Embodying Agency: The Liberal Will, the Psychophysiological Individual, and Intersubjective Connections in the Victorian Novel

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Abstract

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My dissertation examines the emergence of a new language for agency in nineteenth-century literature and science, which articulated a form of intersubjectivity that departed from a central element of Victorian liberal ideology: the emphasis on the autonomous will as key to the advancement of civilization. I show that writers like Charlotte Brontë, Charles Dickens, George Eliot and Wilkie Collins understand character development as importantly physiological, reflecting a movement in Victorian psychology that, for the first time, proposed a scientific account of the relationship between body and mind. The novels I take up do not necessarily affirm the kind of isolated, distanced individual that is typically associated with Victorian liberalism and the form of the novel. Instead, the relationship between body and agency is often imagined as a play of affective influence, constituting the theorization of an embodied intersubjective agency able to form and transform character through connections between bodies. As I show, this deviates from hallowed liberal ideals such as self-formation, the linear development of individual and society, the idea of evolutionary progress, and the role of a rational intellect in producing moral behavior.

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DEDICATION

For my brother, Patrick Kelly.

Introduction:

The Liberal Will, the Psychophysiological Individual, and Intersubjective Connections in the Victorian Novel

Charles Dickens' 1854 novel *Hard Times* presents a crucial moment for Louisa Bounderby when she narrowly avoids the scandal of an affair and instead returns home to confront her father and reprimand him for subjecting her to a harsh education that led her into a loveless marriage. Yet the central change in Louisa's character is not effected by this new intellectual understanding, or even the emotional upheaval that accompanies it. Rather, Louisa finally develops new character traits only after her adopted sister, Sissy, comes and lays her hand on her arm, "warming to life a crowd of gentler thoughts"(169). Thirty-five years later, Dickens' friend Wilkie Collins in 1889 similarly granted a sort of agency to bodily impact in his last published book, *The Legacy of Cain*. Here, the central character, Eunice, has inherited personality traits from her murderous mother. Despite Eunice's efforts to control these traits, she becomes radically transformed whenever she is in the presence of her antagonist, in a reactive, physiological process that trumps her consciously held values, but gives her new powers. The only force strong enough to control her hereditary influences is her love for her fiancé, figured in both somatic and emotional terms.

Embodying Agency explores the creation of a new kind of language for the relationship between body and agency in these Victorian novels, along the works of two other canonical nineteenth-century writers: Charlotte Brontë and George Eliot. These novels understand character development as importantly linked to the body, reflecting a movement in Victorian psychology that, for the first time, proposed a scientific account

of the relationship between body and mind. The connection of body to agency as represented within these novels tends to work against the idea of the Victorian will. Rather than a self-determining will, these novels show an intersubjective agency that is the product of connections between bodies, suggesting the Victorian individual was not as autonomous as has been assumed.

The years between 1840 and 1880 saw the development of physiological psychology, or psychophysiology. Central to this line of thinking was a hard connection between body and mind, often both reductionist and deterministic. Psychophysiology held a prominent position in contemporary Victorian thought, influencing, for example, debates about the nature of the individual.[1] In the hands of some of the most extreme proponents, this theory could be used to claim that the individual was completely reduced to the physical body.[2] New theories abounded – were humans automatons, prey to reflex actions they could not control, prompted by external events? Were emotions and even thought-processes caused by physiological elements in the body rather than some inward power? Could evolution be credited with the inheritance of not only physical, but psychological characteristics?

These kinds of questions were controversial, not only because they challenged more traditional ideas of a soul, replete with innate traits, as the defining element of one's character. They fed into what Amanda Anderson calls the quintessential Victorian debate,

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[1] Rick Rylance in *Victorian Psychology* writes that, regarding the developing discourse of psychology, "In 1850-80, the main source of anxiety concerns psychology's imagining of the mind's comprehensive embodiment for the first time in history" (80). People opposed to physiological psychology claimed it jeopardized the will, and threatened ethical life (73). Matthew Stanley in "The Pointsman" also argues that "Whether or not the success of science demanded humans forfeit their intuition of individual volition was a major intellectual crisis of the Victorian period," such that "the 1850s marked the beginning of decades of vigorous debate on the subject of the will" (467).

[2] Thomas Laycock and, later, Thomas Huxley, proposed theories that humans were comprised solely of their physiological processes.

which pitted materialism against idealism.[3] At the center of this debate was a question about agency, specifically, whether the individual was possessed of a self-determining will, and the terms on which that could be accomplished.

Questions of agency and the individual were imbricated in what Elaine Hadley terms the "mid-Victorian political liberalism" of the 1850s through the early 1880s. As Hadley notes, liberalism was in this era a "practical politics" – the Liberal Party was officially founded in 1859, and responsible for political and social reforms in the 1860s and 1870s. Hadley writes that liberalism championed character, progress, and persuasion, and theorized an individual to enact these values (5).[4] Other scholars like Lauren Goodlad describe Victorian liberalism as a broader "social movement and cultural mythology that culminated in the mid-Victorian years" (15), but still stress its connection to individual

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[3] Anderson in *Tainted Souls and Painted Faces* writes that materialism and idealism seemed to represent two seemingly incompatible systems of thought. Materialism included utilitarianism, the doctrine of necessity, and positivists, while Idealists focused on character as self-created, the free will, critiquing an increasingly mechanistic society (21). This debate informs discussions of phrenology, physiognomy, medicine and psychology, and later seems to be supported by evolutionism (3). See also John Reed, *The Victorian Will*, on this point.

[4] Hadley's liberal individual is comprised of practices that are primarily cognitive in nature. What Hadley terms "liberal cognition" describes a kind of formalized thinking that enables participation in the public sphere, and consists of political opinion. Hadley also focuses on "liberalism's complex relation to embodiment" (8), which she addresses through what she terms the "abstract embodiment" of the liberal individual. For Hadley, "abstract embodiment" materializes the liberal subject. For example, in the case of the elector in a ballot booth, the body is "now saturated with abstract sensation, so that the elector *felt* intensely the moral and rational imperatives of the nation, the state, and the empire" (8). This for Hadley is the enactment of political agency, which consists primarily of opinion. In this articulation, the Victorian body becomes re-embodied as awash in "abstract sensation" that corresponds to equally abstract national imperatives. While arguing for the need to carefully treat the "nuanced relations between the liberal subject's body and mind" (7), Hadley dismisses Victorian explorations of just this topic by writing that, while "the political realm played some role in the lively debates occurring at this time in the fledgling fields of psychology and physiology" (6), Victorian psychology preserved a "not-quite-metaphysical mind/body distinction" (6) and that in any case "liberal political discourse evidences no settled philosophy of mind" (6). My project is not about liberal political discourse per se. However, my research shows that the complex exploration of the mind-body distinction in psychology and physiology was very much imbricated in contemporary political terms. My work shows that the Victorians were themselves examining the relationship between the body and the individual. For example, if the body was so deterministic that it precluded the idea of a free will, what happened to self-determination, character, autonomy? These were the kinds of questions Mill and those he influenced explored in their writing, and which appear in the work of the novelists I take up.

growth.[5] For Goodlad, Victorian Britain is a self-consciously liberal culture, "loudly committed to fostering moral and spiritual growth … but, at the same time, suspicious of government interference with individuals and their property" (53). Liberalism also assumed a historical, evolutionary progress that justified, among other things, the growth of the British Empire.[6] The individual needed agency to participate in character, progress, and upwards evolution. Works like Samuel Smiles' popular *Self-Help* (1859) specified "free will" as the operative term for agency, and made it essential to the cultivation of these Victorian ideals.

At the same time, both Hadley and Goodlad's analysis of Victorian liberalism identify a fundamental ambivalence about agency. Hadley notes that political liberalism assumed a historical and temporal determinism, even as it infused "enormous optimism into the autonomous self-development that designates the liberty of thinking beings" (10). Goodlad, meanwhile, identifies in Victorian liberalism a tension between "negative liberty (the doctrine of nonintervention) and positive liberty (the contrary imperative to empower)" (539). The former model assumes a concept of agency that needs to be protected as "free will," distinct from government's power. The latter assumes an individual that can, and should, be molded by external forces.

This tension was present in psychophysiology, which struggled to articulate an individual possessed of a liberal will yet also subject to the determining influences of the body. It is no coincidence that John Stuart Mill had a role in both these discourses. Unlike Smiles and others such as Samuel Taylor Coleridge, Mill did not believe in the possibility of an entirely, innately free will. However, understanding its central position in Victorian

[5] Goodlad, "Beyond the Panopticon"
[6] See, for example, Uday Singh Mehta, *Liberalism and Empire* (1999)

liberal ideology, he struggled to account for the will in his theory. Mill sought to both acknowledge cultural and physiological determinants and protect the autonomy of the individual in order to ensure self-formation, growth in character, morals and forward progress.

My work traces the connection between Victorian liberal ideology and developing psychology, not only in the work of Mill, but in the psychophysiologists that were aligned with him – notably Alexander Bain, Herbert Spencer, and William Carpenter. The work of all three wrestles with Mill's dual imperative to theorize both a mind-body connection which posited a determining body that shaped every element of consciousness, and an explanation for the liberal will. As I show, this created finally a strangely static body in the work of these early theorists of the psychological self. The genealogy I explore here begins with the related pseudoscience of phrenology. Phrenology, which was astonishingly popular in throughout the nineteenth century, proposed that the skull's features correlate to various personality traits. This crude mind-body correlation was an important point of departure for the psychophysiologists, even as they sought to distance themselves from phrenology's reductionary central tenets.

Each of the four novelists I take up not only displays a knowledge of contemporary psychology, but uses specific psychophysiological theories of the body to explore alternate modes of subjectivity that were at times far from the ideology of the individual. For example, all four writers represent physical impact between characters as something that can be a powerful mode of character-formation precisely because of the attendant physiological influences, showing a mutual investment and loss of autonomy not entirely compatible with the idea of an individual fundamentally in charge of their

own destiny. In such moments, these writers imagined a more productive role for the reductionist theories of their day than the pscyhophysiologists who developed them. They instead show a kind of intersubjective agency possible between connected bodies that moves beyond the binary in the discourse of Victorian liberalism which pitted determinism versus the will, where the will has to be autonomous in order to promote character formation. These novels, finally, do not represent the kind of isolated, distanced individual that is typically associated with Victorian fiction.[7]

In fact, the kind of character physiology and psychology represented by these writers has some points in common with 20th/21st century affect theory's focus on a dynamic body. If the psychophysiologists tended to imagine a static body, determined by external forces that excluded or required an exemption for the will, I am interested in the ways in which these novels re-imagine the relationship between body and agency, engaging in the kind of "play" of bodily influences that characterizes affect theory. In these novels, the newly psychophysiological body helps promote an intersubjective agency that forms and transforms character, challenges ideas of linear development in both individual character and society, subverts the idea of evolutionary progress, and even alters the role of a rational intellect in producing moral behavior. As with current affect theory, these novels place an emphasis on a fundamentally dynamic body that tends to subvert ideological elements scripted onto that body, so that they represent an articulation of a kind of agency that cannot be reduced to the traditional conception of the liberal individual with a free will.

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[7] Anderson in *Powers of Distance*, for example, considers the ways in which "individual Victorians constructed their ideals to … enable detachment" (5). Nancy Armstrong in *How Novels Think* argues that the novel created the form of the individual, which she describes, among other traits, as "self-enclosed." In *The Way of the World,* Franco Moretti asks, "Isn't an English plot a sort of visit to the zoo, where countless and amazing human exemplars are offered to our eyes, each one tightly locked in a cage?" (193).

The Victorian Will

Psychophysiology became embroiled in what John Stuart Mill calls "the free will controversy."[8] As John Reed writes in the *Victorian Will*, the free will versus determinism controversy was not new in the nineteenth century; it was already an established part of the English philosophical tradition, and also had a history on the continent (29). The determinist side of things, allied with terms like necessarianism, materialism and mechanism – argued for laws of causation that would explain human experience without recourse to a soul, Divine influence, or a will conceived of as an innate power.[9] It was often linked with associationist philosophy and, later, the developing sciences including psychophysiology. The idealist side of the debate argued for free will, a morally autonomous subject, and, oftentimes but not always, a theological account for human agency that posited the more traditional concept of a soul.

At the center of the "free will controversy" lay an important component of Victorian ideology. The stakes were high: the will was linked to several terms that comprised the ability of the liberal individual to be autonomous, to be moral, to progress, and control and form character – thereby contributing to British civilization as a whole. This controversy, itself, became a formalized approach to thinking about Victorian agency, one that continually required a resolution that would support key elements of the liberal individual. I examine how two free will advocates – Samuel Smiles and James Martineau – address this tension, before turning to J.S. Mill's attempt to reconcile the will to his emphasis on the doctrine of necessity. Both Martineau and Mill directly link

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[8] *System of Logic*

[9] For more on the Victorian free will debate, see Reed, and also Catherine Gallagher, *The Industrial Reformation of British Literature*, and Anderson in *Tainted Souls, Painted Faces.*

the free will debate to contemporary developments in psychophysiology. Reflecting their distinct ideological perspectives, the two find different ways of preserving enough volition to provide the agency needed for the liberal individual. Mill's work is especially important because his particular attempt to reconcile his concept of the will to developing psychophysiology creates a language for the relationship between body and agency that is replicated in the work of the prominent psychological thinkers who were allied with Mill.

The kind of work the concept of the will performed in the Victorian imagination is perhaps nowhere better articulated than in Samuel Smiles' bestseller, *Self-Help*. First published in 1859, *Self-Help* not only sparked a new genre, but sold 20,000 copies within its first year of publication, and 160,000 over Smiles' lifetime. The book expressed the dominant philosophy of the years between 1840 and 1880, weaving precepts and anecdotes to illustrate what Smiles considered keys to greatness, inculcating the idea that with enough hard work and perseverance, the individual, and the nation, could improve their circumstances.

Central to these key precepts was energy, which Smiles makes synonymous with the will. Smiles ties this energy to the concept of the will in a chapter entitled "Energy and Courage." Smiles here writes that, "Man owes his growth chiefly to that active striving of the will, that encounter with difficulty, which we call effort," making the will the operative element of really any Victorian conception of agency, from energy to effort, to purpose as he remarks here: "It is *will* [sic], -- force of purpose, -- that enables man to do or be whatever he sets his mind on being or doing" (192). Here, and elsewhere,[10]

[10] Smiles reinforces this idea by later asserting: "To think we are able, is almost to be so – to determine upon attainment is frequently attainment itself" (194).

Smiles articulates the prevailing cultural notion that the will is linked to self-determination and character formation.

Self-Help additionally proposes that the Victorian will is at the heart of national progress. In Chapter II, entitled "Leaders of Industry – Inventors and Producers," Smiles writes that "This vigorous growth of the nation has been mainly the result of the free energy of individuals" (37), relating individual energy to the welfare, and upwards progress, of the nation. Smiles is here articulating the popularly-held belief that the English citizen represented the highest development of progress – both as an individual and as a contributor to civilization – because his will was the most developed.[11]

Smiles' advice also operates on the assumption that the "freedom of the will" (193) is necessary to Victorian morals and rules of conduct. A free will not only enables the individual to make a moral choice between good and evil, but "The entire business and conduct of life, with its domestic rules, its social arrangements, and its public institutions, proceed upon the practical conviction that the will is free" (193). Smiles thus makes the free will responsible for every element of moral growth and development of society as a whole. Free will becomes the organizing principle of Victorian society and public institutions.

Yet even Smiles reflects an anxiety about agency, showing an awareness of the public debate on the topic. His solution is an appeal to common sense, personal experience, and introspection: "Whatever theoretical conclusions logicians may have formed as to the freedom of the will, each individual feels that practically he is free to

[11] According to Reed, "In England, a substantial body of opinion concluded that the modern Christian Englishman stood at the pinnacle of progress because he represented the highest development of will. Of course, there were many skeptical and dissenting voices, but where progress was accepted, it was generally bound to some belief in the power of the will to shape not only man's individual and communal destiny but the character of the material world as well" (84).

choose between good and evil" (193).[12] In a somewhat tautological argument, free will is not only needed for moral growth, but moral choice is the evidence of free will. In any case, Smiles' argument here once again reinforces the tight connection between moral choice, growth, and the will.

With the will tied to everything from national prosperity to individual morality, it is not surprising that a psychology claiming the individual is largely determined by physiological forces became controversial precisely because it was perceived as putting the will in jeopardy. While the remainder of my work examines how mainstream psychophysiology attempted to account for agency, it remains important to acknowledge that, to advocates on the adamantly "free will" side of the debate, psychophysiology as a whole was viewed as too deterministic to be able to support the idea of the liberal individual as a free agent precisely because it explored the mind-body connection. Psychophysiology, along with related scientific explorations of the nineteenth century, only served to highlight even more pointedly the terms of the free will debate in the public's eye. This created what scholars call one of the major intellectual crises of the Victorian period.[13]

Martineau, a Unitarian philosopher, was an influential voice arguing against a determinist understanding of human experience. His work, a sustained engagement with the scientific developments of his time, while less reactionary than those of some of his peers, demonstrates the threat psychophysiology, in particular, posed to free will

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[12] He adds here, "There is no absolute constraint upon our volitions, and we feel and know that we are not bound, as by a spell, with reference to our actions." (193)

[13] As Reed writes, "the issue of freedom became acute when science replaced religion and philosophy in the nineteenth century as the principle means of conceiving order in the universe because it now appeared that some hypotheses were becoming susceptible of proof." (5). See also Stanley, Rylance and Anderson on this point.

advocates, and the inventive ways they sought to meet the challenge posed by new scientific discoveries. For Martineau, accounting for the will meant addressing contemporary developments in psychophysiology that threatened to reduce it to a mechanical aspect of human nature.

In an 1870 article entitled "Modern Materialism: Its Attitude Towards Theology," Martineau argues that science is unable to account for the basic concept of "force," or agency. He specifically targets psychophysiological theories like automatism, writing that reflex theory reduces the individual to a mechanical state: "a clock with *two beats* – viz., movement p*lus* consciousness" (538). Martineau counters materialist theories with the assertion that "Our whole idea of Power is identical with that of Will, or reduced from it. That which, in virtue of the principle of causality, we recognize as immanent in nature, is homogenous with the agency of which we are conscious in ourselves" (531). This echoes the kind of language used by popular cultural voices like Smiles, equating the free will with power and an intuitive, practical knowledge of one's own agency.[14]

For Martineau, the move to connect mind to body is fundamentally flawed. Not the least problematic is the implication of a non-theological account of the will that was implied by a mind-body connection: "You need an embodied mind? Lift up your eyes, and look upon the arch of night as the brow of the Eternal, its constellations as the molecules of the universal consciousness" (540). Martineau ultimately seeks to reconcile "mechanical necessity" with an explanation of causal power as provided for by a Divine will, so that, finally, "The dispute between acting Force and intending Mind is as unmeaning as the quarrel of man with his own image. The two are identical" (542). Force

[14] Importantly, Martineau was not therefore arguing for an entirely self-determined will. As a theologian, Martineau sees human will as directed by the Will of God, whose instruments are the state and the church, God's authority in society.

is located in the mind, not the body. The "mechanical necessity" of psychophysiological propositions does not negate purpose – either of the individual or of Divine power – but rather is its expression, as the mind, through the will, guides the physiological processes.

Mill's Intervention in the Free Will Controversy

Although Mill did not believe in the possibility of the kind of free will described by Smiles or Martineau – a God-given, innate quality separate from external determination – he still championed an idea of liberal individualism that shared many similar terms. While Mill opened *On Liberty* by writing that "The subject of this essay is not the so-called Liberty of the Will … but Civil, or Social Liberty" (5), Mill's fundamental assertion that individuals are those who are free to form and act on their opinions carries with it an assumption of an agency closely allied with liberal characteristics. Mill throughout emphasizes character as a guarantor of individuality. The individual "chooses his plan for himself, using reasoning, judgment, moral preference, and "firmness and self-control" to "hold to his deliberate decision" (59). Cultivation of these traits means "perfectifying and beautifying" human life (59), enabling the individual to shape his own character, within the influences of his culture. As with Smiles, Mill's conception of progress does not stop with the individual, but extends to English society as a whole. Mill writes that England's cultivation of individuality has enabled it to ascend as a civilization, and warns that lack of individual thinking and action will ensure its decline.[15] Mill's focus on a character-formation that includes moral development, progressive improvement, and self-control, resulting in enough autonomy

[15] He holds out China as a specter of decline, a country whose conformity has caused it to remain "stationary" for "thousands of years" (72).

from social norms to form and act upon a unique opinion – all this required an explanation for agency.[16] In his 1838 essay "Bentham," Mill admits as much when he faults Jeremy Bentham for overlooking the need to address the "affections and the will" (73) in the development of character.

Mill's work bears throughout the evidence of an attempt develop a social philosophy that reconciles the central tenets of associationism to individual agency, without losing a fundamental emphasis on the shaping influence of external forces.[17] Recent scholarship connects this feature of Mill's thinking to Victorian liberalism at large. Goodlad, calling Mill the "arch exponent of a principled liberal middle ground" (550) in his championing of human individuality, argues that his idea of government explored "a distinctive liberal quandary" (540) – envisioning a modern governmental agency that would be rational, all-embracing, and effective, but also anti-bureaucratic, personalized and liberatory. Hadley identifies what she terms a paradoxical tension in Mill's work: the Victorian "pedagogy of self-development" that serves to educate the citizen into the responsibilities of liberal citizenship. In a note, Hadley remarks on the ambiguity of Mill's use of the term "self-development": it implies, she says, both the educative process and the idea that there is something "self-generated, independent of and indeed unbeholden to external direction or coercion" (67). Whether envisioning a government both pervasive and liberatory, or promoting a concept of self-development

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[16] For example, he writes that an individual with an "energetic character" is one whose "impulses are strong, and are under the government of a strong will" (61).

[17] Mill, famously educated into the principles of associationism and utilitarianism by his father, James Mill, nevertheless read and admired the Romantic thinkers for their explanation of elements that Jeremy Bentham and his associates missed. In "Bentham," Mill makes clear that what is missing in the traditional associationist perspective is an account of human feelings and human agency; he faults Bentham for not having a psychology, for overlooking the need to address the "affections and the will" (73) in the development of moral character. Yet Mill in his essay entitled "Coleridge" remained faithful to his father's basic assumptions, and clearly disagreed with Samuel Taylor Coleridge's assertion of free will and a priori knowledge of morals, implying innate qualities and negating external influence.

that is somehow at once both self-generated and facilitated by education, Mill's philosophy turns on an unresolved question about human agency.

This quintessential liberal problem shapes Mill's psychology as well. While he did not develop new psychological theories himself, Mill aligned himself with contemporary thinkers that could create a psychological solution to the problem of free will. In his 1859 article "Bain's Psychology," Mill speaks reverentially of his father James Mill's contributions to association psychology while praising Bain for expanding Mill Sr.'s determinism to account for a will within psychophysiological processes.[18] He corresponded with Spencer regarding whether evolution could alone account for an innate moral sense.[19] Mill cited Bain and Spencer approvingly in his works, including *System of Logic*. The influence went both ways: Bain's forays into physiological explanations for the will were motivated by Mill in the first place, and Spencer significantly revised his psychology after reading *System*. Both were closely associated in the public mind with Mill during the time period between 1850 and 1870.[20] Meanwhile, Carpenter turned to Mill in his formulation of the relationship between the will and psychology. In "On the Doctrine of Human Automatism," for example, Carpenter writes that people go too far when they designate as "nonsense" the idea that the will and emotions can cause bodily changes, and he explicitly cites Mill here as corroboration (398).

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[18] Bain was the psychologist with which Mill worked most closely. In "Bain's Psychology," Mill applaudes Bain for his physiological theory of the will, and calls his work the most advanced psychology of the period.

[19] For more on this, and on Mill's influence on Spencer, see Robert Young in *Mind, Brain and Adaptation in the Nineteenth Century* (1970), 177.

[20] See Thomas Dixon, *From Passions to Emotions*, 137.

Mill's *System of Logic*[21] explicitly addresses the "free will controversy"[22] and relates it to current thinking in psychology. Mill's philosophical dilemma about agency shaped the way he synthesized contemporary theories of psychology, so that the tension in his thinking – between agency and determinism – is replicated in his articulation of psychophysiology. Book Six is an exploration of the relationship between freedom and determinism. In the chapter "Of Liberty and Necessity," Mill makes his contribution to what he terms "the celebrated controversy concerning the freedom of the will" (550) by attempting a compromise between the position of a completely free will and a fully determined necessarianism.[23] Mill argues that a true understanding of the principle of necessity actually makes place for "a power of self-formation" (551); the individual "has, to a certain extent, a power to alter his character" (550). Mill reasons that although there are circumstances that shape the individual's character, "his own desire to mould it in a particular way is one of those circumstances" (550). This desire is, itself, shaped by other circumstances, not spontaneously produced by some internal force within the individual, so that Mill expands a deterministic view of the will to include freedom of self-formation. What Mill adds to necessarianism is the caveat that, as the individual works within causes of determinism to influence how they will shape their character, their desire to do so becomes one of those causes. Mill's account of a "power of self-formation" allows him to

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[21] Mill published *System* in 1843, with subsequent revisions. Book Six, which is an exposition of the terms liberty and necessity, was the section he thought best in the entire work. While the earlier section of Book Six take a more general approach to the topic of the will and necessity, "Of the Laws of the Mind" is an exploration of these terms within the specific framework of psychophysiology. "System" is one of the few works in which Mill expliclity addresses psychology. Other works are the above-mentioned "Bain's Psychology" and "Sir William Hamilton's Philosophy" (1865).

[22] According to Reed, Mill's views on free will and determinism appear throughout his writings but most clearly in *A System of Logic,An Examination of Sir William Hamilton's Philosophy* and the *Autobiography* (65).

[23] He writes that, "Those who think that causes draw their effects after them by a mystical tie are right in believing that the relationship between volitions and their antecedents is of another nature" (548).

claim the self-formation needed for the moral growth, development, and autonomy of the liberal individual.[24]

The relationship between agency and body is worked out in a Book Six chapter entitled "Of the Laws of the Mind." It is striking that the majority of a section entitled "Of the Laws of the Mind" – a reference to association psychology – is spent discussing physiology.[25] This marks not only Mill's absorption of the latest trends in psychophysiological research, but an agenda. Mill here assumes a fundamental mind-body link. He notes, for example, that differences in character are linked to "diversities in… organic constitution" (560), proposing a much closer connection between character and physiology than other theorists of his time, such as Martineau, supported.[26] By giving physiology a significant shaping influence in the formation of the individual, Mill aligns himself with prominent psychophysiologists like Bain and Spencer. The crux of his argument is not a matter of whether or not the mind-body connection is tenable; he assumes that it is.

However, this section also shows an anxiety about the determining role of the body. Mill turns to association psychology to keep human action from being reduced to an entirely physiological affair. He begins this section with an unfavorable reference to the most reductive physiological theories of his day, and ends it with a rejection of phrenology as even more deterministic than those physiological theories. A hard

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[24] For a similar reading on this point, see Amanda Anderson who notes that Mill in *System of Logic* asks whether actions of human beings are subject to natural laws of causation – and answers in the affirmative; however, he "takes pains to distinguish it from mechanical determinism" (*Tainted Souls*, 23). Anderson does not, however, consider how this relates to the psychology Mill is developing in this section.

[25] Mill states that "the influence of physiological states or physiological changes in altering or counteracting the mental successions, is one of the most important departments of psychological study" (591).

[26] For example, Mill writes, "such differences in the kind or in the intensity of the physical sensations as must necessarily result from differences of bodily organization will of themselves account for many differences … of the other mental phenomena" (560).

physiology would require that "one state of mind is never really produced by another; all are produced by states of body" (590). This is a problem for Mill because it leaves no room for psychology. In section four, Mill develops a schema where a physiological event –for example, a pleasurable sensation – becomes transmuted into a series of ideas, simple and then complex, so that the resulting desire is not "directly influenced by the physical peculiarity" (595). In this iteration, Mill makes the physiological body a determined and determining factor whose influence, while significant enough to constitute the mind-body link, is finally qualified by mental processes.

Distinguishing psychology from physiology is essential to Mill's explanation for agency, because he locates the will in the individual's ability to shape their mental associations, much as he previously argued the individual's will becomes a causal condition shaping their circumstances. Mill theorizes that the varying "mental character" between individuals is caused by both "the previous mental history of the individuals" and "differences of bodily structure" (594). In an earlier section discussing mental history, Mill grants the individual the ability to shape this process: "By cultivating the requisite associations of ideas, people may make themselves unable to conceive any given thing" (261). While the body remains a static, external force, Mill locates agency in the "mental history" of individuals. Although the individual's thought processes are determined by the laws of association, the individual is able to cultivate those associations. As in the section on causation, the ability of the individual to cultivate certain associations becomes one of the circumstances that shapes character, allowing for self-formation and, therefore, the kind individual agency Mill associates with the will.

