Neuromanticism: Emily Brontë and the Embodied Mind

by

Sara Kraus

Bachelor of Philosophy in English Literature, University of Pittsburgh, 2019

Submitted to the Undergraduate Faculty of

University Honors College in partial fulfillment

of the requirements for the degree of

Bachelor of Philosophy

University of Pittsburgh

2019

UNIVERSITY OF PITTSBURGH

DIETRICH SCHOOL OF ARTS AND SCIENCES

This thesis was presented

by

Sara Kraus

It was defended on

June 28, 2019

and approved by

Colin MacCabe, Distinguished University Professor, Department of English Literature

Thora Brylowe, Assistant Professor, Department of English Literature

John Twyning, Professor, Department of English Literature

Thesis Advisor: Amy Murray Twyning, Lecturer II, Department of English Literature

Neuromanticism: Emily Brontë and the Embodied Mind

Sara Kraus, BPhil

University of Pittsburgh, 2019

Scholars often regard Emily Brontë's *Wuthering Heights* as a late Romantic novel, though few studies have explored exactly what is meant by this designation or how a Romantic influence comes to bear on the text. Certainly, Romantic literature is more than a mere sum of its parts and the same should be said of Brontë's *Wuthering Heights,* for the novel does not simply borrow Romantic aesthetics such as a reverence for nature or a longing for one's youth, but engages with the larger philosophical debates that concerned Romantic writers as well as the contemporaneous scholars who influenced them. One major debate concerns the potential material nature of the mind or soul and the threat such a materiality brings to orthodox Christianity's vision of transcendence—a highly contested topic that, as this study shows, appears time and again not only during the Romantic movement but also throughout the Enlightenment. This thesis provides an overview of Enlightenment and Romantic scholars who consider the possible materiality of the mind and soul. Emphasis is placed on the increasingly materialist (though no less contentious) ontologies which appear contemporaneously to the Romantic movement and influence its literature, in part, by offering a new conception of what is meant by materiality. Rather than conceive of matter as inert or inactive, scholars such as Erasmus Darwin and Joseph Priestley propose a vision of matter as active and alive, meaning it has more in common with the mind and soul than ever before. This new understanding of matter collapses the distinctions between the human and natural world, just as it does the distinction between the mind and body. I argue that it is this conception of materiality and its corresponding

implications for notions of the mind, body, and natural world which underpins Brontë's *Wuthering Heights.*

Table of Contents

1.0 Introduction

Critics of Emily Brontë's *Wuthering Heights* (1847) have long agreed that the novel is a worthy child of the Romantic literary movement. Comprising one of literature's most famous Byronic heroes— Heathcliff— and brimming with reverence for nature, Brontë's Romantic inheritance is certainly clear. But is this where *Wuthering Heights'* propinquity to Romanticism ends? After all, Romantic literary scholars would hardly agree that the entire movement is a mere sum of its parts. Indeed, the Romantics are frequently credited with developing distinct and complex philosophies that underpin their poetic works. Can the same be said for *Wuthering Heights* as an heir to the Romantics? Does the text carry within it a philosophical argument similar to those posited by many Romantic writers, one influenced by contemporaneous studies on the mind and body? Scholars such as Alan Richardson and Edward S. Reed have shown that speculation regarding the functioning of the mind or soul[1] could take a materialist turn in the late eighteenth and early nineteenth century— the radical nature of which would come to inspire Romantic writers. These materialist philosophies posited that the mind or soul is, in fact, a product of physical processes. Rather than transcending the physical body, the soul becomes a material entity itself, and thus it is part of the body's functioning, indistinguishable from the body itself. Such propositions were not to be taken lightly, for considering the soul as a material entity means that it cannot live on after the death of one's body, a fate that significantly challenges orthodox Christianity's promise of an otherworldly afterlife. Joseph Priestley, an early proponent of

[1] I use the terms "mind" and "soul" interchangeably throughout this thesis in order to reflect their usage in the eighteenth and early nineteenth century. According to Ralf Haekel, "from Plato onwards the soul acquires the sense of a rational and conscious mind as something separable from, or at least not identical with, the body" (Haekel 22).

materialist psychology, was attacked for his theories and— due in part to his fervent support of the French Revolution and otherwise generally subversive politics— his home lab was destroyed during the 1791 Church and King riots, and he was effectively run out of England for his beliefs (Richardson 15). Indeed, the revolutionary and potentially blasphemous nature of materialist theories of the soul and mind rendered them dangerous to any outspoken theorists. As a result the dissemination of these theories are often visible in what Reed calls works of "*non*official literature" or "writings that could not easily be censored. This means studying the work of poets and other 'popular' writers" ("Soul" Reed 11). Certainly, one of the most important materialist theorists for this study, Erasmus Darwin— grandfather of Charles Darwin— expounded many of his theories through poetry, such as *The Botanic Garden* (1791) and *The Temple of Nature* (1803), though much of his more detailed work is contained in *Zoonomia; Or the Laws of Organic Life* (1794). *Zoonomia*, would come to influence Wordsworth and Coleridge (though they each reject Darwin's poetic form) when they wrote *Lyrical Ballads* (1798). Though the exact extent of that influence cannot be ascertained with total certainty, we know that Wordsworth and Coleridge were adamant admirers of Darwin's poetry and scientific theories in the early 1790s (King-Hele 67; Piper 26). While writing his portion of *Lyrical Ballads*, Wordsworth requested a copy of *Zoonomia* be delivered posthaste— a copy he held onto for two months, during which time he wrote much of his contribution to *Lyrical Ballads* (King-Hele 71).

Not only Wordsworth and Coleridge but Keats and the Shelleys were at one point or another in their careers deeply interested in contemporary scientific theory and advancement. As H.W. Piper notes, Wordsworth and Coleridge both circulated amongst materialist thinkers in the 1790s when they roamed revolutionary France (26). Keats studied medicine and biology

professionally at Guy's Hospital London prior to becoming a poet full time[2]. Percy Shelley was influenced by the work of French material physiologist and philosopher Pierre-Jean-George Cabanis, as well as Erasmus Darwin, and Mary Shelley, of course, famously incorporated the vitalist notions of Luigi Galvani in *Frankenstein: A Modern Prometheus,* citing both he and Darwin in her "Introduction" to the text. Certainly, more work has been done on some Romantic writers' scientific influences than on others (indeed, another study on the influence of contemporary bioelectric experiments on Shelley's *Frankenstein* would be redundant)[3], but the probable influence of increasingly material and biological concepts of the mind and soul which occurred contemporaneously to the Romantic movement has been studied only intermittently. The striking convergences between materialist philosophies and Romantic works that scholars such as Richardson, Reed, H.W. Piper, and Desmond King-Hele have carefully elucidated are deserving of further attention and should be extended beyond the works of those within the traditional Romantic canon. This research is, in part, an effort to advance and elaborate upon the groundwork laid by such scholarship, by tracing the influence of materialist theories on a late Romantic text—*Wuthering Heights*.

Scholars have analyzed *Wuthering Heights* through a variety of lenses, each vying for the opportunity to unravel what appears to be a highly idiosyncratic text. Often times, however, these works pull on a thread that only ultimately tightens the knot, and some essential piece of the novel slips through. Indeed, one of the crucial sentences that has surprisingly slipped through without much critical attention is Catherine's famous declaration: 'Whatever our souls are made of, his

[2] For more on how Keats' medical background influenced his poetry, see Richardson, Alan. "Keats and Romantic Science: Writing the Body". *Cambridge Companion to Keats,* edited by Susan J Wolfson, Cambridge University Press, 2001, pp. 230-245.

[3] For an erudite study of such influences on *Frankenstein*, see Sha, Richard C. "Volta's Battery, Animal Electricity, and Frankenstein." *European Romantic Review*, vol. 23, no. 1, 2012, pp. 21-41.

and mine are the same, and Linton's is as different as frost from fire or lightning from moonbeam" (Brontë 102). This is one of the most famous quotes from *Wuthering Heights,* and yet scholars have treated it as though it were self-explanatory, no more extraordinary than Nelly tying her bonnet. Here, Catherine explains to Nelly, and to the reader, the extent of her attachment to Heathcliff— an attachment that scholars have alternately described as incestuous, codependent, perverted, and even necrophilic[4]. Indeed, the possibility that Heathcliff is really the illegitimate child of Mr. Earnshaw renders his and Catherine's relationship conceivably incestuous, as many scholars have pointed out. Even if they are not related by blood (and readers can never know with any certainty whether or not this is the case) scholars like Joseph Carroll have taken pains to assert that Heathcliff and Catherine's identification with one another is a sign of a disruption and perversion within the text (Carroll 243). Adopting a Darwinian approach to the novel (and perhaps influenced by a psychoanalytic perspective as well) Carroll argues that Heathcliff and Catherine's relationship represents "deep disruptions in the phases of human life history" (246). Like other scholars, he notes that the relationship between Catherine and Heathcliff is not necessarily sexual in nature. However, from Carroll's Darwinian perspective, such asexuality is essentially pathological. Quoting Dorothy Van Ghent, Carroll notes, "The relationship is not one of 'sexual love, naturalistically considered' for 'one does not "mate" with one's self'. In normally developing human organisms, a true fusion between two individual human identities occurs not at the level of the separate organisms but only at the genetic level, in the fertilized egg and the consequent creation of a new organism that shares the genes of both its parents" (251). For Carroll, Catherine

[4]See Stoneman, Patsy. "Rochester and Heathcliff as Romantic Heroes." *Brontë Studies*, vol. 36, no. 1, 2011, pp. 111-118 and Tyler, Graeme. ""Nelly, I Am Heathcliff!": The Problem of "Identification" in *Wuthering Heights*." *The Midwest Quarterly*, vol. 47, no. 2, 2006, pp. 167-181.

and Heathcliff "consummate" their love only after Catherine has died via a necrophiliac "comingling of rotted flesh" rather than normatively through sexual intercourse (252).

Other scholars tend to be a little less extreme in their analysis of Catherine and Heathcliff's relationship. In *The Disappearance of God: Five Nineteenth Century Writers* (1963), J. Hillis Miller posits that Catherine and Heathcliff's connection with one another is representative of Brontë's own ideology regarding the human condition— "For Emily Brontë no human being is self-sufficient, and all suffering derives ultimately from isolation. A person is most himself when he participates most completely in the life of something outside of himself. This self outside of the self is the substance of a man's being, in both the literal and etymological sense of the word" (172). Winifred Gèrin, one of the most prominent Emily Brontë biographers, would likely agree with Miller's assertion, for she notes "always in [Brontë's] philosophy, division was at the root of suffering" (Gerin 152). Generally, Catherine and Heathcliff's relationship can best be articulated as an identification with one another and with the natural world that Heathcliff represents. Most scholars agree on this point, though analyses differ on whether this relationship should be read as perverse or admissible. But if we return to the language of the novel itself, particularly the above quote, there is yet another possible reading of Catherine's sentiment, one that not only clarifies her identification with Heathcliff, but also makes a more philosophical claim. Indeed, the first half of Catherine's statement— "Whatever our souls are made of"— offers two important insights. Firstly, Catherine here suggests that one's soul is *made of something.* That is, that the soul is a material entity, though what it *is* precisely is still subject to debate— a materialist claim no doubt. Indeed, this leads us to the second insight offered by the above quote, for in posing and then dismissing the question of exactly *what* the soul is made of, it seems that Catherine is

acknowledging an ongoing debate regarding the possible materiality of the soul, a debate that *Wuthering Heights* more generally enters into, just as its Romantic predecessors did.

