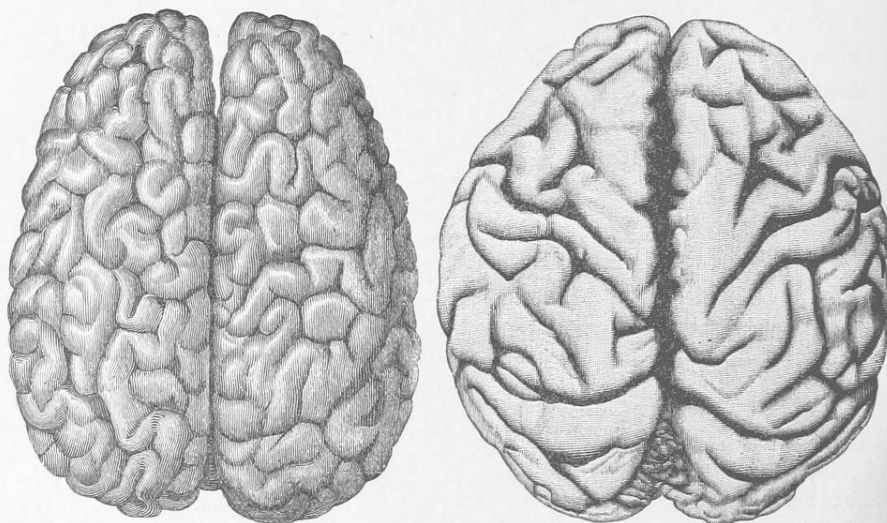abstammen kann, dessen Entwicklungsgang sich gerade umgekehrt verhält."

Großhirn des Menschen (von oben).   Gehirn eines Orang-Utan.

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Victorian Brain

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VICTORIAN BRAIN

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In April 1878 the first issue of *Brain: A Journal of Neurology* was published. Edited by the eminent psychiatrists J. C. Bucknill and James Crichton-Browne, and by the rising stars in the field of experimental and clinical studies of the brain, David Ferrier and John Hughlings Jackson, it sought to lay claim to a new disciplinary territory: neurology. An index of the journal's self-conscious modernity in its use of this term is perhaps to be found in the fact that nearly a century and a half later it is still a leading journal in the field, and publishing under exactly the same title.[1] Indeed, there are even similarities in format, with clinical case studies accompanied by articles addressing medical issues of the day, such as 'brain forcing' of school children, or effects of alcohol on the brain, in the 1878 volume, matched by short pieces on the Zika virus and Alzheimer's, in recent issues.[2] Such apparent similarity and continuity of course also masks major shifts. Current authors, for instance, are unlikely to follow the example of J. Milner Fothergill in his 1878 article on 'The Neural and Reflex Disorders of the Heart' who uses various literary illustrations, including the scene in *Jane Eyre* in which Rochester takes Jane's pulse (in order to reassure himself that she will not faint at the sight of blood), to

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[1] By contrast, anyone looking for a digital version of the nineteenth-century *Journal of Mental Science* now has to search under *British Journal of Psychiatry*. Although the term neurology has a long history, the OED gives the first usage meaning 'the branch of science that deals with the nervous system' in 1878. Slightly earlier uses according to this definition can be found, but by using this subtitle the editors were situating themselves in the vanguard of medical and experimental science. The *American Journal of Neurology and Psychiatry* was founded a few years later in 1882.

[2] Clifford Allbutt, 'On Brain Forcing', *Brain* 1:1 (April 1878), 60-78; Robert Lawson, 'On the Symptomology of Alcoholic Brain Disorders', *Brain* 1:2 (July 1878), 182-194; Abelardo Q. C. Araujo, Marcus Tulius T. Silva, Alexandra P. Q. C. Araujo, 'Zika virus-associated neurological disorders', Brain, 139:8 (2016), 2122-2130; Oskar Hansson and Gouras Gunnar, 'Brain Activity and Alzheimer's Disease: a complex relationship', 2109-2111.

make his point that emotions affect the circulation of the blood.[3] In this example, medical science is confirming the observations of literary authors, and indeed drawing authority from literary precedence. The pages of the current issues of *Brain*, by contrast, are largely impenetrable for a non-medical reader, whilst the use of literary examples in medical writing at large tends to be confined to the field of medical humanities. The balance of power and cultural authority has shifted.

With the enormous recent upsurge of interest in neuroscience, and the accompanying popular assumptions that the neurosciences, in their various forms, hold the keys to understanding all aspects of social, cultural and individual life and behaviour, from social deviancy through to the interpretation of literary texts, it is well to be reminded of the Victorians' similar enthusiasm for interpreting the life of the mind through science.[4] It was not only in the rarefied reaches of experimental research that such interest pertained. Franz Josef Gall, founder in the 1790s of what was to become, in the hands of his disciples, J. G. Spurzheim and George Combe, the popular phrenological movement, had been primarily interested not in 'bumps' on the head, but the internal functioning of the brain. His firm belief that the brain was the organ of the mind became a central tenet of phrenology, underpinning the populist doctrines of social and self-improvement to be found in the work of Combe, whilst his interest in cerebral localisation, as Robert M. Young has shown, fed through into Ferrier's work on mapping the cerebral cortex, which has in turn proved foundational for current neuroscience.[5]

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[3]   J. Milner Fothergill, 'The Neurosal and Reflex Disorders of the Heart', *Brain* 1:2 (July 1878), 195-209, p. 196.

[4]   In *Neuro: The New Brain Science and the Management of the Mind* (Princeton: Princeton University Press, 2013), Nikolas Rose and Joelle M. Abi-Rached offer an excellent overview of the excessive claims being made, but also a positive analysis of the potential for new flexible understandings of personhood, in relation to the social.

[5]   Robert M. Young, *Mind, Brain and Adaptation in the Nineteenth-Century: Cerebral Localization and its Biological Context from Gall to Ferrier* (Oxford: Oxford University Press, 1970).   For a discussion of the social ramifications of phrenology as a social movement, see Roger Cooter, *The Cultural Meaning of Popular Science: Phrenology and the Organisation of Consent in Nineteenth-Century Britain* (Cambridge: Cambridge University Press, 1984).   George Combe's most popular work, *The Constitution of Man in Relation to External Objects* (1828), was one of the best sellers of the nineteenth century, selling an extraordinary 350.000 copies in this period.

A similar trajectory can be traced in the development of a rather different movement, that of Mesmerism, which also dates back to the late eighteenth century, and the theories of animal magnetism of Franz Mesmer. Although the 'mesmeric mania' reached its height in the 1850s, one can trace, as with phrenology, a dual track of influence, on medical science, with the development of theories of hypnotism, and of states of trance, and in popular culture more generally, with late-century interest in unconscious states, and the power of 'mesmeric' influence of one mind on another.[6] Spiritualism of course added to this potent mix from the 1850s, attracting not only those interested in the occult, but also eminent figures in the worlds of science from Cromwell Varley (engineer with the transatlantic cable), physicists William Crookes and Oliver Lodge, and the eminent psychologist, William James.[7]

It is important not to rewrite history, and to superimpose on the nineteenth century our categories of science and 'pseudoscience'. Although areas such as mesmerism and spiritualism were much contested at the time, there were no sharp divisions between science, medicine, and these more popular fields. Developments in technology, such as the telegraph, and telephone, the phonograph and the photograph, with their capacity to overturn the boundaries of space and time, and the functioning of the senses, also had a profound effect on conceptions of the mind and brain.[8] In contemporary culture, the parallel between computer networks and neural pathways has become a tired cliché; in the nineteenth century, as Laura Otis and others have noted, the equivalent

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[6] See Alison Winter, *Mesmerized: Powers of Mind in Victorian Britain* (Chicago: University of Chicago Press, 1998).

[7] See Richard Noakes, 'The Sciences of Spiritualism in Victorian Britain: Possibilities and Problems', in T. Kontou and S. Willburn eds. *The Ashgate Companion to Nineteenth-Century Spiritualism and the Occult* (Farnham: Ashgate, 2012), 25-54; Pamela Thurschwell, *Literature, Technology and Magical Thinking, 1880-1920* (Cambridge: Cambridge University Press, 2001); Roger Luckhurst, *The Invention of Telepathy* (Oxford: Oxford University Press, 2002); Hilary Grimes, *The Late Victorian Gothic: Mental Science, the Uncanny and Scenes of Writing* (Farnham: Ashgate, 2011).

[8] For some of the formative discussions of these intersections see Mark Seltzer, *Bodies and Machines* (New York: Routledge, 1992), and Tim Armstrong, *Modernism and the Body: A Cultural Study* (Cambridge: Cambridge University Press, 1998).

parallel was that of the telegraph and bodily nerves.[9] No discussion of modernity, it seems, was complete, without reference to the branching nerves of the telegraph network, which, in quickening the pace of communication, resulted in the frayed nerves of city residents. Metaphors spread quickly across different fields, with medical discussion of the brain, for example, drawing on the emerging language and practices of photography. Thus Silas Weir Mitchell (of rest cure fame), writing on 'Some of the Lessons of Neurotomy' in the first volume of *Brain*, noted the excellent 'opportunities for study afforded by civil war' (all those injured brains), before explaining the processes of the diffusion of pain as 'due to what I might call, using a photographer's phrase, a *sensitizing* of the related ganglionic cells'.[10] In this period of rapid social, scientific and technological development, interchange between fields happened constantly, both consciously, as in the above example, and unthinkingly, as writers reached for appropriate language to address new concepts.

The belief that thoughts and feelings could be traced to physical processes within the body also lay behind the development of physiological psychology in the Victorian era. Building on earlier associationist psychology, the physiological psychology developed by figures such as Alexander Bain, William Carpenter, Herbert Spencer, and G. H. Lewes, from the 1850s onwards, opened up new ways of thinking about the dreams, and unconscious movements of the mind which had so fascinated the Romantics, and led through to new conceptions of selfhood.[11] Whilst Carpenter tended to cling to belief in an organising Will, for example, Lewes questioned the idea of a directing self. The idea

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[9] Laura Otis, *Networking: Communication with Bodies and Machines in the Nineteenth Century* (Ann Arbor: University of Michigan Press, 2011).

[10] S. Weir Mitchell, 'Some of the Lessons of Neurotomy', *Brain* 1:3 (Oct. 1878), 287-303, pp. 287,.289.

[11] For work in this area see Roger Smith, *Between Mind and Nature: a History of Psychology* (London: Reaktion, 2013); *Inhibition: History and Meaning in the Sciences of Mind and Brain* (Berkeley: University of California Press, (1992); Rick Rylance, *Victorian Psychology and British Culture, 1850-1880* (Oxford: Oxford University Press, 2000). *Embodied Selves: An Anthology of Psychological Texts, 1830-1890* (Oxford: Oxford University Press, 1998), edited by Jenny Bourne Taylor and myself, offers introductions to the primary areas of discussion in relation to mind, body and identity, including areas such as the unconscious and dreams, sexuality, and degeneration, together with selections from key primary texts.

of a 'Thinking Principle' directing operations could not be maintained, he argued, since it was merely the result of manifold activities; consciousness 'is not an agent, but a symptom'.[12] In anticipation of modernist ideas of streams of consciousness, his favourite image of the mind was that of a lake, with multiple streams entering at different levels, and mingling beneath the surface.[13] Recent ecological ideas, addressed by Anna West in this volume, that look at human life as only part of a wider ecological pattern, dissolving distinctions between trees, animals and people, were also foreshadowed in the arguments of Lewes and Spencer that mind could only be understood as a constant process of interaction between the whole organism and a physical and social medium.[14]

Physiological psychology introduced a whole new vocabulary of reflex and automatic actions, and of streams, channels and currents in the mind which fed through into the broader culture of the time in multiple ways; mingling, for example, with mesmeric ideas, and notions of automatic action taken up in late Victorian fiction (as explored here by Kristie Schlauraff). With the rise of evolutionary psychology from the 1860s, following Darwin's publication of the *Origin*, notions of inherited memory, were accentuated, significantly altering the various conceptions of human mind and brain, and giving birth to late-century fictions, from *Jekyll and Hyde* onwards, of the 'beast' within.[15]

All the diverse ways of thinking about the brain and mind, I have outlined, were interlinked at various levels, with patterns of connection

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[12] G. H. Lewes, *Problems of Life and Mind. Third Series*, 2 vols. (London: Trübner, 1877), I, 363.

[13] G. H. Lewes, *Problems of Life and Mind. First Series: The Foundation of a Creed*, 2 vols. (London: Trübner, 1874-75), I, 150n.

[14] See G. H. Lewes, 'Spiritualism and Materialism', *Fortnightly Review'*, 19 n.s. (1876), 479-93, 707-19, p. 715. For a discussion of these ideas, particularly as they were developed by George Eliot, see my own work, *George Eliot and Nineteenth-Century Science* (Cambridge: Cambridge University Press, 1984), and Rylance, *Victorian Psychology*. For work on Wilkie Collins, see Jenny Bourne Taylor, *In the Secret Theatre of Home: Wilie Collins, Sensation Narrative, and Nineteenth-Century Psychology* (London: Routledge, 1988). More recently, Vanessa Ryan has also addressed these concepts in *Thinking without Thinking in the Victorian Novel* (Baltimore: Johns Hopkins Press, 2012).

[15] On ideas of inherited memory, see Laura Otis, *Organic Memory: History and the Body in the late nineteenth and early twentieth centuries* (Lincoln: University of Nebraska Press, 1994).

spreading well beyond immediate fields.   When *Brain* was set up in 1878 it was as a complement to *Mind: A Quarterly Review of Psychology and Philosophy*, inaugurated by Alexander Bain in 1876, with his disciple, George Croom Robertson (Professor of Mental Philosophy and Logic at University College. London), as editor.   Like *Brain, Mind* is still going strong, but it has quietly dropped 'Psychology' from its sub-title, and now boasts solely of its philosophical credentials.[16] At the time of founding, however, it was driven by a desire to demonstrate, in Croom Robertson's words, 'the scientific standing of psychology', and hence to overcome the doubts of all those who thought that the domain of the mind should remain one of subjective enquiry.[17] The aims were nothing if not ambitious. To quote from the prospectus:

> Psychology, while drawing its fundamental data from subjective consciousness, will be understood in the widest sense, as covering all related lines of objective inquiry. Due prominence will be given to the physiological investigation of Nerve-structures. At the same time, Language and all other natural expressions or products of mind, Insanity and all other abnormal mental phases, the Manners and Customs of Races as evincing their mental nature, mind as exhibited in Animals generally – much of what is meant by Anthropology and all that is meant by Comparative Psychology – will come within the scope of the Review.[18]

The speed and tumble of ideas and fields is breath taking, but gives a strong sense of the ways in which all these areas, from the study of nerves through to that of race, language, and animal psychology, were deemed to be deeply interwoven. In addition, Croom Robertson throws in for good measure, psychology of education, logic, aesthetics and ethics, and the history of philosophy.

Although the agenda might appear incoherent from a twenty-first century perspective, it gave expression to the unifying impulse, to be found in Herbert Spencer's Synthetic Philosophy, or G. H. Lewes'

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[16]   See the journals home page, http://mind.oxfordjournals.org/.
[17]   G. Croom Robertson, 'Prefatory Words', *Mind: A Quarterly Review of Psychology and Philosophy* 1:1 (Jan. 1876), 1-6, p. 3.
[18]   The Prospectus is bound in at the back of the first volume in the online version. The ground is covered at greater length in the 'Prefatory Words'.

'Problems of Life and Mind', which set study of the physiological structures of body and mind at the heart of social, psychological and cultural understanding. Not surprisingly, given this agenda, there was considerable overlap between *Mind* and *Brain* in terms of subject matter and contributors. Thus in the first volume of *Mind,* Croom Robertson reviewed very favourably Hughlings Jacksons's *'On the Localisation of Movements in the Brain*, and, as an editor of *Brain,* Hughlings Jackson contributed to its first volume his seminal article on 'On Affections of Speech from Disease of the Brain'.[19] G. H. Lewes, for his part, contributed 'What is Sensation' to the first volume of *Mind*, and 'Motor Feelings and the Muscular Sense' to the first issue of *Brain* (the latter, one of his final articles, as he died later that year).[20] Although there were differences in orientation, and *Brain* was far more focused in its mission, the two journals were united in their attempts to explore the physiological basis of mental processes.

Whilst stressing the interconnected nature of so many of these different forms of approach to questions of mind and brain, I would not wish to suggest there was unanimity of views, or indeed any lack of opposition. The first issue of *Brain,* for example, carried a mocking review by J. C. Bucknill of *Darwinism tested by Language* by the medic Frederick Bateman. Opening with a laudatory preface from the Dean of Norwich Cathedral, the work launched a ferocious attack on both Darwinian theory and the work of Broca and Ferrier in their attempts to locate the seat of language in the brain. Language, Bateman insisted, against Darwin, was a *distinctive* attribute of man, and the Faculty of Speech was 'immaterial' in form, and not traceable to any physiological feature.[21] Yet,

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[19]   G. Croom Robertson, 'Critical Notice: *Clinical and Physiological Researches on the Nervous System. No. 1. On the Localisation of Movements in the Brain', Mind* 1:1, (Jan 1876), 125-27; J. Hughlings Jackson, 'On Affections of Speech from Disease of the Brain', *Brain* 1:3 (Oct 1878), 304-330.

[20]   G. H. Lewes, 'What is Sensation?' *Mind* 1:2 (April 1876), 157-61; 'Motor Feelings and the Muscular Sense', *Brain* 1:1 (April 1878), 14-28.

[21] J. C. Bucknill, 'Critical Digests and Notices of Books: *Darwinism tested by Language*. By Frederick Bateman, M.D. With a Preface by Edward Meyrick Goulburn, D.D., Dean of Norwich', *Brain* 1:1 (April 1878), 108-113, p. 110. Bateman had originally been a supporter of Broca, but had shifted considerably in his orientation as his own work on aphasia developed.   For further details on Bateman, and the debates about language

for all the opposition to Darwinian thought, and what was seen as a new materialism in approaches to the mind, from religious and other quarters, there were, nonetheless, points of inter-relation between quite diverse positions.   The Society for Psychical Research, for example, famously brought together the practices of experimental science (and eminent scientists themselves) with the wilder reaches of idealist and spiritualist thought. There were more subtle connections too. As with today, when the language and concepts of neuroscience penetrate virtually every page of today's press, scepticism and even outright hostility do not provide immunity to the gradual shifts in language and culture. For the Victorians, whatever their individual positions on evolution or materialism might have been, when reading about the latest sensational case of double consciousness, or advertisements for 'brain food' which would help nourish the overstretched brain of the city worker, they were similarly participating in a culture which placed new emphasis, not on the immaterial mind, but on its decisively material partner, the brain.

In this issue of *Victorian Network* we bring together five essays exploring very different aspects of these questions in relation to the literature of the period, as well as reviews of recent works in the area.   In 'Lucid Daydreaming: Experience and Pathology in Charlotte Brontë', Timothy Gao issues a welcome caution against too ready an assumption that writers merely absorbed and assimilated contemporary medical or scientific views. By focusing on individual responses, as expressed in letters and other sources as well as fictional writing, one can glean a far more nuanced picture, capturing resistance, contention, and creative reworkings. Taking Southey's famous advice to Brontë, to leave off her daydreams, and her ambitions to be a writer, he explores Brontë's own highly positive valuations of the power of daydreams, pitting individual experience against the medical orthodoxies of the period.   In an interesting twist, he notes that Southey's advice to Brontë mirrored his own responses to the Luddite rebellions of 1812, an argument that opens out into a reading of *Shirley* which explores parallels between working-

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and evolution, see Gregory Radick, *The Simian Tongue: The Long Debate about Animal Language* (Chicago: University of Chicago Press, 2007), 55-64.

class radicalism and female day-dream. Whilst recognising the difficulties of uncovering the private, subjective experiences of the past, Gao ends with a plea to scholars to turn from an overwhelming focus on the pathological, to look more closely at the quotidian, undramatic, and non-pathological states of mind which shaped individuals' experiences of personal agency.

In 'Two Brains and a Tree: Defining the Material Bases for Delusion and Reality in *The Woodlanders'*, Anna West explores the work of an author who, unlike Brontë, directly engaged with the scientific and medical thought of the time. Hardy, she reminds us, transcribed a passage from G. H. Lewes into his literary notebook, on mental processes as functions of the physical, as well as passages from Henry Maudsley on the physical basis of all perceptions and illusions. As the structure of *The Woodlanders* suggests, however, this again was no simple process of assimilation: experimental science is represented by the dilettante Fitzpiers, in his desire to acquire rights to Grammer Oliver's brain, whilst John South, in his 'delusion' about the tree which might kill him, represents a very different model of knowing and understanding the world (but one that also has a base in the psychology of the era). The sense of empathy for the surrounding animate and inanimate world which West tracks in Hardy's fiction, is one that resonates strongly with contemporary eco-criticism, and, as she concludes, 'the rational urgency of not cutting down trees'.

One of the most interesting areas in current critical work is that of sound studies, and in '"The Apotheosis of Voice': Mesmerism as Mechanisation in George Du Maurier's *Trilby'* Kristie Schlauraff draws on this rich material to read *Trilby* in relation both to mesmerism and Victorian sound technology. Although mesmerism had no scientific credibility by the 1890s, as Schlauraff points out, it could function as a convenient metaphor for the new forms of communication facilitated by the phonograph or telephone. As 'singing machine' Trilby enacts the separation of voice from selfhood inaugurated by the phonograph, whilst also creating communities, or networks, of listeners. Sound reproduction technologies, like mesmerism, Schlauraff suggests, 'reshaped spatial and temporal limitations'. Yet it is important to note Trilby's own exclusion

from the networks her voice creates, and the gendered power dynamics involved.

Patricia Beesley's work, 'Female Transcendence: Charles Howard Hinton and Hyperspace Fiction' takes us, literally, into another dimension, with Hinton's attempts to imagine both a world of the fourth dimension, and radical new possibilities for women. Where Du Maurier highlights the dangers of reducing woman to a machine, Hinton imagines her attaining a state of transcendence, released from the epistemological constraints of nineteenth-conceptions of womanhood. Far from the materialist realm of physiological nerves and brain, Hinton enters the idealised world of the mind, using mathematics to unlock new imaginative possibilities. As with William James' spiritualist vision of a superhuman life, a universe in which we are like cats and dogs in a library, seeing but not understanding, Hinton imagines a hyperspace, open to those who can adopt new modes of vision. Hinton was the son of the physician James, whose conversion to radical views of sexuality, later on in his career, never quite tallied with his earlier published work. For Charles, a noted mathematician, the idealised spaces of non-Euclidian geometry held open the possibilities of a new utopian world.

Our final essay, by Kimberly Cox, takes us back, with a bump, to decisively dystopian visions, and the beast within. 'The Hand and the Mind, the Man and the Monster', draws attention to the close relation between the human brain and hand in Victorian thought.   Human development, she demonstrates, was closely correlated with the use of the hand, and hands became key indicators of both racial and class identity. We are used to ideas of phrenological readings of the skull, but here we are introduced to phrenological guides to the hand, to be scrutinised for sensitivity of touch, refined shape, and delicacy of skin. Cox draws on this material to offer readings of the 'monstrous hand' in *Dr Moreau, Dracula*, and *She*, and the crossing of the human/animal border which the monstrous hand denotes.

As the range and scholarly depth of these essays suggests, the topic of the Victorian Brain is a significant one, opening up into unexpected areas which reveal the extent of the culture's engagement with ideas of the physiological processes of the mind. In our own culture, neuroscience

is in the ascendant, often drowning out alternative voices. In the Victorian age, by contrast, there was excitement and contestation, as writers from across the disciplines explored the implications of the new theories, from cerebral localisation through to the unseen universe of spiritualism. The possibilities of scientific understanding of the mind, as Croom Robertson's prospectus indicated, seemed almost limitless.   With the development of new paradigmatic frameworks in recent criticism, whether of eco-criticism or sound studies, Victorian models of embodied life, which break down divisions between self and other, internal and external, take on new meanings and immediacy.

Lucid Daydreaming:
Experience and Pathology in Charlotte Brontë
Timothy Gao
(University of Oxford)

Abstract
This paper examines representations of daydreaming in the correspondence, journals, and novels of Charlotte Brontë as a case study for the often hidden conflict between medical histories and first-person accounts of mental states. While the emerging field of nineteenth-century psychology diagnosed daydreaming as an intense and involuntary state of consciousness analogous to trances, sleep states, opiates, and mental illnesses, accounts by daydreamers themselves represented their daydreams as critical, rational, and conscious alternatives to dissatisfactions in their social and economic realities. By foregrounding this latter perspective in Brontë's letters and in *Shirley*, I argue for a re-evaluation of the relationship between the disciplinary authority of medical science and the historical individual's experience of their own mind, and for a more optimistic view of volition and autonomy, both in studies of Brontë and in medical humanities research more generally. This more hopeful reading of the literary and historical record enabled by an investigation of the common daydream also suggests the methodological value of shifting away from our existing focus on mental disorder and abnormality towards the significance of healthy, everyday, yet historically significant modes of consciousness.

On the 4th of February, 1836, a little over eleven years before the publication of *Jane Eyre*, twenty-year-old Charlotte Brontë sat down and wrote the following in her journal after a day's teaching at the Roe Head School:

> My mind relaxes from the stretch on which it has been for the last twelve hours & falls back onto the rest which nobody in this house knows of but myself. I now, after a day of weary wandering, return to the ark which for me floats alone on the face of the world's desolate & boundless deluge [...] I fulfil my duties strictly & well. I must, so to speak [...but] as God was not in the wind nor the fire nor the earth-quake so neither is my heart in the task, the theme or the exercise. It is the still small voice alone that comes to me at eventide [...] which takes my spirit & engrosses all my living feelings, all my energies which are not merely mechanical.[22]

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[22] Charlotte Brontë, *Tales of Glass Town, Angria, and Gondal: Selected Writings*. Ed. Christine Alexander (Oxford: Oxford UP, 2010) p. 158. Further references are given after quotations in the text.

Such a description of entering into daydream is dominated by a combination of relief and vitality. Even as her 'mind relaxes', 'falls back onto [...] rest', finds shelter in 'the ark', and transitions from 'a day of weary wandering' to the calming 'eventide' of dream, this process of repose is entwined with a sense of awakening – after a gruelling twelve hours, the daydream finally offers a channel for the 'heart', 'spirit', 'living feelings', and 'energies' that have lain unused during a day of 'merely mechanical' labour. Most startlingly of all, Brontë's self-comparison to God's absence in physical miracles, and presence in the invisible 'still small voice' heard by the prophet Elijah, comes to express a sharp contrast between the mental deadness of real life and the vitality of mental interiority. The palpable sense of joy and need in this private journal entry suggests the crucial role daydreaming played in helping the young Brontë recuperate from (and perhaps even survive) the traumatic experience of her social, economic, and physical realities.

This was not, on the whole, how daydreaming was understood or represented in the Victorian public sphere. Outside private autobiographical records of subjective experiences, a developing psychological profession with increasing social and cultural authority viewed daydreams with suspicion, alongside trances, sleep states, opiates, and mental illnesses. Natalie Mera Ford's work has recently argued that new perceptions of psychological instability fused with Romantic associations of creative genius and poetic vision into a conception of daydreaming which emphasised intense, involuntary, and borderline insane states of 'reverie'.[23] This theorisation of daydreaming by Victorian doctors and mental theorists often conflicts irreconcilably with accounts by daydreamers themselves of the effects and affects of their own daydreams. While recent scholarship in the medical humanities has stressed the continuities and complementariness between science and culture in the nineteenth century, relatively little has been said about conflicting relationships between public medical definitions of mental states and private affective experiences. How did Victorians negotiate their understanding and experience of their own mind with emerging scientific theories about the brain, especially if the two disagreed? How self-disciplinary is such an encounter with medical authority, and how resistant?

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[23] Natalie Mera Ford, 'The Interpretation of Daydreams: Reverie as Site of Conflict in Early Victorian Psychology.' *Conflict and Difference in Nineteenth-century Literature.* Ed. Dinah Birch and Mark Llewellyn. (Houndmills: Palgrave, 2010) pp. 81-94 (pp. 80-3). Further references are given after quotations in the text.

The history of conflict between medical practice and its subjects is central to the well-established field of scholarship on female madness and hysteria, but such studies have generally emphasised the historical silence of the patient under the disciplinary power of medical authority. Robert Brudenell Carter's 1853 treatise *On the Pathology and Treatment of Hysteria* recommends doctors 'to assume a tone of authority, which will, of itself, almost compel submission' from the female hysteric, who 'if she interrupts the speaker, she must be told to keep silence and to listen; and must be told [...] in such a manner as to convey the speaker's full conviction, that the command will be immediately obeyed'.[24] Elaine Showalter has argued from such accounts that 'the tradition of English psychiatric medicine during the nineteenth century has also [like the French tradition] tended to silence the female patient, to make her the object of techniques of moral management'.[25] Later in the century this kind of silence would be turned against the doctor, in perhaps the most famous case of individual resistance to psychological diagnosis: in the confrontation between Freud and his patient Dora, his interpretation of her hysterical symptoms and dreams as being driven by incestuous and homosexual desires is continually rejected by Dora herself, and eventuates in her refusal to continue with his therapy. But even as feminist critics like Hélène Cixous have represented Dora's rejection of her diagnosis 'as a silent revolt against male power over women's bodies and women's language' performed by 'a resistant heroine',[26] others have been more wary of either the effectiveness of such a revolt, or the dangers of romanticising mental illness. Phyllis Chesler has argued strongly that 'anxious and terrified women are [not] about to seize the means of production and reproduction',[27] while Showalter has expressed similar reservations that 'the self-destructive and self-enclosed strategies of hysteria' achieved 'at best a private, ineffectual response to the frustrations of women's lives [...with] costs in powerlessness and silence' (p. 161). As Maroula Joannou's recent review of the critical debate

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[24] Robert Brudenell Carter, *On the Pathology and Treatment of Hysteria* (London: J. Churchill, 1853) p. 119.

[25] Elaine Showalter, *The Female Malady: Women, Madness, and English Culture, 1830-1980* (New York: Pantheon, 1985), p. 154. Further references are given after quotations in the text.

[26] Toril Moi, 'Representation of Patriarchy: Sexuality and Epistemology in Freud's "Dora" ', *Feminist Review* 9 (1981), p. 67; Claire Kahane, 'Introduction: Part Two.' *In Dora's Case: Freud--hysteria--feminism*. Ed. Charles Bernheimer and Claire Kahane (New York: Columbia University Press, 1985), pp. 60-74 (p. 25).

[27] Phyllis Chesler, *Women and Madness* (New York: Avon, 1972), p. 56.

summarises, if 'madness [is] the label attached to women who are in a psychic revolt against patriarchy, such rebellion is doomed to fail because it has no social dimension, and the rebels cannot be taken seriously by society precisely because they are deemed to be mad.'[28] Whether enforced by medical treatment or protesting against medical diagnosis, women patients are silenced from voicing dissenting explanations of their own experiences and behaviours, and from providing counter-histories to the records of their doctors.

Compared to the scholarship accumulated over the past three to four decades on hysteria, madness, and insanity, the unassuming mental state of the daydream has often been critically overlooked. This paper will argue, however, that the perception of daydreaming as relatively minor compared to other mental states in fact provides unique opportunities to examine the relationship between public pathologisation and private experience. For one, as Ford has noted, even Victorian psychologists who worried over daydreaming's unstable effects acknowledged that the ubiquity and ordinariness of its mild, harmless forms 'effectively tempered constructions of extreme reverie as unsound' and made it more difficult to claim as an area of specialised knowledge, compared to more serious diagnoses like hysteria, monomania, or moral madness (p. 81). For another, much lighter social pressures and cultural taboos than those experienced by patients of hysteria allowed daydreamers to speak for themselves – first-person representations of daydream present throughout the autobiographical writings and published novels of daydreamers like Brontë provide a wealth of literary evidence. The liminality of daydreaming as a pathology therefore allowed first-person descriptions of its subjective experience to stand as more sympathetic, relatable, and reliable accounts to both Victorian and modern readers than less common and more opaque experiences of mental illness – offering therefore a more credible form of resistance against medical theories which sought to exert definitive authority over the mental state.[29] At the same time, such advantages vindicate commonplace, peripheral, and often overlooked experiences like daydreaming as productive topics for critical attention.

Finally, an emphasis on autobiography and literature as platforms for subjective lived experiences also raises questions about the relationship of the literary critic to different types of historical records. The

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[28] Maroula Joannou, *Contemporary Women's Writing: From the Golden Notebook to The Color Purple* (Manchester: Manchester University Press, 2000), p. 32.
[29] Subjective accounts of Victorian daydreaming read very familiarly, at least, to the brain of this modern critic.

interdisciplinary focus of recent scholarship on mutual assimilation, interpenetration, and the borrowing of cultural authority between medical treatises and literary works has enabled us to historicise fictions in their contemporary understandings of the mind and body. At the same time, however, examining how writers like Brontë may have disagreed with and actively resisted the medical theories of their time should also make us wary of how immersion in certain types of evidence can introduce new blindspots, as well as insights. This paper's discussion therefore begins not from top-down, objective standards of medical science, but from Brontë's first-person experience of her own daydreams, and the records of her being medically advised for them.

'A doctor could do me no good.'
In December 1836, ten months after writing in her journal about 'the rest which nobody in this house knows of but myself' (p. 158), Brontë started an unlikely chain of correspondence with Robert Southey, then Poet Laureate. That initial letter has not survived, but what can be extrapolated from Southey's response in the following March is that she had enclosed samples of her poetry and requested advice about publication. Southey's surviving letter has since become a classic piece of evidence for feminist criticism due to its early and crushing disappointment of a literary career which now holds prominent place in both the Victorian and feminist canons:

> The day dreams in wh[ich] you habitually indulge are likely to induce a distempered state of mind; & in proportion as all the "ordinary uses of the world" seem to you "flat and unprofitable", you will be unfitted for them [...] Literature cannot be the business of a woman's life: & it ought not to be. The more she is engaged in her proper duties, the less leisure will she have for it [...] To those duties you have not yet been called, & when you are [...] You will then not seek in imagination for excitement, of wh[ich] the vicissitudes of this life & the anxieties from wh[ich] you must not hope to be exempted [...] will bring 'with' them but too much.[30]

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[30] Robert Southey, Letter to Charlotte Brontë, 12 Mar. 1837, in *The Letters of Charlotte Brontë: With a Selection of Letters by Family and Friends*. Vol 1. Ed. Margaret Smith (Oxford: Clarendon, 1995), pp. 166-7. Further references are given after quotations in the text.

Alongside the letter's reflection of social attitudes to female authorship, Sally Shuttleworth has also pointed out an implicit medical undertone with which 'Southey's warnings to Brontë […] were underpinned, in contemporary medical ideology, by a more sinister, alarming message.'[31] Shuttleworth's reading points out the letter's context in prevailing gynaecological theories which frequently warned that 'intellectual study for a woman […] withdrawing physiological energy from the reproductive organs, and directing it instead into intellectual pursuits would lead, physicians argued, to a complete breakdown of female health' (p. 77). Southey's tactfully indirect references to feminine 'uses' and 'business' therefore euphemise a concern with Brontë being physiologically 'distempered' or 'unfitted' for the marriage and motherhood to which she has 'not yet been called […] from which she must not hope to be exempted'.

The medical anxieties Shuttleworth detects in Southey's letter also potentially reflect Southey's own experience of being diagnosed and treated for the heart palpitations he had suffered since 1799. His physician, the experimental chemist Thomas Beddoes, subscribed to a Brunonian theory of medicine which attributed physiological illness to imbalances caused by under- and over-stimulation of various organs, especially the brain. Such assumptions about dangerous redirections of limited 'physiological energy' went on to shape the gynaecological theories which form the subject of Shuttleworth's study, but as Gavin Budge has noted, the more general principles of Brunonian medicine frequently underpinned Southey's thinking about social and medical issues. In a review of Malthus in 1832, Southey had argued that 'the more the mind is exerted, the more the body suffers […] The most thoughtful people, taken as a body, are the least prolific [in reproduction]', a narrative of mental activity threatening physiological fertility which he would put in more strongly gendered terms four years later to Brontë.[32] Budge's speculation that Southey himself may have stopped writing poetry from concerns that 'composing poetry "excited" him too much […and] fears that he might develop consumption through nervous overstimulation' (p. 59) heavily suggests the role of Southey's own medical

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[31] Sally Shuttleworth, *Charlotte Brontë and Victorian Psychology* (Cambridge: Cambridge University Press, 2004), p. 78.

[32] Robert Southey, 'Essay IV: On the State of the Poor, the Principle of Mr Malthus's *Essay on Population*, and the Manufacturing System. 1812.', *Essays, Moral and Political* (London: John Murray, 1832), p. 152 fn, quoted in Gavin Budge, *Romanticism, Medicine and the Natural Supernatural: Transcendent Vision and Bodily Spectres 1789-1852* (Basingstoke, Hampshire: Palgrave Macmillan, 2012), p. 2.

history in his response to social malaise – and to Brontë, whom he advised more explicitly in a second letter on March 22nd to 'Take care of over-excitement, and endeavour to keep a quiet mind (even for your health it is the best advice that can be given you)' (p. 170).

These gynaecological and Brunonian anxieties about the overstimulated mind form the backdrop to the more specific and psychological health risk suggested in Southey's brief but significant reference to 'day dreams'. It is difficult to say whether Southey's choice of words responds to specific terms in Brontë's missing initial letter, but the narrative of mental degeneration set out in his prediction that 'day dreams [...] are likely to induce a distempered state of mind' coincides strongly with Victorian theories of daydreaming as an inherently unstable mental state. As Ford's research on medical archives has shown, scientific perceptions of daydreaming and 'reverie' in the nineteenth century fell into the periphery of 'heightened anxieties about trancelike conditions [...] such as somnambulism, spectral illusions, and mesmeric trance' (p. 81), as well as a 'mounting association with degenerative material agents [...] nitrous oxide and opium in addition to other physical causes of delusory reverie, such as fever, prolonged study, and head wounds' (p. 87). This ambiguous and slippery relationship to more seriously impaired, uncontrolled, or altered states of consciousness dominated medical definitions of daydreaming throughout the century, and informs Southey's fear of Brontë's possible spiral into depression or madness.

