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

[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

[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

[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

[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) functions 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]

[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

[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

[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

[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

[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

[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

[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

[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

[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

[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

[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]

[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

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]

Bibliography

[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.

Archer, William, 'Real Conversations', *Thomas Hardy Remembered*, ed. by Martin Ray (Aldershot: Ashgate Publishing, 2007), pp. 28-37.

Casagrande, Peter, 'The Shifted "Centre of Altruism" in *The Woodlanders*: Thomas Hardy's Third "Return of a Native"', *ELH*, 38.1 (1971), 104-125.

Cohen, William A., 'Arborealities: The Tactile Ecology of Hardy's *Woodlanders*', *19: Interdisciplinary Studies in the Long Nineteenth Century*, 19 (2014), 1-19.

Cottingham, J., R. Stoothoff, and D. Murdoch, *The Philosophical Writings of Descartes*, 2 vols (Cambridge: Cambridge University Press, 1984).

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

Descartes, René, *Discourse on Method* and *The Meditations*, trans. by F. E. Sutcliffe (London: Penguin, 1968).

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

Fincham, Tony, *Hardy the Physician: Medical Aspects of the Wessex Tradition* (New York: Palgrave Macmillan, 2008).

Gowers, W.R., *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).

Hardy, Thomas, *The Collected Letters of Thomas Hardy*, ed. by Richard Purdy and Michael Millgate, 8 vols (Oxford: Clarendon Press, 1978-1988, 2012).

——, *The Complete Poems of Thomas Hardy*, ed. by James Gibson (London: Macmillan, 1976).

——, *The Dynasts*, The Poetical Works of Thomas Hardy, vol. 2 (London: Macmillan, 1924).

——, *The Life and Work of Thomas Hardy*, ed. by Michael Millgate (London: Macmillan, 1984).

——, *The Literary Notebooks of Thomas Hardy*, ed. by Lennart A. Bjork, 2 vols (London: Macmillan, 1985).

——, *Thomas Hardy's Public Voice: The Essays, Speeches, and Miscellaneous Prose*, ed. by Michael Millgate (Oxford: Clarendon Press, 2001).

——, *Under the Greenwood Tree*, ed. by Simon Gatrell, intro. and notes by Phillip Mallett (Oxford: Oxford University Press, 2013).

——, *The Woodlanders*, ed. by Dale Kramer (Oxford: Oxford University Press, 2000).

Hillis Miller, J., *Thomas Hardy: Distance and Desire* (London: Oxford University Press, 1970).

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

Irwin, Michael, *Reading Hardy's Landscapes* (London: Macmillan, 2000).

Keen, Suzanne, 'Empathetic Hardy: Bounded, Ambassadorial, and Broadcast Strategies of Narrative Empathy', *Poetics Today*, 32.2 (Summer 2011), 349-389.

——, *Thomas Hardy's Brains: Psychology, Neurology, and Hardy's Imagination* (Columbus: Ohio State University Press, 2014).

Levine, George, '*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.

Mallett, Phillip, 'Hardy and Philosophy', in *A Companion to Thomas Hardy*, ed. by Keith Wilson (West Sussex: Wiley-Blackwell, 2009), pp. 21-35.

Maudsley, Henry, *Natural Causes and Supernatural Seemings*, 3rd edn (London: Kegan Paul, Trench, Trübner, 1897).

Millgate, Michael, *Thomas Hardy: A Biography Revisited* (Oxford: Oxford University Press, 2004).

Salt, Henry, 'A Lover of Animals', in George Hendrick's *Henry Salt: Humanitarian Reformer and Man of Letters* (Chicago: University of Illinois Press, 1977).

Scott, Ann, Mervyn Eadie, and Andrew Lees, *William Richard Gowers 1845-1915: Exploring the Victorian Brain* (Oxford: Oxford University Press, 2012).

Shaw, [George] Bernard, *The Doctor's Dilemma*: *A Tragedy*, ed. by Dan H. Laurence (London: Penguin, 1946).

Stiles, Anne, *Popular Fiction and Brain Science in the Late Nineteenth Century* (Cambridge: Cambridge University Press, 2012).

Taylor, Jenny Bourne, 'Psychology', in *Thomas Hardy in Context*, ed. by Phillip Mallett (Cambridge: Cambridge University Press, 2013) pp. 339-50.

Thomas, Keith, *Man and the Natural World: Changing Attitudes in England 1500-1800* (Middlesex: Penguin, 1984).

Woolf, Virginia, *Mrs Dalloway*, ed. by Stella McNichol (London: Penguin, 2000).

Young, Kay, *Imagining Minds: The Neuro-Aesthetics of Austen, Eliot, and Hardy* (Columbus: Ohio State University Press, 2010).