Some of the characteristic premises attributed to British Romanticism— namely its admiration for the natural world and its resolute dismissal of Enlightenment ideology—make the turn to physiological conceptions of the mind and soul particularly suited to Romantic principles. Enlightenment theorists were influenced in particular by Descartes' elucidation of Cartesian dualism, or the idea that the mind and the body are separate entities, the former being immaterial and transcendent, and the latter a material entity which is left on Earth at the point of death (Wood 804). Cartesian dualism merely articulated and elaborated what were likely already accepted notions of the divide between the mind and body that is itself as old as Christianity at least. But Descartes' divide raises an important issue— how can the material body be affected by or affect the immaterial mind? Descartes himself would offer solutions to this issue, which, as I discuss later in this thesis, steer his work closer to materialism than he ever intended. Indeed, this is the common fate of the philosopher who wishes to explicate the relationship between the mind and body— in many cases his or her theory tends towards a materialist account. Thus, as the next section will show, devout Christians could posit materialist philosophies with no intention of threatening orthodoxy throughout the Enlightenment and well into the Romantic period— though any theorist who posited as much was certainly open to attack. Materialist philosophies were radical and revolutionary (especially later, more explicit theories such as Priestley's) for they not only threatened orthodox notions of the soul, but by rendering the mind or soul as a material entity, these theories elided Enlightenment distinctions between the human and the natural world that would appeal to Romantic writers.

Similarly, on the heels Newton's mathematical approach to the natural world, Enlightenment theorists often put forth a more mechanical understanding of the mind, visible in theories such as Hartley and Locke's associationism— the notion that the mind operates through an association of ideas which are initially prompted by sensory input. Such processes are inherently passive, while the burgeoning theories of the mind, characterized by theorists such as Priestley and Darwin, offer far more active, holistic, accounts for the relationship between the mind and the body. Importantly, the shift from passive to active models of the mind depend upon a reassessment of the nature of matter itself. Indeed, to render the mind or soul a physical entity does not necessarily mean rendering it inert or passive. Rather, concurrent investigations regarding the nature of matter itself prompted theorists to reimagine matter as active and energetic, again shifting away from a Newtonian and Enlightenment ideology in which matter is inert and solid (Piper 9). For Romantic writers, this means vivifying the materiality of the natural world, in addition to reimagining the human's place in it.

Reading *Wuthering Heights* through the frame of such shifts in theories of the mind and soul means pursuing the Brontë's Romantic influence farther than previous studies have. And indeed, there are surprisingly few studies of Brontë's influences, and these tend to acknowledge only Byron and Sir Walter Scott, important influences to be sure, but it is likely that they are the subject of study largely because these are works known to be held at the Haworth Parsonage. This thesis aims to extend intermittent studies on materialism and Romanticism. I argue that Brontë takes on the materialist philosophies one may find in Romantic works, which are themselves influenced by contemporaneous scientific discourse. Doing so provides a fresh context for *Wuthering Heights,* one of the most notably enigmatic and idiosyncratic works of the English literary canon.

2.0 The Mind and Soul: From Enlightenment to Romanticism

In order to establish the theoretical milieu regarding the mind and soul within which Emily Brontë works, I will here elucidate a history of theories regarding materialism, including its proponents as well as its detractors[5]. I will begin with the theories which reigned supreme during the Enlightenment, such as those of Descartes and Locke, with special attention to how such theories often approach a materialism they did not intend. Then, I will detail the quiet shift towards a more pronounced materialism, one that considers the mind or soul as a function of material bodies, while also redefining what is meant by "material". These new materialist[6] ideas were typified by the work of Hartley, Priestley, and Erasmus Darwin, all of whom came to influence (directly or indirectly) the Romantic literary movement. Though my selection of historical figures may be idiosyncratic, these theorists allow me to trace a relatively clear lineage of materialist thought and tendencies throughout the Enlightenment and into the Romantic movement. I have also chosen these theorists because it is likely that Brontë herself would have had direct access to their works. It must be noted from the outset, however, that we cannot trace Brontë's own philosophies to the influence of one single book or theorist. The insistence on pinpointing Bronte's influences reflects a gendered assumption that her ideas must have been supplied by other authorities. I contend, rather, that Bronte's writing shows her to be engaged in original thought regarding the implications of such materialism. Indeed, the inability to trace the materialist

[5] Much of this section synthesizes and elaborates upon the work of scholars such as Alan Richardson, Edward S. Reed, H.W. Piper, Paul Wood, and John B. Yolton all of whom I am indebted to for their thorough exploration of eighteenth and nineteenth century science, and/or its connections to Romanticism.

[6] "New materialist" here is distinct from the contemporary school of New Materialism. For a connection between Romantic era reexaminations of the nature of matter and contemporary New Materialism, see Richard C. Sha's chapter "Imagining Dynamic Matter: Percy Shelley, *Prometheus Unbound*, and the Chemistry and Physics of Matter" in *Imagination and Science in Romanticism.*

musings evinced in *Wuthering Heights* to the influence of any one single program of thought shows her to be an active participant in the speculations of her time. By establishing a history of ideas and attitudes towards materialistic theories of the mind and soul this section provides the theoretical context through which one can view *Wuthering Heights.* It also traces the places in which materialistic accounts of the mind and soul inadvertently cropped up during the Enlightenment, and how such accounts came to be adjusted and reinterpreted during the Romantic literary movement.

I will begin where histories of modern philosophies of the mind and soul often do— with the writings of Rene Descartes. Descartes famously established Cartesian dualism In *Meditations on First Philosophy* (1641), in which he sought to provide enough evidence such that "there will be none who dares to doubt the existence of God and the real and true distinction between the human soul and the body" (4). As this quote suggests, Descartes did not *invent* this sort of mind-body dualism, rather he defended it in order to defend the Christian god. Nevertheless, his insistence that the mind is separate from the body made him the figurehead for dualistic theories throughout the Enlightenment and still today. However, while Descartes worked from a dualistic perspective, his later theories about the functioning of the mind leaned towards a materialism he did not originally intend. Indeed, in strengthening the divide between the mind and body, the weight of explaining how mental processes function fell on Descartes shoulders. If the soul or mind is in fact an immaterial entity, how does can it affect the material body and vice versa? In response to such questions, Descartes further developed his theory, and postulated that the pineal gland is the proper "seat of the soul"— that is, where the soul is physically joined to the body. He expounded this theory first in a series of letters and later elaborated his reasoning in *The Passions*

of the Soul (1649). Descartes' explanation of the pineal gland's functioning is somewhat complicated, but it may be best summarized with the following quote from *The Passions:*

> ...let us here add that the small gland which is the main seat of the soul is so suspended between the cavities which contain the [animal] spirits that it can be moved by them in as many different ways as there are sensible diversities in the object, but that it may also be moved in diverse ways by the soul… Reciprocally, likewise, the machine of the body is so formed that from the simple fact that this gland is diversely moved by the soul, or by such other cause, whatever it is, it thrusts the spirits which surround it towards the pores of the brain, which conduct them by the nerves into the muscles, by which means it causes them to move the limbs (347).

Put more simply, the pineal gland is the physiological location in which the soul is attached to the body, and because of the gland's proximity to cavities which contain animal spirits—theoretical minute particles capable of moving through the pores of the brain and the hollow nerves of the body—the pineal gland is thus agitated and moved by said spirits. These spirits themselves are put in motion either through sensory input ascertained from a given object, or by the "diverse ways" of the soul, which Descartes does not clarify. Further, the pineal gland, when moved by animal spirits, can direct these spirits outwards, through the nerves and muscles, resulting in bodily action[7]. For the purposes of this thesis, I am interested in the fact that by elaborating his initial theory about the mind and body, Descartes runs up against an issue that recurs throughout the

[7] For a more detailed account of the physiological nature of Descartes work see Reed, Edward S. "Descartes' Corporeal Ideas Hypothesis and the Origin of Scientific Psychology." *The Review of Metaphysics*, vol. 35, no. 4, 1982, pp. 731-752. For Descartes work on the pineal gland, see Berhouma, Moncef. "Beyond the Pineal Gland Assumption: A Neuroanatomical Appraisal of Dualism in Descartes' Philosophy." *Clinical Neurology and Neurosurgery*, vol. 115, no. 9, 2013, pp. 1661-70.

history of such theories. That is, theories which attempt to explain how the mind and the body can be separate entities and yet interact oftentimes lean towards materialism, even when this is not the intention of the author (as is often the case).

Let us look more closely at Descartes' theory of the pineal gland. As stated above, Descartes admits that the pineal gland may be affected by the soul *or* by the sensory input gained from an outside object. How, one may ask, can we understand the differences between thoughts developed via the actions of the soul on the pineal gland and thought developed from the impetus of sensory objects? Perhaps the lack of a sensory object would make the case that it is the workings of the soul on the pineal gland that produce ideas, but when, if ever, is one in a state totally absent of sensory stimuli? Indeed, Descartes' theory elides the distinction between the actions of the soul and the actions of the body on the brain. In his analysis of Descartes *L'homme* (1629-1633), published posthumously in 1664, Paul Wood similarly notes that Descartes' theories tend to have a dual meaning that irrevocably blends the physiological and the mental. According to Wood, within "Descartes' philosophical lexicon the term 'idea' can refer either to the physical patterns of animal spirits or to the purely mental contents of thought" (805). Thus, for Descartes an idea is at one and the same time a physical and mental phenomenon, and the inability to distinguish between the two could conceivably render Descartes' work materialistic in nature. More generally, simply locating the soul in the pineal gland brings Descartes' theories closer to materialism, as his later detractors would not hesitate to point out. Eighteenth century philosopher Thomas Reid is one such detractor and it is to his theories of the mind and body that I now turn.

Most notable for founding the Scottish "School of Common Sense" (a reaction against Humean skepticism regarding the existence of reality outside of the mind) Reid's theories about the mind and body follow a stricter dualism than Descartes', for he refuses to indulge in any

speculations regarding how the mind interacts with the body. Reid felt that God perfectly suited the mind to producing perceptions in accordance with sensory input. Indeed, according to Reid, "the ultimate fact in psychology was teleological: God had so arranged our bodies and minds that upon receipt of a certain stimulus, our bodies feel a given sensation and our minds conceive a particular perceptual belief" (Reed 26). Thus, Reid argued that theories about the mind and the body should do away with attempts at causation altogether— one can only know that certain sensory input results in corresponding perceptions or ideas, but how or if the former causes the latter is a mystery (Reed 29). Thus, correlation alone can be studied properly. By insisting that the connection between the mind and body is a relationship beyond human explanation, Reid avoids following in Descartes' footsteps and moves firmly away from materialist accounts of the mind. Metaphysical theories derived from Reid's disavowal of causation achieved popularity in the nineteenth century, resulting in "mind-brain theorizing [which] proceeded along correlational lines" (Reed 29). According to modern philosophy scholar G.P. Brooks, Reid restricted his theories to mental phenomena alone out of humble acknowledgement of ignorance, and, according to Brooks "such a choice, combined with a stated inability to understand the nature of the relationship between the mental and the physical worlds, and with his despair about the state of physiological knowledge in his own period, can hardly be taken as an anti-physiological bias" (71). Nonetheless, the fact remains that Reid avoided speculating on the relationship between the mind and the body and did so from a largely orthodox Christian viewpoint. Doing so helps to avoid the materialism that the work of Descartes and his followers, such as Locke, were destined to fall into at the very moment they attempted to properly explicate the relationship between the mind and the body, which tended to result in attributing mental effects to physical causes.

