



# Commentary: Why Study the History of Neuroscience?

Jeremy Trevelyan Burman<sup>1\*</sup> and Brianne M. Collins<sup>2</sup>

<sup>1</sup> Theory & History of Psychology Department, Heymans Institute for Psychological Research, University of Groningen, Groningen, Netherlands, <sup>2</sup> Psychology Department, Providence University College, Otterburne, MB, Canada

**Keywords:** history of neuroscience, history of psychology, historiography, history of science, science education, Thomas Kuhn

## A Commentary on

### Why Study the History of Neuroscience?

by Brown, R. E. (2019). *Front. Behav. Neurosci.* 13:82. doi: 10.3389/fnbeh.2019.00082

Memory is not synonymous with History. Granted, a discipline that doesn't remember its past suffers from a kind of epistemic Alzheimer's—as Brown (2019) put it memorably. This is recognizably pathological, and therefore affords an apparently-compelling answer to the titular question. However, the evocation is limited. Not only is memory not always an accurate impression of the past, but the metaphor also does little here to explain the value of history for science. Nor is it consistent with how specialists in the field, or allied areas, view their subject.

Nearly 60 years ago, Kuhn ([1962] 2012) popularized what is now the mainstream approach to the history of science: the historian's goal is to understand “the historical integrity of that science in its own time” (p. 3). History is therefore no longer memorial, or celebratory, but investigative: *How did what past scientists do make sense to them at the time? How were ideas and discoveries the products of pressures—conditions of possibility, power, governmentality, thinkability—which existed in their contexts?* (see also Burman, 2020).

As a result of adopting this perspective, Kuhn ([1962] 2012) criticized the treatment of history as the writing of tourist brochures. Such memorabilia were then discarded by specialist historians of science, including by historians of the behavioral sciences (broadly conceived; see e.g., Stocking, 1965; Young, 1966). Thus, regrettably, Brown advocates for a return to an approach that has been out-of-date for more than half-a-century.

That said, however, the espoused view is not representative of the field. For instance, Gavrus and Casper (2017) positioned their *History of the Brain and Mind Science* in explicit contrast to that old-fashioned approach. Their perspective is then consistent with scholarship in allied areas (see Furumoto, 1989; Hilgard et al., 1991; Capshew, 2014). Indeed, recent research assumes these historiographical virtues—such as a critical approach, and a focus on unheard voices (or silenced subjects)—then proceeds to derive new insights along lines afforded by several broad themes (Burman, 2018).

Most problematic in the original essay, though, is that Brown failed to follow his own memorial through-line. The metaphor could easily have been made consistent with contemporary historiographical concerns. To wit: *What, or who, have we forgotten and why?* (see Draaisma, [1995] 2000). Indeed, this is what makes historical research so exciting (e.g., Burman, 2015, 2019; Rutherford, 2015). And it's why history is valuable pedagogically: it requires reflection, and perspective-taking, as a function of method.

We want students to be more than tourists who visit Disney's EPCOT resort, then leave thinking they've had an *authentic* cultural experience. We also don't want them to lament the ignorance of those who did otherwise. Instead, we want them to be more humble; to prefer to go to the source,

## OPEN ACCESS

### Edited by:

J. Landeira-Fernandez,  
Pontifical Catholic University of Rio de Janeiro, Brazil

### Reviewed by:

William Barbosa Gomes,  
Federal University of Rio Grande do Sul, Brazil

### \*Correspondence:

Jeremy Trevelyan Burman  
j.t.burman@rug.nl

### Specialty section:

This article was submitted to Learning and Memory, a section of the journal *Frontiers in Behavioral Neuroscience*

**Received:** 06 June 2020

**Accepted:** 25 June 2020

**Published:** 13 August 2020

### Citation:

Burman JT and Collins BM (2020) Commentary: Why Study the History of Neuroscience? *Front. Behav. Neurosci.* 14:127. doi: 10.3389/fnbeh.2020.00127

whenever possible, and learn to see things according to how and why those things made sense to the people who held other beliefs. In other words, we want them to learn how to think “from below” (Thompson, 1966; cf. Porter, 1985; Spivak, 1988). To hear those who can’t be heard (e.g., Jacyna and Casper, 2012).

Brown’s writing, though, is memorable. We thus conclude with something equally so: *History is not about us—it’s about them. The goal is not to judge, but to understand. And that’s a valuable thing for everyone to learn.* Whether or not you want to work as an Historian after, perspective-taking and deep understanding from within (“cultural competence”) are useful and indeed marketable skills.

