

Essential Science Conversations:
Mixed feelings about mixed methods in psychological science
February 16, 2022

Recommended Reading and Resources

Readings recommended by Joe Gone (less on mixed methods, and more on qual inquiry)

On philosophical distinctions between approaches to psych inquiry (accessible and brief):

Gone, J. P. (2013). Epistemology/ontology and community-engaged psychological science [Unpublished manuscript]. Department of Psychology, University of Michigan at Ann Arbor. [See attached]

On thematic analysis in psychology:

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>

On criteria for transparent methodological reporting in qual health research:

Tong, A., Sainsbury, P., & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*, 19(6), 349-357. <https://doi.org/10.1093/intqhc/mzm042>

On methodological accommodations in psych research for American Indian communities (x2):

Gone, J. P. (in press). Researching with American Indian and Alaska Native communities: Pursuing partnerships for psychological inquiry in service to Indigenous futurity. In H. Cooper (Ed.-in-Chief), M. Coutanche, L. M. McMullen, A. T. Panter, D. Rindskopf, & K. Sher (Assoc. Eds.), *APA handbook of research methods in psychology (2nd ed.): Vol. 2. Research designs: Quantitative, qualitative, neuropsychological, and biological*. Washington, DC: American Psychological Association.
<https://gonetowar.com/wp-content/uploads/2021/11/JPG-AI-Research.pdf>

Wendt, D. C., & Gone, J. P. (2012). Decolonizing psychological inquiry in Native American communities: The promise of qualitative methods. In D. K. Nagata, L. Kohn-Wood, & L. A. Suzuki (Eds.), *Qualitative strategies for ethnocultural research* (pp. 161-178). Washington, DC: American Psychological Association. <https://doi.org/10.1037/13742-009>

On why methodological rigor does not ensure disciplinary acceptance of findings:

Bem, D. J., & Honorton, C. (1994). Does psi exist? Replicable evidence for an anomalous process of information transfer. *Psychological Bulletin*, 115(1), 4-18. <https://doi.org/10.1037/0033-2909.115.1.4>

My overview of these methodological issues in the context of diversity science:

Gone, J. P. (2011). Is psychological science a-cultural? *Cultural Diversity & Ethnic Minority Psychology*, 17(3), 234-242. <https://doi.org/10.1037/a0023805>

Some FAQ's by Elizabeth G. Creamer (creamere@vt.ed)

1. If quantitative and qualitative methods descend from different epistemologies, how can they be combined in mixed methods? How can these seemingly dichotomous methods be integrated?

This is a positivist mindset that translates to approaches to mixed methods where the qualitative and quantitative strands are kept at arm's length. Often quantitative dominant, this approach to mixed methods is often used by cross-disciplinary teams without much methodological overlap. In this approach, different people are usually responsible for the qualitative data collection and analyses and the quantitative data collection and analysis.

Resource: Creamer, E. G. (2018). Editorial: Striving for methodological integrity in mixed methods research: The difference between mixed methods and mixed up methods. *Journal of Engineering Education*, 107 (4), 526-530. <https://doi.org/10.1002/jee.20240>

2. What are some “best practices” in ensure rigor and validity in qualitative and mixed methods?

Use tables and figures that demonstrate the linkages between theory and research design and the document the link between data source and conclusions.

Resource: Plano Clark, V. L., & Sanders, K. (2015). The use of visual displays in mixed methods research: Strategies for effectively integrating quantitative and qualitative components of a study. In M. T. McCrudden, G. Schraw, and C. Buckendahl (Eds.), *Use of visual displays in research and testing: Coding, interpreting, and reporting data* (pp. 177-206). Information Age Publishing.

3. What is the best way to teach students about mixed-methods approach? How do we ensure that our students have proficiency in quant, qual, and mixed methods approaches?

The best way to do this is through an introductory research methods course that devotes equal time to quantitative, qualitative, and mixed method research. The text, [Research Methods, Design, and Analysis](#) is organized this way.

4. What are publication outlets in the social sciences that are friendly to mixed methods? Which journals are most likely to accept qualitative work?

It is usually explicitly stated in the aims statement of a journal if it accepts only quantitative research or if it is open to qualitative and mixed methods. *Many qualitative journals, including the [International Journal of Qualitative Methods](#), are quite friendly to mixed methods research, as are more generic methodological journals, like [Journal of Social Science Research Methodology](#) and [Methods in Psychology](#).*

5. What resources would you recommend for learning more about mixed methods research?

[The Mixed Method International Research Association](#) offers free access to members of a large number of webinars from leading figures in the field of mixed methods. They also offer a new series of on-line modules about once every six months. Membership fees are quite low.