One of the most popular schools of thought regarding the process of mental functioning during the Enlightenment was the associationist school. It has two notable theorists— John Locke and David Hartley— each of whom I will discuss in turn. Though it should be noted that the latter is generally regarded as the founder of the associationist school, the former offered a precursor to associationist ideas which would come to influence Hartley and others. Indeed, Locke is the first to introduce the theory of association in *An Essay Concerning Human Understanding* (1690). In *Human Understanding*, Locke explains that ideas and thoughts occur through either sensory input or through a process of reflection (Locke 52). Importantly, however, reflection itself cannot occur prior to initial sensation. For instance, the idea to drink hot chocolate on a snowy evening comes only after one has experienced hot chocolate as a warm beverage. Sensation necessarily precedes reflection, and thus, all our ideas are ultimately the result of lived experience (Locke 52). This is in keeping with Locke's famous notion of the human mind as a "blank slate" which is written upon as we interact with the world around us. What Locke means by association, then, is this very process of gaining ideas through repeated sensory experience, and the eventual and habitual connection that forms between the two. In Locke's example, a musician familiar with a particular song may hear only the opening notes of that song and, in his mind, know or "hear" which notes will come next. Thus, sensory input (hearing the first notes of a song) results in ideas (the rest of the song) which, because they are have always been connected together (the first notes and those that follow) the mind naturally associates the two and produces the idea of the song (Locke 280). Simply postulating that mental phenomena are a direct result of sensory experience is enough for critics such as Reid to denounce associationism as inherently materialistic. Indeed, "Reid had maintained that the Lockean 'way of ideas' led to materialism… the notion that mental states are ideas that are the effects of physical cases (stimuli and the impressions they make on our bodies

and brains) makes no sense except in the kind of materialist interpretation" (Reed 32-3). But Locke came in even closer contact to materialism by suggesting a possible physiological explanation for how associations are formed:

> Thinking and Understanding, as well as… Motions in the Body… seems to be but Trains of Motion in the animal Spirits, which once set continue in the same steps they have been used to, which by often treading are worn into a smooth Path, and the Motion in it becomes easy, and as it were natural. As far as we can comprehend Thinking, thus *Ideas*, seem to be produced in our Minds; or if they are not, this may serve to explain their following one another in habitual Train, when once they are put into that Tract, as well as it does to explain such Motions of the Body (Locke 280).

Thus, like Descartes, Locke believed that ideas could occur through the movements of animal spirits in the mind. He proposed that the recurrent motions of animal spirits smoothed certain paths along the nerves that are then apt to be repeated. In this manner, sensory input from the nerves becomes irrevocably associated with an idea, forever connecting the two through the habitual motions of animal spirits. Locke is somewhat vague in his physiological proposal, and this may well be purposeful, for, as I have noted previously, appeals to physiological processes to explain the origins of mental phenomena often shifted too close to materialism for comfort. Indeed, Locke even "professed to eschew" physiological explanations for the workings of the mind at the beginning of *Human Understanding*, writing on the very first page that he "shall not at present meddle with the Physical Consideration of the Mind" and yet, as Paul Wood points out, it is this very physiological theorizing of the mind that *Human Understanding* eventually indulges in (Wood 807). Nevertheless, Locke's work in *Human Understanding* came to inspire those

interested in keeping separate the study of the mind and the study of the body (such as Reid, even if he accused Locke himself of leaning towards materialism) and other, more materialist writers equally. It is the more materialist accounts that Locke inspired that I now turn to, namely the work of David Hartley, whom, in the words of Richardson could be considered the "first physiological psychologist" (67).

Indeed, Hartley took the materialist tendencies in Locke's associationism and expanded upon them in an attempt to explain the association of ideas through physiological processes alone (Richardson 9). Hartley's work in *Observations on Man* (1749) elaborated Locke's theory of associations and insisted that all mental functioning could be explained through an associationist framework. Expanding upon Locke's original theory, Hartley posited that the association between ideas occurred through material "vibrations" in the nerves and brain. These vibrations occur by "motions" from one's external environment which assail one's senses. The resulting vibrations run along the nerves, which Hartley conceives of as "solid but porous cords with 'infinitesimally small particles' of Newtonian ether diffused throughout" (Richardson 9). Once they have reached the brain, the vibrations set off smaller corresponding vibrations (what Hartley calls vibratiuncles) in the medullary substance (today known as axonal, or white matter) of the brain. Vibratiuncles can continue in the brain, especially if one is regularly exposed to the same sensory data and the continuance of vibratiuncles results in certain dispositions and habits, thus forming the associations between sensory input and ideas as theorized by Locke. In this manner, Hartley effectively argued that the mind/soul was a product of physiological, and thus, material operations. Indeed, according to Richardson, Hartley's *Observations* "attempted no less than to explode post-Cartesian dualism and reground philosophy of mind in the brain and nervous system" (9). Such an endeavor was not met without critique. As Richardson notes, Hartley insisted that his work need not contradict

orthodox Christian authority and defended his theory by arguing that the soul could be material, and that there is "no necessary connection between the soul's immortality and its immateriality" (10). Locke had argued similarly in *Essays,* stating that he does not want to "lessen the belief of the soul's immateriality" though "all the great ends of morality and religion are well enough secured without philosophical proofs of the soul's immateriality" (qtd. In Yolton 15) but in both cases the authors were not entirely convincing on this point, and the materialist tendencies of both Hartley and Locke's theories still left them open to criticism by their more orthodox detractors.

Further, theories such as Locke's and Hartley's conceived of the mind as a passive and mechanical gatherer of information, rather than an active processor or creator of ideas— a notion that did not sit well with Romantic era writers and theorists. Coleridge, for instance, famously criticized Hartley in his *Biographia Literaria* (1817), though he was once so impressed with *Observations* that he named his first son after Hartley, and even once insisted in a letter to Southey that he would "go farther than Hartley and believe the corporeality of *thought*" (qtd. in Richardson 10). Nevertheless, Coleridge would later condemn Hartley's work for its positing the mind as inherently passive. According to Coleridge, Hartley's theory rendered the mind a "blind mechanism", "devoid of any 'distinct powers'" (qtd. in Richardson 11). But these criticisms could be lobbed equally at other Enlightenment theorists as well. Recall Descartes' work on the functioning of the mind— he theorized that ideas are formed via the movement of animal spirits along hollow nerves and the pores of the brain. Accordingly, the body and mind are thus conceived as conduits through which animal spirits flow, rather than active substances in their own right. Thus, the notion of the mind as a passive register of experience is typical of Enlightenment

theorists who broached a physiological account of the mind[8]. To conceive of the mind as the result of physiological (and thus material) processes means that the mind would be as inert and inactive as matter itself— or as matter was imagined during the Enlightenment.

Enlightenment notions of the natural world were typified by the works of Newton, whose efforts to explain each physical occurrence as the effect of verifiable laws which could be evidentially supported by mathematics left the world as predictable and without volition as a machine— or like the clockwork it is so often compared to. Accordingly, material entities at this time were not themselves considered active or energetic— rather, they were inert and solid, subject only to outside forces, such as gravity. Newton himself was strongly opposed to any theories that posited that matter contained any force within itself (Yolton 92). Further, matter was generally thought to be composed of corpuscles, or discrete, solid particles similar to atoms. As such, the Newtonian conception of matter rendered it "absolutely inert, and seen in this way, it had nothing in common with either life or mind" (Piper 9). Not only, then, did a materialist philosophy posited during the Enlightenment mean that the mind, like matter, was necessarily inactive and passive, but, because matter itself was conceived of as so inert and inanimate, materialist theories of the mind and soul were difficult to contend with— how could that inert matter produce life?

However, in the latter half of the 18th and early 19th century, new theories of matter began to do away with older, Enlightenment ideas, embracing instead a conception of the natural world and all the matter within it as active, fluid and, in Erasmus Darwin's case, sentient. With concurrent work on magnetism, electricity, and chemical action it was becoming increasingly clear that matter can no longer be thought of in terms of solid corpuscles (Piper 18). Thus, matter underwent a

[8] Thomas Reid did actually conceive of the mind as active and powerful, though his account of mental functioning had no physiological, and thus no material, basis. As such he was not bound to Enlightenment notions of matter which render a material mind as passive and inert.

thorough reconceptualization by the work of theorists like Roger Joseph Boscovich— to whom I will return momentarily— Sir Humphry Davy, Mary Somerville, and Michael Faraday (Sha 31). These theorists replaced the corpuscular and inactive matter imagined by Newtonians[9] with notions of force, which made matter itself active and lively (Yolton 108). The resulting conception of matter, when coupled with materialist theories of the mind, solves the problem elucidated by Coleridge's critique of Hartley above— if the mind is the product of material or physiological processes, and matter itself is active and energetic, then a material mind need not be a passive or inert one. This is the method taken by theorists like Erasmus Darwin and Joseph Priestley, who combined burgeoning theories of matter as composed of forces with physiological theories of the mind inspired by Hartley. The result is an active account of the mind, distinct from earlier Enlightenment theorists more mechanistic renderings.

Priestley adopted Hartley's physiological materialism and stripped it of its mechanistic character by combining his work with the theories of matter posited by Boscovich. According to contemporary scholar John W. Yolton, Hartley's theories, though an important initial step towards more openly physiological systems of the mind, required for Priestley the addition of Boscovich's work— "Hartley's physiological explanation of thought, though couched within the older, corpuscular view of matter, suggested to Priestley that thought might be a property of the brain. Boscovich's force theory of matter provided Priestley with a new kind of materialism, in terms of which the idea of thinking matter was more acceptable" (109). Once more, newer notions of matter as active made a material mind a more viable option, and the active accounts of the mind that accompany this sort of materialism better suited Romantic era writers as they turned away from their Enlightenment predecessor's worldview.

[9] See Yolton, Chapter 5 "Matter: Inert or Active" for a study of the various ways Newtonians elaborated or adjusted corpuscular theory.

In *A Theory of Natural Philosophy* (English translation 1763), Boscovich envisioned an interplay between forces of attraction and repulsion at the center of every particle as the basis for matter (Yolton 110). Accordingly, matter is no longer an inert and solid substance, but active and porous. Boscovich's theory is rather complicated and I have only offered a gloss of it, for it is sufficient for this thesis, and for understanding the work of Priestley, to say that Boscovich's work opened up the possibility for Priestley and others to reconsider matter as something composed of forces rather than hard bodies. Priestley's incorporation of Boscovich and Hartley's theories are elucidated in his *Disquisitions Relating to Matter and Spirit* (1777). Here, Priestley writes that he, "like the generality of christians [sic] in the present age, had always taken it for granted that men had a soul distinct from his body" (v). However, his view on the subject is not what it once was—"even when I first entered upon metaphysical inquires I thought that either the *material* or the *immaterial* part of the universal system was superfluous" (vi). Thanking Hartley and Boscovich for their work, Priestley goes on to declare that he has dispensed with all that is immaterial and replaced it with an entirely material concept of the mind and body influenced by these two theorists. Following the work of Boscovich, Priestley conceived of matter, which composes the mind and body, as porous and penetrable, operating via a system of attraction and repulsion. Physical phenomena such as pressing one's feet upon the ground while walking is not simply the result of solid bodies pushing against one another, but evidence of the repulsion of forces between these bodies (Yolton 112). This new conception of matter was utilized by Priestley in support of Hartleyian materialism, which he modified in his edition of Hartley's work, by downplaying Hartley's own formulation of neural vibrations as the basis for associations. Priestley did so not because he wished to dismiss Hartley's materialism, but because he wanted to replace his vibration theory with newer notions of matter, such as Boscavich's (Richardson 10). Yolton expertly

summarizes the implications of Priestley's application of Boscovich's theories as follows: "With impenetrability rejected, with the great porosity of matter accepted, and with the powers of attraction and repulsion characterizing matter, Priestley drew the obvious conclusion to the thinking-matter debate… since it was the old concept of matter that made it difficult to ascribe thought to matter, that difficulty is now eliminated" (113).