Therefore while Mill emphasizes the connection between "bodily structure" and character, he views physiological influences as deterministic, and needing to be mediated through a primarily mentalized psychological process in order to preserve the will. This makes the will, finally, not fully integrated with the body, despite Mill's more general theorization of the mind-body connection. One's desire, or wish, to form one's character is here synonymous with the cultivation of mental associations, rather than physical or emotional processes. The psychophysiological connection is stressed throughout "Laws," but only with great caveats, and with a re-iterated hierarchy of influence.[27] Education and circumstance are privileged because the individual is able to cultivate, within those processes, mental associations that allow for some amount of agency in self-development. The physiological influence, in and of itself, is made completely deterministic, and so needs to be corralled, by mental psychology or other forces that are more easily integrated with the will.

Psychophysiology and the Embodied Individual

Mid-Victorian psychology marks the first sustained attempt to scientifically theorize a mind-body connection.[28] While this had been a topic of philosophical debate for centuries, proponents of physiological psychology claimed that they possessed empirical evidence showing that the individual's sensations, emotions and thoughts were linked to somatic processes. Rick Rylance evocatively describes this period in British

[27] Mill writes, "It is certain that, in human beings at least, differences in education and in outward circumstances are capable of affording an adequate explanation of by far the greatest portion of character, and that the remainder may be in great part accounted for by physical differences in the sensations produced in different individuals by the same external or internal cause" (561).

[28] Rylance writes that "In 1850-80, the main source of anxiety concerns psychology's imagining of the mind's comprehensive embodiment for the first time in history"(80). Danziger sees the psychophysiological period beginning with the 1847 publication of a treatise by Thomas Laycock which extended physiological reaction to the brain.

psychology as one in which "the increasingly confident acceptance that mind was dependent on the architecture of the brain and the nervous system" produced a fascination with new neurological theories, as well as "the enticing possibility of consistent, naturalistic explanations crossing the barriers between mental and physical events, the yearning urgency of linking mind and body like two separated members of an unfortunate family" (*Victorian Psychology*, 96)**.** Psychology and physiology were inextricably linked until the end of the century.

Psychophysiology was a clear break from the psychology of the eighteenth and early nineteenth centuries, which tended to be more philosophic and theological in nature.[29] The theological approach to psychology foregrounded the soul, predicated on the assumption that body and spirit/mind are different categories. Upon this view, human beings innately possess autonomous mental faculties such as reason, faith, love, and volition which are not linked in any way to the body.[30] The philosophical approach tended either to similarly presuppose innate traits, or consider the soul a tabula rasa shaped only by experience. The former of these perspectives is linked to the Scottish

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[29] Young in *Mind* establishes that psychology was more metaphysical before the nineteenth century. The question of how or whether the mind interacts with the body was treated ontologically. This precluded empirical investigation of relations of mind and brain, psychological and behavioral laws, and the relation of mental functions to the environment. The nineteenth century contributed the view of the mind as biological science, and was concerned with the function of the organism, and its role in adaptation to the environment (7). See also Rylance on this point, who notes that psychology in the early nineteenth century was defined in encyclopedias as the doctrine of the soul, with the assumption that body and spirit/mind are different categories (*Victorian Psychology*, 27). Psychology historian Kurt Danziger in *Naming the Mind* (1997) similarly notes that 18th-century psychology was philosophical, with the nomenclature "mental philosophy" only changing to "psychology" in the middle of the nineteenth century. There were, of course important precursors in the 18th-century, including David Hume and David Hartley. Hartley's *Observations on Man* (1749) was especially influential in nineteenth-century psychology, as he used metaphors of machines to explain the processes of a largely deterministic body, even as he attempted to provide a theological account of these processes. Psychological texts in central Europe dealt with physiological issues as far back as the mid-eighteenth-century, according to Danziger.

[30] See Rylance, "The Discourse of the Soul" and "Discourse on Philosophy" in *Victorian Psychology* for more on these earlier approaches that were still influential in the nineteenth century, as well as Dixon in *From Passions to Emotions*.

school of common sense and moral sentiment theory. Moral sentiment theorists like Frances Hutchison and, in a more qualified manner, Adam Smith, argued that humans possess innate qualities independent of experience, certainly of the body, often with recourse to the language of a soul. The associationist school, which had its roots in the philosophy of John Locke, claimed that the powers of the mind derive from external sensations and the internal reflection of the mind upon its activity. The associationists held that all mental states – from beliefs and desires to moral feelings and complex emotions – are acquired rather than innate.[31]

British psychology took a decidedly more somatic turn in the mid-nineteenth century when scientific research yielded new information on the nervous system. Sir Charles Bell's demonstration that nerves are bundles of filaments, performing different functions, and that spinal nerves contain different filaments for motion and sensation,[32] laid the groundwork for subsequent theories of the reflex action. This theory, which essentially states that purely physical causes can trigger sensation, emotions and even thoughts through the work of the nervous system, was influential in early physiological theory in the late 1840s and throughout the mid to late century. It played a key role in the controversial theories of human automatism, first popularized by Thomas Laycock in 1847 when he published an article entitled "On the Automatic Function of the Human Brain" that extended the reflex function from the spinal cord to the powers of the brain

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[31] Both of these strands of psychological thinking continued to operate throughout the nineteenth century, until psychology became more consolidated as a discipline towards the end of the century. Associationist philosophy, also called "sensationalism," was an important precursor to physiological psychology. In the mid-18th century, Hartley was the first to shift the approach from epistemological questions to psychological processes. While famous early nineteenth-century associationists Jeremy Bentham and James Mill Sr. did not pursue Hartley's psychological approach, their emphasis on the connection between sensation and perception, along with a refusal to grant the individual innate properties, formed a large part of the methodological and conceptual inheritance of early psychophysiological theory.

[32] See Janet Oppenheim, *Shattered Nerves*, for more here.

itself, thereby encompassing the entire human organism. Kurt Danziger calls this a seminal moment, writing that the psychophysiological period begins when Laycock, followed by others, "attempted to explore the application of the concept of reflex function to higher levels"[33] ("Problematic Science, 126), rejecting the then-prevailing mind-body dualism which saw the mind as acting independently of the body. The concept of reflex action was influential in physiological psychology in general as the primary mechanism explaining how external forces shape the individual's psychic development through the body.

In an 1860 article entitled "The Physiology of Laughter," Herbert Spencer could therefore ask, "Why do we smile when a child puts on a man's hat? Or what induces us to laugh on reading that the corpulent Gibbon was unable to rise from his knees after making a tender declaration?" (395) and propose that "Such an answer to this question as may be possible, can be rendered only by physiology." Spencer's answer reverses the traditional account for emotions, which had them produced by the soul rather than the physiological body. He extends this logic to cognition as well,[34] re-scripting the methodological approach of associationist philosophy – which would have stopped at the general idea that sensations somehow "excite" ideas and emotions – into the language of psychophysiology, providing an account of human experience based on the workings of the nervous system.

Spencer's explanation for laughter –which he extends to other emotions – reframes psychological processes as largely determined by physiological reactions to

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[33] Danziger further adds that, "The importance of this development should not be under-estimated. For the first time we encounter the conception of universal principles of behavior in a recognizably modern form."

[34] He writes, "Sensations excite ideas and emotions; these in their turns arouse other ideas and emotions; and so on continuously. That is to say, the tension existing in particular nerve-centres, when they yield us certain sensations, ideas or emotions" (396).

external events. Laughter is either produced by a reflex action, the kind of involuntary reaction that occurs when, for example, the foot is tickled, or a more complex process in which the individual feels a "sense of incongruity" that produces a nervous tension for which laughter is the release. In both cases, the process is largely driven by physiological factors, with nerve centers as the primary forces.[35] Spencer even includes involuntary reactions that are not directly linked to external stimulation – a pulsing heart, "the contractions of the stomach during digestion" – the body still charting a reaction to an external event but not linked to sensation directly. Finally, Spencer's theorization of a "nervous excitation" that goes even beyond reflex actions to "those external actions through which we read the feelings of others" shows that he is charting a comprehensive theory of somatic processing that extends from the automatic movements of an involuntary reflex action to the more complicated processes through which feelings are read, which involves both emotional and rational knowledge.

Spencer's language here makes the will either incidental to psychophysiological processes, or overrun by them, as he is at pains to show that his theory can explain psychology without the need to rely on the will – for example, he defines a reflex action as "muscular movements that occur independently of the will, or in spite of it" (398), and specifies that the nervous system acts on the muscular system "with or without the guidance of the will" (398). "The Physiology of Laughter" ultimately suggests a passive body. Nerves are "raised to states of tension" and then "discharge themselves" on

[35] Spencer writes that "while we are totally unable to comprehend how the excitement of certain nerve-centers generate feeling – while, in the production of consciousness by physical agents acting on physical structures, we come to a mystery never to be solved" (396). He nevertheless assumes that nerve-centers cause feeling, and even consciousness, by "physical agents." Although he sometimes uses language that implies a reverse logic in which "emotions and sensations produce bodily movements," his re-scripting of sensations as first going through nerve-centers means that the entire event is a physiological response to an external event.

muscles, or the nervous system, to produce further somatic and psychological states. Consciousness itself is produced by "physical agents acting on physical structures" (399). While "nerve-centers in a state of tension" will "pass on the excitement" to other nerves, there is no sense that the organism itself originates any of this excitement, or that the nerves have any other role in its production other than as conduits for a "stimulus" (400) whose origins are in some environmental event. The body described here is similar to that proposed by other psychophysiological theories of the time: often passive, neither dynamic nor possessing transformative energy.

Spencer's emphasis on psychophysiological processes that could explain human experience without the need for any kind of innate "free will" created a static body. His pursuit of a fully realized mind-body link famously left him fundamentally unable to account for human agency at all. His contemporary, the American psychologist William James, praised Spencer's premise that the essence of mental and bodily life are one, even as he criticized Spencer for making the individual too passive.[36] Like Mill, Spencer subtracts agency from the body – yet at the same time, he is unable to do without some form of agency that can account for the liberal ideals he wants to maintain. Spencer was a champion of a form of evolutionary psychology that assumed British civilization would steadily improve over time. His belief in an upwards progress for civilization relied on a concept of individual agency that is never resolved, or reconciled to the reductive nature of the psychophysiological processes he theorizes.

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[36] As noted by Young, who additionally writes that James critiqued Spencer for overdoing the matter and leaving "no room for any mental structure at all, except that which passively resulted from the storage of impressions received from the outer world in the order of their frequency by fathers and transmitted to their sons"(*Mind*, 194)

My research shows that the two – an individual trapped in a determining, static body, and an attempt to locate the liberal will within physiological processes – are related elements in Victorian psychology. The psychophysiologists I examine imagined a very reductive relationship between body and mind because of the need to avoid relying on traditional concepts of the will that could too easily be conflated with the soul or some other metaphysical explanation for human psychology. However, this resulted in a fundamentally passive explanation that had trouble accounting for human agency. As Victorian ideals of the will were fundamentally incompatible with a physiologically-driven psychology, this left psychologists unable to re-integrate the two.

In what follows, I examine the work of two other proponents of psychophysiological theory, in addition to Spencer: William Carpenter and Alexander Bain. All three produced seminal works, and were leading figures in Victorian psychological debates. William Carpenter, whose popular *Principles of Human Physiology* went through five editions between 1842 and 1855, was an influential voice in developing psychology, and was cited extensively by James, the founding father of American psychology. Bain and Spencer, while less well-known currently than Charles Darwin, were actually more influential than Darwin during the period between 1850 and 1870.[37] Both produced tomes that served as prominent primary textbooks for generations of both British and American psychologists, through the early twentieth century.[38] [39]

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[37] See Dixon, *From Emotions to Passions*, 137.

[38] See Danziger, *Naming the Mind,* 37, and elsewhere.

[39] There were, of course, other psychophysiologists writing in the nineteenth century. I focus on Carpenter, Bain and Spencer because of their close connection with Mill and, through Mill, with a set of ideas surrounding the Victorian individual. Other influential psychophysiological thinkers during this period include Laycock and T.H. Huxley, whose work was received as on the extreme end precisely because they did not work to accommodate this kind of language. Another related thinker was the philosopher George Henry Lewes. Lewes, along with Henry Maudsley, was not as closely linked to Mill but displays some of

All three take a physiological approach to psychology, but are concerned to preserve various elements of Victorian ideology attached to the idea of the will, producing the kind of inert body and mind connection I have been describing. Carpenter, for example, was the other major theorist of automatism in the 1850s, besides Laycock. He proposed that virtually any aspect of the individual's psyche, including thoughts and emotions, could be determined by automatic reflexes. However, he argued that the will could be preserved in individuals through proper education, creating a strange division between people trapped as "thinking automata" and those with a transcending agency. Bain was praised by his contemporaries for discovering a physiological way to account for the will within the mind-body connection. Yet his theories propose an essential original spark of energy that he has trouble integrating into the body, making the source of the will unreliable and, when it is active, requiring the control of determining physiological processes. Spencer's work on evolutionary theory, his signature contribution to psychology, presupposes a forward-evolving agency that his evolutionary theory is unable to account for. His individual's character is completely shaped by the environment, yielding traits that are bequeathed subsequent generations.

Phrenology: Psychophysiology's Problematic Relative

Victorian psychophysiology was not the first attempt to account for liberal agency within a biologically-driven mind-body connection. That honor belonged to the

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the same tensions. Oppenheim notes, regarding Maudsley's 1883 *Body and Will*, "Despite his concerted efforts throughout the volume, he was unable to make the will entirely coterminous with a cluster of nervous centers in the brain." (*Shattered,* 43). Danziger writes that Bain and Spencer, in particular, influenced the end-of-century development of neuroscience through the figure of John Hughlings Jackson, whose work, however, dispensed entirely with the will (*Naming*, 135)

pseudoscience of phrenology. Phrenology, the practice of reading psychic traits based on the physical features of the skull, was so pervasive at mid-century that George Combe's phrenology text *The Constitution of Man* was the fourth most popular book in Britain after the Bible, *Pilgrim's Progress* and *Robinson Crusoe.* Phrenology shared an interest in the interpretation of external form with physiognomy, an earlier semiotic system of character divination that was also popular throughout the nineteenth century. Physiognomy took hold of the British imagination in the late eighteenth century upon the 1783 publication of *Essays on Physiognomy* by the Swiss pastor John Caspar Lavater. Although often used together, the two represented divergent approaches: while phrenology favored a physiological methodology, physiognomy was more idealistic, viewing facial features as directly revealing the soul.[40]

First developed by Franz Joseph Gall in late 18th century, phrenology was purposefully altered when it was introduced to English audiences in the early 1830s. Gall's original version of phrenology presumed an unchanging character defined by physiological traits. When imported to Britain, advocates like Combe added language to

[40] While, as Shuttleworth notes in *Charlotte Brontë and Victorian psychology*, the "two systems clearly overlapped in popular usage" (59), they essentially represented fundamentally different views. Physiognomy, as articulated by Lavater, was theological in nature, positing a relationship between facial features and the soul that could only be properly read with divine inspiration. While the public reception took physiognomy in a more practical direction, often ignoring Lavater's idealism, the practice still importantly diverged from phrenological materialism (Gall, for example, denied the existence of the soul). Although both physiognomy and phrenology connect body and character, physiognomy conceives of facial features as "directly expressing" qualities (60) of an organic whole. Phrenology, on the other hand, was materialist rather than idealist and from the beginning more scientific in its articulation, with Gall positing a correlation between the features of the skull and character based on his theory of cerebral localization. It is therefore phrenology that that was the important precursor to psychophysiology in its connection between body and mind. Despite their differences, phrenology and physiognomy were often used together in character descriptions, or even interchangeably. In *Villette*, for example, a clearly phrenological reading is described as physiognomical. My last chapter shows that both practices played a similar role in the criminology related to late nineteeth-century hereditary theories, and were taken up as such by Wilkie Collins. For more on physiognomy see Shuttleworth and also Sharrona Pearl in *About Faces*.

the doctrine to accommodate key elements of the liberal individual such as the will and, with it, the ability to progress through self-improvement. However, phrenology was seen by many as an overly reductive explanation of character formation.

Phrenology bears a vexed relationship with psychophysiology. On one hand, physiological psychology was heavily indebted to phrenology for its strong claim for cerebral localization. As Robert Young has argued, Gall laid the foundations for empirical research into psychology as a biological science when he "convinced the scientific community once and for all that the brain is the organ of the mind" (*Mind*, 3).[41] Phrenology's contributions were recognized by the psychophysiologists. Bain and Spencer, for example, both initially subscribed to phrenology before moving on to physiological psychology. Once they did so, they continued to applaud phrenology's connection of character to the functions of the brain. However, at the same time they worked to distinguish their theories from phrenological doctrine. In *On the Study of Character*, Bain explains why: phrenology cannot account for the will. Mill ends his section on psychology in *System* with a statement intended to make psychophysiology credible while dissociating any further research from phrenology. He praises the "physiology … of the brain and nervous system" as being in a state of "rapid advance" and "bringing forth such new and interesting results" that phrenology is disproved. He concludes the entire section with the statement that, "whatever may hereafter be found to be the true theory of the subject, phrenology at least is untenable" (596). The pseudoscience presented a problem for the psychophysiologists as they needed to recuperate its language of a mind-body connection for a scientific context, while avoiding

[41] Young even goes so far as to call Gall the first modern empirical psychologist of character and personality (18).

its extreme determinism – particularly as they were themselves promoting a physiological account.

Phrenology thus came to stand at the outskirts of psychophysiology, an uncanny double whose presence often implied troubling questions about agency and the body that continued to haunt that science throughout the century. I take up phrenology as a precursor to psychophysiology that was not only influential in the formulation of that particular science, but also an important Victorian theorization of the mind-body relationship in its own right which explored tensions around body and agency that would come to shape its more reputable relative. Particularly after Combe moved to attach liberal agency to the pseudoscience in order to make it palatable to a British public, phrenology came to represent those tensions in a dramatic fashion. It therefore stood for a reductive mind-body correlation, not only for the psychophysiologists who were attempting to distance themselves from it, but also for the public. Each of the novels I take up here engages with phrenology as well as psychophysiology, often using the former to critique the latter, but fundamentally using them both to help chart the new landscape of the mind-body connection.

From Psychophysiology to Twenty-First-Century Neuroscience

British psychophysiology was largely forgotten for most of the 20th century, and Spencer, Bain and Carpenter remain rather obscure figures compared to their famous contemporary Darwin. In 1982, Danziger titled his chapter contribution to an anthology of nineteenth-century psychology, "Mid-Nineteenth-Century British Psychophysiology: A Neglected Chapter in the History of Psychology." He noted that the lack of empirical

evidence and scientific research methodologies meant that work from this period lost crediblity in the eyes of the developing discipline. Since then, history of psychology books like Nicholas Humphrey's *A History of the Mind* (1992) and Danziger's own *Naming the Mind* (1997) have argued for the relevance of psychophysiology within the development of the discipline. As Danziger and other historians of psychology note, British psychophysiology importantly influenced the development of American psychology.[42] [43] This occurred through their work being used as textbooks, and also directly through the work of James, who read and cited extensively from Victorian psychophysiology.[44]

The development over the last twenty years of cognitive science and neuroscience as fields of interest with ramifications across disciplines triggered a resurgence of interest in nineteenth-century psychology in general. Neuroscientist Oliver Sacks in his New York Times bestselling *The Man Who Mistook His Wife For A Hat* stresses his indebtedness to the late Victorian neurologist Hughlings Jackson. Rylance relates nineteenth-century psychophysiology to the work of not only Sacks but other neuroscientists, including V.S. Ramachandran, Stephen Jay Gould, Richard Dawkins and Gerald Edelman.[45] The nineteenth-century physiological psychology I here examine has

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[42] See also Rylance, Dixon, and Young.

[43] Interestingly, psychophysiology even influenced Freud. Danziger notes that all of Freud's early teachers were committed to the reflex theory, and that "its effects are easily detectable in Freud's own early forays into speculative psychophysiology" (*Naming*, 62). Ultimately, however, the influence of the early psychophysiologists was more important in the development of empiric academic psychology than in the depth psychology of psychoanalysis.

[44] Danziger writes that "Early modern American Psychology took many of its categories from nineteenth-century British textbooks" (*Naming,* 37).

[45] Rylance notes that: "The models and assumptions that Carpenter, Lewes, and James used were, as yet, immature in both detail and overall conception, but they point forward directly to important twentieth-century work." (107). Contemporary neuroscience continues the debate regarding innate versus acquired ideas, the role of physical sensation in producing them, as well as evolutionary models of development. This is all, of course, within a more sophisticated framework for understanding the brain that moves

particular resonance with a current branch of neuroscience that is invested in emotion research, especially that of Antonio Damasio. Damasio, who has related his research extensively to the work of 17th-century philosophers René Descartes and Baruch Spinoza, has also claimed an intellectual heritage from James, whose seminal 1884 article, "What is an Emotion?" argued for the primarily physiological nature of emotions by proposing that emotions occur as a result of bodily changes, triggered by a perception. James' articulation of emotion follows closely upon the psychophysiological processes developed by the British researchers, even though it improves upon their work by being less reductive and more organic.[46]

Thus it is not only James, the acknowledged predecessor, but also his British contemporaries, whose work informs Damasio, a key figure not only in his particular field, but also in affect theory, where his work has been taken up in numerous contexts.[47][48] Damasio's research, which he claims in *Looking for Spinoza* is intended to solve the "mind-body problem" (9), shows the relevance of Victorian psychophysiology to current research. At the same time, his work also shows how twenty-first-century theory is able to move beyond the more simplistic formulations of the nineteenth century,

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beyond the anatomical, mechanical, point-by-point correlation of nineteenth-century theories to more capacious systems, comparing the brain, for example, to the growth systems of a jungle.

[46] James quoted heavily from Carpenter's *Principles of Psychology* in his work, and was influenced by Spencer in his functional psychology. Among his revisions to Victorian psychophysiology, he avoided the hard-line approach to physiological influence, arguing that automatism theory's reflex action didn't make enough room for active energy (Rylance, 101-105).

[47] Papoulias and Callard claim that among the neurologists taken up by affect theory, that "It is the work of Antonio Damasio (1994, 2000, and 2004) and, to a lesser extent, Joseph LeDoux (1996) that cultural theorists most often cite" ("Biology's Gift," 39).

[48] Damasio's discussion of James during a 2007 speech is especially revealing of what has been taken and left from earlier psychophysiology. Here, Damasio praises James for inverting the traditional sequence of events, to make it so that first there is a bodily reaction, then an understanding of what is going on, claiming this has since been entirely borne out by the research. He also supports James' move to interpose the body between the causative stimulus and the experience of emotion, as this provides the essential body and brain connection. Both of these points clearly have their origins in nineteenth-century.psychophysiology. However, Damasio says James left out the idea that there is an appraisal of the stimulus, so perception does not always trigger a body state.

especially in its articulation of a dynamic body. Damasio's signature move is to distinguish emotions from feelings by associating emotions with the body, and feelings with the mind. While emotions are entirely physiological responses to the environment of the organism, feelings are mental images of those bodily processes, so that feelings are "the idea of the body being in a certain way" (85), enabling the brain to understand how to relate the body to its environment. Damasio views the interaction between body and mind as thoroughly entwined with all aspects of consciousness, much like the nineteenth-century psychophysiologists.[49] However, while he similarly proposes that emotions and their ensuing feelings are a reaction to an external stimulus, what he calls an "emotionally competent object" (39), his language is not as deterministic as that of the psychophysiologists. He gives an organic intelligence to emotions: while an emotion is a somatic reaction to an object, it includes a preliminary non-cognitive "appraisal-evaluation phase" (36), which allows the organism to assess an environment, and to respond accordingly and adaptively.[50]

Damasio's distinction of emotions from feelings enables him to theorize an explanation for human experience that moves far beyond the point-by-point correlations of psychophysiology. Feelings, which mark the mind's embodied interface with emotions,[51] are essential for consciousness, and provide agency: they are "able to guide a

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[49] Damasio's language for emotions is capacious and includes cognitive as well as sensory processes. For example, in his co-authored article "We Feel, Therefore We Learn," he provides a comprehensive yet physiologically-based account of human functioning: he argues that learning, attention, memory, motivation, social functioning, even moral decision-making processes are "subsumed within the process of emotion."[49] (7).

[50] This emotional reaction is originally automatic, but can be trained, through education, to correspond to the values of a culture, much in the way Carpenter theorizes, but without ever positing a position in which the subject can step out of physiological processes.

[51] Damasio stresses that feelings are not just a cluster of thoughts with a certain feeling label – feelings are distinguished by the fact that they are always linked to the body's physical reaction (86); at the same time,

deliberate endeavor of self-preservation and assist with making choices" (52). Feelings are even able to provide for "some measure of willful control of the automated emotions" (53). He states that feelings are not "a passive perception or a flash in time," but rather involve "a dynamic engagement of the body" (59), so that there is a repeated back and forth, an interplay between the emotion and the feeling, the body and the mind.[52] This conception of body as organism is lacking in the static language of the psychophysiologists. Damasio's integration of agency into the feeling, physiological body is precisely what makes his research so appealing to affect theorists. He uses his neurological research[53] to show that even the processes of the brain – and its mind – are integrated with the physiological body. This is a kind of agency that comes from organistic wholeness, a will power possible solely within the physiological and neurological processes of the body.

Alternatives in the Victorian Novel

Scientific debates in the nineteenth century were held publicly. They were not quarantined to academic journals, nor were they articulated in specialized language inaccessible to the average reader. Instead, articles on the latest research were published not only in the philosophic *Mind* but also in general periodicals like the popular *The Fortnightly Review, The Contemporary Review*, and even Dickens' *Household Words*.

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they form "the foundational components of our minds" (53) by translating "the ongoing lifestate in the language of the mind" (54)

[52] As the feeling consists of a brain map of the bodily state of emotion, it can engage with that bodily state in what he terms "a sort of reverberative process" (59); this allows the brain to act on the body, and the body on the brain, so that the influence goes both ways. Feelings enable the brain to manage the relationship between the body and its surrounding environment, but the brain is what creates that map in the first place (a process that becomes more complex through education and evolution).

[53] For example, he cites neurological research that shows patients crying and laughing when a certain part of their brain has been triggered. He notes that not only were these patients exhibiting the external symptoms of emotion, but they were also thinking differently in response to the physical stimulus.

Developing discourses in the nascent discipline were considered of general interest to the public. The terms of psychological discourses were well enough known that novelists could mention them in their work and expect the public to understand. For example, Collins makes Carpenter's theory of unconscious cerebration a central element of the unfolding mystery of *The Moonstone*. Victorian psychology of the 1850s to 1880s was an open, cross-disciplinary discourse whose contributors included economists, creative writers, philosophers and policy-makers, as well as scientists.[54]

Each chapter of *Embodying Agency* reflects the cross-disciplinary nature of psychological discourse in the nineteenth century by working with texts both literary and scientific, clustered around a specific aspect of the mind-body debate as it took shape. The Victorian language for the will articulated an agency comprised of self-development, which in turn required autonomy, self-control, and the ability to progress through change and growth, often in order to make a moral choice. The free will versus determinism debate meant that these terms were regularly in play. The psychophysiological research I address tended to reproduce the terms of that debate, proposing a strong mind-body link while preserving a category for an autonomous will that could not be fully explained by the determining influences of the body. The Victorian novelists I take up exhibit this tension between body and agency, but find surprising ways of moving beyond this binary into something that has more in common with the kind of dynamic body envisioned by the recent neurological research of scientists like Damasio, and which is most clearly articulated in relation to ideas of alternate forms of subjectivity in affect theory.

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[54]See Rylance, 7. Laura Otis in *Membranes: Metaphors of Invasion in 19th-Century Literature, Science and Politics* (1999) writes there was no split between science and literature in the nineteenth century; science was actually a variety of literature. See also Anne Stiles in *Neurology and Literature*, regarding the "frequency with which neurological discoveries and methods appeared in the popular press"(6).

The novels in this study show the body as a potentially transformative site. Psychophysiological processes in these novels often constitute a different sort of agency that is not always commensurate with the Victorian will. Through an exploration of both phrenology and physiological psychology, Charlotte Brontë's *Villette* challenges self-help narratives that require an autonomous process of self-formation. In Dickens' *Hard Time*, Louisa Gradgrind is able to experience growth and significant change in her character through psychophysiological processes that are ultimately beyond her control. The education of Maggie Tulliver in Elliot's *The Mill on the Floss* involves a movement from more physiologically-induced psychological processes to a kind of rational emotion that produces a subjective moral will. Collins' *The Legacy of Cain* makes the central character's agency be comprised of several interrelated physiological processes, including hereditary influence and romantic love. To a surprising degree, each of these novels shows agency integrated within psychophysiological processes. The bodies of these characters are finally not static and determining over and against an individual will. Instead, the physiological body becomes dynamic, producing an alternative sort of agency. In each novel, this agency is constituted through a connection between bodies, rather than the autonomy of the individual. This intersubjective agency tends to re-script the other elements aligned with the Victorian will, so that characters are not necessarily assured of forward progress or self-control. Morality, itself, is often understood through connection with other characters, rather than abstract ideals.