## AUTHOR’S NOTE

This commentary was prompted originally by a discussion in the Theory and History of Psychology expert-group at the University of Groningen, where related themes are taught in the graduate programme

## REFERENCES

- Brown, R. E. (2019). Why study the history of neuroscience? *Front. Behav. Neurosci.* 13:82. doi: 10.3389/fnbeh.2019.00082
- Burman, J. T. (2015). Neglect of the foreign invisible: historiography and the navigation of conflicting sensibilities. *Hist. Psychol.* 18, 146–169. doi: 10.1037/a0039194
- Burman, J. T. (2018). What is history of psychology? Network analysis of Journal Citation Reports, 2009–2015. *SageOpen* 8, 1–17. doi: 10.1177/215824401876
- Burman, J. T. (2019). “Development,” in *The Cambridge Handbook of the Intellectual History of Psychology*, eds R. J. Sternberg and W. Pickren (Cambridge: Cambridge University Press), 287–317.
- Burman, J. T. (2020). “On Kuhn’s case, and Piaget’s: a critical two-sided hauntology (or, on impact without reference),” in *History of the Human Sciences*, eds F. Callard and C. Millard, Special issue dedicated to the memory of John Forrester, 1949–2015. doi: 10.1177/0952695120911576
- Capshew, J. C. (2014). “History of Psychology since 1945: a North American review,” in *A Historiography of the Modern Social Sciences*, eds R. E. Backhouse and P. Fontaine (New York, NY: Cambridge University Press), 144–182.
- Draaisma, D. ([1995] 2000). *Metaphors of Memory: A History of Ideas About the Mind*. Cambridge: Cambridge University Press (Original work published in Dutch in 1995).
- Furumoto, L. (1989). “The new history of psychology,” in *The G. Stanley Hall Lecture Series*, Vol. 9, ed I. S. Cohen (Washington, DC: American Psychological Association), 9–34.
- Gavrus, D., and Casper, S. T. (2017). “Introduction: technique, technology, and therapy in the brain and mind sciences,” in *The History of the Brain and Mind Sciences: Technique, Technology, Therapy*, eds S. T. Casper and D. Gavrus (Rochester, NY: University of Rochester Press), 1–24.

(<https://www.rug.nl/masters/theory-and-history-of-psychology/>). The draft then developed in conversation between the authors, back and forth, across several iterations. The result was a much longer text, which—following the required word limit—was pruned back and focused on the key issues.

## AUTHOR CONTRIBUTIONS

JB served as primary author, responsible for broad themes in the historiography of science as they pertain to the history of the behavioral sciences (broadly conceived). BC provided expertise about the history of neuroscience, neurology, and neurosurgery. All authors listed have made a substantial, direct and intellectual contribution to the work, and approved it for publication.

## ACKNOWLEDGMENTS

We are grateful to Stephan Schleim for bringing the target article to our attention.

- Hilgard, E. R., Leary, D. E., and McGuire, G. R. (1991). The history of psychology: a survey and critical assessment. *Annu. Rev. Psychol.* 42, 79–107. doi: 10.1146/annurev.ps.42.020191.000455
- Jacyna, L. S., and Casper, S. T. (eds.). (2012). *The Neurological Patient in History*. Rochester, NY: University of Rochester.
- Kuhn, T. S. ([1962] 2012). *The Structure of Scientific Revolutions (50th Anniversary Edn.)*. Chicago, IL: University of Chicago Press. (Original work published 1962).
- Porter, R. (1985). The patient’s view: doing medical history from below. *Theor. Soc.* 14, 175–198. doi: 10.1007/BF00157532
- Rutherford, A. (2015). Maintaining masculinity in mid-twentieth-century American psychology: Edwin Boring, scientific eminence, and the “woman problem”. *Osiris* 30, 250–271. doi: 10.1086/683022
- Spivak, G. C. (1988). “Can the subaltern speak?,” in *Marxism and the Interpretation of Culture*, eds C. Nelson and L. Grossberg (London: Macmillan), 271–313.
- Stocking, G. W. Jr. (1965). On the limits of ‘presentism’ and ‘historicism’ in the historiography of the behavioral sciences. *J. Hist. Behav. Sci.* 1, 211–218. doi: 10.1002/1520-66961965071:3211::AID-JHBS23000103023.0.CO;2-W
- Thompson, E. P. (1966). History from below. *Times Liter. Suppl.* 65, 279–280.
- Young, R. M. (1966). Scholarship and the history of the behavioural sciences. *Hist. Sci.* 5, 1–51. doi: 10.1177/007327536600500101

**Conflict of Interest:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2020 Burman and Collins. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.