A friend of Priestley's, Erasmus Darwin, worked on a similar set of inquiries regarding the possible material and physiological basis for the mind which modified the work of Hartley[10]. He was also, like Priestley, involved in advancing ideas about matter as dynamic rather than solid and inert. Indeed, according to H.W. Piper's analysis of Darwin's theories, both he and Priestley "believed in the active force of matter" (27). Unlike Priestley, however, Darwin did not root his ideas about matter in Boscovich or any one theorist in particular— rather, he seems to have developed his theories about materiality concurrently with his physiological explanations for mental functioning which depend on adjusting our preconceived notions about what matter is. Most notably, he includes, in addition to expanding the physiological associations set forth by Hartley, a new principle which governs all bodily and mental processes and which he refers to as the "spirit of animation".

Darwin's work on the mind and body is most developed in his *Zoonomia; Or The Laws of Organic Life* (1794), though it appears also in the form of lengthy notes added to his popular poem *Temple of Nature* (1803). In the former work, Darwin argues that the mind is embodied in what he refers to as the "sensorium", or "the medullary part of the brain, spinal marrow, nerves, organs of sense, and of the muscles; *but also at the same time* that living principle, or spirit of animation,

[10] Darwin and Priestley were also members of the Lunar Society, an informal intellectual group that met on nights with a full moon (the light of which would guide them home) in order to discuss their work. It is likely that Darwin and Priestley would have discussed their notions of the mind and body, and as such, they might have been influenced by one another's work.

which resides throughout the body, without being cognizable to our senses, except by its effects" (my emphasis, I.II.II). For Darwin, then, the mind is dispersed throughout the body and is simultaneously equal to a vital principle that he refers to as the "spirit of animation". One can already see how Darwin's theory might tend towards materialism, for it equates spirit and mental activity with bodily processes, despite his more conservative opening remarks in the first section of *Zoonomia* that "The whole of nature may be supposed to consist of two essences or substances; one of which may be termed spirit, and the other matter" (I.I.I). However, Darwin's work goes on to clarify what precisely he means by the spirit of animation and how it functions, though these ideas do not steer his work away from materialism but towards it, for the spirit of animation is composed not of spirit in any divine sense but of a "matter of a finer kind" (Darwin I.XIV.I).

According to Darwin, the spirit of animation, existing at once with and seemingly within the sensorium (Darwin is ambiguous on this point) causes the contractions of muscle and sensory fibres in the body. An external stimulus results in the irritation and subsequent exertion of the spirit of animation, causing the fibres of the muscle and sense organs to contract (Elliott 202). These contractions produce pain and pleasure which then constitute the ideas of desire and aversion (Elliott 202). In short, it is the contraction of animal fibres resulting from the spirit of animation which ultimately constitutes one's mental functioning and ideas. Darwin himself defines an idea as follows:

> The word *idea* has various meanings in the writers of metaphysic: it is here used simply for those notions of external things, which our organs of sense bring us acquainted with originally; and is defined as a contraction, or motion, or configuration, of the fibres, which constitute the immediate organ of sense…

synonymous with the word idea, we shall sometimes use the words *sensual motion* (Darwin I. II. XII).

Certainly, this is a materialist theory of the mind, for ideas are equated to the physiological processes generated via the spirit of animation. Reed, elaborating on the implication of Darwin's theory of the sensorium and spirit of animation writes that, in Darwin's system "the immediate objects of thought are the movements of the relevant neural fibers. The mind does not first make contact with a feeling or sensation and then formulate ideas; rather the mind simply *is* the body and all its feelings" (39).

Darwin also carries on Hartley's physiological explanations of association, integrating them into his theory of the sensorium and the spirit of animation as a predictable succession of fibrous contractions which results from "frequent repetition" or "habit" (I.IV.VII). However, Darwin significantly reduces the mechanistic nature of Hartley's biological associationism, subtly shifting the focus of his work such that it highlights the body and mind's dynamism. This is done, in part, by his conceptualization of the spirit of animation. Darwin, in fact, specifies that the spirit of animation does not cause contractions of muscle and sense fibers through Hartleyian "vibrations or revibrations". Rather, fibrous contractions are the result of "changes or motions of [the spirit of animation] peculiar to life" (qtd. In Elliott 210). Perhaps it is not immediately obvious how vibrations of a substance are necessarily less active than motion itself (are vibrations not a type of motion?) but I would argue that vibrations imply a fixity and a lateral movement which, once moved, returns to an original position. This cannot be said of motion in general, which, in Darwin's case, implies something more closely resembling a circulatory movement throughout the body or the sensorium. In any case, a closer look at how Darwin conceives of the spirit of animation reveals

that he envisioned a more active conception of matter in his physiological theories, rather than the inert, solid basis for matter typical of theorists in the early half of the 18th century.

Further, Darwin significantly likens the "power of contraction" generated by the spirit of animation in one's sense organs and muscles to the laws of attraction and repulsion governing inanimate matter— "this power of CONTRACTION constitutes the laws of animal motion, as the circumstances attending the exertion of the power of ATTRACTION constitute the laws of motion of inanimate matter" (I.IV.I). Darwin's theory of body and mind is clearly influenced by the work of physicists on the nature of matter more generally— whether this be the influence of Newton's law of gravity or the work of theorists like Boscovich who reconceptualized matter as forces of attraction and repulsion, we cannot know for certain. However, given Darwin's interest in arguing for the existence of the spirit of animation as a different kind of matter— a theory which many would criticize for being superfluous— in addition to his friendship with Priestley and general intellectual prominence, I would argue that he was attentive to newer notions of matter as composed of force rather than as solid and inert, in the way Newtonians imagined it.

For Darwin the spirit of animation is a vital force composed of a subtle fluid which he imagines behaves in ways closely analogous to electricity. Indeed, according to his grandson, Charles Darwin, he "entertained 'the wildest speculations on the resemblance between the action of the human soul [that is, through the spirit of animation] and that of electricity'" (qtd. in Elliott 208). Certainly, he was not alone in theorizing the possible effects of electricity on the human body— Galvani famously conceived as much in his 1780 experiments in which he electrocuted frog legs, causing the muscles to contract and move, as though the frog were still alive. Galvani concluded that electricity must thus be the source of life or equal to the soul, though his detractors, primarily led by Alessandro Volta, were quick to argue that this is not the case, pointing out that

the electric shock came from the touch of the metals Galvani used in his experiment[11]. What Galvani's experiments did prove, however, is that electricity had the ability to move along the nerves, an important discovery for theorists like Darwin who were intrigued by Galvani's experiments, though he ultimately argued against Galvani's assertion that the essence of life was equivalent to electric currents (Richardson 7). In his own work Darwin— himself familiar with and interested in contemporaneous bioelectric theories— posited instead that his theory of spirit of animation is not electricity *exactly.* However, he felt that it was a useful model for the type of energetic matter that the spirit of animation must necessarily be (Elliott 210). Indeed, Darwin believed that the spirit of animation was so closely related to electricity and magnetism that he came to utilize both in his medical procedures in order to regulate abnormalities in the functioning of the spirit of animation (Elliott 203). Thus, the spirit of animation is not a divine, immaterial entity, but a very fine matter,[12] probably not much different from the idea of animal spirits which forms a part of Descartes' and Locke's theories, except in one important respect— Darwin likens his notion of the spirit of animation to the energetic force of electricity, rather than inactive corpuscles typical of Enlightenment theorists.

Significantly, Darwin's spirit of animation extends to all of animal life, "and in some degree even… vegetables" (I.XIV.I). Indeed, his work on particular plants eventually convinced Darwin that the spirit of animation may not be exclusive to animal life. When discussing the

[11] For a detailed study of Galvani and Volta's competing theories, see Pera, Marcello, and Jonathan Mandelbaum. *The Ambiguous Frog: The Galvani-Volta Controversy on Animal Electricity.* Princeton University Press, Princeton, New Jersey, 1992;1991.

[12] It is worth noting that Darwin's spirit of animation might be considered a philosophy of vitalism— a type of theory which posits that the force of life is a distinct entity from others found in nature— which is frequently put at odds with the materialist philosophies that I have hitherto been describing. However, as H.W. Piper points out, during Darwin's time, there was little difference between vitalist and materialist philosophies (Piper 10). The nature of electricity was one of several natural phenomena that became an incentive for reevaluating traditional conceptions of matter in terms of force rather than in terms of inert material. Insisting on a division between materialist and vitalist philosophies during this time would ignore the fact that matter itself was being thought of as energetic, forceful, and active, rather than inert, as earlier Enlightenment theories would have it.

curious movements of plants like the Venus fly-trap, Darwin argued that such motion proves that plants had "not only muscles… but must be endued with nerves of sense as well as motion" (qtd. in Elliott 212). The following passage from *Zoonomia* succinctly summarizes Darwin's equation between plant and animal life:

> Vegetable life seems to possess an organ of sense to distinguish the variations of heat, another to distinguish the varying degrees of moisture, another of light, another of touch, and probably another analogous to our sense of smell. To these must be added the indubitable evidence of their passion of love, and I think we may truly conclude, that they are furnished with a common sensorium belonging to each bud and that they must occasionally repeat those perceptions either in their dreams or waking hours, and consequently possess ideas of so many of the properties of the external world, and of their own existence (Darwin I.XIII.V).

Indeed, by proposing that plants, like humans and animals, have a sensorium and thus a spirit of animation, it must necessarily follow in Darwin's system that they, too, are sentient. He goes so far as to attribute to plants ideas and even self-consciousness and reflection. Darwin's willingness to do so was met with criticism by his more conservative opponents, however, as much as it enraged some, his work certainly appealed to Romantic poets such as Wordsworth, Coleridge, and the Shelleys. Romanticism's characteristic esteem for the natural world would likely dispose Romantic writers to appreciate a theory that puts nature on par with human experience, offering it a sentience and animation that Romantic poets infuse in their own work. Percy Shelley, for example, became deeply immersed in Darwin's physiological theory, and wrote his poem *Queen*

Mab, in a Darwinian-style, featuring extensive notes and explanations. Here, he writes that "Every atom is sentient in unity and part" (qtd. in Reed 45). I could cite nearly any of the works of the aforementioned Romantics as evidence for their active and sentient notion of nature, for it is one of the principle characteristics of the Romantic movement in general. As M.H. Abrams notes in his seminal study of Romanticism, *The Mirror and the Lamp*, "The habitual reading of passion, life and physiognomy into the landscape is one of the few salient attributes common to most of the major romantic poets" (64). But as scholars such as Piper, Reed, and Richardson have shown, this characteristic might well be supported or influenced by concurrent debates on the nature of the mind and matter. Indeed, Reed even argues that the sharp rise in materialist ideas following 1848 can be attributed to the nontraditional (read literary) circulation of such ideas, which may have been "much more widely known of and discussed than the printed record indicates— especially the published philosophical works, which tended to conform to academic and ecclesiastical standards of what was respectable" (48).