Resource: Creamer, E. G., & Reeping, D. (2020, December). Advancing mixed methods in psychological research. *Methods in Psychology*. Vol. 3.
<https://doi.org/10.1016/j.metip.2020.100035>

6. What are the largest barriers to mixed methodology being provided as part of a research methods course in higher education?

One barrier is that it generally requires a lot of paperwork and time to add a new course to the curriculum of a graduate program. This is a major obstacle to a curriculum that remains contemporary. It used to be that it was not easy to find faculty with this expertise but the growth in the number of people using mixed methods may change that.

7. How can graduate training better prepare early-career professionals to meet the demands of evolving research methods in psychology?

My recommendation is to resist the binary stance that in this day and age that students have the option to declare their interest as qualitative or quantitative methods if they wish to be competitive in the market and to be invited to join research teams going after funding. They must have competency in all three research methodologies.

8. What are some data analysis programs/software that you would recommend for mixed methods studies.

There are a number of qualitative software programs that are very compatible with analysis in mixed methods. These include: [ATLASTI](#), [NVIVO](#), [MAXQDA](#), and [Dedoose](#).

9. What are some successful approaches to bridging qualitative and quantitative methods (versus delineating them)?

- 1. Case-based analysis that integrates qualitative and quantitative data about, say, how an individual experiences depression.*
- 2. Tables and figures that bring together qualitative and quantitative data on the same constructs.*

Resource: Creamer, E. G. (2018). [An introduction to fully integrated mixed methods research](#). SAGE.

10. Are there any guidelines for reporting mixed methods research?

The new APA standards for reporting include mixed methods.

Epistemology / Ontology and Community-Engaged Psychological Science

Joseph P. Gone

(with gratitude to Prof. Mark Aber for helpful comments)

June 2013

Psychological science emerged from philosophy in the late nineteenth century, but throughout the history of the discipline psychologists have rarely returned to these roots for instruction or insight. Nevertheless, I would be remiss in promoting Community Engaged Psychological Science (CEPS) if I did not pause briefly to consider the theories of knowledge that inform and inspire community research and action. It is our view that the modal or predominant theory of knowledge that guides routine disciplinary inquiry in psychology might best be construed as *naïve positivism*.¹ Positivism in the social sciences refers to the general belief that the assumptions and methods of the natural sciences apply just as readily to the study of human affairs. Other ideas regularly associated with positivism in psychology include the assumption that science is the most credible means for cultivating authoritative knowledge about mind and behavior; that such knowledge consists of the discovery of regular or predictable patterns for psychological phenomena (especially in the identification of general causal relationships); that such discoveries depend on methods that (artificially) reduce the complexity of psychological phenomena to allow for systematic study and cumulative refinement in explanation; and that investigator bias must be minimized and controlled to ensure valid research in the pursuit of nomothetic psychological principles. These powerful commitments have shaped knowledge production in psychology for over a century; indeed, their force in the discipline throughout this time has been hegemonic, rendering competing approaches nearly invisible beyond small communities of their adherents. Note that I am *not* arguing that most psychologists would offer an account of their activities with explicit reference to these assumptions (simply because most assumptions remain tacit), but I do believe that most psychologists would *recognize* these assumptions as disciplinary commitments that structure the design of their research and the analysis of their data.

It is precisely because such assumptions are frequently tacit that, among psychologists, these disciplinary commitments are best construed as *naïve*. For one thing, even when they are aware of these commitments, few psychological scientists have critically examined or explored these assumptions with any sophistication, and therefore have never seriously interrogated their credibility, applicability, or limitations. For another, many psychological scientists routinely assert the tenets of positivism in their characterizations of disciplinary knowledge, even when such tenets have been contested or abandoned by philosophers of science. For example, many psychological scientists behave as though their research activities (a) discover the way the human mind transparently operates in the world (a “correspondence theory of truth”), (b) reveal stable laws about mind and behavior that generalize to all of humanity (as strands in the “nomological net”), (c) produce “objective” knowledge that remains unbiased by investigator values or interpretations (the “fact-value dichotomy”), or (d) yield the most authoritative knowledge possible about a given phenomenon of interest (owing to methodological rigor). Advances in the philosophy of science since the mid-twentieth century, however, have yielded robust ontological and epistemological challenges to these assertions (especially in their strongest forms and absent substantive qualification), opening the way for alternative approaches

¹ I am indebted to Dr. Dennis C. Wendt for first suggesting this term as a way of capturing this theory of knowledge.

to producing disciplinary knowledge. These alternative approaches vary considerably in their relationship to positivism. Some incorporate such relatively minor additional clarifications that they do not radically alter the practice of psychological inquiry and thereby preserve intact such forms of naïve positivism (e.g., a scientific realist might acknowledge that “truths” about the mind are not “discovered” per se, but rather that theories about the mind are only ever formulated as representational approximations of reality; and yet, this acknowledgment would not necessarily change one’s scientific practice). Others diverge in their assumptions and commitments much more substantially.

