



Memory and cognition: shifting approaches to how we do science

Ayanna K. Thomas¹

Accepted: 10 January 2023
© The Psychonomic Society, Inc. 2023

On 1 January 2020, I took on the role as Editor-in-Chief of *Memory and Cognition*. My vision has been and continues to be to create a venue for research that broadens our understanding of human cognition. I seek to do this by encouraging more research that examines cognition in context and expands the diversity of the included content area. I continue to support the publication of innovative methodological and analytical perspectives. I strive to develop and offer tools to foster visibility of new ideas. And I aim to improve the representation of culture, demography, and geography of readers, authors, reviewers, and the editorial staff. With the start of 2023, I not only remind our readership of what we strive for at *Memory and Cognition*, but also offer some reflection on what I have learned in these 3 years as Editor. I offer this editorial as a glimpse into how the commitment to support theory-driven research, embrace fresh perspectives, encourage diversity of thought, and enable the team of scientists who serve as associate editors for this journal have evolved.

The year 2020 brought a unique set of challenges for our world. With a global pandemic that forced us all into isolation, the team at *Memory and Cognition* had to quickly pivot in how we approached the process of reviewing manuscripts. We carefully considered procedures to reduce unnecessary burdens on reviewers and developed strategies to make timely, effective, and efficient decisions. We found that, even under the pressures of isolation and illness, many in the scientific community were willing to dedicate time and energy to the peer-review process. 2020 emerged as an exceptionally impactful year for *Memory and Cognition*. We accepted approximately 150 empirical articles presenting innovative research spanning visual statistical learning to analogical reasoning. In addition, we developed a special issue focused on reconceptualizing the distinction between episodic and semantic memory edited by Felipe De Brigard, Muireann Irish, and Sharda Umanath. I am proud of the

work that our community produced during that year, and I am especially impressed by the Associate Editors (Sarah Barber, Monica Bucciarelli, Jennifer Coane, Felipe De Brigard, Bridgid Finn, Wendy Francis, Joe Magliano, Steve Majerus, Henry Otgaar, Priti Shah, Laura Thomas) and every reviewer who devoted time that year.

However, 2020 brought more than the disruption and tragedy of a pandemic that still costs lives daily. On 25 May 2020, George Perry Floyd Jr. was murdered by police officers in Minneapolis, Minnesota. Although the tragedy of George Floyd's murder is one that is all too familiar in the US landscape, this event sparked a movement across the USA that centered critical discussions of race, racism, and anti-racism. This movement directly impacted our field and shaped *my* thinking on not only whose voices are included in scientific discussions, but also *what questions are valued for research*.

The way we are trained to think about human cognition and the way in which we evaluate others' work has subtly limited advancing our understanding of the variables that affect our thinking and behavior. I and others have argued that the current predominant approaches to study have limited reliable theory development, methodological advances, and understanding of the function and processes that underlie human cognition (e.g., Prather, 2021; Thomas et al., *in press*).

The research presented in this journal since its inception has focused squarely on the understanding of human cognition as a set of internal processes that allow for the transformation of sensory input into abstract mental representations that can be stored, recovered, and used. The predominant approach to the study of human cognition is on understanding internal cognitive processes, informed by the assumption that cognitive processes are generally universal across the human species (Thomas et al., *in press*). The pursuit of cognitive universals has led to explicitly associating the brain and biology to cognition, and presupposes that beneath superficial differences that may emerge across cultures, or deficits in performance that may emerge across racial groups, lies a shared cognitive architecture (Block, 1995).

✉ Ayanna K. Thomas
ayanna.thomas@tufts.edu

¹ Tufts University, Psychology, Medford, MA, USA

It is from this perspective that the pursuit of universals was an important counterpoint to the scientific racism that preceded and continues to co-exist with the field of Cognitive Psychology. However, the era of objective, context-free, empirical investigation into human cognition did not ameliorate the persistence of scientific racism. Rather, the context-free approach taken by many cognitive researchers in the pursuit of universal cognitive processes may have limited our ability as scientists to effectively characterize human cognition.

The discussion of race in the history of Cognitive Psychology is not new. However, we as a field are becoming increasingly aware that structural racism has impacted our characterization of “normal” or “control” participant groups. We are beginning to recognize that principles of human cognition may not be effectively derived from unrepresentative samples (e.g., WEIRD populations), that questions regarding human cognition may not be effectively generated from a homogenous set of scientists, that human cognition may be better understood in context, and that individual and cultural variation should be investigated and leveraged to support robust theories of human cognition (Prather, 2021).