As this section has shown, Enlightenment theorists interested in the relationship between the mind and the body could inadvertently posit materialist theories that were capable of threatening orthodox notions of the soul or mind. Even though such materialist ideology was roundly attacked, the fact remains that it was not uncommon amongst some of the era's most prominent thinkers, such as Descartes and Locke. Thus, materialist philosophies bubbled beneath the surface for much of the era, unwittingly forming a part of its intellectual ethos. These theories became more explicit in their materialism he latter half of the 18th century, through the work of theorists like Priestley and Darwin, whose radical ideas were transmitted and explored by several key Romantic writers. Stepping away from the passive, inert models of matter typical of Enlightenment accounts, Priestley and Darwin instead utilized newer conceptions of matter as

force in their theories, thus positing a materialism that renders the mind and soul as active, dynamic, and powerful. Further, these theories necessarily equate the human and the natural world, since both are the result of the active forces which constitute matter. This equation effectively spiritualizes nature, which appeals to the Romantic writers and, conversely, it naturalizes the spirit, an effect more clearly discernible in Brontë's *Wuthering Heights.*

3.0 Science at Haworth?

Given the above history of materialist accounts of the mind and soul, it is sensible to wonder whether these theorists or their works could possibly weigh on Emily Brontë's *Wuthering Heights.* Indeed, a certain mythology seems to have wrapped itself around the Brontë family, particularly the sisters Emily, Charlotte, and Anne, who, between them, produced some of the most important and beloved works of Victorian era literature[13]. The popular image of the sisters sharing their stories by candlelight in the lonely and isolated Haworth Parsonage in Yorkshire, England has been a stubborn one, and bred, in part, by the aversion of metropolitan writers in the Victorian era towards their rural counterparts— an animus that Emily Brontë so pointedly depicts in the figure of Lockwood, who, on entering Wuthering Heights, remarks that he "does not think he could have fixed on a situation so completely removed from the stir of society" (Brontë 37). Indeed, Lockwood's conception of life at Wuthering Heights and Thrushcross Grange seems to be the butt of an inside joke, a caricature of the city man's views of the countryside. And yet, this is the very idea about the Brontë sisters that has permeated popular culture, though, thanks to the work of Brontë scholars, these misconceptions about the Brontë sisters' access to society and education have dwindled[14]. Nevertheless, as Beth Newman points out in her Broadview Introduction to *Wuthering Heights,* a diluted version of the Brontë myth lives on still on the backs of mass marketed editions of the Brontë's works or advertisements hoping to entice tourists to visit "Brontë Country" (15).

[13] See Miller, Lucasta. *The Brontë Myth.* Knopf, New York, 2003

[14] See Barker, Juliet R. V. *The Brontës.* Weidenfeld and Nicolson, London, 1994.

Scholars such as Juliet Barker have shown that life at Haworth was not so sleepy or remote as the Brontë myth might suggest— rather, Haworth was rich with cultural activity. Further, Charlotte and Emily Brontë both received schooling outside of the parsonage, at the Clergy Daughters School in Cowan Bridge, and later, at Le Pensionnat Héger in Brussels, Belgium, with the hopes of one day opening up their own school together. What exactly they learned in Belgium, or during the brief time they spent at Cowen Bridge boarding school in their youth, it is impossible to say. However, Haworth itself was within walking distance of the Keighley Mechanics Institute, a local library that we know the Brontë's both had access to and likely borrowed from. Their father, Patrick Brontë, is recorded on the institute's registry as having not only attended lectures at the library but he also gave lectures of his own (Duckett 196). Thus, it is relatively safe to assume that the family were generally active members. Mechanics institutes were developed in the early 19th century in order to provide adults with technical and scientific information with the hopes that local industries would benefit from having more knowledgeable employees. Accordingly, the Keighley Mechanics Institute carried books on a variety of subjects, however it was largely stocked with works on science, technology, and natural philosophy, with many of these subjects overlapping in a single text. More particularly, the library contained (at least in 1841) copies of works by some of the authors discussed above, including a work by Thomas Reid identified as *On The Mind*— which could potentially be either Reid's *An Inquiry into the Human Mind on the Principles of Common Sense*, or *Essays on the Active Powers of the Mind*— and Locke's *An Essay Concerning Human Understanding*. While these works may not outright support materialist notions of the mind— indeed, in Reid's case they oppose such ideas entirely— even opposing viewpoints are apt to discuss the positions which they set themselves against. Further, and as discussed above, Locke's theory of associationism slipped towards a materialist philosophy which

would supply later writers like Hartley, Priestley, and Darwin with the seed for developing more physiological accounts of the mind. Thus, if we were interested in tracking Emily Brontë's direct access to the sort of materialist philosophies that could have informed the creation of *Wuthering Heights*, we need look no further than the local library.

That being said, it is impossible to track *exactly* which books Brontë read— we may only consider the works that she had access to and even then, we must be aware that we are operating on speculation. Indeed, critics like Bob Duckett have recently argued that it is altogether unlikely that the Brontë's borrowed books from the Keighley Mechanics Institute since Patrick Brontë joined the institute later in his daughter's lives (which seems to presume that their writing was influenced only by earlier reading) and, as Barker has noted, daughters could not accompany their fathers to the library, only sons could do so (though there is record of the Brontë sisters attending at least one lecture there) (Duckett 195-6). Duckett regards other local Mechanic's institutes in Bradford and Halifax as equally likely sources for the Brontë's books, as well as "public" libraries and circulating libraries (196). In any case, the Brontë's were capable of borrowing books from a variety of locations, and what they chose to read cannot be entirely traced. That Emily Brontë might have been steeped in materialist literature is as fair a case to make as any, especially given the Brontë's demonstrable interest in the sciences.

Critics such as Barbara Munson Goff and Sally Shuttleworth have both examined the Brontë's novels in light of contemporaneous scientific milieu. In "Between Natural Theology and Natural Selection: Breeding the Human Animal in *Wuthering Heights"* Goff illuminates the possible overlaps in evolutionary thinking which anticipates Charles Darwin's *On the Origin of Species* and the "breeding" of kin in *Wuthering Heights,* finding startling convergence between the two. She premises her work by insisting that the Brontë sisters took a serious interest in natural

history, positing that Emily Brontë was interested in the "moral, social, psychological and theological implications of nature science" (Goff 480). Her article, however, looks forward to scientific discoveries, while my own work here connects Brontë to the materialist enterprises of writers earlier in the century, and, as such, lays a somewhat greater claim to delineating possible influences. But Goff is certainly right in noting that humans in *Wuthering Heights* are overwhelmingly described as animal-like and that scholars shouldn't dismiss such characterization as mere metaphor. However, the materialist notions of writers like Erasmus Darwin would similarly posit that the distinction between humans and animals is slim. And, as Darwin's conservative detractors did not fail to point out, if the human soul is the result of bodily processes, what is left to distinguish man from animals?

Shuttleworth similarly devotes a chapter of her work *Charlotte Brontë and Victorian Psychology* to providing the necessary context for dismantling the Brontë myth and revealing the family's interest in science and biology. Shuttleworth notes that such an interest may well stem from Patrick Brontë, who's heavily annotated copy of Thomas John Graham's *Modern Domestic Medicine* suggests a fascination with science and disease (Shuttleworth 27). Indeed, Patrick Brontë took note of each of the family member's particular illnesses, and, in doing so, likely made all of the Brontës more apt to speculate on the nature of their bodily existence. However, Shuttleworth is interested only in illuminating the texts of Charlotte Brontë, and as such pays scant amount of attention to Emily, though, being sisters, they were raised and schooled together and thus exposed to similar ideas and influences. Both Goff and Shuttleworth have laid the groundwork for placing the Brontë's in conversation with contemporary scientific discourse— in doing so, both inspired the work in this research paper.

Those who have read *Wuthering Heights* could not miss the novel's preoccupation with natural life, and this fact alone is one of the best pieces of evidence that Brontë was likely interested in natural sciences. But if one looks more closely at the novel, the opening chapters of the text reveal a more thorough understanding of natural sciences than may be assumed by Brontë's poetic rendering of the natural world. Consider the following phrase from the third chapter, in which Heathcliff, after finding Lockwood— his guest and new tenant—in Catherine's former bedroom demands, "'And who showed you up into this room?' he continued, crushing his nails into his palms, and grinding his teeth to subdue the maxillary convulsions" (Brontë 57). "Maxillary" is such a technical term for the jawbone that it seems almost out of place in the novel, and certainly readers may well skip over it. Importantly, however, it shows Brontë's knowledge and familiarity with human anatomy. Further, the term "maxillary" is used in Goldsmith's *History of the Earth,* which was held at the Keighley Mechanics Institute and it may well have been Brontë's source ("maxillary"). If this is the case, the usage of the term "maxillary" in *History of the Earth* is, tellingly, in regard to animal anatomy. Brontë's willingness to apply knowledge of the animal form to human beings reflects the novel's frequent eliding of the distinction between human and animal, which, as I noted above, is but one feature of materialist philosophies.

Finally, notions of materialism may well have come to Brontë indirectly through her acquaintance with Romantic works. If Wordsworth, Coleridge, and the Shelleys were influenced by Darwin and Priestley, then Brontë might have been influenced by the often latent materialism of these works. It is tempting to analyze *Wuthering Heights* only in light of the Romantic authors it is known for a fact the Brontë family possessed— Lord Byron and Sir Walter Scott— and certainly I do not mean to contest their influence here. However, I would add that given the difficulty scholars are faced with in tracing exactly *what* books the Brontë's read, we cannot say

with total confidence that other Romantic writers were not equally influential. I argue that the Romantic writers influence is conceivably discernable in Emily Brontë's apparent materialist claims throughout *Wuthering Heights.*

4.0 Material Selves

It should be noted that I do not intend to argue that Emily Brontë was a materialist, for only Brontë herself would be able to say as much, and had she said so (which is unlikely for very few people in the 18th and 19th century would openly admit to being a materialist) the evidence of such profession is long gone. Certainly, following a reaction against the "pagan" impulses in *Wuthering Heights,* Charlotte Brontë felt it necessary to alter her sister's public reputation such that Emily would appear more orthodox than current scholars often believe her to be. But whether or not Brontë would consider herself a materialist is largely beside the point, for novels can be affected by notions and social contexts in ways that authors themselves may not explicitly realize. As such, I contend that Brontë's work was influenced by an ethos of inquiries regarding the nature of the mind and soul and the body during the late 18th and early 19th century. As I have noted above, she may well have read texts explicitly dealing with such questions, or the works of Romantic writers whose work treats potential materialist philosophies in a subtler fashion. In any case, these questions were by no means answered when Brontë wrote *Wuthering Heights*— questions about the nature of the mind or soul are never truly answered, rather they are simply subject to reformulation. Indeed, it would be difficult even today to declare that a consensus has been reached regarding whether or not there is a soul which exists apart from the body, or whether the functioning of the mind can be boiled down to solely physiological processes.

Conceiving of the functions of the mind as the result of physical processes— that is, committing to a materialist philosophy— precipitates the effective collapse of an established binary between that which is physical and that which is spiritual. There are two important and fundamentally related consequences from such a collapse which I have briefly outlined in the

above section. First, the natural, material world is placed on par with the spiritual, and as such they occupy the same plane of existence. This means that that which was once simply a physical phenomenon (a falling tree branch) is now spiritualized, and vice versa. Secondly, and similarly, human beings, now stripped of their transcendent, immortal souls are no more or less spiritually important than the natural world itself. Humans are fundamentally physical beings, and as such are one with the physical and natural world. Readers of *Wuthering Heights* will undoubtedly grasp this very unity simply by noting the relationship between Catherine, Heathcliff, and the natural world surrounding the Heights.