Brunonian fears of overstimulation, gynaecological concerns with female activity, and early psychological suspicions about semi-conscious states therefore all overlap and combine to make Southey's letter a powerful expression of Victorian hypochondriasis – one which seems to have baffled its recipient. That Brontë was disappointed to receive a discouragement to her literary ambitions is unsurprising, but when she wrote back to Southey on March 16th, the tenor of that reply also suggests a resistance towards (or simply confusion about) the unsolicited diagnosis in which that discouragement had been couched:

> You only warn me against the folly of neglecting real duties for the sake of imaginative pleasures [...] to pursue that single, absorbing, exquisite gratification [...] but I am not altogether the idle dreaming being [my first letter] would seem to denote [...] I find enough to occupy my thoughts all day long, and my head and hands too, without having a moment's time for one dream of the imagination. In the evenings, I confess, I do think, but I never trouble any one

else with my thoughts. I carefully avoid any appearance of pre-occupation and eccentricity [...] I have endeavoured not only attentively to observe all the duties a woman ought to fulfil, but to feel deeply interested in them.[33]

What is immediately apparent about this letter is how its conscientious tone and dutiful promises belie the earlier attitudes towards 'imaginative pleasures' and 'duties' expressed in her private journal; underneath her deference to the Poet Laureate and apparent compliance to his advice, however, the letter also chafes against his authority.[34] Conspicuously and carefully missing from her reply is any acknowledgement of the medical implications that dominate the letter to which she's replying – her suggestion that Southey 'only' warned her against the unproductivity, impropriety, and pre-occupation for which she provides apologetic reassurances is far from the truth. In place of any reference to her mental or physiological health is an account of her 'day dreams' which is distinctly affective and experiential, rather than medical: describing writing poetry as an 'absorbing [...] gratification', she is insistent on how duties 'occupy my thoughts', notes her distaste for 'any appearance of pre-occupation', resolves to 'attentively' fulfil her tasks, and to be 'deeply interested' in them. The language of mental absorption, (pre)occupation, attention, and interest in these outwardly deferent assurances represents daydreaming not as a state of dangerous trance, but a much more ordinary and conscious (if socially unconscientious) choice to disengage from the boredom of work. That Southey wrote back to restate his point more explicitly 'for your health' might reflect a concern about this failure (or refusal) to acknowledge his warnings.

Perhaps expectedly for correspondence between a twenty-year-old governess and a sixty-year-old Poet Laureate, the two of them wrote somewhat at cross-purposes, at the root of which is an incompatibility between Southey's inherited medical knowledge and Brontë's personal lived experience. Not only were the mental, moral, and physiological dangers publically ascribed to daydreaming evidently not apparent to

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[33] Charlotte Brontë, Letter to Robert Southey, 16 Mar. 1837, in *The Letters of Charlotte Brontë*, pp. 168-9.

[34] The undercurrent of resentment in Brontë's response has also been noted by Lyn Pykett, for whom 'Brontë's apparently prim acceptance [...] also has the effect of foregrounding the sources of (some) women's more general dissatisfactions with a woman's proper duties'. Lyn Pykett, 'Women and the Sensation Business.' *Writing: A Woman's Business: Women, Writing and the Marketplace*. Ed. Judy Simons and Kate Fullbrook (Manchester: Manchester University Press, 1998), pp. 17-30 (p. 19).

Brontë herself, such medical characterisations of her mental habit represent almost a mirror opposite of her own autobiographical descriptions. What is for Brontë the mind at rest and relaxation is diagnosed as a brain in dangerous 'over-excitement'. Far from an awakening of 'energies' and 'living feelings' that daily life fails to capture, Southey sees a redirection of limited vital energy from the body to the brain. Rather than a reality of work which is an involuntary and 'merely mechanical' (p. 158) experience she is economically compelled to perform, it is daydreaming that is considered a loss of volition through 'trancelike conditions'.[35] Instead of 'the ark' that shelters and recuperates her sanity from the truly traumatic experiences in 'the world's desolate and boundless deluge' (p. 158), in Southey's medical narrative, her daydreams are the real precursors to mental illness. The exchange between Brontë and Southey and their implicit (but stark) disagreement over how to interpret her daydreams exemplifies a confrontation between private subjective experience and objectivising scientific definitions.

At stake in this confrontation is not only an interpretation of daydream, but an individual's right to explain their own mental experiences against scientific determinations of their behaviour. Brontë's accounts of her own daydreams are also expressions of discontent with 'the task, the theme, [and] the exercise' of her work and the difficulty of being 'deeply interested' in what is deeply *un*interesting. But if such accounts describe critically the limits and dissatisfactions of her social reality, Southey's suggestion that it is daydreaming making these 'ordinary uses of the world [...] flat and unprofitable' to her mind conversely locates a psychological disorder inside the self, rather than a social disorder constricting the lives of middle-class Victorian women. More than passive misreading, the medicalisation of individual experience explains (and explains *away*) social or political unhappiness as the result of psychological abnormality, simultaneously dismissing the legitimacy of complaint and actively reasserting its causes: if Brontë wrote seeking a literary solution to the mental emptiness of her life and work, Southey's advice to be more 'engaged in her proper duties' and 'to keep a quiet mind' offer renewals of the problem ostensibly as solutions. The idiomatic language of Southey's advice is particularly telling of the social strategies of medical diagnosis: the conflation between health, activity, and audibility in the injunction 'to keep a quiet mind' defines healthiness as a lack of stimulation or expression, conveniently rendering any expression

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[35] Ford, 'Interpretation', p. 81.

of dissatisfaction or desire for stimulation automatic symptoms of disorder.

Southey's letters represent to Brontë not only a rejection of her literary hopes, but a more categorical rejection of her ability to explain her own experiences; in a kind of long-delayed self-vindication, every protagonist in Brontë's eventual literary career is given the narrative authority to express experiences strikingly similar to Brontë's in 1836. Both *Jane Eyre* and *Villette* are narrated by protagonists who daydream in the midst of teaching work. Jane Eyre, frustrated by the limits of being a governess at Thornfield, finds it 'my sole relief [...to] allow my mind's eye to dwell on whatever bright visions rose before it [...] to open my inward ear to a tale [...] quickened with all of incident, life, fire, feeling, that I desired and had not in my actual existence.'[36] Lucy Snowe, more explicit in her avowal that 'my work [at a *pensionnat*] had neither charm for my taste, nor hold on my interest', declares herself nonetheless 'capable of sitting twenty years teaching infants the hornbook' because of a capacity 'to hold two lives – the life of thought, and that of reality; and, provided the former was nourished with a sufficiency of the strange necromantic joys of fancy, the privileges of the latter might remain limited'.[37] The strategies with which both characters survive the realities of labour recall Brontë's own reliance on 'the ark' of fantasy keeping her afloat at the Roe Head School – and their representation contest Southey's diagnosis in the very literary works which also contravene his advice.

But the clearest reflection of Brontë's continued resistance to the medicalisation of her experiences is found in her second published novel, *Shirley*. Published twelve years after her correspondence with Southey and six years after his death, the terms of her youthful promise to have 'enough to occupy my thoughts all day long, and my head and hands too' resurface almost verbatim in Caroline Helstone's desire 'to have something absorbing and compulsory *to fill my head and hands, and to occupy my thoughts.*'[38] One way to explain the faithfulness with which this phrase from a private letter in 1837 reappears in a published novel in 1849 is to examine Caroline's encounter with her uncle, who frustrates her desire for activity by being 'as ignorant as the table supporting his coffee-

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[36] Charlotte Brontë, *Jane Eyre*. Ed. Jane Jack and Margaret Smith (Oxford: Clarendon, 1969), p. 132.

[37] Charlotte Brontë, *Villette*. Ed. Herbert Rosengarten and Margaret Smith (Oxford: Clarendon, 1984), p. 105.

[38] Charlotte Brontë, *Shirley*. Ed. Herbert Rosengarten and Margaret Smith (Oxford: Clarendon, 1979), p. 257, emphasis added. Further references to this edition are given after quotations in the text.

cup of all his niece had undergone and was undergoing' (p. 210). Mr Helstone forms a familiar male figure of well-intentioned but unsympathetic paternalism:

> "These women are incomprehensible [...] they exhibit themselves effete as dead weeds, blanched and broken down. And the reason of it all? that's the puzzle. She has her meals, her liberty, a good house to live in, and good clothes to wear as usual [...] I suppose I must send for advice. Will you have a doctor, child?"
>   "No, uncle; I don't want one: a doctor could do me no good. I merely want change of air and scene."

Caroline's discontent represents a 'puzzle' to Mr Helstone because she ostensibly fulfils his mechanistic criteria for female sufficiency – 'She has her meals, her liberty [...] a good house [...] and good clothes' – qualities that also inform his initial proposed solutions of 'two guineas to buy a new frock' and a retirement 'to a watering-place' (p. 212). His wrongheaded, Southey-like determination that calmness and quiet is the solution, rather than the cause, of her restlessness leads him to offer solutions which only leave Caroline more restricted and under-stimulated than ever; his concern with keeping her healthy 'as usual' misapprehends her need for 'change'.[39] Such a scene visibly restages Southey's pathologising advice to Brontë 'to keep a quiet mind', and suggests the continued impression of that specific early encounter even twelve years later, midway through the very literary career he had so strongly discouraged. More generally, however, the failure of personal sympathy in Mr Helstone's willingness to 'send for advice' from a doctor *rather than* accept the explicit explanations Caroline offers of her own mental state is also indicative of the growing authority of medical knowledge over an individual's account of their own mind.

For Brontë and Caroline, these confrontations represent not only painfully unsympathetic misreadings of their experiences, but a dismissal of their right to critique the conditions of their own lives. Much of what Brontë's women have to say about their daydreams centre around the use of the word *interest*, which cuts across these accounts – just as Brontë and Lucy Snowe come to the conclusion that they daydream because their

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[39] As the psychoanalyst D. W. Winnicott would note in the twentieth century, 'You may cure your patient and not know what it is that makes him or her go on living [...] absence of psychoneurotic illness may be health, but it is not life.' D. W. Winnicott, *Playing and Reality* (New York: Basic, 1971), p. 134.

work is too tedious for them 'to feel deeply interested' (Brontë) or to have any 'hold on my interest' (Lucy Snowe), Caroline's daydream of romance with her cousin Robert Moore in a 'tale full of fire, quick with interest' (p. 291) also identifies 'interest' as something missing in her daily reality and compensated by fantasy. Conversely, Caroline observes that Robert himself does not daydream because 'Nothing that they had ever talked of together was now in his mind: he was wrapt from her by interests and responsibilities in which it was deemed such as she could have no part.' (p. 191) For Robert the industrialist, the word 'interest' resonates beyond mental attention ('to feel deeply interested'), attraction ('quick with interest', p. 291), or taste ('hold on my interest'). In making similar observations about Robert's focussed mind, the narrator of *Shirley* repeatedly characterises him as an obsessive agent of *economic self-interest* whose 'circumstances rendered him specially prone to confine his attention and efforts to the furtherance of his individual *interests*' (p. 187, emphasis added). The novel also explains his fixation with mill machinery with reference to his *business interests*, because 'Speculations most important to his *interests* depended on the results to be wrought by them' (p. 39, emphasis added). In yet another sense, Robert's drive to achieve profits serves his greater goal of paying the debts incurred by his father's business losses, including his accrual of *financial interest*. By moving across these multiple senses of 'interest', ones 'deemed such as [Caroline] could have no part' (p. 191), *Shirley*'s account of boredom and daydream articulate the restrictions which keep women from being not only mentally but also economically invested in reality.

The conceptual bridge which Brontë's use of 'interest' builds between mental stimulation and economic return therefore suggests the contribution of these otherwise innocuous passages of daydream to *Shirley*'s broader (yet critically disputed) purpose as an industrial novel. *Shirley*'s setting, during the Luddite uprisings of Yorkshire in 1811-12, has been a major point of contention for critics debating the narrative's ambiguous engagement with workers' rights. Catherine Gallagher's influential suggestion that the novel's 'industrial conflict [...] is little more than a historical setting and does not exert any strong pressure on the form' has only relatively recently begun to be resisted by critics like Peter Capuano, whose analysis of domestic sewing and mill manufacturing has argued for 'a more direct and more historicized claim about how Brontë's treatment of manufacturing in the novel connects or networks two very different constituencies: hardened Luddite machine breakers and dispossessed middle-class women for whom professional opportunities

outside the home were extremely limited.'[40] Along similar lines, Shuttleworth's has pointed out that Brontë's letter to her publisher on May 12th 1848 about *Shirley* makes clear her intention to address the labour economics of gender in 'the present market for female labour [which] is quite overstocked', and specifically the problem that 'When a woman has a little family to rear and educate and a household to conduct, her hands are full, her vocation is evident – when her destiny isolates her – I suppose she must do what she can – complain as little – bear as much, work as well as possible.'[41] As Shuttleworth argues, the novel's structural analysis of the overstocking of the marriage market forms a parallel to the issues of unemployment driving Luddite violence in 1812.[42]

While the textile workers in *Shirley* express dissatisfaction with their economic redundancy through the violence of political agitation, the mental agitation of Caroline's daydreaming comes to express her own discontent with social redundancy. The partial reappearance of the expression 'to fill my head and hands' in the statement of intention foregrounded by Shuttleworth's discussion, to describe the married woman whose 'hands are full', points by omission to a more subtle mental component in *Shirley*'s economic critique. If the unfilled hands of the unmarried woman can only 'do what she can' without a family of her own in which she can invest her labour, what should the unmarried woman do with her head? The obviously unsatisfactory options for physically occupying an unmarried woman's hands (as Brontë tentatively writes, 'I suppose she must') still omit the other half of the problematic Brontë had been concerned with since 1837. Although the topic is evaded in her letter, the novel itself grapples with the problem of the female mind in spinsterhood. After spending (another) evening with an 'imagination full of pictures – images of Moore, scenes where he and she had been together' (p. 192), Caroline increasingly identifies for herself the social fate which is also the title of the chapter: 'Old Maids', women for whom only the economic self-sacrifice of community charity remains as activity. Such a fate, as she acknowledges, is 'a terrible hollowness, mockery, want, craving, in that existence which is given away to others, for want of something of your own to bestow it on' (p. 193-4), a stark contrast to the

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[40] Catherine Gallagher, *The Industrial Reformation of English Fiction: Social Discourse and Narrative Form, 1832-1867* (Chicago: University of Chicago, 1985), p. xi; Peter J. Capuano, 'Networked Manufacture in Charlotte Brontë's Shirley', *Victorian Studies* 55.2 (2013), pp. 231-42 (p. 232).

[41] Charlotte Brontë, Letter to W. S. Williams, 12 May 1848, in *The Letters of Charlotte Brontë,* Vol. 2, p. 66, quoted in Shuttleworth, p. 183.

[42] See Shuttleworth, p. 183.

self-interests which occupy Robert's mind, and a means to fill spare hands which have been excluded from economic competition. With a corresponding mental disengagement, as Caroline grimly consoles herself, 'life is short...Seventy years, they say, pass like a vapour, like a dream when one awaketh' (p. 195). Even as the daydream vapourizes the dissatisfactory limits of worldly existence, an acknowledgement of its necessity also brings the social and economic causes of those dissatisfactions into sharp focus.[43]

Remarkably, Brontë was not alone in looking back to Luddism to explore the politics of the daydream – the advice she received from Southey in 1837 was itself a recycled thought from a previous article Southey had written for the *Quarterly Review* in the December of 1812. Reviewing Patrick Colquhoun's *Propositions for ameliorating the Conditions of the Poor*, Southey had written of 'the Luddite committees' and 'The armed associations of Nottingham and Yorkshire':

> Discussions and speculations upon first principles of government and abstract rights, with a view to the formation of some New Atlantis or Utopia, have an effect upon men analogous to that which novel-reading produces upon girls: as long as the inebriation lasts, it unfits them to bear their parts in the realities of life, which appear 'stale, flat and unprofitable' to their heated and high-fed fancies.[44]

The Brunonian and psychological rhetoric with which Southey discredits political uprising as 'heated and high-fed fancies' and 'inebriation' is the exact same with which he later dismisses Brontë's literary 'day dreams' as the precursor to 'a distempered state of mind [...] as all the "ordinary uses of the world" seem to you "flat and unprofitable", you will be unfitted for them'; indeed, Hamlet is a much more gender-appropriate example in discussing disaffected working men than in its recycled use as a warning for a governess. Gavin Budge's sympathetic reading of this article has argued that 'the medical underpinnings of Southey's characterization of the attractions of political radicalism for factory workers [...] is dismissive

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[43] Jane Eyre's daydreams of 'all of incident, life, fire, feeling, that I desired and had not in my actual existence' also perform this paradoxical double role of disengagement and critique, of what Heather Glen describes as 'a refusal to acquiesce in the given [...] realized in a series of figures of autonomous imaginative power'. Brontë, *Jane Eyre*, p. 132; see Heather Glen, *Charlotte Brontë: The Imagination in History* (Oxford: Oxford University Press, 2004), p. 101.

[44] Robert Southey, 'Art. IV.' Rev. of *Propositions for Ameliorating the Condition of the Poor...By P. Colquhoun*, *Quarterly Review* (Dec. 1812), pp. 319-56 (p. 353).

of workers' political radicalism as a mere symptom of the conditions created by the "manufacturing system," but his naturalistic view of radicalism as originating in a craving for "excitement" then puts the onus on the manufacturers to change conditions for their workers.' But while any such compassionate recognition of the conditions causing workers' political daydreams is distinctly *not* recycled into his advice for Brontë (presumably because he was much less willing to acknowledge an 'onus [...] to change conditions' for womanhood than for factory work) Southey's reuse of a diagnostic strategy from 1812 to 1837 suggests that he, too, saw a continuity between working-class radicalism and female daydream – as experiences of social discontent which needed to be invalidated by medical labels of overstimulation and delusion, and suppressed by medical treatment.[45]

The struggle of women and workers to affirm their credibility as witnesses of their own experiences makes clear the objectivising threat of medical interpretation. While the Luddite communities themselves exercised no right of reply to the medical explanation (and dismissal) of what they probably perceived as reasoned political positions founded on all-too-real experiences of economic distress, Brontë's autobiographical records and published fictions offer a rare voice for the resistance of first-person experiences. Although the fantasies of Brontë and her protagonists fall short of the political abstractions and utopianisms of radical workers, daydreaming for Jane, Caroline, and Lucy nonetheless represents a deliberate rejection of their social and economic reality based on a critical awareness of its shortcomings and dissatisfactions – as well as a desire to imagine more satisfying alternatives of how reality could be. To read between the lines of Brontë's journal in 1836, then, is potentially to read a narrative where months of daydreaming about more engaging avenues for 'my spirit', 'my living feelings', and 'my energies' (p. 158) than teaching eventuated in a dramatic decision to contact the Poet Laureate for help in effecting a career change. To read otherwise – for example, to follow a very canonical view that considers Brontë's daydreams and her literary output as bursts of intense, spontaneous, and pathological creativity – is to leave no room to credit Brontë's dissatisfaction, volition, and determination. In short, it is to call her desire for a literary career her 'day dreams', rather than her *ambitions*.

'Symptomatic' Reading

Daydreaming about 'the continent of Europe, like a wide dream-land' while sailing to the titular Villette, Lucy Snowe describes the horizon as

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[45] Budge, p. 63.

'grand with imperial promise [...] an arch of hope', before suddenly checking herself. 'Cancel the whole of that, if you please, reader – or rather let it stand, and draw thence moral – an alliterative, text-hand copy – Day-dreams are delusions of the demon' (p. 76). She retreats below deck with sea-sickness. As Ford has argued, such a scene seems to exemplify a 'conflict between Lucy's imagination and reason that portends more severe contests to come.'[46]

Lucy's psychic shocks and collapses throughout *Villette*, as well as her experience of being drugged with opium, seem to corroborate this reading of internal conflict between self-discipline and passionate intensity – one which has a long heritage in Brontë biography and criticism. Even from 1857, Elizabeth Gaskell's biography of Brontë read her early writings as indicative of 'her fancy and her language run riot, sometimes to the very borders of delirium',[47] a concern later echoed by Q. D. Leavis's characterisation that the Brontës' 'practice of creating a fictional daydream world persisted into adult life, so that from being the most precocious of children they became retarded adults.'[48] The rise of psychoanalysis gave more ballast to such narratives, characterising Brontë as an 'abnormally developed personality – the neurotic or the genius', whose fiction 'to the very words, came to her whole and unalterable, out of what some of us now choose to call the Unconscious [...from] emotional conflict in her own soul'.[49] Even as feminist critics like Sandra Gilbert and Susan Gubar overturned such judgemental pathologising into a history of repressed female creativity, their rereading nonetheless kept intact an image of Brontë as 'essentially a trance writer',[50] and of *Villette* as 'not a literary object but a literature of consciousness.'[51] Whether as 'delirium', 'daydream', 'Unconscious', or 'trance', the discipline or repression of an involuntary or intuitive mental state is at the heart of Brontë's mythology as an author.

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[46] Ford, 'Vision and Pathology', p. 147.

[47] Elizabeth Gaskell, *The Life of Charlotte Brontë*. Ed. Elisabeth Jay. (London: Penguin, 1997), p. 66.

[48] Q. D. Leavis, *Collected Essays*. Ed. G. Singh. Vol. 1. (Cambridge: Cambridge University Press, 1983), p. 174.

[49] See Lucile Dooley, 'Psychoanalysis of Charlotte Brontë, as a Type of the Woman of Genius', *The American Journal of Psychology* 31.3 (1920), pp. 221-72 (pp. 222-3).

[50] Sandra M. Gilbert and Susan Gubar, *The Madwoman in the Attic: The Woman Writer and the Nineteenth-century Literary Imagination* (New Haven: Yale University Press, 1980), p. 311.

[51] Gilbert and Gubar, p. 439.

The recent growth of medical humanities research has helped to qualify, contextualise, and demystify this narrative, but has also in its own way contributed to it. In the last two decades, a growing recognition of the porousness between science and culture in the nineteenth century has meant that, as Helen Small has written, 'the general emphasis in interdisciplinary studies is on complementarity [...] literary critics have turned to medical history to ground their readings of fiction's mad people in the lived experience of eighteenth- and nineteenth-century' men and women'.[52] One exemplar of such studies is Shuttleworth's project of tracing the medical categories and terminologies co-opted into Brontë's fiction. Locating Brontë's use of terms like 'monomania' and 'moral insanity' to the medical texts on the shelves of the Parsonage, Shuttleworth's unpacking of the scientific specificity of Brontë's language represents an influential model for historicising literary representations of mental illness.[53] On the one hand, such acknowledgements of Brontë's own engagement with nineteenth-century medical science affords her more autonomy and self-knowledge than earlier stereotypes of 'a quivering wreck naively spewing forth her complexes into her books',[54] or of her work 'as merely the output of a neurotic unconsciousness writing ignorantly and compulsively'.[55] On the other, the natural predominance of mental illness as a topic in medical sources has also continued to skew scholarship towards a focus on representations of disorder and mental abnormality in literature. This methodological focus comes under some tension when individual lived experiences struggle for recognition *against* medical sources – indeed, when individuals disagree with medical science about whether they are ill at all.

Ford's work in excavating the complicated diagnostic history of the daydream from a large archive of medical texts explicitly follows Shuttleworth's example in moving from medical history into literary interpretation. For example, Ford's 2010 medical-historical study 'The Interpretation of Daydreams: Reverie as Site of Conflict in Early Victorian Psychology' makes use of a survey of the 'important medical and philosophical treatises published between 1830 and 1870' by John Abercrombie, Robert Macnish, James Cowles Prichard, John G. Millingen,

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[52] Helen Small, *Love's Madness: Medicine, the Novel, and Female Insanity, 1800-1865* (Oxford: Clarendon, 1996), pp. 36-7.

[53] Shuttleworth, pp. 48-56.

[54] See Lucasta Miller, *The Brontë Myth* (London: Vintage, 2002), p. 138.

[55] See John Maynard, *Charlotte Brontë and Sexuality* (Cambridge: Cambridge University Press, 1984), p. 71, quoted in Carol Bock, *Charlotte Brontë and the Storyteller's Audience* (Iowa City: University of Iowa, 1992), p. 164.

Henry Holland, George Henry Lewes, and Walter Cooper Dendy to argue that the diagnostic definition of 'reverie' was in 'conflict [...] between what could be summed up as generative and degenerative brands' (p. 83). Her literary study in *Brontë Studies* the following year, ' "The track of reverie": Vision and Pathology in *Shirley* and *Villette*', sets out an explicit statement of intention to build on Shuttleworth's methodology: 'My aim here is to add 'reverie' to the list of pathological vocabulary employed by Charlotte Brontë [...] in a text that, as Sally Shuttleworth has stressed, combines Gothic elements with medico-cultural discourse'.[56] Her reading retraces her earlier medical-historical narrative of reverie's unstable medical definition to a literary interpretation that Brontë's fictions 'invest "reverie" repeatedly with ambivalent and gendered force [...] the notion veered between positive and negative interpretations' (p. 141). Scenes like Lucy's reverie at sea are therefore read as examples which show Brontë reflecting 'contemporary psychological discourse' and repudiating 'reverie' as 'unstable if compelling [...] best for her sensitive female protagonists to avoid, despite its enduring allure' (p. 149-150). Read alongside Lucy's experience of opium, such a reading attributes daydreaming with the inherent attraction of chemical agents, and the involuntary behaviour of addiction, and is therefore replicative of Victorian attitudes towards overstimulation and opiated consciousness. Ford ultimately presents Brontë as prescribing something much like Southey's 'best advice for your health', or Gaskell's concerns with fancies 'run riot [...] to the very borders of delirium'. The movement of her research between medical-historical evidence and literary texts follows a 'track' which she argues Brontë herself has travelled in assimilating a 'pathological vocabulary' into fiction.[57]

But just as Brontë's response to Southey's advice is not necessarily as acquiescent as it first appears, there is potentially more to her engagement with contemporary medical knowledge than complementarity, reflection, or the smooth assimilation of ideas. Many of the medical texts owned, read, and annotated by Brontë's father reinforce Southey and Gaskell's attitudes: Thomas John Graham's *Modern Domestic Medicine* lists 'inactivity and a sedentary life', 'passions of the mind', and

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[56] Natalie Mera Ford, ' "The Track of Reverie": Vision and Pathology in Shirley and Villette', *Brontë Studies* 36.2 (2011), pp. 141-51 (p. 145). Further references given after quotations in the text.
[57] Ford, 'Vision and Pathology', p. 145.

'every considerable emotion' among the causes of hysteria,[58] while Robert Macnish's *The Philosophy of Sleep* defines youthful reverie as 'a habit of inattention, which, in extreme cases, may terminate in imbecility [...] it is apt to injure the usefulness of the individual'.[59] These texts come to be echoed later in the century by Carter's recommendations 'to avoid everything likely to produce emotion of any kind [...] to enjoin regular daily exercise, not confined to a lounging walk, but carried to the point of fatigue'.[60] But if Brontë was familiar with these medical cautions by the time they were restated to her in 1839 as recommendations to combine 'a quiet mind' with 'proper duties' and 'ordinary uses',[61] she would have also encountered Macnish's claim that reverie is 'frequently induced by forcing young people to learn what they dislike' (p. 278), and that 'In such a case, the person should be strongly directed to those subjects in which he feels most *interest*, and never be made to study what he has not a positive liking for' (p. 283, emphasis added). What would Brontë, for whom the crushingly uninteresting duties of the unmarried woman are performed because 'I must, so to speak' (p. 158) or 'she must, I suppose',[62] have made of this advice? Such an example suggests the possibility of a more idiosyncratic and less disciplinary relationship between the individual and their contemporary medical knowledge. While Brontë may have turned to external definitions for a vocabulary with which to describe and understand types of mental illness, for a mental state which she once described as 'the ark' in which her 'heart' sheltered, she was more than capable of discriminating between which parts chimed with her experience, and which utterly opposed it.

Such a possibility leaves us with the challenge of discerning the difference between a genuine assimilation of medical theories and a strategic balancing of public knowledge with private experience. To return to Lucy's apparent self-disciplining in *Villette*, it is significant that while her narration is often riddled with gaps and ambiguities from psychological pressures and involuntary lapses in consciousness, she is also often deliberately evasive, or even deceptive: at one point withholding her recognition of a returning character from the reader, and refusing to confirm the fate of her lover at the end of the novel. To build

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[58] Thomas John Graham, *Modern Domestic Medicine* (London: Simpkin and Marshall, 1827), p. 387.
[59] Robert Macnish, *The Philosophy of Sleep* (Glasgow: W.R. M'Phun, 1836), p. 279. Further references given after quotations in the text.
[60] Carter, p. 101.
[61] Southey, 22 Mar. 1837, p. 159; Southey, 12 Mar. 1837, p. 166.
[62] Brontë, 12 May 1848, p. 66.

on Carol Bock's argument that 'to take Brontë seriously as a thinker and as a writer' requires interpretations which 'see the ambiguities in her novels as intentional – the apparent contradictions as a sign of complexity rather than a symptom of confusion",[63] one can read Lucy's reneging of her daydream in more 'intentional' ways than as a 'conflict between [...] imagination and reason'.[64] Her sudden and explicit request to 'Cancel the whole of that, if you please, reader', to overwrite a heartfelt description of her aspirational daydream with a self-disciplinary (even alliterative) 'moral',[65] could be read either as a genuine check on a dangerous habit *or* as a more cynical protestation of compliance specifically addressed to a patronising 'reader' – that 'I am not altogether the idle dreaming being it would seem to denote'.[66] The too-freely offered 'moral', to refrain from a mental exercise which Lucy obviously enjoys and which evidently sustains her, also recalls by contrast the narrator's joke at the ending of *Shirley*, of spying 'the judicious reader putting on his spectacles to look for the moral. It would be an insult to his sagacity to offer directions.' (p. 740-1) It would be a denial of Brontë's sagacity, in turn, to take her or Lucy's meekness too much at face value.

The tendency to read over the potential for volition, deliberation, and consciousness in Brontë and her protagonists is broadly indicative of the temptation to a very literal kind of 'symptomatic reading'. To borrow and literalise the term from Stephen Best and Sharon Marcus, such readings are 'symptomatic' in that they too readily interpret fictional representations of mental experience as representations of medical symptoms, based on an assumption that the experience being explored is necessarily a form of disorder.[67] This affinity for characterising Brontë's protagonists as individuals suffering or under threat from internal mental disorders (whether innate or born of repression), rather than healthy individuals reacting rationally and creatively to external social dissatisfactions, is where the focus on mental illness in recent medical humanities research most resembles the traditional morbidity of Brontë

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[63] Bock is arguing against what she calls a 'confessional tradition' of interpreting Brontë's work as a psychological outpouring, something which Ford avoids in her representation of Brontë as consciously engaging with medical theories rather than simply being a victim to them. My argument here takes more specific issue with Brontë's implied compliance in that engagement. See Bock, p. 164.

[64] Ford, 'Vision and Pathology', p. 147.

[65] Brontë, *Villette*, p. 76.

[66] Brontë, 16 Mar. 1837, p. 169.

[67] See Stephen Best and Sharon Marcus "Surface Reading: An Introduction", *Representations* 108.1 (2009), pp.1-21 (pp. 3-5).

criticism and biography. As Mary Jacobus has also written of Gilbert and Gubar, 'The warning might run: Doesn't this view of women's writing as symptom, this privileging of the female gothic, deny its variousness and multiformity?'[68] How might critics put more faith in the nuance and range of individuals' responses to the authority and objectivity of medical knowledge, practitioners, and institutions?

The fact that medical-historical archives are much more public, objective, and accessible than the rare and fragmentary records of subjective experiences contributes significantly to the elusiveness of 'variousness and multiformity'. Ubiquitous yet invisible, the private experiences of the daydream form a slippery topic of investigation compared to the visible public process of medical research and discussion. As Debra Gettelman has pointed out of scholarship in the History of Reading, investigations into the contents of subjectivity rather than categories of public knowledge must 'remain as aware as ever that readers' minds are stubbornly resistant to the historical record [...and] openly self-conscious about the difficulty or impossibility of recovering something as intangible as the psychological experience of a long-gone reader.'[69] But if such epistemological barriers make individual, everyday mental states like reading or daydreaming difficult to detect and to tease out from their traces in the historical and literary record, the regularity with which Charlotte Brontë's novels continually return to such experiences points to the importance of resisting their erasure. Equally important as investigating intense, altered, and abnormal forms of consciousness is recognising the important role which quotidian, undramatic, and non-pathological mental states played in shaping the agency and self-determination of historical individuals. To take daydreaming seriously without sending for the doctor is a difficult but important task of listening to what is 'not in the wind nor the fire nor the earth-quake', but in 'the still small voice alone'.

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[68] Mary Jacobus, Rev. of *The Madwoman in the Attic: The Woman Writer and the Nineteenth-Century Imagination*. *Signs* 6.3 (1981), pp. 517-23 (p. 521).
[69] Debra Gettelman, 'The Psychology of Reading and the Victorian Novel', *Literature Compass* 9.2 (2012), pp. 199-212 (p. 202).

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TWO BRAINS AND A TREE:
DEFINING THE MATERIAL BASES FOR DELUSION AND REALITY IN THE WOODLANDERS

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Abstract:

In *The Woodlanders* (1887), Thomas Hardy engages with contemporary scientific and philosophical discourse in his depiction of Edred Fitzpiers and the two brains he seeks to study: the brains of Grammer Oliver and John South, the latter who has just died from fear of a tree. While the character of Fitzpiers reflects some of the fears that physiologists raised for the Victorian public, Hardy continually creates a series of doublings to both illuminate the scientific discussion and complicate it. Following the movement away from the metaphysical toward the material causes underlying all action and feeling, Hardy subtly suggests the physical basis for John South's delusions; furthermore, he blurs clear delineations between illusion and reality. At the same time as suggesting that man might be no more than a machine, his fiction calls for empathy with even the inanimate world—without which, he seems to argue, there can be no fellow-feeling for humankind. While his contemporaries were asking whether vivisecting an animal was like vivisecting a human, Hardy moves the question one step further, dislimning boundaries between the arboreal and the human: as can be seen in the following investigation of two brains and a tree.

Visitors to Thomas Hardy's Max Gate in Dorchester in the early twentieth century often remarked upon the overgrowth of the trees surrounding the house. Hardy planted the trees himself on New Year's Eve 1883 before heading to London for the rest of the winter: a fir plantation of a rumoured 2,000 trees that served as a physical barrier to block the wind and to ensure the privacy of the home and garden.[70] According to his biographers, Hardy 'refused to allow the trees to be cut back for fear of "wounding" them'.[71] This worry of 'wounding' a tree demonstrates an unusual and particularly Victorian respect for the arboreal world, often expressed in a sentiment against the felling of trees in that era. As Keith Thomas ironically notes, 'in Victorian landscape photography the trees often have greater individuality than the figures standing beside them.'[72] The sense of the trees being living creatures can be traced into early twentieth century writing; in Virginia Woolf's *Mrs Dalloway* (1925), for

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[70] Thomas Hardy, *The Life and Work of Thomas Hardy*, ed. by Michael Millgate (London: Macmillan, 1984), p. 170.

[71] Michael Millgate, *Thomas Hardy: A Biography Revisited* (Oxford: Oxford University Press, 2004), p. 244.

[72] Thomas, *Man and the Natural World: Changing Attitudes in England 1500-1800* (Middlesex: Penguin, 1984), p. 212.

example, Septimus Smith repeatedly thinks 'leaves were alive; trees were alive,' describing the sensation of 'the leaves being connected by millions of fibres with his own body'.[73] While Smith's thoughts often are taken as the ravings of a man suffering what would now be labeled post-traumatic stress disorder from service in the First World War, what if his premise that trees are alive and interconnected to the fate of the human were taken seriously?

Septimus Smith's feeling of connectedness with trees finds an earlier literary resonance in Hardy's *The Woodlanders* (1887).[74] Perhaps the most unusual case presented to Hintock's doctor, Edred Fitzpiers, is that of John South: a man dying not from 'any organic disease' but from fear of a tree (p. 92). When the tree is cut down, South dies by sundown the next day, fulfilling his prophecy that his life would be bound up with that of the tree. In contrast to this patient who believes that a tree is alive Hardy sets up Fitzpiers as a rational, philosophical man of science who casually holds, as one character tells Grace Melbury, 'that no man's hands could help what they did, any more than the hands of a clock' (p. 50). When Grace first meets the doctor (in order to relieve her family servant from a bargain struck with him, trading the servant's brain after her demise for ten pounds while she was living), Fitzpiers welcomes her to look through his microscope, to experience his perspective of the world. Grace recoils when she finds out the specimen on display is from John South's brain— not because of the nature of the tissue, but rather 'with wonder as to how it should have got there'. Fitzpiers laughs at her reaction, exclaiming, 'Here I am [...] endeavouring to carry on simultaneously the study of physiology and transcendental philosophy, the material world and the ideal, so as to discover if possible a point of contact between them; and your finer sense is quite offended!' (p. 131).

Viewed through Fitzpiers's lens, the movement of the cranial tissue from man to specimen is logical: the 'extraordinary case' is no more than an 'experiment' for him, an opportunity to carry out an 'investigation' (p. 102, p. 117). In this sense, Fitzpiers figures as the Victorian stereotype of a physiologist: a cold-hearted man tinkering in his laboratory to appease his own curiosity. His wish to find a 'point of contact' between physiology and philosophy illuminates the division between the two fields that occurred after Darwin. Fitzpiers's engagement with each field—while shown as offhand, desultory interest in the novel—reflects Hardy's

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[73] Woolf, *Mrs Dalloway*, ed. by Stella McNichol (London: Penguin, 2000), p. 24.

