# Neurology

ANNE STILES

TALKING about neurology during the Victorian era is tricky, in part because the word itself and the discipline it signifies were both in a state of transition. Coined by Thomas Willis in his 1664 treatise *Cerebri Anatome,* the term "neurology" was seldom used before the late nineteenth century, first appearing in the *Lancet* in 1859 and in the *British Medical Journal* in 1861.[1] Neurology as an independent medical specialty, meanwhile, was not firmly established in Britain until after the First World War, as historian of science Stephen T. Casper explains.[2] Therefore, despite the watershed neurological developments occurring in Victorian Britain, such as physician David Ferrier's groundbreaking maps of the cerebral cortex and the life-saving brain surgeries they made possible, it can be misleading to refer retroactively to a Victorian figure as a "neurologist" or to discuss the field of neurology as if it resembled the highly specialized medical discipline it has become today.[3]

Instead, the study of the brain and nervous system during the early to mid-nineteenth century was the shared project of individuals in many emergent fields—including psychologists, philosophers, physicians, gentleman amateurs, and even literary critics, some of whom were deeply interested in the latest physiological research. In this generalist intellectual climate, polymathic thinkers such as George Henry Lewes, E. S. Dallas, and Alexander Bain created a strain of novel theory that used physiological principles to explain the mental processes and affective experiences of readers, as Nicholas Dames demonstrates in *The Physiology of the Novel* (2007). These thinkers and others like them made similar observations about poems, whose metrical patterns imitate bodily rhythms and nerve impulses, as Jason Rudy writes in *Electric Meters* (2009).

As the nineteenth century progressed, the mental sciences became the province of trained researchers and state-funded laboratories as opposed to gentlemen scholars like Bain and Lewes. Scientific writing, too, became more professionalized and less accessible to lay readers, having its own academic jargon and incorporating quantitative analyses, clinical research, and complex animal experiments. With the creation of specialized journals like *Mind* (1876–present) and *Brain* (1878–present), and the advent of professional societies like the Neurological Society of London (founded in 1886), the intellectual flexibility possible at mid-century gradually receded from view.[4]

Tellingly, literary scholarship that engages with Victorian mental sciences has tended to focus on mid-Victorian authors such as George Eliot, Charlotte Brontë, Charles Dickens, and Wilkie Collins, who benefited from the disciplinary openness of their era, as well as later authors like Thomas Hardy who read widely in mid-century scientific literature.[5] Criticism that engages with the more complex neurological ideas from later in the century, such as cerebral localization and the neuron doctrine, is still comparatively rare. Nonetheless, some scientifically trained literary authors—such as H. G. Wells, Sir Arthur Conan Doyle, Robert Louis Stevenson, and Bram Stoker—could and did incorporate aspects of late-Victorian neuroscience into their fiction, as Laura Otis, Elisha Cohn, and I have argued in our respective works.[6]

The development of neurology into a full-fledged medical specialty continued apace into the twentieth century, resulting in specialized hospital wards, research labs, increased funding, and professorships dedicated to neurology. The culmination of this growth can be seen, among other places, in the modern university, where disciplinary silos prevail and meaningful interaction between sciences and humanities is unusual. The mid-Victorian moment described above seems almost utopic by comparison, in that scientists, philosophers, physicians, and literary scholars freely communicated across disciplinary boundaries (which were, at that time, relatively permeable and still unfixed).

The relatively new field of cognitive literary studies attempts to recreate this bygone atmosphere of boundless interdisciplinarity and relative equality between the disciplines. This field, which dates from the Presidentially proclaimed "Decade of the Brain" (the 1990s), turns to twenty-first-century neurology, psychology, linguistics, computer science, philosophy of mind, and anthropology to shed light on imaginative literature of past eras.[7] One frequently stated goal of such work is to bring neuroscientists and literary scholars in productive communication with each other, whether that means merely reading each other's works or actively collaborating.[8] While these are laudable endeavors, such interdisciplinary exchanges are too often one-sided. Humanists invite medical experts to our colloquia and conferences, but do they reciprocate? And if so, on what terms? Frequently, literary scholars invited to events in medicine and the life sciences are expected to use our expertise to teach empathy to exhausted physicians—as if such a feeling could be taught, or would necessarily be useful a clinical setting.[9]

In their current forms, cognitive literary scholarship and its recent offshoot, cognitive literary historicism, seem unlikely to change this

depressing status quo, even if these fields enrich our understandings of individual literary works and genres.[10] This is because—the occasional interdisciplinary collaboration notwithstanding—most cognitive literary scholars are based in literature departments and, quite appropriately, use the vocabulary and theoretical tools available within their field.[11] Clear communication with neuroscientists and lay readers would require a process of translation in which we demystify our own disciplinary jargon and theoretical tools in addition to incorporating methods from the sciences. Neuroscientists themselves would also need greater incentives to meet us halfway. Given the vast disparity in research funding and job opportunities between our respective disciplines, neurologists may see little material benefit to collaborating with literary scholars. As humanists, then, we bear the burden of communicating what practical or existential value we might offer to our better-paid colleagues across campus. This unenviable task might start with a closer look at the mid-Victorian era, when far-reaching interdisciplinary collaboration was a reality, not a utopian ideal.