I have been describing an articulation of the relationship between body and agency in these novels that amounts to the kind of "structure of feeling" theorized by Raymond Williams, who uses this term to identify an element of social consciousness

which is not reducible to fixed social forms, yet also not apart from them.[55] For Williams, social forms are found in "the range from dominant systems of belief and education to influential systems of explanation and argument" (130). In this case, the form is just this ongoing Victorian debate about free will versus determinism, which then became specified in psychophysiology as a determined and determining body ambivalently related to an autonomous will. Williams' methodological approach helps explain the role literature plays in articulating a new structure of feeling. Works of art and literature are already social, yet also able to represent elements which are not "covered by other formal systems" (133).[56] This makes them particularly able to represent emerging structures of feeling, their "forms and conventions" showing a "social formation of a specific kind which may in turn be seen as the articulation … of structures of feeling which as living processes are much more widely experienced." (133). The more capacious methodological approach of a structure of feeling allows me to avoid simply casting novelists as the voice of public reaction against the developing sciences.[57] This runs the danger of making the novelists somehow stand outside the ideological concerns that shaped scientific developments like psychophyiosology, while at the same time overlooking the special contribution that a work of literature can bring to a topic of scientific discourse. Theories that are often discussed in a strangely impersonal manner in contemporary psychophysiological texts are, in the novels, articulated within lived

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[55] For Williams in *Marxism and Literature (*1977), the concept of a structure of feeling marks the place where ideology meets lived experience, "meanings and values as they are actively lived and felt" (132), which he specifies as "affective elements of consciousness and relationships: not feeling against thought, but thought as felt and feeling as thought: practical consciousness of a present kind, in a living and inter-relating continuity." (132)

[56] Williams writes that structures of feeling have "a special relevance to art and literature, where the true social content is in a significant number of cases of this present and affective kind" (133).

[57] For example, in the introduction to her anthology, *Neurology and Literature*, Anne Stiles argues that novelists essentially represented the voice of the public's reaction to new neurological theories.

experience, placed in relationships between individuals, and individual and society.[58] This necessarily shifts the emphasis from a consideration of the relation between the physiological body and the individual will, to the exploration of the connection between bodies, in a play of mutual influence that often instantiates a different agency, one less individualized and more intersubjective.

A line of scholarship connects the form of the individual to the form of the novel, particularly that of the English novel. Ian Watt's seminal *The Rise of the Novel*, published in 1957, argues that the realist conventions of the novel coincided with the needs and interests of a society that was becoming more rational and individualistic, so that "The novel is the form of literature which most fully reflects this individualist and innovating reorientation" (13). Richard Altick in *Victorian People and Ideas* suggests that the British novel's primary focus was on individual character, with the belief that reason leads to progress. Franco Moretti argues in *The Way of the World* that the novelistic subgenre of the bildungsroman constructs an autonomous, interiorized individuality, which is "the necessary fruit of a culture of self-determination" (16).[59] In *How Novels Think*, Nancy Armstrong argues that the articulation of the individual is at the heart of the ideology of the novel, so that the novel as a genre is defined by its project to create the modern individual. She locates the English novel as the "test case" and places it in a direct line of descent from Lockian tradition of the autonomy and "self-enclosure" of the individual

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[58] Athena Vrettos in *Somatic Fictions* also resists lumping the medical treatise and novel into a unified notion of a cultural text, noting that they may tell overlapping stories, but have their own sets of ideological and aesthetic tensions (13).

[59] Moretti's point is that the bildungsroman works to reconcile the "free individual" to social norms, without recognizing the inherent tensions, and points at the English novelists, in particular, as the most conservative in this regard. The tensions the bildungsroman seeks to resolve lie between individuality and socialization, autonomy and normality, interiority and objectification. Eliot is the notable exemption here for Moretti, as she attempts to represent an "organic culture" in the social world is a web and the individual has no right to autonomy (221).

(11), elsewhere referring to the "self-containment so essential to individualism" (93). Hadley sees the novel as in league with Victorian liberalism, writing that "novels seek not surprisingly to educe the liberal individual through their formal operations" (86). Victorian novels at times registered ambivalence intrinsic to theories of liberal individualism, but Hadley suggests this is not necessarily intentional.

While continuing in this tradition of a fundamental association between the novel and the liberal individual, my research shows a form of subjectivity that foregoes precisely those traits produced by an autonomous will, and which thus diverges from the form of the individual otherwise articulated in the texts I take up. If a will allowing for some measure of autonomy, self-control, self-development, growth and progress was a central component of the liberal individual, these novels show a different sort of agency. The point of its emergence is the structure of feeling I have been describing, which posits a relationship between body and agency that implies a less reified model of subjectivity that is, for example, more open to external influence than the "self-contained" model. The dynamic body represented in these novels tends to entail a different agency, which does not necessarily rely on or even affirm liberal ideals of self-control or moral progress. Instead, characters are importantly embodied, influenced by physiological processes over which they have very little control, and shaped through connections with other bodies – resulting in an intersubjective agency that often challenges the autonomy of the individual.

The novels I here take up comprise both realistic and non-realist genres. Current scholarship on sensation fiction, especially that of Collins, has shown that genre's exploration of contemporary psychology encouraged a subversion of Victorian ideas of

the self.[60] My work, however, shows that the relationship between body and agency was explored across genres, along with ways of conceiving of agency that did not necessarily support self-determination. This is a departure from Armstrong, who argues that while gothic novels affirmed forms of subjectivity that exceeded or undermined the individual, the realist novel worked to delegitimize, and exclude, those forms from their narratives. My research shows that sustained explorations of non-individualized agency were not relegated to gothic fiction, nor were they necessarily written out of the realist novels I take up. To the degree that the novel imagines a dynamic body, something other than the autonomous will is represented, so that realism can also represent a form of subjectivity that does not always confirm that of the liberal individual. In order to explain how a focus on the dynamic body model produces a different sort of agency than the one assumed by dominant cultural ideology, I want to turn to current affect theory. By doing so, I do not want to impose current ideas on a specifically Victorian theorization of the somatic self. However, I do want to suggest that these Victorian novels have a particular resonance with the developing affect theory of the twenty-first century. This also takes up the mind-body connection, imagining a relationship between an emphasis on the physiological processes of the body (even if the term "body" here is more expansive), and alternative forms of subjectivity.

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[60] Jenny Bourne Taylor, for example, notes that "Collins' fiction works at the uneven limits of Victorian ideology by manipulating and interweaving an extraordinarily wide range of contemporary psychological writings, drawing on aspects of those theories to explore social and psychic contradictions…" (2). Mascioratte and Cvetkovich relate current theories of affect to the emotional work of sensation fiction, as part of a reading of the political work of the form. Mascioratte in particular examines how Collins' affective representation reveals the construction of the individual, writing that sensation fiction's use of affect shows "the excesses of legal and political production of subjectivity in an individualistic capitalistic economy" (93). However, both Mascioratte and Cvetkovich relate a 20th-century theorization of affect to nineteenth-century literature, missing an opportunity to examine how the Victorians themselves took up the physiological body and related it to the various elements that comprised the idea of the individual.

Affect Theory's Similar Investments

Twenty-first century affect theory shares similar investments in exploring the relationship between body and alternate forms of subjectivity. While there are currently several strands of affect theory, a unifying feature is the importance of the role of the body in producing subjectivity. Like the pscyhophysiologists, affect theorists conceive of bodily impact as a foundational element of human experience. However, where physiological psychology envisioned a strict cause-and-effect, static correlation from external event either outside or within the body, to a psychological change, affect theory posits free-floating intensities that hover on the surface of the body, and connect it to other bodies. These intensities are pointedly not cognitive events, nor even necessarily emotional (although they often are), and they serve as the motivating factors in action and human experience. In their introduction to *The Affect Theory Reader*, Melissa Gregg and Gregory J. Seigworth write that affect is in many ways synonymous with "force or forces of encounter, although it doesn't have to be especially forceful," while at the same time, "the real powers of affect" are "affect as potential: a body's capacity to affect and to be affected" (2). The body becomes re-defined as anything capable of generating this kind of affective force, a dynamic interface with the world. In this way, I see affect theory as having more in common with the kind of physiological play I locate in the Victorian novels, than with the actual psychophysiological theories that informed those representations.[61]

[61] Furthermore, affect theory tends to be on the "humanities" side of the disciplinary divide, and its relation to current scientific research is productive in a way that resonates somewhat with the novelistic treatment of psychophysiology in the nineteenth century. Massumi addresses the current disciplinary divide in the introduction to *Parables of the Virtual* (2002), writing that "thefts from science for the humanities" (19) necessarily entail a "kind of shameless poaching from science" (20). This involves moving beyond simply taking up, piecemeal, a scientific concept like "an exotic pet" and adding it to whatever project is already

Much of affect theory draws from contemporary work in the neurosciences, biology and psychology, with a primary investment in undoing the Cartesian mind-body divide.[62] The two texts often cited as seminal moments in the development of affect theory – Eve Sedgwick and Adam Frank's "Shame in the Cybernetic Fold" and Brian Massumi's "The Autonomy of Affect" – both make explicit use of scientific research.[63] For Massumi, affect is intensity, which is "embodied in purely autonomic reactions" that occur at the surface of the body, most directly in the skin, "at its interface with things" (25), registered as impulses, impingements, resonating between a body and its environment. Depth reactions, on the other hand, include emotions,[64] cognitions, but even other autonomic actions like changes in heartbeat and breathing, as all are "associated with expectation" (25), and thus consciousness. Affect is entirely non-conscious, and is always going on in the body, so that "the body is radically open, absorbing impulses faster than they can be perceived" (28). Citing physiological research that shows this gap

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underway. Yet at the same time, this is not to make the humanities more scientific, merely applying science to the humanities, but to make a difference in the humanities through these kinds of "respectful betrayals" (20). In their article "Biology's Gift," Papoulias and Callard argue that current affect theory, while drawing heavily from Damasio and others, tends to foreground the "inherent dynamism of the body" in a way that exceeds the kind of agency even Damasio gives it. While Papoulias and Callard see this as a problem, I think is exactly the kind of "respectful betrayal" Massumi talks about. By re-imagining the body as dynamically open and transformative, affect theorists are able to identify productive new ways to articulate subjectivity.

[62] According to Papoulias and Callard, "affect theory draws upon various propositions from the composite discipline of neuroscience, not the least the claim that the Cartesian distinction between body and mind is inadequate in the face of findings concerning the origins of perception, thinking, and behavior in general." ("Biology's Gift")

[63] Sedgwick turns to Silvan Tomkin's affect research, and Massumi draws on neurological experiments and research. The work of the neurologist Damasio is especially prominent in affect theory (Papoulias and Callard, 33). I want to suggest a historical resonance here – extending Damasio's admitted inheritance of nineteenth-century psychology (and, as I argued, through James to the British psychphysiologists) – to current affect theory.

[64] While Massumi draws a clear line separating affect and emotions, some branches of affect theory do not make such a distinction. I have focused on Massumi because his theorization of affect as intensity, a non-conscious physiological process, resonates well with the way psychophysiological theories are approached in the novels I take up. However, Kathy Woodward makes the good point in *Statistical Panic* that emotion and affect (as intensity) stand in "dialectical relationship to each other" (25), and the novels I examine tend to often – although not always – relate what I am locating as affect with particular emotions, such as sympathy or love.

between impulse and perception, Massumi explores what he terms "the free will doctrine" and argues that, "Will and consciousness are subtractive. They are limitative, derived functions that reduce a complexity too rich to be functionally expressed" (29). The affective is therefore a field of energy and vitality at the surface of the body, radically open and autonomous as long as it is not "captured" by formed perceptions, cognitions and emotions.[65] Here, will is equated with inhibition, limiting the agency of the body, yet at the same time it is not external to the body's organic processes.[66] Like Damasio, Massumi makes use of a concept of "resonation" between different levels of bodily functions to explain how the process works, avoiding a claim that the will is somehow produced apart from the body, or by rational ideas alone.

For Massumi, affect is agency. It is not reducible to the body, but it is integrated into the body.[67] This flips the schema of the nineteenth-century "free will controversy," which pitted body against agency. Here, body *is* agency, and the will, as Massumi says, is "subtractive"; it limits agency into something that can be acted upon or expressed. While the pscyhophysiologists did not fully integrate the will into the body, Massumi's theory re-articulates the mind-body problem by re-envisioning the role of the will. The will does not need to be protected from the body, because the body itself is the site of an agency that is eventually formed into an action through the will. However, because

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[65]Massumi writes that "For out of the pressing crowd an individual action or expression will emerge and be registered consciously. One "wills" it to emerge, to be qualified, to take on sociolinguistic meaning, to enter linear action-reaction circuits, to become a content of one's life – by dint of inhibition." (31).

[66] For Massumi,"What we think of as 'free,' 'higher' functions, such as volition, are apparently being performed by autonomic, bodily reactions occurring in the brain but outside consciousness" – cognition is required, but secondary: "the formation of a volition is necessarily accompanied and aided by cognitive functions." (29).

[67] Massumi uses the concept of the virtual body to define play of affect in the body before it is realized. The actual body is what is realized. "What is being termed affect in this essay is precisely this two-sidedness, the simultaneous participation of the virtual in the actual and the actual in the virtual, as one arises from and returns to the other. Affect is this two sidedness as seen from the side of the actual thing, as couched in its perceptions and cognitions." (35). Affect unites both potential and actual agency.

volition is first an automatic process, and secondarily cognitive, the will never entails a step back from the body, and in fact needs affect to provide agency. Shifting the locus of agency to affect makes the body "radically open," full of vitality and possibility.

Affect theorists following in Massumi's wake have continued this language of a powerfully dynamic body. For example, Lorne Bertelsen and Andrew Murphie combine Massumi's theorization of impersonal intensity while recruiting Damasio's physiological research of emotion and feeling as relating self to world, in order to argue that:

> Affect always carries subjectivities elsewhere, to new territories and a dismantling of the old, ever toward the infinite possibilities and powers contained within our bodies, our friends (and our foes?), and their ecological contexts … We live affective transitions, the sensations of events as they come into being. ("Affect of Everyday Infinities,"153)

This re-articulation of subjectivity enables affect theory to dislocate other formulations. According to this line of thinking, there is always something about affect that exceeds established forms of subjectivity. The language Gregg and Seigworth use to describe affect in their introduction – as "at once impersonal and personal" also "sub-personal, pre-personal," challenging dichotomies of "subject/object, human/nonhuman, identity, structure, background/foreground, and so forth" (4) – shows the disruptive effects of the liminal position of affective influence on structures of subjectivity.

Current affect theory shows that re-envisioning the relationship between body and agency – or, in Massumi's articulation, envisioning the body *as* agency – is a powerful move. I want to argue that something similar occurs when Victorian novelists imagine newly physiological body and agency in their works. Without claiming that they explore new forms of subjectivity as radically as twenty-first century affect theorists, I suggest that they contemplate to some degree the "open" play of bodily influence and agency that

characterizes today's affect theory. Therefore, in the chapters that follow I will be using the term "affect" advisedly, to refer this kind of bodily agency that, in the case of the Victorians, exceeded the category of the liberal individual.

Chapter Plan

The first chapter examines phrenology as a crystallization of the concerns regarding embodiment that were so prevalent within the larger discussion of psychophysiology, to which phrenology was an important precursor. I place Charlotte Brontë's *Villette* in context with Combe's popular phrenology handbook, the *Constitution of Man*. Combe, I argue, attempted to re-package the reductive elements of phrenology for a Victorian audience by attaching to it a self-help narrative akin to that which Smiles espouses. This allowed Combe to account for a liberal will within a determining mind-body connection.

While phrenology is present in nearly all of Brontë's works, it plays a particularly prominent role in *Villette*, Brontë's last novel. Phrenological readings of the central character, Lucy, not only prove accurate but enable her to progress through the narrative. However, while Brontë has Lucy attempt to use phrenology to participate in the kind of self-help ideology espoused by Combe, she ultimately divorces it from the language of self-formation and with that, the idea of the liberal will. Instead, phrenology enables Lucy to possess a different sort of agency, one that proceeds from an intersubjective connection with another character based on their shared phrenological traits. This stands in contrast to the novel's treatment of psychophysiology proper, which Lucy rejects precisely because she is unable to locate within herself an independent will strong enough to

counter the determinist influences of her body. While Brontë therefore turns from psychophysiology to locate affective agency in phrenology, the rest of the novels I take up relate the science and its less scientific forebear in a different fashion. In their work, phrenology stands at the outer limits, invoking a reductivist understanding of the relationship between body and psychological traits that must be rejected. The remaining three novels I treat instead find a dynamic body in their revisions to psychophysiological theory, perhaps reflecting the increasing dominance of the scientific approach as the nineteenth century progressed.

Chapter two moves to Charles Dickens' *Hard* Times, published in the midst of a controversy about determinism that had theories of human automatism at its center. These theories, which marked the beginning of psychophysiology as a science, were widely perceived as reducing human experience to a physiological event. To protect liberal agency, William Carpenter explicitly accounted for the will in his influential *Principles of Human Physiology*. His attempt to locate agency within the automatic reflexes of the body, however, leaves him with a central division between persons who are determined and those whose will triumphs over the body.

Dickens' famous critique of the mechanizing effects of industrialization in *Hard Times* relies on depicting certain characters as automatons and critiquing the new psychophysiology by comparing it to phrenology. Yet the novel fundamentally ties psychology to the physical body, and only resolves the tension between physiological determination and agency by creating privileged characters who are exceptionally disembodied, in a manner that replicates Carpenter's division. However, within this stratification, Dickens, unlike Carpenter, examines the operation of agency for characters

who are nonetheless largely determined by psychophysiological processes. While Louisa never fully progresses out of being an automaton into a self-defined and rational will, she is able to change and grow through an affective exchange with another character, altering her personality through non-cognitive means. Although this kind of affective power is ultimately contained by the fact that Sissy maintains a privileged, disembodied status, Dickens' exploration of alternative forms of agency for Louisa and also members of the towns' circus relies on just this kind of refiguring of the relationship between body and subjectivity.

I next turn to a fuller attempt to integrate the will into the psychophysiological make-up of the individual in the work of Alexander Bain and George Eliot. Mill praised Bain as providing the physiological answer to the problem of phrenology, that is, of locating the will in the body. In *The Senses and the Intellect*, Bain theorized agency as a sort of spontaneous energy occurring through the nervous system. I show that Bain attempts this integration as an answer to phrenology's inability to account for agency. This move is interestingly replicated in Eliot's work, where what is figured as an all-determining phrenological influence in the gothic novella *The Lifted Veil* is converted to a psychophysiological process in the realist novel *The Mill on the Floss* that accounts for the will.

Bain has trouble fully integrating agency into the body. While he comes up with a theory to locate the will in somatic terms, its role is ambiguous, so that the body itself is a static site that sometimes acts upon, or is influenced by, an element that serves as the will. This happens at both the level of higher functions and automatic processes. Bain describes the body acting on a "spark" that serves as the will, linking even as he separates

the two. Bain also keeps the will separate from emotions and thoughts, so that they influence each other, but are not integrated. *The Mill on the Floss*, on the other hand, shows a number of intersubjective affective interchanges that powerfully work to shape character development and relationships between characters through non-cognitive means. These affective forces are integrated with intentional, conscious thought processes when the heroine Maggie undergoes an education in which she develops a kind of rational emotion that owes much to Eliot's familiarity with the philosophy of Baruch Spinoza. Although Eliot finally requires the mind to reel affective influence in, she shows a surprisingly thorough integration of body and agency, where Maggie's rational will is finally created in and through an affective process. Key for Eliot, Maggie achieves in this way a moral understanding, but one that is inherently subjective.

My last chapter explores an end-of-century debate regarding evolutionary psychology and the possibility of hereditary transmission of acquired characteristics. Herbert Spencer was an avid proponent of this theory and worked in his *Principles of Psychology* to distinguish this brand of determinism from that of phrenology. However, Spencer is unable to account for the agency he assumes to be at the heart of evolutionary progress.

Wilkie Collins' sensation novel *The Legacy of Cain* explores a similar internal contradiction between Victorian ideals of agency and evolutionary psychology. Collins' central character, Eunice, discovers she has inherited some elements of her mother's personality, a psychophysiological process which is figured as uncontrollable affective reactions to persons in her environment. Eunice attempts to control this through a moral will, but is unable to do so, resulting in a fragmented self as she flips between different

personalities. The novel exploits this tension by tying inherited characteristics to phrenology, so that when Eunice changes identity she undermines her own physicality as well. *Legacy* finally suggests a fundamental incompatibility between articulations of the liberal individual as possessing a self-defining will and the kind of static yet fully determining body envisioned by Spencer. The evolutionary process is radically uncontained in Eunice, providing an affective agency that is not consciously deployed. Eunice is only able to gain some measure of cohesion through her love for her husband, which love is figured as an affective influence strong enough to ward off that of her mother's. This novel rewrites the Victorian individual as an incoherent, trans-subjective, identity forged in mutual influence with others, relational, and lacking a central, self-determined will.

Chapter One:

Phrenology in *Villette*: Lucy Snow's Escape from Self-Help

Charlotte Brontë frequently turned to phrenology in her novels.[1] *The Professor* makes so much use of detailed phrenological language in describing characters that scholars theorize Brontë must have had a phrenological manual open as she wrote the book.[2] Phrenological terms and concepts are scattered throughout *Jane Eyre*; Jane's opinions of Rochester, for example, are shaped by her phrenological reading of his head early in their relationship.[3] Brontë's last novel, *Villette*, published in 1853, only rarely uses specialized phrenological terms, and the phrenological readings of and by characters are more vague. Yet phrenology here plays perhaps the most important role in any of Brontë's novels: phrenological readings come at key points in *Villette* to ensure the forward progress of the heroine, Lucy Snow. In this way, the novel reflects the Victorian use of phrenology for self-improvement. However, *Villette* ultimately turns to phrenology to represent a form of agency that challenges the ideology of the liberal will.

Phrenology was viewed as espousing a crude determinism by many Victorians. The pseudo-science's claims to define psychic states by the shape of the cranium seemed

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[1]According to Nicholas Dames,"In her work phrenology achieves its greatest visibility in nineteenth-century fiction, although Balzac and Eliot, among others, will incorporate the century's most famous pseudoscience into their fiction." ("Clinical Novel," 360) Brontë 's letters show that she visited a phrenologist herself and was impressed with the reading, judging it to be 'a sort of miracle – like—like—like as the very life itself" (as quoted by Sally Shuttleworth in *Charlotte Brontë and Victorian Psychology,* 66)

[2] Brontë compares a character to Pope Alexander the sixth, whose skull was used as an example in phrenological books published by Johan Spurzheim, George Combe, and John Elliotson. The Brontë family owned a copy of Elliotson's book, *Human Physiology*. See Taylor and Shuttleworth, *Embodied Selves*, for more here.

[3] We are told that Rochester's forehead "showed a solid enough mass of intellectual organs, but an abrupt deficiency where the suave sign of benevolence should have risen" (112).

to reduce the individual to nothing but phrenological "bumps." William Hazlitt complains of phrenology in his 1829 article "Phrenological Fallacies":

> "shall we suppose this marked and universal difference which runs through the whole frame and through every thought and action of life, to proceed from a particular bump or excrescence of the skull, and not to be inherent in the texture and substance of the principle (whatever it may be) which feels, and thinks, at all times, and in all circumstances?" (249)

Discussing what he terms "general character," Hazlitt here makes clear that his opposition to phrenology lies in the fact that it claims character can be reduced to a bump on the skull rather than whatever it is that motivates thought and feeling, but which can likely be called agency.

Yet at the same time phrenology was wildly popular in Victorian Britain. By mid nineteenth century, George Combe's phrenology textbook *The Constitution of Man* (first published in 1828 with a revised edition in 1835) was the fourth most popular book in England. In 1847, total sales of *Constitution* exceeded 80,500, and by 1860, more than 100,000 in Britian and 200,000 in America. By comparison, Darwin's *Origin of Species* had only sold 50,000 copies by end of century.[4] Phrenological societies were formed throughout Britian and Ireland, and phrenological busts and casts were sold everywhere.[5]

While scholars note a variety of reasons for phrenology's popularity,[6] I want to focus here on its function as a practice of self-help. As promoted by Combe and others who followed his lead, phrenology promised growth, development and progress – not

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[4] Among others, see Roger Cooter here, who writes in *The Cultural Meaning and the Meaning of Popular Science* that phrenology was "the nineteenth century's most popular and popularized "science" and one of its most fecund in the period preceding Darwin" (2).

[5] According to John Van Wyhe in *Phrenology and the Origins of Victorian Scientific Naturalism,* there were more than 30 phrenological societies across Britain and Ireland by the 1830s. By 1836, H.C. Watson estimates there to be 5000 active phrenologists in Britain, with thousands more as passive (102).

[6] Cooter discusses how phrenology usefully "surfaces" character for an age in which the concerns of humanists and romantic rebels (regarding, for example, the metaphysical soul) don't work with an industrial capitalist society (118).

only for the individual who adhered to its tenets, but for British society as a whole. In its espousal of self-control in character formation, this articulation of phrenology had much in common with Samuel Smiles' bestseller, *Self-Help*. *Constitution* assumes, in its focus on self-improvement, the operation of a form of agency that is similar to the kind of free will doctrine *Self-Help* explicitly promotes as a cornerstone of Victorian values. This kind of agency – linked to self-determination, progress, upwards mobility, and moral perfection – sits oddly with the essentially static nature of the "faculties" ascribed to the phrenological head. These faculties, which included any aspect of human nature, were typically categorized into emotional, intellectual, and instinctive character traits. They were linked to various bumps on the skull, ostensibly representing the size of the physical "organ" located within the brain, inside the skull. For most major phrenological theorists, including Combe, these organs could be improved upon, but were generally assumed to remain static in size.

Phrenology thus enacts in a more blatant and crude form the central tensions at the heart of the debates surrounding determinism in Victorian psychophysiology.[7] Both phrenology and more authentically scientific strands of psychophysiology foreground the body in theorizing the formation of character without recourse to traditional ideals of a soul with innate and unchanging qualities. But they are beset by the same problem of over-determination and a difficulty accounting for agency, and were both perceived as jeopardizing the will through an insistent connection between body and character. Thomas Carlyle put phrenology and physiology together as "ideologies of

[7] See Rick Rylance, who writes that phrenology "argued for a determining relation between anatomy and character (and therefore destiny), and phrenology was seen as 'gross materialism' by many" (*Victorian Psychology*, 97). According to Rylance, both phrenology and nineteenth-century psychophysiology propose "an over-insistent, determining correlation between anatomy and behavior, which rendered human agency somewhat passive or even irrelevant" (101).

education" that produced the general mechanization of his age that existed in opposition to the "primary, unmodified forces and energies of man" (*Signs,* 68). Phrenology was seen as an extreme position of the physiologist's focus on the body in explaining the psychological phenomena of human character.[8] As a result, a careful repudiation by the psychophysiologists was required to establish their own research. As I show in subsequent chapters, this made phrenology a sort of uncanny double to psychophysiology, with Alexander Bain, Herbert Spencer and even William Carpenter working especially hard to both distance themselves from, and correct, phrenology's inability to account for liberal agency, while still retaining the mind-body connection.

Brontë's *Villette* engages with phrenology and physiological psychology, particularly in its representation of the heroine, Lucy Snowe, who uses the language of both to describe her experiences. The novel foregrounds the mind-body problem inherent in both approaches to psychology; each is shown to create a deterministic relationship between Lucy's body and her character. However, psychophysiology and phrenology have a different narrative trajectory in the novel. While *Villette* is a modern novel in that Lucy is thoroughly embodied, its treatment of psychophysiology presents an unreconciled tension between a physiologically determining body that needs to be controlled, and Lucy's inability to produce an individual will equal to the task. *Villette* is more invested in phrenology as an explanation for human experience. I want to examine the possibility that Brontë saw in phrenology a different kind of articulation of agency, one that is more intersubjective than individualistic. Phrenology in *Villette* explores the paradox inherent in the self-help narrative that Combe had so assiduously cultivated

[8] Rylance writes, "Phrenology, therefore, argued for a determining relation between anatomy and character (and therefore destiny), and phrenology was seen as 'gross materialism' by many" (98).

around the practice, and its connection between character and physiology. However, Brontë's treatment of phrenology enables a different kind of agency precisely through its conflation between body and character, showing an affective resonance between individuals that subverts the idea of an isolated, autonomous subjectivity that must therefore shape itself.