It is these more radical departures from positivism that feature quite centrally in CEPS. These approaches contest positivism’s assumptions about the basic nature of mind and behavior (ontology), the generative prospects for developing psychological knowledge (epistemology), and the appropriate procedures for studying psychological phenomena (methodology). The foundations of these alternatives rest on a variety of philosophical traditions, including social constructionist, phenomenological, hermeneutic, discursive, and contextualist approaches, as well as diverse forms of critical theory (such as Marxism, feminism, multiculturalism, and so forth). These approaches have been reviewed in detail for psychologists elsewhere, but it is important to acknowledge at the outset that (a) very few psychologists rigidly adopt and adhere to one or another of these philosophical traditions in insular and dogmatic form, and (b) very few specific research methods are encapsulated within one or another of these philosophical traditions in hermetic fashion. In other words, as with lived experience more generally, the practice of post-positivist inquiry in psychology is frequently a composite of assumptions and commitments that emerge from a frustration with the (under-acknowledged) limits of positivism as well as an interest in centering facets of mind and behavior that have long been excluded from disciplinary inquiry. As a consequence, for our purposes here, it is most useful to describe the appeal and implications of these post-positivist commitments in more general terms for undertaking CEPS. I identify two major contributions of post-positivist inquiry that I believe help to distinguish CEPS from psychological inquiry-as-usual.

First, drawing on post-positivist inquiry relative to ontology (regarding the existent nature of something), CEPS assumes that psychological phenomena should be understood as inherently *context-dependent*. Specifically, that which is experienced and expressed as mind and behavior is co-constituted by biological systems and socio-historical processes as these interact through organismic development. In this regard, mind and behavior inevitably arise as a function of the material, cultural, and historical surround that furnishes the substance, shape, and content of experience upon which psychological phenomena depend. Thus, the pertinent biological systems as well as the relevant socio-historical processes channel and constrain the experience and expression of mind and behavior in distinctive ways, giving rise to psychologies that are both similar and diverse in comparative terms throughout history and around the world. Whereas positivism in psychology has been invested in identifying only the universal similarities, fundamental patterns, and basic operations of mind and behavior by “controlling for” (and thereby eliminating) contextual nuances (e.g., in positing six basic emotions), CEPS embraces a contextualist philosophy that deliberately attends to psychological phenomena in all of their situation-specific diversity (e.g., in positing many culturally-contingent emotions that are partly constituted by the distinctive linguistic terms used to designate them). As a result of this contextual quality, psychological phenomena are understood to be significantly comprised by the settings in which they emerge. At least two important implications follow from this recognition. One implication is that such phenomena merit study as substantively-embedded within their

constituting contexts—there is no such thing as a-contextual psychological experience. A second implication is that such phenomena are always evolving in accord with the shifting socio-historical processes that furnish their constituting contexts—the stability of psychological experience is always in question because it is assumed that diverse psychologies are themselves always on the move. In sum, CEPS acknowledges the deeply embedded nature of psychological experience. As a result, I advocate inquiry that accounts for contextual nuance in both creating and sharing psychological knowledge through community engagement, and insist that any generalization of resultant knowledge claims must be demonstrated rather than assumed.

Second, drawing on post-positivist inquiry relative to epistemology (regarding how something is known), CEPS recognizes that psychological knowledge is inherently *perspectival*. Specifically, that which is known about mind and behavior is recognized as a reflection or refraction of (a) the knower (or community of knowers), (b) the activities undertaken to produce the knowledge in question, and (c) the socio-historical context in which such knowledge was originally produced and subsequently interpreted. In this regard, disciplinary knowledge is always understood as produced from some vantage point or another—there is no such thing as “objective” knowledge representing a “view from nowhere.” Instead, all psychological knowledge—and all psychological knowers—are invested in particular interests, and the pretense that knowledge can be objective rather than grounded in the subject positions of its producers actively obscures the privileges, power, and politics associated with any given form of authoritative knowledge production. Thus, as a result of this perspectival quality, knowledge in psychology is always partial or incomplete, and is always inflected with power and politics. At least two important implications follow from this recognition. One implication is that knowledge in psychology is always contingent on the people, activities, and historical moments of its production—far from being objective, such knowledge necessarily reflects the vested interests and political commitments of the knowledge communities that generated it. A second implication is that knowledge in psychology is always open to further elaboration or elucidation from a different vantage point—rather than closed-minded arrogance, intellectual openness and epistemological humility would seem far more appropriate to advances in disciplinary understanding. In sum, CEPS acknowledges the inherent limitations of knowledge production in psychology. As a result, I advocate for a robust philosophical and methodological pluralism in creating knowledge through community engagement, and insist that issues of power and politics warrant full scrutiny rather than avoidance and dismissal.