## Notes

1. Stephen T. Casper, *The Neurologists: A History of a Medical Specialty in Modern Britain, 1789–2000* (Manchester: Manchester University Press, 2015), 5.
2. Casper, *The Neurologists*, 2, 6.
3. For highly readable overviews of Victorian neuroscientific developments, see Stanley Finger, *Origins of Neuroscience: A History of Explorations into Brain Function* (Oxford: Oxford University Press, 1994), chaps. 2–4; Edwin Clarke and L. S. Jacyna, *Nineteenth-Century Origins of Neuroscientific Concepts* (Berkeley: University of California Press, 1987); and Frank Rose, *A Short History of Neurology: The British Contribution, 1660–1910* (Oxford: Butterworth-Heinemann, 1999).
4. Casper, *The Neurologists,* 36.
5. See Sally Shuttleworth, *Charlotte Brontë and Victorian Psychology* (Cambridge: Cambridge University Press, 1996) and *The Mind of the Child: Child Development in Literature, Science, and Medicine, 1840–1900* (Oxford: Oxford University Press, 2010); Jenny Bourne Taylor, *In the Secret Theatre of Home: Wilkie Collins, Sensation Narrative, and Nineteenth-Century Psychology* (New York: Routledge, 1988); Nicholas Dames, *The Physiology of the Novel: Reading, Neural Science, and the Form of Victorian Fiction* (Oxford: Oxford University Press, 2007); Suzanne Keen, *Thomas Hardy's Brains: Psychology, Neurology,*

*and Hardy's Imagination* (Columbus: Ohio State University Press, 2014); Jill Matus, *Shock, Memory, and the Unconscious in Victorian Fiction* (Cambridge: Cambridge University Press, 2009); Jason Rudy, *Electric Meters: Victorian Physiological Poetics* (Athens: Ohio University Press, 2009); Rick Rylance, *Victorian Psychology and British Culture, 1850–1880* (Oxford: Oxford University Press, 2000).

6. Laura Otis, "Howled out of the Country: Wilkie Collins and H.G. Wells Retry David Ferrier," in *Neurology and Literature, 1860–1920,* ed. Anne Stiles (Basingstoke: Palgrave, 2007), 27–51; Elisha Cohn, "Oscar Wilde and the Brain Cell," in *Literature, Neurology, and Neuroscience: Historical and Literary Connections,* ed. Anne Stiles, Stanley Finger, and François Boller (Amsterdam: Elsevier, 2013), 19–39; Anne Stiles, *Popular Fiction and Brain Science in the Late Nineteenth Century* (Cambridge: Cambridge University Press, 2012).
7. Alan Richardson, "Once Upon a Mind: Literary and Narrative Studies in the Age of Cognitive Science," *Modern Fiction Studies* 61, no. 2 (2015): 359–369, 359.
8. See, for instance, Alan Richardson, *The Neural Sublime: Cognitive Theories and Romantic Texts* (Baltimore: Johns Hopkins University Press, 2010), x; and Patrick Colm Hogan, "Literary Brains: Neuroscience, Criticism, and Theory," *Literature Compass* 11, no. 4 (2014): 293–304, 302.
9. For different perspectives on this topic, see Paul Bloom, *Against Empathy: The Case for Rational Compassion* (New York: Ecco, 2016); Omar Sultan Haque and Adam Waitz. "Why Doctors Should be More Empathetic—But Not Too Much More," *Scientific American,* April 26, 2011, https://www.scientificamerican.com/article/doctors-and-dehumanization-effect/.
10. This includes Victorian novels. For a cognitive literary approach to Eliot, Dickens, and Austen, see Alan Palmer, *Social Minds in the Novel* (Columbus: Ohio State University Press, 2010). For cognitive historicist approaches to these authors and Hardy, see Young, *Imagining Minds: The Neuro-Aesthetics of Austen, Eliot, and Hardy* (Columbus: Ohio State University Press, 2010) and Keen, *Thomas Hardy's Brains.*
11. Hogan, "Literary Brains," 302.