Phrenology and the Self-Help Narrative

Constitution's popularity is explained in part by the fact that it was received as a kind of self-help book. Phrenology appealed across the social class system because it championed the progress of the individual. Combe's book was as likely to be found on the shelves of lower-class workers as elite members of the intellectual vanguard such as John Stuart Mill and George Henry Lewes (who nevertheless voiced reservations about the practice).[9]

Constitution functioned as a prescription for daily living, preaching moral virtues along with free trade, work, discipline, and individualism. British phrenologists celebrated not only the knowledge of self that it afforded, but what the individual could do with this knowledge: use it to shape their character to enable social and personal advancement.[10] As a system for understanding the self, phrenology's attraction was precisely that it promoted a simplistic application of the developing theories of the mind-

[9] For more, see Cooter, who also notes the unselfconscious use of phrenology among even the self-educated, giving the example of an Irish beggar who claimed clemency in a Dublin court in 1832 for whacking a miser on his faculty of Benevolence (136).

[10] Phrenologists celebrated "liberal faith in the right of the individual to fulfill his or her own destiny and not be made to submit either to the intellectual or physical force of others" (Cooter, 144). See also Shuttleworth and Van Wyhe here.

body connection that could be used by anyone to gain better self-understanding.[11] Rick Rylance argues that phrenology's influence has to be looked at in context of an uncertain theoretical domain, in which it was valued as a specific, "thoroughly imagined attempt to see the functional identity of physical and mental states" (*Victorian Psychology*,101). Phrenology was, fundamentally, the first system to make a strong claim for the brain being the organ of the mind. Originally developed by Franz Joseph Gall (1758-1828), whose "cranioscopic" method was the first empirical study of cerebral localization, phrenology laid the foundation for further empirical research into the relation between the function of the mind and the brain, as well as the relationship between the brain and the environment.[12] Gall's articulation, however, was not easily compatible with British liberalism. For example, he rejected the idea of the moral perfectibility of the human species, claiming that moral growth was limited by the brain's organization (16).

While Gall gave public lectures from 1796 on and was one of the most famous men in Europe, his ideas were not widely known England until they were imported in 1814 by Johann Kaspar Spurzheim (1776-1832).[13] Finding little was known about the system, Spurzheim elevated himself from Gall's former assistant to his co-collaborator, and published his own books on the system. By the time Combe published his work, Gall's system, while retaining its essential elements, was known as phrenology, a

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[11] According to Rylance, "A patina of intellectual seriousness was harnessed to a personalized, future-predicting, and character-divining appeal similar to that of astrology. At the same time, the intellectually serious side of phrenology (that engaged with cerebral localization) was reinforced by its outlaw reputation in the medical establishment and among the stuffy pundits of respectable knowledge who lambasted it routinely in the great periodicals" (98).

[12] For more here, see Robert Young in *Mind, Brain and Adaptation in the Nineteenth Century*, who argues that, while speculation that the brain is the organ of the mind is as old as the 4th century, no one before Gall had argued for the dependence of the mind on the brain in such detail (90).

[13] According to Van Wyhe, Spurzheim arrived in England "with broken English and a box of skulls to try his own Gall-like lecture tour" (29). Spurzheim was the first to publish the image of a head to illustrate the craniographic map of organs. Gall's followers had produced images of skulls, often representing actual specimens (34).

naturalized philosophy that, especially in the first half of the century, sought to claim scientific legitimacy.[14] Scholars credit Combe with making phrenology the pop psychology of the nineteenth century. For example, Cooter writes that "Combe transforms phrenology from an arcane theory of the brain and character to that of a socially respectable scientific vehicle of 'progressive' ideas on social life and organization" (101). A central element of Combe's success was his effort to dress phrenology in a language that would make it compatible with Victorian liberalism.[15] His *Constitution* posits phrenology as the key to understanding human nature, thus ensuring progress.

One of Combe's strongest advocates was Samuel Smiles, who in 1859 would publish his own best-seller, *Self-Help.* John Van Wyhe writes that Smiles greatly admired Combe, wrote to him to help promote his first book, and reproduced Combean themes in all his works.[16] Smiles even went on lecture tours where he gave speeches promoting self-help as modeled on Combean philosophy. *Self-Help*'s argument that the individual could, with enough effort and self-control, ensure his own moral and social development, therefore contributing also to the progress of British civilization as a whole, clearly draws on Combe's philosophy in *Constitution*. It is revealing that Smiles, who championed the "freedom of the will" (193) as an essential component of his doctrines,[17] promoted the

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[14] While Combe was the most famous propagandist, he was joined by many others, including the eminent physiologist Dr. John Elliotson, whose *Human Physiology* contains an extensive defense and application of phrenology to psychology.

[15] Sally Shuttleworth writes that Combe worked to reverse "the apparently determinist component of phrenology" (63) by arguing that understanding the laws of phrenology would allow people to advance to their full potential.

[16] Van Wyhe writes that "the author most responsible for the popularization of Combean self-help was the Scottish author Samuel Smiles" (*Phrenology*, 189)

[17] Smiles, for example, wrote that "Whatever theoretical conclusions logicians may have formed as to the freedom of the will, each individual feels that practically he is free to choose between good and evil" (193).

apostle of a form of pseudo-psychology so reductive that psychophysiologists worked to distance themselves from it, precisely because it was seen to threaten the will. This shows Combe's success in re-packaging the static system originally developed by Gall into a self-help creed that espoused the dominant ideals of Victorian liberalism. Many advocates of phrenology, including Smiles, simply chose to overlook the fact that the central physiological proposition – that of determining faculties etched in the skull – had remained unchanged, and that Combe himself was not an advocate of the concept of free will. This was at least in part a product of Combe's use of the kind of liberalist language typically associated with the Victorian will. Although Combe does not make specific provisions for the idea of an autonomous will in *Constitution*, the language he uses for the individual assumes the kind of self-directing, autonomous agency needed for moral and social growth.[18]

Central to Combe's system in *Constitution* is a belief in the forward progress and moral perfectibility of civilization. Reasoning that man is a "progressive being" and that "history exhibits the human race only in a state of progress towards the full development of its powers" (11), Combe argues that "the Creator" has given man the ability to "discover his own nature." Combe asserts that a better understanding of man's constitution will allow him to attain both happiness and moral perfection. Conversely, human suffering is caused by ignorance of the laws of the organic, moral and intellectual constitution. Therefore much of *Constitution* is devoted to arguing for the necessity of education: by understanding the terms of his constitution, man is able to grow and cultivate various character traits. A section entitled "Application of the Natural Laws to

[18] Van Wyhe writes, "in Combe's version of phrenology, free will had a role (despite his statements to the contrary)" (60), as individuals could choose to develop their moral faculties.

the Practical Arrangements of Life," for example, urges "every individual" to devote "so many hours a day" to the exercise of their nervous system, the employment of their intellect, and the "cultivation and gratification of our moral and religious sentiments" (115). Combe's language of growth, progress, and education relies on an idea of a Victorian will such as Smiles would later explicitly link to such projects. His prescription assumes an autonomous power of intentional self-formation, and of self-control, that is strong enough to mold character into the prescribed moral codes.

Despite Combe's attempt to widen his reach by insisting that his philosophy does not rely on phrenology (and so can be adopted even by those skeptical of the practice), the pseudoscience shapes *Constitution* throughout. Combe claims phrenology is the "best supported mental philosophy which has hitherto been taught" (xi), and uses it to ground his own understanding of psychology. For example, he touts phrenology as the key to understanding the "animal, moral and intellectual powers," and helping to adapt man to his external circumstance. He also uses the phrenological faculties to describe various character traits. Phrenology provides understanding of human nature because, unlike all other systems, it posits a clear connection between body and mind:

> "the organs of the mind can be seen and felt, and their size estimated,—and the mental manifestations also that accompany them can be observed, in an unlimited number of instances,—so that, assuming the existence of organs, it is clear that a far higher degree of certainty in regard to the natural endowments of the mind may be attained by studying them, than by any means previously applied" (57).

Combe's explanation of the phrenological chart of the human faculties is very detailed, and describes each faculty's uses and abuses. The chart itself forms a part of the book's appeal as a self-help guide. A reader could, for example, look up "Inhabitiveness" and discover "*Uses:* It produces the desire of permanence in place.—*Abuses:* Aversion

to move abroad" (55). This language was easily learned by the public, and once correlated to the head charts, used to judge not only their own characters, but those of others. If a better understanding of one's constitution was required for individual and social progress, phrenology provided the key to that process. Unlike Gall, who is convinced that the phrenological constitution is the last word on a human's moral capacities, Combe stresses the potential for self-formation.

What Combe leaves implied in his general philosophy,[19] he spells out in his exposition of the faculties of phrenology: the moral order of the universe is imprinted on human bodies, and the more humans understand their organization, and cultivate the requisite faculties, the more perfected they become. Combe's system requires a harmonious balance between the faculties, so that the moral faculties dominate over the intellectual and the animal propensities.[20] For example, the faculty of Cautiousness is an animal propensity, and useful for self-protection. When acting alone, Cautiousness leads to "self-preservation and self-gratification" (75). However, when not "in harmony with the dictates of the moral sentiments," these traits become "sources of innumerable evils" (75). Any faculty (even moral), if acting alone, and not in harmony with the others, can therefore slide from the "use" category into "abuse."

Phrenology therefore invites self-regulation as most individuals possess faculties that are either "deficient" or "excessive in size," throwing off the harmonious balance

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[19] For example, he argues that a man who "cultivates his intellect and higher sentiments, and who habitually obeys the precepts of Christianity" will not only become morally and intellectually happy, but gain a knowledge of physical and organic laws, and so place "himself in harmony with the order of creation, attaining the highest degree of perfection" and happiness (20).

[20] Combe writes that "To realize happiness, the whole faculties must be gratified harmoniously, or at least the gratification of one or more of them must not offend the dictates or desires of any of the others." (65)

with other faculties, and requiring proper management.[21] This occurs in the form of exercise.[22] In addition to the targeted daily exercise described above, Combe recommends a kind of group therapy. At one point, Combe imagines a "party of thoroughly practical phrenologists" who are "able to meet in the perfect knowledge of each other's qualities." They are able to "gently remove" the barriers between them caused by Cautiousness, and foster in each other a "directing sway" to "Benevolence, Veneration, Conscientiousness, and Intellect" so that the "higher principles of the mind operate with a delightful vivacity unknown to those deficient in those qualities" (117). This implies, first of all, a need to control and regulate certain portions of one's character, and then positions phrenology as a very practical method to promote the advancement, growth and change, not only of the individual, but of the community.

Combe's advocacy of self-formation sits uneasily alongside the essentially static nature of the organs and their respective faculties. Even as he encourages exercise and education, his language implies a limited ability to fundamentally change these qualities, such as when he describes "inferior characters, in whom the moral and intellectual organs are deficient" (209), who are only able to temporarily improve their organs by being exposed to external influences that "excite these organs to unwonted vivacity" (209)**.** Combe's language becomes even more static when he describes the actual practice of the phrenological reading of heads. *Constitution* includes drawings of the heads of famous figures, along with commentary on those heads. Among them is the head of Pope

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[21] As Combe observes,"in most individuals one or several of the organs are so deficient, or so excessive, in size, in proportion to the others, that their perceptions of duty will differ from the highest standards" (65).
[22] As Combe explains, "The best mode of increasing the strength and energy of any organ is to exercise it regularly and judiciously, according to the laws of its constitution. The brain is the organ of the mind; different parts of it manifest distinct faculties; and the power of manifestation in regard to each is proportionate, *cæteris paribus,* to the size and activity of the organ" (149).

Alexander VI, no figure of esteem for the protestant Victorians.[23] Combe quotes a phrenological reading by Spurzheim at length:

> "This cerebral organization," says Dr Spurzheim, "is despicable in the eyes of a phrenologist. The animal organs compose by far its greater portion … Such a head is unfit for employment of a superior kind, and never gives birth to sentiments of humanity."(183).

This language is determinist and dissonant with the liberal emphasis on character formation that Combe carefully cultivates in *Constitution*.

Yet Combe's advocacy of using phrenology to make proper judgments in selecting marriage partners and work positions follows Spurzheim's determinism. He recommends against marriage between persons of phrenologically-diverging heads, claiming this would not only doom the marriage but produce damaged offspring. His reasoning for why some persons fail at their chosen professions reduces the problem to the size of the brain, and the quality of its phrenological organs: "First, if the brain be too small … the mind will not act with sufficient energy to make an impression. Secondly, some particular organs indispensably requisite to success, very small." (272).[24] He also advocates the use of phrenology for choosing employees, especially "confidential assistants" to prevent being robbed, cheated, or possibly even murdered as phrenology "affords facilities for discovering, prior to experience, the natural talents and dispositions of individuals" (275). Choosing careers and employees based on the shape of the skull creates a reductive process that is at odds with the self-help ideology Combe also attaches to his doctrine.

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[23] His head is sharply contrasted to that of "Philip Melancthon, the illustrious reformer and associate of Luther" (180).

[24] Combe gives the example of a lawyer lacking in the organs of "Language, or Causality": "deficiency in the first rendering him incapable of ready utterance, and in the second, destitute of that intuitive sagacity, which sees at a glance the bearing of the facts and principles founded on by his adversary, and estimates the just inferences that follow." (272)

Constitution therefore contains a finally unreconciled tension between liberal ideals of progress, moral growth and change – all necessitating the Victorian will – and the essentially static nature of the organs of the phrenological head. While Combe's signature contribution is to soften Gall's hard determinism, he is unable to offer more than a minimal amount of self-formation within the defined boundaries of the various categories of psychical traits.[25] The actual practice of phrenology, after all, was meant to enable judgment of character; radically changing or transforming faculties would undermine the entire process. Thus, while phrenology was, according to Cooter, viewed as a "celebration of individualism" that was "simply the means of making the most of one's mental and social lot in life" (Cooter, 269), Cooter's research also shows public reception was ambivalent. He notes that phrenology appealed to the Owenite socialists (234), who favored determinist explanations of individual and social growth, but gladly adopted Combe's language of progress. On the other hand, the feminist and community organizer Catherine Barmby wrote in an 1826 article published in the *Co-operative Magazine* that phrenology makes man "necessarily what he is" (228), with his character created for him by conformation, and no self-directing power to choose.

Villette's Affective Phrenology

Many scholars view *Villette* as a more radical exploration of themes first developed in *Jane Eyre.* Both novels take the form of a bildungsroman following the journey of a solitary woman who must fend for herself and who finds some measure of success and stability by the novel's end. However, the situation is more dire for Lucy

[25] I here differ in my reading of Combe with Cooter and Shuttleworth, who both focus more on Combe's language of liberalism and progress, rather than on the tension this creates with phrenology's physiological explanation of that process.

Snowe, the heroine of *Villette*: she is bereft entirely of her family, and rather than finding employment at an English manor house, she moves to the kingdom of Labassecour,[26] whose French culture is entirely alien. Where Jane works as a governess in the domestic sphere, Lucy works as a teacher in a boarding school, effectively entering the public sphere. The novels finish on significantly different notes: while Jane becomes happily married to her Mr. Rochester, the ending of *Villette* strongly hints that Lucy's betrothed perishes at sea, leaving Lucy alone to run her own school.

Furthermore, while the madwoman in *Jane Eyre* is contained to the attic, *Villette* presents us with a heroine who is prone to depression and monomania. In their seminal study, Sandra Gilbert and Susan Gubar call *Villette* Brontë 's "most overtly and despairingly feminist novel" (399), contrasting it to *Jane Eyre* on this point.[27] They write that Lucy Snowe progresses throughout the novel into a greater ownership of her own story, and independence. Following Gilbert and Gubar's work, much criticism of the novel has focused on a feminist assessment of Lucy's advancement into an autonomous independence. However, Amanda Anderson has more recently argued[28] against a reading that sees *Villette* as "the narrative of Lucy's hard-earned bid for independence" (52), where she gains an "autonomy" that enables her to stand "against the forms of power that otherwise constrain and condition the individual." (53). I want to argue for a reading of the novel that takes more seriously Lucy's language at the end when she writes, of her lover, that she is now living "by his affection, having his worth by intellect, and his goodness by heart." Attention to Brontë's purposeful use of phrenology suggests that

[26] Belgium. Villette was inspired by events in Brontë 's life. She went to Belgium to teach, and worked there in a pensionnat (boarding school).
[27] *The Madwoman in the Attic*
[28] *The Powers of Distance*

Lucy is not independent at the end of the novel, as she does not possess the self-directed will of the liberal individual. However, she does gain a new kind of agency, one that is only possible through a shared subjectivity, and enabled by phrenology. Phrenology in *Villette* effectively divorces the language of self-help from the phrenological self, in the process putting pressure on the pseudoscience's focus on bodily determination to suggest an alternative mode of character formation that is facilitated by shared agency rather than willed control.

Brontë's treatment of phrenology in *Villette* forms a significant contribution to contemporary mind-body debates occasioned by the developing physiological explanation of psychology, whether linked to phrenology or physiology as such. While Brontë – along with her sisters – has traditionally been viewed as a kind of natural genius, more recent scholarship has established that she was very much aware of the psychological discourse of her time.[29] The family patriarch, the Rev. Patrick Brontë, kept an annotated copy of Thomas John Graham's *Domestic Medicine* (1826) in the Brontë family library.[30] The library also contained a copy of John Elliotson's *Human Physiology* (in its fifth edition in the 1840s). This medical tome combined contemporary physiology with the pseudosciences of mesmerism and phrenology, of which Elliotson was an avid advocate. Brontë is also known to have regularly read *Blackwood's Edinburgh Magazine*, a journal which published essays on the latest developments in psychology and

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[29] For Brontë 's use of psychophysiology, see Linda Austin, *Nostalgia in Transition*, Athena Vrettos, *Somatic Bodies*, and Jane Wood, *Passion and Pathology*. On phrenology in Brontë's work, see Nicholas Dames, *Amnesiac Selves*, and Nathan R. Elliott, "Phrenology and the Visual Stereotype in Charlotte Brontë's *Villette*." Sally Shuttleworth's *Charlotte Brontë and Victorian Psychology* was a ground breaking work that was the first to place Brontë within such a context, and examines her writing in relation to both psychophysiology and phrenology.

[30] Shuttleworth notes that the Reverend Brontë "records not only his family's physical ailments and the remedies employed, but also his preoccupation with the threat of nervous disease and insanity" (11).

phrenology. Furthermore, Brontë had, according to Athena Vrettos, an informed interest in "mesmerism and debates about body and mind" (58), as well as exposure to prevailing theories of neurosis through her own consultations for recurring nervous symptoms.[31] Vrettos is here drawing from Elisabeth Gaskell's biography as Brontë herself never recorded her debt to scientific theory. Sally Shuttleworth in *Charlotte Brontë and Victorian Psychology* surmises that it was unlikely she had extensive reading in scientific and medical texts. However, her novels are so conversant with the psychological ideas of her time that scholarship over the last ten years has examined her treatment of contemporary mental illnesses such as hypochondria, monomania, and specifically female illnesses such as nervousness and hysteria, in addition to phrenology.[32]

Psychophysiology and phrenology shape the way *Villette*'s narrator thinks about herself and others, and are represented by Lucy's two romantic interests. The first section of the novel is devoted to Lucy's unrequited love for a practicing physician, John Graham. As Shuttleworth argues, Brontë likely named Dr. John after the Thomas John Graham whose *Domestic Medicine* was so important to the Brontë household. In any case, Dr. John's advice to Lucy bears with the dictates of *Domestic Medicine*, which links much of human experience to various somatic conditions. While Graham's tome, published in 1826, preceded the development of psychophysiology as a full-fledged movement, much of his work espouses a physiologically-oriented psychology. In a section on exercise, for example, he traces a direct line from lack of exercise to a "train of nervous and hypochondriacal symptoms"(383), by way of a weakening of the body in

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[31] According to Vrettos, "interest in mesmerism and popular debates about body and mind suggest that Brontë was both caught up in and skeptical about the popular enthusiasm for questions of scientific rationalism, mesmerism, and spiritualism around mid-century" (*Somatic Bodies,* 58).
[32] See Austen, Wood and Vrettos, as well as Beth Torgerson, *Reading the Brontë Body.*

general, especially the stomach.[33] Lucy's second romantic interest, M. Paul, is linked with phrenology as he provides explicit phrenological readings of Lucy that ultimately figure in both her personal and professional development.[34]

Villette turns to both physiological psychology and phrenology in its representation of the mind-body connection. However, where Lucy is highly ambivalent about a psychophysiological explanation for her nature, she does not question phrenology, and uses it herself in her reading of others. *Villette* ultimately locates in physiological psychology an opposition between body and agency that is created by the idea of the individual will, and the possibility of self-formation. Phrenology, on the other hand, shows a dynamic connection between bodies and characters made possible through a different sort of agency, and ultimately militates against the self-help narrative.

Lucy slips in and out of the language of physiological psychology to explain her experience.[35] When she is left alone at the pensionnat during a vacation period, she experiences what she terms a "peculiarly agonizing depression" (228) that she describes in psychophysiological terms.[36] The language Lucy uses here in relation to her depression implies she has little control over the physiological processes of her body, and that she is helplessly subject to their influence on her psychological well-being. She tells herself, "I really believe my nerves are getting overstretched: my mind has suffered somewhat too

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[33] Graham writes, "by exercise, the spirits are enlivened, as well as the body refreshed; and it is an undeniable truth that where it is neglected, the strength and energy of the whole machine gradually fall to decay, and a morbid irritability is induced, ... The natural powers of the stomach and intestines sustain particular injury, … the whole animal economy is disordered ; and a train of nervous and hypochondriacal symptoms, together with gout, apoplexy, palsy, glandular obstructions, and many other complaints incident to inactive, indolent, and sedentary persons, come on" (383).

[34] Torgerson in *Reading* notes a similar dynamic in which Dr. John represents medicine and M. Paul representes phrenology (76). However, she does not examine the interaction between the two diverging perspectives.

[35] For more here, see Shuttleworth, especially on page 234.

[36] She writes, for example, that "my nervous system could hardly support what it had for many days and nights to undergo in that huge, empty house" (226).

much; a malady is growing upon it – what shall I do? How shall I keep well?" (228). Unable to keep well, Lucy descends into an illness that extends from her nervous condition to a fever. After deliriously wandering the streets of Villette, she falls senseless to the ground. Upon regaining consciousness, Lucy surmises that her soul may have attempted to leave her body, "deeming that her painful union with matter was at last dissolved" (235), but was forced to become bound "once more, all shuddering and unwilling, to that poor frame, cold and wasted, of whose companionship she was grown more than weary" (235). Lucy reveals here a fundamental ambivalence about psychophysiology as an explanation for her experience. While she encodes herself with the language of that science, she finishes by stressing a distinction between her soul and "its painful union with matter." Lucy does not deny the mind-body connection, but creates an opposition between her soul and its "cold" frame.

That tension between body and soul comes to define Lucy's experience in an even more dramatic fashion when she tells Dr. John that she has seen a nun in the attic of the pensionnat. While Lucy fears she may have seen a ghost (following the local legend of a nun haunting the place after having been buried alive), Dr. John suggests that the entire episode "is all a matter of the nerves" (319), calling the nun a "spectral illusion resulting from long-continued mental conflict" (320). Lucy's response shows her fear at the idea of being determined by her nerves:

> "You think then," I said with secret horror, "she came out of my brain, and is now gone in there, and may glide out again at an hour and a day when I look not for her?" (320)

Although the language is that of a specter gliding about a house, Lucy's use of the term "brain" reveals that what is most troubling is the idea that she is unable to control her

psychophysiological processes, that her brain will somehow reproduce the image of the nun without her power to intervene. Lucy's struggle with determinist physiology is further highlighted by the fact that Dr. John is able to read her agitation through her facial features, and gain knowledge of her experience, despite her desire keep it from him.[37] Dr. John is twice able to use his professional expertise to read Lucy this way, stressing the fact that she is unable to control her body; to the trained professional eye, it communicates with or without her sanction.[38]

Lucy's painful and even fearful experiences are sharply contrasted with the airily optimistic language Dr. John uses in response to her request for a cure for the visions of the nun. Dr. John turns to the ideology of self-help, telling her, "Happiness is the cure—a cheerful mind the preventive: cultivate both" (320). To Lucy, however, this sounds like "mockery." Her ensuing comments questioning how it is possible to "cultivate" happiness put a point on the matter.[39] Dr. John has just told her she is determined by her nerves, her brain, her "mental conflict," yet here he cheerfully assumes she can somehow cultivate her happiness apart from her body – that she has a power of self-formation that comes with an individual will not determined by these physiological processes. Yet Dr. John's explanation for her psychological experiences leaves no room for the will.

Lucy finally rejects Dr. John's attempt to locate her within a static, determining body. After the second time she sees the nun, he tells her again that "it was all optical

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[37] He tells her that his ability to look on her "from a professional point of view" enables him to "read, perhaps, all you would conceal – in your eye, which is curiously vivid and restless; in your cheek, which the blood has forsaken, in your hand, which you cannot steady" (318).

[38] Shuttleworth similarly notes Lucy's discomfort with Dr John's medical gaze: "Lucy's resistance to Dr. John stems less from the actual content of his medical verdicts, than from his reduction of her to a bundle of symptoms, open to his professional definition and control" (234).

[39] Lucy here famously ruminates to herself, "No mockery in this world ever sounds to me so hollow as that of being told to *cultivate* happiness. What does such advice mean? Happiness is not a potato, to be planted in mould, and tilled with manure" (321).

illusion – nervous malady," and Lucy notes: "Not one bit did I believe him; but I dared not contradict; doctors are so self-opinionated, so immovable in their dry, materialist views." (328). Lucy's use of the term "materialist" to critique Dr. John's profession is an informed assessment of the physiological psychology he represents. This term was used by popular critics of kind of mind-body correlation that Dr. John generally suggests, and that the psychophysiologists succeeding Thomas John Graham made even more explicit. Following this comment, the materialist approach to psychology is immediately challenged in the form of an actress Lucy and Dr. John watch perform the role of Vashti.[40] This actress is "scarcely a substance herself" and Lucy writes, "let all materialists draw nigh and look on" (329). The climax of her performance comes when she is fighting death, a scene rendered in the novel as a battle between the will and the physical body, with Lucy describing the death scene:

> when, as it seemed, an inordinate will, convulsing a perishing mortal frame, bent it to battle with doom and death … *would* see, *would* breathe, *would* live, up to, within, well nigh *beyond* the moment when death says to all sense and all being – "Thus far and no farther!" (332)

At this moment, the theatre suddenly erupts in a fire and the play is suspended, leaving Vashti caught in a moment between life and death, forever locked in a battle between her "inordinate will" and her body. Vashti refuses to be reduced to her corporeal status. This is a remarkable scene. The narrative doesn't deny the mind-body connection, but it simply refuses to entirely reduce Vashti's experience, and her will, to the determining forces of her body. Instead, it dramatizes exactly the kind of connected, yet oppositional relationship between individual will and, here, dying body that Dr. John's theories

[40] The Vashti performance is often read as a particularly enlightening moment for Lucy. Reading the scene within another context, Lynne Voskuill writes, "Vashti is also a liberator for Lucy Snowe…She opens Lucy to her own inner life, passions that cannot be contained by conventional cultural patterns of women's identity" (437)

promote. It is no coincidence that Lucy is watching this scene with Dr. John, who evinces little sympathy for Vashti.

By the end of the novel, Lucy discovers that the nun is really the disguised lover of one of the students. This further challenges Dr. John's assessment, as he had explicitly told her that the nun was not a thief or burglar (320), refusing to believe that what Lucy saw was not produced by her nervous condition. The way the text completely undermines Dr. John and leaves Vashti suspended in her battle between matter and soul – as a response to Dr. John's materialism – suggests Brontë does not see in the kind of physiological psychology that Dr. John represents a viable formulation of the self. In both Lucy's experience of depression and the nun and Vashti scenes, the mind-body connection is not actually denied. What is a problem, however, is the attached language of self-help. To be a healthy, functioning person – or at least one who doesn't see ghostly nuns – Lucy needs to be able to control her body. This creates a divisive opposition between determining somatic processes and the individual will that Lucy is unable to resolve because, as Brontë resolutely shows, she is unable to step outside her body. Despite her flights of fancy, Lucy's lived experience does not present her with the option of turning to an autonomous will in order to define herself. This makes Dr. John's claim that Lucy needs only to make the right kind of effort in order to cure herself, particularly cruel. It also creates a "materialist" conception of a dry, cold body determining the individual, with no explanation for agency. Phrenology shows something different.[41]

Certainly, phrenology is also figured in *Villette* as a deterministic physiological practice; it even more forcefully connects the individual to body – in this case, the shape

[41] My reading here differs from Shuttleworth, who stresses instead Brontë's treatment of physiological psychology as her significant intervention in the debates regarding embodiment, rather than phrenology.

of the skull. Yet, as I will show, Brontë locates in phrenology a different kind of agency, one that is possible in and through bodily connections. This agency confounds the language of individual will attached to phrenology by self-help ideology. Brontë moves Lucy from a Combean self-help narrative to one of mutual investment and intersubjective agency, made possible through the dynamic mind-body relationship she locates in phrenology.