Recognizing the need for diverse samples, ecologically relevant stimuli, and considering context in understanding cognition has led to important findings in categorization (e.g., Medin & Atran, 2004), perception (e.g., Haddon et al., 2011; Segall et al., 1963), language development (Figueroa, *in press*), and memory (Wang, 2021), to name a few. As one example, research has shown that Westerners are more likely to attend to and encode object information independent of context as compared to East Asian individuals. This difference in encoding suggests perceptual and cognitive processes that align with cultural orientations, practices, and ecologies. Ignoring these influences or establishing norms of cognitive processes based on restricted cultural perspectives limits the utility of our findings. Considering new or understudied approaches to cognition may lead us to embrace cognition more fully as a complex system composed of many internal individual elements embedded within, and open to an external complex environment. We may begin to consider human cognition as enduring patterns of reactions, attitudes, or overt behavioral manifestations that are a function of demographic, cultural, social, and other environmental factors (Boykin, 1977).

In the 2 years I have remaining as Editor-in-Chief of this journal, I would like to create a space for investigations and discussions that consider cognition in context. We have a forthcoming special issue focusing on exploring the assumptions of cognitive universality and human cognitive diversity to be published in 2023. In addition, *Memory and Cognition* will offer a venue for broadening the field’s perspective on the study of human cognition. To achieve this goal, *Memory and Cognition* will now accept new formats for publications.

Types of New Articles Published

Commentary Papers and Review Articles that

- Introduce new theoretical ideas, methods, and/or approaches to studying cognitive psychology.
- Map basic cognitive psychology research onto applied and translational science.
- Discuss methods and practices for engaging citizens in our scientific pursuits.

Discussion papers that debate or discuss a specific topic in Cognitive Psychology from multiple perspectives.

Special Issues and Manuscripts that focus on

- Examining cognition in context.
- Combining complementary theories and/or findings from distinct research traditions.

Memory and Cognition will continue to accept empirical quantitative research that examines human memory and learning, conceptual processes, psycholinguistics, problem solving, thinking, decision making, and skilled performance. We will continue to review relevant work in the areas of computer simulation, information processing, mathematical psychology, developmental psychology, and experimental social psychology. The core principles of *Memory and Cognition* remain central to this vision. The goal of these new article formats is to encourage novel approaches to theory and methods that embrace examining problems from multiple angles and conflicting perspectives.

As Editor, I continue to champion the diversity of research questions (e.g., interdisciplinary and inter-sub-disciplinary questions) and approaches (e.g., computational, individual differences) published in *Memory and Cognition*. I encourage the reader to take this opportunity to consider this journal as a venue that upholds the traditions of theoretically robust empirical research while embracing new methods and perspectives that allow for a broader consideration of complexity in cognition.

Although I end my tenure as Editor-in-Chief at the end of 2024, I hope to encourage a new era at *Memory and Cognition* that broadens the way we think about human cognition.

References

- Block, N. (1995). The mind as the software of the brain. In *Thinking: An invitation to cognitive science* (Vol. 3, 2nd ed., pp. 377–425). The MIT Press.
- Boykin, A. W. (1977). Experimental psychology from a black perspective: Issues and examples. *Journal of Black Psychology*, 3(2), 29–49.

- Figueroa, M. (in press). *Language development, linguistic input, and linguistic racism*. *Wires Cognitive Science*.
- Haddon, A. C., Rivers, W. H. R., & Wilkins, A. (2011). *Reports of the Cambridge Anthropological Expedition to Torres Straits*. Cambridge University Press.
- Medin, D. L., & Atran, S. (2004). The native mind: Biological categorization and reasoning in development and across cultures. *Psychological Review*, 111(4), 960–983. <https://doi.org/10.1037/0033-295X.111.4.960>
- Prather, R. (2021). *Reconstructing the Study of Human Cognition*. <https://doi.org/10.31234/osf.io/45a2q>
- Segall, M. H., Campbell, D. T., & Herskovits, M. J. (1963). Cultural differences in the perception of geometric illusions. *Science*. <https://doi.org/10.1126/science.139.3556.769>
- Thomas, A. K., McKinney de Royston, M., & Powell, S. (in press). Color evasive cognition: The unavoidable impact of scientific racism in the founding of a field. *Current Directions in Psychological Science*.
- Wang, Q. (2021). The Cultural Foundation of human memory. *Annual Review of Psychology*, 72, 151–179. <https://doi.org/10.1146/annurev-psych-070920-023638>

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.