BOOK REVIEW

Popular Fiction and Brain Science in the Late Nineteenth Century, by Anne Stiles (Cambridge: Cambridge University Press, 2011). 274 pp. Hardback, £59.99. Paperback (2014), £19.99.

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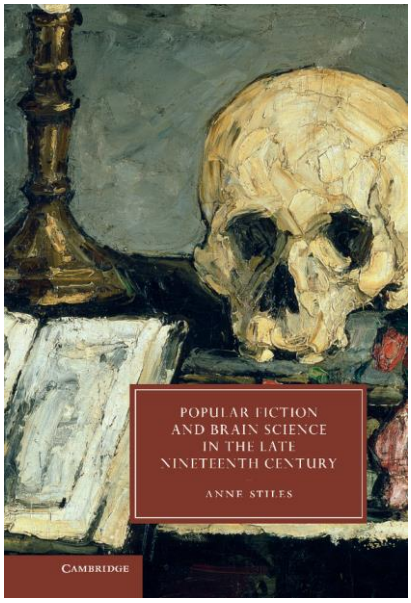

Before the term 'science fiction' was available for literary-critical taxonomy, which genre was available to an author of creative fiction who wanted to investigate the human brain? In Anne Stiles's estimation, for late-nineteenth-century writers, that genre was the 'Gothic romance'. Readers of Victorian fiction may remember that high realists such as G. H. Lewes and Émile Zola were deeply familiar with neurological experimental methods like vivisection and autopsy, and that they outlined the critical ramifications of brain science for Dickensian literary criticism and the *roman experimental*. Stiles reveals, however, that more 'commercially successful genres' were just as much imbued with the cutting-edge *savoir-faire* of Victorian brain science (p. 3). Gothic novels, 'shilling shockers', and even late-century adventure stories and 'romances' for adolescent boys 'were often exceptionally well informed about neurological theories and their philosophical ramifications, more so than many respected practitioners of realism'. Authors of such popular fiction – R. L. Stevenson, Bram Stoker, and H. G. Wells, among others – engaged with the newest lab-based findings of Victorian neurology. These novelists addressed pressing philosophical questions that science posed about the mind-brain divide, the spirit's role in biological materialism, and the human capacity for free will.

By questioning realism's value in representing scientific truths, Stiles's book stands out from much of the work that has already been done on the Victorian brain; *Popular Fiction and Brain Science* finds the 'deep-seated fears and visionary possibilities' of neurology expressed within late-nineteenth-century popular genres (p. i). The author explicitly

contrasts her approach with Nicholas Dames's in *The Physiology of the Novel (2007)*, which (Stiles notes) takes its key literary examples from 'the canon of high realist fiction' (p. 12). Challenging the 'empiricist' and 'mimetic' ambitions that Dames, George Levine, and Lawrence Rothfield have argued Victorian realist novelists shared with nineteenth-century scientists, Stiles elucidates an opposite tendency in the period's romance.[260] She argues that the explicitly *non*-realist features of Gothic romance captured the sensations of Victorian neurological experimentation:

> Late-Victorian romances, with subject matter ranging from adventure on the high seas to spine-tingling monstrosities, aimed to provoke an immediate, visceral reader response – specifically, a *nervous* response appropriate to the neurological subject matter these romances often addressed. (p. 19).

In other words, if writers of Victorian 'high realism' aspired to become like neurologists, readers of Gothic romance more closely resembled the bodies, whether animal or human, of those they experimented upon.

Moving beyond a 'high' and 'popular' dichotomy, Stiles asks why late-nineteenth-century literature engaged so vividly with tropes from neurology, and whether it aided the development of knowledge in the other direction – in advancing the progress of brain science. The answer is a resounding affirmative. Not only were 'scientific researchers and literary authors [...] mutually responsive to one another' (p. 6), but the connection went deeper still: 'if a scientific discourse can be said to have a mood or tone, late-Victorian neurology could justly be characterized as a Gothic science' (p. 10). As writers addressed issues of biological determinism and human agency, they invoked imagery of brains, brain cells, and cerebral localities.

Neurology's influence on literature was not just thematic, but formal too. Stiles finds that late-nineteenth-century fiction writers employed literary devices borrowed from neurological genres, such as the case studies that appeared in journals including *Mind: A Quarterly Review* (1876—) and *Brain: A Journal of Neurology* (1878—). Extending

[260] See Nicholas Dames, *The Physiology of the Novel: Reading, Neural Science, and the Form of Victorian Fiction* (Oxford: Oxford University Press, 2007); George Levine, *The Realistic Imagination: English Fiction from Frankenstein to Lady Chatterley* (Chicago: University of Chicago Press, 1981) and *Darwin and the Novelists: Patterns of Science in Victorian Fiction* (Cambridge, MA: Harvard University Press, 1988); and Lawrence Rothfield, *Vital Signs: Medical Realism in Nineteenth-Century Fiction* (Princeton: Princeton University Press, 1994).

into the late nineteenth century the interdisciplinary formal investigation that Alan Richardson has undertaken for Romanticism, Stiles tells us that, while brain science and literature had earlier been intertwined, the fields were differentiated for the Victorians.[261] Neurological case studies were tagged for Victorian readers as 'scientific' – lending impressive cross-disciplinary gravitas to the brain-related concerns that each of the Gothic romances discussed in this book considered.