[74] *The Woodlanders*, ed. by Dale Kramer (Oxford: Oxford University Press, 2000). Further references are given after quotations in the text.

genuine involvement with contemporary scientific thought. George Levine notes that Fitzpiers's research parallels (and perhaps parodies) Lydgate's in George Eliot's *Middlemarch* (1871-2), adding,

> in any case, it is a parody of ideas that Hardy takes with the greatest seriousness and that are central to the novel. The post-Darwinian sensibility of the narrator (as well as of Fitzpiers, one can presume), is imbued with a sense that all of life can be traced out into the material world. How then to account for, how to deal with, consciousness, art, love, morality?[75]

The work of this article will be to examine some of 'the ironies of the incompatibility between consciousness and matter, between the social and the natural' that the novel raises, using the image of John South's brain under the microscope as a pivot (p. 191). Critics including Levine, Suzanne Keen, and J. Hillis Miller have explored the intersections of scientific discourse and neurological imagery in Hardy's writings; and William Cohen, Peter Casagrande, and Michael Irwin have considered the relationship between humans and trees in *The Woodlanders*.[76] This article will argue that the two discourses are interconnected through the Victorian scientific movement away from the metaphysical toward the material causes underlying action and feeling.

In his depiction of the inhabitants of the woodlands, Hardy creates a series of doublings that both illuminates the scientific discussion and complicates it. The character of Fitzpiers—Hardy's only protagonist doctor in a novel—reflects some of the public fears raised in relation to the experimentation conducted by Victorian physiologists (on bodies and

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[75] George Levine, '*The Woodlanders* and the Darwinian Grotesque', in *Thomas Hardy Reappraised: Essays in Honour of Michael Millgate*, ed. by Keith Wilson (Toronto: University of Toronto Press, 2006), pp. 174-198 (p. 191). Further references are given after quotations in the text.

[76] For a study of Hardy's writings in relation to Victorian intersections between science and literature and to current cognitive literary studies, see Suzanne Keen's *Thomas Hardy's Brains: Psychology, Neurology, and Hardy's Imagination* (Columbus: Ohio State University Press, 2014). For a discussion of *The Dynasts*'s use of neural imagery, see J. Hillis Miller's *Thomas Hardy: Distance and Desire* (London: Oxford University Press, 1970). For discussions of porous boundary between humans and trees in *The Woodlanders*, see William Cohen's 'Arborealities: The Tactile Ecology of Hardy's Woodlanders', *19: Interdisciplinary Studies in the Long Nineteenth Century*, 19 (2014), 1-19; Michael Irwin's *Reading Hardy's Landscapes* (London: Macmillan, 2000); and Peter Casagrande's 'The Shifted "Centre of Altruism" in *The Woodlanders*: Thomas Hardy's Third "Return of a Native"', *ELH*, 38.1 (1971), 104-125.

brains, human and animal) that suggested material bases for psychological phenomena. This attention to the materiality of the mental provides a context for a new analysis of John Smith's illness: Hardy subtly suggests a physical basis for South's delusions while repeatedly complicating clear delineations between illusion and reality throughout the novel. Closely connected to the fallibility of perception is the need for empathy in navigating a material-based world. At the same time as suggesting that man might be no more than a machine, Hardy's fiction calls for empathy with even the inanimate world—without which, he seems to argue, there can be no fellow-feeling for humankind. While his contemporaries were asking whether vivisecting an animal was like vivisecting a human, Hardy moves the question one step further, dislimning boundaries between the arboreal and the human: as can be seen in the following investigation of two brains and a tree.

I. Grammer Oliver's brain and 'the young medical gentleman in league with the Devil'

The first brain the reader encounters in *The Woodlanders* is not that of John South's under the microscope: rather, it is the large specimen contained within the skull of a living character's head, namely, Grammer Oliver's. Grammer Oliver, the Melburys' servant, tells Grace Melbury of the bargain she has struck with a new inhabitant of Hintock, the young Dr. Fitzpiers. Already the reader has been primed to see Fitzpiers as the figure of the evil surgeon-scientist, the sort of man whose laboratory practices may not be suitable for young women like Grace to read about in respectable Victorian journals. The narrator introduces him in chapter three through the light burning in his window into the darkness of the night, referring to him as 'the young medical gentleman in league with the Devil, of whom there is something to be said later on', and the woods-folk have heard rumours 'he has sold his soul to the wicked one' (p. 15, p. 30).[77] George Melbury dismisses the gossip as '[n]onsense', insisting the doctor is 'a gentleman fond of science, and philosophy, and poetry, and in fact, every kind of knowledge' (p. 31). The dichotomy set up here illustrates Victorian attitudes toward physiologists and reflects the nature of the changes the field was undergoing. After Darwin demonstrated the origins of mankind from a common progenitor with all other animals, the

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[77] The idea of the scientist as selling his soul to the devil dates back to the story of Faust, popularized in England in the Elizabethan period with Christopher Marlowe's play, *The Tragical History of the Life and Death of Doctor Faustus* (1604).

Cartesian dualism that separated humans (as uniquely possessing immortal souls) from animals (who did not possess the type of soul that might distinguish them from a machine) lost its foundation.[78] Moving forward, physiologists used animals as anatomical and biological models for the human body—especially with the practice of vivisection—and, as Anne Stiles notes in her work on popular fiction and neuroscience in the late-Victorian period, 'this cultural sea change was reflected in the disappearance of the *soul*, which gradually vanished from mainstream scientific discourse in the wake of cerebral localization experiments and theories of cerebral automatism.'[79] The reaction of the inhabitants of Hintock to the experimenting of their new and strange doctor as being somehow mixed up with black magic and being 'in league with the Devil', then, shows the way this 'sea change' was felt even in the rural stretches of England: there is a suggestion that to be a 'gentleman fond of science' somehow implies selling one's soul.

Fitzpiers's desultory combination of metaphysics and physiology, though, is in opposition to the current of scientific thought in the 1870s: while, as Stiles points out, 'the study of the mind or soul gave way to the measurement of physical phenomena occurring within the brain and nervous system' (p. 52), Fitzpiers attempts to do both, holding on to the dualism proposed by Descartes (who believed, from the basis of shape, that the soul might be located in the pineal gland).[80] Grammer Oliver, who cleans the doctor's house, tells Grace of the philosophical snippets Fitzpiers has told her, echoes of Kant and Spinoza, but the phrase that perhaps stands out the most is her reference to his reading of humans as automata: the suggestion that 'that no man's hands could help what they did, any more than the hands of a clock' (p. 50). In 1874, Thomas Huxley posited a startling reconfiguration of Descartes's suggestion that animals were automatons in his lecture 'On the Hypothesis that Animals are

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[78] See René Descartes, *Discourse on Method* and *The Meditations*, trans. by F. E. Sutcliffe (London: Penguin, 1968), p. 76. Darwin was not the first to suggest a theory of evolution: his own grandfather Erasmus Darwin and (more famously) Jean-Baptiste Lamarck had proposed earlier theories, but none with a viable mechanism. Darwin and Alfred Russel Wallace were the first to formulate the idea of natural selection as a means through which evolution could occur, thus giving the theory credibility.

[79] Stiles, *Popular Fiction and Brain Science in the Late Nineteenth Century* (Cambridge: Cambridge University Press, 2012), p. 51. Further references are given after quotations in the text.

[80] For Descartes's investigation of the soul's location, see J. Cottingham, R. Stoothoff, and D. Murdoch, *The Philosophical Writings of Descartes*, 2 vols (Cambridge: Cambridge University Press, 1984), I, 340.

Automata, and Its History'.[81] Detailing a fascinating account of the complex behaviors that could be induced in a frog undergoing cranial modifications—including the ability to swim and to avoid obstacles in its path despite the loss of its optic lobes—then in a sergeant who suffered a wound to his left parietal bone in battle and began to display periodical 'abnormal states' in which he ceased to respond to external sensory stimuli (except touch) yet was able to carry out complex behaviors such as writing a letter or singing a song, Huxley eventually came to a single conclusion: if animals were machines, as Descartes posited, then human animals were, too.

Hardy had followed the scientific movement toward a physiological basis for all phenomena, copying the following quotation from George Henry Lewes in his notebook:

> Physiology began to disclose that all the mental processes were (mathematically speaking) <u>functions</u> of physical processes, i.e.—varying with the variations of bodily states; & this was declared enough to banish for ever the conception of a Soul, except as a term simply expressing certain functions.[82]

He fully embraced Huxley's suggestion of humans as automata and began experimenting with the suggestion in his fiction: perhaps most notably in *The Dynasts* (1904-08), where Napoleon has moments of realizing all his actions were the product of an unknown Immanent Will he 'passively obeyed',[83] but even in *The Woodlanders* the term automaton appears to describe Giles, who goes about his 'work daily like an automaton' after Grace has married Fitzpiers (p. 223). For Huxley, humans were 'conscious automata', whose 'mental conditions [were] simply the symbols in consciousness of the changes which take place automatically in the organism', and whose 'sum of existence' consisted of a 'great series of causes and effects'.[84] All 'states of consciousness', in humans or animals, were the result of 'molecular changes of the brain-substance'—including, one might note, states of delusion and the perception of reality.[85]

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[81] Huxley, 'On the Hypothesis that Animals are Automata, and Its History', in *Collected Essays*, 9 vols (London: Macmillan, 1893), I, pp. 199-250.

[82] *The Literary Notebooks of Thomas Hardy*, ed. by Lennart A. Bjork, 2 vols (London: Macmillan, 1985), I, p. 92.

[83] 'The Dynasts', *The Poetical Works of Thomas Hardy*, vol. 2 (London: Macmillan, 1924), p. 519.

[84] Huxley, p. 244.

[85] Ibid, p. 244.

Setting aside the implications such a train of thought had for free will (which Hardy was in the process of percolating himself, his own articulations of the matter taking form filtered through Schopenhauer's influence later in *The Dynasts*), one might consider the anxieties raised by the direction of this discourse for Victorians still grappling with what Freud later called the 'Darwinian trauma' to man's place in the universe. Already the increase of experimentation on animals with vivisection raised fears that what scientists would do to dogs and apes they might eventually practice on humans. Huxley's suggestion of 'mental conditions' as nothing more than material changes in brain-matter was even more unsettling: it transformed the mystery of sentience into an elaborate cranial machine to be mapped and dissected. Even the mind was made material: and in the hands of scientists, human brains might be profitable material for investigation indeed.

In her discussion of the way late-Victorian Gothic romances conversed with contemporary cerebral research and reflected the fears of the public, Stiles points out that many Victorians first became aware of the research taking place through the Ferrier trials: a series of trials investigating the vivisection practices of David Ferrier, a physiologist whose extensive studies on the brains of animals allowed for the earliest mapping of the brain and paved the way for advances in neurosurgery. His goal, as he wrote in *The Localization of Cerebral Disease* (1878), was to show that 'what is true of the monkey is strictly true also of man'.[86] This idea was shocking for two reasons. First, as Stiles explains, '[d]uring and after the Ferrier trials, the Victorian lay public was rudely confronted with the idea that their mental and spiritual activities might be purely mechanical, traceable to electrical activity in specific regions of the brain' (p. 24). Second, if his work was meant to eradicate the difference between humans and animals in a physiological sense, what were the moral implications of animal experimentation? Stiles notes that the 'Victoria Street Society [...] were appalled to learn that Ferrier had kept his monkeys alive for days, weeks, even months following their cranial surgeries in order to witness the long-term effects of cerebral damage' (p. 67). Perhaps even more ominous is the fact that Ferrier later conducted experiments at West Riding Lunatic Asylum in Yorkshire, where he 'produced the first map of the motor cortex which demonstrated that

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[86] Stiles, p. 66. Further references are given after quotations in the text.

different functions of the brain were located in different regions of the hemispheres'.[87]

The ominous insinuation of Huxley's suggestion of humans as automata was that vivisecting humans might not be that different from vivisecting animals, if both were 'conscious automata' whose lives could be boiled down (or, in the case of Claude Bernard's subjects, baked) to series of ongoing chemical reactions, and this was often a central fear driving repugnance toward the act of vivisection. With the removal of the soul from scientific discourse, what was to prevent the use of human subjects for vivisection? As George Bernard Shaw suggested in his preface to *The Doctor's Dilemma* (1911), 'the man who once concedes to the vivisector the right to put a dog outside the laws of honor and fellowship, concedes to him also the right to put himself outside them; for he is nothing to the vivisector but a more highly developed and consequently more interesting-to-experiment-on vertebrate than the dog.'[88] Hardy's own view on vivisection is surprisingly utilitarian (or perhaps not surprisingly, given John Stuart Mill's importance to Hardy): while historically he has been labeled as anti-vivisectionist, his correspondence with Florence Henniker and others shows a repeated reluctance to lend support to the anti-vivisection movement, despite his general stance against cruelty to animals, whom he viewed as kin.[89] His viewpoint on vivisection comes closer to Charles Darwin's: while both repudiated the

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[87] Ann Scott, Mervyn Eadie, and Andrew Lees, *William Richard Gowers 1845-1915: Exploring the Victorian Brain* (Oxford: Oxford University Press, 2012), p. 95. Hardy met and even discussed brains with James Critchton-Browne, who was director of the asylum at the time of Ferrier's experiments there; see *Life and Work*, p. 275.

[88] [George] Bernard Shaw, *The Doctor's Dilemma: A Tragedy*, ed. by Dan H. Laurence (London: Penguin, 1946), p. 52. Shaw's good friend Henry Salt, the founder of The Humanitarian League, made the fear even more explicit in his one-act play 'A Lover of Animals', in which a vivisector is accused of having 'cut open' the head of his servant 'for the sake of the students of the hospital, and not for his own benefit at all'; see George Hendrick's *Henry Salt: Humanitarian Reformer and Man of Letters* (Chicago: University of Illinois Press, 1977), p. 192.

[89] For Hardy's reluctance to support the anti-vivisection movement, see *The Collected Letters of Thomas Hardy*, ed. by Richard Purdy and Michael Millgate, 8 vols (Oxford: Clarendon Press, 1978-1988, 2012), II, p. 47; III, p. 74; IV, p. 34; V, p. 30. For his view on animals as kin, see *Life and Work*, pp. 373-374, pp. 376-377; the former is his sole statement against vivisection, which equivocates that the 'practice' *sometimes may* 'be defended [...] on grounds of it being a good policy for animals as well as for men'. For Mill's influence on Hardy, see Phillip Mallett's 'Hardy and Philosophy', in *A Companion to Thomas Hardy*, ed. by Keith Wilson (West Sussex: Wiley-Blackwell, 2009), pp. 21-35.

thought of causing needless suffering to animals, they realized that physiology as a field could only improve through such experimentation, and they believed that the benefits—for both humans and nonhumans—might outweigh the negative factors.[90]

Hardy plays between this utilitarian aspect and the devil-imbued rural formulation of Victorian fears of physiologists in the exchange between Grammer Oliver and Grace when she explains the offer on her brain. Grammer Oliver informs Grace:

> "Well—he talks of buying me [...]
> "Buying you—how?"
> "Not my soul—my body, when I'm dead."

She adds that Fitzpiers has noticed the 'very large' size of her brain, admiring it with the comment, '[a] woman's is usually four ounces less than a man's; but yours is a man's size' (p. 50). He offers her ten pounds for her head after her death. Given that brain size was an indicator of intelligence in Victorian thought—a fact Grace, who has been examined by a phrenologist, would have known—Fitzpiers's observation is high praise.[91] (The suggestion that Grammer Oliver is intelligent is born out in the novel both by Grace's trust in the elder woman's assessment of whether the doctor is 'clever' (p. 50), and by Oliver's sharp manipulation of Grace to negotiate her way out of her bargain with Fitzpiers—while keeping the ten pounds.) Fitzpiers's impassive negotiation in obtaining a 'specimen' from its living form and later refusal to back down on the deal when Grammer Oliver asks to be released from it plays out on two levels. On one hand, it adds 'fascinating horror' to Grace's picture of the yet unknown doctor: she imagines him as 'a remorseless Jehovah of the sciences, who would not have mercy, and would have sacrifice' and 'a merciless, unwavering, irresistible scientist' (p. 122). She dreams of him as 'a weird alchemist-surgeon' who chases 'Grammer Oliver's skeleton' with a 'scalpel in hand' (p. 51, p. 122). In this sense, Fitzpiers could line up next to Frankenstein, Moreau, and the other scientists of literature who figure as the physiologist who went too far, crossing the murky moral boundary

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[90] See David Allan Feller, 'Dog fight: Darwin as animal advocate in the antivivisection controversy of 1875', *Studies in History and Philosophy of Biological and Biomedical Sciences*, 40 (2009), pp. 265-271.

[91] Stiles notes that cranial measurements were considered the best identifier of intelligence in the Victorian period; see p. 122.

within experimentation.[92] Yet the narrator, like Melbury, undoes this image of Fitzpiers as the mad scientist:

> as need hardly be said, Miss Melbury's view of the doctor [...] was not quite in accordance with fact. The real Doctor Fitzpiers was a man of too many hobbies to show likelihood of rising to any great eminence in the profession he had chosen[...]. In justice to him it must be stated that he took such studies as were immediately related to his own profession in turn with the rest, and it had been in a month of anatomical ardour without the possibility of a subject that he had proposed to Grammer Oliver the terms she had mentioned to her mistress. (p. 122)

The second level, then, while less frightening on the surface, is more unnerving: Fitzpiers is no longer a mad scientist labouring in his laboratory but a regular man with a variety of interests whose modern beliefs lead him to view a living person in his close proximity—in this case, Grammer Oliver as she cleans his living quarters—as a possible subject for posthumous study. Possessing a material body, then, means the possibility of transformation into nothing more than a specimen for study. Fitzpiers's bargain and willingness to wait resembles something akin to paying in advance while waiting to reap one's goods; as Suzanne Keen ironically notes, 'the orchard region' in *The Woodlanders* 'cultivates not just apples but other products for harvest: hair, brains, people'.[93] The very normalcy of the transaction makes it unsettling. Even Grammer Oliver formulates her end of the bargain in utilitarian terms, saying, 'faith, if I can be of any use to my fellow-creatures after I'm gone they are welcome to me' (pp. 50-51). Fitzpiers is simply 'a surgeon arranging to obtain a subject for dissection' (p. 129). He addresses Grace on her impressions of the arrangement, asking, '[y]ou think there was something very fiendish in the compact, do you not Miss Melbury?' Grace defers that she saw it simply as 'strange', and Fitzpiers concurs, 'Yes, that may be; since strangeness is not in the nature of a thing, but in its relation to something extrinsic—in this case an unessential observer' (p. 129). In his philosophical analysis of the scenario, it is only strange because Grace, an uninvolved and 'unessential observer' views it as such. Fitzpiers views the

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[92] Stiles examines such figures in her monograph, examining the interchange between scientific thought and Gothic romances, the latter which reflected the fears raised by cranial theory.

[93] Keen, *Thomas Hardy's Brains*, p. 155.

whole world through this objective philosophical lens: patients, lovers, and trees are no more than specimens for conjecture and perhaps experimentation.

Grace's wonder at Fitzpiers's possession of John South's brain is suggestive. First, that her recoiling from the microscope is not due to what she sees shows her own modern thinking; she, like Fitzpiers, is able to see a brain as just a brain—an attitude common today with the devolution of subjectivity from medical discourse, in which the individual human vanishes under the general moniker of 'patient' or 'case'.[94] Even though the knowledge makes her uneasy and inspires nightmares, Grace knows enough of 'advanced ideas' that she sees 'no harm' in Grammer Oliver's deal with Fitzpiers (p. 51). Yet the absence of explanation of how the brain came to be in Fitzpiers's possession suggests something nefarious. Dale Kramer, in his edition of the novel, notes deletions to the text surrounding South's brain, including 'an allusion [...] to Fitzpiers *not* having South's brain to examine, having by then passed out of that phase of his interests' (p. xxxiv). He further notices that 'Hardy never reinstated any of the deleted material that would have made clearer how Fitzpiers might have obtained a section of South's brain for dissection' (p. xxxiv). By leaving the question open, Hardy allows readers to form their own speculations—including the conclusion that Grammer Oliver's brain may not be safe after all (depending, of course, on Fitzpiers's intellectual whims at the time of her death).

II. The 'extraordinary case' of John South

The second brain that the reader encounters in *The Woodlanders* is that of John South. Before viewing it through the microscope with Grace, however, the reader learns what is unusual about this specimen by observing the 'extraordinary case' of his illness and death (p. 102). John South suffers from a paranoid monomania centered upon an elm tree 'which stood at a distance of two-thirds its own height from the front of [his] dwelling'. He watches it night and day, worried it will fall upon and crush his house. The narrator explains,

> Whenever the wind blew [...] the tree rocked, naturally enough; and the sight of its motion, and sound of its sighs, had gradually bred the terrifying illusion in the woodman's mind. Thus he would sit all day, in spite of persuasion, watching its every sway, and listening to

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[94] See Stiles, p. 15.

the melancholy Gregorian melodies which the air wrung out of it. This fear it apparently was, rather than any organic disease, which was eating away the health of John South. (p. 92)

The description of John South's disease matches contemporary medical discourse on delirium and illusions. The famed neurologist William Gowers describes delirium as a state in which '[m]ental processes cease to correspond with reality'. Specifically, John South seems to be suffering from delusions—or 'false ideas', in Gowers's phraseology—and illusions, caused by 'actual sensory impressions' (in this case, the sight and sound of the tree) that 'excite erroneous sensory impressions' (that the tree is alive).[95] Henry Maudsley, whose volume *Natural Causes and Supernatural Seemings* (1886) Hardy owned, defines an illusion as dependent on perception: it occurs '[w]hen there is an external object to excite the perception, but the nature of it is mistaken'.[96] For South, the movement and sounds evoked by the wind acting upon the tree serve as sufficient external stimuli to cause him to perceive the tree as a living being—and one that means to act maliciously.

South suffers from the 'quiet' or 'melancholy' delirium as opposed to the active or elated version, which Gowers notes is marked by 'delusions [...] (especially of sight) which dominate the patient's ideas' and may cause him to confuse 'inanimate objects for persons' and to talk 'almost continuously, but usually in a low monotonous voice'.[97] In South's case, vision plays a central role in his obsession; he sits 'staring [...] as if his gaze were frozen on to its trunk' (p. 101). Every dialogue he has with other characters focuses on this topic of the tree, and when Marty asks him a question about the possession of their house, his speech becomes 'rational and firm enough' during his answer, then 'laspse[s] back into his moaning strain' about the elm (p. 15). He seems to see the tree as his double, copying its movements with his own body and explaining to Giles,

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[95] Gowers, *A Manual of Diseases of the Nervous System*: *Diseases of the Brain and Cranial Nerves; General and Functional Diseases of the Nervous System*, 2nd edn (London: Churchill, 1893), p. 104.

[96] Maudsley, *Natural Causes and Supernatural Seemings*, 3rd edn (London: Kegan Paul, Trench, Trübner, 1897), p. 177. For more on Maudsley's influence on Hardy, see Keen's *Thomas Hardy's Brains* and Jenny Bourne Taylor's 'Psychology' in *Thomas Hardy in Context*, ed. by Phillip Mallett (Cambridge: Cambridge University Press, 2013) pp. 339-50.

[97] Gowers, p. 105.

> 'Ah—when it was quite a small tree,' he said, 'and I was a little boy, I thought one day of chopping it off with my hook to make a clothes-line-prop with. But I put off doing it, and then I again thought that I would; but I forgot it, and didn't. And at last it got too big; and now 'tis my enemy, and will be the death of me. Little did I think, when I let that sapling stay, that a time would come when it would torment me, and dash me into my grave.' (p. 92)

Like the titular characters of Hardy's poem 'The Felled Elm and She', this elm has grown up alongside South, marking the years of his life with its growth. As Marty explains to Fitzpiers, 'The shape of it seems to haunt him like an evil spirit. He says that it is exactly his own age, that it has got human sense, and sprouted up when he was born on purpose to rule him, and keep him as its slave. Others have been like it afore in Hintock' (p. 102).

While Fitzpiers marvels, 'This is an extraordinary case', Marty's comment that 'Others have been like it afore in Hintock' is revealing (p. 102). If one considers the context of Maudsley's writing on delusion, the observation has subtly eugenic undertones: Maudsley attributed cases of delusion to a 'loose-knit mind', explaining that '[i]n such cases there is commonly a loose mental fabric at the outset, with which native fault goes a necessary lack of thorough sincerity and stable unity of mind predisposing it to inconsistencies or actual incoherence of development'. The suggestion, then, is that the people of Hintock possess 'a loose mental'—and by Victorian correlation, moral—'fabric' to begin with, predisposing them to develop irrational beliefs and to misperceive the external world around them. Maudsley compares the development of an illusion to the practice of a dishonest act repeated at a job until it no longer feels wrong, explaining that '[t]o get outside the infected atmosphere of the familiar ceremony so as to see and feel the thing as it is and as it looks to others not like-minded is then impossible'.[98] One might articulate this in terms of neural pathways: once established, the neural pathway becomes like a track carved into a road by a wagon wheel, each use deepening the groove and making it more difficult to dislodge the wheel. Repeated perception of an object or action in one light makes it 'impossible' to distinguish impression from reality.

When one considers the development of an illusion as a gradual process repeated until the belief becomes stronger than reality, South's case—and the fact that others in Hintock have had held similar illusions

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[98] Maudsley, p. 188.

related to trees—becomes not-so-extraordinary.[99] As the opening of *Under the Greenwood Tree* (1872) explains, '[t]o dwellers in a wood, almost every species of tree has its voice as well as its feature'.[100] Trees, as many critics have noted, are depicted in human-like terms throughout *The Woodlanders*—and indeed, throughout Hardy's oeuvre. South is not alone in seeing the tree as having its own movement and hearing its sounds as a monotone Gregorian chant. The instances of trees in Hardy's writings described as having voices recognizable by human ears have often been noted by critics: if compiled into a single list, it would be lengthy.[101] Marty hears the sound of the trees being planted as a sigh at being born, and even Giles can't help but hear the tree seem 'to heave a sigh' as he finishes 'shrouding' the lower limbs to clip its movements (p. 95, p. 92).[102] Michael Irwin argues that trees in Hardy's writings are portrayed both as '*intrinsically* expressive' and as imbued with human meaning, creating a sense of 'comparability and interconnectedness between the lives of men and the lives of trees'.[103] William Cohen, in his fascinating article 'Arborealities', proposes a reading of the novel looking at 'the trees as people and the people as trees', arguing through close readings of Marty's and Giles's characters that 'Hardy eradicates the distinction between people and trees by emphasizing their common material properties'.[104] Cohen zooms in on 'tactile ways of knowing': the way 'ideas and things rub against each other'.[105] Add the Victorian focus on all mental processes embodied in physical processes, and the repeated perception of trees as human from the sensory input of their movement and sound in the wind literally 'rubs' a neural pathway in the brain. If the trees appear as people to the woodland folk of Hintock, then South's delusion is perhaps the

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[99] In his medical analysis of South's delusions, Tony Fincham notes that 'there does appear to be a higher than average incidence of this type of problem in men, such as woodmen or gamekeepers, who work largely on their own. It is debatable whether this is the result of their solitary occupation or whether this kind of work attracts those with paranoid tendencies in the first place'; see *Hardy the Physician: Medical Aspects of the Wessex Tradition* (New York: Palgrave Macmillan, 2008), p. 98.

[100] *Under the Greenwood Tree*, ed. by Simon Gatrell, intro. and notes by Phillip Mallett (Oxford: Oxford University Press, 2013), p. 11.

[101] See, for example, Irwin's *Reading Hardy's Landscapes*, p. 17, p. 48, p. 53.

[102] Marty's attention to the trees' 'sighing' upon being planted, 'as if [...] they are very sorry to begin life in earnest—just as we be', reveals that like her father, she sees the trees as if they had human qualities (p. 65).

[103] Irwin, p. 17, p. 52.

[104] Cohen, 'Arborealities', p. 6, p. 17.

[105] Ibid, p. 19.

natural outcome of a mind that continually treads the path of recognizing trees as something other than inanimate objects.

While South's case is an extreme version of such perception, Hardy deliberately plays with the delineation between reality and illusion throughout the novel. Walking his property just before South's death, Giles has '[t]he sense that the paths he was pacing, the cabbage-plots, the appletrees, his dwelling, cider-cellar, wring-house, stables, weather-cock, were all slipping away over his head and beneath his feet as if they were painted on a magic-lantern slide' (p. 91). At other times, Hardy blurs the boundary between the dream world and the real. Grace and Fitzpiers dream—or seem to dream—of each other before they ever meet. After her conversation with Grammer Oliver, Grace has '[k]aleidoscopic dreams of a weird alchemist-surgeon, Grammer Oliver's skeleton, and the face of Giles Winterborne' (p. 51). Fitzpiers, who sees Grace enter his room as he wakes from a nap through the reflection of a mirror, becomes confused whether he has dreamt of her or actually seen her. He wakes with the sense that 'the lovely form which seemed to have visited him in a dream' had actually been in the room (p. 127), but as he converses with her upon her return, he becomes momentarily 'persuaded that it had indeed been a dream' and tells her that he wouldn't have dreamt of her 'without considerable thinking about [her] first' (p. 130). Fitzpiers seems to have conjured Grace up: both in the case that dreams often do focus on the subject of waking thought and in her actual physical presence after his mental ruminations. That their first glimpse of each other is through a mirror further toys with the line between illusion and reality.

If one considers Maudsley's explanation of the origin of illusions, the boundary between reality and illusion maintained by perception becomes even more porous. Maudsley discusses the origins of illusions by delving into the relationship between perception and reality. He writes,

> in each perception a person for the most part sees only a very small part of that which he thinks he sees, the mind contributing from the stock of its former experience what is necessary to fill up the image. The visual impression is never more than a sign to which experience has taught him to give its proper meaning—a sign which, without the complementary contributions of the instructed mind, would be meaningless.

He explains, then, that the majority of perception is actually illusion, with 'no one [...] actually having nearly so much of the objective experience as

he seems to have'. Rather, the individual 'sees a part only, which, being sufficient to suggest the whole, is the symbol of much that he does not see but takes for granted' (p. 193-194). Much of what makes up reality for an individual is illusion, based on prior sensory experience.

Hardy's awareness of the role of perception is evident in his essay 'The Science of Fiction'. Here, Hardy's explanation of how a writer should approach reality in fiction resonates with Maudsley's description of perception. Arguing against the trend toward photographic realism, Hardy points out the impossibility of capturing 'in its entirety the phantasmagoria of experience with infinite and atomic truth, without shadow, relevancy, or subordination'.[106] He concludes, '[t]o see in half and quarter views the whole picture, to catch from a few bars the whole tune, is the intuitive power that supplies the would-be story-writer with the scientific bases for his pursuit' (p. 110). Reality and illusion, then, matter less than perception of a thing: the way one looks at or listens to the exterior sensory world. John South's death with the cutting down of the tree affirms this power of perception. His delusions, shaped from material bases, have a material effect. Here Fitzpiers—who swears after the 'experiment', 'Damned if my remedy didn't kill him!'—shifts closer to Grace's original conception of him as a heartless scientist-surgeon. On his way out of the house after the death, he asks Giles a question about Grace, the 'extraordinary case' of John South apparently already off his mind.

III. 'Oak, Ash, or Elm': Can a Tree be a Fellow-Creature?

This final section returns to the question raised in the opening paragraph: what if Septimus Smith's assertion that trees are alive and connected to the fate of humans were taken seriously? For John South, the assertion is indeed true: the 'death' of the tree brings about his own demise, and the loss of properties contingent with the end of his life eventually leads (or at least contributes) to Giles Winterborne's death. As the narrator explains in the opening chapter, there is a 'closely knit interdependence of […] lives' in Little Hintock, and its inhabitants, walking through the 'grey shades, material and mental' of the trees each morning to start their day, enact a course that 'form[s] no detached design at all, but […] part of the pattern in the great web of human doings then weaving in both hemispheres' (p. 8, p. 22). This 'web of human

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[106] *Thomas Hardy's Public Voice: The Essays, Speeches, and Miscellaneous Prose*, ed. by Michael Millgate (Oxford: Clarendon Press, 2001), p. 108. Further references are given after quotations in the text.

doings', then, becomes a neural network of its own, a vision which Hardy brings fully to the forefront in *The Dynasts*. In the overlap between 'tree-like men' and 'man-like trees', to borrow the words of Peter Casagrande, and in the haze between reality and illusion, Hardy creates a space in which trees might be construed as significant creatures in their own right.[107]

Consider, for example, the attitudes of the various characters towards the elm connected to John South's death. Thomas notes that the progression in attitudes towards animals from the early modern period to the Victorian era was curiously paralleled 'in the case of trees': a view of them first as wild things to be eliminated (leading to the clearing of woods), then as organisms to be domesticated (the woods as a site of agriculture, harvesting timber), and finally as pets (or, perhaps, familiar members of one's home, to be cherished and cultivated).[108] He observes that '[i]n England trees were increasingly cherished, not just for their use, not even just for their beauty, but because of the human meaning, what they symbolized to the community in terms of continuity and association' (p. 214). Fitzpiers, Giles Winterborne, and John South each view the elm in South's yard in a different light, and their three perspectives roughly approximate Thomas's categorization of attitudes toward trees.

Fitzpiers, like his early modern predecessors, sees the tree as a wild thing to be eliminated. He insists, 'The tree must be cut down; or I won't answer for his life', and when Giles hesitates, he exclaims, 'what's a tree beside a life!' (p. 102). While his suggestion to remove the sensory basis of South's illusion is logical, he fails to view the tree through South's eyes. Giles replies that ''Tis timber': for him, the tree is first and foremost the domesticated property of Mrs Charmond that must be 'marked first, either by her or the agent' before it can be felled (p. 102). Yet Giles, unlike Fitzpiers, is able to see the elm from South's perspective. He follows 'the direction of the woodman's gaze' (gaze-following being a subsidiary component of empathy) toward the elm, a tree that is 'familiar to him from childhood', too (pp. 91-92). He can see the movement and hear the sighs of the tree, although he is able to distinguish that it is animated by the wind. South, however, identifies the tree as having 'human sense'— and it is this 'human meaning', to quote from Thomas, that perhaps has the most significance. South's fear of the tree falling on his house is bound up with his worry of what will happen when his lifehold on the property ends. The tree, in this sense, very much becomes a symbol in the

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[107] Casagrande, 'The Shifted "Centre of Altruism" in *The Woodlanders*', p. 117.

[108] Thomas, p. 192. Further references are given after quotations in the text.

community for 'continuity': the felling of the tree represents the end of an era, a change in Hintock from the rooted woodsmen who hold 'ordinary leases for three lives' to peripatetic labourers who must move with their work.[109] South repeatedly makes this association, worrying 'my poor life, that's worth houses upon houses, will be squashed out o' me' (p. 102). South's life has become a material measure—'a measuring-tape of time by law'—and with its end,

> the small homestead occupied by South himself, the larger one of Giles Winterborne, and half-a-dozen others that had been in the possession of various Hintock village families for the previous hundred years, and were now Winterborne's, would fall in and become part of the encompassing estate. (p. 91)

South transfers this material sense of his life's value to the tree, making it the bearer of tradition and its felling the fall of his and Winterborne's property. In Levine's words, 'John South's life is entirely inwoven with the life of that frighteningly swaying tree [...] Nature and its images are as much *humanly projected idea and feeling* as they are wood and sap and morning dew.'[110] Life and property, man and tree, become indistinguishable in South's eyes.

Fitzpiers, as an outsider, does not understand the significance of the tree or South's life. For him, a patient is just a patient, and a tree is just a tree—conclusions that are (or nearly are) fatal within the novel. His sense of the interchangeability of people, animals, and trees applies even to his conception of falling in love. He tell Giles,

> 'Human love is a subjective thing [...] it is joy accompanied by an idea which we project against any suitable object in the line of our vision, just as the rainbow iris is projected against an oak, ash, or elm tree indifferently. So that if any other young lady had appeared instead of the one who did appear, I should have felt just the same interest in her.' (p. 116)

Love, contingent on perspective, is no more than an illusion for Fitzpiers. His indifference is carried out in action: he sleeps with Suke Damson and Felice Charmond and Grace Melbury as his impulse moves him. Yet

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[109] For Hardy's concern for such shifts in rural communities, see his 1883 essay 'The Dorsetshire Labourer', in *Thomas Hardy's Public Voice*, ed. by Millgate, pp. 37-57.
[110] Levine, p. 175; italics mine.

Fitzpiers's philosophical view is framed within his hierarchical sense of living organisms as existing along a Great Chain of Being. Like his sense that a tree is nothing beside a human life, he views himself—having descended from an ancient noble family—as being superior to the woodlanders around him, to the extent of feeling as if he 'belonged to a different species' from them (p. 177).

Yet the narrator undermines Fitzpiers's sense of superiority with a quiet irony. As Fitzpiers waxes philosophic on the nature of love, Giles falls into questioning him in a Socratic style 'with such well-assumed simplicity that Fitzpiers answered readily' (p. 117). The doctor reveals that 'medical practice in places like this is a very rule-of-thumb matter: a bottle of bitter stuff for this and that old woman […]; occasional attendance at births […]; a lance for an abscess now and then' (p. 117). Fitzpiers's list of duties to his human constituency is not unlike Giles's various roles as a woodsman: making the apples into cider, planting trees, and shrouding or barking the trees as needed. With the soul removed from the material body, investigating a brain is no different from 'operating' on a tree, as Giles and Marty do (pp. 134-135). Fitzpiers views the woodlanders as another species and thinks of them in material terms as cases and specimens; in contrast, the woodlanders view the trees as almost human but use as them as products for trade. Giles, upon hearing Fitzpiers express repeated interest in Grace despite his insistence that he is 'in love with something in [his] own head, and no thing-in-itself outside it at all', questions, 'What difference can it make, if she's only the tree your rainbow falls on?' (p. 117). The difference between Fitzpiers's and Giles's love for Grace is shown here: while Fitzpiers negotiates his feeling through the rational perspective that love is in the eye of the beholder, Giles's vision does not land upon 'oak, ash, or elm tree indifferently' (p. 116). Giles has what Fitzpiers lacks; that is, as Hardy's narrator explains, a sense of 'old association—an almost exhaustive biographical or historical acquaintance with every object, animate and inanimate, within the observer's horizon' (p. 123). His subjective experience of the world makes up his own reality; he does not search for an external objective world.