As with psychophysiology, Lucy is conversant with the language of phrenology and applies it to both herself and others. For example, she summarily fixes the character of an insolent maid, Rosine, by commenting that she "was a young lady in whose skull the organs of reverence and reserve were not largely developed" (426). Here, Lucy uses phrenology in the manner prescribed by Combe. She also uses it to judge the character of M. Paul, writing that "… nor could I be blind to certain vigorous aspects of his physiognomy …. The deep, intent keenness of his eye, the power of his forehead --- pale, broad, full – the mobility of his most flexible mouth" (290). The discussion of M. Paul's "broad, full" forehead, especially, denotes Lucy's phrenological evaluation. In these cases, Lucy's use of phrenology to judge character assumes a body with shapes on the skull denoting faculties that don't change.

Phrenology initially operates in *Villette* in a manner similar to Combe's advocacy of its use for self-help, seeming to grant to Lucy the kind of power of self-formation and progress in both character and career development that Combe attached to the practice. When Lucy arrives alone and without references to Madame Beck's establishment, she is accepted based on a phrenological reading by M. Paul.[42] The scene is a textbook

[42] Dames describes this scene as "Perhaps the most famous instance of body-reading in the English novel" (*Amnesiac Selves*, 82)

application of Combe's recommendation to use phrenology to evaluate prospective employees. Uncertain about whether she should hire Lucy, Madame Beck appeals to her cousin, M. Paul, to use his skills in phrenological reading to evaluate Lucy's character, and help her decide whether she should hire her.[43] M. Paul does so, his attitude "seeming to say that he meant to see through me, and that a veil would be no veil for him" (131). After his reading, he tells Madame Beck that he recommends hiring Lucy. The phrenological reading thus serves a key role in Lucy's progress towards a successful professional career. Originally hired as a nanny, Lucy is quickly promoted to the position of English teacher at Madame Beck's boarding school, and by the end of the novel, she is running her own school. The originary source of this upwardly-mobile career trajectory lies thus in phrenology, resonating not only with Combe's recommendation of phrenology to hire employees, but also with his injunction to use it as a gauge to taking on the proper career.

Furthermore, phrenology enables Lucy to discover new faculties that she was previously unaware she possessed, creating the possibility of growth.[44] M. Paul repeatedly returns to his original phrenological reading throughout the narrative, each time revealing more of what he read in Lucy's skull – and thereby, her character.[45] The first time he explicitly refers to back to his reading of Lucy occurs when he persuades her to take a role in a school vaudeville play. In his project of persuading her to take up a suddenly-vacated role, he tells her, "I read your skull, that night you came; I see your

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[43] Mme. Beck tells M. Paul: "I want your opinion. We know your skill in physiognomy; use it now. Read that countenance" (131). M. Paul performs the reading using phrenology.

[44] Importantly, these faculties are "new" because Lucy was previously unaware she possessed them. Lucy does not suddenly grow new faculties.

[45] Dames also stresses the importance of M. Paul's use of phrenology, writing that "the reading he produces is validated by the narrative itself, as it is in almost every case" (*Amnesiac Selves*, 83).

moyens: play you can; play you must" (201). Importantly, M. Paul is here telling Lucy about a faculty of which she was previously unaware. Lucy performs well and afterwards, she reports that she feels a "keen relish for dramatic expression" and now desires to "cherish and exercise this new-found faculty" (210). What is notable about this episode is not Lucy's theatrical abilities but rather that they reveal a new part of her personality. When she steps out of the dressing-room in her new guise, she immediately shows a more spirited character. Whereas she previously had let M. Paul lock her in the attic to memorize her lines, and passively allowed her nemesis Zelie St. Pierre to mock her, now a sneer from the French instructress causes Lucy to taunt her in return – timid, shy Lucy is suddenly fiery, assertive and combative. Once onstage, Lucy largely improvises her role, again drawing on a more spirited part of her nature: "feeling the right power come – the spring demanded gush and rise inwardly" (209). Thanks to phrenology, Lucy has discovered a previously unexercised faculty, again following Combe's precepts in character formation.

Lucy even attempts to use phrenology to repress and control herself in the manner Combe advocates. When Dr. John promises to write her, Lucy steels herself to avoid becoming over-excited by a letter from a man she is in love with but knows does not love her in return by telling herself:

> if he *should* write, what then? Do you meditate pleasure in replying? Ah, fool! I warn you! Brief be your answer. Hope no delight of heart—no indulgence of intellect: grant no expansion to feeling—give holiday to no single faculty. (229)

Lucy's prescription for maintaining self-control follows Combe's advice in vigilantly examining herself to make sure no phrenological faculty gains excessive influence,

thereby upsetting the careful balance between faculties that Combe advocated as essential to moral and advantageous well-being.

Phrenology, then, seems to grant Lucy all the benefits associated with the Victorian concept of free will that powered the self-help language Combe grafted onto the practice, enabling personal and professional progress and growth through self-directed effort. However, the novel's treatment of phrenology places it within a deterministic language that trumps Lucy's own will, highlighting the inherent contradiction in her phrenological judgment of others and her desire to use phrenology to promote self-formation. For example, although M. Paul's original reading of Lucy enables her to not only find employment in Villette but launches her into a successful career in education, this reading is contextualized by language that stresses the determining force of fate rather than Lucy's initiative. Lucy had arrived in Villette with no position, no friends and not even an idea where to stay – this would seem to be an opportune moment for self-definition. However, Lucy soon loses directions to an English-speaking inn and, finding herself completely lost, stumbles upon Madame Beck's pensionnat. The text tells us: "Providence said, 'Stop here; this is *your* inn.' Fate took me in her strong hand; mastered my will; directed my actions: I rung the door-bell." (129). The phrenological reading takes place soon after Lucy is admitted to the pensionnat. The language here, stressing the role of providence and fate in directing Lucy's actions, even, as she says, "mastering my will," creates a context that is at odds with the kind of Smilesian self-help narrative promoted by Combes. Rather than experiencing this moment as a pinnacle of self-determination, Lucy is instead directed by another force, her individual will completely irrelevant. This creates an ambiguous context for the actual

phrenological reading, putting the determinist elements at play– such as the fact that Lucy is being judged by the shape of her skull, by a "vague arbiter of [her] destiny" – in conflict with the self-help narrative in which the reading launches her on her upwardly-mobile career trajectory.[46]

The dissonance between phrenology and self-help is made even more explicit when Lucy, now established at the pensionnat, begins making plans for starting her own school. During a walk in the pensionnat's garden, Lucy wonders, "how I should make some advance in life, take another step towards an independent position" (433) and further remonstrates with herself: "Courage, Lucy Snow! With self-denial and economy now, and a steady exertion by-and-by, an object in life need not fail you." This kind of thinking is an explicit engagement in self-help ideology, especially with the Combean assertion that proper understanding of the phrenological faculties would ensure the progress of civilization as a whole and the upward mobility of the individual in particular.[47]

However, Lucy is not allowed to proceed in this rhetoric of self-help. She is interrupted in her musings by M. Paul, who uses phrenology to assert a likeness between the two of them. M. Paul explicitly cites physical features, asking Lucy, "Do you observe that your forehead is shaped like mine – that your eyes are cut like mine?" (440), and

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[46] Heather Glen, in *Charlotte Brontë: The Imagination in History*, also notes the strong language of Providence and Fate in this scene, suggesting that the two are even conceived of as separate forces, both working to impact Lucy (263).

[47] Emily Heady also argues that *Villette* problematizes the language of the self-help, writing in "Genre and Self-Narration" that "Brontë allows Lucy to slip in and out of self-improvement rhetoric" (345). She also reads this particular scene as an abortive attempt on Lucy's part to claim that language as her own, describing Lucy's statements here as an "ambitious, Smilesean speech that Lucy makes when she formulates her plan for independence" (355). However, Heady argues that Lucy manages to work against "Smilesean self-interest" by a turn to altruism. My reading is importantly different here, as I argue that Lucy is able to escape the self-help narrative only by the influence of M. Paul, through which she develops an intersubjective agency.

telling Lucy that she only needs to "look in the glass" (440) – presumably, at the shape of her skull – to be convinced that they are alike. This starkly shifts the language in the narrative from that of self-formation to physiological determinism, in terms even stronger than those invoked by Dr. John to tell Lucy that her nervous constitution created mental hallucinations. Here, M. Paul is claiming not only a knowledge of Lucy's character but also asserting a rapport between two otherwise secretive individuals – entirely based on the shape of their skulls. Soon after, he begins teaching Lucy subjects of which she lacks knowledge, in preparation for an eventual teaching position. The novel ends with Lucy indeed running her own school – however, she did not attain this position through "self-denial and economy." Instead, M. Paul sets up the establishment without her knowledge, then, surprising her, takes her there and hands it to her as a gift. Lucy does not obtain her professional advancement and independence through her own means. The moment in the garden underscores this by showing Lucy moving from one narrative to another: she moves from a rhetoric of self-definition and self-formation to shared subjectivity and influence. Phrenology facilitates this process by providing M. Paul the means to assert their mutual affinity.

Brontë's use of phrenology in *Villette*, I argue, does not promote Victorian self-help narratives relying on free will, but rather explores alternate forms of agency.[48] While Lucy attempts to use phrenology to control herself, she is not only prevented from being able to do so, but enabled to grow through processes that have nothing to do with self-formation. Phrenology ultimately works precisely against the dictates of repression inherent in Combe's articulation. This can be seen regarding the new faculty that

[48] Here I differ significantly from Shuttleworth, who sees the role of phrenology in Villette as contributing to ideologies of self-help in that "if Lucy is to succeed, it must be by a process of self-control, subduing her 'evil' propensities, and encouraging the good" (223).

phrenology helps Lucy see she (already) possesses. When M. Paul tells Lucy that, based on his reading of her skull, she has the ability to participate in the school play, Lucy does so, showing a passionate spirit she typically represses. However, the next day Lucy remembers her position in life – that of a middle-class single woman who must work for a living – and decides that, although she had discovered in herself "a keen relish for dramatic expression," the spirited nature it shows her capable of possessing would not do "for a mere looker-on at life" (210). She resolves to repress this "new-found faculty"(210) for the rest of her life.[49] However, phrenology here works to keep Lucy from this kind of repressive self-formation when M. Paul repeatedly reminds Lucy of this phrenological faculty, in effect stressing the determining nature of her body over her own efforts at self-control. Referring back to his original reading, M. Paul twice reminds her that she possesses this faculty. The first time, he tells her "Other people in the house see you pass, and think that a colourless shadow has gone by. As for me, I scrutinized your face once, and it sufficed" (224) – he sees in her a "flame," one that, he says, shone brightly on the stage. The second time, Lucy is sitting dejected at a dinner party after Dr. John calls her a shadow when M. Paul suddenly sneaks up and whispers in her ear that although she may seem sad and submissive, she is not; she has a flame in her soul and lightning in her eyes. Lucy here finally owns the faculty, turning to M. Paul and saying "Yes, I have a flame in my soul, and I must have it!" (390). Phrenology here works against the self-control inherent in self-help by stressing the determining nature of the physiological faculties. As M. Paul reminds Lucy, her efforts at self-control cannot change her body. Rather, Lucy is able to grow into a new kind of agency, which is the

[49] Lucy says that "I put them by, and fastened them in with a lock that neither Time nor Temptation has since picked" (210).

power to own character traits that challenge the social expectations for a woman in her place, by recognizing the mind-body link as more powerful than her own will.

Phrenology in *Villette* also grants Lucy an agency that works against the autonomy inherent in the self-help creed Combe sought to attach to it, while still functioning to move her forward in her life. This is again developed through her relationship with M. Paul. At that moment in the garden with M. Paul, when he tells her "your forehead is shaped like mine" (440) as proof of an "affinity" and "rapport" between the two, he further tells Lucy that "you were born under my star" (440), and that as a result their "destinies are difficult to disentangle" (440). M. Paul here identifies an "affinity" and "rapport" between their individual personalities that can be attributed to a similar rapport between their bodies. This kind of language suggests an affective resonance[50] that implies a shared subjectivity created by their shared physiological traits.[51] The context for this conversation – a conversation about the nun in which Lucy and M. Paul share their separate stories about having seen her, only reaffirms their connection when the nun suddenly appears and, as Lucy recounts:

> he raised his head suddenly; I made the same movement in the same instant; we both looked to one point … With a sort of angry rush – close, close past our faces – swept swiftly the very NUN herself! Never had I seen her so clearly. (441)

At this point in the narrative, Lucy and M. Paul are unsure whether the nun is, as M. Paul puts it, "flesh and blood, or something that remains when blood is dried and flesh is wasted" (441). The language here – the two see the nun together because they "made the same movement in the same instant" both looking at the same point at the same time –

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[50] M. Paul adds that they also have similarly "cut" eyes and "tones of voice."

[51] John Hughes' "The Affective World of Charlotte Brontë's Villette" (2000) also locates an important role for affect in the novel. However, Hughes primarily focuses on affect as emotion. I am talking about a primarily physiological exchange that allows for a play of bodily influences that impacts subjectivity.

suggests that a kind of unity of vision and even bodily movement, has enabled them to share this experience. This follows on M. Paul's assertion that the traits of their skulls signify similar, shared, and enmeshed, personalities. Meeting Lucy at her point of deepest isolation, phrenology works to reverse the alienation she felt as a result of Dr. John's psychophysiological assessment that she was hallucinating by granting her the possibility of a shared subjectivity.

Read in this context, M. Paul's involvement in Lucy's educational and professional accomplishments becomes not a sign of a diminished ability to enact her will, but rather a sign of shared agency. For example, Lucy describes herself as "intellectually imperfect" (453) because she is not a voracious reader. However, hearing M. Paul expound on a topic, Lucy learns in a different way: "his mind was indeed my library … his tomes of thought were collyrium to the spirit's eyes; over their contents, inward sight grew clear and strong" (453). M. Paul's knowledge, shared with Lucy in a way she can appreciate, becomes something she now possesses, herself, her vision altered as a result. By the time M. Paul and Lucy are sitting together in the house he has bought for her to run as her own pensionnat, Lucy can accept it coming from his hand, because it is a sign of their mutual assimilation, writing that "far as had progressed, and near as was achieved our minds' and affections' assimilation" (563). At the end of this episode – the last time M. Paul and Lucy will be together – the language circles back around to M. Paul's phrenological readings. Lucy recalls the time in the garden: "He deemed me born under his star: he seemed to have spread it over me like a banner. Now, penetrated by with his influence, and living by his affection, having his worth by intellect, and his goodness by heart – I preferred him above all humanity." (564).

In the relationship between M. Paul and Lucy, Brontë presents an alternative to Victorian self-help formulas that rely on the autonomous will of the individual. Combe's prescriptions focused on the need for individuals to engage in daily acts of self-control, such as exercising their various faculties. Brontë's Lucy does improve and progress through life. However, this is not a solitary endeavor, but rather produced through her relationship with M. Paul. What phrenology offers to Lucy is an integration with another so complete that she is able to possess, through that person, the faculties she lacks, whether intellectual or emotional. The phrenological self is not undermined – Lucy never refuses M. Paul's readings – but rather expanded. The phrenological self is no longer a unit defined by a single body, but can be comprised of plural subjectivities who, together, possess the needed faculties.

In representing phrenology in this way, Brontë is taking advantage of an element of the practice that tended to run counter to the individualist orientation Combe gave it: the fact that unlike the more scientific endeavors that were becoming increasingly specialized, phrenology could be appropriated by a lay person, and used in everyday relationships.[52] While Combe repeatedly stresses the use of phrenology to critically evaluate others according to his moral lexicon – for example, a prospective employee or marriage partner – Brontë shows phrenology can be used to assert connected likeness between bodies. M. Paul and Lucy do initially judge each other's character through their readings, but phrenology comes to operate in a different way once M. Paul asserts, and Lucy accepts, a phrenological correlation. Here I read differently than Nicholas Dames,

[52] As Cooter and others show, phrenology did have its own specialized language and system, that set apart its practitioners. However, it could be learned by the general public. Phrenologists attempted to make their practice scientifically valid in the first half of the nineteenth century, but never fully gained that credibility. From mid-century on, it was viewed as a pop psychology.

who argues in *Amnesiac Selves* (2001) that phrenology promotes a primarily detached, "clinical" visual gaze in the novel.[53] The practice of phrenology in *Villette* may be specular and primarily rational, but, as the scene with the nun shows, the reading enables Lucy and M. Paul to recognize a "rapport" between their bodies. A kind of dynamic affective interplay ensues that is enabled by phrenology's very fully realized connection between mind and body. The affective resonance entails an intersubjective agency that marks an important distinction with the trained medical gaze of Dr. John, which is more specular and clinical in the sense that Dames describes.

In the novel's treatment, this gives to phrenology a dynamic quality that is lacking to psychophysiology. While the subsequent novels I examine find a kind of affective energy in psychophysiological processes, that language is more often applied to phrenology in *Villette*. Dr. John may be able to use physiological psychology to detect in Lucy a certain "raised" look that means she has seen the nun, but he is unable to use that knowledge effectively. His prediction that the nun is not a robber is completely undermined.[54] Nor does he understand Lucy's character: while M. Paul sees in her a flame, Dr. John calls her "a being as inoffensive as a shadow." Indeed, Brontë suggests in *Villette* that the kind of psychophysiology articulated by Dr. John principally falls short not in positing a mind-body connection, but in failing take advantage of the attendant properties. Rather than affording the kind of affective resonation that Lucy and M. Paul

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[53] Dames sees the operation of phrenology in *Villette* in a fundamentally different light. He writes that phrenology promotes a "clinical" gaze of detachment, where the phrenological reader reduces others to the various elements of their head. He also argues that M. Paul's diagnoses of Lucy maker "her character static, and they are based on visual investigation" (121). Conversely, I argue phrenology makes possible a close rapport between Lucy and M. Paul that exceeds "visual investigation" of features of the face and skull and is based instead on a resonance between their bodies.

[54] Unlike the relationship with Dr. John, the nun being revealed to be real doesn't change Lucy and M. Paul's shared experience, nor the role it plays in their developing relationship.

experience, something that unites their subjectivities, psychophysiology proposes a cold, distanced eye that reads a body and then tells that individual to cure themselves by exerting their will. When Dr. John tells Lucy to cultivate happiness and a healthy mind in order to ward off what he deems to be her nervous visions of the nun, she brushes him off, incredulously asking, "do you cultivate happiness? How do you manage?" (321). During the portion of the novel defined by her relationship with Dr. John, Lucy sinks under the burden of being required to create her own happiness. At the end, her character enmeshed with M. Paul's, sharing phrenological traits, she says she is living the happiest years of her life.

The novel's final pages famously imply M. Paul's death while overseas, leaving Lucy both financially independent and professionally successful. Scholars who see her new-found wealth and position of self-reliance in owning her own home and running a pensionnat as signs of her successful journey towards independence, however, are missing the point.[55] Lucy even reminds the reader that she is happy and successful because of her integration with M. Paul: "The secret of my success did not lie so much in myself, in any endowment, any power of mine … The spring which moved my energies lay far away beyond the seas, in an Indian isle." (565). In accordance with principles of phrenological determinism, Lucy has not suddenly developed new powers. However, she

[55] This line of criticism was famously inaugurated by Gilbert and Gubar, who write, for example, that the house represents Lucy "making her own way"; "both a home and a school, the house represents Lucy's independence" (438). More recently, Karen Chase Levenson in "Victorian Cultivation" writes that Lucy "worked hard and succeeded in her profession. She became independent, autonomous, effective and well-liked" (163). Chase here makes a connection between Lucy's success in life and an ability to work hard, be autonomous and independent that I am suggesting the novel in fact militates against; in my reading, Lucy has progressed precisely because she is no longer autonomous or independent. In "This Heretic Narrative," Patricia Johnson argues that Lucy "attempts to be the author of herself" (617). For a reading that agrees with my view that Lucy is not independent, but for different reasons, see Timothy L. Carens in "Breaking the Idol of the Marriage Plot," who argues that "The extent to which the ending of the novel is shadowed by divine authority makes it difficult to read it as the triumph of Lucy's "own powers." (350).

is able to possess them through the person of M. Paul; hers is a joint, shared agency, as she reminds us here. Lucy might be independent professionally, but her character is integrally bound up with another. What Brontë offers is an examination of a profound shaping influence between two persons, facilitated by their bodies, that produces an intersubjective agency.

Chapter Two:

"Thinking Automata" versus "Free Agents": William Carpenter's Categories as Forms of Agency in Charles Dickens' *Hard Times*

With the onset of the industrial revolution, the language of the machine took on an ambiguous position of both threat and promise that was reflected in many disciplines, including the developing field of psychology. Prominent psychophysiologist William Carpenter,[1] for example, complained that some contemporary psychological theorists reduced the individual to "a thinking machine, his conduct being entirely determined by his original constitution … his fancied power of self-direction being altogether a delusion" (*Principles*, 772), even as he developed his own theories of automatism. Yet Carpenter has trouble creating a solid line dividing the human and machine, as when he comes close to making the human being into a special kind of automaton in this comparison of humans to their mechanical replications:

> We have seen automata of various kinds, -- a writing and a drawing automaton, a flute-playing automaton, with divers others, -- and more recently a speaking automaton; but we believe that no walking automaton was ever constructed, though the attempt has often been made. ("Noble," 540)

Carpenter's point is that the human being is distinct from the automaton because of "the extraordinary co-ordination of muscular movements" that is required for such acts as walking, which entails "a set of mechanical difficulties, which no human skill has yet been able to overcome" ("Noble," 540). Yet his logic here distinguishes the human from the truly mechanical automaton merely by level of complexity, rather than innate

[1] William Carpenter (1813-1885) was one of the most influential voices in the development of psychophysiology over the nineteenth century. He was professor of medical jurisprudence in University College, Fullerian Professor of Physiology at the Royal Institution, and the editor of *The British Foreign Medico-Chirurgical Review*. His popular *Principles of Human Physiology* went through five editions between 1842 and 1855.

difference. In fact, Carpenter elsewhere repeatedly uses walking as an example of automatic states in humans.

Carpenter was only one of many nineteenth-century scientists fascinated by the idea of automatism and struggling to define what exactly comprised a specifically human agency. As Adam Crabtree explains in "Automatism and the Emergence of Dynamic Psychiatry," the term "automatism" was first used in the English language in an 1838 article in *Blackwood's* magazine, in which it served as a synonym for "automaton." Soon after, the term was adopted by physiologists to represent the automatic, or reflex, action of the nervous system in connection with the spinal cord and, subsequently, the brain. Psychology historian Kurt Danziger argues that the move to connect automatic action to the brain – first theorized by Carpenter and his contemporary Thomas Laycock – ushered in the start of psychophysiology. Theories of automatism were popular at mid-century, then revived towards the end of the century in the work of psychophysiologists like Henry Maudsley and Thomas Huxley, who in 1874 presented the controversial address "On the Hypothesis That Animals Are Automata, and Its History."

The language of automatism blended with that of the machine. While philosophers had long theorized that perhaps the human body functioned as a machine,[2] the increasingly scientized explanations linking the idea of the body as machine to automatism and the developing industrialization of England seemed to give it a new validity and currency. Many proponents of the new psychophysiology used the term in their texts to describe various functions of the human body. Meanwhile, opponents

[2] See Thomas Dixon, *From Passions to Emotions*.

complained that the psychophysiologists were making the human precisely too mechanistic, jeopardizing, above all, agency.[3]

While some psychophysiologists – like Laycock and, later, Huxley – theorized a human being without a will, Carpenter attempted to respond to contemporary criticism by accounting for agency within theories of automatic action. I am interested in Carpenter's tight-rope performance because I find it symptomatic of mainstream Victorian liberal ideology, which imagined an individual both determined by external forces and yet somehow also independent, preserving inner agency. Carpenter's solution is a turn to education, and he argues in his influential *Principles of Human Physiology* that the proper education of the will creates the distinction between humans that are "free agents" and those that are relegated to the status of "thinking automata." In so doing, Carpenter actually creates a stratification in which some become fully-developed individuals, able to form their own characters, and others are automatons, unable to possess an autonomous, self-directing will.

This tension between the automaton and the free agent figures importantly in Charles Dickens' *Hard Times*. Published in 1854, the same time-period theories of automatism were first gaining currency and Carpenter was publishing his several editions of *Principles*, Dickens' quintessential critique of industrialization makes use of contemporary psychophysiology to depict certain characters as automatons, mechanized by the systems of education that promote and enable England's industrial economy.

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[3] The religious philosopher James Martineau, for example, argued in an 1875 article that the "living Will" is located in the mind and is "our causality." He complained that extending the reflex theory to the brain left little room for consciousness to make any difference in self-direction, comparing theories of bodily reflex to those which include the brain by writing that, "In the one case, the subject acts: in the other, he acts and knows it. But this new fact is inoperative, and leads to nothing: were it absent, he would figure away as a molecular automaton all the same, and not a scene or a word would be altered in the five-act comedy of life."

Although Dickens is invested in critiquing a Carpenter-like education, he similarly explores the connection between education and psychophysiological development in relation to the idea of free will. Both Dickens and Carpenter ultimately theorize a process in which the individual is submitted to a profound social conditioning made possible through combined physiological and psychological forces. The resulting threat to Victorian ideals of the liberal will leads in both cases to a stratification in which free agents are distinguished from those unable to assert authority over psychophysiological processes. However, Dickens, unlike Carpenter, shows that it is impossible to transform an automaton into a self-governing individual through education. Instead, he explores the possibility of a different kind of agency for automatons, one that takes advantage of the body's power to produce character formation through its own dynamic processes.

Victorian Psychophysiology's Debt to Early Automatism

Automatism theory was driven by explorations into the reflex function, the kind of physical movement physiologists were attentively noting as they performed experiments on frogs and found that, even when decapitated, certain reflexes would occur upon bodily impact. Eventually the theory grew to include any thought or action that happened without conscious effort. George Henry Lewes in an 1862 article entitled "History of the Reflex Theory" explained it as:

> an attempt to describe the *mechanism* by which certain acts in the living body take place without consciousness; and to connect with this same mechanism, all those acts in decapitated or brainless animals which *look* like acts prompted by sensation and volition, but which *cannot* be so prompted – it is held – because sensation and volition are seated in the brain. (196) (italics sic)

As Lewes' synopsis here shows, reflex theory from the beginning created questions regarding sensation and volition. The earliest British theorists of reflex theory carefully sought to avoid any insinuation that it related to the brain, thought to be the seat of volition, as this tended to disturb metaphysical ideas of the pre-eminence of the soul, not to mention the capacity of the individual to maintain an autonomous will.

Marshall Hall, who first brought reflex theory to prominence in Britain in 1833, distinguished reflex acts from higher mental activities that could be linked to the mind or soul by tying them all to the spinal cord, thus avoiding the brain as the seat of the mind. Lewes' explanation of Hall's contribution to reflex theory effectively reflects Hall's nuanced negotiation of physiological influence :

> There is a distinct class of actions, called reflex actions, wholly independent of sensation or volition. These belong to a distinct nervous mechanism, "the true spinal system," with a separate set of nerves, the excitor and the motor nerves. An impression on the surface is conveyed by an incident, excitor nerve to the spinal centre, and, instead of being transmitted upwards to the brain, is immediately reflected along the motor nerves to the muscle. (203)

Early reflex theory thus closely focused on the nervous system as a means to evade any implications regarding the will and morals.[4] As Lewes notes, the physical impression is conveyed by the nerves but stopped before being "transmitted upwards to the brain" and instead reflected back to the safer regions of nerves and muscles. The reflex actions of the body are here carefully distinguished from the mind's volitional actions.

[4] See L.S. Jacyna in "The Physiology of the Mind, the Unity of Nature, and the Moral Order in Victorian Thought." He notes that Hall "narrowly circumscribed the scope of such reflection; there was, he held, a fundamental difference between these actions and the higher functions which were governed by the soul" (111).

When Laycock[5] extended Hall's theory to the mind in 1840, the move was a momentous one, met with much controversy at the time, and is today hailed as a seminal development in the history of psychology.[6] Most scholars identify Laycock and Carpenter as the two most important theorists of this stage in British psychophysiological thinking.[7] Their work combined to build the groundwork for an explanation the role of automatism within the psychophysiological processes of the individual. Carpenter and Laycock are often described as rivals, however, and they had a fundamental disagreement regarding the scope of automatic functions that serves to neatly articulate the challenge automatism posed to Victorian concepts of agency.

In his now-famous 1844 address, "On the Reflex Function of the Human Brain," Laycock makes it clear that he views automatic processes as extending throughout the body, stressing the unity of the body as "a continuous and harmonious whole is formed out of the multitudinous and disjected parts" (298). As such, for Laycock, there are no grounds for arguing that the brain is exempt from processes occurring in the rest of the body; he writes that "the brain, although the organ of consciousness, [is] subject to the laws of reflex action, and that in this respect it [does] not differ from the other ganglia of the nervous system" (298). His position was predictably controversial, with

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[5] Laycock (1812-1876), professor of medicine at the University of Edinburgh, first published his theories of automatism in a series of articles in the *Edinburgh Medical and Surgical Journal* in the late 1830s. He subsequently published them as a book, *The Nervous Diseases of Women*, in 1840 (Crabtree).