Catherine and Heathcliff's relationship, as noted in the introductory pages of this paper, has long been a source of fascination for scholars of *Wuthering Heights.* Indeed, the two create a whirlwind around themselves that manages to swallow whole all those who dare interfere, and it is this very destructive and powerful dynamic that sustains the entire plot of the novel. No reader of *Wuthering Heights* would suggest that they are simply in love, for this does not quite capture the force of their connection. Further, to suppose that their relationship is rooted in childhood friendship similarly renders their desires for one another either perverse, as discussed above, or entirely out of proportion to the occasion. Rather, Catherine and Heathcliff identify with one another entirely. Indeed, they are entirely incapable of conceiving of themselves apart from one another. At a pivotal moment early in the novel, Catherine attempts to explain to Nelly her hesitation regarding her impending marriage to Edgar Linton. Catherine does not fear her separation from Heathcliff following the marriage, rather, she fears for his safety should he remain at Wuthering Heights without her. She is soothed only when after considering that the arrangement may be beneficial for Heathcliff, since she could use Edgar's money to raise his social standing

and put him out of the reach of Hindley's rule. Nelly is appalled by the very idea, for such an arrangement approaches a sort of bigamy. Catherine responds as follows:

> This is for the sake of one who comprehends in his person my feelings to Edgar and myself. I cannot express it; but surely you and everybody have a notion that there is or should be an existence of yours beyond you. What were the use of my creation, if I were entirely contained here? My great miseries in this world have been Heathcliff's miseries, and I watched and felt each from the beginning: my great thought in living is himself. If all else perished, and *he* remained, *I* should still continue to be; and if all else remained, and he were annihilated, the universe would turn to a mighty stranger: I should not seem a part of it... Nelly, I *am* Heathcliff! He's always, always in my mind: not as a pleasure, any more than I am always a pleasure to myself, but as my own being. So don't talk of our separation again: it is impracticable (Brontë 103).

The possibility for helping Heathcliff is what Catherine believes to be the very best reason for marrying Edgar. To help Heathcliff and guarantee his happiness is the only method for securing her own happiness. For Catherine, Heathcliff "comprehends in his person", that is, in the very nature of his existence, her own self— including her love for Edgar. Likewise, Catherine experiences all of Heathcliff's miseries just as he does, or vice versa, for the line could (perhaps intentionally on Brontë's part) be read either way. The personal, emotional, inner selves that most people cannot ever fully reveal or articulate to another are overlapping to the point of equivalency in Catherine and Heathcliff. Indeed, as Catherine so famously states, "I *am* Heathcliff!". The "existence… beyond you" that Catherine attempts to express to Nelly is her existence *in* Heathcliff, not in a transcendent soul. And certainly, she is correct in pointing out the difficulty in articulating

such a relationship— a shared existence is an altogether unusual bond. But in locating the self in one another, Catherine and Heathcliff are doing precisely what the materialist does— articulates the self in terms of material existence. Indeed, in *Wuthering Heights,* Catherine and Heathcliff view themselves as existing because one another does. Just as the materialist argues that the mind or soul is the product of material existence, Catherine and Heathcliff contend that their mind and soul is a result of the very existence of one another as material entities. Certainly, one could argue that their shared selfhood would imply a more spiritual identification, and I do not wholly disagree with this. For, as stated above, materialism does not need to exclude spirituality, rather it allows for the material world to form the basis of it. But Catherine and Heathcliff describe their unity in terms that overlap distinctly with the materialist. In this manner, the souls of Catherine and Heathcliff are immanent rather than orthodox transcendent— an immanence which is mediated through one another, and physically located in the corporeal frame of their own bodies in addition to one another's.

Earlier in the very same scene described above, Catherine struggles explaining to Nelly why she feels that her impending marriage to Edgar is fundamentally wrong. Nelly asks what could be the obstacle to their union, to which Catherine responds "*Here!* And *here!"* striking first her head and then her chest, above the heart. "In whichever place the soul lives— in my soul, and in my heart, I'm convinced I'm wrong!" (Brontë 101). This quote, like the above quote— "Whatever our souls are made of…" suggests that Catherine is here entering upon an ongoing debate when she says, "whichever place the soul lives". According to Alan Richardson, debates surrounding the location of the mind and soul were not entirely settled by the Romantic period though it was largely agreed that the brain is the seat of the mind (1). And Catherine herself ultimately finds this to be the case, for though she feigns ignorance regarding "where the soul lives", after she has

stricken both her chest and her head she identifies the former as the heart, and the latter as the soul. It seems Catherine, like the materialists, willingly attributes the location of the soul to the brain. Doing so potentially challenges orthodox insistence that the soul is transcendent in nature. But there was a certain division regarding this point— indeed, some theorists felt that there was nothing controversial about theorizing that the soul may be physically located or attached to somewhere in the body whilst one is alive (Reed 6). Remember Descartes' theory that the pineal gland is the location in which the soul meets the body. However, others insisted that this slips dangerously close to materialism, for contending that the soul is physically located in a bodily structure would seem to imply that the soul is dependent upon that structure, or equivalent to the physical processes of it. Indeed, this is the nature of Reid's attack on Descartes and Locke, delineated above.

If Catherine views the soul as located in a material structure, then the following quotation carries much more weight: "He's always, always in my mind: not as a pleasure, any more than I am always a pleasure to myself, but as my own being" (Brontë 103). Heathcliff is part of, or rather, equivalent to, Catherine's mind. And since Catherine, as discussed above, conceives of this soul as likely rooted in the brain's physiological processes— that is, as the result of the material existence—and, at the same time, as realized in the very being of Heathcliff, it stands that there is an equivalency between the two. Heathcliff, a material being, *is* Catherine's mind and soul. And as such, the soul for Catherine is located in the body— be it her own or the body of another— it is, in any case, physically and materially conceived.

Heathcliff uses similarly materialist terms to describe his relationship to Catherine. In the hours before her death, Heathcliff, pleading and scolding her for marrying Edgar and becoming ill because of it, asks "would *you* like to live with your soul in the grave?" He thus imagines Catherine as the physical, living embodiment of his soul. When she dies, he believes that this soul will not

float away to heaven (or descend to hell) but will remain there in the grave with her body. This is the very implication of a materialist philosophy that caused concern and outrage from more orthodox opponents. A similar statement from Heathcliff in this scene warrants attention for its materialist undertones. In the pain of his impending loss, Heathcliff exclaims, “I *cannot* live without my soul!”. This, of course, once more reveals the nature of his relationship with Catherine as the living embodiment of his soul, and vice versa.

5.0 Divided Minds

Much of the work on the mind and matter in the late 18th and early 19th century posited a notion of the mind as fundamentally divided— a distinct change from the principle notions during the Enlightenment in which the brain (which may or may not, depending on the theorist, be the organ of thought, but, was at the very least apt to be the organ of sensation) was one single, undifferentiated organ. Instead, the brain could be conceived of as a collection of organs, each with their own functions. This concept was popularized by Franz Joseph Gall and his assistant Johann Spurzheim, who founded the theory of phrenology. Phrenology was a highly influential theory in the early and mid-19th century, and, as Shuttleworth has pointed out, the Brontë's were familiar enough with the theory for Charlotte to incorporate it in several of her novels, including *Jane Eyre* and *Villette* (Shuttleworth 52-3). The fundamental notion behind phrenology is that the various parts of the brain correspond to various propensities and abilities (Richardson 19-21). By measuring the shape of a person's skull, then, his or her personality traits and intellectual abilities can be assessed and revealed. Such a theory gave phrenologists and novice hobbyists alike a power that approximates to mind reading. While the division of the brain into a variety of specific functioning parts is based in reality, phrenology itself has since been cast aside as a pseudoscience. Nonetheless, the theory of a divided brain was certainly popular while Brontë was writing *Wuthering Heights.* But even before Gall, Erasmus Darwin similarly argued that the mind could be divided. Since, in his own theory, the mind is dispersed throughout the body, Darwin's concept of this division must be articulated a bit differently. According to Reed, "if ideas are any and all embodied feelings (not merely cerebral impressions of bodily feelings), then at any one time we may have a large number of different ideas. Erasmus Darwin's concept of the mind, unlike the

traditional theory of the soul, allowed that the mind could be multiple, even divided against itself, just as the body can be" (40). Reed here points to an important implication of these divided mind theories— that one's mind may be divided against itself. It is this possibility that seems to be expressed by Catherine and Heathcliff's relationship. In the previous section I highlighted how Catherine and Heathcliff's relationship is depended upon a total identification— they simply *are* one another's mind and soul, at least in their own terms. But, at the same time, they are also different people— they each possess physically distinct bodies and they have varying desires, and inclinations, even though these often overlap. They are even prone to arguments, especially after Catherine's marriage to Edgar. How, then, could Catherine and Heathcliff conceive of one another as the physical embodiment of their own selves? This would seem to breed a contradiction. However, the possibility that the mind operates as a divided, and yet still physical, entity which is capable of producing conflicting ideas, would settle such a contradiction. If, as Shuttleworth argues, Charlotte Brontë was familiar with the theory of phrenology, it is equally likely that Emily Brontë was also cognizant of theories in which the mind can be divided, and that she may have considered the implications of such possibilities when she wrote *Wuthering Heights.*

6.0 Active and Embodied Nature

Some of the greatest evidence for the materialism inherent in *Wuthering Heights* stems from Catherine and Heathcliff's identification not only with each other, but with the natural world on the moors. Heathcliff, even in his very name, has long been thought of as the embodiment of the forces and power of the natural world, and Catherine (though not so suitably named) is not any different. Their childhood is characterized by long wanderings on the moors and a deep-seated affinity for the natural world. Catherine and Heathcliff's embodiment of nature can easily be read alongside materialist ontologies, for imagining the mind or soul as a physiological entity or the result of biological processes necessarily places it on equal footing to the natural world. But like the "new" materialists, Catherine and Heathcliff's material souls are not composed of inert, solid matter. Rather, Brontë conveys matter in the novel, both in the physical souls of Catherine and Heathcliff, and in matter more generally, as active and dynamic. We shall begin with the former.

When Catherine remarks that whatever it is the soul is made of, Heathcliff's and hers are the same, she also notes that "Edgar's is as different as frost from fire, or moonbeam from lightning" (Brontë 102). Thus, Catherine and Heathcliff's souls are composed of a very particular type of matter, one which is more active, like electricity and fire, versus Edgar's frosty and inanimate soul. Recall that experiments and theories regarding the nature of electricity were extraordinarily popular during the late 18th and early 19th century. Especially significant were those theories which contended that electricity had some function in the human body. Most famous, as discussed above, is Galvani's experiment on disembodied frogs, repeated by the curious "anywhere frog legs are found". Galvani believed that his experiments proved that the soul, the essence of life, is electricity. Darwin held a similar belief, in which the spirit of animation is made

of such a fine and yet active matter that it can only be understood with electricity as its analog. These theorists offer just a sample of a wider cultural fascination with the biological prospects for electricity. Further (and also discussed above) what electricity *was* exactly precipitated debates around the nature of matter itself. One common explanation, however, was that electricity is akin to fire, something Brontë picks up on here when equating lightning to fire (Elliott 198). That electricity pushes the boundaries of matter from something inert to that which is active is part of what made it such an exciting contender for possible physical explanations for the mind and soul. In describing Catherine and Heathcliff's souls as electric, Brontë, like Mary Shelley before her, is incorporating scientific theory regarding the nature of the soul which depends on an active conception of matter. In doing so, Brontë depicts Catherine and Heathcliff as possessing within themselves the powerful and dynamic force of lightning. They come to embody the natural world around them, while Edgar Linton is described in terms that one might use for a Newtonian universe. Catherine almost restates this quote later during an argument with Edgar, telling him that "Your cold blood cannot be worked into a fever: your veins are full of ice-water; but mine are boiling, and the sight of such chillness makes them dance" (Brontë 134). Again, Catherine conceives of Edgar as frozen, implying a coolness that is utterly lifeless. Catherine's very blood, by contrast, is warm and boiling, dynamic and energetic.