It is this 'old association', or feeling for 'every object, animate and inanimate', then, that gives meaning to a world in which reality depends on perspective and in which consciousness can be mapped out as a physical process of electrical synapses in the brain. Giles's and Marty's—and to an extent, Grace's—relationship with the woods around them, to quote Cohen, does not reveal a 'connection to the natural world that is hopelessly remote from the rest of us, but instead a generalized

breakdown of the differentiation between the natural and the cultural, the environment and the human'.[111] This breakdown is facilitated by two key factors in Hardy: memory and empathy. According to contemporary physiology, a memory was shaped because 'every molecular change which gives rise to a state of consciousness' would leave 'a more or less persistent structural modification'—or in other words, establish a neurological pathway that could be reused. The 'repeated occurrence of that condition of its molecules' would then '[give] rise to the idea of the thing remembered'.[112] In this way, it was possible for the physical environment—and specifically in this example, the elm—to write upon its human observer. The sight of a tree might give rise to a general conception of an arboreal entity, but for John South (and for Giles), the 'old association' with this individual elm gives rise to a specific and personal acquaintance.

These memories are often involuntary, automatic (and at times subconscious) in the body as triggered by one or more of the senses, the type of memory explored more consciously by Proust. When Grace returns to her childhood home and wanders around its rooms, for example, the narrator explains, '[e]ach nook and each object revived a memory, and simultaneously modified it" (p. 47). The experience of interacting with objects in the material world brings back the memory of past interactions, although the memory—unstable as memory always is—changes with its recurrence. In this way, the relationship between animate and inanimate entities becomes reciprocal: the human places meaning upon an inanimate object, but simultaneously that object modifies the memory and its meaning. In *Imagining Minds*, Kay Young argues that 'Hardy's attention to the objects of his character's attention—to what they notice and how they act in relation to what they notice—defines [...] a vision of how consciousness works'. [113] While she notes that this object-oriented 'nonintrospective consciousness' gives readers access to characters' thoughts without an omniscient, 'mind-reading' narrator, this vision of 'how consciousness works' also provides a space for the impact of the material world upon the characters, mirroring the neurological discoveries of the Victorian era in the novel form (p. 125, p. 135).[114]

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[111] Cohen, p. 17.

[112] Huxley, p. 214-16.

[113] Young, *Imagining Minds: The Neuro-Aesthetics of Austen, Eliot, and Hardy* (Columbus: Ohio State University Press, 2010), pp. 135-136. Further references are given after quotations in the text.

[114] Young also turns to Antonio Damasio's description of 'core consciousness': '"the knowledge that materializes when you confront an object, construct a neural pattern

Looking at Hardy's narratorial strategies of empathy, Keen discusses the idea of the German term '*Einfühlung*' in its late-nineteenth-century meaning: a sense of '"feeling into"' that creates 'an embodied (emotional and physical) response to an image, a space, an object or a built environment'.[115] Vernon Lee used the term in her discussion of understanding the beautiful through empathy, given 'empathy's inclusion of memories and awakened emotional states as key elements of an audience's collaborative responsiveness to art' (p. 351). Despite being an inanimate entity, then, a tree has the capacity to transport a person to a specific emotional state and memory. In his fiction, Hardy creates worlds in which his characters and readers 'feel into' inanimate objects: into trees, landscapes, even rock. Keen identifies this as a form of 'broadcast strategic empathy', the most expansive and inclusive form of narratorial empathy. In Keen's words,

> When he enlivens wastes, endowing landscapes such as Egdon Heath with facial features and personalities, animates abstract forces such as the Phantom Intelligences, and feels into the perspectives of fossils or worn church pavement stones, he exercises *Einfühlung* that is not reciprocated. (p. 382)

With this empathy so closely linked to emotion and memory, to adjusting one's perception to see the whole behind the part, Hardy is able to move easily from the human to the animal to the arboreal and vegetal worlds, uninhibited by the traditional boundaries that separate one form of life from another. In his poem, 'Transformations', for example, the yew tree growing over a grave allows the decomposing material bodies beneath its roots to exist 'as nerves and veins [...] | In the growths of upper air' where they can 'feel the sun and rain, | And the energy again | That made them what they were!'[116] The poem weaves human anatomical (and possibly neural) imagery into the sensory experience of the tree, moving again between material and mental in the suggestion that the tree can feel the

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for it, and discover automatically that the now-salient image of the object is formed in your perspective, belongs to you, and that you can even act on it"' (*The Feeling of What Happens*, p. 126, as qtd. in *Imagining Minds*, p. 140).

[115] Keen, 'Empathetic Hardy: Bounded, Ambassadorial, and Broadcast Strategies of Narrative Empathy', *Poetics Today*, 32.2 (Summer 2011), 349-389 (p. 350). Further references are given after quotations in the text.

[116] *The Complete Poems of Thomas Hardy*, ed. by James Gibson (London: Macmillan, 1976), p. 472. See also, 'The Wind Blew Words', p. 447, in which the speaker identifies with the tree as 'a limb of [himself]'.

sunlight as it goes through the process of photosynthesis, transforming the light into energy.

It is in empathy for trees—and for the non-sentient organisms in the natural world—that Hardy creates a space for fellow-feeling for the human as rendered in physiological and material terms by the scientific community. If humans were no more than 'conscious automata' made up of material parts and physical processes, then Hardy's ability to 'feel into' trees—unconscious and inanimate as they are—demonstrates an empathy that counters for what could be seen as a rather cynical and unfeeling view of a mechanical world. Yet Hardy creates this space subtly, continually shifting between the metaphysical and material worlds, playing with perception, and complicating clear delineations between illusion and reality. While the contemporary scientific theories woven into his text—of automatism and of perception—may have been unsettling for Victorian (and even for modern) readers, concurrently he writes a world in which even trees have individual personality and significance, or, to borrow Derrida's phrase, 'unsubstitutable singularity'.[117] Hardy compels his readers to look at trees in order to widen their sense of empathy with the inanimate world, moving the arboreal reverence from poetical to practical in an ecological perspective. After all, the fate of trees does effect 'the great web' of living beings—not only localized ecosystems that are destroyed through the widespread deforestation occurring in the present day, but also the overall planetary health with the increasing problem of global warming due to rising carbon dioxide levels. Hardy's empathy for the natural world encourages 'the gradual growth of the introspective faculty in mankind': to understand that the 'real' can only take place through subjective experience, to be willing to shift scale, and to view the world from other (animate and inanimate) perspectives.[118] Given this context, Septimus Smith's imperative 'Men must not cut down trees'—an echo of the Victorian feeling for trees, but furthermore, a plea against the irrationality of war—takes on a rational urgency.[119]

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[117] Jacques Derrida, 'The Animal That Therefore I Am (More to Follow)', trans. by David Wills, *Critical Inquiry*, 28.2 (2002), 369-418 (p. 378).

[118] See William Archer's interview of Hardy, 'Real Conversations', *Thomas Hardy Remembered*, ed. by Martin Ray (Aldershot: Ashgate Publishing, 2007), pp. 28-37 (p. 35).

[119] Woolf, p. 26.

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'THE APOTHEOSIS OF VOICE':
MESMERISM AS MECHANISATION IN GEORGE DU MAURIER'S *TRILBY*
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Abstract

This article considers the relationship between mesmeric and sonic influence in George Du Maurier's *Trilby* to argue that mesmerism offered a significant framework for conceptualising sound in the late-Victorian era. Drawing on Franz Anton Mesmer's theorisation of a 'universally distributed and continuous fluid' affecting all animate and inanimate bodies, I demonstrate how sound similarly constructs networks of influence that facilitate communication but privilege certain individuals over others. Published in 1894, when mesmerism was firmly categorised as unscientific, but set in the 1850s when its legitimacy remained contested, *Trilby* exposes the shift from mesmerism as aspiring science to mesmerism as metaphor. Through a comparison of scenes of looking and listening in the novel, I argue that sound facilitates communication between bodies more readily than sight. While looking is depicted as an individualised process that reinforces the separateness of bodies, listening is represented as a collective endeavour that exposes the interconnectedness of the audience members. Trilby's vocalisations facilitate a mode of shared experience previously deemed impossible, yet her figuration as a 'singing-machine' leaves her isolated. Aligning the mesmeric subject with the mechanised human, Du Maurier's work reveals the relationship between mesmeric and sonic influence to depict sound's most threatening implications.

When George Du Maurier's infamous mesmerist Svengali exerts his influence over Trilby, she becomes 'just a singing-machine—an organ to play upon—an instrument of music—a Stradivarius—a flexible flageolet of flesh and blood—a voice, and nothing more—just the unconscious voice that Svengali sang with'.[120] This exhaustive description of Trilby underscores her inherent lack of autonomy as a mesmeric subject, variously positing her as a phonograph or musical instrument whose vocal production depends on Svengali's manipulation of her body. Published in 1894, when mesmerism was firmly categorised as unscientific, but set in 1850s bohemian Paris when its validity as a science remained contested, *Trilby* tells the story of a young woman who is transformed from a tone-deaf artists' model to an international singing diva at the hands of the disreputable musician and mesmerist Svengali. *Trilby's* retrospective orientation towards mesmerism allows Du Maurier to reveal a significant

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[120] George Du Maurier, *Trilby* (New York: Oxford University Press, 2009), p. 299. Further references are given after quotations in the text.

connection between the mesmeric subject and the mechanised human. Through its persistent equation of Trilby with a 'singing-machine' the novel illustrates how devices like the phonograph severed what had been considered an immutable bond between human voices and human bodies, necessitating a reconceptualisation of the nature of sound that accounted for the voice's newfound independence.

Drawing on Franz Anton Mesmer's theorisation of animal magnetism, this article argues that mesmerism offered a significant framework for thinking about sound at a time when devices like the phonograph allowed the human voice to speak even in the absence of a human speaker. My reading of *Trilby* exposes the shared language of Mesmer and Du Maurier to demonstrate how the latter reappropriates outmoded scientific concepts to critique the impact of sound technologies on late-Victorian society. In his 1779 'Dissertation on the Discovery of Animal Magnetism' Mesmer posits the existence of a 'universally distributed and continuous fluid' affecting all animate and inanimate bodies.[121] He insists, 'that all bodies [are], like the magnet, capable of communicating this magnetic principle; that this fluid penetrate[s] everything and [can] be stored up and concentrated, like the electric fluid; that it act[s] at a distance' (p. 36). Mesmer's theorisation of the practice popularly termed mesmerism emphasises the capacity of his universal fluid to facilitate communication between bodies, a characteristic underscored in Du Maurier's representation of the phenomenon.[122] Although Mesmer mentions sound only in passing, as something that communicates, propagates, and intensifies the universal fluid, the language he employs to describe animal magnetism precipitates the language used to describe sound not only in Du Maurier's novel, but also in sound studies criticism (p. 55). Like Mesmer's substance, sound is fluid, penetrating, and capable of constructing networks of influence that facilitate communication, but privilege certain individuals as authorities over others.

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[121] *Mesmerism: Being a Translation of Mesmer's Historic Mémoire sur la découverte du Magnétisme Animal to appear in English* (London: MacDonald & Co., 1948), p. 54. Further references are given after quotations in the text.

[122] Although "mesmerism" has become the popular name for Mesmer's phenomenon, he originally called it "Animal Magnetism" to distinguish it from mineral magnetism. However, Victorians used these terms interchangeably. Mesmer's decision understandably caused many to confuse animal magnetism with magnets. In an effort to refute this erroneous assumption Mesmer ceased using electricity and magnets in his work after 1776. See Fred Kaplan, ' "The Mesmeric Mania": The Early Victorians and Animal Magnetism', *Journal of the History of Ideas,* 35.4 (1974), pp. 691-702 (p. 692).

The conflation of mesmeric and sonic influence in Du Maurier's novel not only exposes the relation between the 'universal fluid' and sound, but also confronts the possibility that like mesmerism, sound could be turned to nefarious purposes. Representing a 'revelation of what the human voice could achieve', the mechanised Trilby is framed as a superior being capable of influencing the emotions and actions of her audience (pp. 214-15). However, her vocal evolution comes at a cost. Placed in a mesmeric trance that mutes her emotional capacity, renders her virtually unconscious, and strips her of autonomy, Trilby becomes 'the apotheosis of voice and virtuosity' at the expense of her "humanness". As a 'singing-machine' she facilitates the shared experience of her listeners, but remains unable to participate in the unique community that convenes around her performances. Through the juxtaposition of mesmeric and sonic influence, *Trilby* demonstrates that while mesmerism eventually failed as a science, it continued to function as a metaphor integral to understanding the shifting soundscape of the late-nineteenth century.

I begin with an analysis of nineteenth-century figurations of mesmerists and their subjects, arguing that though entranced individuals were vulnerable, mesmerism offered them a degree of power by provoking changes in their sensory function and intellectual capacity. Turning from mesmeric influence to sonic influence, the second section of my article clarifies the similarities between Mesmer's fluid and sound. I continue to investigate how these forms of influence impact communication between animate bodies, suggesting that the fundamental ideas behind animal magnetism offered a productive model for thinking about how sound technologies like the telephone and phonograph reshaped the relationship between bodies and voices. The final section of my article offers a close reading of Du Maurier's *Trilby*. I compare scenes of looking and listening in the novel to argue that sound facilitates communication between bodies more readily than sight, but destabilises "humanness".

Mesmerist and Mesmerised: Power and Mesmeric Practice

While Mesmer intended to use animal magnetism to benefit humankind, claiming medicine would 'reach its final stage of perfection', it is not difficult to understand the resistance he faced given the supposed power of the mesmerist (p. 56). Fred Kaplan explains that despite mesmerism's potential, it required the public to accept a significant paradigm shift, 'a new theory about the nature of influence and power relationships

between people, and between people and objects in their environment'.[123] Mesmerism did necessitate a reconsideration of how animate and inanimate bodies influence one another, but it also reinforced many biases of the existing social structure. Nineteenth-century conceptualisations of the ideal mesmeric subject emphasise the vulnerability of individuals whose autonomy is already compromised; subordinate members of society are more susceptible to a practice that further moderates self-governance. In his 1843 *Practical Instruction in Animal Magnetism,* J.F.P. Deleuze explains 'magnetism generally exercises no influence upon persons in health. The same man who was insensible to it in a state of good health, will experience the effects of it when ill'.[124] Deleuze's statement aligns susceptibility to mesmeric influence with physical constitution, an association that implicitly establishes nineteenth-century women as more pliant subjects. Imperfect health and nervousness, qualities that recur in most descriptions of the ideal mesmeric subject, were also closely associated with women.[125] Recounting an experiment intended to demonstrate 'that [animal magnetism] acted at a distance', Mesmer inadvertently illustrates the danger male mesmerists posed to female subjects. He writes, 'I pointed my finger at the patient at a distance of eight paces; the next instant, her body was in convulsion to the point of raising her on the bed with every appearance of pain' (p. 38). The striking image of a women convulsing with pain in response to a

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[123] '"The Mesmeric Mania", p. 692.

[124] *Practical Instruction in Animal Magnetism,* trans. Thomas C. Hartshorn (New York: Da Capo Press, 1982), p. 24. Further references are given after quotations in the text. Like Mesmer, Deleuze believed in the existence of a magnetic fluid. In the introduction to his work he writes, 'I believe in the existence of a fluid, the nature of which is unknown to me; but those who deny the existence of this fluid, who compare the action of magnetism in living beings to that of attraction in inanimate bodies, or who admit a spiritual influence without a particular agent, cannot, on that account, contradict the consequences to which I shall arrive. The knowledge of the processes, and of all the conditions necessary for the efficient use of magnetism, is independent of the opinions which serve to explain the phenomena, and of which, up to the present time, none are susceptible of demonstration' (p. 18). One of the major stumbling blocks Mesmer faced was the fact that he could not explain or provide evidence of the magnetic fluid. Deleuze dismisses this as unimportant.

[125] Alison Winter points out that the majority of the experimental subjects used by John Elliotson, a well-respected physician at the University College Hospital, were lower-class women. However, she also explains that a prevalent view of mesmerism in light of Elliotson's experiments with the O'Key sisters was that it allowed morally weak women to take advantage of weaker men. See Alison Winter, *Mesmerized: Powers of Mind in Victorian Britain* (Chicago: The University of Chicago Press, 1998).

pointed finger elucidates the extreme fear some felt towards mesmerism. Additionally, the depiction of the male mesmerist exercising unprecedented control over the female body raises questions regarding the use of animal magnetism for reprehensible purposes, an issue central to Du Maurier's depiction of the relationship between Svengali and Trilby.

The potential exploitation of mesmerism was a significant concern, especially since works like Deleuze's claimed that '[t]he faculty of magnetizing exists in all persons' (p. 32). Advocates of mesmerism as science generally implicated amateurs who used mesmerism as entertainment as the primary offenders, suggesting that misuse of the practice was not a concern within professional communities. Mesmer foregrounds this argument in his own work when he states that '[physicians] alone are qualified to put [animal magnetism] into practice' (p. 57). Harriet Martineau, a prominent writer and journalist and a staunch advocate of mesmerism, vehemently opposes what she calls 'itinerant advocates' in her 1845 *Letters on Mesmerism.* Questioning their motivations, she writes,

> no man of enlarged views, of knowledge at all adequate to the power he wields, would venture upon the perilous rashness of making a public exhibition of the solemn wonders yet so new and impressive, of playing upon the brain and nerves of human beings, exhibiting for money on a stage states of mind and soul held too sacred in olden times to be elicited elsewhere than in temples, by the hands of the priests and the gods.126

Mesmerism places the subject in an intensely vulnerable position not only in relation to the powerful mesmerist but all observers. Calling attention to the manipulation of the human body, specifically 'the brain and nerves of human beings', Martineau highlights the subject's loss of autonomy while in the trance state. She describes the exploitation of mesmerism as a sinful act that violates the intimate connection between mesmerist and subject by turning the 'solemn wonders' of the body into a profit seeking 'public exhibition'. Martineau's sentiment echoes Deleuze, who similarly states that mesmerists 'ought to regard the employment of [magnetism] as a religious act, which demands the greatest self-collectedness, and the greatest purity of intention. —Hence it is a sort of profanation to magnetize for amusement' (p. 27). Ultimately, Martineau and Deleuze

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126 *Miss Martineau's Letters on Mesmerism* (New York: Harper & Brothers, 1845), p. 21. Further references are given after quotations in the text.

argue that mesmerism must be employed carefully and responsibly as a science, rather than a form of entertainment.

However, locating the problem of exploitation exclusively in the realm of entertainment fails to account for the increasing authority of the scientific community over individuals' bodies. I would argue that opposition to the exhibition of mesmeric subjects was grounded in a more widespread resistance to the dehumanising effects of treating bodies as objects, a resistance that persisted in relation to the potential mechanisation of human bodies. Physicians like John Elliotson who were eager to persuade sceptical colleagues of mesmerism's validity, were just as exploitative in their mesmeric experiments as 'itinerant advocates', if not more so. Alison Winter explains that the majority of Elliotson's subjects, most of whom were women, were 'from a group whom Victorian physicians did not regard as individuals in the same category as themselves, and possibly not as individuals at all: their charity patients'.127 Nineteenth-century scientists defined themselves as highly rational and dispassionate figures capable of viewing human bodies as sites of knowledge production. This persona helped physicians establish themselves as professionals, but it also led to questions regarding their willingness to exploit experimental subjects in the name of science. What emerges from Martineau and Deleuze's stipulations about the proper applications of mesmerism is the fact that regulating mesmerists to ensure 'the greatest purity of intention' was virtually impossible, especially since anyone could manipulate the universal fluid.

Although descriptions of mesmerism often emphasise the subject's disempowerment, the mesmeric trance actually grants them a form of influence by changing their sensory function and giving them access to otherwise inaccessible knowledge. Treatises on mesmerism explain that entranced subjects no longer perceive the external world, shifting to a mode of internal perception. Deleuze makes this move from exterior to interior explicit in his discussion of somnambulists. He writes, '[t]he external organs of sense are all, or nearly all, asleep; and yet [the mesmeric subject] experiences sensations, but by another means. There is roused in him an internal sense, which is perhaps the centre of the others, or a sort of instinct' (p. 68). The notion that 'an internal sense' or 'sort of instinct' is 'roused' suggests this kind of sensing is latent in all individuals and simply needs to be accessed by putting the 'external organs of sense' to sleep. Deleuze goes on to argue that magnetism reveals

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127 *Mesmerized: Powers of Mind in Victorian Britain* (Chicago: The University of Chicago Press, 1998), p. 61.

the two-fold existence of the *internal* and the *external* man in a single individual. They offer a direct proof of the spirituality of the soul, and an answer to all the objections raised against its immortality. They make evident the truth known to ancient sages, and so well expressed by M. de Bonald, that *man is an intelligence served by organs.* (p. 69).

The bodies of mesmeric subjects thus become new sites of knowledge, exposing relations between the internal and external existence of humankind not apparent in normally sensing individuals. This transformation calls attention to the importance of voice, which moves fluidly between the spatially and temporally distinct realms subjects and mesmerists inhabit even though the body cannot. Furthermore, it grants subjects a degree of authority as repositories of knowledge gleaned using the 'internal sense' and conveyed to observers through dialogue.

In addition to enabling mesmeric subjects to employ the 'internal sense', the trance state allegedly facilitated highly logical thinking and allowed subjects to address metaphysical questions.[128] Martineau recounts a dialogue with a mesmeric subject who explains that mesmerism 'exalts and elevates the thinking powers' (p. 15). In his 1841 *Facts in Mesmerism, with Reasons for a Dispassionate Inquiry into It,* Chauncy Hare Townshend relates these intellectual changes to sensory changes in mesmeric subjects. He states, 'separated from the usual action of the senses, the mind appears to gain juster notions, to have quite a new sense of spiritual things, and to be lifted nearer to the fountain of all good and of all truth'.[129] While Townshend contextualises this aspect of mesmerism within religion and spiritualism, *Trilby* links the ascendancy of the mesmeric subject to evolutionary superiority.[130] In both cases, the

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[128] Edgar Allan Poe's 1844 short story 'Mesmeric Revelation' directly engages the idea that mesmeric subjects could address metaphysical questions. The ailing Mr. Vankirk asks to be mesmerised so that he can experience the intellectual enlargement afforded by the trance state and attain knowledge about 'the soul's immortality'. See Edgar Allan Poe, 'Mesmeric Revelation', in *The Complete Tales and Poems of Edgar Allan Poe* (New York: Vintage Books, 1975), pp. 88-95 (p. 89).

[129] *Facts in Mesmerism, with Reasons for a Dispassionate Inquiry into It* (New York: Harper & Brothers, 1841), p. 11. Further references are given after quotations in the text.

[130] Anne Stiles tracks the association between genius and insanity prevalent in nineteenth-century scientific discourse, calling attention to the threat of particular kinds of evolution to morality. The overdevelopment of the human brain was considered dangerous because, following Lamarckian thought, the development of any

transcendent nature of the trance state enables subjects to access alternative realms unencumbered by their physical forms. The mind and voice take precedence over the body, which assumes a role comparable to the telephone; it becomes a device that facilitates communication at a distance.

The changes to mesmeric subjects' sensory function and intellectual capacity described by well-known theorists of mesmerism like Deleuze and Townshend gesture towards a unique form of empowerment. Yet, literary representations of the relationship between mesmerist and mesmerised often exaggerate the latter's vulnerability, depicting mesmerists as having unilateral power that they wield with villainous intent. Du Maurier's Svengali fully embodies this stereotype, to the extent that the noun Svengali has come to 'designate a person who exercises a controlling or mesmeric influence on another, freq. for some sinister purpose'.[131] Consequently, Svengali has been a major focus in critical treatments of the novel, far overshadowing the titular character, and leading critics like Laura Vorachek to suggest that the focus on Svengali has obscured other lines of enquiry.[132] However, the mesmerist's role in Trilby's demise has become a subject of debate. Does the sinister Svengali, a talented musician 'walking up and down the earth seeking whom he might cheat, betray, exploit, borrow money from, make brutal fun of, bully if he dared', absolutely determine Trilby's fate? (p. 42). Hilary Grimes claims that critics like Maria M. Tatar, Alison Winter, and Daniel Pick provide static readings of mesmerism that inaccurately portray Svengali as exercising constant and absolute power over Trilby. She argues that 'mesmerism does not simply describe a powerful mesmerist and a powerless subject, but rather a merging and blurring of identities and powers of both mesmeriser and mesmerised'.[133] By shifting attention away from Svengali, Grimes pushes readers to consider the broader implications of mesmeric influence and highlights the networks of bodies constructed through the practice. While I follow Grimes's formulation of

one organ necessarily led to the deterioration of others. Stiles writes, 'One possible conclusion of rapid Lamarckian brain evolution, then, was a species of morally insane beings boasting enormous cerebrums and miniscule bodies'. See Anne Stiles, 'Literature in "Mind": H.G. Wells and the Evolution of the Mad Scientist', *Journal of the History of Ideas* 70.2 (April 2009), pp. 317-39 (p. 329).

[131] 'Svengali, n.', in *OED Online* <www.oed.com> [accessed 12 May 2015].

[132] 'Mesmerists and Other Meddlers: Social Darwinism, Degeneration, and Eugenics in *Trilby*', *Victorian Literature and Culture* 37.1 (2009), pp. 197-215 (p. 200).

[133] 'Power in Flux: Mesmerism, Mesmeric Manuals and Du Maurier's *Trilby*', *Gothic Studies* 10.2 (2008), pp. 67-83 (p. 67).

mesmerism as a 'merging and blurring of identities and powers', I contend that Trilby's mechanisation and resultant unconsciousness inhibits a fully cooperative relationship. Furthermore, her status as a 'singing-machine' excludes her from the community that convenes around her vocal performances. My next section considers Trilby's isolation in relation to broader discussions of the inherent isolation of corporeality. I argue that mesmerism and sound technologies offered potential means of overcoming such barriers and enabling shared experience.

Human Voices, Mechanical Bodies

Contemplating the English landscape after social expectations prevent him from marrying Trilby and a consequent illness renders him affectless, Little Billee wonders: 'Why couldn't these waves of air and water be turned into equivalent waves of sound, that he might feel them through the only channel that reached his emotions!' (p. 178). Despite his renown as a painter, Little Billee recognises the capacity of 'waves of sound' to exert a particular influence over human emotions. His desire for a synesthetic experience privileges sound as a fluid substance that moves through the channels of his body to awaken latent feelings in a way visual stimuli cannot. This understanding of sound aligns with the very characteristics Mesmer associates with the 'universally distributed and continuous fluid' essential to animal magnetism, a comparison rendered more apparent in the context of Du Maurier's novel because of its dual concern with mesmeric and sonic influence.[134] Little Billee's frustrated exclamation also gestures towards his deep need for connection, a need that was central to discussions of how mesmerism and sound technologies might overcome the isolating nature of human corporeality.

Mesmerism's potential for facilitating the emotional connection Little Billee craves is apparent in M. Loewe's 1822 text, *A Treatise on the Phenomena of Animal Magnetism.* Loewe explicitly links the disabling of the external senses in the trance state with a new form of communication

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[134] The notion that sound is 'universal' and 'continuous' like Mesmer's fluid is also evident in the contemporary rhetoric of sound studies critics like Steven Connor, who characterises sound as 'omnipresent, nondirectional, and mobile', and Edith Lecourt, who remarks that 'sound reaches us from everywhere, it surrounds us, goes through us'. See Steven Connor, 'Sound and the Self', in *Hearing History: A Reader,* ed. by Mark M. Smith (Athens, Georgia: University of Georgia Press, 2004), pp. 54-66 (p. 57); see also Edith Lecourt, quoted in Steven Connor, 'The Modern Auditory I', in *Rewriting the Self: Histories from the Renaissance to the Present,* ed. Roy Porter (New York: Routledge, 1997), pp. 203-23 (p. 214).

between bodies. He claims that 'shut[ting] the avenues of the organs of sense against external influence' transforms the 'whole man' into 'an organ of admission for the external impressions'.[135] Exploring the potential of this state of being he writes,

> [i]f all men were in such a condition, their respective ideas would be communicated to each other by one simultaneous feeling, even without any speech or other sign; for speech and all other signs are only assistants, to obtain our perceptions by means of the usual organs of sense. Hence a person in the above state can obtain perceptions of the ideas of another, who is not in that state; but the other cannot do so, without their being indicated by the usual signs. (p. 65).

Loewe's contrast between the 'simultaneous feeling' and the 'usual signs' of communication like speech identifies one of the central barriers to shared experience: the isolation inherent to corporeality. John Durham Peters explains that prior to the invention of technologies like the telegraph, communication was framed as an insurmountable physiological problem irrespective of voice. Reinforcing the constraints of embodiment Peters writes, 'my nerve endings terminate in my own brain, not yours, no central exchange exists where I can patch my sensory input into yours, nor is there any sort of "wireless" contact through which to transmit my immediate experience of the world to you'.[136] Loewe's description of communication between mesmerised individuals presents mesmerism as a solution to the unsharable nature of human experience. In essence, the practice creates Peters's 'central exchange' where 'respective ideas [can] be communicated' regardless of corporeal boundaries. However, lurking behind Loewe's theorisation of mesmeric communication is the ever-present threat of exploitation. The idea that subjects can 'obtain perceptions of the ideas of another, who is not in that state' while 'the other cannot do so' leaves observers vulnerable to mental violation.[137]

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[135] *A Treatise on the Phenomena of Animal Magnetism: In which the Same are Systematically Explained According to the Laws of Nature* (London: G. Schulze, 1822), p. 64. Further references are given after quotations in the text.

[136] *Speaking into the Air: A History of the Idea of Communication* (Chicago, The University of Chicago Press, 1999), p. 4. Further references are given are quotations in the text.

[137] George Eliot addresses this theme in her 1859 novella *The Lifted Veil,* which features a character who is able to telepathically access others' thoughts. He becomes obsessed

Little Billee's desire that the English landscape present itself as waves of sound suggests that like the mesmeric fluid, sound could facilitate particular modes of communication and emotional connection. The language that sound studies critics like Steven Connor use to describe the human voice further underscores the shared properties of sound and Mesmer's fluid: both substances penetrate animate bodies and expose networks of influence. Connor explains,

> voice comes from the inside of a body and radiates through space which is exterior to and expands beyond that body. In moving from interior to exterior, and therefore marking out the relations of interior and exterior, a voice announces and verifies the cooperation of bodies and the environments in which they have their being.[138]

Connor's description of voice as both expanding beyond the body and 'marking out the relations of interior and exterior' echoes Deleuze's claim that mesmerism exposes 'the two-fold existence of the *internal* and the *external* man in a single individual'; both sound and the mesmeric fluid work to disrupt the internal/external binary central to nineteenth-century understandings of embodiment. Furthermore, the idea that 'voice announces and verifies the cooperation of bodies' emphasises its capacity to expose connections between individuals, a quality Mesmer associates with his substance. However, sound does not acquire the same capacity to communicate the 'simultaneous feeling' that Loewe describes until it becomes independent like the mesmeric fluid, a change brought about by the proliferation of sound technologies.

Nineteenth-century innovations like the telephone and phonograph affected human bodies in ways comparable to mesmerism: these devices reshaped sensory function, liberated human voices from human bodies, and generated new forms of communication. Peters explains that as communication shifted from being a 'physical transfer or transmission' to a 'quasi-physical connection across the obstacles of time and space' questions of embodiment turned to questions of disembodiment (p. 5). While Peters associates this change with the development of

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with his brother's fiancé Bertha because her mind is difficult to read and discovers her manipulative and dishonest nature after he eventually marries her. Bertha, suspicious that Latimer is able to gain access to her mind, plots to kill him. See George Eliot, *The Lifted Veil* (New York: Penguin Books, 1985).

[138] *Dumbstruck: A Cultural History of Ventriloquism* (New York: Oxford University Press, 2000), p. 6. Further references are given after quotations in the text.

communication technologies, mesmerism might have inspired a similar shift if not for the widespread scepticism regarding its authenticity. Viewed in this light, Martineau's contention that '[i]t is important to society to know whether mesmerism is true' carries a bit more weight (p. 3). Regardless, under both definitions of communication voice proved elusive in terms of categorisation, failing to fit into the dominant visual culture associated with nineteenth-century science. Sound shared many qualities with Mesmer's universal fluid, but it differed in its emanation from material bodies.

While mesmerism inspired only those who accepted the practice to rethink the conditions of embodiment, the introduction of devices like the phonograph required society at large to develop a new understanding of the relationship between human voices and human bodies. Jonathan Sterne explains,

> Before the invention of sound-reproduction technologies, we are told, sound withered away. It existed only as it went out of existence. Once telephones, phonographs, and radios populated the world, sound lost a little of its ephemeral character. The voice became a little more unmoored from the body, and people's ears could take them into the past or across vast distances.[139]

Like mesmerism, sound reproduction technologies reshaped spatial and temporal limitations, unmooring sound from the human body and allowing individuals to move 'into the past or across vast distances'. Trilby's unique position as a 'singing-machine' allows her to provoke precisely this kind of movement 'into the past' in her audience members, who experience happy scenes of childhood while listening to her voice. Yet devices like the phonograph also introduced mechanical bodies that reinvigorated the question of what it means to be human. The problem of embodiment was complicated not only by the changing functionality of the sensory organs, but also by the possibility of disembodiment or re-embodiment within non-human forms.

Turning to electronic telecommunications, Jeffrey Sconce explains that devices like the telephone 'have compelled citizens of the media age to reconsider increasingly disassociative relationships among body, mind,

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[139] *The Audible Past: Cultural Origins of Sound Reproduction* (Durham: Duke University Press, 2003), p. 1.

space, and time'.₁₄₀ While 'presence' takes different forms in relation to different mediums, Sconce outlines a recurrent mode of conceptualisation that employs language reminiscent of Mesmer's explanation of animal magnetism. He writes

> fantastic conceptions of media presence [...] have often evoked a series of interrelated metaphors of 'flow' suggesting analogies between electricity, consciousness, and information that enables fantastic forms of electronic transmutation, substitution, and exchange. In the historical reception of each electronic telecommunications medium [...] popular culture has consistently imagined the convergence of three 'flowing' agents conceptualized in terms of their apparent liquidity:
> (1) the electricity that powers the medium
> (2) the information that occupies the medium
> (3) the consciousness of the viewer/listener (pp. 7-8).

Devices like the telephone are thus situated within networks of 'flowing" agents" that, like Mesmer's universal fluid, facilitate communication between bodies. The fact that public imagination persistently evokes this metaphor suggests the fundamental ideas behind animal magnetism, a force that connects all animate and inanimate bodies and allows them to influence one another, remain pertinent in the media age. Additionally, the inclusion of 'the consciousness of the viewer/listener' as one of the agents implies that electronic telecommunications devices reconfigure embodiment, allowing individuals to flow in and out of their corporeal selves. Loewe's concept of 'simultaneous feeling' as a mode of communication aptly captures the fluidity of thought and emotion implicated in 'media presence'. The final section of my article considers mesmeric and sonic influence in Du Maurier's novel to argue that *Trilby* exposes the importance of mesmerism as a metaphor for sound.

Mesmeric and Sonic Influence in George Du Maurier's *Trilby*

Employing mesmerism as a metaphor for sonic influence, George Du Maurier's *Trilby* explores the ramifications of shutting down not only the external senses, but also the consciousness of the mesmeric subject. Taffy, the Laird, and the sensitive Little Billee, a group of artists affectionately

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¹⁴⁰ *Haunted Media: Electronic Presence from Telegraphy to Television* (Durham: Duke University Press, 2000), p. 7. Further references are given after quotations in the text.

termed 'The Three Englishmen', bear witness to Trilby's transformation from a tone-deaf artists' model to an international singing diva known as 'La Svengali'. Du Maurier's novel endorses the curative powers of mesmerism, demonstrating its usefulness in treating the painful neuralgia in Trilby's eyes, but primarily focuses on mesmerism as a form of entertainment. On the surface, *Trilby* confronts the possibility that mesmerists will abuse their positions to exercise control over subjects and seek personal gains. Emphasising the potential for exploitation, the Laird worries that mesmerists 'get you into their power, and just make you do any blessed thing they please—lie, murder, steal—anything!' (p. 52). Svengali's sexual desire for Trilby, who he presents as his wife throughout her performances, exacerbates this danger by illustrating how male mesmerists might take advantage of female subjects. However, the novel more fundamentally speaks to the seductive power of sound at the turn of the nineteenth century. 'La Svengali' captivates and entrances audiences with her voice, expanding the scope of mesmeric influence from a single subject to a large assemblage.

The two manifestations of Trilby, one an autonomous young woman and the other a 'singing-machine' controlled by Svengali, elucidate the shifting relationship between bodies and voices consequent to inventions like the phonograph. The juxtaposition of Trilby's imperfect voice, emanating from her human body, and La Svengali's otherworldly voice, emanating from a mechanical surrogate, raises questions regarding how the evolution of sound might impact humanness. The character gains an enormous degree of power because of her superior vocal ability, but compromises the qualities that make her human. While Trilby O'Ferrall is an empathetic, autonomous individual, who inspires the love and devotion of the artistic community, La Svengali is a dispassionate, unconscious machine that manipulates the emotions and actions of the audience. Using the discounted practice of mesmerism as a metaphor for influence more broadly, Du Maurier exposes how sound can similarly reshape the human sensorium and create networks of animate and inanimate bodies.

