.

Elizabeth: Yes, it was fun.

Peggy: Thanks, everybody. I'll end the broadcast now. Bye-bye.

[00:55:20] [END OF AUDIO]