[6] Danziger in "Mid-Nineteenth-Century British Psychophysiology" argues that Laycock's intergrative theory marks the start of the psychophysiological movement. With Laycock's claim that the reflex function could be used to explain the brain's processes, the mind was no longer exempt from the physiological processes of the body, thus crossing the "gulf between psychology and physiology" that had existed in British psychology until then.

[7] Both were important to the growth of physiological psychology in Britain. Jacyna writes that while Laycock "pioneered many of the crucial concepts of the discipline and did much through his writings and teaching to present its claims to a wider audience" (111), Carpenter "was the author of a series of textbooks which were the standard works in medical education in the mid-nineteenth century" (112), which from the first stressed the physiology of the nervous system. See also Crabtree and Danziger here, as well as Rick Rylance, *Victorian Psychology and British Culture, 1850-1880*.

contemporaries vehemently denouncing the connection he drew between mind and body on the grounds that it made the body too mechanical. [8]

This means that for Laycock, agency is flattened: volition is but one of many effects produced by the body's physiological processes. While 18th-century moral theorists and the Romantics had bequeathed to the Victorians a theory of the will as innate, interior and linked to the soul,[9] Laycock theorizes the will as simply another function of the physiological body: when an "impression is diffused through the cerebro-spinal axis," groups of muscles contract to produce "instinctive, emotional, consensual and volitional actions" (308). The energy required for this process comes from the stimulation of a "mechanism" that can be either located on the periphery of the body or the interior elements of the nervous system (308). Laycock is not invested in protecting agency as a metaphysical interior force inherent in the individual.[10] Furthermore, his approach does not leave room for a will that the individual is able to exert to produce self-fashioning, in the sense that John Stuart Mill recommended. Laycock instead writes that characters traits such as "A peculiar gait, a certain kind of frown, a hitch of the shoulder, a tone of voice, are all the result of co-ordinate muscular acts taking place independently of the volition of the individual, and almost always without his consciousness" (310). Although Laycock uses the term "individual," he is here describing a process of character formation that is far from the kind of self-direction that Mill and his allies, including Carpenter, linked to the role of the individual will.

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[8] As Jacyna notes, popular reception saw Laycock's theory as "as a challenge to 'spiritualism' – that is, to the autonomy of a causally-effective spiritual principle."(117)

[9] For more here, see Charles Taylor, *Sources of the Self* (1989), 371-389.

[10] Crabtree notes that Laycock depicts a kind of "cerebral self-sufficiency" as "His view was that all energies involved in human mental activities originate in the organism. He stated that physiological research produces no evidence to show that a separate mind or will acts on the brain and causes changes to occur there" (53).

Carpenter's Caveat to the Thinking Machine

Carpenter was the other major theorist of automatism in the first half of the nineteenth century. However, while he championed the reflex function as avidly as Laycock, he claimed human agency could still be maintained. In fact, Carpenter was so confident that his theories were able to locate the will in the midst of psychophysiological processes that in 1846, he published an article entitled "Mr. Noble on the Brain and Its Physiology," in which he turned to his version of reflex theory to discredit the popular pseudoscience of phrenology.[11] The article, a critique of a phrenological book by Christopher Noble, aims to explain why phrenology cannot work, from a purely scientific perspective. The essay casts phrenology outside the limit of what constitutes credible scientific practice, and in so doing legitimizes Carpenter's own research.[12] As with his contemporaries Alexander Bain and Herbert Spencer,[13] Carpenter's language shows that he is aware of the similarities between his work and that of phrenology. Both make a claim for being able to produce, as he puts it, a "cerebral physiology" and tie physiology to character. For Carpenter, this similarity is also a threat to the legitimacy of his practice and he works to distinguish phrenology from psychophysiology by making phrenology

[11] Phrenology, which claimed a correlation between shapes and bumps on the skull and personality, was popular throughout the nineteenth century. Practitioners believed the bumps on the skull related to the shape of the brain itself, where they located character traits. Phrenologists were in fact the first to propose cerebral localization, and for the first part of the century attempted to have their practice recognized as a valid scientific endeavor (see Young for more here).

[12] Carpenter critiques the practice of phrenology as unscientific, and even cites his own experience with phrenological reading as proof of the unreliable outcomes of the practice, finding it problematic that "three extremely diverse accounts having been given of our own "developments," by three well-known phrenologists, in the course of a few months" (523).

[13] See Bain, *On the Study of Character, Including an Estimate of Phrenology*, and Spencer, *The Principles of Psychology*.

the sole recipient of a critique often leveled at both: that they present a reductivist understanding of the mind-body correlation.

Carpenter turns to his own reflex theory to argue against phrenology's claims that the body's actions are determined by distinct divisions within the brain. He foregrounds instead the role of the body, arguing that most actions are produced by physiological reactions in the body rather than propensities with their source solely in the brain. This allows Carpenter to claim psychophysiology allows for a more holistic model of the body, while phrenology oversimplifies these processes.[14] The charge here is against phrenology's tendency to rely too much on point-by-point correlations, so that individual is determined by the shape of their skull. This sets psychophysiology up in contrast as a more complex model, able to account for agency.

Carpenter more fully theorizes free will versus automatism in his *Principles of Human Physiology*, a popular work that went through five editions between 1842 and 1855. In the fourth edition, he added new material in a lengthy section entitled "Functions of the Nervous System," to specifically address reflex theory. Along with Laycock, Carpenter defines actions that are "entirely of a reflex character" as primarily passive responses to sensations that are "excited by internal or external impressions." These actions are "purely automatic, since neither emotion, reason, nor will has any participation in them" (642). Additionally, Carpenter like Laycock argues automatic actions play into a range of physical, intellectual or emotional actions. An involuntary laugh can be caused by the physical sensation of tickling or by intellectually recalling an amusing experience. Carpenter's influential theory of "unconscious cerebration" turns on

[14] According to Carpenter, phrenological principles would locate all reflex actions with their origins in the brain: "We might as well expect to find a distinct organ in our own encephalon ….for laugher, sneezing, or any other association of muscular actions called into play by the direct agency of sensation" (504).

the concept of automatic thinking, which he claims had a role in everything from somnambulism to various states of abstraction, even those which produce works of art or intellectual treatises.

As Carpenter elaborates on what he terms "the automatic action of the Mind" (774), he approvingly cites Laycock and writes that his own work here amounts to friendly amendment of Laycock's theory. However, Laycock himself was reportedly frustrated by Carpenter's apparent inability or unwillingness to appreciate an important point of distinction in their work:[15] while Laycock saw body and mind as entirely integrated, Carpenter theorizes a position where the mind – and thus the will – can re-assert control over the automatic processes. "Control" is, indeed, a key word for Carpenter. His language in *Principles* shows a revealing anxiety about the lack of control involved in the automatic action of the mind when, for example, he describes it as operating by a succession of ideas "without the exercise of any control or direction on the part of the individual to whose consciousness they present themselves," thereby making it no less a reflex action than "the actions of the Spinal Cord" (775). While Laycock refuses any exemption for the brain from the body's processes, Carpenter is fundamentally uncomfortable with this position and seeks to protect the will by re-situating automatism within a modified form of the traditional Cartesian mind-body dualism. He theorizes that "the Will, if it possess its due predominance, can exercise a determining power; keeping in check every automatic impulse" (647). For him, the will, produced by the mind, allows

[15] Danziger writes that "What continued to annoy Laycock was that Carpenter never seemed fully to grasp the crucial difference in their conception of automatic activity" (130).

the individual to assert volitional control over the physiological body by essentially halting the automatic processes before they take over the mind.[16]

In staking out his position in such terms, Carpenter seeks to establish a middle ground in psychophysiology, somewhere between the materialist and spiritualist positions. As a physiologist, Carpenter is invested in granting a body to the individual. The traditional position is problematic because it refuses to admit any kind of physical mind-body connection.[17] He defines materialism, on the other hand, as claiming that:

> *all* the operations of the Mind are but expressions or manifestations of material changes in the Brain; that thus Man is but a thinking machine, his conduct being entirely determined by his original constitution, modified by subsequent conditions over which he has no control, and his fancied power of self-direction being altogether a delusion; and that notions of "duty" or "responsibility" have no real foundation, Man's character being formed *for* him and not *by* him. (771)

Carpenter doesn't mention names, but his articulation of materialism clearly has much in common with Laycock's version of automatism. Carpenter criticizes materialism by positioning it as a direct threat to Victorian ideals of liberal agency: the "thinking machine" is a being "entirely determined" by his or her physiological make-up, with no "power of self-direction." The individual here is essentially rendered passive, trapped within physiological processes that Carpenter argues would preclude the ability to shape, grow, define, and control character. As a result, terms like "duty" and "responsibility" lose their mooring and morality itself is jeopardized.

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[16] Carpenter describes a physiological process by which an "excitor impression" travels upwards towards the brain, and if it reaches the brain without any interruption, it becomes subject to the will, "which may be exerted in producing or checking a muscular movement, or in controlling or directing the current of thought" (647). However, if the impression does not travel all the way to the brain, it moves in the opposition direction and a reflex action occurs.

[17] Carpenter writes, for example, that "the Mind appears in the light of a separate immaterial existence, mysteriously connected, indeed, with a bodily instrument, but not dependent upon this in any other way for the conditions of its operation" (771). With this language, Carpenter references the kind of idealism espoused by Samuel Taylor Coleridge in *Biographia Literaria* and taken up subsequently by opponents of psychophysiology like Martineau.

Athough Carpenter, as a prominent physiologist, was often charged with being a materialist himself,[18] he sought to provide a compromise between the two sides of the debate by acknowledging automatic processes, but claiming the exercise of the will can prevent the individual from becoming a full automaton.[19] However, this produces a stratification as it creates categories: those who are able to control their automatic impulses, and those who are not. Carpenter theorizes that:

> It is, in fact, in virtue of the Will, that we are not mere thinking automata, mere puppets to be pulled by suggesting-strings, capable of being played upon by every one who shall have made himself master of our springs of action. It may be freely admitted that such thinking automata do exist: for there are many individuals whose Will has never been called into due exercise, and who gradually almost entirely lose the power of exerting it, becoming the mere creatures of habit and impulse. (776)

Carpenter creates two classes of beings: "thinking automata" and those he elsewhere designates under the rubrics of the "independent, self-moving, and self-controlling agent" (645), and the "free agent" (776). In making this distinction Carpenter positions automata as a threat to Victorian ideals of liberal agency. Those who are not able to exert their will lose their capacity to function as individuals, becoming instead "mere puppets to be pulled by suggesting-strings." Carpenter here, and elsewhere,[20] ties a loss of autonomy to automatism. The inability to control one's psychophysiological processes amounts to a susceptibility to any sort of external influence, so that the automaton is "entirely determined by the influence of suggestions on the Mind," whether stemming from causes

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[18] Rylance notes that Carpenter was placed together with Huxley and Maudsley as being influenced by the determinism in John Mill Sr.'s "Analysis" (60). Matthew Stanley writes in his article "The Pointsman" that "although he denied that his work circumscribed the will, William Carpenter's arguments that the reflex action could work without conscious intervention seemed to suggest that many of the higher functions of the mind were automatic" (474).

[19] Also according to Rylance, "Carpenter for some time resisted the advance of the physiological analysis in which he was so eminent when it entered the psychological domain, and retained his belief in the essential independence of the higher faculties" (184).

[20] As when he references "the thinking automaton, the whole course of whose ideas may be determined by suggestions operating from without" (798)

purely physical, emotional or intellectual. Carpenter's automaton therefore does not have agency, autonomy, or self-control: a "creature" that becomes a sort of uncanny double of the Victorian ideal of the free agent.

The free agent, representing "man in his highest state of psychical development" (776), is produced only by abjecting the automaton. Carpenter outlines a hierarchy in which the human species is composed of various levels of self-control,[21] which depends entirely upon the degree to which the person is under the "direction of automatic impulses." This marks the

> advance of Man from the mental state of childhood (which is permanently retained, as to all its essential characters, in many adults, and even in the whole races of the least cultivated order) to the highest elevation which his nature is capable of displaying in his present sphere of existence. (646)

Carpenter thus provides a psychophysiological justification for Mill's concept of civilization as articulated in such works as *On Liberty*. However, by writing these liberal ideals into the body, Carpenter makes even more explicit the inherent contradiction involved in the fact that Victorian ideology required stratification to sustain its categories. Carpenter defines the formation of the individual as a progress into willed self-control and character at the apex of civilization.[22] Yet at the same time he theorizes that certain adults and even entire races "permanently retain" a "mental state of childhood," unable to acquire the will that allows them to be free agents. These persons and races, completely determined by their bodies, are exempt from the development of the individual. Carpenter stresses the need to study these "creatures of habit and impulse" by comparing them to

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[21] He writes that "Now between the complete want of this controlling power of the Will, and the most perfect possession of it, every intermediate gradation is presented by the several individuals which make up the Human species" (650).

[22] Carpenter again here stresses that Will is "probably the most distinctive attribute of the Human mind in its highest phase of development; and it is that which gives to each individual the freedom of action" (650).

the "state" of the individual, in order to understand "what share the Will really takes in the operations of our minds and in the direction of our conduct, and of what must be set down to the Automatic operation of our psychical nature" (777). Carpenter's research methodology makes explicit an assumption that remains implicit for political theorists like Mill: persons without free will are required so that the individual can be formed by contrast. Furthermore, his psychophysiological theory keeps these automatons trapped within their bodies. This limits and forestalls arguments for reform he himself elsewhere makes in his text.

Carpenter proposes education as the solution to the problem of agency. Directly after raising the specter of the "biologized subject," whose mind and character are formed for him as determined by reflex action, Carpenter writes that the human being can become a "free agent" by learning to "emancipate himself from the domination of his constitutional and automatic tendencies" (810). His language here once again underscores the essential division between a determining body and the "free agent," where agency is located not in the body but opposed to it, even as a central connection between the two is proposed. The individual is emancipated from the body through education: Carpenter claims that all the "most enlightened educators" affirm the principle "that this power of self-control ought to be the object of all nursery discipline"(812). He gives a detailed explanation of how parents can teach their children to control their "urgent impulses," their emotions and eventually also their thoughts. This involves a "process of external suggestion" which must be continually repeated until the child learns to control "his urgent impulses to immediate action," (812), so that the "individual becomes capable of

forming his own character" (812).[23] [24] The language here stresses the kind of liberal ideology of self-formation espoused by Mill and others: individuals must be able develop and shape their own character. In Carpenter's articulation, this can only be accomplished by controlling one's psychophysiological processes, making automatism antithetic to the autonomy of the individual.

However, by writing this language into the psychophysiological body, Carpenter's work comes up against a latent tension in Victorian ideals of self-control. In order to become fully-functioning individuals, children are to exert their will in order to free themselves of the bodily impulses that cause them to be too susceptible to external influence, thereby producing the kind of autonomy that drives Victorian self-control and repression.[25] If Carpenter worries that an automaton is like a puppet, the threat is precisely that external influence makes its way into the psychology of the individual through physiological processes. Yet he here argues that the very means of gaining self-control and agency through education is through the "process of external suggestion." Education is therefore only effective if the child is susceptible to external influence. The very psychophysiological processes that make automatic action possible are needed to educate children out of being automatons. In attempting to salvage the will from an overly-materialist theory of automatism, Carpenter finally is unable to provide a sustainable way to maintain or produce agency. He connects body to mind but then

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[24] Carpenter's language here – especially his assumption that the education process is founded on "external suggestion" -- owes much to the contemporary theories of association psychology he espoused, which held that all mental states were acquired rather than innate, derived from external stimulation. This approach to psychology was popular throughout the nineteenth century and fellow advocates included Mill and Bain.

[25] John Kucich, for example, writes in *Repression in Victorian Fiction* that "Victorian repression produced a self that was more responsive libidinally, more self-sufficient, and – oddly enough – more antisocial than we have yet understood" (3).

assumes that, in order to preserve agency, the will needs to be able to re-assert control over the process. Carpenter's vision of a fundamentally determining body can only threaten the will, requiring his theorization of an education process to rescue an autonomous and self-determining agency. He promotes a theory of social conditioning in which the child is determined by either purely physiological reflexes, or social forces that shape the individual through those same processes. Carpenter's move to use education to establish a will strong enough to control automatic reflexes paradoxically results in a loss of agency.

Automatism and Agency in Hard Times

I'd like to begin my Dickens section by returning to that well-versed man of letters and science, George Henry Lewes. In an 1872 essay entitled "Dickens in Relation to Criticism," published two years after Dickens' death, Lewes explores Dickens' shortcomings in developing the psychology of his characters with a striking comparison to the physiology of frogs:[26]

> When one thinks of Micawber always presenting himself in the same situation, moved with the same springs. . . one is reminded of the frogs whose brains have been taken out for physiological purposes, and whose actions henceforth want the distinctive peculiarity of organic action, that of fluctuating spontaneity. Place one of these brainless frogs on his back, and he will at once recover the sitting posture; draw a leg from under him, and he will draw it back again; tickle or prick him and he will push away the object, or take one hop out of the way; stroke his back, and he will utter one croak. All these things resemble the actions of the unmutilated frog, but they differ in being isolated actions, and always the same: they are as uniform and calculable as the movements of a machine. The uninjured frog may or may not croak, may or may not hop away; the result is never calculable, and is rarely a single croak or a single hop. It is this complexity of the organism which

[26] This was not the first time Lewes had taken Dickens to task over conflicting ideas of psychophysiology: Lewes in 1853 criticized Dickens' representation in *Bleak House* of Krook's death by spontaneous combustion, to which Dickens famously responded by adding a preface to the 1853 edition of the novel in which he cited numerous writers verifying the theory.

> Dickens wholly fails to conceive; his characters have nothing flexible and incalculable in them. (148, 147)

Lewes predictably finishes by comparing Dickens' fictional style unfavorably to the complex psychological realism of his partner George Eliot, leading the way in a critical assessment of Dickensian psychology as uninformed and undeveloped, unable to explain the intricacies of the human mind.[27] Lewes – and those critics who take a similar approach – often operate on the assumption that these kinds of character representations betray Dickens' oversimplification in his psychology. However, the very language of Lewes' criticism places Dickens' work in the kind of context which *Hard Times* itself explores in its representation of character psychology. The imagery – of a brainless frog, whose body is completely directed by the pricking, tickling and prodding of the experimenter – recalls the language Carpenter uses to describe the "thinking automaton." If Carpenter's human automatons aren't far removed from the animal state, Lewes' vivisected frog drives home the point that any self-defining agency is lacking in a Micawber-like characterization; the character is instead completely determined. Yet Lewes apparently misses the point, that a writer exploring the tension between free will and determinism would turn to such a model to represent the psychology of characters caught in this position.

My argument follows a more recent line of criticism that claims Dickens was advisedly taking up contemporary scientific developments in representations of his character's psychology. Rosemary Bodenheimer in *Knowing Dickens* shows that while

[27]Bodenheimer writes that Dickens was subjected "to a great deal of condescension from critics who saw him as an uneducated popular writer whose genius for humor compensated for his failures to represent the inner lives of his characters" (5). However, post-Freudian criticism has been kinder to Dickens, she notes.

Dickens was criticized post-Eliot for his representations of internal life,[28] he was actually doing interesting work with contemporary theories of the unconscious; she calls him the "Victorian novelist most deeply intrigued by nineteenth-century ideas about the unconscious mind" (6). His library at Gad's Hill, she notes, contained over thirty books on the workings of the mind, from contemporary physiological psychology to materials on the spirit world. Athena Vrettos suggests that Dickens' caricatures, with their repetitive character ticks, mark his contribution to larger debates that had at their core concerns with individuality and mechanization.[29] Tamara Ketabgian in *The Lives of Machines* argues that Dickens' engagement with these psychological debates represents an interest in mechanical forms of affect.[30] Dickens' participation in these debates was an attempt to reconcile this mechanized articulation of the self to Victorian ideals of agency.

In placing Dickens specifically within early Victorian psychophysiological debates about automatism, I suggest that he, like Carpenter, perceived these theories as threatening the individual's self-determined will. Yet his work similarly signals the impossibility of returning to earlier philosophical views that refused any connection

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[28] Bodenheimer here cites a long letter Dickens wrote to Lewes during the spontaneous combustion debate, in which Dickens claims to be well-versed in scientific views.

[29] Vrettos argues in her article "Defining Habits" that "By situating Dickens within a wider historical context, we can see how his fiction contributed to an ongoing philosophical debate about the social and psychological effects of habit (broadly defined here as patterns of repetitive behavior), and how his very mode of characterization – particularly in his most eccentric characters – confronted the tensions between individuality and mechanization that came to be at the center of this debate" (401).

[30] Ketabgian,in *The Lives of Machines* similarly places Dickens in conversation with Hall, Laycock and Carpenter, in her bid to demonstrate a new kind of mechanized affect theorized in Victorian literature and culture. Ketabgian is explicitly writing against scholarship that assumes *Hard Times* – and Victorian literature and culture in general – pits humans against machines, and instead argues for "a more porous and productive relation among human nature, industrial technology, and that most contested of topics – emotions" (48). While I agree that Dickens and the psychophysiologists are articulating a new kind of mechanized psychic interiority, I believe Ketabgian goes too far in her recuperation of a productive Victorian theorization of mechanized interiority. For example, Ketabgian omits Carpenter's significant revisions to Laycock's claims that automatic functions defined the subject. I argue that both Dickens and Carpenter attempt to account for agency within their treatment of these theories of automatism, meaning they limit human mechanization even as they endorse automatism as a psychological theory. This creates an important ambivalence within mechanical theories of the self that Ketabgian overlooks.

between body and mind: both Dickens and Carpenter were invested in finding a way to account for agency within an embodied subject, driven, at least in part, by mechanical, automatic tendencies. If it remains unclear whether he had actually read Carpenter's *Principles,* he could not have failed to pick up on the terms of the contemporary debate about automatism. John Gordon in *Physiology and the Literary Imagination* notes that Dickens was familiar with and admired Sir Charles Bell, who contributed the Bell-Magendie law of nerve action to psychophysiology and also played an important role in automatism theory. Dickens corresponded with Bell and owned two of his books, including the 1847 edition of *The Anatomy and Philosophy of Expression as Connected with the Fine Arts,* a text which foregrounds the mind-body link.[31]

In 1857, Dickens published in his *Household Words*[32] an article entitled "The Nerves" which extensively quotes Bell and specifically addresses the reflex action as a class of involuntary movements occurring when "the extremities of the sensitive nerves, being irritated by some external stimulus, convey the sensation to the spinal cord and motor nerves to the brain, producing corresponding movements in the muscles" (522). While the article eventually limits the role of these involuntary processes by stating they are subordinate to voluntary movements, it traces a tight connection between emotions and the body's physiological conditions, supposing, for instance, that a "long-continued

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[31] In an 1874 article "On the Doctrine of Human Automatism," Carpenter provides a history of automatism that starts with Bell's work, claiming Bell was the first to show the experimental basis for the idea that nerves run from central to peripheral terminations. Carpenter writes that Bell recognized this "nervous circle" as providing the "mechanism of those involuntary movements which are called forth by sensory impressions" (399), popularizing the idea of reflex action that was so fundamental to theories of automatic actions and states.

[32] The relationship between *Hard Times* and *Household Words* is well-established: Dickens first published *Hard Times* in his magazine as a means to boost circulation, according to Margaret Simpson in *The Companion to Hard Times*. Simpson shows that over 1854, the year *Hard Times* was published, the magazine ran a series of articles that related to the themes of the novel.

grief" can so weaken the heart that the "sufferer has died not only literally but figuratively of a broken heart" (524). Interestingly, while the writer asserts that "passions of the mind exert an influence … on the heart and on the breathing" (524), the writer also contemplates a reversal in which the physical condition of the body affects interior states by asking whether "we can not, by controlling the outward sign of passion – to a great degree master the passion itself" (525). The author finally equivocates in a manner very much like Carpenter by stating that, "over these actions of the body the mind has a control, though unequal and imperfect" (525), creating a similar emphasis, and ambivalence, regarding the role of the will in controlling psychological processes.

Hard Times, Dickens' critique of British industrialization and political economy, with its strong utilitarian aspect, has long been read as concerned with just these questions of free will and determinism. In her seminal *The Industrial Reformation of British Fiction*, Catherine Gallagher argued that the industrial novel's project to encourage reform puts these terms in play in a conflicted manner, so that the novels exhibit a tension both in form and content, unable to finally reconcile the "negative determinism of the factory system with … faith in God's benign Providence or in human free will" (28). Scholars more recently have located this tension within the industrial novel's representation of the individual. For example, Amanda Claybaugh in *The Novel of Purpose* shows that industrial reform novels put a focus on the individual as both the agent and site of social transformation. *Hard Times* inscribes this tension between determinism and free will onto the body of the individual.

Dickens turns to contemporary theories of automatism and phrenology in his charge that Victorian industrial culture is literally turning its children into machines. In so

doing Dickens pays tribute to his mentor and the man to whom he had dedicated *Hard Times*: Thomas Carlyle.[33] While critics have linked *Hard Times* to a number of Carlyle's works, the essay "Signs of the Times," as Michael Goldberg in *Carlyle and Dickens* puts it, "might be regarded as an ideological prospectus to the novel" (79). Dickens' repeated representation of the war between "fact" and "fancy" is a thinly veiled adaptation of Carlyle's opposition between the "mechanical" and "dynamical." For Carlyle, the dynamical has its roots in the metaphysics of German idealism; he associates with it ideas such as soul, character, moral virtue, love, religion, creativity, "the primary, unmodified forces and energies of man" (68) – the same kind of language Dickens ascribes to "fancy" in *Hard Times*. Meanwhile Carlyle links "the Age of Machinery" with the "iron fingers" of industrialization, arguing that it has become the culture of the age so that "Men are grown mechanical in head and in heart, as well as in hand" (68). He describes a society composed of machines that produce education, but also specific movements such as the "Unitarians, Utilitarians, Anabaptists, Phrenologists," describing mechanical education and linking it to utilitarianism and phrenology in terms that are echoed in *Hard Times*.

Carlyle also shows that the mechanical age has been internalized by the individual, arguing that "Not the external and physical alone is managed by machinery, but the internal and spiritual also" (60). Ketabgian counters the traditional assessment of Carlyle as opposing soulless, shallow machines to deep, emotional dynamism by suggesting that Carlyle's essay, while clearly critiquing the mechanical, "does not portray the erasure of feeling so much as the presence of different and more mechanical modes of

[33] As Goldberg notes, *Hard Times* is a "a novel dedicated to Carlyle and of which Dickens said to Carlyle "I know it contains nothing in which you do not think with me." Dickens himself thought the book a Carlylean novel, and almost every aspect of its satire has a counterpart somewhere in Carlyle's writings.

feeling" (654). She shows that Dickens similarly explores a mechanical affect in *Hard Times*. While I find Ketabgian's argument convincing, an important distinction needs to be made: Carlyle, after all, published "Signs" in 1828, well before the theories of reflex action and automatism were popularized that would usher in the discipline of psychophysiology. So while Carlyle writes that "the science of the age, in short, is physical, chemical, physiological," he creates a clean division between this and the "psychological science" (68) of the Germans. His essay does not theorize the kind of relationship between physiology and psychology that Dickens shows in *Hard Times*.

For all its pessimistic assessment of mechanistic determinism, Carlyle's essay ends on a positive note: "If Mechanism, like some glass bell, encircles and imprisons us … -- yet the bell is but of glass; 'one bold stroke to break the bell in pieces, and thou art delivered!' (81). For Carlyle, finally, the Benthamite focus on external circumstances, and the mechanical affect that comes with it, falls before "the great truth that our happiness depends on the mind which is within us, and not the circumstances which are without us" (67). Carlyle ultimately imagines a scenario in which the individual can self-define by choosing to reject the social influences of the age and revert to an entirely different sort of psychology: that of the dynamic, deep springs of a "primary" energy undetermined by external forces. Scholars have long noted that *Hard Times* is not so optimistic, leaving central characters like Louisa and Stephen trapped inside the glass bell.[34]

[34] For example, Patricia Johnson argues that "While each is in some sense rescued, and by the same agent, the Circus girl Sissy Jupe, neither is brought back to a full life. Stephen survives for only a few minutes after his maimed body is pulled out of the mine, and Louisa's scarring past prevents her from marrying again or ever having children," (414), in"Hard Times and the Structure of Industrialism: the Novel As Factory." *Studies in the Novel*. 21.2 (1989).