Du Maurier's depictions of sensory experience emphasise movement between exterior and interior, underscoring the idea that sights and sounds taken into the body exert a powerful influence over the individual. Populated primarily by artists, *Trilby* calls attention to the dominance of the gaze in nineteenth-century culture and considers the differences between looking and listening. The Three Englishmen in particular, who use models for many of their paintings, spend a great deal of time walking

through the city and 'gazing' at the sights: 'they gazed and gazed, [and] each framed unto himself, mentally, a little picture of the Thames they had just left' (p. 196). The gaze of the men, who physically see Paris but mentally imagine London, posits looking as a contemplative process of turning one's sight inward, rather than observing what is actually present. This division between the exterior world and the interior world of the artist's imagination is further evident in the Laird's representations of toreadors, which 'ceased to please (or sell) after he had been to Seville and Madrid; so he took to painting Roman cardinals and Neapolitan pifferari from the depths of his consciousness—and was so successful that he made up his mind he would never spoil his market by going to Italy!' (p. 151). The Laird more successfully depicts toreadors using a studio model and 'a complete toreador's kit—a bargain which he had picked up for a mere song', than when he works from life, implying that reproductions of the human form derived 'from the depths of [the artist's] consciousness' appear more authentic to buyers (p. 5). What becomes evident in these examples is the independent nature of looking and the ability to control what one sees. Although the Three Englishmen traverse Paris together, often walking arm in arm, the phrase 'each framed unto himself' reinforces the unsharable nature of embodied experience. Each character constructs his own vision of the Thames and cannot share it with the others. The artists' imposition of a London scene on the Parisian landscape demonstrates that individuals have an enormous amount of control over what they see: a fact reinforced by the Laird's need to change from toreadors to cardinals and pifferari after his paintings stop selling. When buyers are no longer interested in looking at his representations of toreadors, he must find a new subject that they want to see.

While the artistic community employs a model a looking focused on exterior appearances, Svengali's close visual scrutiny of Trilby epitomises the medical gaze Michel Foucault famously associates with the clinic. Many characters comment on the beautiful qualities of Trilby's voice, but the 'well-featured but sinister' Svengali is the first to recognise its true potential and examine her body not as an aesthetic object, but as a site of vocal production (p. 11). His first significant evaluation of Trilby occurs when he uses mesmerism to cure the painful neuralgia in her eyes. Happy that her pain is gone, Trilby lets out the 'Milk below!' cry she typically uses to signify her arrival at the artists' flat. Svengali notes, 'It is a wonderful cry, matemoiselle—*wundershön*! It comes straight through the heart; it has its roots in the stomach, and blossoms into music on the lips [...] It is good production—c'est un cri du coeur!' (p. 50). Svengali traces

the production of Trilby's voice through the interior of her body, moving from her stomach to her lips, straight through the heart of the listener. Taking advantage of her 'pride and pleasure', he asks to perform a more intense examination of her mouth, a request she unquestioningly accedes to. The mesmerist exclaims,

> Himmel! The roof of your mouth is like the dome of the Panthéon [...] The entrance to your throat is like the middle porch of St. Sulpice [...] and not one tooth is missing—thirty-two British teeth as white as milk and as big as knuckle-bones! and your little tongue is scooped out like the leaf of a pink peony, and the bridge of your nose is like the belly of a Stradivarius—what a sounding-board! and inside your beautiful big chest the lungs are made of leather! (pp. 50-1).

The comparison of Trilby's anatomy to architectural details recalls the gaze of Taffy, the Laird, and Little Billee as they walk through Paris casually gazing at various landmarks. However, Svengali's gaze differs in its intense focus on the interior of the body. While the Three Englishmen turn their sight inward to imagine the Thames, Svengali extends his gaze into Trilby to imagine the lungs contained in her 'beautiful big chest'. He points out the different components of her body required for vocal production, such as the roof of her mouth, throat, teeth, tongue, nose, and lungs. Although he uses metaphors like the pink peony to flatter Trilby, his emphasis on resonant structures like the 'dome of the Panthéon' and the 'belly of a Stradivarius' reveal his predominant interest in her bodily architecture. Despite the differences in these two modes of looking, both emphasise sight as an individualised process often used to advance personal and professional desires. Looking does not function like the mesmeric fluid; instead of exposing the interconnectedness of bodies, sight reinforces the isolating nature of embodiment.

Scenes of listening within the novel alternatively underscore sound's similarly to the mesmeric fluid; sound flows within and between bodies, facilitating communication and allowing individuals to share thoughts and feelings in spite of their corporeality. La Svengali's sonic influence reveals an inherent connection between sound and human emotion, a relationship underscored by Little Billee's description of the return of his feelings as 'the sudden curing of a deafness that has been lasting for years' (p. 213). Throughout her performance at the Cirque des Bashibazoucks, La Svengali evokes powerful emotions from her listeners, imbuing even the

simplest nursery rhyme with deep significance. Her voice, which 'seemed to be pouring itself out from all around', leaves 'some five or six thousand gay French people [...] sniffling and mopping their eyes like so many Niobes' (pp. 210-11; p. 217). The image of her voice 'pouring itself out' heightens its similarity to Mesmer's substance, both by calling attention to its fluid nature and suggesting it functions independently. Commentary from the crowd reinforces the idea that the musical selection is unimportant; it is the voice itself that exerts an influence. Under Svengali's control, 'La Svengali's' body projects '[e]very voice a mortal woman can have [...] and of such a quality that people who can't tell one tune from another cry with pleasure at the mere sound of it directly they hear it' (p. 170). For all of the listeners, especially Little Billee, the allure of her voice seems to stem from its ability to awaken their emotions and stimulate their senses. It invokes

> all the sights and scents and sounds that are the birthright of happy children, happy savages in favored climes—things within the remembrance and reach of most of us! All this, the memory and feel of it, are in Trilby's voice [...] and those who hear feel it all, and remember it with her. It is irresistible; it forces itself on you; no words, no pictures, could ever do the like! (p. 218).

Through their collective sensory experience, the spellbound listeners achieve the kind of communication that Peters discounts as impossible based on the limitations of embodiment. 'La Svengali's' voice not only reaches the listeners emotionally, it places them in a kind of mesmeric trance that makes them employ a different kind of sensing. Additionally, it actualises Loewe's vision of all men being in the same condition such that they communicate through 'simultaneous feeling'. Sitting in the theatre listening to 'La Svengali', the audience mutually perceives 'sights and scents and sounds' beyond the temporal and spatial situation they physically inhabit.

However, 'La Svengali' also inspires a kind of 'savagery' or 'madness' in the audience, suggesting that like mesmerism, sonic influence could pose a threat to vulnerable listeners. Before attending her performance, the Three Englishmen hear accounts of how her voice 'gives one cold all down the back! it drives you mad! it makes you weep hot tears by the spoonful!' (p. 169). Another listener, the young Lord Witlow, states, '[s]he sang at Siloszech's, and all the fellows went mad and gave her their watches and diamond studs and gold scarf-pins. By gad! I never heard or

saw anything like it. I don't know much about music myself [...] but I was mad as the rest' (p. 171). Witlow's lack of control despite his ignorance about music indicates that La Svengali's voice impacts listeners regardless of their musical sensibilities, affecting all bodies indiscriminately. Furthermore, his association of madness with the valuable 'watches and diamond studs and gold scarf-pins' the audience gives La Svengali returns to the idea of the exploitative mesmerist, demonstrating how Svengali uses Trilby to attain fame and fortune. Transforming his subject into 'an unconscious Trilby of marble, who could produce wonderful sounds— 'just the sounds he wanted, and nothing else', Svengali exerts a dehumanising effect on both the young woman and her captive audience (p. 299).

Why does Svengali use mesmerism to transform Trilby into a device comparable to a phonograph, shutting down her external sensory organs but also inhibiting the internal sense associated with mesmeric subjects? Drawing on William Carpenter's *The Doctrine of Human Automatism* and *Principles of Human Physiology,* Ashley Miller provides a conceptualisation of voice that may account for Svengali's need to render Trilby unconscious. Voice, Miller argues, 'is inherently *re*productive rather than productive: the ear provides the original sound that the voice then reproduces. If the human voice is an instrument, it is an instrument that is played by the ear'.[141] Miller's formulation of the human voice suggests that in order to 'play' Trilby's voice, Svengali needs to control her ear, replacing her tone-deaf organ with his own. Her claim raises an important question: what does it mean for voice to be 'inherently *re*productive' in the face of sound *re*production technologies? For Trilby, it means that without the intervention of Svengali, she could never produce the otherworldly voice of 'La Svengali'. When her body is mechanised, incapable of sensing or voicing anything Svengali does not permit her to, Trilby is no longer subject to the complex relation between voice and ear that Miller describes. However, as a result of his intervention she becomes a repository for Svengali's voice, which he etches into her mind using his mesmeric influence. Trilby's performance of Chopin's impromptu in A flat on her death bed, as well as her final repetition of the mesmerist's phrase, '*Svengali...Svengali...Svengali...*', demonstrate that she retains her status as a phonograph after Svengali's death (p. 284).

Trilby's preservation of Svengali's voice not only reinforces her role as a sound technology, but also calls attention to the newfound capacity

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[141] 'Speech Paralysis: Ingestion, Suffocation, and the Torture of Listening', *Nineteenth-Century Contexts: An Interdisciplinary Journal* 36.5 (2014), 473-87 (p. 477).

of the human voice to continue speaking after death. As Connor explains, technologies like the gramophone created an atmosphere in which the voices of the dead could continue to speak. The classic image of Nipper the dog. listening to his master's voice emanate from the horn of the gramophone. suggests the voices of the dead exert power over the living even when they emerge from mechanical bodies. Connor points out that early versions of the image appear to situate the gramophone on top of a coffin, arguing, 'If the dog's attentive listening is taking place on a coffin, then this involves the unpleasant suggestion of some kind of physical connection between the machine and the deceased anatomy of the master' (p. 386). Like the gramophone, Trilby becomes a surrogate body that preserves the voice of Svengali and allows it to be played back to the listener. In his 1878 article, 'The Phonograph and Its Future' Thomas A. Edison states that the device 'permits of an indefinite multiplication of a record, and its preservation for all time'.[142] He explicitly claims that the eternal preservation of sound is possible 'without regard to the existence or non-existence of the original source' (p. 530). Trilby adheres to Edison's description, faithfully preserving the voice crafted by Svengali despite his death.

Conclusion

Like the mesmeric fluid, sound facilitates communication between bodies; both forces reshape the human sensorium and expose networks of influence, necessitating new definitions of humanness that account for variations in the conditions of embodiment. Nineteenth century descriptions of mesmerism often emphasise the power of mesmerists, expressing anxiety about the potential exploitation of the practice. The perceived vulnerability of mesmeric subjects, a theme prevalent in literary representations of mesmerism, hinders understandings of the phenomenon as the mutual wielding of power Grimes describes. In truth, subjects acquire authority through their ability to utilise what Deleuze terms an 'internal sense' as well as their expanded intellectual capacity.

The shifting soundscape of the late-nineteenth century, which saw the proliferation of sound technologies like the phonograph, required individuals to confront the interconnectedness of animate and inanimate bodies. The human voice was 'a little more unmoored from the body', to borrow Sterne's words, reinvigorating discussions of embodiment as a

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[142] 'The Phonograph and Its Future', *The North American Review* 126.262 (May-Jun., 1878), pp. 527-36 (p. 529). Further references are given after quotations in the text.

marker of humanness. The possibility that voices could be disembodied, or re-embodied in mechanical forms, disrupted spatial and temporal restrictions fundamental to understandings of life and death. Du Maurier's *Trilby* demonstrates that mesmerism functions as an apt metaphor for sonic influence, offering a framework for thinking about changes in sensory experience. By blurring the distinction between mesmeric subject and mechanised human, the novel elucidates key differences between the two. Unlike the mesmeric subject, Trilby becomes an unconscious instrument that Svengali uses to exert influence over the audience. While her manipulation of the listeners suggests the mechanised human possesses unprecedented power, surpassing that of mesmerism, the conditions of Trilby's altered state also suggest that in order to gain such abilities she must be stripped of basic human qualities. Her voice provokes a largely positive emotional response in the audience members and enables shared experience. Yet, 'La Svengali' is excluded from the network of bodies created by her performance. Trilby has no recollection of these moments of connection when she emerges from the trance state, indicating her exclusion from the shared experiences her voice facilitates. In an atmosphere where mesmerism was mainly a form of entertainment rather than a medical tool, Du Maurier demonstrates its continued importance as a cultural phenomenon.

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FEMALE TRANSCENDENCE:
CHARLES HOWARD HINTON AND HYPERSPACE FICTION
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Abstract

As far as nineteenth-century mathematician and writer Charles Howard Hinton was concerned, it was an unwillingness to explore beyond the boundaries of established epistemologies that prevented the conception of a fourth dimension or hyperspace. In this essay, I consider how Hinton employs the allegory of hyperspace to re-imagine women as transcendent. In the novellas, Stella and An Unfinished Communication (1895), he disavows not only a scientific epistemology that prevents a more expansive world view but also a gender ideology that constrains ideas of femininity. I argue that Hinton's radical re-imagining of the nature of the world, human consciousness and femininity leads him to create women who transcend a Victorian ideology that has defined them by their biology and the Hegelian sense of immanence in order to achieve higher consciousness. I draw comparisons between Hinton and New Woman novelists, who were writing at the same time, suggesting that both were engaged in re-imagining ideas of femininity and the kind of world women might occupy. But where nineteenth-century New Woman novelists anticipated individual transformation through a process of social and political change, Hinton envisaged social change as depending on an introspective, internal process of transcendence.

The English mathematician, Charles Howard Hinton, was only one amongst a number of nineteenth-century thinkers consumed with speculation about multi-dimensional space and the nature of consciousness. Georg Riemann and James Sylvester, both mathematicians, lectured on *n*-dimensional space to audiences in Germany and England in the mid-nineteenth century. Hermann von Helmholtz and James Clerk Maxwell were keen to consider the implications of extra spatial dimensions for physics, as was the German astrophysicist, Johann Zöllner, who used the concept of four-dimensional space to explain spiritualist phenomena. The fourth dimension became 'the favoured plaything' of spiritualists and occultists.[143] Speculations were to fuel the literary imagination too, with the publication of Edwin Abbott's *Flatland: A Romance of Many Dimensions* (1884), and later stories by H. G. Wells. It was in this context that Hinton's *Scientific Romances* appeared. Published in two series in 1886 and 1896, they are a collection of essays, lessons, allegories and fictional pieces that represent Hinton's exploration of the

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[143] Mark Blacklock, 'The Higher Spaces of the Late Nineteenth-Century Novel', *19: Interdisciplinary Studies in the Long Nineteenth Century*, 17 (2013), p. 3.

concept of a fourth dimension or hyperspace.[144] Hinton's central thesis is that the intuition of hyperspace is hampered only by the retention of existing scientific epistemological frameworks to understand the world. These frameworks act as a barrier to recognising a hyperspace world of infinite possibilities.

In this article, I consider two novellas, published together as *Stella and An Unfinished Communication* in 1895, in which Hinton explores female transcendence or higher consciousness.[145] These stories deserve more critical attention than they have received. They constitute only one element of Hinton's wider project of expanding human consciousness, but their importance lies in the way they represent a radical challenge to prevailing gender ideology and, I believe, a profound sympathy for women.[146] In encouraging his readers to divest themselves of obstacles that prevent an intuition of hyperspace, he demands a rejection not only of scientific epistemology but also of pre-conceived notions of what it is to be a woman. I argue that, in *Stella and An Unfinished Communication*, Hinton sets out to disavow a patriarchal gender ideology that defines women by their biology. He takes a radical departure from the prevailing nineteenth-century notion of women that aligns them with Nature and embeds them in the material world, thereby denying them the opportunity for transcendence. By situating women in a space outside that which normally defines them, Hinton rejects the Hegelian concept of the immanent woman. Instead, he re-imagines femininity as transcendent. Luce Irigaray suggests that women can only escape the construction of immanence and create a subjectivity of their own once they have a space they can call their own.[147] With this idea in mind, I argue that in situating women in hyperspace Hinton is, in effect,

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[144] Charles Howard Hinton, *Scientific Romances,* First and Second Series (London: Swan Sonnenschein & Co., 1886, 1896).

[145] I use the terms 'transcendence' and 'higher consciousness' interchangeably, to mean the fact of transcending or surmounting; of being above and independent of the ordinary limits of the world and of consciousness; and to be distinguished from immanence.

[146] In the preface to *Stella and An Unfinished Communication,* Hinton writes, 'One line, one feature, of the landscape of the land to which these thoughts lead, and only one, has been touched upon' (n.p.).

[147] Luce Irigaray, *An Ethics of Sexual Difference* (London: Athlone Press, 1993), pp. 34–42. Elizabeth Grosz discusses the significance of space and place in Irigaray's philosophy in *Sexual Subversions: Three French Feminists* (St.Leonards, NSW: Allen & Unwin, 1989), pp. 173–6.

providing them with their own space and thus the possibility of transcendence.

In these novellas, Hinton draws on other nineteenth-century conceptions of consciousness in an effort to overcome both the limitations to a literary representation of transcendence and the constraints of contemporary discourse. In challenging notions of femininity that support a separate spheres ideology, Hinton contributes to a debate that others, particularly New Woman writers, engage in elsewhere. Elizabeth Throesch makes the point that his project is 'surprisingly similar to the feminist project of rethinking of the ways in which sexuality, subjectivity, and the concept of emancipation are framed by discourse'.[148] The similarities are there but I argue that, by situating women in allegorical hyperspace, Hinton sets up a way to subvert ideological constraints. If women continue to be viewed through the lens of existing ideologies, this is because those gazing at them have failed to dispense with these outmoded ways of thinking. Hinton offers an imaginary spatial leap into the fourth dimension, a space in which the nature of womanhood is not easily defined for here anything is possible.

One of Hinton's contemporaries, William Stead, journalist, activist and spiritualist, also envisaged a fourth dimension, or 'throughth': 'In the new world which opens up before us life becomes infinitely more divine and miraculous than it has ever been conceived by the wildest flights of imagination of the poet'.[149] This is a world in which past, present and future connect. Stead's openness of mind encapsulated not only a belief in the supernatural world, but also his appreciation of other movements that promised significant change in this world. As editor of *Review of Reviews*, Stead regularly reviewed and championed New Woman fiction. He comments that this form of writing has fostered in woman the discovery that 'she has really a soul after all', and that she no longer has to accept the position given to her in the world. Instead, he argues, 'All social conventions, all religious teachings, and all moral conceptions will have to be reconsidered and readjusted in harmony with this new central factor'.[150] Hinton's writings demand a similar radical reconsideration and

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[148] Elizabeth Throesch, '"The difference between science and imagination?" (un)framing the Woman in Charles Howard Hinton's *Stella, phoebe*,' 18.1 (2006), pp. 75–98, p. 94.
[149] William Stead, 'Throughth; or On the Eve of the Fourth Dimension', *Review of Reviews* (April 1893), pp. 426-32, p. 427.
[150] William Stead, 'The Book of the Month: The Novel of the Modern Woman', *Review of Reviews,* (July 1894), pp. 64-74, p. 74.

readjustment of thinking about women. Where New Woman writers of the late-nineteenth century are mainly focused on the transformation of femininity through social change and activism, on re-shaping ideas of female sexuality, maternity and marriage, Hinton is concerned with the power of change from within. His feminism develops from speculating on hyperspace and the potential for a higher (female) consciousness, its development enabling the transformation of women's world. I begin by providing a short exposition of Hinton's hyperspace philosophy as set out in *Scientific Romances* and then consider his representation of female transcendence in *Stella and An Unfinished Communication*.

Hinton's Hyperspace Philosophy

Charles Howard Hinton (1853-1907) was a mathematician whose interest in abstract geometry led to his philosophy of hyperspace. His resistance to social and moral conventions and his irregular lifestyle was in tune with his belief that in freeing the mind we could be so much more than we are.[151] Hinton's philosophy is outlined in a series of speculative texts in which he explores the limits of Euclidean geometry, the notion of a fourth dimension, and the nature of consciousness and transcendence. The concept of consciousness was a difficult one for nineteenth-century thinkers to grapple with, many resorting to using a range of metaphors.[152] George Lewes writes of a 'stream' and, using the analogy of the waves on a lake, 'a mass of stationary waves', the patterns of which are in constant fluctuation caused by new sensations modifying them.[153] Herbert Spencer,

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[151] Hinton was the son of James Hinton (1822-1875), a well-known surgeon and writer who considered himself also a moral and religious guide. James promoted a philosophy of altruism based on the belief that the experience of both pleasure and pain were essential to human life and spirituality, and to the spirit of altruism. He had a great love of women and advocated polygamy as a form of social control of sexual desire. Charles edited his father's papers after his death, and the influence of his father's philosophy of altruism can be seen in his own work. Like his father, Charles breeched the conventions of moral behaviour and thought: in 1886 he was sentenced to three days for bigamy, after which he and his family fled to Japan. In spite of this transgression, I believe that his writing expresses an understanding of and sympathy for women He had several jobs, some of which were as a maths teacher, and it was during one teaching job that he developed a set of cubes which enabled him to visualise the fourth dimension. He was also known for having invented the 'baseball gun', a device for practising hitting balls.

[152] See Jill M. Kress, *The Figure of Consciousness: William James, Henry James, and Edith Wharton* (Routledge: New York & London, 2002).

[153] G.H. Lewes, *The Physical Basis of the Mind* (London: Kegan Paul, Trench, Trubner & Co., 1893), p. 366.

employing various metaphors, realised that he could only refer to the substance of the mind in terms of symbols, suggesting that the mind is fundamentally unknowable.[154] William James uses 'stream of consciousness', but is concerned about the actual naming of consciousness. He would prefer a common term, but is unable to come up with anything that satisfies him. He turns to introspection, the most fundamental postulate of psychology, as the only process that one can rely on: 'All people unhesitatingly believe that they feel themselves thinking, and that they distinguish the mental state as an inward activity or passion, from all the objects with which it may cognitively deal'.[155] The unstable nature of representing consciousness gives a flavour to the task that Hinton takes on, one complicated by the fact that he starts with a mathematical abstraction – the idea of a fourth dimension. His intention in conceptualising space is less to do with its geometric possibilities than with its association with higher forms of consciousness. If it is possible to imagine hyperspace then, according to Hinton, it is also possible to experience transcendent or higher consciousness. In common with Sylvester, Helmholtz and other scientists who are keen to push the boundaries of knowledge by challenging Euclidean geometry, Hinton uses the concept of a fourth dimension to explore the extent of human consciousness.[156]

Hinton's essays and lessons on the fourth dimension are quite dense and difficult for the non-mathematical mind to comprehend. In using different forms of exposition, including diagrams, he clearly wants to enable the reader to make sense of hyperspace at the same time as acknowledging that this will involve hard work and the setting aside of any preconceptions. In his early essay of 1880, 'What is the Fourth Dimension?', Hinton writes that 'It is the object of these pages to show that, by supposing away certain limitation of the fundamental conditions of existence as we know it, a state of being can be conceived with powers far transcending our own'.[157] In arguing for the existence of a fourth dimension, he suggests that just as a two-dimensional being would be

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[154] Herbert Spencer, *The Principles of Psychology* (New York: D. Appleton and Company, 1896), p. 162.

[155] William James, *The Principles of Psychology*, 2 vols, vol I (London: Macmillan, 1891), p. 185.

[156] Blacklock, p. 1.

[157] Charles Howard Hinton, 'What is the Fourth Dimension?', in *Scientific Romances* First Series (London: Swan Sonnenschein, Lowrey & Co., 1886), pp. 3-32, p. 4. Further references are given after quotations in the text.

unable to perceive a three-dimensional object, it is difficult for us to imagine a four-dimensional being, but not impossible if only we could rid ourselves of pre-conceived limitations: 'Why, then, should not the four-dimensional beings be ourselves, and our successive states the passing of them through the three-dimensional space to which our consciousness is confined?' (p.18). Of course the difficulty for Hinton, and for others speculating on the fourth dimension, was trying to make manifest an abstract concept. In *A New Era of Thought* (1888) he proposes 'a complete system of four-dimensional thought – mechanics, science, and art', the necessary condition of which is 'that the mind acquire the power of using four-dimensional space as it now does three-dimensional'.[158] For this to happen, we must set aside self-regard and adopt a 'thorough-going altruism':

> Pure altruism means so to bury the mind in the thing known that all particular relations of one's self pass away. The altruistic knowledge of the heavens would be, to feel that the stars were vast bodies, and that I am moving rapidly (p. 92).

Dispensing with established ideas that have shaped the way we live and setting aside self-regard is what he means by 'casting out the self'.[159] 'One's own particular relation to any object, or group of objects, presents itself to us as qualities affecting those objects – influencing our feeling with regard to them, and making us perceive something in them which is not really there' (p. 210). He instructs us to divest ourselves of spatial relations that inform a viewpoint and sense of identity associated with self-interest, in order to move into a space of selflessness and altruism. As one reads Hinton's texts, it becomes clear that abstract geometry is merely a framework for developing a moral and ethical philosophy that demonstrates the influence of his father's philosophy of altruism.

In his essay 'Many Dimensions', published in the same volume as *Stella and An Unfinished Communication*, Hinton speculates that, 'by passing deeper and deeper into absolute observation of matter', there is 'a glimpse of a higher world' and the realisation that 'all we think, or do, or

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[158] Charles Howard Hinton, *A New Era of Thought* (London: Swan Sonnenschein & Co., 1888), p. 86. Further references are given after quotations in the text.
[159] Charles Howard Hinton, 'Casting Out the Self', in *Scientific Romances*, pp. 205-22, p. 211. Further references are given after quotations in the text.

imagine, lies open'.[160] This idea echoes the geologist Edward Hitchcock's notion that 'every impression which man makes by his words, or his movements, upon the air, the waters, or the solid earth, will produce a series of changes in each of those elements which will never end'.[161] Hinton also employs the Nietzschean concept of 'eternal recurrence', the theory that events are repeated endlessly. This is associated with what Nietzsche termed *amor fati*, the acceptance of one's fate, transforming life from what has passed into what one has willed to pass.[162] This openness to and revelation of life's events suggests not only the suspension of time and space as we know it but also a moral impulse. It is through this openness, Hinton says, that 'we treat each other in the service of truth, as if we were each members of that higher world'. In realising the unity of past and future, we experience a higher form of consciousness. We might represent this to ourselves as a day of reckoning or as 'an omnipresent and all-knowing mind' (p.43).[163] This idea of duration and an overarching consciousness also suggests, as Throesch indicates, the influence of William James's concept of a cosmic consciousness based on Gustav Fechner's panpsychic view of the universe, in which individual consciousness is envisaged as only one part of a higher-order consciousness.[164] James says:

> [T]he drift of all the evidence we have seems to me to sweep us very strongly towards the belief in some form of superhuman life with which we may, unknown to ourselves, be co-conscious. We may be in the universe as dogs and cats are in our libraries, seeing the books

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[160] Charles Howard Hinton, 'Many Dimensions', in *Scientific Romances*, 2nd Series (London: Swan Sonnenschein & Co., 1896), pp. 27-44, .p 42. Further references are given after quotations in the text.

[161] Edward Hitchcock, *The Religion of Geology and Its Connected Sciences* (Boston: Phillips, Sampson, and Company, 1859), p. 412.

[162] See Friedrich Willhelm Nietzsche, *Thus Spoke Zarathustra* (New York, 1917). See also Elizabeth Throesch, 'The *Scientific Romances* of Charles Howard Hinton: The Fourth Dimension as Hyperspace, Hyperrealism and Protomodernism', (2007) <http://etheses.whiterose.ac.uk/id/eprint/371> [accessed 5 May 2015], p. 250. Throesch indicates the influence of Nietzsche's philosophy on Hinton. Further references are given after quotations in the text.

[163] There is a day of reckoning for the narrator in 'An Unfinished Communication' when his life passes before him and he must acknowledge his sins, particularly those against women (pp. 175-7). It is tempting to speculate that this might reflect Hinton's own remorse for his bigamy and a desire to put things right.

[164] In her thesis, Throesch discusses the interest that Hinton and James took in each other's intellectual ideas, pp. 272-284.

and hearing the conversation, but having no inkling of the meaning of it all.[165]

This 'superhuman life' is analogous to Hinton's hyperspace, a higher consciousness of which many, like James's dogs and cats, are as yet unaware.

If the ability to intuit the fourth dimension is evidence of superhumanity, then Hinton may have recognised it in his 18-year-old sister-in-law Alicia Boole's ability to grasp four-dimensional geometry.[166] Preternatural ability in women has traditionally been associated with the mystical. James, for example, refers to the higher powers of the 'feminine-mystical mind'.[167] Stead makes a similar connection using the analogy of the Conscious Personality as husband and Unconscious Personality as wife. In contrast to the husband, who is 'vigorous, alert, active', the wife keeps house, storing up impressions, remaining passive until her husband sleeps when she is free to act:

> Deprived, like the wife in countries where the subjection of woman is the universal law, of all right to an independent existence, or to the use of the senses or the limbs, the Unconscious Personality has discovered ways and means of communicating other than through the recognised organs of sense.[168]

Stead's analogy of female consciousness rising up against male subjection reflects his feminist sympathies. He believed that clairvoyance, thought-reading and automatic writing were examples of Divine revelation mediated through the feminine unconscious, representing 'rifts in the limits of our three-dimensional space through which the light of four-dimensional space is pouring in upon us'.[169] James describes the glimpses of higher consciousness in a similar vein: 'The fence is weak in spots, and

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[165] William James, *A Pluralistic Universe: Hibbert Lectures at Manchester College on the Present Situation in Philosophy* (London: Longmans, Green and Co., 1909), p. 309.
[166] Alicia Boole discovered the fourth dimension by using a set of cubes that Hinton had made for teaching purposes. Boole went on to become a well-respected mathematician.
[167] William James, 'What Psychical Research Has Accomplished', in *The Will to Believe, and Other Essays in Popular Philosophy* (New York: Longmans, Green and Co., 1921), pp. 299-327 (p. 301). These essays were published in original form in *Scribner's Magazine* in 1890, *Forum* in 1892, and *Proceedings of the Society for Psychical Research* in 1896.
[168] William T. Stead, *Real Ghost Stories* (New York: G. H. Doran Co., 1921), p. 23.
[169] Stead, 'Throughth', p. 427.

fitful influences from beyond break in, showing the otherwise unverifiable common connection'.[170] Although James associates the female mind with a mysticism usually ascribed as passive, both Stead and Hinton represent women with these higher powers as both active and transcendent. Hinton addresses the ideological and epistemological obstacles to the conception of both transcendent woman and the fourth dimension in *Stella and An Unfinished Communication.* He represents women as possessing a natural predisposition that enables them to mediate the rifts in the borders between three- and four-dimensional space. This gives them access to a world in which they can become free subjects, untrammeled by definitions of passivity or weakness.

'Stella'

In 'Stella', Hinton uses hyperspace to explore a version of femininity unconstrained by the three-dimensional visible world. [171] Stella, a young woman made invisible through the reduction of her coefficient of refraction to one by her now-deceased scientist uncle, Michael Graham, meets Hugh Churton, the executor of Michael's will. Having fallen in love with Stella, Hugh is intent on returning her to visibility so that she can be a proper Victorian wife and mother. Stella's story is related several years later by Hugh to the narrator. Hugh, described as a man with 'even more than the average English incapacity for ideas', reflects Hinton's despair at man's ability to intuit hyperspace (p. 107). One must, therefore, read Hugh's analysis of events through a veil of limited intellectual curiosity. Hugh is unable to see any potential in Michael's experiment with hyperspace, preferring to view Stella as the latter's victim and in need of rescuing. Throesch argues that Stella is subject to a phallocentric framing both by Hugh, who needs a fully-embodied woman as his other, and by Michael, who justifies her invisibility as his experimental subject.[172] Michael believes that visibility was the penalty Eve paid for eating the fruit of 'the tree of being seen and known' (pp. 32-3), the desire to be seen now part of woman's fallen nature. He wishes to help Stella towards a state of transcendence by casting off her vain corporeal self so that she

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[170] William James, 'The Confidences of a Psychical Researcher', *The American Magazine* (1908), n.p., cited in William McDougall, 'In Memory of William James', *PSPR* 25 (March 1911), pp. 11-29, p. 27.

[171] C. H. Hinton,'Stella', in *Stella and An Unfinished Communication: Studies of the Unseen* (London: Swan Sonnenschein & Co., 1895), pp. 1-107. Further references are given after quotations in the text.

[172] Throesch (2006), pp. 83, 94. Throesch uses the concept of 'framing' in Luce Irigaray's sense of woman being framed by man as his Other.

can return to an original, prelapsarian self, one untainted by vanity. His aim is to free Stella from the constraints he believed visibility placed on women, but the notion of invisibility was just as problematic in the nineteenth century. Women were expected to be unseen, their visibility being carefully prescribed. Throesch argues that Hinton uses Stella's invisibility to problematise the idea of liberation of the self. I prefer to see this as Hinton using invisibility as a way of facilitating liberation by asking the reader to 'see' Stella differently.

In the context of the Victorian private sphere, women's invisibility included divesting themselves of desire and self-interest and putting the needs of family first. Returning to visibility at Hugh's request, Stella simply exchanges one form of invisibility for another. In being re-defined by Hugh as the (in)visible Victorian wife and mother, she senses that she 'cannot be quite happy often' (p. 106). Michael's intention in making Stella invisible was for her to cast off self, thereby mediating Hinton's principles of altruism and selflessness in the pursuit of science. Her apparent sacrifice of self could, therefore, be seen as no different from the trope of Victorian woman's self-sacrifice for husband and family. Indeed, being in thrall to Michael and, on one occasion, being easily duped by a fraudulent spiritualist, would support this. I believe, however, that Stella's route to transcendence lies in her allowing Michael to make her invisible. His death means that he cannot complete his plan for her, hence the reader being given only glimpses of her higher consciousness. Michael's death is a useful device for Hinton to emphasise the difficulties that exist in achieving higher consciousness. In his notes, 'oddly enough under the subject of religion' (p. 98), Michael suggests that Stella will return to visibility with spiritual insights gained through her transcendent invisibility. Hugh recognises her special insight into eternity and the universal soul: 'To find your eternal self is not to find yourself apart and separate, but more closely bound to others than you think you are now' (p. 29). This eternal self suggests James's cosmic consciousness. Reading Michael's notes, Hugh discovers that the vision of the self beyond three dimensions is to be found 'in the consideration of ourselves as given with others, of ourselves as changing' (p. 50).

> There is a consciousness in us deeper than thought, which is directly reached, which is reminded of the higher existence by the clear depths of waters, by the limitless profundity of the night-time sky. A crystal thrills us with a sense of something higher, saying as it were, 'Confined as you and I are to this earthly state, still letting fall

away the encircling barriers of obscurity that with us this being is, I show myself to you even as you and I and all are to the higher vision' (pp.51-2).

Hugh can only conceive of Stella as Michael's 'emblem', someone to be rescued rather than as a woman of many dimensions as suggested by Michael's reference to the crystal. Stella's femininity transcends definition as Michael's experimental subject or as Hugh's wife. There are glimpses of her multiplicity in the suggestion of spiritual insight, in her clairvoyant capacity to foresee danger on the sea journey to China and her strength and bravery saving the crew and passengers, and in her capacity for sympathy with those different from herself.

Stella's transcendent multiplicity is emphasised through the association in the above quotation with the sea and sky, allusions to the mythological interconnectedness of femininity, a female lunar deity and menstrual cycles. [173] In Hinton's representation of women, there is a tension between their apparent subjugation to natural forces and an association with higher consciousness. The legacy of ancient mythology certainly risks reducing women to Hegelian immanence. Hegel's concept of woman has been critiqued by several feminists, some celebrating her rootedness in nature, others foregrounding her rational transcendence and urging her liberation from an association with nature.[174] It would be easy to dismiss Hinton's women as rooted in nature, but I believe that a more careful reading reveals a more nuanced representation. Just as Hinton's essays and lessons in *Scientific Romances* demand a great deal of concentration to begin to intuit the fourth dimension, so a close reading of the novellas is necessary to understand women's multiplicity. Rather than negate woman's affinity with nature, I think that what Hinton does is show how limited this three-dimensional view of her is. To envisage a four-dimensional woman is to view a woman whose relation to nature must be re-defined in relation to her capacity to achieve higher consciousness. We must read Hinton's reference to deep waters in terms of the Jamesian analogy to deeper levels of consciousness. As Ornella Moscucci points out, the dichotomy of rational, cultured male and immanent female 'had no foundation in 'nature': it was based on

[173] See Ornella Moscucci, *The Science of Woman: Gynaecology and Gender in England 1800-1929* (Cambridge: Cambridge University Press, 1990), p. 33. Further references are given after quotations in the text.
[174] See Antoinette M. Stafford, 'The Feminist Critique of Hegel on Women and the Family', *Animus*, 2 (1997), pp. 64-92, p. 68.

ideological oppositions which are deeply entrenched in western thought' (p.28). Hinton's project is to deconstruct these assumptions. The fourth dimension provides the space that Irigaray argues woman requires in order to discover her true subjectivity which, in Hinton's story, is transcendence. Escaping the constraints of a three-dimensional world is not easy however, as Stella makes clear at the end of the story as she expresses her unhappiness.