Consider yet another famed line from the text, when Nelly is first describing Catherine's personality she says that "she is a wild, wick slip of a girl" (Brontë 69). Each element of this quote suggests an active conception of nature embodied by Catherine. Catherine is "wild" in the sense that she is as untamed as Heathcliff and part of the natural, undomesticated world. She is "wick", meaning active or lively in the Yorkshire dialect, rather than "wicked" as most modern readers

interpret it[15]. Finally, she is a "slip" or a small shoot off of a tree. Thus, she is described by Nelly as wild, animated, and natural— that is, in terms which evoke the notion of an energetic and active nature that theorists such as Priestley and Darwin described. At several occasions in the text, Catherine and Heathcliff are described in such terms, using metaphors that blur the boundaries between nature and human, eliding any distinctions between the two. Metaphors about trees are frequently used for this purpose. Indeed, when Nelly insists that Catherine is a "slip of a girl", her assertion may have more truth than she imagines, for Catherine, like the slip or scion of a plant, effectively grafts herself onto Heathcliff in childhood, such that they become a single unified organism. But since Catherine is the graft, and Heathcliff is thus the trunk, or root part of the plant, Catherine comes to depend on him for her existence. When Heathcliff, overhearing Catherine's discussion with Nelly, leaves Wuthering Heights in order to raise his social standing, his and Catherine's separation from one another has effectively begun, and it is this separation that, once more, is represented in the text by the actions of a plant. Heathcliff's disappearance aligns with a violent storm which causes the limb of a tree at the corner of the Heights to break off, crushing the chimney. Indeed, the tree here represents Catherine and Heathcliff's separation, and we may imagine that it splits at its weakest part— where Catherine is metaphorically grafted on[16]. The resulting split means that the base of the plant (Heathcliff) is capable of surviving still, but Catherine's demise begins here, at the point of their separation. Following Heathcliff out into the storm, Catherine becomes violently ill and it is this very sickness which recurs years later, ultimately killing her.

[15] See Beth Newman's footnote in Brontë, Emily. *Wuthering Heights.* Edited by Beth Newman, Broadview Press, 2007.

[16] J. Hillis Miller utilizes a similar metaphor for describing Catherine and Heathcliff's relationship— "Cathy and Heathcliff are as inseparably joined as trunk and root of the living tree. Their relation to one another excludes or absorbs their relation to everything else" (Miller 174)

But this is not the only moment in the text where Catherine is ascribed a kinship with a tree bough. Significantly, Catherine's ghost first appears to Lockwood in the form of a tree limb knocking against the window frame of *Wuthering Heights.* It then transforms into Catherine's reaching hand and pushes through the window, breaking the glass and cutting her wrists in the process. Such a violent transformation not only reinforces an affinity between Catherine and nature, but is inherently dynamic, rendering both Catherine and the natural world she is equated to energetic and lively. The tree limb knocks against the window just as the bough of the tree crashed into the Heights years earlier. Nature is thus active and capable of movement— it is not passive nor inert. Additionally, Catherine and Heathcliff are not only represented through nature—an affinity that pushes past metaphor and becomes equivalency—but nature itself is consequently anthropomorphized. Consider when Nelly tells Heathcliff that Catherine has died: Heathcliff bemoans his loss, and, in a fit of despair violently smashes his head against a nearby tree, covering it with blood. The result is a tree that appears to be bleeding just as a human does, or just as Catherine did, having given birth just before her death.

The humanlike quality of nature, and naturelike quality of the human in *Wuthering Heights* is a feature also of Erasmus Darwin's own poetry. In *The Botanic Garden,* Darwin delineates and invigorates the Linnaean system of plant classification by adapting Linnaeus sexual terminology. The result is an erotic portrayal of plant propagation described in terms of human sexuality. This, of course, should not be surprising given what we know of Erasmus Darwin's beliefs regarding the nature of plant life. Indeed, he felt that plants were largely akin to even the most complex animals, such as human beings. Part one of *The Botanic Garden* features lengthy notes which delineate the various overlaps in anatomy between plant life and animals, a convergence so important to Darwin that he restates them again in *Zoonomia* (I. XIII.V). For example, Darwin

insists that the leaves of plants resemble lungs, and that the roots of vegetables "resemble the lacteal system of animals" (I.XIII.V).

As stated above, Darwin argued that plants, like animals were capable of sensation and feeling, and thus, by the logic of his system, able to produce ideas and to think. On one hand, then, *The Botanic Garden* is a pedagogical attempt to make scientific discourse more entertaining. On the other Darwin's work in *Zoonomia* suggests that we should take his usage of anthropomorphizing more seriously, even literally. Of course, anthropomorphizing nature is by no means a new method in poetry, and thus it is not singular to Darwin or to Brontë. However, given the scientific discourse Darwin was steeped in, his own use of anthropomorphization carries more significance. Certainly, the Romantics in general often utilize anthropomorphization in their poetry but again, such usage represents more than a mere rhetorical device, rather, it likely reflects Romantic tendencies to spiritualize nature— a tendency that may well be rooted in contemporaneous science. Brontë's own blurring of the human and the natural was likely similarly influenced, and the result is a text in which humans like Catherine and Heathcliff are on par with, and equated to, a powerful and energetic natural world.

7.0 Spiritualizing the Material

One of the consequences of materialist ontologies is their tendency to, in the words of Thomas Reid, "spiritualize the material" by collapsing the distinction between that which is spiritual and immaterial (like the soul) and that which is material and physical (like the body) (Reid 517). The result is a world in which matter becomes spiritual. Once more, this can be seen in *Wuthering Heights,* for here heaven and salvation are reconceived as nature and the life cycle. Consider the following passage, in which Catherine explains to Nelly a particularly harrowing dream:

> "If I were in heaven, Nelly, I should be extremely miserable."
>
> "Because you are not fit to go there," I answered. "All sinners would be miserable in heaven."
>
> "But it is not for that. I dreamt once that I was there."
>
> "I tell you I won't hearken to your dreams, Miss Catherine! I'll go to bed," I interrupted again.
>
> She laughed and held me down; for I made a motion to leave my chair.
>
> "This is nothing," cried she: "I was only going to say that heaven did not seem to be my home; and I broke my heart with weeping to come back to earth; and the angels were so angry that they flung me out into the middle of the heath on the top of Wuthering Heights; where I woke sobbing for joy" (101).

Here, Catherine explicitly states that for her, heaven is not a place she wishes to depart to upon her death— she does not desire a Christian salvation dependent upon unification with God. Rather, she wishes for her soul to return to earth, to nature, or, more specifically, to Wuthering Heights. This heterodox vision of heaven and deity as equivalent to the natural world renders it both that which gives life, and life everlasting.

Catherine conceives of the natural world as the source of life, more so, it seems, than a Christian god, a view that aligns closely with the materialist, for whom biological and physical realities create life. Indeed, Catherine's death is a result of her separation from the natural world of the moors following her marriage to Edgar. As a child, she had traipsed around the moors for hours, living her life, "half savage, hardy, and free" (Brontë 140). She was always connected in some way to the outer world, even when she and Heathcliff were held inside by a tyrannical Hindley. In the diary entry that Lockwood stumbles upon, Catherine states that she and Heathcliff are being punished, and as such she must occupy herself with remaining inside, separated from direct contact with Heathcliff. Still, she pushes open a nearby door in order to see the page she writes on, but perhaps there is more to this gesture (Brontë 53). A door or window to the outside disintegrates the barrier between the domestic world and the natural. For Catherine, such thresholds become her only source of life when she is trapped within the domestic sphere by her marriage to Edgar. Indeed, when Catherine is close to her death, she requests that the chamber window be open to the moors, though Nelly refuses her pleas— "'Because I won't give you your death of cold,' I answered. 'You won't give me a chance of life, you mean,' she said, sullenly. 'However, I'm not helpless yet; I'll open it myself' (Brontë 140). For Catherine, the natural world functions as a life source. Remembering her hardiness when she was a child and capable of running rampant along the moors and comparing it now to her weakened constitution— she used to be

"laughing at injuries not maddening under them!"— it is clear that she has lost something essential when she committed to a domestic life as Edgar's wife, and this loss results in her slow demise (Brontë 140).

Not only is the natural world a source of life, identical in ability to a deity, but it is also life everlasting—a heaven composed of earth. This is clear in Catherine's dream as well as in Heathcliff's insistence that a side be knocked out of Catherine's coffin and that the same be done to his own when he dies, such that their remains will mingle together in the surrounding soil. This is certainly not the request of a man who thinks his and Catherine's souls will rise to heaven— if so, why should it matter that their bodies disintegrate together? Instead, Heathcliff's desire is rooted in his belief that their heaven, their salvation, is a death that reunites them once more through the earth. Heathcliff tells Nelly that prior to giving the sexton these instructions for his death, he bribed him to open Catherine's coffin. When Nelly scolds Heathcliff for disturbing the dead, she asks "And if she had been dissolved into earth, or worse, what would you have dreamt of then?'...'Of dissolving with her, and being more happy still!' he answered. 'Do you suppose I dread any change of that sort? I expected such a transformation on raising the lid—but I'm better pleased that it should not commence till I share it (Brontë 271)". Indeed, Heathcliff only wishes for their remains to mingle in the earth, rendering them a part of the life cycle. A similar message is portrayed in Brontë's poem, "Death" (1843). Though she only published around thirty poems in her lifetime, many of the themes contained within her poetry overlap with those in *Wuthering Heights*[17]. Let us consider the final stanzas of "Death"

[17] For a study of Brontë's poetry, see Gezari, Janet. *Last Things: Emily Brontë's Poems.* Oxford University Press, New York; Oxford, 2007.

Heartless Death! The young leaves droop and languish;

Evening's gentle air may still restore--

No: the morning sunshine mocks my anguish-

Time, for me, must never blossom more!

Strike it down, that other boughs may flourish

Where that perished sapling used to be;

Thus, at least, its mouldering corpse will nourish

That from which it sprung—Eternity (Brontë "The Complete Poems" 40)

Here, the speaker's notion of eternity does not align quite with the Christian heaven, rather, eternity is the cycle of life. The speaker finds solace in knowing that all that dies will be broken down on the earth and nourish subsequent life.

Though she had been dead for well over a decade, Catherine's body had not yet decayed, for when he opened her coffin, Heathcliff finds her relatively undisturbed. This outcome is hinted at early in the text, when Lockwood explains that the cemetery beside the chapel "lies in a low hollow, between two hills—an elevated hollow— near a swamp, whose peaty moisture is said to answer to all the purposes of embalming on the few corpses deposited there" (Brontë 55). Like a bog body, Catherine has been naturally embalmed, and as such, the process of decomposition has not yet begun when Heathcliff opens her grave. This of course could be expected when viewing Catherine and Heathcliff's bond as materialistic, as elucidated above. If Catherine is the material embodiment of Heathcliff's soul, and vice versa, then it makes sense that she would exist still as a

material being while Heathcliff is still alive. Indeed, not only does her body remain a concentrated (that is, not yet decayed) entity, but even her ghost is similarly material.