Dickens imagines the mechanization of the age inscripted within the body itself, creating new possibilities for the psychology of the individual through physiological processes. If Dickens takes a Carlylean approach to his critique of education – criticizing just the kind of utilitarian psychology that Carpenter extols in *Principles*[35] – yet he ultimately figures an account of character formation that has much more in common with Carpenter's iteration. *Hard Times* shows that persons who have been mechanized by the education of the age are unable to break the glass bell because that mechanization has indelibly formed their psychophysiological make-up. Unlike Carlyle's individual, these characters in *Hard Times* do not have the option of switching to a psychology exempted from the "culture of the age." Dickens is articulating a fundamentally modern concept of psychology, one that has more in common with twenty-first century theories of social conditioning.[36] Physiological psychology in *Hard Times* limits the free will, precisely because the newly-theorized connection between body and mind serves as a conduit for the influence of social forces. *Hard Times* furthermore shows that it is not only those submitted to a mechanical education who are unable to evince a fully self-determining agency. The Circus community shows a similar social conditioning facilitated by the processes of the body, despite its position outside the utilitarianism of Coketown. This leaves Dickens no other recourse, in his bid to demonstrate the "dynamic" nature of

[35] With his focus on external influence shaping inner character, Carpenter's treatment of psychology – and education – in *Principles* has much in common with the associationist psychology inherent in the utilitarian emphasis on cultivating moral character through positive and negative reinforcement. Carpenter's father was a Unitarian minister devoted to the philosophy of David Hartley, and he was raised using James Mill's *Analysis of the Phenomena of the Human Mind* as his psychological textbook. Rylance notes that Carpenter was viewed by his contemporaries as being influenced by *Analysis*.

[36] Jill Matus similarly locates a modern articulation of social conditioning in *Hard Times*. ('Secrets of the Heart': Emotion, Narration, and Imaginary Minds in Hard Times and Mary Barton." *English Language Notes*. 48.1 (2010): 11-25.) However, she overlooks the explicitly physiological way the individual's psychology becomes shaped by culture, which I see as a clear point of intersection with current work done by theorists such as Brian Massumi in his chapter "The Autonomy of Affect" in his book *Parables for the Virtual* (2002).

"fancy," than to create Sissy as the privileged "free agent" apart from the embodied characters. Like Carpenter, Dickens relies on a stratification between those who qualify as individuals, and those who do not, to resolve this tension at the heart of Victorian ideals of agency. In the process, *Hard Times* makes explicit what Carpenter's theory leaves implicit: psychophysiology involves a conditioning process so complete that it becomes impossible to spontaneously develop a will capable of extracting itself from external influences. Dickens shows that once the psychophysiological body is proposed, an autonomous will is not possible. However, he examines an alternative form of agency, one that is created in and through the body's processes, even imagining an intersubjective agency. Dickens moves beyond Carpenter's binary of a static, determining body versus an autonomous will, to explore a kind of subjectivity that diverges from the privileged form of the individual that he locates in Sissy.

Determining the Body at Coketown and at the Circus

Hard Times examines the effects of industrialism on both the factory workers and the children of Coketown who are given a utilitarian-like education, making the connection, like Carlyle, between industrialism and utilitarianism. The children – Bitzer, Tom, Louisa and Sissy – undergo a system of education that functions more as a caricature of the philosophy proposed by Bentham than as a faithful representation. [37] The

[37] Kathleen Blake in *The Pleasures of Benthamism* argues that Dickens' treatment of Gradgrind's utilitarian-like educational principles is a critique of a problematic application of that philosophy, not utilitarianism itself. Bentham's original conception of education entails "maximized utility, meaning maximized learning, made more pleasant, lively, and painless, with greater work efficiency and lesser tuition costs – all to increase educational benefits in aid of class advance for those lower down" (54). The Gradgrind system of education misapplies these precepts, and "Dickens shows this to be wrong" (63), with Sleary coaching Gradgrind in the proper application. Blake's approach argues against the grain of traditional literary criticism which charges Dickens with either not understanding or not supporting

children at the school run by Thomas Gradgrind are subjected to the "mechanical art and mystery of educating the reason" (41) and treated as soulless "little vessels," ready to have "imperial gallons of facts poured into them" (6). This excessively deterministic educational system paints the children as, from the perspective of Gradgrind, devoid of innate qualities and instead completely shaped by the school. Gradgrind's approach is an extreme version of the association psychology that was often connected to utilitarianism by Dickens' contemporaries.[38] Although hyperbolized, it shares some traits in common with the associationist influences in Carpenter's suggestion for parents to teach their children to control their "urgent impulses," emotions and thoughts as part of "nursery discipline." As Carpenter does in *Principles*, the Gradgrinds assume their children can be molded through their educational system.[39] While Carpenter argues this sort of education will teach children the self-control needed to overcome automatic tendencies and cultivate their own agency, Dickens shows the opposite: it is because Bitzer, Tom and Louisa have been processed through the Gradgrindian education system that they have no capacity for a self-directed will, and instead function like automatons. Yet *Hard Times* does not free characters from the psychophysiological body. Instead, the novel shows that people can be educated, through psychophysiological processes, into a certain relationship between body and interiority, so that they become more or less of a free agent or, alternatively, more or less of a thinking automaton.

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utilitarian theory (see A.H. Gomme in *Dickens,* or Sylvère Monod in "Dickens as Social Novelist," for example).

[38] According to Rylance, assocationism "was the target for famous assaults by Colerdidge in *Biographia Literaria*, by Wordsworth in *The Prelude*, and, in connection with Utilitarian social and educational programmes, by Dickens in *Hard Times*, all of whom emphasized what they took to be its heartless, soulless, joyless, mechanical reductions of human behavior." (55)

[39] The Gradgrind children have all "been lectured at, from their tenderest years; coursed, like little hares. Almost as soon as they could run alone, they had been made to run to the lecture-room" (11).

The clearest candidate for a mechanized automaton in *Hard Times* is of course Bitzer, star pupil of the Gradgrindian system of education and later a promising employee at Bounderby's bank. Bitzer's position as the most physiologically-determined of all the children is cemented by the use of phrenology in his characterization.[40] While phrenology's extreme articulation of a physiological link between body and mind required Carpenter to draw sharp distinctions to delineate his own theories, Dickens presents them all on a continuum. By subverting the distinction psychophysiologists were attempting to make between phrenology and automatism, Dickens shows they are both reductive theories. The same system that produced Tom and Louisa also produced Bitzer, leaving none in possession of an autonomous will.

Dickens' characterization of Bitzer is framed by phrenology. As David E.E. Sloane points out in a 1974 edition of the *Dickens Studies Newsletter,* George Bitzer has much in common with George Parker Bidder (1806-1878), known as "The Calculating Boy," who gave public demonstrations of his mathematical abilities.[41] Bidder was, as Sloane puts it, a cause célèbre among the phrenologists.[42] George Combe, for example,

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[40] Phrenology is also closely associated with the novel's depiction of determinism as it is featured in the description of both Gradgrind and Bounderby, the two men Dickens makes responsible for turning Coketown's students and factory workers into lifeless machines through their particular brand of educational and economic practices. The narrator describes Gradgrind's "square wall of a forehead" as well as the "shining surface [of his head], all covered in knobs, like the crust of a plum pie" (5). Bounderby is described as "A man with a great puffed head and forehead" (14). In both cases attention to the forehead is a clear reference to phrenology. In Gradgrind's case, the square forehead denotes his proclivity for order, method, classification and systematizing. The knobs covering Gradgrind's head also represent the discourse of phrenology, in which "knobs," or bumps on the skull, were measured and read as indicative of character traits. The tight correlation between Gradgrind's bumps and his character shows he is just as much an automaton as his children, with his character shaped by the features of his skull. This also solidifies the link, in the novel, between phrenology and automatism: both propose a psychophysiological link between body and mind that facilitate a social conditioning so complete that individual will is lost.

[41] Dickens himself uses the term when, in describing the Bounderby marriage, he writes, "the bridesmaids were … fit helpmates for the calculating boy" (84).

[42] Further evidence that Bidder had attained a general level of recognition or notoriety in relation to the phrenologists is suggested by Carpenter's passing reference to the 'calculating boy' in his discussion of phrenology in *Noble*.

cites him as an example under the trait of "Number" in his popular *Lectures on Phrenology* (Third Edition, 1854). In any case, Dickens could also simply have heard about the matter in discussion with his good friend, the physiologist and tireless advocate of phrenology and mesmerism, John Elliotson.[43] Besides the obvious similarity in names, both Bitzer and Bidder publicly demonstrate their mathematical abilities: Bitzer's first appearance in *Hard Times* has him calculating the exact number of teeth of a horse (7). When Bitzer discovers Gradgrind's own son, Tom, to be a thief, he refuses Gradgrind's offer of a bribe by explaining that "I have gone over the calculations in my mind" (214), and he finds it weighs in his advantage to bring Tom in.

Bitzer has so fully absorbed the Gradgrind doctrine that it has shaped his psychophysiological constitution. Phrenology here signifies the most extreme form of determinism, marking the place where social system thoroughly produces subjectivity. As George Bidder's double, Bitzer is defined by his phrenological faculty for mathematics, as he helpfully reminds the reader throughout the book by frequently knuckling his forehead. It is this faculty which prompts him to mathematically assess every situation in terms of self-interest (even putting his own mother in the poorhouse), so that "All his proceedings were the result of nicest and coldest calculation" (89). Bitzer's phrenological faculty for mathematics not only makes him especially susceptible to the self-calculation inherent in Gradgrindian utilitarianism, but is re-inforced and developed as the determining element of his nature, through the influence of that system.[44] As such, Bitzer has much in common with Carpenter's "biologized subject," the person whose

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[43] Their close and mutually-influential relationship is detailed by Fred Kaplan in *Dickens and Mesmersism*. Eliotson founded and became president of the London Phrenological Society in 1824.

[44] This coincides with the phrenological theories of George Combe, who argued in *Lectures* and elsewhere that phrenological faculties could be improved by intentional cultivation.

domination by physiological forces causes him to function as an automaton, fully determined by external influence:

> And if we could imagine a being to grow up from infancy to maturity, with a mind in the state of the of a "biologized" subject (825), we should see that it would be strictly correct to speak of his character as formed for him and not by him; all his thoughts, feelings, and actions being but the reflex of his own nature upon the impressions made upon it; and that nature being determined in part by original constitution, and in part by the mode in which it is habitually called into action. (810)

Unlike Carpenter's biologized subject, Bitzer's "exactly regulated" mind (89) epitomizes self-control. Yet in Dickens' articulation, this self-control is finally the product of his phrenological faculty for calculation being acted upon by the Gradgrind system, so that, as with the automaton, "his character is formed for him and not by him"; his nature is determined by both his "original constitution" and the social forces by which "it is habitually called into action." As has often been noted, Bitzer is one of the most static characters of the novel; his life is predicted by the dogma that shapes him, physically and psychologically.[45]

There is no phrenology in the description of Gradgrind's children, Tom and Louisa. However, their characterization as automatons stresses a similarly tight link between body and mind, so that their psychophysiological make-up is also a product of their education. In fact, Tom's lack of self-control makes him almost as much of an automaton as Bitzer. Tom, who "had never been left to his own guidance for five consecutive minutes," is "incapable of governing himself" (102). This is especially evident in the fact that he is prey to "groveling sensualities" (102). Tom passively resists

[45] F.R. Leavis in *The Great Tradition* (1964) calls Bitzer "the real triumph of the system" (378), and a "thin-blooded, quasi-mechanical product of Gradgrindery"(368). I would add that Bitzer is, as an automaton, fully mechanical.

his father's utilitarian system by being a stubborn "mule." However, the text shows that what he takes to be his rebellious, individual pursuits – smoking, drinking, and gambling – result from his enslavement to physical needs. The Gradgrind system of education teaches children "facts" but not how to negotiate their emotions and bodily impulses. As a result, Tom is entirely guided by these "sensualities," eventually robbing Bounderby's bank to pay for his gambling debts.

Tom, like Bitzer, has a tick that points to his bodily incorporation into mechanization. If Bitzer continually reminds the reader of his phrenological features by knuckling his forehead, Tom, who "gave himself up like a machine" when in trouble as a child, takes to grinding things through his teeth in a machine-like way. When upset and nervous, Tom bites things: rose-buds just after he robbed Bounderby's safe-deposit (135), and straw when his father confronts him with the deed at Sleary's Circus (212). In *Principles,* Carpenter claims that his "thinking automata" are "creatures of habit and impulse" and stresses that those who are unable to control their habits[46] become "the slave of routine" and are "deficient in volitional power" (798). The coinciding of Tom's machinations with his immoral actions stresses his uncontrollable participation in both.

Both Tom and Bitzer, therefore, present a very thorough process of social conditioning that shapes their psychology by shaping their bodies. Tom is unable to resist sensual urges precisely because he has never had the opportunity to learn to "govern himself." Bitzer's "extremely regulated" mind is not a sign of self-control because it is simply a product of the Gradgrind system rather than his individual choice. In making

[46] Vrettos in "Defining Habits" shows how important Victorian theories of habit were not only to contemporary psychophysiological debates, but to questions regarding individual agency, writing that theories of habit prompted questions of free will vs. mechanical determination. In *Hard Times*, it further emphasizes the lack of agency for those characters most at the mercy of their habits – the thinking automata.

this connection, Dickens shows that theories of automatism run the risk of producing a mind-body correlation as static as that of phrenology. As both Tom and Bitzer are completely shaped by unchanging psychophysiological processes that preclude an autonomous will, neither functions as an individual. Lacking any kind of agency, they are not capable of self-formation, growth, or progress, and both are explicitly not moral.

However, Dickens shows something different with Louisa's character. While clearly located as an automaton rather than a "free agent," Louisa is able to experience some degree of agency. This, however, is not predicated on the individual will. Rather, it is produced in and through her affective encounters with other characters. Unlike Tom and Bitzer, Louisa has an agency which cannot be fully defined by her father's utilitarian ideals. Tom is compared to a machine, but Louisa's face shows evidence of "a light with nothing to rest upon, a fire with nothing to burn" (14). Yet Louisa is at the same time the star of the Gradgrindian system of education. Her father sees her as a dispassionate model of self-control, telling her, "You have been so well trained… You are not impulsive, you are not romantic, you are accustomed to view everything from the strong dispassionate ground of reason and calculation" (75). While Gradgrind believes Louisa's education has enabled her to use reason to control her impulses, Dickens gives her a self-awareness about her education that serves to highlight the terms through which it was accomplished. She later tells her father that "it has been my task from infancy to strive against every natural prompting that has arisen in my heart… there lingered in my breast, sensibilities, affections, weaknesses capable of being cherished into strength" (163). Louisa's apparent self-control is nothing more than a profound disconnection from her emotions. Dickens here makes a correlation between self-generated emotions and an independent will:

without the ability to act on her emotions, Louisa is unable to form her own character, requiring the influence of other characters to access her emotions and, ultimately, her motivations.

Louisa's emotions are instead produced through affective contact with others. While discussing Bounderby's marriage proposal with her father, she has one "wavering moment in her, when she was impelled to throw herself on his breast, and give him the pent up confidences of her heart" (78). However, she is unable to produce this confession; instead, "With his unbending, utilitarian, matter-of-fact face, he hardened her again…" (78), and she never shares her concerns. Furthermore, any sympathy Louisa is able to feel originates not in herself, but others. Young Louisa ignores Sissy until the latter shares her story of her father's departure; thereafter, whenever the mail comes, Louisa becomes wrapped up in Sissy's reaction: "The trembling of Sissy's lip would be repeated in Louisa's face, and her eyes would follow Sissy with compassion to the door." (51). The emotion starts with Sissy and comes to Louisa in an affective exchange, Sissy's trembling features impacting Louisa's, and producing a shared emotion. Later, when Louisa as a grown woman goes to visit Stephen just after he is fired, her initial hard interrogation of Stephen and Rachael changes in tone when "She looked from him to Rachael, and her features softened. … and her voice had softened too" (122).

In Louisa, Dickens explores a kind of agency enabled by affective resonance between bodies. Although Louisa is unable to produce her own emotions, she is influenced by a psychophysiological reaction to others' emotions. This allows her to challenge her educational system in a way that exceeds the mulish stubbornness of Tom: she talks with Sissy about her father despite his having forbidden her to do so, and she

visits Stephen knowing the visit will displease Bounderby. Her concern for the welfare of others clearly moves her beyond the self-calculation of Bitzer. However, she is unable to evince any emotion that would demonstrate her sympathy until a physiological reaction kicks in and she passively responds to the physical presence of others. Dickens shows that this makes Louisa's agency unable to effectively produce change in the world around her. She is finally unable to help the people she sympathizes with – Sissy never hears from her father and Stephen never gets his job back – making her sympathy both passive and ineffective.

Louisa's need for others to help her actualize her internal states also makes her easily manipulated. She marries the unlikely Mr. Bounderby solely because she knows that it would please Tom, despite the fact that she does not love Bounderby and even secretly despises him. This dynamic is crystallized when James Harthouse enters the narrative and witnesses, for the first time, the interaction between Tom and Louisa. Harthouse has been contemplating Louisa's impassive demeanor and wonders,

> "is there nothing that would move that face?"
> Yes! By Jupiter, there was something, and here it was, in an unexpected shape! Tom appeared. She changed as the door opened, and broke into a beaming smile (101).

Tom's psychophysiological influence is stressed here. His presence literally moves Louisa's face as nothing else will. As Harthouse watches the scene, he discovers the key to Louisa's character, which he will later use to manipulate her. Dickens castigates Tom for giving Harthouse factual information he uses to win her over, but it is Louisa's physical reaction to Tom that gives him the keys to her affections. If Carpenter stresses the link between willed self-control and autonomy by arguing that "It is, in fact, in virtue of the Will, that we are not mere thinking automata, mere puppets to be pulled by

suggesting-strings, capable of being played upon by every one who shall have made himself master of our springs of action" (776), Louisa's susceptibility to Tom and Harthouse reveals a lack of autonomy that exists despite all the self-control implied by her dispassionate nature. She functions here as something very similar to a "thinking automaton," a puppet dominated by psychophysiological processes that allow both men to master her "springs of action."

Harthouse's attraction to Louisa is framed around a desire to create a similar psychophysiological reaction to what she evinced for Tom; he decides "to prove the face which had set him wondering when he first saw it, to try if it would change for him" (129). This foregrounds the role of Louisa's body, not only as an indicator of Harthouse's influence, but as a conduit. In a conversation purportedly about Tom, Harthouse gains increasing influence over Louisa through the growing susceptibility both revealed and facilitated by her blushes. He sits next to her and at the first mention of Tom's name, "her color brightened, and she turned to him with a look of interest" (129). Throughout the conversation, the narrative remarks three additional times that Louisa blushes, at one point even "flushing deeper and deeper" (130) as Harthouse gains additional affective influence over her. Each blush is followed by an increasingly personal revelation that trumps Louisa's expressed reserve. Harthouse influences Louisa through processes that are bound up with her psychophysiological reactions, reinforcing her lack of autonomy and nearly drawing her into an adulterous relationship.

However, Louisa flees Harthouse's influence and returns to her father's home, where she is influenced instead by Sissy, who comes into her room as she lies in her bed, pretending to be asleep. She is figured here as completely repressed, with the "strongest

qualities she possessed … turned upon themselves" and becoming a "heap of obduracy" against Sissy, whom she resents for seeing her in her weakness (169). Then:

> It was well that a soft touch came upon her neck, and that she understood herself to be supposed to have fallen asleep. The sympathetic hand did not claim her resentment. Let it lie there, let it lie.
> It lay there, warming to life a crowd of gentler thoughts; and she rested. As she softened with the quiet, and the consciousness of being so watched, some tears made their way into her eyes. (169)

Sissy is able to change Louisa simply by touching her. Furthermore, the affective impact is described in the language of a reflex action of the brain, of the kind that Laycock theorized happened for everyone and Carpenter only for those who could not control their physiological processes by willpower, those who are automatons: Sissy touches Louisa on her neck, "warming to life a crowd of gentler thoughts" (169). The language here shows that Sissy's touch influences not only Louisa's emotions and sensations, but her thought process. The scene ends with Louisa changed and, rather than reserved and resenting Sissy, begging her to have compassion on her with a new, passionate emotional openness.

Unlike Bitzer and Tom, Louisa does therefore experience a change in her character, which enables her to have some degree of freedom: by the end of the novel we find her indulging in fancy as opposed to fact, and being loved by children everywhere. Yet Louisa is not fully redeemed, most obviously as she never remarries and has no children of her own; the loving children belong to Sissy. Louisa's growth in character is not the product of an autonomous, self-defining will. Rather, she has benefitted from intersubjective character formation. She is able to grow, and change, as a character because of Sissy's affective influence on her body. This gives her shared agency, where Sissy's influence enables her to grow. However, Dickens shows that once a body has

been socially conditioned, it cannot be suddenly educated into another subjectivity, precisely because that conditioning has indelibly shaped psychophysiological processes. While able to experience a new range of emotions, Louisa does not gain the ability to self-produce them; she requires a lifelong relationship with Sissy and her children for that.[47] In *Hard Times*, finally, the Carlylean glass bell cannot be shattered. Dickens creates a boundary between the automaton and the autonomous individual that is even more severe than Carpenter, but avoids Carpenter's implicit contradictions in claiming that children can develop an autonomous will through the very shaping influences that make them automatons in the first place.

Sissy, indeed, is the only one of the four children to possess a free and self-directed will, and this is clearly linked to her inability to fully absorb the Gradgrind system. As a child, for example, she complains, "what a stupid girl I am. All through school hours I make mistakes" (47). As a young woman, Gradgrind finally takes her out of school, chiding her for being "extremely deficient in your facts" (72) but begrudgingly recognizing that "there is something in this girl which could hardly be set forth in tabular form" (73). There is, apparently, also something in Sissy which can hardly be set forth in physical form.[48] Unlike the other children, where repeated reference is made to the

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[47] My argument here involves a different assessment of Louisa's agency than Alexander Welsh, who writes in *Dickens Redressed* that "One of the attractive things about *Hard Times* is that two young and otherwise unprivileged women appear to write their own scripts" (194). If Louisa is able write her own script at all, it is within a very narrow circumference, and certainly not in a manner that is comparable to Sissy's level of freedom in self-determination.

[48] A similar dynamic occurs in *Our Mutual Friend.* Within a text noted for its characters with physical disabilities and psychological developments, Lizzie Hexam seems barely located in a body herself. She is able to muster a "supernatural spirit and strength" (663) to pull Eugene Wrayburn from the river after he has been severely beaten and left for dead, and carry him to safety. Later, as Eugene convalesces, the narrative makes clear that he is only able to heal through the influence of Lizzie's physical presence. Notably, the sound of her voice keeps him from slipping into unconsciousness (715). Along with his healing comes a significant moral change in his character. However, the end of the novel makes it clear that Eugene continues to depend upon Lizzie; "he never got on well without her" (768). Like Louisa, he is

psychophysiological dimensions of their characters, Sissy's character is primarily described in general terms. For example, we are first introduced to her along with Bitzer. While Bitzer's "cold eyes," skin and even lashes are closely described in a manner that presents an obvious correlation with a deficiency in his character, Sissy is only represented as a girl who, in contrast to Bitzer, is "so dark-eyed and dark-haired" (7) that she seemed to receive a deeper color from the sun. Other than this kind of general symbolic language, in which deeper color signifies the kind of warmth Bitzer's character lacks, the text gives us only a very generalized description of Sissy's corporeality. Exempted from education into deterministic ideology or psychophysiology, Sissy is the fullest incarnation of a "free agent" in the novel. She not only manages to extricate herself from the Gradgrindian system without suffering any ill effects, but provides the agency that the other characters lack. She works a change in the Gradgrind household causing all remaining members, including Gradgrind himself, to see the error of his system. She changes Louisa, and persuades Harthouse to act against his self-interest. It is also Sissy who discovers Stephen down Old Hell Shaft and gives Rachael the power she needs to go find help.

Sissy is not originally from Coketown, and the novel clearly suggests that her differing temperament is linked to her childhood origins. While Louisa, Tom and Bitzer are raised unrelentingly in the world of fact, Sissy's early childhood is spent in the world of fancy – the Circus. Her nature bears some resemblance to that of the Circus performers, who are described as, beneath their worldliness, possessing a "remarkable gentleness and childishness…, a special inaptitude for any kind of sharp practice, and an

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given a fuller agency but one that stops before free will. Eugene gains the willpower to thwart social expectations and marry a lower-class woman, but he requires her affective influence to make the change.

untiring readiness to help and pity one another" (31). Sissy's "inaptitude for any kind of sharp practice" shields her from the mathematical education of the Gradgrind system, yet her gentleness wins over the hearts of not only the entire Gradgrind household, but Harthouse. In this latter case, Sissy's child-like qualities help her persuade him to leave Coketown and cease pursuing Louisa; she speaks to him with a "child-like ingenousness" (173) and with "a blending of gentleness and steadiness that quite defeated him" (175). What Harthouse sees here in Sissy is the child-like qualities of the Circus performers. Yet she also possesses a psychophysiological power over him.

As if turning the tables upon his previous encounter with Louisa, Sissy is able to make Harthouse blush out of shame when she reminds him of his "honor as a gentleman" and "the blood really rose in his face" (173). Harthouse is dominated by Sissy because he is unable to influence her in a similar manner: "if she had shown, or felt, the slightest trace of any sensitiveness to his ridicule or astonishment, or any remonstrance he might offer; he would have carried it against her at this point" (175). What gives Sissy power over Harthouse is her ability to not be embodied, to not show or feel an emotional reaction to him. She here functions as a "free agent," able to use her will to control herself and accomplish a moral purpose. She has an "entire forgetfulness of herself in her earnest quiet holding to the object with which she had come" – in her single-minded purpose to convince Harthouse to leave, she abstracts her body into her purpose as ambassadress. More specifically, "she seemed to have her mind entirely pre-occupied with the occasion of her visit, and to have substituted that consideration for herself" (173). Here her mind is inseparable from her will, and this becomes a substitution for her self – both physically and figuratively. In this way, she is able to assert her will over

Harthouse, who finishes by saying: "I see no way out of it. What will be, will be. This will be, I suppose" (176).

The novel has a hard time explaining how Sissy manages to develop a will strong enough to transcend her physicality. It seems that Sissy is able to resist the Gradgrind system because of her previous education by the Circus, where she learns the "graces of heart" that Louisa complains were missing in her father's system. Yet Dickens makes clear that the Circus performers are just as determined by their education as Louisa and Tom, through an early induction and rigorous training. While the Bounderby children are taken to the schoolroom as soon as they can walk and talk, Sleary's daughter Josephine and, subsequently, her son, are tied to a horse as toddlers. They both then excel at performing on horses; her son is even able to perform alone at age three.

The Circus members, like the Coketown children, are shaped by external influences both psychological and physiological. However, those in the Circus are able to achieve a greater degree of agency through self-control by taking advantage of the mind-body connection to shape their characters by training their bodies. For example, E.W.B. Childers and Master Kidderminster, who together perform a complicated act of much physical agility in which Childers holds Kidderminster by the crown of his head while riding a horse, have so trained their bodies that even the way they walk is shaped by their profession.[49] They walk about "with a very knowing assumption of being stiff in the knees" that is "understood to express, that they were always on horseback" (29). If Carpenter writes that the man who is controlled by his habits is an automaton, and theorizes that walking can be itself an automatic action, then Childers and Kidderminster

[49] Catherine Gallagher makes a similar point in *The Body Economic* when she writes that "all the performers had been apprenticed early, and their very bodies are shaped by their labor" (76).

achieve success by intentionally producing their habitual walk, evincing just the kind of self-control that Carpenter espouses in *Principles*.

This, then, is a point of departure with the psychophysiological characterization of the Coketown children: the Circus members are able to achieve agency by manipulating the physiological processes of the body. While Tom is a victim of his habits as much as of external influence in general, Childers and Kidderminster are more "knowing." Being aware about the relationship between body and self allows these characters to take advantage of physiological processes, for example by intentionally creating their own habits. However, this ability to self-define is limited: the narrative flirts with, but then abandons, the idea that the performers are able shape their characters by transforming their bodies. Kidderminster, for example, although a young man, is able to so convincingly play the role of a Cupid that he is "the chief delight of the maternal part of the spectators" (26). Here he appears to embody a character that is completely at odds with the masculinity he inhabits when not in the ring: he is "of the turf, turfy," irascible and full of foul language. However, by the end of the narrative we find Kidderminster overtaken by his body. He has grown so "materially turfy" (208) that he is no longer able to play the role of a cherub. Instead, he must "yield to the invincible force of circumstance" (208) and take on another position. Kidderminster is, finally, firmly tied to the materiality of his physique as a determining circumstance.

The connection between body and agency is further demonstrated in the Circus world by the story of Sissy's father, whose failure is couched exactly in these terms. Childers explains to Gradgrind that Sissy's father has abandoned her and the Circus because "his joints are turning stiff, and he is getting used up" (27). This in turn affects

his routine as a clown, where he "misses his tip" and is "short in his leaps and bad in his tumbling" (27). His failure as a clown is comprised of the fact that his body has deteriorated to a point where he is no longer able to manage it; as with Kidderminster, he is overtaken by his body. Sissy's description of her father connects his physical troubles to a psychological breakdown. She tells Louisa that he grew "scared and trembling" because "he felt himself to be a poor, weak, ignorant, helpless man" (49), suggesting that his trembling is caused by his lack of willpower. Her further description of him as in a state of "rocking, crying, trembling" (51) on the last day she saw him demonstrates that he was in a hysterical fit, completely at the mercy of the bodily processes. Neither Kidderminster nor Sissy's father is able to produce a self-determining will that can transcend the shaping forces of their bodies. However, while Sissy's father is completely destroyed when he becomes physically unable to play the clown, Kidderminster obtains a limited form of agency by allowing his body to move him into a new role at the Circus. No longer able to play the boyish Cupid, he is now in a more mature role, that of a "man who made himself generally useful" (208).