'An Unfinished Communication'

'An Unfinished Communication' is a novella in which the male narrator seeks redemption through a Nietzschean form of *verlernen* or unlearning.[175] On his journey to find the 'Unlearner' he encounters three women, all of whom appear to have experienced some form of transcendence. As in 'Stella', it is the male protagonist who must strive for a higher truth, women appear already to have access to it. Part of the process of his unlearning appears to be encountering women who challenge pre-conceived binaries of gender, of immanence and transcendence. The story begins with the narrator wandering through a squalid part of New York in search of the Unlearner. On the latter's doorstep, he encounters a woman with two small children; she appears shabby and unkempt, 'but her form, strong and substantial, had a touch of antique grace. Comely but unanimated features surmounted her deep bosom'. She tells the narrator that the Unlearner 'did say as I was a better one in his line than he was himself, but I guess that was one of his ways' (p. 113). The narrator misinterprets this to mean that women, like children, are good at forgetting. He identifies this woman, with children clinging to her skirts, as an example of Hegelian immanent woman, embedded in maternity and the materiality of life.[176] From this viewpoint, woman's immanence precludes transcendence. She represents stability, a solid centre in which men can forget themselves and from which they rise

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[175] C. H. Hinton, 'An Unfinished Communication', in *Stella and An Unfinished Communication*, pp. 109-77. Further references are given after quotations in the text. For more on *verlernen,* see Robin Small, *Friedrich Nietzsche: Reconciling Knowledge and Life* (Yarra, Victoria: SpringerNature, 2016), p. 75, in which Small defines *verlernen* as the process of unlearning, one element of which is the need to overcome moral prejudices and to give up thinking in terms of responsibility, guilt and blame. Another element is to rid oneself of dualisms, such as health/sickness, pleasure/pain, that dominate life. Unlearning is not the same as forgetting, it is instead related to relearning or *umlernen.*

[176] See G. W. F. Hegel, *The Philosophy of Right*, trans. T. M. Knox (Oxford: Oxford University Press, 1967), p. 166.

to flourish in the public sphere. But the narrator's three-dimensional perspective is mistaken. Rejecting this narrow view of woman's conjunction with immanence, Hinton reveals a woman of multiple dimensions. As someone better than the Unlearner at unlearning, this woman transcends a world dominated by Hegelian oppositions to re-define herself. She becomes, instead, a form of 'goddess spirituality', a term used by Shari Neller Starrett to re-frame Hegel's image of woman into one who embodies the divine with an awareness of 'life as a cycle of creative rebirths'.[177]

The second woman the narrator encounters is Nattie. She is a mysterious young woman. Washed up on the shore following a storm, 'miraculously preserved', she is taken in and cared for by a fisherman in the village (p. 146). Her story resembles the miracle of the Virgin Mary saving from shipwreck and drowning a woman about to give birth, which Marina Warner suggests makes 'the metaphysical analogy between the watery mass from which form emerges into life and the actual birth of a child, between the ocean and the maternal womb'.[178] There is no indication that Hinton based Nattie on this myth, but in her singularity, her independence and oneness with nature, she clearly has 'nothing in common with these heavy fisher folk. Who was she? – singular, wild girl, living on the sands by the sea' (p. 148). Nattie's demeanour suggests some special insight. The narrator recognises the powerful affinity she has with the sea and the land, a landscape that has both saved and cherished her:

> [F]or who else had taught her that ineffable grace? who else had breathed into her soul those premonitions of life's deep passion? who else had taught her to catch the thoughts of those high souls, whose words, faintly echoed, leave all unmoved the slumbering world? The courage of the storm, the grace of each pale flower of the strand that gives all its tender beauty to its arid spot of sand – all was hers; and she moved breathing life and meaning into all around her (p. 150).

This association of Nattie with nature suggests not the three-dimensional immanent woman but a multi-dimensional one. Nattie is at one with nature as she breathes 'life and meaning into all around her', at the same

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[177] Shari Neller Starrett, 'Women, Family and the Divine', in *Feminist Interpretations of G. W. F. Hegel,* ed. by Patricia J. Mills (Pennsylvania: Re-Reading the Canon Series, Pennsylvania State University Press, 1996), pp. 253-74, p. 264, cited in Stafford, p. 77.

[178] Marina Warner, *Alone of All Her Sex: The Cult of the Blessed Virgin Mary*, 2nd ed. (Oxford: Oxford University Press, 2013), p. 272.

time as seeing beyond the natural world to commune with 'those high souls' imperceptible to the rest of the world. The narrator's discovery that Nattie's full name is Natalia reinforces her association with re-birth and multiplicity. Her emergence from the waves suggests her transcendence. There is more to Natalia than meets the eye but without access to higher forms of consciousness the narrator is unable to comprehend her true nature, a further reference to the limitations of a three-dimensional view of woman.

Hinton's third depiction of womanhood comes in the form of a vision the narrator has when drowning. In a strange but significant interlude, he witnesses an encounter between a woman and St. Paul and St. Simeon Stylites. She asks for their judgment, dropping the bundle she carries, saying, 'I have stolen these' (p. 163). Her bundle reveals all the beauties of the Romantic world, the sensual adornments of human grace and beauty that have turned Nature into something unnatural – 'all was there, not the substance of things, but the show of them'. She says,

> But men wove robes and garments, inventing light and colour, placing light and colour and sound before me. They praised me, calling me Nature and wonderful, beautiful. I, because I liked their praise, put on these robes that were none of mine, making pretence to be as they would care to see me; all that you see I put on, feigning to be what men praised – I, who all the while have no part in any of these things, whose it is to move the atoms on their ceaseless wheeling (p.164).

Everything that is natural and true in woman is contaminated by man's construction of her, clothed by his desire, like Stella in her visible form. Man has made woman into something to suit his carnal purposes, but in a way that conceals her true nature. In this vision, however, she is told to leave the garments she has dropped so that she can return to her true self, 'not clothed in the feigned robes she wore before, in which, because man had woven them, there was of his evil' (p. 165). Stripped of man's construction, woman can return to her original state. As an allegory of womanhood, reduced to her essence and freed of the desires of others, Nature is no longer framed by notions of immanence and passivity. This episode marks the dawning of a new day: 'The light of dawn, the sunset of even, no longer were what man put on her; but were of Nature's own' (p. 165). This is the day and place that Hinton imagines when the expansion of consciousness enables woman's alignment with nature to be seen not as delimiting but as offering the possibility of transcendence. At the end

of the story, the narrator foresees a time when he and Natalia will be reunited as equals. This can only happen once he too has experienced transcendence through unlearning, 'for it is only in the world-regard in the care for all life that souls can walk together perfectly, and only so now will Natalia and I walk together' (p.176). Man must also find his own space. To quote Irigaray, 'If any meeting is to be possible between man and woman, each must be a place, as appropriate to and for the other, and toward which he or she may move' (p. 40). The transcendence of a limited world-view that defines man as subject and woman as his other offers, instead, the possibility of subjectivity for both.

Hinton and New Woman Fiction

Scientific Romances is an example of a highly experimental and speculative form of writing in the sense that it focuses on 'presenting modes of being that contrast with their audiences' understanding of ordinary reality'. [179] In Hinton's writings, as Bruce Clarke argues,

> [M]athematical physics morphs into incipient science fiction. He was essentially a scientific romancer on the order of Verne or Wells, as yet too enmeshed in scientific and philosophical agendas to cut his texts loose as pure fictions.[180]

And yet, *Stella and An Unfinished Communication*, although emanating from the mind of a mathematician with a strong didactic purpose, is also from 'the world of imagination and dream'. [181] It is a form of romance in the way that it seeks not to copy reality but to represent, in the words of Henry James, 'experience liberated, so to speak; experience disengaged, disembroiled, disencumbered, exempt from the conditions that we usually know to attach to it'.[182] These stories resist the constraints of rationalism, stretch the boundaries of scientific epistemology and engage with the romantic imagination. In conceptualising a world of four dimensions, Hinton conjoins his knowledge as a mathematician and scientist with 'the beautiful circuit and subterfuge of our thought and our desire' (p. 32), that is, a desire to make real through fiction an expansive world of infinite possibilities. There are parallels between the way shifting

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[179] R. B. Gill, 'The Uses of Genre and the Classification of Speculative Fiction', *Mosaic*, 46.2 (2013), 71-85 (p. 73).

[180] Bruce Clarke, 'A Scientific Romance: Thermodynamics and the Fourth Dimension in Charles Howard Hinton's "The Persian King"', *Weber Studies*, 14.1 (1997), para. 22.

[181] Gillian Beer, *The Romance* (London: Methuen & Co., 1970), p. 7.

[182] Henry James, *The Art of the Novel: Critical Prefaces* (London: Charles Scribner's Sons, 1895), p. 33. Further references are given after quotations in the text.

conceptions of time and space in the late-nineteenth century enabled Hinton to imagine a four-dimensional world, and the way that the cultural and socio-economic climate provided an impetus for other writers, particularly New Woman novelists, to imagine a world in which women's lives are transformed. There is also that romantic strain in New Woman fiction to represent experiences that are 'liberated' from the conditions that normally apply. In choosing to compare Hinton's fiction with that of New Woman writers, I do not want to suggest that the latter constitute a homogenous group – far from it, there are some distinct divisions both in style and form of writing and in the importance they give to different aspects of women's lives. I am interested, however, in the ways in which Hinton's and New Woman writers' engagement in the discourse on femininity and gender involve challenging established epistemologies in order to radically re-imagine the world.

The spaces in which Hinton and New Woman writers situate women can be described as utopian. Utopia is, according to Jean Pfaezler, a 'nowhere' space not necessarily because of its unreality, 'but because it contains more truth, more information – hence more political possibility – than does everyday reality'.[183] The imaginary worlds that Hinton and New Woman writers create are developed out of the worlds in which they live. Their purpose is to challenge the status quo and offer better alternatives. For many New Woman writers social change is central to their agenda with, for example, novelists such as Olive Schreiner and activists like Eleanor Marx envisaging a utopian world in which women and men live as equals. The stifling of female intellect by men is challenged in stories such as Schreiner's 'The Buddhist Priest's Wife', and the binary of male dominance and female helplessness is inverted in many of George Egerton's stories.[184] In common with these stories, female resistance to subordination by men is an important theme in *Stella and An Unfinished Communication.* The struggle for equality is often hard-fought in New Woman fiction, with many heroines meeting a sad end through

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[183] Jean Pfaezler, *The Utopian Novel in America 1886-1896: The Politics of Form* (Pittsburgh, University of Pittsburgh Press, 1984), p. 158, cited in Matthew Beaumont, *Utopia Ltd: Ideologies of Social Dreaming in England 1870-1900* (Chicago: Haymarket Books, 2005), pp. 118-9.

[184] Olive Schreiner, 'The Buddhist Priest's Wife', in *Daughters of Decadence: Women Writers of the Fin-de-Siècle*, ed. by Elaine Showalter (London: Virago, 1993), 84-97. See also Gail Cunningham, "He-Notes': Reconstructing Masculinity', in *The New Woman in Fiction and in Fact:* Fin-de-Siècle *Feminisms*, ed. by Angelique Richardson and Chris Willis (Basingstoke: Palgrave Macmillan, 2002), pp. 94-106.

death, illness or suicide.[185] Like Stella, they struggle against established thinking, rarely finding true happiness. Although Hinton shares with New Woman writers a faith in the written word to change minds, the promise of the narrator to tell Stella's story is no guarantee that life will improve. Matthew Beaumont suggests that one of the reasons feminist utopias tend to fail is because most of them remain framed by Victorian patriarchy.[186] The utopian hope underlying Hinton's fiction is constantly up against more powerful established ways of thinking that define both nineteenth-century scientific thought and gender ideology. There are no happy endings for either Stella or Natalia, suggesting that the struggle for a vision of a new world is a formidable one.

In both New Woman and Hinton's texts, the impulse is for women to transcend the world in which they live. For many women writers this involves taking control of their own bodies, whether in the form of promoting free love, or the social purity agenda of novels like Sarah Grand's *The Heavenly Twins* (1893).[187] (Stella is a good example of the risks women take when they allow men to control their bodies.) Some writers give priority to the maternal function as part of a eugenic project to ensure that women take the lead role in human evolution. George Egerton sees woman's role in evolution as a way of celebrating her primal, sexual self, with the close conjunction of women and nature as a form of corporeal transcendence.[188] Mona Caird, on the other hand, opposed the way in which Darwinian evolutionary ideas were being used to justify what she saw as the barbaric practices of eugenism. Like Hinton, she resists the idea of woman's affinity with nature confining her to the private sphere. This conjunction is 'a mere register of the forces that chance to be at work at the moment and of the forces that have been at work in the past'.[189]   Although Hinton does not engage in the debate about sexual freedom or eugenics, he is interested in the discourse on the embodied woman and her role in the service of others. For example, he questions whether Stella is merely Michael's 'emblem', his experimental

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[185] See Sally Ledger, 'Ibsen, The New Woman and The Actress', in Richardson and Willis, pp. 79-93, p. 83.

[186] Beaumont, p. 104.

[187] Sarah Grand, *The Heavenly Twins* (New York: Cassell Publishing Company, 1893).

[188] See Angelique Richardson, *Love and Eugenics in the Late Nineteenth Century: Rational Reproduction and the New Woman* (Oxford: Oxford University Press, 2003), p. 157. See also George Egerton, 'A Cross Line', in Showalter, pp. 47-68.

[189] Mona Caird, 'Suppression of the Variant Types', in *The Morality of Marriage and Other Essays on the Status and Destiny of Woman* (London: George Redway, 1897), pp. 195-21, pp. 197-8.

subject, or a 'crystal', the multiple and transcendent woman. Although Michael dies before his experiment is completed, the implication is that Stella's self-sacrifice is in the service of female transcendence.

I believe that where Hinton differs from most late-nineteenth-century New Woman writers is in the introspective turn his fiction takes. He is less interested in the ways in which social and political change might affect female consciousness than in the power of subjective, internal transformation to influence wider changes. Introspection was to become a focus of early Edwardian feminism. As Lucy Delap points out, the belief in self-actualisation and individualism was at least as important as fighting for women's rights and freedoms, and was strongly influenced both by Nietzsche and by Max Stirner's *The Ego and His Own*.[190] In his discussion of slave mentality, Stirner argues that submissiveness would not be reversed through revolution but by internal transformation. This idea was popular with Edwardian feminists like Dora Marsden, editor of *The Freewoman*, but there is also evidence of it in Hinton's hyperspace philosophy. Just as James suggests that it is only through introspection that we can know what consciousness is, so Hinton argues that it is the introspective turn that allows for the experience of higher consciousness. Stella is liberated from her corporeal self, and therefore divested of external temptations that might detract from self-knowledge. In 'An Unfinished Communication', it is the internal, psychological process of unlearning that is the route to higher consciousness. Although the introspective turn in feminism focused on individual change, for some 'the dual focus on self-development and duty' would be to the benefit of all (p. 111). Similarly, Hinton foresees the casting out of self as in the interests not only of individual consciousness but also of dispensing with old epistemologies in order to open the mind to new ways of thinking and being in the world.

Hinton's novellas make a significant contribution to discourses in the late-nineteenth century on gender and consciousness. Femininity was still largely defined in terms of the body and woman's maternal function, the fragility of the relationship between mind and body, and a quasi-mystical belief in women's inherent spirituality. The idea of women's

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[190] Lucy Delap, *The Feminist Avant-Garde: Transatlantic Encounters of the Early Twentieth Century* (Cambridge: Cambridge University Press, 2007), p. 113. Further references are given after quotations in the text. Max Stirner, *The Ego and His Own*, trans. Steven T. Byington (New York: Benj. R. Tucker, 1907).

immanence, their natural state being an affinity with Nature and their maternal function, ensured them a fixed position within the private sphere of home and family, this position justified and elevated by its association with women as the spiritual and ethical centre of family life. Denied access to civil society, women achieved individuality only through the subjectivity of another. Through the allegory of hyperspace, Hinton re-imagines women as transcending the ideological limitations that restrict their self-realisation. By situating women in four-dimensional space in *Stella and An Unfinished Communication,* Hinton reinforces the central point of his hyperspace philosophy – that a three-dimensional worldview provides only a partial understanding of the world's expansiveness, and that the ability to transcend this perspective opens the door to a radically altered world. Freed from the constraints of a Victorian ideology that determines who and what women can be, Hinton disavows the Hegelian idea of immanent woman. He rejects the association of feminine mysticism and spirituality with passivity to conjoin these qualities with women's propensity for agency and transcendence. I have argued that Hinton's project demands a radical re-thinking of the nature of the world, human consciousness and femininity. In this respect he can be compared with New Woman writers who also wished to create a world in which women would be free to explore their subjectivity. Although Hinton's fiction can be seen as a precursor to science fiction in the way that it mixes science and imagination, he later came to the conclusion that we do exist in a four-dimensional world: we just need to learn how to experience it. Hyperspace becomes not simply a fantastic space of the imagination. His rejection of prevailing epistemology and ideology is based on a belief in the reality of a world experienced as more expansive and open-ended. This extends to the way in which female consciousness and identity are understood, allowing for the emergence of a form of femininity that is complex, multiple and transcendent.

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THE HAND AND THE MIND, THE MAN AND THE MONSTER
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Abstract

This article reads the monstrous hand in Victorian fiction as a parallel for the dangerously different mind and brain. The human hand and brain were perceived by the Victorian scientific community as mutually constitutive and as having evolved in tandem, such that the hand becomes the symbol of human superiority. The hand's dexterity and sensitive nerves of touch capable of effecting the mind's ambition distinguishes it from the paws, claws, and "hands" of animals. Yet, as books on hand-phrenology reveal, not all human hands are the same. Hand-phrenologists equated manual sensitivity with intellect and brain size. The human hand that signifies the superior human intellect is traditionally English, male, educated, upper-middle class, and capable of engaging in "civilised" forms of sympathetic touch with his fellow beings. Humans distinguished themselves from the animals they evolved from with their thinking hands that both act as agents of the mind and brain and communicate knowledge of the world to them. Hands that act on the world through touch but lack the manual sensitivity necessary to facilitate such intercommunication prove monstrous in their inability to form stable social connections necessary to human progress. This article argues that monstrous hands in H. G. Wells' *The Island of Doctor Moreau* (1896), Bram Stoker's *Dracula* (1897), and H. Rider Haggard's *She* (1887) are those that initially appear human, but reveal through their dulled tactile sense and manual deformity a depraved mind with unnatural brain power. In the figure of Moreau, the monster's hand and the human hand appear interchangeable until his hand is nearly severed, reflecting his brain that sought to evolve beyond human limitation but was still bound by human failing. Monstrosity and humanity overlap in monstrous hands that parallel monstrous minds, problematising the clear boundaries that structured Victorian society and classified the people that comprised it.

No discussion of the Victorian brain would be complete without a discussion of the human hand. Victorians perceived the hand and mind as entirely interdependent and mutually constitutive. Scientists, evolutionary theorists, philosophers, and hand phrenologists alike claimed that human brains evolved with the dextrous use of hands.[191] In

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[191] See Erasmus Darwin, *The Temple of Nature; or, the Origin of Society* (Baltimore: John W. Butler and Bonsal and Niles, 1804); Charles Bell, *The Hand: Its Mechanism and Vital Endowments as Evincing Design* (London: William Pickering, 1833); Charles Darwin, *The Descent of Man, and Selection in Relation to Sex* (New York: D. Appleton and Company, 1871); Richard Beamish, *The Psychonomy of the Hand; or, The Hand an Index of Mental Development, According to Mm D'Arpentigny and Desbarolles*, 2nd edition (London: [n.pub.], 1865); T. H. Huxley, 'On the Relations of Man to the Lower

particular, the precision grip and refined sense of touch unique to human hands accounted for humans' superior intellect. While the brain may have acted as the central organ of the mind, from the early nineteenth century on the hand was perceived as an agent of both.192 As Richard Beamish explains in *The Psychonomy of the Hand* (1865), a popular work on the emerging science of hand-phrenology,193

> It is scarcely necessary to remind my readers that the intercommunication between the outer world and the brain is by means of a distinct system of nerves, which, more sensitive than the most delicate telegraphic wires, convey all intelligence to the great nervous centre, and transmit from thence the determination of the will to the several points of demonstrative action.194

Beamish, drawing on the work of Charles Bell and Mm D'Arpentigny and Desbarolles before him, identifies the nerves of touch located primarily in the hands as the most common agents of such 'intercommunication.' Hands connected the brain and mind to the 'outer world' in a literal sense. A refined sense of touch was understood as essential for the brain and hands to act on and perceive the world.

Situating touch in its Victorian context, Pamela Gilbert explains that the 'touching hand enacts the toucher's will, but the sensing hand troubles distinctions between active and passive, between the touching and the touched.'195 Victorians understood the human hand as an

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Animals,' in *Evidence as to Man's Place in Nature* (New York: D. Appleton and Co., 1872), pp. 71-138.

192 See Stiles for a more complete discussion of the relationship between the brain and mind during the nineteenth century. As she explains, it was the work of Franz Joseph Gall during the late eighteenth century that 'convinced the scientific community that the brain was the organ of the mind, a previously controversial notion' (p. 11).

193 A term that plays on phrenology, which was the study of character in the shape of the skull. Hand-phrenology was a similar practice that read character in the shape of human hands.

194 Beamish, p. 1.

195 Gilbert, par. 1. Victorian understandings of touch prefigured that of contemporary phenomenologists, which Gilbert references here. As Maurice Merleau-Ponty explains, '[t]he handshake too is reversible; I can feel myself touched as well and at the same time as touching.' Steven Connor elaborates on this idea of the double sensation of touch: 'If you touch your skin [...] then you feel yourself and you feel yourself feeling. You are simultaneously an object in the world and a subject giving rise to itself as it advances to meet the world in that object.' Maurice Merleau-Ponty, *The Visible and the*

appendage capable of touching and sensing simultaneously. In other words, the active hand that touches also proves vulnerable to sensation as it passively experiences that which it touches. According to this view, the brain's capacity to communicate with the world depends upon the sensitivity of the nerves of touch in the hands. A 'touching hand' can act on the world, but a 'sensing hand' requires the brain to register and translate the actions of the world on it. The human hand senses, and the more sensitive the hands, the more sensitive the brain.

Scholarship on the relationship between hands, brain, and mind often focuses particularly on manual monstrosity in the figure of the severed or disembodied hand in late-Victorian Gothic romances that acts with a will of its own, often proving not only a marker of character but also a commodity or fetish object that signifies wider cultural anxieties about social transgression, gender relations, and the imperial project.196 Overlooked in these studies, however, are hands that remain connected to the body and brain but prove just as threatening. In the context of belief

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Invisible, ed. Claude Lefort, trans. Alphonso Lingis (Evanston: Northwestern University Press, 1968), p. 142; Steven Connor, *The Book of Skin* (Ithaca, NY: Cornell University Press, 2004), p. 41. See also Merleau-Ponty, *Phenomenology of* Perception (London and New York: Routledge, 2002).

196 Katherine Rowe identifies the disembodied or ghostly hand 'that reaches unexpectedly from the shadows' as that which troubles seemingly stable boundaries between person and object as it reaches across to touch (p. 111). Kelly Hurley offers a largely Freudian reading of Queen Tera's seven-fingered mummified severed hand in Bram Stoker's *The Jewel of Seven Stars* (1903) that, she argues, 'can be said to symbolise not just the potential immortality of the (white) subject but also the potential immorality of the (white) empire' (p. 182). Aviva Briefel points out that stories about severed hands throughout the century express the common anxiety that a hand might reveal the secrets of its owner's identity whether or not such revelation was desired. However, she also suggests that the absence of racial signifiers questioned the trust put in the hands' unfailing honesty about human character. Finally, Abbie Garrington's study of the severed hand as a Modernist trope claims that the severed hand severs the 'body not only [from] its executive capacities, but also [from] its primary symbol of intentional selfhood and haptic experience' (p. 171). Katherine Rowe, *Dead Hands: Fictions of Agency, Renaissance to* Modern (Stanford: Stanford University Press, 1999); Hurley, Kelly, 'The Victorian Mummy-Fetish: H. Rider Haggard, Frank Aubrey, and the White Mummy,' in *Victorian Freaks: The Social Context of Freakery in Britain*, ed. Marlene Tromp (Columbus: Ohio State University Press, 2008), pp. 180-199; Briefel, Aviva, *The Racial Hands in the Victorian Imagination* (Cambridge: Cambridge University Press, 2015); Garrington, Abbie, 'Horrible Haptics,' in *Haptic Modernism: Touch and the Tactile in Modernist Writing* (Edinburgh: Edinburgh University Press Ltd., 2013), pp. 170-82.

in the evolutionary superiority of humans, and especially of the best of English humans, brain evolution distinguished human from animal and evolved from regressive humans. The hand's sensitivity reflected an individual's place in the hierarchy of evolutionary advancement and in literary representations particularly, a hand's tactile sensitivity acts as a measure of one's neurological and intellectual sensitivity, which becomes a marker of humanity or one's lack thereof. I assert that intact monstrous hands in Victorian literature are those that lack tactile sensitivity and thus the ability to form what were perceived as civilised connections with the world. Their domineering touches grasp without sensing in a sufficiently 'evolved' way. As a consequence, the brains and intellects these hands serve engage with the world in a destructive and callous manner improper to an evolved English human.

This paper argues that we consider hands within literature as another site of commentary on the Victorian brain and mind to which they are attached. Late-Victorian Gothic romances such as H. G. Wells *The Island of Doctor Moreau* (1896), Bram Stoker's *Dracula* (1897), and H. Rider Haggard's *She* (1887) provide key sites to locate this parallel figuration of hand and brain due to the emphasis they place on manual monstrosity. Each text establishes a parallel between deformed hands and mental monstrosity. The hands of Dracula, Queen Ayesha, and Doctor Moreau initially appear human, but become monstrous as their physical deformities, devolution, or near severing figures their hands' insensitivity, bringing to the surface larger cultural anxieties about brains and minds that possess unnatural power of a deviant nature and thus threaten to destabilise social boundaries thought fixed. Monstrous hands enact and reflect brains without empathy in which humanity and monstrosity overlap.

The Hand and the Mind in Victorian Popular Science

In order to understand how a hand can *become* monstrous, we must first attend to why the hand is so directly linked to the idea of humanity. As previously noted, early nineteenth-century discourses on human exceptionalism suggested that the development of the human brain correlated with the evolution of the hand's dexterity and tactile sensitivity. In *The Temple of Nature* (1802), Erasmus Darwin distinguishes the human hand from the paws and claws of animals, establishing a direct correlation between the hand's shape, dexterity, and refined sensibility, and the ingenuity of the human mind:

> Nerved with fine touch above the bestial throngs,
> The hand, first gift of Heaven! to man belongs;
> Untipt with claws the circling fingers close,
> With rival points the bending thumbs oppose,
> Trace the lines of form with sense refined,
> And clear ideas charm the thinking mind.[197]

'The hand' and 'the thinking mind' are mutually constitutive in E. Darwin's figuration because the hand is 'Nerved with fine touch,' an observation that suggests a correlation between physiological sensation and neurological development. His emphasis on tactile sensation positions the hand in the Victorian imaginary as an educator of the brain and an agent of the mind, not merely a symbol of or stand-in for either.[198]

By mid-century, the practice of craniometrics, which claimed that the size of the skull and thus brain acted as an index of intelligence, had grown in popularity and had been linked with the degree of tactile sensitivity measurable in hands.[199] Beamish, for example, asserts a direct correlation between manual sensitivity and intelligence when he argues that the 'marked difference in the development of the corpuscles of touch between man and the lower animals, entirely coincides with the difference which has been found to characterise the *brains* also of man and apes.'[200] Late Victorians believed then that as touch developed in higher order animals such as humans, so did intelligence.

In *The Descent of Man* (1871), Charles Darwin, E. Darwin's grandson, corroborates such a view of the hand as an active agent of the mind: 'Man could not have obtained his present dominant position in the world

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[197] E. Darwin, Canto III, lines 121-26.

[198] As Peter Capuano explains in his recent book, 'The Victorians were highly cognizant of the physicality of their hands precisely because unprecedented developments in mechanised industry and new advancements in evolutionary theory made them the first people to experience a radical disruption of this supposedly distinguishing mark of their humanity' (p.2). I begin with this discussion of hands as perceived by evolutionary theorists in order to argue for attention to the materiality of hands and tactile experience as connected to the perceptions of brain development. Capuano, Peter, *Changing Hands: Industry, Evolution, and Reconfiguration of the Victorian Body* (Ann Arbor: University of Michigan Press, 2015).

[199] Stiles notes that 'Cranial measurements were thought to be perhaps the most reliable and "objective" indictor of intelligence prior to the advent of IQ tests' around 1905 (p. 122). Stiles, Anne, *Popular Fiction and Brain Science in the Late Nineteenth Century* (Cambridge: Cambridge University Press, 2012).

[200] Beamish, p. 3; italics original.

without the use of his hands, which are so admirably adapted to act in obedience of his will.'[201] Hence, hands not only communicate information about the outside world to the brain, but reflect the superior intellect of human subjects by enacting one's will on the world. The perceived evolutionary link between the human hand and brain remained dominant throughout the century. Charles Bell's 1833 treatise lauds 'The human hand [that] is so beautifully formed, it has so fine a sensibility, that sensibility governs its motions so correctly, every effort of the will is answered so instantly, as if the hand itself were the seat of that will.'[202] Nearly fifty years later in 1880, Thomas Huxley, Wells' teacher and Darwin's Bulldog, similarly praises the human hand as a vehicle of the mind, hailing it as that appendage on which our 'carrying into effect the conceptions of the mind so largely depends.'[203] In short, prominent figures in the field of science during the nineteenth century helped establish a direct link between the human brain, the human hand, and (the) human being.

Wells explicitly identifies 'The human hand, [. . .] [as] the teacher and interpreter of the brain,' in 'The Man of the Year Million,' a semi-satirical 1893 article for the *Pall Mall Budget* popularising the link between brain and hand.[204] In fact, he goes so far as to hypothesise that, by the 'year million,' human evolution will see the body dwindle in size while the brain and hands continue to grow:[205]

> The coming man, then, will have a larger brain, and a slighter body than the present. But the Professor makes one exception to this. "The human hand, since it is the teacher and interpreter of the brain, will become constantly more powerful and subtle as the rest of the musculature dwindles."
> Then in the physiology of these children of men, with their expanding brains, their great sensitive hands and diminishing bodies, great changes were necessarily worked. (p. 3)

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[201] C. Darwin, pp. 135-36. Further references given after quotations in the text.

[202] Bell, p. 23. For a full discussion of Bell, see Capuano, Peter J., 'On Sir Charles Bell's *The Hand*, 1833' (2012). *Faculty Publications -- Department of English.* Paper 92. http://digitalcommons.unl.edu/englishfacpubs/92

[203] Huxley, p. 103.

[204] H. G. Wells, 'The Man of the Year Million,' *Pall Mall Budget* (1893), p. 3 (p. 3). Further references given after quotations in the text.

[205] *Punch* parodies this view in, '1,000,000 A.D.' (25 Nov. 1893), emphasising the popularity of this discussion about the hand's relationship to the mind.

In Wells' figuration, told in the voice of an imagined professor, the continued development and sensitivity of the hands coincides with the evolution of the human brain. As Anne Stiles explains in *Popular Fiction and Brain Science in the Late Nineteenth Century* (2012), the theory Wells espouses was 'based on the most rigorous evolutionary science of [his] day' as well as the Lamarckian hypothesis that 'organs that are frequently used tend to develop more quickly and hence grow larger, while little-used organs wither away and ultimately disappear.'206 Notably, not only do the hands remain, but they remain 'sensitive,' suggesting that in the 1890s popular perception linked sensitive hands with brain development.

C. Darwin's earlier writings explain this link. He suggests that as long as hands were used primitively for locomotion, hurling stones, and climbing trees by apes and early man, 'Such rough treatment would also have blunted the sense of touch, on which their delicate use largely depends' (p. 136). The hand that belongs to the human species, that is integral to its intellectual and physical evolution of the brain, acts as an agent of the mind, developing it by engaging with the 'outer world' in a particularly sensitive, intellectual mode. Hands' use determines their function and influences brain development.207

By the *fin-de-siècle*, hands were considered not only agents of the mind but also indexes of character, markers of intellect, and measure of class standing. Hands hardened by labour reflected more elementary minds while delicate hands with long, slender fingers signified a more sophisticated intellect. Anne McClintock explains in her reading of Arthur Munby's fascination with the hands of working women that 'Hands expressed one's class by expressing one's relation to labor.'208 Sensitive hands belonged to the educated, genteel classes. Peter Capuano argues in his foundational study, *Changing Hands* (2015), that theories of racial

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206 Stiles, p. 119 and 20. For a full discussion of *fin-de-siècle* views on Lamarck's theories introduced in *Zoological Philosophy* in 1809, see Stiles, particularly her introduction (pp. 1-24) and chapter four (pp. 119-155). Stiles argues that Wells was particularly fascinated by 'the Lamarckian idea of unchecked brain evolution,' p. 20.

207 This view is taken to the extreme is Wells' *The First Men in the Moon* (1901) in the protagonists Cavor's description of the Selenites' process of creating 'Machine hands' responsible for labour such as 'clawing, lifting, [and] guiding,' jobs that require little intellectual curiosity and little dexterity (p. 281). Wells, H. G., *The First Men in the Moon* (Brooklyn, NY: Braunworth and Co., Bookbinders and Printers, 1901).

208 McClintock, Anne, '"Massa" and Maids: Power and Desire in the Imperial Metropolis,' in *Imperial Leather: Race, Gender and Sexuality in the Colonial Contest* (London and New York: Routledge, 1995), pp. 73-131 (p. 99)

degeneration, often associated with contemporary issues about class and race, were linked with the discovery of the gorilla in the 1840s, which was viewed as the missing link between animals and humans because of not only skeletal similarity but also because their paws had a similar shape and the same number of bones as human hands. As a result of this manual similarity, Capuano argues that 'large palms and short fingers were interpreted' by hand-phrenologists such as Beamish 'not only as indicators of a propensity to handle shovels, pick-axes, and barrows, but as signs of animality itself.'[209] Animals and the labouring classes had smaller minds because they possessed elementary hands with concomitantly duller tactile sensitivity.

The hand, however, was not merely perceived as an agent of the brain and mind. Bell, among others, theorised self-consciousness as emerging from an awareness of tactile sensation seated in the hands. As Bell explains,

> The knowledge of external bodies as distinguished from ourselves, cannot be acquired until the organs of touch in the hand have become familiar with our own limbs; we cannot be supposed capable of exploring anything by the motion of the hand, or of judging of the form or tangible qualities of an object pressed against the skin, before we have a knowledge of our own body as distinguished from things external to us. (p. 146)

To know oneself is to touch oneself. Human consciousness associated with brain development emerges when an individual reaches out to touch an object or being and recognises it as distinct from the self. Consciousness is a physical process that emerges from the sensations arising from tactile experience.[210] The hand is a particularly important sense organ because it allows the human to distinguish Self (human,

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[209] Capuano, pp. 136-137. See particularly the section in chapter five titled, 'Animals with Hands,' pp. 130-138.

[210] This notion dates back to the Abbé de Condillac's *Traité des sensations* (1754) in which he theorises the sense of touch as intimately connected with the emergence of a specifically characterised type of conscious thought: 'Placing its hands on itself, it will discover that it has a body, but only when it has distinguished the different parts of it and recognised in each the same sentient being. It will discover there are other bodies when it touches things in which it does not find itself.' Abbé de Condillac, *Condillac's Treatise on the Sensations*, trans. Geraldine Carr (Los Angeles: University of Southern California, School of Philosophy, 1930), p. 86.

sensitive, educated, large-brained) from Other (animal, insensate, uneducated, small-brained).[211] Humans were defined by the nineteenth-century scientific community as those beings possessed of evolved brains evinced in their great dexterous, sensitive hands. Thus, hands become monstrous when their insensitivity imperils their brain's ability to communicate and connect with the rest of the human species.

The Manual and the Monstrous

Much as the self is generally conceived of in singular terms, discussions of the hand within nineteenth-century evolutionary discourse frequently reference '*the* human hand' rather than 'human hands' or 'hands' (see for example the writings of E. Darwin, Bell, and Wells cited earlier). Jacques Derrida's reading of 'Heidegger's Hand' in '*Geschlecht II*' notes the singularity assigned to the hand and the mind in order to establish a clear correlation between the monstrous and the manual: 'he [Martin Heidegger] always thinks the hand *in the singular*,' Derrida explains, 'as if man did not have two hands but, this monster, one single hand.'[212] Derrida suggests that *the* hand (in its singularity) possesses a grotesque quality that simultaneously reveals it as no prehensile organ but rather a sign (*le monstre*) of human thought.[213]

In *What is Called Thinking* (1968), Heidegger suggests that humans utilise *the* hand as a 'monstration' of thought.[214] The hand for Heidegger

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[211] Briefel complicates the Victorian idea that the hand was a truthful marker of identity. She argues that the increasing prevalence at the end of the century of novels and short stories about hands' 'readiness to betray the secrets of identity' responded to the developing sciences of chirognomy, palmistry, and fingerprinting that noted 'the dishonesty of the face and the necessary honesty of the hand': a face can lie where a hand cannot (p. 15, 4). However, she continues to assert that race proved a problematic category of distinction; aside from colour, no specific characteristics associated with the hand distinguished categories of race beyond a shadow of a doubt.
[212] Jacques Derrida, 'Geschlecht II: Heidegger's Hand,' in *Deconstruction and Philosophy: The Texts of Jacques* Derrida, trans. John Pleavey Jr (Chicago: Chicago University Press, 1987), pp. 161-96 (p. 182; italics original).
[213] Ibid., p. 166. See also p. 168.
[214] I use 'monstration' in the Derridean sense. In '*Geschlecht II*,' Derrida notes that there exists no word capable of directly translating the French *monstrosité* into English as that which both warns and shows. The closest is our "monstrosity," which holds a completely different connotation. Because of this, Derrida suggests the use of the term 'monstrate' from the English 'demonstrate' as that term capable of denoting that which shows or reveals: 'The hand is monstrasity [*monstrosité*], the proper of man as the being of monstration,' Ibid., p. 169.

is the sign of human intellect and separate from 'our bodily organism,' connected more directly to the brain because of its tactile sensitivity:

> The hand is a peculiar thing. In the common view, the hand is part of our bodily organism. But the hand's essence can never be determined, or explained, by its being an organ which can grasp. Apes, too, have organs that can grasp, but they do not have hands. [...] Only a being who can speak, that is, think, can have hands.[215]

According to Christopher Johnson, in Heidegger's lecture, 'the humanity of the human, that which sets it apart from the rest of so-called "nature"— its monstrosity—[...] reside[s] in the human hand.'[216] The human hand simultaneously appears as a monster (a sign and a warning) and monstrates (shows and reveals) evolved human intelligence. The term 'monster' has its roots in the Latin words '*monstrer*' (to show) and '*monere*' (to warn). Thus, a monster functions as both a sign (a Derridean 'mostrasity' [*monstrosité*]) and, more specifically, a warning (a monstrosity). The hand is a monster of the brain in all senses of the term.