Each of Stiles's five chapters considers how a writer of late-Victorian Gothic romance responded to a key philosophical debate in neurology. The first chapter, on Stevenson's *Strange Case of Dr Jekyll and Mr Hyde* (1886), considers the novella generically as a parody of scientific case studies. It situates *Jekyll and Hyde* in a transition in the 1880s and 1890s from the neurological notion of a 'dual brain' (or split personality) into the conception of a 'Multiplex Personality' (p. 33). In an unusually pedagogical intervention, Stiles critiques scholarly editions of Stevenson's text, the 2003 *Norton* and the 2005 *Broadview*, which only include appendices referring to the 'Multiplex Personality', since that notion in fact postdates Stevenson's novella. She argues, instead, that the split between Jekyll and Hyde is based on the earlier 'dual brain' idea, with distinct personalities housed in uncommunicative left and right hemispheres – an idea that was associated with criminal lunacy during the precise period in which Stevenson wrote his novella.

Turning in the second chapter to *Dracula* (1897), 'the most conservative work of fiction examined in this volume' (p. 56), Stiles contends that the eponymous vampire is a portrait of a neurologist – in Van Helsing's terms, a 'first rate scientist' whose 'mighty brain' and 'learning beyond compare' are betrayed by his soullessness (quoted in Stiles, p. 53). Dracula's method of seducing his victims owes its procedural specifics to memos on cerebrospinal surgeries that Stoker's brother Thornley, the Inspector of Vivisection for Ireland, provided his novelist sibling (p. 70). Meanwhile, the 'crime for which Dracula is so reviled', his experimentation on humans, had its real-life corollary in the 'degrading' experiments of the neurologist Jean-Martin Charcot, whose followers were called 'the *Charcoterie*' (p. 71). As *Dracula* is shown to be informed by scientific treatises on neurology, somnambulism, and psychical research, the novel's tension between medieval and modern outlooks is recast by

[261] See Alan Richardson, *British Romanticism and the Science of the Mind* (Cambridge: Cambridge University Press, 2001), and *The Neural Sublime: Cognitive Theories and Romantic Texts* (Baltimore, MD: Johns Hopkins University Press, 2010).

Stiles as a pressing debate about the ethical and spiritual significance of materialism.

In chapter three, such neurological materialism is taken to its bleeding edge in the works of Grant Allen, an Anglo-Canadian novelist who saw the mind as a 'machine [...] composed of numberless cells and batteries' (quoted in Stiles, p. 85). In Allen's 1891 novella *Recalled to Life*, cerebral physiology behaves mechanistically, as an indelible image of a traumatic scene is left, like a photograph, on the heroine's retina and optic nerve. The eye's equivalency to a camera's 'sensitive-plate' pervaded Victorian criminology: during the Jack the Ripper case (1888), 'the eyes of several victims were removed and photographed in the hopes of revealing the murderer's identity, but without success' (p. 94). But, for Stiles, Allen's 'biomechanical metaphors' of physiological materialism were 'exactly the elements that allow his fiction to run away with him': the novel moves from case study into 'Gothic mystery' through the inadequacies of the analogy between eye, brain, and camera, suggesting the author's imperfect grasp of neurology (p. 92).

Revealing a contrastingly deep knowledge of Lamarckian evolutionary theory, neurology, and the residual trappings of phrenology, H. G. Wells is shown in chapter four to flirt with the boundaries between genius and alien, as he prophesises the atrophy of humanity that would result from the brain's overdevelopment. By 'morphing the mad scientists of *The Island of Doctor Moreau* and *The Invisible Man* into the top-heavy extra-terrestrials of *The War of the Worlds*', Wells warns against the late-Victorian tendency to overemphasise brain-work at the expense of the body (p. 133). Meanwhile, Wells draws on the scientific advances of the real Dr Jacques Moreau and other neurologists, who wrote clinical profiles of geniuses as madmen or even 'alien[s]' (pp. 128, 143).

While these top-heavy, mad scientists have barely evolved since Wells's influential portrayals, Stiles shows that one area that *has* changed since the turn of the twentieth century is the representation of brain cells. Chapter five looks at the novels of Marie Corelli (a writer of bestsellers who outsold Wells tenfold), in which neurons are revealed to be a crucial part of the author's spiritual doctrine. Corelli's 'Electric Creed' combines elements of psychical research, theories on electricity, the Curies' work on radiation, and the biomechanics of neurons, to argue that the brain could be recharged much like a battery, and that readers would be spiritually revivified by consuming her texts. But Stiles shows how, as in the case of Allen, Corelli's romances rely on an underlying 'mistake' (p. 180): 'for [her] unique fusion of science and spirituality to succeed, she had to wilfully

misunderstand [...] how neurons actually work' (p. 156). In this final chapter on Corelli and in the section on Allen, Stiles insists that these lesser-known authors drew more imperfectly on brain science than did Stevenson, Stoker, and Wells. Stiles never states explicitly that Allen and Corelli's novels were less enduring because of these 'mistakes' and 'misunderstandings' – although the implicit assumption that a mastery of the realities of Victorian neurology helps to confer literary quality, or even canonicity, is clear enough.

Stiles's book's most powerful contribution, however, is to show how generative it was for Victorian popular writers to leave behind such realism, whether novelistic or scientific. In the more recent *Victorian Medicine and Popular Culture* (2015), Tabitha Sparks praises Stiles by saying that her 'metaphorical reading of illness and fiction enables connections between a character and a biomedical condition that cannot be confirmed by medicine'.[262] Struggling with the boundaries of their metaphorical and mimetic registers, these Gothic romances' 'mistaken' representations of brain science made creative room for subversion, paradox, and literary experiment – capturing, if not the reality of the Victorian brain, then the spirit of the Victorian neurological imagination.

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[262] Tabitha Sparks, 'Illness as Metaphor in the Victorian Novel: Reading Popular Fiction Against Medical History', in *Victorian Medicine and Popular Culture,* eds. Louise Penner and Tabitha Sparks (London: Routledge, 2015), pp. 137-46 (p. 146).

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