8.0 Material Ghosts

Heathcliff explains to Nelly in the very same scene described above that this is not the first time Heathcliff has attempted to exhume Catherine from her grave. Shortly after her burial, Heathcliff also dug up her coffin with the intention of holding her in his arms for the last time. As soon as he has the lid of the coffin in his grasp, however, he feels over his shoulder a sigh, which he at once recognizes as the breath of Catherine's spirit, though he cannot see her. This breath stops him in his tracks, and he reburies the coffin, convinced that she is with him again. What is significant here is that Catherine's ghost *breathes*[18]. Why should a ghost, no longer living, produce a sigh? Once more, Brontë utilizes a materialist conception of the spirit, describing Catherine's ghost not as some immaterial entity, but still in the terms of a living being. This implies that even upon her death, there is no discernable distinction between the soul and the body.

When Lockwood encounters Catherine's ghost in the opening chapters of the novel, she is similarly depicted in terms of physicality. Lockwood, unlike Heathcliff, can see Catherine, or at least her hand, which grabs onto Lockwood, and he grabs back. The simple tangibility of her ghost is notable and certainly suggestive of her materiality. What is more, Lockwood, still holding onto her wrists, drags Catherine's arms back and forth across the shattered windowpane, "till the blood ran down and soaked the bedclothes" (Brontë 56). That even as a ghost she is capable of bleeding suggests once more the embodied nature of her soul, even after death. Indeed, since Catherine's

[18] It is not unusual for ghost stories that postdate *Wuthering Heights* to hint at a ghostly presence by a blast of cool or warm air, but this was not the case when Brontë was writing. Further, Catherine's ghost is not signified only by the presence of a draft, but by her physical breath.

body has not decayed at this point in the text, one may wonder if she has not simply risen from the grave in an attempt to come back to the Heights. When Heathcliff feels Catherine's ghostly breath over his shoulder, he insists to Nelly that "I felt that Cathy was there: not under me, but on the earth" (Brontë 272). Perhaps this is the case, her just buried body, has, Christ-like, risen.

In any case, the materiality of Catherine's ghost certainly reinforces the already notable convergence between materialist philosophies and *Wuthering Heights.* Further, a movement which similarly theorizes about the materialization of the soul was just on the horizon— spiritualism. The spiritualist movement originated in the United States, but it rapidly consumed the European imagination, enlisting millions of supporters, the most famous of which include the likes of Sir Arthur Conan Doyle and Alfred Russel Wallace. Followers of spiritualism gathered together for séances in which it was believed they could raise the dead and speak to those ghosts who appeared before them. In England the movement actually first began in Keighley, the Yorkshire town that Brontë frequented and likely borrowed books from. As Logie Barrow has noted in his study of spiritualism in rural England, Keighley "earned its reputation as the cradle of British spiritualism," though why this is, cannot be said with certainty (Barrows 10).

Though it wasn't properly introduced to Keighley until after Brontë had written and published *Wuthering Heights,* it can be assumed that the speed with which it was taken up by the Keighley populace, and the rest of Western Europe, speaks to the general agreeability of the idea that spirits may materialize after death (Owen 21). As Alex Owen points out, in *The Darkened Room,* early spiritualists such as those in Keighley "held out the fervent hope that science would prove their case and sought to establish both the survival of the spirits and its materiality through strict adherence to the empirical method" (Introduction). Owen writes that, for spiritualists, "if spirits could 'materialise', take on human form, and appear at séances, then it followed that they

existed but embodied an unknown kind of matter" (Introduction). Indeed, they did not seek to destroy the laws of physics with their beliefs, but to enhance them by finding this unknown spirit matter, an endeavor that those familiar with the work of Erasmus Darwin would find strikingly familiar.

9.0 Conclusion

The Romantic inheritance of Emily Brontë's *Wuthering Heights* is far more profound than scholars often allow. Brontë is not simply repeating the aesthetics of an earlier movement but expounding and elaborating on a radical materialist ontology. Catherine and Heathcliff are described in fundamentally materialistic terms, a characterization absent from many Romantic texts, no matter how much materialism they may implicitly contain. This is perhaps the result of presenting such a philosophy in a novelistic form, whereas the Romantics overwhelmingly used poetry. Novels, unlike poems, allow more space for characterization, and it is through the characters of Heathcliff and Catherine that Brontë most thoroughly develops her materialism.

In *Wuthering Heights,* Brontë effectively blends together the distinction between the natural and the spiritual, putting each on equal footing and infusing the natural with the spiritual at the same time that it naturalizes the spirit. In this manner *Wuthering Heights* replaces orthodox visions of a disjunction between the soul and the body with characters whose soul *is* the body (be it their own or the body of another) and thus, their soul forms a part of the natural, material world.

Works Cited

Abrams, M. H. *The Mirror and the Lamp: Romantic Theory and the Critical Tradition.* Oxford University Press, New York, 1953.

Barker, Juliet R. V. *The Brontës*. Weidenfeld and Nicolson, London, 1994.

Barrow, Logie. *Independent Spirits: Spiritualism and English Plebeians, 1850-1910*. Routledge & Kegan Paul, London, England; Boston, Mass., USA, 1986.

Brontë, Emily, and Charles W. Hatfield. *The Complete Poems of Emily Jane Brontë.* Columbia University Press, New York, 1941

Brontë, Emily. *Wuthering Heights*. Edited by Beth Newman, Broadview Press, 2007.

Brooks, G. P. "The Faculty Psychology of Thomas Reid." Journal of the History of the Behavioral Sciences, vol. 12, no. 1, 1976, pp. 65-77

Carroll, Joseph. "The Cuckoo's History: Human Nature in Wuthering Heights." Philosophy and Literature, vol. 32, no. 2, 2008, pp. 241

Darwin, Erasmus. *Zoonomia; or, the laws of organic life. ... . By Erasmus Darwin, M.D. F.R.S. Author Of The Botanic Garden.* Volume 1. The second edition, corrected. London, 1796. Eighteenth Century Collections Online. Gale. University of Pittsburgh Library System. 11 June 2019

Descartes, Rene. *Philosophical Works: Rendered in English.* Translated by Elizabeth Sanderson Halden and G.R.T. Ross, Cambridge University Press, 1911.

Duckett, Bob. "Where did the Brontës Get their Books?" Brontë Studies, vol. 32, no. 3, 2007, pp. 193-206.

Elliott, Paul. ""More Subtle than the Electric Aura": Georgian Medical Electricity, the Spirit of Animation and the Development of Erasmus Darwin's Psychophysiology". Medical History, vol. 52, no. 2, 2008, pp. 195.

Gérin, Winifred. *Emily Brontë: A Biography*. Clarendon Press, Oxford, 1971.

Gezari, Janet. *Last Things: Emily Brontë's Poems*. Oxford University Press, New York; Oxford, 2007.

Goff, Barbara M. "Between Natural Theology and Natural Selection: Breeding the Human Animal in Wuthering Heights". Victorian Studies, vol.27, no. 4, 1984, pp. 477.

Haekel, Ralf. *The Soul in British Romanticism: Negotiating Human Nature in Philosophy, Science, and Poetry*. Trier Wissenschaftlicher Verlag Trier, 2014.

King-Hele, Desmond. *Erasmus Darwin and the Romantic Poets.* St. Martin's Press, New York, 1986.

Locke, John. *An essay concerning humane understanding. In four books. Written by John Locke, Gent.* The fifth edition, with large additions. London, MDCCVI. [1706]. Eighteenth Century Collections Online, Gale. University of Pittsburgh Library System. 11 June 2019

"maxillary, adj. and n." OED Online, Oxford University Press, June 2019, www.oed.com/view/Entry/115247. Accessed 11 June 2019.

Miller, J. H. *The Disappearance of God: Five Nineteenth-Century Writers.* Belknap Press of Harvard University Press, Cambridge, Mass, 1963.

Miller, Lucasta. *The Brontë Myth.* Knopf, New York, 2003

Owen, Alex. *The Darkened Room: Women, Power, and Spiritualism in Late Nineteenth Century England.* Virago Press, London, 1989.

Pera, Marcello, and Jonathan Mandelbaum. *The Ambiguous Frog: The Galvani-Volta Controversy on Animal Electricity.* Princeton University Press, Princeton, New Jersey, 1992;1991.

Piper, H. W. *The Active Universe: Pantheism and the concept of Imagination in the English Romantic Poets.* University of London, Athlone Press, London, 1962.

Priestley, Joseph. *Disquisitions relating to matter and spirit. To which is added the history of the philosophical doctrine concerning the origin of the soul, and the nature of matter; with its influence on Christianity, especially with respect to the doctrine of the pre-existence of Christ. By Joseph Priestley, LL.D. F.R.S.* ... Vol. Volume 1. The second edition improved and enlarged. Birmingham, MDCCLXXXII. (1782). Eighteenth Century Collections Online, Gale. University of Pittsburgh Library System. 11 June 2019

Reed, Edward S. "Descartes' Corporeal Ideas Hypothesis and the Origin of Scientific Psychology." The Review of Metaphysics, vol. 35, no. 4, 1982, pp. 731-752.

Reed, Edward. *From Soul to Mind: The Emergence of Psychology from Erasmus Darwin to William James.* Yale University Press, New Haven, 1997.

Reid, Thomas. *An inquiry into the human mind, on the principles of common sense.* By Thomas Reid, D. D. Professor of Philosophy in King's college, Aberdeen. Edinburgh, MDCCLXIV. (1764). Eighteenth Century Collections Online, Gale. University of Pittsburgh Library System. 11 June 2019

Richardson, Alan. "Keats and Romantic Science: Writing the Body". Cambridge Companion to Keats, edited by Susan J Wolfson, Cambridge University Press, 2001, pp. 230-245.

Richardson, Alan. *British Romanticism and the Science of the Mind*. Cambridge University Press, Cambridge, UK; New York, 2001

Sha, Richard C. "Imagining Dynamic Matter: Percy Shelley, Prometheus Unbound, and the Chemistry and Physics and Matter" Imagination and Science in Romanticism, Johns Hopkins University Press, 2018.

Shuttleworth, Sally. *Charlotte Brontë and Victorian Psychology*. Cambridge University Press, Cambridge, 1996.

Stoneman, Patsy. "Rochester and Heathcliff as Romantic Heroes." Brontë Studies, vol. 36, no. 1, 2011, pp. 111-118

Tyler, Graeme. ""Nelly, I Am Heathcliff!": The Problem of "Identification" in Wuthering Heights." The Midwest Quarterly, vol. 47, no. 2, 2006, pp. 167-181,113.

Whone, Clifford. "Where the Brontës Borrowed Books". Brontë Society Transactions, 11:5, 1950 pp. 344-358.

Wood, Paul. "Science, Philosophy, and the Mind." The Cambridge History of Science, edited by Roy Porter, vol. 4, Cambridge University Press, Cambridge, 2003, pp. 800–824. The Cambridge History of Science.

Yolton, John W. *Thinking Matter: Materialism in Eighteenth-Century Britain.* University of Minnesota Press, Minneapolis, 1983.