According to Alexandra Warwick, in contrast to the visibly Othered freak-show monsters of the 1850s, after Darwin, 'the monster that is most feared is the invisible one; the man whose apparently normal exterior hides intellectual deformity.'[217] Victorian literature regularly prefigures such mental monstrosity—residing in the brain and often depicted as either madness or genius—through descriptions of hands that initially appear ordinary but are later associated with either physical or genetic abnormalities. According to Stiles, 'Wells held the widespread view that genius usually accompanies physical or psychological deficiency,' embracing the views of criminologists such as Cesare Lombroso who

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[215] Martin Heidegger, *What Is Called Thinking?* trans. J. Glenn Gray (New York: Harper Collins, 1976), p. 16.

[216] Christopher Johnson, 'Derrida and Technology,' in *Derrida's Legacies: Literature and Philosophy*, eds. Simon Glendinning and Robert Eaglestone (Routledge, 2008), pp. 54-65 (p. 59).

[217] Alexandra Warwick, 'Ghosts, Monsters and Spirits, 1840-1900,' in *The Gothic World*, eds. Glennis Byron and Dale Townshend (Hoboken: Taylor and Francis, 2013), pp. 366-75 (p. 369). Criminals would be included among these types of monsters largely because of the difficulty Victorians like Cesare Lombroso had classifying criminals and thus specific criminal qualities according to visual markers.

states that 'The man of genius is a monster.'[218] I argue that such physical and psychological deficiency is figured in the monstrous hands that populate late-Victorian Gothic romance.

As Capuano shows in his reading of Dickens's *Great Expectations* (1861), mid-century scientific discourse on the hand racialised, gendered, and classed the sense of touch, linking more refined tactile sensitivity with the English male elite.[219] The labouring hand carried signs of that work on the surface of its skin, which often became sun-stained, hardened, and scarred with the daily grind of factory labour, rendering the nerves of the fingers less sensitive; conversely, the genteel hand appeared pale, slight, delicate, and soft, and its nerves were thus thought more sensitive. Characters in late-Victorian fiction that possess monstrous hands often have a dulled sense of touch associated most often with manual monstrosity linked with animality, race, or gender deviancy. Not only did the Victorians pathologise madness and the immorality of the lower classes, but they 'pathologised genius and upheld the mediocre man as the evolutionary ideal.'[220] *The* hand, as identified in scientific discourse, signified a particular version of humanity.

Gothic romances of the Victorian *fin-de-siècle* take up the question of one's relative humanity in depictions of monstrous hands and their unsympathetic touches. If a clasp of the hands was perceived as a marker of a highly developed brain able to engage in fellow-feeling, as popular articles on handshaking suggested, then the inability to enter into a sympathetic embrace with a fellow creature calls one's humanity into question.[221] Labouring classes, which consisted of racialised bodies of people like the Irish, were represented with hands similar to those of gorillas because they were less evolved according to the scientific community. Returning to Wells' novella, for instance, neither Moreau nor

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[218] Stiles p.134; Lombroso, Cesare, *The Man of Genius*, ed. Havelock Ellis (London: Walter Scott, 1891), p. viii. Stiles argues that it was Lombroso who 'solidified the identification between genius and criminality that became a popular theme among late-Victorian scientists and novelists' (p. 129).

[219] See Capuano, *Changing Hands*, particularly chapter five, pp. 127-151. For an earlier version, see Capuano's article, 'Handling the Perceptual Politics of Identity in *Great Expectations*,' *Dickens Quarterly*, 27.3 (2010), pp. 185-208.

[220] Stiles, p. 126.

[221] For example, an article titled 'Hand-Shaking' in Charles Dickens's popular periodical *All the Year Round* (1870) claims that '[t]he custom of hand-shaking prevails, more or less, among civilised nations,' and an article in another periodical similarly asserts that '[w]ith the march of intellect, shaking has progressed likewise.' 'Hand-Shaking,' *All the Year Round*, (Apr. 1870), pp. 466-69 (p. 467); 'On Shaking Hands,' *London Saturday Journal* (Oct. 1841), pp. 213-14 (p. 213).

his Beast People shake hands and all are described at some point as having a dulled tactile sensitivity and thus an implied less than civilised nature. In the case of the Beast People, their manual deformity parallels their clear intellectual inferiority, which Victorians associated with stunted brain development. The case is more complicated with Moreau himself, however. Moreau's monstrosity stems from his disavowal of sensitivity figured in his failure to give the Beast People human hands. Even though he appears to exhibit the characteristics of superior hand and brain, Moreau fails at the imperial project, fails to make any contribution to science, and ultimately fails at creation, unable to shape the Beast People's hands into sensitive organs capable of developing their minds. His nearly severed hand at the novel's end is a commentary upon the state of his brain, nearly detached as it is from the emotional qualities associated with the heights of the human species to which he aspires.

According to contemporary theoretical writing about monstrosity, a monstrous body challenges our understanding of what is human by functioning as a sign of the limits of such a definition.[222] Monstrous hands similarly challenged Victorian understandings of race, class, and gender as stable categories of classification. The Beast People's misshapen hands gesture towards their humanity while concurrently marking them as animal. Edward Prendick, the narrator of *Moreau*, notes immediately upon meeting them that they had 'malformed hands, lacking sometimes even three digits.'[223] He identifies these creatures as possessed of hands even as he is struck by those hands' abnormality. The Beast People trouble the Victorian ideal of humanity even as they seem to define its limits. The Ape-Man, for example, threatens English imperial humanity by 'assum[ing], on the strength of his five-digits, that he was [Prendick's] equal, and was forever jabbering at [him], jabbering the most arrant nonsense' (p. 195). The Ape-Man's assumption of equality threatens Prendick's masculine sense of self as an English intellectual set apart from the lower orders of existence. The Ape-Man's monstrous hands that come so close to approximating human ones disrupt this hierarchy by forcing Prendick to confront the reality of human plasticity: If the Ape-Man's

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[222] See *Between Monsters, Goddesses and Cyborgs: Feminist Confrontations with Science, Medicine and Cyberspace,* eds. Nina Lykke and Rosi Braidotti (London and New Jersey: Zed Books, 1996) and Margrit Shildrick, *Embodying the Monster: Encounters with the Vulnerable Self* (London: SAGE, 2002).

[223] H. G. Wells, *The Island of Doctor Moreau: A Critical Text of the 1896 London First Edition, with an Introduction and Appendices,* ed. Leon Stover (Jefferson, NC: McFarland and Co., Inc., 1998), p. 112. Further references given after quotations in the text.

hands can be made human, what is to keep Prendick's from becoming animal?

Other *fin-de-siècle* texts too raise such questions by invoking manual monstrosity as a sign of a dangerously different mind or brain. Much like the Ape-Man's hands threaten Prendick's English masculine distinction, Dracula's hands prove a similar threat to Jonathan Harker. Bram Stoker's Dracula has become the most iconic of Victorian monsters known primarily for his dangerous appetite. Yet, his hands suggest his moral and mental degeneracy long before we know he can bite.[224] Shortly after arriving at the castle, Jonathan takes note of them:

> Hitherto I had noticed the backs of his hands as they lay on his knees in the firelight, and they had seemed rather white and fine; but seeing them now close to me, I could not but notice that they were rather coarse—broad, with squat fingers. Strange to say, there were hairs in the centre of the palm. The nails were long and fine, and cut to a sharp point.[225]

We have established that Victorians viewed the human hand as that which is 'Untipt with claws' and 'with sense refined,' so how then do we classify Dracula's hands? They initially appear human, 'rather white and refined,' but upon closer inspection they begin to blur the boundary between human and animal, civilised and primitive, sensible and senseless as the Beast People's do.

Jonathan describes what hand-phrenologists termed an 'elementary hand.'[226] According to *Chiero's Language of the Hand* (1894), an elementary hand 'naturally belongs to the lowest type of mentality. In appearance it is coarse and clumsy, with large, thick, heavy palms, short fingers, and short nails.'[227] The only difference between this description and Jonathan's is that Dracula has 'long' and 'fine' nails 'cut to a sharp point.' *The Hand Phrenologically Considered* (1848) addresses nails,

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[224] See Stiles for a reading of the influence of neuroscience on Dracula.

[225] Stoker, Bram, *Dracula: Authoritative Text, Backgrounds, Reviews and Reactions, Dramatic and Film Variations, Criticism*, eds. Nina Auerbach and David J. Skal (New York: W. W. Norton and Co., Inc., 1997), p. 24. Further references given after quotations in text.

[226] See Beamish and Chiero, *Chiero's Language of the Hand*, 15th ed. (London: Nicholas and Co., 1900).

[227] Chiero, p. 27.

situating them as analogous to claws in animals.[228] Yet, it suggests that an elementary hand with long nails speaks to 'a higher type of organisation' and also recalls the 'hands of witches, demons, and sorcerers who tend to have elongated fingers 'armed with long nails or claws, like the toes of lower animals.'[229] Such a hand positions Dracula on the border between a human and a supernatural being possessed of an evolved brain but with a nature more closely linked with the animals it evolved from. It also links him, labouring classes, animals, and the threatening supernatural unknown together. Furthermore, Dracula's hairy palms warn of masturbatory tendencies: growing hair in the centre of the palm was an old wives' tale told to keep children from onanism.[230] His hand is the sign of mental degeneracy as well as a cause of it. Similar to the Beast People's that can only approximate without ever duplicating human hands, Dracula's monstrous hands reveal him as a threat to the social order because he is a creature that can pass as human when he desires. As Stiles argues of scientific discourses such as biology, sexology, criminology, and evolutionary theory, I assert that studies on hands and their social and scientific functions also contributed to the 'destabiliz[ation] [of] prevailing ideas about what it meant to be human.'[231]

Unlike severed hands that act as agents independent of human will and are fully severed from their human connection, Dracula's monstrous hands, like Moreau's, act on his own volition, betraying his dangerous designs to corrupt Jonathan's mind by stimulating his appetite for fleshly pleasure as fully conscious. Jonathan describes Dracula's touch as 'cold as ice—more like the hand of a dead than living man' (p. 22). Dracula's hands, like the Beast People's and Moreau's, generate fear specifically in the moment of contact. When 'something cold touched my hand. I started violently' (p. 115), Prendick explains of his first tactile encounter with the

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[228] *The Hand Phrenologically Considered: Being a Glimpse at the Relation of the Mind with the Organisation of the Body* (London: Chapman and Hall, 1849), p. 68. See also Briefel for a discussion of nails and Orientalism in chapter three, pp. 78-101.
[229] Ibid., p. 69; 68.
[230] Arnold Labrie notes the same, also explaining that 'the Darwinian ape, because of his lassitude, is inclined to masturbate.' Arnold Labrie, 'Purity and Danger in Fin-de-Siècle Culture: A Psychohistorical Interpretation of Wagner, Stoker, and Zola,' *Psychoanalytische Perspectiven*, 20.2 (2002), pp. 261-74 (p. 266). This myth about growing hair in the centre of the palms is, however, erroneous; even Charles Darwin notes that 'it is a significant fact that the palms of the hands and the soles of the feet are quite naked [in the human fœtus], like the inferior surfaces of all four extremities in most of the lower animals' (p. 25).
[231] Stiles, p. 10.

Beast People and Jonathan cannot 'repress a shudder' (p. 24). Dracula's hands are not the disembodied hands of unseen labour that confront those touched with the reality of exploitation; rather, these are the hands of the Other that risk contaminating through contact because they cannot always be distinguished readily.[232] Though a sentence later Jonathan describes this 'shudder' to Mina, his fiancée, as 'a horrible feeling of nausea' (p. 24), Victorian audiences could not have helped reading the erotic possibility encoded in the term 'shudder,' which often appeared alongside the words 'excitement' and 'pleasure' or stood in for ejaculation itself.[233] Dracula's manual monstrosity encapsulates the way the Count troubles English imperial humanity; he possesses human consciousness, acts only on his own diabolical ambition, and cannot be distinguished from English subjects when he chooses to hide his nature. His icy touch reveals him to be an Other that is dangerously desirable; he is the *unheimlich*, that which reveals the limit of our ability to make the clear distinctions so important to Victorian society.

   I argue that Dracula's hands reveal this monstrosity in their insensitivity to Jonathan. Dracula's touch contaminates, transmits, imposes, dominates, but does not feel; Jonathan's response has no physiological effect on Dracula, much as the Beast People seem insensate to Prendick's horror and Moreau claims a numbness to the Beast People's pain. A monstrous hand reveals a mind unaffected by empathy in a hand unaffected by sympathy. Dracula's hands threaten to contaminate Jonathan with his own appetite, revealing the intellectual vulnerability of a seemingly ideal, mediocre Englishman at the centre of the imperial project. Jonathan's susceptibility to Dracula's monstrous touch and depraved appetites destabilises the boundary between human and Other and queries the value placed on brain development as the defining factor

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[232] See Rowe and Hurley, Kelly, *The Gothic Body: Sexuality, Materialism, and Degeneration at the Fin de Siècle* (New York: Cambridge University Press, 2004).
[233] Though Johnson's dictionary defines this term as 'to quake with fear,' it was popularly used in pornography and literature more generally to indicate an overwhelming reaction to erotic pleasure. Perhaps the most well-known use of the term is in William Yeats 1923 poem, 'Leda and the Swan' in which '"shudder" describes the swan's ejaculation but also relates to Leda's fear.' A lesser-known example of its use during the Victorian period appears in the first volume of the pornographic magazine, *The Pearl* (1879), in a story entitled *Lady Pokingham, or They All Do It*: '"Ah! Oh! Rub harder, harder—quicker," she gasped, as she stiffened her limbs out with a kind of spasmodic shudder.' Peter Childs, '"History is a Nightmare": Symbolism and Language,' *Modernism* (New York: Psychology Press, 2000), pp. 187-208 (p. 208); 'Lady Pokingham, or They All Do It,' *The Pearl*, 1 (1879), n.p.

of human distinction.234

Like *Dracula,* H. Rider Haggard's *She* (1887) positions monstrous hands as a direct threat to English masculine superiority defined by brain power. Ayesha, the immortal witch-queen of the lost African civilization of the Amahaggar, initially appears to be the most beautiful of human women. Yet, her hands and their brutal, supernatural touch question the relationship between brain evolution, English masculinity, and imperial power. In her reading of mummified hands in Haggard's fiction, Hurley notes that 'Freaks were thought to exist at the very limits of human identity and thereby to call into question what it meant to be a human subject in a human body.'235 Laura Chrisman asserts that, in imperial romance fiction of the *fin-de-siècle,* 'the economy and the body [are] primary determinants of subjectivity' when read through the lens of Fredric Jameson whom, she argues, asserts that 'The human sense of existence is [...] entirely and directly constituted by the sensations of the physical body' such that sensations that the psyche cannot make sense of are often linked with the colonial world and thus are 'unbridgeably "other."'236 I argue that Ayesha's hands reveal her as an Other as Dracula's reveal him to be, and that they also prove the primary locus through which Haggard's novel questions the limits of human subjectivity.

Ayesha, like Dracula and the mad-scientist, possesses a super-human brain with unmatched power that proves threatening because consumed with ambition and desire. She seeks to conquer England and possesses power enough to do so, apparent in her use of her hand as the conduit of her mind. As Leo Vincy, one of the novel's protagonists, springs at her in fury, she 'stretched out her hand again, and he went staggering back [...] he felt as though he had suddenly received a violent blow in the chest, and, what is more, utterly cowed, as if all the manhood had been taken out of him.'237 Her upraised hand allows her to touch Leo's body

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234 I must thank Nathaniel Doherty for the countless drafts that he read as I worked through this idea and that of the connection between the hand and brain. His feedback was invaluable to this article.

235 Hurly, p. 183. Among these she notes 'the vampire-mummy, the beast-people, the beetle-woman, the fungus-man, the tentacle body, the prehistorical survivals, [and] the ape-man' as examples of 'phantasmatic liminals' that offer such a challenge (p. 183).

236 Chrisman, Laura, *Rereading the Imperial Romance: British Imperialism and South African Resistance in Haggard, Schreiner, and Plaatje* (Oxford: Claredon Press, 2000), p. 10.

237 H. Rider Haggard, *She: A History of Adventure* (New York: Modern Library, 2002), p. 225. Further references given after quotations in the text.

with her mind, channelled through her hand, shrivelling his heroic spirit.

To make clear the link between her hand, brain, and monstrous nature, by the narrative's end Ayesha's 'most beautiful white hand [...] with long tapering fingers, ending in the pinkest nails' has 'turned dirty brown and yellow [...] nothing but a claw now, a human talon resembling that of a badly preserved mummy' (p. 142, 291). Both Dracula's and the Beast People's hands recall such a description. Ayesha's transformation into a 'dirty brown and yellow,' ape-like rag—a clear referencing of her imagined racialised, animal origins—delivers Leo from the power and allure her 'beautiful white hand,' in the singular, once wielded while also touching on contemporary anxieties about devolution; her monstrous hand alerts readers to the racially tainted brain that lurks beneath her seeming whiteness. Additionally, her hand devolves when she dies and her brain loses control. Her beautiful hand monstrous in the power it wields becomes visibly monstrous in its deformity when her brain has been bested.

Like Moreau, the power her hand holds as the singular organ of her will proves tenuous and is divested after she emerges as a direct threat to English imperial masculinity and the nation that relied on its stability. In contrast to Ayesha and Dracula's hands, Moreau's unfeeling touch and the activities of his hand render visible his horrific past, forced by the English medical society to either exile himself or give up his gruesome experiments. While Stiles argues that, through narratives such as *Moreau*, Wells sought to 'lend mad geniuses an element of humanity denied them in many other discussions of the subject,' I assert that in the case of Moreau Wells rather sought to test the limits of humanity by exploring those aspects of character conspicuously absent from narratives of scientific genius.[238] I agree with Stiles that Moreau 'has evolved far enough to compromise his emotional sensitivity,' but I would press this assertion further to suggest that Moreau's insensitive use of his hands queries the value Moreau places on callousness as evidence of an evolved intellectual state.[239] His domineering touch reflects a brain without sympathy. In contrast to Dracula and Ayesha who are 'conquered' by English muscle, Moreau proves more threatening because his downfall results from the distortion of his undeniably English brain and intellect.

The Man and the Monster

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[238] Stiles, p. 135.
[239] Ibid., 139.

Wells positions Moreau as possessing *the* hand in the Derridean and Heideggerian sense. As many critics have noted, the Beast People deify Moreau, but what often escapes critical attention is that they do so by locating his power in his singular hand—'the Hand' (p. 118).[240] Given the fundamental alignment of Victorian masculinity with the model of 'God the Father' and the identification of the objective' scientific gaze with ideals of masculine divinity (the 'god-trick' that 'fucks the world'), the failure of Moreau's hand reveals his monstrosity specifically as a lack of mental or neurological capacity.[241] Fellow-feeling and the emotional sensitivity it conveys through touch plays a definite role in defining the Doctor's deficits.

We first meet the Beast People when Prendick flees from Moreau's compound fearing that he too will be vivisected. During Prendick's interactions with the Beast People, we are introduced to 'the Law,' a performative hymn that they learn from a missionary who sought to civilise them and that they reinterpret to reflect the submission to Moreau that they must display to avoid returning to Moreau's 'House of Pain' (p. 118):[242]

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[240] See Galia Benziman, 'Challenging the Biological: The Fantasy of Male Birth as a Nineteenth-Century Narrative of Ethical Failure,' *Women's Studies: An Interdisciplinary Journal*, 35.4 (2006), pp. 375-95 (p. 385); Michael Parish Lee, 'Reading Meat in H. G. Wells,' *Studies in the Novel*, 42.3 (2010), pp. 249-68 (p. 263); and Helen Sutherland, 'Monsters, Morality and Religion,' in *Creating Monstrosity, Discovering Humanity: Myths and Metaphors of Enduring Evil*, eds. Elizabeth Nelson, Julian Burcar, and Hannah Priest (Oxford, UK: Inter-Disciplinary Press, 2010), pp. 217-227. They all address Moreau as a scientist who usurps, assumes, and/or parodies the power of God, but none attend to his all-powerful Hand worshiped by the Beast People.

[241] Haraway, Donna J., 'Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective,' in *Simians, Cyborgs, Women: The Reinvention of Nature* (New York: Routledge, 1991), pp. 183-201 (p. 189). In her discussion of situated knowledges within science, Donna Haraway explains the 'god-trick of seeing everything from nowhere' claimed by scientific disciplines as objectivity (p. 189). I reference her concept here because she discusses this claim to objectivity as a masculinist position, and I suggest that Moreau attempts, but fails, to assume a similar position.

[242] The chant concludes with the quotation above and begins with the following said by the Beast People in unison while swaying:

 'Not to go on all-Fours; *that* is the Law. Are we not Men?'
 'Not to suck up Drink; *that* is the Law. Are we not Men?'
 'Not to eat Flesh nor Fish; *that* is the Law. Are we not Men?'
 'Not to claw Bark of Trees; *that* is the Law. Are we not Men?'
 'Not to chase other Men; *that* is the Law. Are we not Men?' (p. 117; italics original)

> "*His* is the House of Pain.
> "*His* is the Hand that makes.
> "*His* is the Hand that wounds.
> "*His* is the Hand that heals." (p. 118; italics original)

The rhetorical structure of this lyric converts Moreau's hand into *the* Hand of the Judeo-Christian god who made men in his own image; the Beast People look reverentially on Moreau whose singular Hand, with a capital 'H,' possesses the power to 'make,' 'wound,' and 'heal.' Leon Stover notes that this chant recalls the old testament God: 'See now that I, even I, am he, and there is no god with me: I kill, and I make alive; I wound, and I heal: neither is there any that can deliver out of my hand.'[243] The 'hand' stands as a metaphor for power in the Bible, and the Beast People's chant that reinterprets it makes concrete the power of God into the literal hand of the scientist. Moreau's powerful hand enacts the will of his brain. Though Moreau possesses *the* hand associated with the English mind, whether or not it is human and indicative of a more evolved intellect proves a vexing question. It becomes clear, as his relation with and investment in his creations is revealed, that Moreau himself may be the most dangerously unclear being on the island—the monster that renders English imperial humanity as an ideal always already tainted.

Galia Benziman has read *Moreau* as a fantasy of male birth, emphasising that while male scientists may have the power to create, they always fail at parenting.[244] I suggest that Wells' novella figures Moreau's creative potential as a scientist as a kind of monstrosity born of mental-neurological failings. Moreau does, to an extent, successfully shape his creations in his image, but their deformed hands and deadened tactile

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[243] Deuteronomy 32.39. It also resembles Job 5.18: 'For he maketh sore, and bindeth up: he woundeth, and his hands make whole.' This suggests that the power believed to reside in God's hands is a prevalent theme in the Old Testament linked with the idea of judgment. However, Deuteronomy 32.39 is spoken by Moses while warning his people of the judgment that God may visit upon them if they worship false idols, which is reminiscent of the Kanaka missionary who taught this chant to the Beast People in the hope of preventing them from falling into the same sin against which Moses warns his people.

[244] She also points to Frankenstein and his monster as an example. See also Steven Lehman, 'The Motherless Child in Science Fiction: "Frankenstein" and "Moreau,"' *Science Fiction Studies*, 19.1 (1992), pp. 49-58 and Elaine Showalter, 'The Apocalyptic Fables of H. G. Wells,' in *Fin de Siècle, Fin du Globe: Fears and Fantasies of the Late Nineteenth Century* (New York: St. Martin Press, 1992), pp. 69-84.

sensitivity are reflections of the Doctor's own lack of sympathy and the monstrosity of his paternity. Stiles notes that 'While the genius described by Victorians was definitively male, his [Moreau's] masculinity was undermined by the suggestion of hysterical effeminacy and his refusal of heterosexual procreation.'[245] Moreau's hands are monstrous because of what they attempt to create and, specifically, how they fail to do so.

Moreau attempts to reproduce outside of the heterosexual mode of procreation; Elaine Showalter terms this 'celibatary reproduction': a mode that denies the female role in reproduction and often seeks to reproduce itself rather than create something new.[246] Franco Moretti notes that 'one of the institutions most threatened by monsters is the family.'[247] Moreau's monstrosity is thus revealed in his hands but associated with his brain; he is a genius who threatens the family by refusing to engage in heterosexual procreation or the sympathetic family bond. Showalter suggests that these anxieties about changing gender relations, including the role of masculinity, were associated with the emergence of the New Woman, who threatened English masculinity and the family and nation through it: 'the highly publicised decline in the national birthrate' led to a reevaluation of the traditional female role such that 'medicine and science warned that such ambitions [outside of the home] would lead to sickness, freakishness, sterility, and racial degeneration.'[248] The genius or mad scientist, like the New Woman, becomes Other—ill, monstrous, racialised—by threatening English masculinity, the English family, and thus Victorian society.

The Doctor lacks the care-giving touch that Benziman identifies as required to complete the Beast People's transformation into fully realised 'humanised animals' (p. 147). Moreau's hands most dramatically materialise his monstrous nature through this failure. The Beast People's manual deformities, suffered at the Hand of Moreau, reveal Moreau's inhumane scientific interest in 'the plasticity of the living form' (p. 133). The failure of his effort forces readers to question the clarity of the vision

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[245] Stiles, p. 133.

[246] Showalter, Elaine, 'The Apocalyptic Fables of H. G. Wells,' in *Fin de Siècle, Fin du Globe: Fears and Fantasies of the Late Nineteenth Century* (New York: St. Martin Press, 1992), pp. 69-84 (p. 75). Dracula's reproduction of himself and his vampiric appetites in the bodies of his vampire brides and Lucy is another example that she provides.

[247] Franco Moretti, 'The Dialectic of Fear,' in *Signs Taken for Wonders: On the Sociology of Literary Forms*, 2nd edition (New York and London: Verso, 2005), pp. 83–108 (p. 78)

[248] Elaine Showalter, *Sexual Anarchy: Gender and Culture at the Fin de Siècle* (Little, Brown Book Group Limited, 1992), p. 39.

Moreau claims when first describing his work to Prendick.[249] The failed creation of the Beast People suggests not only the plasticity of human and animal shapes but also the threat represented by uncontrolled intellectual curiosity and brain development associated with it. Moreau views himself as divine, but his drive towards intellectual progress through vivisection overshadows his reason and destabilises this otherwise convincing image of English imperial masculinity (imagined as scientific rationality and ultimate procreative control). Moreau's monstrous hands create grotesque, abhuman amalgams that he then rejects for their inhumanity.[250] Ultimately, this is a rejection of his own brain reflected back.

As a result of Moreau's failure, the Beast People end up with misshapen hands that lack tactile sensitivity and recall the distorted appendages of Dracula and Ayesha that we discussed above. While most critics have focused on the Beast People's acquisition of language as the mark of their humanity, and their loss of it as the sign of their regression into animality, I argue that by emphasising the Beast People's tactile insensitivity the text marks them as inherently inferior abhumans.[251] If

[249] Wells transplants this quotation about the plasticity of human form directly from his essay, "The Limits of Individual Plasticity," published a year earlier in 1895.

[250] Though critics traditionally refer to the Beast People as "nonhuman," both Kelly Hurley and Neville Hoad offer alternative terms for addressing their racial status. Hurley identifies the Beast People as 'abhuman'—invoking Julia Kristeva's concept of abjection—in order to denote a 'not-quite-human subject,' while Hoad refers to the Beast people as 'unhuman,' explaining that one must first be human to be 'inhuman' while 'non-human' can also designate inanimate objects. Neville Hoad, 'Cosmetic Surgeons of the Social: Darwin, Freud, and Wells and the Limits of Sympathy on *The Island of Doctor Moreau*,' in *Compassion: The Culture and Politics of an Emotion*, ed. Lauren Berlant (New York: Routledge, 2004), pp. 187-218 (p. 213, n.5); Kelly Hurley, *The Gothic Body: Sexuality, Materialism, and Degeneration at the Fin de Siècle* (Cambridge University Press, 2004), p. 55. I will refer to Moreau's creatures as abhuman "Beast People" throughout to highlight what, I argue, their monstrosity comes from: their blurring of what was once thought a clear boundary between human and nonhuman, and their expansion of reproductive possibility—Moreau procreates on his own without a woman.

[251] Lennard Davis argues in his study of disability that nationality and full citizenship is linked with language, and that, 'Because people are interpellated as subjects through language, because language itself is a congealed set of social practices, the actual dysfunctionality of the Deaf is to have another language system.' Here, the Beast People have access to language and yet they are still positioned as outsiders, disabled by their manual deformity and lack of tactile sensitivity. Lennard J. Davis, *Enforcing Normalcy: Disability, Deafness, and the Body* (New York and London: Verso Books, 2014), p. 78.

the hand expresses human intellect by acting on it as Heidegger and nineteenth-century scientists conceive, then the Beast People are always already marked as abhuman even if their appearance and language can approximate the human form and human behaviour. The Beast People do not possess *the* hand, but rather bestial hands that mark their racial inferiority.252 The Beast People's unrefined tactile sense denies them not only the capacity to fully experience the world, but also to engage in sympathetic touch with each other, possibly referenced in their inability to form a sustainable community.253

However, Prendick's need to distinguish these creatures from humans like himself reveals an underlying fear of similarity. If animals can be made into human-like creatures, then humans can revert to their animal origins: brains, like hands, can degenerate.

When Prendick returns to England, he fears that his 'discoverers thought [him] a madman,' 'an animal tormented with some disorder in its brain,' even as he looks on the people of England and 'feel[s] as though the animal was surging up through them' (p. 203, 205). Prendick cannot distinguish whether he or the people around him are anymore human—or animal—than the Beast People that he escaped. Thus, even as the text marks the Beast People's hands and brains as deficient, in so doing it challenges not only the human as a stable category but also the other class and social divisions on which Victorian society was based.

Moreau's hands prove similarly unable to engage in reciprocal manual contact, revealing a detachment from the fellow-feeling that was supposed to unite English men when they clasped hands.254 As Moreau himself claims when Prendick questions him about the pain vivisection inflicts, 'Sympathetic pain—all I know of it, I remember as a thing I used to suffer from years ago' (p. 141). In Moreau's mind, truly evolved people do not experience either bodily pain or pleasure and they have no regard for such sensations in others. Yet, the writings of Bell, for example, identify both pleasure and pain as essential to the continued development of the human psyche: 'Finally, as to man, we shall be led to infer that the pains and pleasures of mere bodily sense (with yet more benevolent

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252 For a discussion of the Beast People's racialization, see Timothy Christenson, 'The "Bestial Mark" of Race in *The Island of Doctor Moreau*,' *Criticism*, 46.4 (2004), pp. 575-95.

253 While they live together in a city-like structure of their creation, there is always a sense of animal competition exemplified in their final devolution into their bestial selves. Without the Kanaka missionary, they cannot maintain their community.

254 Interestingly, the text never describes a handshake between Moreau and Prendick. This absence further supports my reading of Moreau's insufficient sensitivity.

intention) carry us onward through the development and improvement of the mind itself, to higher aspirations' (p. 15). Moreau is a threatening figure because he reveals a fundamental contradiction between the man of science he so closely resembles and the good English man he so dramatically fails to be.

As it turns out, his power to 'make,' 'wound,' and 'heal' is not as consequential as the Beast People believe. He explains to Prendick, 'The human shape I can get now, almost with ease, [...]; but often there is trouble with the hands and claws—painful things that I dare not shape too freely' (p. 146). This essential point of hypocrisy indicates the distorted nature of his thinking. While Moreau denies his capacity to sympathise with the pain felt by his creations, he still shies away from working their hands extensively because they are such 'painful things.' Though Moreau claims to have evolved past pain and sympathy, this reaction to the intensity of the Beast People's suffering and his consequent inability to shape perfectly the their hands signifies detached scientific rationality and sympathetic fellow-feeling at odds in the man of genius. Since the Beast People are modelled after Moreau's own form, their misshapen hands and dulled tactile sensitivity come to render visible Moreau's own inner distortion.[255] The Doctor's well-developed brain aspires to divinity but fails to measure up to humanity in spite of itself.

The emblem of his paternal authority and divine masculinity that yet fails to bring adequate sensitivity to his mind and brain, Moreau's hand is ultimately defeated and maimed by the female puma, his last and most promising creation. The puma's vengeance reveals Moreau's hand as

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[255] Cesare Lombroso notes in his 1876 study *Criminal Man* (trans. 1911) 'that 4.1 percent of criminals have serious malformations of the hand' (p. 307). In addition to manual deformity, Lombroso was also interested in physical sensitivity, often testing this by measuring tactile sensitivity in the hands. Lombroso 'believed that physical insensitivity correlated with emotional and moral insensitivity' (p. 401). According to Lombroso's research, '[a]ll travelers know that among the Negroes and savages of America, sensitivity to pain is so limited that the former laugh as they mutilate their hands to escape work, while the latter sing their tribe's praises while being burned alive' (p. 69). He 'suspect[ed] that criminals are less sensitive to pain than the average man,' and further asserted that complete insensitivity to pain (analgesia) usually appears among the criminally insane, and assumed that colonial subjects were criminal because of their race (p. 206). Thus, based on Lombroso's theory of criminality, Moreau's self-professed insensitivity to pain and the Beast People's own lack of tactile sensitivity suggest that both possess criminal instincts. In other words, Moreau's insensitivity to pain connects him with the animal nature of the Beast People rather than positioning him as more evolved, as Moreau would have us believe. Cesare Lombroso, *Criminal Man* (Durham and London: Duke University Press, 2006).

a failed, monstrous parody of the hand of God because in that it carries no real creative power for, as Prendick notes, 'As soon as [his] hand is taken from them, the beast begins to creep back' (p. 147). Moreau dies with '[o]ne hand [...] almost severed at the wrist' (p. 178). Benziman, Coral Lansbury, and Thomas Cole have read this passage as the resurgence of the feminine in a novella that not only absents the female, but only depicts it as subjugated and exploited by science, in the figure of Moreau.256 Showalter identifies the vivisector as 'a fin-de-siècle scientist who attempts to separate reproduction from female sexuality' and 'replac[e] heterosexual reproduction with male self-creation.'257 If Moreau tries, like a god, to create human forms from nonhuman ones, then the female puma, whom Showalter identifies as 'a New Woman figure,' renders Moreau's failure to reproduce the human form visible.258

The puma emerges from Moreau's House of Pain 'not human, not animal, but hellish, brown, seamed with red branching scars, red drops starting out upon it, and the lidless eyes ablaze' (p. 171). The puma's 'brown' skin and animal form establish a textual link between animality, race, and sex in this instance. The inclusion of blood, standing in for dangerous, uncontrolled female sexuality, carries this image even further towards a threat to English masculine superiority, which Victorian society positioned at the centre of their conception of humanity. As Ayesha's touch betrays an enormously powerful brain beyond control, so too does the puma's near severing of Moreau's hand suggest a power that exceeds his hold in a literal sense. She bests his brain as she does his hand.

In this moment, the text cements the representation of Moreau's brain, hand, and touch as monstrous because it has created nothing but a scarred and terrifying body, proving Moreau himself neither the right kind of human nor an animal, and certainly not godlike. Moreau's nearly severed hand is a metaphorical presentation and embodiment—a monster—of his mind's failure. If his is supposed to be the hand that 'makes,' 'wounds,' and 'heals,' then the puma's near severing of it subverts Moreau's power and locates the central problem of the novel in the hand itself as an expression of his mind, deformed long before.

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256 See Benziman; Coral Lansbury, 'Gynaecology, Pornography, and the Antivivisection Movement,' *Victorian Studies*, 28.3 (1985), pp. 413–437; and Thomas Cole, '"I Have Worked Hard at Her Head and Brain": Dr. Moreau and the New Woman,' in *The Sex Is Out of This World: Essays on the Carnal Side of Science Fiction*, eds. Sherry Ginn and Michael G. Cornelius (Jefferson, NC: McFarland and Co., Inc., 2012), pp. 134-51.
257 Showalter, 'Fables,' p. 72. Cole, following Showalter, reads the island itself as female, or at the very least feminised.
258 Showalter, *Sexual Anarchy*, p. 179

Moreau's hand remains indeterminate: human in form but nearly a classic, severed monster. Unlike Dracula who is undead and Ayesha who is immortal, Moreau is revealed to be simultaneously human and other, a perverted mind in a camouflaged body. Even as he aspires to divine scientific authority he fails to leave anything behind for all his own trouble and the Beast People's suffering because his disavowed sensitivity to their pain dooms his project to decay because their brains will never have the stimulating sensitivity to the world that the human hand provides.

Moreau projects his emotional and intellectual insensitivity onto his creations in their insensate hands and in their intellectual dullness. While careful attention has been paid to the symbolism of severed hands in fiction of the Victorian *fin-de-siècle*, I argue that monstrous hands that remain connected to bodies and act as agents of brains and minds deserve similar consideration. Monstrous hands that cannot engage in sympathetic touch enact and constitute the brain and mind to which they are attached. If *the* human hand can become the hand of the monster, then the human brain is open to a similarly dangerous pattern of degeneration. Moreau's nearly severed hand reflects a brain nearly severed from its human(e) potential, one that should aspire to a more highly evolved state but that is ultimately crippled by his limitations. The Victorian hand allows literature to reflect, in concrete images, the invisible workings and character of the brain it serves but has failed to nurture.

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BOOK REVIEW

A Cultural History of the Senses in the Age of Empire, Vol. 5, ed. Constance Classen (London: Bloomsbury, 2014). 276 pp. Hardback, £70.

Reviewed by Ian Middlebrook
(Edge Hill University)
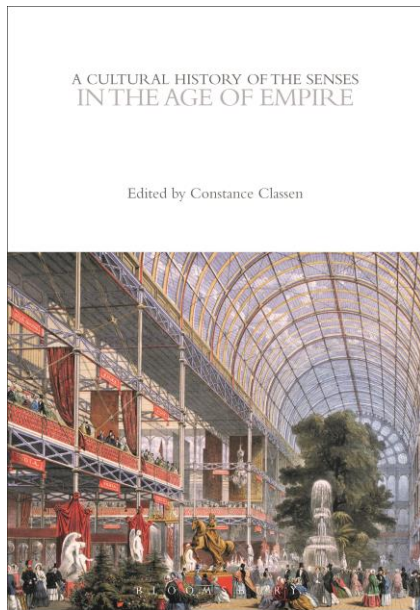
Constance Classen has brought together a diverse and stimulating collection of essays on the senses in the age of empire. Classen, as general editor of the *Cultural History of the Senses* series, spanning from antiquity to the twenty-first century, places the senses under examination from a range of fascinating historical, social, and cultural perspectives: from the rapidly changing city to the market place; from religious 'sensory values' to philosophical, scientific, and medical discourse. *A Cultural History of the Senses in the Age of Empire* (1800-1920) is volume five of six. It offers an extraordinarily rich and compelling exploration of the senses, enabling the reader to consider, through a broad range of cultural discourse, a period of rapid technological and social change with fresh sensitivity to everyday experience.

Kate Flint, in her chapter 'The Social Life of the Senses', draws on Dickens's 'Covent Garden Market' from *Sketches by Boz* (1836), an essay describing, with vivid clarity, the sights and sounds of the marketplace. Flint then offers analysis of Phoebus Levin's painting *Covent Garden Market* (1864), perceptively observing the way 'no unifying perspective or clear sight lines mimics, through our viewing practice, the experience of having our attention pulled first one way, then another' (pp. 28-29). An array of writers, from Wordsworth and De Quincey to Georg Simmel and Ruskin, are judiciously deployed, addressing issues from the conditions of

modern life that create a sense of isolation, to the appeal of the natural world. The array of sources and examples employed by Flint weave a broad picture that alights on detail to illuminate sensory experience. For example, the episode in Gaskell's *North and South* (1855), when the mill operatives touch Margaret's 'shawl or gown to ascertain the exact material' (quoted in Flint, p. 40), produces a network of correspondences. Flint guides the reader from the streets of Milton through a productive discussion of the body, dress material, 'fashionable norms' – the 'minute differences of material cut and decoration' on which fashion depended (p. 40) – and nineteenth-century women's magazines on codes of behaviour and etiquette. Gustave Doré's illustration, *Women Fingering Clothes in a Street Market* (1872), is another of the many wonderful images that add depth and interest to each chapter in the book.

Alain Corbin's chapter, 'Urban Sensations: The Shifting Sensecape of the City', is first-rate on the features and changes in cities that contributed to 'shaping the daily sensory experience' (p. 48). It focuses on technical developments that profoundly transformed 'the city's sensorial space', from gas lighting to new sewer systems and the management of waste. The chapter is concerned primarily with Paris and covers 'anxieties over odours', 'a major preoccupation of urban dwellers' (p. 55). While the arguments may not feel new, they are eloquent and important, particularly on the social significance of attitudes to filth and dirt. The chapter reminds the reader of seminal work on this subject from the 1980s, such as *The Politics and Poetics of Transgression* (1986), by Peter Stallybrass and Allon White. Indeed, Corbin's acknowledgements on the final page reveal this chapter to be from his book *The Foul and the Fragrant: Odour and the French Social Imagination*, translated from the French by Miriam Kochan, Christopher Prendergast, and Roy Porter in 1986. Corbin's chapter works well within Classen's collection even though the material on social attitudes to dirt is constantly being revisited, reanalysed, and revitalised through historical and cultural scholarship, for instance in Lee Jackson's *Dirty Old London: The Fight Against Filth*

(2014).[259] Though the material does not break any new ground, it is an important contribution to this cultural history and one that resonates with David Barnes's consideration of the ways in which London and Paris managed public health concerns over the disposal of waste through sewer construction. Barnes's chapter is a wide-ranging and rewarding history of medical practice, closing with a discussion of 'diagnostic technology and reading of the body' (p. 156). He examines the technologies that transformed 'the direct encounter between the physician's senses and the patient's body' (p. 159), including the thermometer, sphygmomanometer (a device for measuring blood pressure), and X-ray.

Chapter seven marks a distinct change of pace with Nicolas Daly's brisk, but satisfying, survey of 'The Senses in Literature', followed by Classen's own contribution: a graceful approach to art from the Romantics to the Futurists. Classen takes the reader through painting, sculpture, and the decorative arts with skilful aplomb. Before tackling the avant-garde and Futurism, Classen even considers performance and architectural space via a brief, but gratifying, discussion of William Beckford, James Wyatt, and William Morris.

It is this combination of developments in medical science ('Seeing Hearing and Smelling Disease', chapter six) alongside lucid discussion of art and the senses 'from the Romantics to the Futurists' (chapter eight) that makes the volume such a valuable resource for examining the senses across disciplines. Popular histories such as Liza Picard's *Victorian London: The Life of a City, 1840-1870* (2005), and Judith Flander's *The Victorian City: Everyday Life in Dickens' London* (published more recently in 2012) beautifully evoke the sights, sounds, and smells of the Victorian city and are compellingly readable. For this book on the senses, there was a danger of creating a disparate collection of chapters that sit together uneasily. The sheer range of topics needed to be covered in a book on the senses from 1800 to 1920 – social life, the built environment, religion, philosophy, science, medicine, art, and media – could be cumbersome.

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[259] Jackson's *Dirty Old London: The Victorian Fight Against Filth* (New Haven: Yale University Press, 2014) was reviewed in *Victorian Network*'s issue on 'Victorian Dirt' (Winter 2015).

Yet all these areas are addressed in this slim volume, by authors who delve meticulously into their chosen subject matter. Though, perhaps inevitably, given the range of material, the essays do not speak to each other as well as they might in a single-authored volume or, indeed, one less ambitious in scope.

A cultural history of the senses is a tall order and this volume on the *Age of Empire* succeeds in offering content that is wide-ranging and surprisingly detailed. For example, David Barnes discusses René Laënnec, medical listening, and the first stethoscope, before broadening the scope to the smell of disease in the form of nineteenth-century debates on illness during the Great Stink afflicting London in 1858, to the 'fetid emanations' from the sewers of Paris twenty two summers later (p. 153). Robert Jütte's chapter on science and philosophy, which provides analyses on the physiology of each of the senses, is also outstanding in its detail and sits very well alongside Barnes's on medicine. The multiple approaches to the senses on offer require one to step back and consider each piece as a thought-provoking intervention on a much larger subject – though the material is fascinating and judiciously selected. The book concludes with Alison Griffith's chapter on photography and media. She has innovative ideas to contribute on the senses and nineteenth-century institutional spaces, specifically museums and prisons. This book succeeds as a history that offers illuminating analysis and discussion necessary to sketch out the wider social and cultural debates. Yet the chapters will undoubtedly offer fresh perspectives and insights to readers with expertise in the subject matter of individual essays in the volume.

At this banquet of the senses there is plenty to digest, but each chapter should be savoured. There are no footnotes to detract from the body of the text and minimal, but helpful, notes over several pages at the end. The bibliography is extensive and varied. Moving from the marketplace (in chapter three) to religion (in chapter four) is quite a shift in gear, but the editor has arranged these varied chapters as logically as the diverse material will allow, in order to construct a wide-ranging history of the period in one slim volume. Classen has written an excellent introduction, which succinctly locates the diverse subjects that follow in

their historical contexts. In this wealth of rich ideas, certain chapters are especially compelling: Erika Rappaport's 'The Senses in the Marketplace', for example, is a feast for the senses and a delight to read, offering a sustained approach to this lively subject, the best I have encountered in any history of the period. A chapter on food, class, and diet would have been a worthwhile addition to this study, but whichever of its chapters you turn to, or if you read the book from cover to cover in one sitting, you will find yourself wanting to go back for a second helping – to immerse yourself in this rich sensory exploration of nineteenth- and early-twentieth-century history and culture.

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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.

Reviewed by Arden Hegele
(Columbia University)
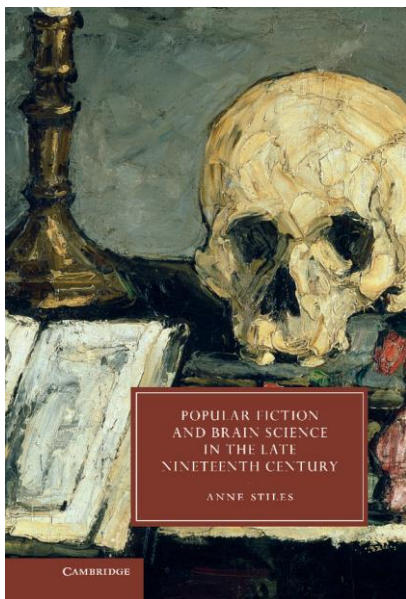
Before the term 'science fiction' was available for literary-critical taxonomy, which genre was available to an author of creative fiction who wanted to investigate the human brain? In Anne Stiles's estimation, for late-nineteenth-century writers, that genre was the 'Gothic romance'. Readers of Victorian 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

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[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

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[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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BOOK REVIEW

Thomas Hardy's Brains: Psychology, Neurology, and Hardy's Imagination,
by Suzanne Keen (Columbus: Ohio State University Press, 2014). 236 pp.
Hardback, $64.95. Paperback, $25.95. Multimedia CD, $14.95.

Reviewed by Nicole Lobdell
(Georgia Institute of Technology)
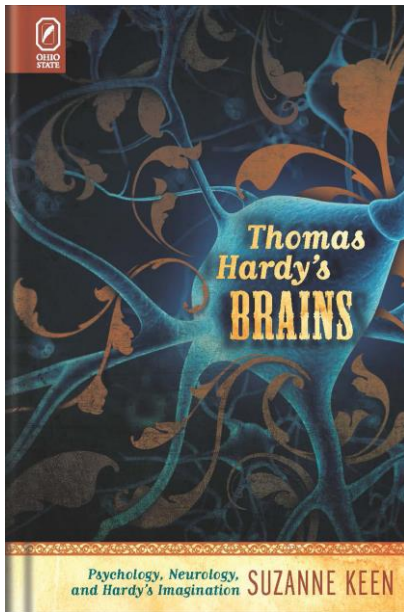
An innovative, interdisciplinary scholar in the fields of narrative theory, neuroscience, psychology, and affect theory, Suzanne Keen has few parallels. Her most recent book, *Thomas Hardy's Brains: Psychology, Neurology, and Hardy's Imagination*, was shortlisted for the 2015 Phi Beta Kappa's Christian Gauss Award for Literary Scholarship or Criticism. In it, Keen builds on her previous work in *Empathy and the Novel* (2007) to present a smart, provocative examination of Victorian psychology, neurology, and affect in Thomas Hardy's novels and poetry. Despite attempts by scholars to examine the brain and neural network imagery in Hardy's oeuvre, most noticeably in *The Dynasts* (1904-8), which Keen describes as 'one of the first modern texts to represent the monist idea of the universe in explicitly neurological imagery of hyperastronomical scale' (p. 6), no significant study that considers Hardy's theory of the mind and development of an affective psychology through his personal program of reflective reading in psychology, neuroscience, philosophy, and evolution has previously been published.

The impetus for Keen's project is twofold: to contribute to ongoing historical research that contextualises Victorian sciences of the brain and Hardy's extensive reading about the brain, and to contribute to the

intersection of literary criticism, cognitive historicism, and literary cognitive theory by testing the 'claims of literary cognitivism with regards to the works of a writer who was well aware of the psychology of his day' (p. 13). The first chapter examines with insight Hardy's reading 'about human brains and behavior, nerves and their diseases, cognition and emotion' in the writings of Auguste Comte, Joseph Fourier, George Henry Lewes, Théodule Ribot, Aldous Huxley, Herbert Spencer, Charles Darwin, and Henry Maudsley (p. 20). In his *Literary Notebooks,* Hardy kept careful notes on his responses to the popular scientific, psychological, and philosophical texts of the day. One notable absence from his notebooks is Freud, but as Rosemary Sumner has argued in *Thomas Hardy: Psychological Novelist* (1981), 'Hardy anticipat[es] Freud in his depiction of neurotic characters or those who struggle against inhibition' (quoted in Keen, p. 45). Keen is adamant that critical attention to Hardy's anticipation of Freud and Jung has occluded recognition of his earlier insights into human behavior, and she stresses that Hardy's reading habits are important because of their diversity: 'he habitually sought confirmation of his interests and hunches in disparate sources' (p. 185). For example, Hardy found in his reading of Comte and Ribot confirmation for his own theory of altruism. Hardy's was a mind in constant communication with other minds. The image of a network or community of brains in communication with one another or working together to solve problems intrigued Hardy, and he explored that image at both the microscopic level, portrayed by the village communities in his novels, and the macroscopic level, with his vision of humanity in *The Dynasts* connected through a cosmic, universal brain.

One of the central paradoxes for Hardy's psychology is that 'he could not help understanding through his feelings even though he could see that feelings motivated most peoples' thoughtless actions. He never gave ground on the centrality of lovingness even as he documented human cruelty' (p. 168). Can true altruism exist in a world where all living things are connected? In his narrative theory, Hardy endeavours to develop a narrative strategy reliant upon altruism and empathy. In chapter two, Keen examines 'the intersections of communal knowledge and individual states of mind' (p. 71). She asks: what power does

intermental, or communal, thoughts possess that intramental, or individual thought, does not? In novels such as *The Mayor of Casterbridge* (1886), Hardy contemplates the ability of communities to discern readily the thoughts of individuals, even as individuals fail to perceive their own thoughts. Keen offers four case studies as evidence of Hardy's narrative techniques that demonstrate individual nescience (Hardy's term for 'unknowing') amidst seemingly omnipotent communities. In *Far from the Madding Crowd* (1874), the narrator's psycho-narration reveals 'the conditions of ignorance, unknowing, or failure to apprehend of major characters, as it clarifies mood states and recognized motives' (p. 77). For Hardy, thought report is the ideal narrative technique to account for the complex psychology of a feeling individual manoeuvered by unseen forces (such as instinct) and frequently at odds with the collective thinking of groups or communities.

Arguably the most compelling in its originality, chapter three examines 'the intersections of emotion and thought, mindsight and nescience, in individual lyrics on a human scale and in vatic utterances on the nature of the cosmos' (p. 107). Through his poetry, Hardy elucidates a theory of the mind that accounts for man's emotional vulnerability. He demonstrates a distinct desire to return to a state of 'unknowing', what Hardy terms *nescience*. Keen close reads several Hardy poems including 'The Mother Mourns' and 'By the Earth's Corpse', both from *Poems of Past and Present* (1901-2), in which Hardy anthropomorphises nature, which laments man's development. The volume's title, *Past and Present*, is indicative of Hardy's greater preoccupation with time. His unresolved struggle to reconcile human time with cosmic time would lead Hardy to compose surprising poems like 'The Aerolite', in which he characterises the 'germ of consciousness' as an alien infection (p. 128). These later poems express man's desire 'to live without knowing that he does, in a natural body [...] To retain embodied experience without emotion and feeling would lead to desirable states of not-thinking and not-feeling' (p. 129).

The final chapters, 'The Neurological Turn' and 'Empathetic Hardy', mature Hardy's evolving theory of the mind. In his later narratives and

poetry, he relies on strategic empathy and *Einfühlung*, a German aesthetic based on 'the projection of feeling into inanimate objects', such as Hardy demonstrates in his poem 'The Convergence of the Twain' (p. 170). Hardy employs such empathy in three narrative modes: bounded (empathy for members of one's group), ambassadorial (empathy on behalf of distant others), and broadcast (empathy for 'universal objects of concern') (p. 190). Keen demonstrates that, in his later novels *Two on a Tower* (1882) and *The Woodlanders* (1887), Hardy uses more explicit neurological imagery to examine man within universal space. In part, it is an experiment of time, space, and the embodied consciousness set against the magnitude of the universe. Keen demonstrates that Hardy's interest in the brain in the 1880s helped him to formulate 'the possibility of a cosmic brain, the link between individual minds and this neural network, and the power of minds to create ejects' (p. 145). Hardy's reading in 1880s psychology led him to the idea of ejects, a method by which the mind 'creates the world that surrounds it through projection of its perceptions' (p. 151). Ejects take the shape of 'ghost-like projections' (p. 151), but Hardy's larger concern was how the individual mind negotiated a physically confined consciousness in its efforts to traverse the distance between itself and another consciousness. Hardy grapples with these limitations of the individual in his later novels, but in *The Dynasts*, he would turn to consider consciousness on a cosmic-scale.

One of the chief image-schemas for Hardy is that of the brain as a container, 'from the small (skull-sized) to the vast (on the scale of the cosmos)' (p. 102). Each chapter of *Thomas Hardy's Brains* could therefore have been presented as a finite container of information, but Keen acknowledges that Hardy did not compartmentalise knowledge in this way. He was insatiably curious, frequently returning to authors, texts, and ideas and re-examining them anew as science uncovered new evidence. Perhaps this explains, why Keen's analysis of *The Dynasts* is not confined to one chapter but stretches across her volume, like a neural web of information. This structure may frustrate some readers, but it demonstrates how Hardy's theory of the mind developed across the decades of his career, culminating at last in the epic poem.

The overarching thesis of Keen's study is that Hardy 'intuitively coalesces imagery from neurology and psychology to figure forth his central paradox, a cosmic Theory of Mind consisting of an unfeeling, unwitting but motive universe inhabited by human creatures tragically evolved to feel' (p. 16). In the face of such an all-encompassing thesis, Keen's book is surprisingly brief. There is material enough for several books. However, the brevity of *Thomas Hardy's Brains* is a testament to Keen's deft writing and her ability to organise vast amounts of information into comprehensive lists, the kind of lists perfectly befitting a Victorian study. Lists abound, but they serve Keen well in moving readers swiftly through material that in lesser hands could quickly turn cumbersome. Readers of *Thomas Hardy's Brains* will find a compelling, interdisciplinary volume that merges fields of narrative theory, cognitive culture studies, affect theory, and literary cognitivism, offering new insight into Hardy's influences and Victorian neurology.

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BOOK REVIEW

The Poet's Mind: The Psychology of Victorian Poetry 1830-1870, by Gregory Tate (Oxford: Oxford University Press, 2012). 214 pp. Hardback, £71.

Reviewed by Benjamin Westwood
(Wadham College, University of Oxford)
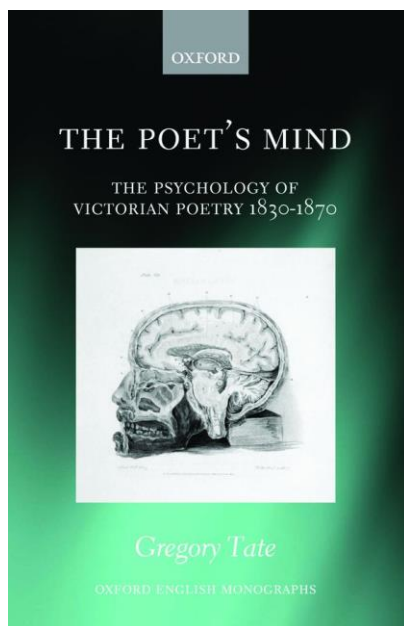
If, as Gregory Tate's poised and nuanced study argues, the 'self-scrutinizing stance and fragmented forms of Victorian poetry and the systematic analyses of psychologists often aim towards the same goal: the examination and explication of the processes of the mind', *The Poet's Mind* also makes clear that they are as often in tension as they are in convergence (p. 184). In chapters on Robert Browning, Tennyson, Arthur Hugh Clough and Matthew Arnold, and George Eliot's poetry, Tate outlines the various ways that poetic language was understood, and celebrated, as a particularly potent medium in which to register the questions raised by associationist and physiological studies of psychology, which gained prominence in the mid-nineteenth century.

Connecting the chapters is the argument that 'the question of how the mind constructs and is constructed by poetry was perhaps the most important issue in nineteenth-century poetics' (p. 5), and as a result 'poetry of psychological analysis became one of the most influential poetic modes in Victorian Britain' (p. 3). While few would argue with the notion that the introspective impulse is writ large across nineteenth-century poetry, what Tate's book strongly brings out is a sense of the importance of the interaction between two kinds of discipline *qua* discipline: writing poetry and scientific theorising. A less sophisticated study might have been content to register the simple fact of exchange between, for instance, associationist psychology and spasmodic poetry, or Eliot's lesser-known poetry and the materialist psychology of her partner G. H. Lewes and Herbert Spencer. Yet Tate, for example, keeps in play, alongside the undeniable historical fact of Tennyson's interest in 'pre-Darwinian

evolutionary theories in the late 1820s', a sense of where and how the formal qualities of poetry might enable, resist, or render ambiguous, moments where these extra-poetic influences become perceptible (p. 44). This is particularly clear in Tate's reading of Tennyson's *In Memoriam* (1850) and *Maud* (1855), in which he teases apart the ways '*In Memoriam* strives, through both its form and its language, to silence its unquiet heart and brain', and how nevertheless 'the psychological noise made by the brain, and by the body in general, remains audible throughout' (p. 94). For instance, the repeated metre and *abba* rhyme scheme allows the 'formal identity of the elegy's stanzas' to function 'to an extent as a "mechanic exercise" that soothes its speaker's mental upheaval', while at the same time the 'rhyme scheme reinforces more than it counteracts the poem's representation of a changing and self-doubting mind'. The result is a sense of 'simultaneous mutability and inertia' (p. 97). Tennyson's 'measured language' is, we are led to understand, a language of beats and rhythms which attempts to measure an unruly and decidedly unmeasured mind.

The Poet's Mind is full of well-observed zoomings-in on the cogs and gears of poems; seemingly banal or readily understandable words like 'brain', 'mind', 'heart', 'body', and 'soul' become more like Empsonian complex words. Tate ably tracks their usages and significations through a veritable thicket of semantic variability. Each chapter, though, progresses the overall argument. While never bogged down by the ambiguities he registers, this fine-grained approach helps to shape and complicate the broader claims of the chapters, and of the book as a whole. In brief, and far too broadly, the first chapter contends that Browning's and Tennyson's early poetry exhibits a tension between ideas of the embodied mind and a transcendental soul, at the levels of content, structure, and local syntax. Chapter two finds Matthew Arnold and Arthur Hugh Clough writing a decade later in close response to The Spasmodics, reflecting in their letters and poems on the dangers of the solipsism of the 'mind in dialogue with itself', and on the moral and aesthetic stakes of this kind of poetry. In the third chapter Tate closely reads *In Memoriam* and *Maud*, suggesting that in both long poems Tennyson is trying, in different ways, to work out how to find a place in poetry and the individual for both the soul and the brain, as well as how to figure (both in terms of understand and represent) the interactions and barriers between them. The fourth chapter juxtaposes the insistence on fragmentation discussed in the earlier chapters with George Eliot's view of poetry. For her, the technical and affective resources of poetry were ways of affirming, and rendering

coherent, a unity between mind and body not available to the experimental laboratory of prose fiction. In the penultimate chapter Tate explores how, in the closing decades of the study, Browning complicates the links between thought and physiological process, unsettling in different places the presumed priority of either. Questions of will, agency, and representation raised by the insights of materialist psychology are central, Tate argues, to understanding Browning's later work, and perceptible in the performed and often contradictory negotiations between embodied thought and metaphysical truth. Tate sees Browning searching for a moral way to bring together the insights of physicalist psychology with human intimations of spiritual transcendence. The conclusion briefly surveys poetry from the 1880s and 1890s, arguing that the mid-nineteenth century is interesting as a tipping point marking when the precursory theories and assumptions of modern psychology became integrated into poetic language, ultimately 'undermining [...] the barrier between rational thinking and poetic feeling' (p. 185).

While the remit of Tate's argument is to show the influence of associationist and materialist psychology on Victorian poetry's construction of the embodied mind, it nonetheless feels as though both Wordsworth's *The Prelude* (published posthumously in fourteen books in 1850) and Elizabeth Barrett Browning's *Aurora Leigh* (1856) are given surprisingly short shrift in a book concerned with the psychology of mid-nineteenth-century poetry. Wordsworth and Elizabeth Browning may not have been *au fait* with the psychological theories which, Tate argues, so influenced the authors that have made it into the study. Yet a review of *The Prelude* from *The Eclectic Review* in 1850 points to similar anxieties around poetic solipsism, the new idea of epic interiority, and a sense of fragmentation:

> We grant, then, to Wordsworth's detractors, that his eye was introverted, that he studied himself more profoundly than aught else but nature – that his genius was neither epic, nor lyric, nor dramatic – that he did not 'look abroad into universality' [...] But all this we look at as only a needful statement of his limitations; and we pity those who produce it for any other purpose. Future ages will be thankful that a formation so peculiar, has been so carefully preserved. The 'moods' of such a mind will be ranked with the dramas, lyrics, and epics of inferior poets. His monotony will be compared to that of the ocean surges, which break now on the shore to the same tune as they did the eve before the deluge. His

> obscurities will appear jet black ornaments. His fragments
> will be valued as if they were bits of the ark.[263]

This perhaps points to a limitation of Tate's study: that Psychology as a particular phenomenon of scientific inquiry is both distinct from, and related to, psychology as a broader notion of an individual's inner life. It is a difficult word to pin down – indeed 'Psychological' is one of Raymond Williams's 'Keywords'. As he notes,

> except in scientific uses, *psychological* does not normally express [...] the human mind as a whole. It indicates what is felt to be an area of the mind, which is primarily that of "feeling" rather than of 'reason' or 'intellect' or 'knowledge'. *Psychological reasons* are given, not usually because they are derived from *psychology* (except in its comparably extended sense of the understanding of the feelings or characters of others), but as a reference to this assumed area.[264]

This is, of course, no failing of Tate's work, but rather a function of the necessary boundedness of a monograph. Contributing to previous scholarly work on Victorian poetry's embodied-ness, such as that by Kirstie Blair and Jason Rudy,[265] Tate's excellent study further textures and delineates our understanding of the relation of Victorian poetry to Victorian bodies; all the while, however, carefully tracking the dialectical obsession with *dis*embodied-ness. Mid-nineteenth-century poetry, this study suggests, found considerable inspiration in figuring out how words on a page could both represent a material existence, and intimate a metaphysical or spiritual one; and recognise itself as a form which could register with special potency, in Tennyson's words, that 'damnèd vacillating state'.[266]

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[263] [Unsigned], '"*The Prelude*", *Eclectic Review,* 28 (1850), 550-62. Collected in *The Prelude: 1799, 1805, 1850*, eds. Jonathan Wordsworth, M. H. Abrams, and Stephen Gill (London: Norton, 1979), pp. 547-50 (p. 549).

[264] Raymond Williams, *Keywords: A Vocabulary of Culture and Society* (London: Fontana, 1985 [1976]), pp. 246-47.

[265] See Kirstie Blair, *Victorian Poetry and the Culture of the Heart* (Oxford: Oxford University Press, 2006), and Jason Rudy, *Electric Meters: Victorian Physiological Poetics* (Athens: Ohio University Press, 2009).

[266] Alfred Tennyson, 'Supposed Confessions of a Second-Rate Sensitive Mind' (1832), collected in *Tennyson: A Selected Edition*, ed. Christopher Ricks (London: Routledge, 2014 [1969]), p. 12.

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BOOK REVIEW

Theatre and Evolution from Ibsen to Beckett, by Kirsten Shepherd-Barr
(New York: Columbia University Press, 2015). 400 pp. Hardback, £44.

Reviewed by Katharina Herold
(Pembroke College, University of Oxford)
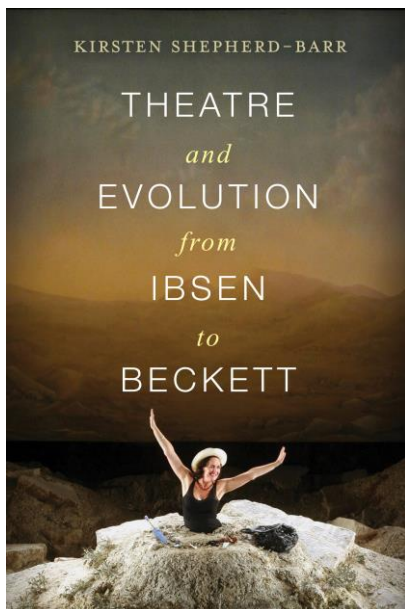
Building on Jane Goodall's *Performance and Evolution in the Age of Darwin* (2002) and her own *Science on Stage* (2006), Kirsten Shepherd-Barr's study *Theatre and Evolution from Ibsen to Beckett* is a stellar example of interdisciplinary research, bringing together in interesting ways evolutionary theory and theatre. It chronologically maps one hundred and fifty years of interplay and mutual influence between evolutionary thought and Anglophone European and American theatre in all its forms. Far from merely absorbing scientific ideas into the dramatic canon, Shepherd-Barr argues, playwrights and theatrical performance often enough also challenged and transformed evolutionary theory at its core. In her words, '[t]heatre is no mere handmaiden to science' (pp. 4-6). Shepherd-Barr's strategy is 'not only to catalogue theatrical allusions to evolution', but also to 'show the more indirect, oblique engagement with the ideas themselves' (p. 3). This is realised in the monograph's structure, opening with an introduction that outlines the relevant scientific and philosophical currents informing Darwin's theory, such as Jean-Baptiste Lamarck's teleological concept of the 'inheritance of acquired characters', Robert Chambers's hypothesis of the close evolutionary link between humans and animals, Herbert Spencer's '*survival of the fittest*'

development model, and Hugo de Vries's principles on pangenetic heredity. All these concepts are explained eloquently, allowing a non-specialist audience to situate the plays subsequently discussed within their scientific and social context.

Paying tribute to the dramatic as well as theatrical text, the study's eight chapters explore the ways in which playwrights from Ibsen to Beckett tested, or indeed reacted against, these 'scientific ideas in broader cultural contexts' (p. 3). Often this resulted in neglecting scientific accuracy in favour of new artistic experimentation. Shepherd-Barr's focus on eminent authors such as Ibsen, Shaw, James A. Herne – 'America's Ibsen' (p. 8) – and Beckett is complemented by her examination of a range of less-canonical writers, in particular the women writers Elizabeth Robins, Florence Bell, and Susan Glaspell. The book's strength thereby lies in its attention to the variety and breadth of the exchange between theatre and science throughout the late-nineteenth and twentieth centuries.

The first two chapters set the scene for this sweeping survey, shining a spotlight on science as Victorian theatrical spectacle. The public sphere in Britain in the 1890s was saturated with the performance of natural history and biology staged in human exhibits, public scientific lectures, zoos and freak shows, even farcical operettas 'with an "evolutionary argument"' such as Gilbert and Sullivan's *Princess Ida* (1884). On the other side of the pond, evolution stepped into the limelight in Herne's plays, 'steeped in Charles Darwin and Hebert Spencer' (p. 39). Notably, the chapters present original research on the censorship concerning the Spencerian controversy in Henry Arthur Jones's *The Dancing Girl* (1891).

With the arrival of naturalism on stage, the focus of the book shifts to the performer's body as 'an evolutionary text' and the influence of Darwin's *The Expression of the Emotions in Man and Animals* (1872) on acting theory (p. 54). In an interesting analogy, Shepherd-Barr identifies the processes of cooperation and altruism, two major strategies of survival, with the art of acting. Mimicry, a further strategy to that end, was perfected by actress Eleonora Duse, whose 'natural acting' allowed

her to mimic emotions through 'neurological trickery' (p. 59). As modern research discovered after Darwin, with the help of *mirror neurons* the brain can be artificially stimulated to, for example, mechanically produce a blush at will in front of an audience.

The core of this book – and clear home territory for Shepherd-Barr – is chapter three on Ibsen's evolutionary vitalism. Shepherd-Barr teases out the contradictions in Ibsen's unprecedented portrayal of women in connection with topics such as marriage, motherhood, eugenics, and heredity. While Ibsen is hailed as the liberator of women, Shepherd-Barr rightly points to Ibsen's 'temporary embrace of eugenics as part of his response to the intellectual package of evolution as it was then understood' (p. 89). Focusing on Ibsen's 'evolutionary' impact on drama, the role of women in evolution takes centre stage in the following three chapters. Chapters three to six are exclusively concerned with the role of women, sidelining issues of homosexuality and questions of male reproduction (for example, impotence). The book by no means claims to be an exhaustive study; to the contrary, it specialises in narrating woman's position in evolution and theatre. This is one of the distinct merits of the work, which perhaps deserves to be reflected its title.

Chapter four assesses 'gender essentialism' as a consequence of evolutionary thought discussed in plays around the turn of the century, for example the questioning of the innate nature of motherly instincts, such as breast-feeding, in Herne's *Margaret Fleming* (1890). Shepherd-Barr highlights this play to show how '[e]volutionary discourse focused particular attention on the burden that biology placed on women' (p. 92).

Relating this emphasis on the role of women on stage and in evolution to a wider ecological scale, the book presents itself as a timely contribution to both theatre and (Neo-)Victorian studies. It engages with current social debates including breastfeeding, global warming, and genetic technology replacing the human sphere, which still very much resonate with anxieties surrounding evolution today. While Shepherd-Barr takes a historicising perspective, she also succinctly explores these contemporary issues, notably the dramatic interpretation of heredity and eugenics addressed in chapter five. Bernard Shaw famously emphasised

'the role of the will in human evolution' and propagated a return 'to the pre-Darwinians while insisting on his own innovation' (pp. 134, 140). Hubert Henry Davies's plays explored genetics as a field 'with rich dramatic metaphors' (p. 145), accessible to the Anglophone public through William Bateson's translations of Gregor Mendel's theory on heredity in 1902. Arthur Wing Pinero's *The Freaks* (1918) subsequently picked up on the Victorian interest in 'freakery', linked to concerns about mutation that were being raised by the increasing numbers of wounded soldiers returning from WWI (a '"sudden leap" in human evolution', p. 220), disability, and the inversion of gender roles ascribed to the New Woman, made painfully visible on the stage.

Shepherd-Barr's book explores how the ideas of social mutation and mutilation challenged women's biological determinism, for example by the separation of motherhood and marriage, through the increasingly radical performance of the female body on stage (p. 172). Sexual selection, in itself a performative process as many plays illustrated, was presented as a legitimate reason to transcend class boundaries and to justify marital break-ups, contraception, abortion, addiction, and infanticide. Women writers such as Robins and Bell (*Alan's Wife,* 1893) presented this theatrical emphasis on women's experience in their plays, destabilising the term 'New Woman' and the 'implicit link between female activism and childlessness' (p. 197). Theatrical portrayals of failed child-parent relationships mirrored 'the changing discourse on evolution' (p. 175).

The book closes by opening up perspectives on the tensions between Ecocentricity and the Anthropocene. Chapter seven is devoted to the innovative and distinctly American treatments of evolution in the plays by Glaspell, Thornton Wilder, and Eugene O'Neill in the first half of the twentieth century: theatre 'profoundly shaped by war' that 'evinces a strong environmentalist streak' (p. 221, 204). Foregrounding botany, hybridity, and adaptation of life forms, theatre thus became a laboratory for research and experimentation. For example, in Wilder's *The Skin of Our Teeth* (premiered in 1942), a journey through 'various milestones in human evolution', the audience becomes part of the scenario as the fish in an imaginary pre-historic ocean (p. 223). Shepherd-Barr concludes that 'it

is striking that, in 1955, the most prominent American theatrical engagement with evolution was a historical one', albeit with a progressive, optimistic outlook (p. 236).

In contrast, chapter eight investigates evolution's 'profound relevance' for Beckett, who 'dramatizes the process of ecocide' (pp. 239-40). Drawing on Beckett's personal notes, Shepherd-Barr demonstrates through a series of fine close readings the fact that both Darwin and Beckett 'seem taken with the concept of "earth afloat"' and 'ape-human proximity' (p. 247, 259). Beckett 'returns the theatre to thinking about humans as a species' and its chances of survival (p. 254). As with Ibsen, Beckett's impact on theatre compares to Darwin's on science.

Overall, this study shines in its effortless balancing of two disciplines and its vivacity of style. Shepherd-Barr provides intricate close readings of cornerstones of modern theatre, whilst also usefully introducing lesser-known dramatic texts and authors. She impressively uncovers the ways in which theories of natural science have influenced theatrical theory and vice versa, linked by their 'shared status as sign systems' (p. 53). The strength and merit of this book lies in its wealth of materials and its sheer overwhelming diversity of examples, which testify to the richness of research presented. This breadth, however, could also be problematic since the focus jumps between authors and texts, continents and periods, with a tendency to divert the reader's attention. The survey's necessity to make extensive use of quotations, often referring to other critics' work, at times leaves the reader wanting to hear more of Shepherd-Barr's own excellent observations and insights. This minor concern, however, merely reflects the overall excellence of what is a fundamental contribution to interdisciplinary studies in theatre and science. *Theatre and Evolution* opens up new avenues of enquiry concerning the power of technology versus the abilities of human brain-power on and off stage, as well as into how theatre shapes the public discussion of contemporary scientific innovations today.

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