Critics often assume that the Circus comprises a radically different world from that of Coketown; F.R. Leavis' classic analysis of *Hard Times* contrasts the vitalism of the Circus to the mechanical nature of Coketown.[50] The psychology of the novel, however, suggests a closer connection between apparent opposites. While the Circus clearly opposes the Gradgrind system in its cultivation of fancy and emotion, the members of both cultures are shaped by social circumstances, making them susceptible to

[50] Traditional scholarship tends to follow F.R. Leavis' characterization of the Circus as the antidote to Coketown. Diedre Davis in *Fictions of Resolution in Three Victorian Novels*, for example, is primarily concerned with *Our Mutual Friend* but writes that "In *Hard Times*, Gradgrindery and rationalized manufacture are opposed, among other things, by the childlike anarchy of Sleary's horse-riding and the unself-conscious sweet morality of Sissy Jupe."

psychophysiological processes that are at least somewhat mechanical in nature and constrict agency. If the Circus members are not automatons, this is the result of a different educational regime than that in operation for the Coketown children, rather than a sign that they represent a fundamentally more vitalistic form of human nature. The Circus members are cultivated in their emotions and educated into a knowing relationship with their physicality. As a result, they are able to take advantage of various elements of their psychophysiological make-up, and obtain a limited agency. However, Dickens shows that the Circus community's focus on self-formation via physical conditioning is implicitly constrained by the limitations of the body. The failed clown who is no longer able to exert any physical control lacks self-determining capability just as much as Tom and Bitzer. Subjected to an education that omits any reference to emotions, the Coketown children are at the mercy of their psychophysiological make-up. Both educational systems demonstrate the power of a culture in shaping the nature of the individual through processes both psychological and physiological.

Sissy, alone, is not defined by her body. This appears to be a result of the fact that she is never entirely educated in one system or the other. Unlike the Circus children, she is taught to read by her father at an early age, developing her ability to imagine and a level of sophistication not present in her Circus family. Additionally, she is not apprenticed to a certain position in the Circus – unlike Josephine's, her body is not sculpted at age three into that of a horse rider. When her father abandons her, she faces a decision as to whether finally to become apprenticed or live with the Gradgrinds, ensuring her transition to that system. Yet the moral and emotional character traits she developed living with the Circus provide her not only with the "graces of heart" that

Louisa is lacking in her state of automatism, but with the ability to resist indoctrination into the Gradgrind system of self-centered calculation. Exempted from the physiological psychology of the Circus and Coketown, Sissy is not determined by either culture. Unlike the other characters in *Hard Times*, she seems to operate out of a different psychology, one that follows a more traditional model in which the will is not linked to physical processes but is rather indicative of inner qualities that have nothing to do with the body.

Dickens and Carpenter both, therefore, figure a free agent, possessed of an autonomous will, but are fundamentally unable to explain how one might be embodied. Dickens critiques the Carpenter-like position of educating children out of automatism and into possession of free will by showing that this paradoxically necessarily entails loss of agency. Purely physiological processes are only replaced by social conditioning that is facilitated through the psychophysiological connection. Yet Dickens' own representation of the liberal individual appears to avoid any significant kind of corporeality. Although the narrative gives Sissy credit, for example in the Harthouse scene, for transcending her body and focusing solely on her altruistic purposes, she is not fully located in her body to begin with. Like Carpenter's *Principles*, *Hard Times* creates a category of people who are exempt from the physiological determination that shapes others, in order to preserve the category of the free-willed individual. For Carpenter, the exemption occurs for persons whose will has been trained to supersede the influences of the body. However, *Hard Times* shows that it is impossible to maintain a free will within a fundamentally psychophysiological explanation for the individual. Indeed, Sissy's rarefied status as the "free agent" seems nostalgic for the kind of world Carlyle could imagine when he challenged his readers to break the glass bell of mechanism. The majority of the

characters in *Hard Times* are firmly located in the world of early Victorian psychology, here represented by the physiologically-oriented theories of phrenology and automatism. Some, like Bitzer, Tom and the fallen clown, are entirely determined by their psychophysiological condition. Others, like Louisa and Kidderminster, are able to attain a non-autonomous, embodied form of agency allowing for some amount of character formation and growth, but only by working within the limits of their bodies, as shaped by their distinct cultures.

Chapter Three:

George Eliot, Alexander Bain, and Embodying a Moral Will

George Eliot's ethical vision required her to account for the will. In *The Mill on the Floss*, as in many of her other works, she establishes moral action not as the result of following an abstract code, but rather as produced by sympathy. Eliot valued sympathy for its power to connect individuals. Some scholars have argued that her use of sympathy can be ambivalent, functioning primarily as a specular, rational process that only reinforces distance and difference.[1] However, sympathy in *The Mill* is not purely rational. It also has a strong affective component that serves to create an intersubjective bond – the product of Eliot's intervention in contemporary psychophysiological theory. In fact, through an innovative hybridization of Victorian psychophysiological thought with the earlier philosophical work of Adam Smith and Baruch Spinoza, Eliot theorizes a new kind of moral will – one which can go the distance of connecting individuals because it is at once a part of the body's physiological processes, and a product of rational understanding. The will here both serves to promote moral progress yet at the same time challenges the kind of autonomy ascribed to the Victorian will.

Contemporary psychophysiologist Alexander Bain struggled to articulate just this kind of relationship between agency and body while maintaining the markers of the liberal individual. Bain moved to unite the will to a physiologically-determined body. In both *The Senses and the Intellect* and *The Emotions and the Will*, he answered contemporary criticism that physiological psychology was too materialistic and could not

[1] See, for example, Audrey Jaffe in *Scenes of Sympathy*, David Marshall in *The Figure of Theater* and Rae Greiner in "Sympathy Time."

account for the agency of the individual. Yet while Bain does indeed place the will within the nervous system, he enforces, between the will and the rest of the physiological processes, a distinction that keeps the body itself a determining force. The will is meanwhile ambiguously positioned as both originary and requiring the body's influence to become active, and then formed into a proper moral habit.

Eliot and Bain, therefore, share a central concern with the project of locating the liberal will within the psychophysiological body. I arrive at their interventions in Victorian science, however, by way of their exploration of the pseudoscience of phrenology. Both were intrigued by the practice – Eliot had a cast of her head made for the phrenologist George Combe, and Bain's first foray into psychology was through phrenology.[2] As I show by examining a novella of Eliot's exploring phrenology and Bain's treatise on the subject, the practice was enticing precisely for its move to connect body and mind. Yet phrenology's extremely reductive correlation between body and character figures for both Eliot and Bain a point of departure. Their attempts to integrate the will within a psychophysiological body and their success in doing so are directly related to the steps they take to disentangle phrenology from human agency.

Bain's Attempt at Integration: The Inert Will versus the Determining Body

Alexander Bain was an important voice in the developing discipline of psychology. As Rick Rylance notes, Bain – along with others like Herbert Spencer – was "central to the debates of the period and initiated, influenced, or responded to most of the leading psychological ideas of the period" (*Victorian Psychology*, 154). Robert Young

[2] See Robert Young in *Mind, Brain and Adaptation in the Ninenteenth Century.* Bain also studied Combe's phrenological publications, and Eliot's letter's often contained brief phrenological descriptions, according to Beryl Gray.

writes that Bain "did more than any other single figure to free psychology from its philosophic context and make it a natural science in its own right" (*Mind*, 6). Bain's influence was so strong that, following the publication of his works, psychological texts included a section on the structure and physiology of the nervous system. An 1864 review of his works notes in passing that his books are "are so well known to students of philosophy that it is hardly necessary to allude to any of their distinguishing peculiarities."[3]

Bain's elaboration of a way to talk about the will within a scientific understanding of the psychological subject was perceived as his signature contribution by his contemporaries, as it provided a response to idealist criticism of the mechanical body. J.S. Mill, for example, was an early fan of Bain's *The Senses and the Intellect*, first published in 1855, and he explicitly championed Bain for providing a psychophysiological explanation for the will that yet kept the individual from becoming too passive. George Henry Lewes and Herbert Spencer similarly praised Bain for his analysis of the formation of the will from reflex action in the subsequent *Emotions and the Will*. Mill saw Bain's psychological work as an extension of his own thinking and upon the publication of *Emotions* in 1859 wrote a laudatory review of both texts entitled "Bain's Psychology," claiming Bain had "stepped beyond all his predecessors" and produced work which represented the best "*a posteriori* psychology" had to offer . The article shows that Mill is impressed with Bain's combination of association psychology with contemporary developments in physiology, and specifically with his explanation of an "active" element in the mind that can correct the passivity of traditional association

[3] "Bain on the Senses and the Intellect," published in the British periodical *The Reade*r.

psychology.[4] Mill writes that "Mr. Bain has made a great advance on this theory… He holds that the brain does not act solely in obedience to impulses, but is also a self-acting instrument" (302). However, he stipulates that Bain's theory is attractive because it supports his view of human experience as shaped by circumstance by refusing to grant a special, disembodied status to the will, for example by turning to traditional ideas of the will as an innate part of the soul. This aspect of Bain's theory was not lost on those on the opposite side of what Mill aptly termed "the free will controversy." An 1855 review of the *Senses and the Intellect* complains that "we think Mr. Bain makes too much of the body in reference to the mind. He digs down into the human materialism to explain things which are too subtle and intellectual to admit of solution there" (590).[5]

If Mill approvingly cited Bain in *System of Logic* and wrote laudatory reviews of his work, the sentiment went both ways. Mill's thinking influenced Bain's work, perhaps nowhere more clearly than in the articulation of liberal agency. Both men share a concern to figure the Victorian individual as possessed of a will, even while espousing theories that emphasize the necessarianism of association psychology. In Bain's case, this requires the negotiation of deterministic physiological theories. His approach therefore reflects the Victorian quandary in the conception of the individual, most coherently articulated by Mill, that promoted liberal agency while still maintaining an emphasis on the shaping power of external forces. In response to critics that painted the developing theories of psychology as too materialistic, Bain grants an "internal culture" to the physiological

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[4] As Mill writes, "Those who have studied the writings of the Association Psychologists, must often have been unfavourably impressed by the almost total absence, in their analytical expositions, of the recognition of any active element, or spontaneity, in the mind itself. Sensation, and the memory of sensation, are passive phenomena; the mind, in them, does not act, but is acted upon; it is a mere recipient of impressions" (301).

[5] Published in *The British Quarterly Review*

body. He foregrounds external influences on the body, and the body itself as an external influence on interior states, yet locates the will within the physiological processes.

Bain's project to stake psychophysiology's claim on agency, along with the inherent tension that project engenders, is perhaps most clearly seen in his move to explicitly incorporate the language of liberalism into his physiological treatises. For example, *The Senses and the Intellect* celebrates the will as a central element of the successful individual within a liberal society. Bain writes that the will is the desire that drives the individual, and furthermore is "manifestly a constitutional, self-prompting force" (80). Those driven by the will include the restless adventurer, traveler, businessman, "needler in affairs," and the man who hates repose and despises passive enjoyment. The will "is the pushing energy of Philip of Macedon and William the Conqueror" (80). Agency here is explicitly tied to liberal ideology – to discovery, business, and colonialism. In stressing such terms, Bain establishes his attempt to salvage agency within a physiological account of the subject, as an important aim of his work. Yet he later suggests the body itself plays a role in determining the social progress of the individual. In Book Two, he positions the body as transmitting knowledge through the sensations, then links the kinds of knowledge various bodies produce through their varying physiological organization to their roles in capitalist society. For example, a body that is able to distinguish softness makes a good pastrycook, builder, or sculptor (180); facility with the sense of touch enables "innumerable handicraft operations" and makes a good potter, polisher, sewer, or baker (183). The idea that the body determines professional development is at odds with Bain's earlier description of the will as the operative element. This tension between a determining body and a self-prompting will is

replicated in Bain's theories of the physiological production of the will, as I will show with consequences for his moral theory.

Before launching into Bain's psychophysiological theorizations, however, I want to turn to his treatment of the pseudoscience of phrenology. Phrenology's inability to account for the will created a problem for him, one that he attempts to resolve in his psychophysiology. However, the very terms of the phrenological problem limit his ability to re-imagine the mind-body relationship. In 1861, he published *On the Study of Character, Including an Estimate of Phrenology*, a work which praises the phrenological system even as it calls into question its treatment of the will. Bain stresses that phrenology's strength lies in its connection between body and mind, writing that "phrenology is thus set up, in contradistinction to the pre-existing systems of mind, as rendering a full account, perhaps for the first time, of the influence of the brain upon mental life" (16).[6] For Bain, phrenology establishes the idea that character can be linked to psychophysiologal explanations. He writes that the connection between mind and brain, and between psychological traits and the body in general, is one of the most interesting for humanity and is "vitally involved in the practical questions of our well-being" (16). The body becomes important, foregrounded in a way that resonates with developing scientific research.

Although Bain aligns physiology and phrenology in this way, he enforces a significant distinction in the account of the will. He writes in *On Character* that the phrenological head's division of the will into several different categories is problematic. He argues that "phrenology has broken up and dispersed in the most irregular way the

[6] As Young shows, phrenologists were in fact the first to posit the cerebral localization of psychological traits, an important step in the scientific process that established that the brain is the organ of the mind.

great fact of our spontaneous energy, which lies at the basis of will, and determines the strength or weakness of our active impulses generally" (117). Bain's language here implies that "spontaneous energy" is diminished by the act of being "dispersed," fragmented among the various phrenological traits, which include Concentrativeness, Combativeness, Self-Esteem, Veneration, and Firmness. Bain explains that these categories all include emotions as well as the will. Thus, the problem here is that the phrenological formulation too easily conflates the will with the emotions, something Bain is at pains to keep distinct in his own theory. The idea that the will is not a cohesive, coherent unit, distinct from both the emotions and the intellect is problematic for Bain because it is here that he locates the agency of the individual. He writes that the phrenological model of the brain should create a section for "pure activity, not allied with any sentiment in particular, but open to the stimulation of all the senses" (45). Any categories that involve this "pure activity" should be grouped together in the will. Bain concludes, "there ought to be in the development of the head a region of Will and a region of the various Emotions – the one indivisible, the other containing many subdivisions" (46).

Bain therefore values phrenology for the same reason he rejects it: the pseudo-science proposes a through integration between mind and body. While phrenology makes the important move of theorizing a mind-body relationship, it can't account for liberal agency. Bain's analysis of the problem specifies that this is because phrenology "disperses" the will into the emotions and the intellect, rather than keeping it "indivisible." Bain's own psychophysiological theory in *Senses* and in *Emotions* corrects just this problem by making the will a distinct unit in the psychology of the individual.

He divides character into three parts: Volition, Emotion and Intellect. In this kind of schematic, he is simply following a popular Victorian formula. What Bain adds here is a physiological explanation for a mutual influence between these three categories, thus arriving at his innovative theory of an embodied will. However, he throughout carefully distinguishes the will from the emotions and the intellect in a move that seems intended to repudiate the overdetermined phrenological body. Paradoxically, this move limits Bain's ability to imagine an integrated psychophysiological process. While he does locate the will in the body, his language tends to figure a volitional energy that must be impacted by external influence in order to be released, creating an ambiguity around whether agency is actually located within the individual. Furthermore, Bain's commitment to providing a physiological explanation for the will leaves him with little ability to explain how it can triumph over physiological processes to fulfill the kind of liberal ideals he supports – such as moral action. Bain's solution here of turning to habit to reinforce an errant will tends to re-create the trope of the static body.

If Bain claims phrenology has obscured the role of the will by failing to properly distinguish it, in *The Senses and the Intellect* he carefully locates the originary spark of the will. In the move that gained him renown among his fellow psychophysiologists and the appreciation of Mill, Bain keeps this spark within the physiological framework, thus accounting for liberal agency within the psychophysiology of the individual. He identifies an active internal force, which he later terms "spontaneous energy," that serves as the seed of what he variously calls "volition" and "the will," and is distinct from both sensations and emotions. He stresses throughout his work that this energy is not only

active, but independent of external forces such as those which prompt sensations. For example, he claims that this originary spark of the will

> precedes sensation, and is at the outset independent of any stimulus from without; and that action is a more intimate and inseparable property of our constitution than any of our sensations, and in fact enters as a component part into every one of the senses, giving them the character of compounds while itself a simple and elementary property (67)

Passages like this one show his commitment to providing an explanation for the will that can support ideals of liberal agency. Here, terms like "active" and "independent" resonate with language used by free will proponents, those on the idealist side of debate with materialism. His description of this originary energy as "simple" and "elementary" furthermore places the will in a primary position in relation to all other elements of the human organism. However, unlike traditional advocates of the free will doctrine, Bain does not align this originary spark with an innate quality, much less an innate moral force or soul. Bain's individual does not possess an agency that is somehow able to step outside the body in order to control it. Unlike his contemporary William Carpenter, Bain refuses to provide an exception for the will – he keeps it firmly tied to physiological processes.[7] The will is intimately bound up with the nervous system and as such forms a component of sensations, emotions and thoughts.[8]

Bain uses an evocative metaphor to negotiate the tension between the "inward power" of the individual and external forces, comparing the nervous system to an organ:

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[7] Bain's work here can usefully be contrasted to that of his contemporary psychophysiologists Carpenter and Herbert Spencer. Despite his focus on the connection between physiological and psychological developments, Carpenter finally gives the will the power to direct physiological processes, re-creating a mind-body dualism. Spencer, on the other hand, made no provision for the will and was charged by his contemporaries with being unable to account for agency.

[8] Young makes a similar analysis, claiming that "Bain defines volition as this compound of spontaneous movement and feeling" (115).

> The nervous system may be compared to an organ with bellows constantly charged, and ready to be let off in any direction, according to the particular keys that are touched. The stimulus of our sensations and feelings, instead of supplying the inward power, merely determines the manner and place of the discharge. (291).

In this formulation, the agency of the individual is figured as the power contained within the organ, pre-existing any external stimuli. The sense of "inward power" is conveyed by the idea of an organ fully charged, "ready to be let off in any direction." Yet Bain simultaneously makes this powerful organ dependent on sensations and feelings that "determine the manner and place of the discharge." In Bain's theory, sensations, emotions and thoughts are shaped by external events. For example, he later writes in a section on sensation that: "So far as mere feeling or emotion is concerned, a very few fibres, intensely excited, can kindle up the most vehement mental effects" (180). The description here has much in common with current affect theory: a body is impacted by an external force, and subjective experience is constituted as a result of that impact. However, there is a key difference from the way affect theorists like Brian Massumi theorize the relationship between affect and agency. Massumi and others locate a kind of agency within the affective impact itself, within the interplay between the body and its surrounding environment. For Bain, however, external impact is a purely determining force, one that shapes the body but does not, of itself, provide agency – because that agency is already contained, separately, within the body, waiting for that impact in order to be "discharged." Bain does provide for a subsequent integration between the will and sensations, emotions and thoughts, making his theory of the body more dynamic than that of most of his contemporaries. However, his system is at the core predicated on an enforced distinction specifying that agency is not produced by a dynamic engagement

with the body's surroundings, but rather "released" from within the nervous system once triggered by an external impact that is simply mediated through the body. This finally leaves Bain with a determined body and a strangely inert source of agency, largely trapped within the nervous system unless released by external pressure.[9]

This affects the way Bain conceives of the growth of the will out of this originary spark, and even the role that the will can play in the moral growth of the individual. In *The Emotions and the Will*, Bain explains that this undeveloped agency – which he now terms "spontanenous energy" and locates more firmly within neurological processes – can, on its own, incite activity, but restricts this to involuntary movements, such as those that enable a person to wake up from sleep.[10] The developed will, on the other hand, is able to control the voluntary muscles, and this begins at the early stages of human maturation through painful and pleasurable experience.[11] Muscular feelings, sensations and emotions can all stimulate the will. The individual is thus motivated by muscular pains, bad odors, soft touch – but also by approbation, praise and the "sentiment of power and superiority" which prompt "the will with ardour, and [are] inciting to some of the greatest efforts that human nature is capable of" (386).

Bain's characterization of not only the will but also emotions and thoughts as intricately bound up with the body's physiological processes means that the will is able to control both emotions and thoughts through its sway over the body's voluntary muscles.

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[9] Bain further stipulates in *The Emotions and the Will* that "Without some antecedent of pleasurable, or painful, feeling – actual or ideal, primary or derivative – the will cannot be stimulated. Through all the disguises that wrap up what we call motives, something of one or other of these two grand conditions can be detected" (351).

[10] For more on how Bain's theory of spontaneous energy in *Emotions* grew out of his theory of an innate stimulus to volitional action in *Senses*, see Rylance, 198.

[11] For example, Bain writes that "A pleasurable emotion prompts the continuance of any active impulse that contributes to maintain or increase it, and brings out into full operation such acts as have become associated with it"(334). This language shows Bain's commitment to association psychology and the utilitarian philosophy of Mill.

For example, Bain observes that an emotion can be affected by controlling the movements associated with it, as this serves to "suppress the nervous currents that excite" the emotion, "so that the internal quiesance follows the external." Thus "the will, operating through its own proper instruments, the voluntary muscles, reaches the deep recesses of emotion, and by stilling the diffused wave, can silence the conscious state maintained by it" (365). This means that the individual can, by controlling various parts of the body, control the emotion – the emotion can either be suppressed or incited. Not being able to control the emotion is likely the sign of an unusually strong emotional wave, or a feeble will. Bain also makes clear that volition is involved in controlling rational thought, the "stream of images and recollections coming into the present view of the mind" (366), because, as Bain writes, "what the will can do is fix the Attention." Once again, this is accomplished through the will's control over the voluntary muscles. If the "brain and other parts of the system" produce an image, the will can control the voluntary elements of the physiological system involved in focusing on an idea, and so control the process.

Yet although Bain conceives of the will as produced by painful or pleasurable sensations or emotions, and then able to control both emotions and thoughts through the voluntary muscles, he also argues that control is not absolute. Both emotions and thoughts can be strong enough to overcome its prompting. The will can aid the emotions in maintaining a pleasurable condition, but emotions can "bring us into misery in spite of the operation of the will" (318). Bain's sense of a psychological system divided between distinct forces in a competitive, rather than integrated, manner is evident when he writes that "in the voluntary control of the thoughts, we frequently have two powers against

one" (383), meaning that emotions and the intellect align themselves against volition. In this case, of the three, emotion is the strongest: the influence of emotions is what "renders self-control so difficult as regards the thoughts" (383). This reflects Bain's adamant stipulation that volition must be kept separate from emotion. While Bain explores the ways emotions, thoughts and the will work together to produce various psychological states, he ultimately conceives of them as separate categories, true to his statement, in his critique of phrenology, that the will must be kept "inviolate." This necessarily limits his ability to envision the integration of the will, not only into the physiological processes of the body, but into emotions and thoughts. For example, here it is clear that whatever power emotions have in directing the course of the individual – especially when emotions are strong enough to trump both intellect and volition – is precisely not will, not agency. Volition can work with emotion to produce effects, but is ultimately a different force, either working alongside to sustain a good emotions, or working against harmful emotions.

This leaves Bain with a theory of psychophysiological processes that may work together but are fundamentally distinct. It also means that the will's influence is limited: it must operate through the voluntary muscles, and may or may not succeed in controlling thoughts and emotions. This makes the will unreliable, a problem for the moral language Bain wants to finally attach to individual agency. What he turns to in order to reinforce volition and ensure that it trumps emotional influence is, strikingly, another physiological process: habit. This move is in keeping with that of contemporary thinkers, notably Mill, who view habit as essential in maintaining a decision of the will in the face of more

pleasurable temptations that might set utilitarian calculations off in another direction.[12] Bain locates habit within the body,[13] so that any volition can produce a habit which can then serve to fix the will into the body's processes.

In his section entitled "Moral Habits," Bain suggests that habits can serve to support and stabilize an otherwise unreliable will. He gives his most extensive discussion of the physiological aspects of the process in his example of a person attempting to adopt the practice of "regular early rising" (457). In this case, a person may experience a conflict for days to years between a "prudential volition as regards the collective interests of life" and a "strong massive indulgence"(457); each time, the will has to battle against those indulgences in order to triumph. However, after some time, there "creeps on a certain habitude of the system," making the conflict less dire, until finally:

> What the individual has had to act so many times in one way, brings on a current of nervous power, confirming the victorious, and sapping the vanquished, impulse. The force of determination that unites the decisive movement of jumping out of bed with the perception of the appointed hour, is invigorated slowly but surely and there is an equal tendency to withdraw the nutritive power that keeps up the pleasurable sensibility opposed to the act. (457)

Bain turns to contemporary theories of habit as ingrained in the body through physiological processes to "invigorate" the will, that "force of determination."

Habit serves to insure the balance of power plays out in favor of the will by writing its commands into the body and also, conveniently, sapping the body of

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[12] Mill writes, for example, that "as we proceed in the formation of habits, and become accustomed to will a particular act or a particular course of conduct because it is pleasurable, we at last continue to will it without any reference to its being pleasurable" (*Utilitarianism*, 4).

[13] This was not an original move. Charles Darwin, Herbert Spencer and George Henry Lewes all examined the physiological dimensions of habit. Bain's formulation here – where habit is used to reinforce the will – bears much in common with Mill's discussion of habit in *System of Logic* and *Utilitarianism*, although Mill does not discuss habit as a physiological process. On the other hand, the psychophysiologist William Carpenter primarily stressed habit as antithetical to the will, writing, for example, "there are many individuals whose Will has never been called into due exercise, and who gradually almost entirely lose the power of exerting it, becoming the mere creatures of habit" (*Principles*, section 806).

sensations that would subvert obedience. Bain shows that this applies to an entire range of moral endeavors, including, for example, temperance.[14] The individual must start with an intense effort of the will, but after regular effort over a period of time, habit supplies "a concurring power that supersedes the necessity of high resolve" (460). Finally, habit can even help the will triumph over the emotions. For example, a person with an "unbridled temper" and "moderately endowed with strength of will" (therefore unlikely to rule the emotion) can shift the balance of the equation by cultivating a habit, "superadding the force of habit to the force of volition" (468).

In this moment of moral reinforcement of the will, the body is valued precisely for being static. That is, its physiological processes are assumed to be fixed enough to stabilize an otherwise aberrant will. While the will forces a certain moral habit onto the body, the habit is formed precisely at the moment that the physiological processes function to determine the will. Although Bain's key contribution to psychological theory is an explanation of the will as part of the physiological body, his theory for moral habits shows the limits of his thinking. He links Victorian liberal agency to the will, and locates that will within the processes of the nervous system, but finally cannot escape the trope of the static body determining the will. Individual agency is made possible when the physiological processes of the body control and contain the will by "fixing" it. This reinforces the division Bain creates in *Senses* regarding the originary spark that needs to be triggered by external influence, as well as the divisions he maintains between the will, emotions and the intellect as separate, although mutually influential, processes. George

[14] He suggests, "When, however, the volition is so strong on the point as to operate on all occasions for a lengthened period, the plastic force adds a concurring power that supersedes the necessity of high resolve. This alone is a habit of temperance" (460).

Eliot works with these same concerns in *The Lifted Veil* and *The Mill on the Floss*, but creates a more dynamic relationship between will and body through integration.

Eliot's Rationally-Produced Affective Sympathy

In 1859 George Eliot interrupted her work on *The Mill on the Floss* to write a Gothic novella, *The Lifted Veil*. As Beryl Gray notes in her introduction to *The Lifted Veil*, Eliot's publishers were embarrassed when they received the novella, viewing *The Mill on the Floss* as the more proper vehicle for Eliot's work and critical reputation, and the novella was not published until 1878. *The Lifted Veil* marks Eliot's only foray into the Gothic mode, and it is also the text in which she treats the practice of phrenology most extensively.[15] The Gothic here serves as a means to examine less-established theories by which Eliot was nonetheless fascinated, including not only phrenology but mesmerism. Her exploration of scientific developments – such as evolution, physiology and psychology – in her realist texts has been well documented.[16] While *The Mill on the Floss* has often been read as exploring evolution and contemporary theories of memory, I want to locate within this realist text an engagement with physiological psychology that is integrally related to the exploration of phrenology in *The Lifted Veil.*

Both texts examine the role of agency within an embodied psychology – figured alternatively by phrenology and physiology – and in this way work with the same problematic Bain takes up in *On Character*, *Senses,* and *Emotions*. As with Bain,

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[15] While Eliot does make passing reference to phrenology in novels like *Adam Bede* and *Felix Holt*, its presence is not essential to the narrative, unlike *The Lifted Veil*.

[16] See Gillian Beer, *Darwin's Plots*, Sally Shuttleworth, *George Eliot and Nineteenth-Century Science*, and Michael Davis, *George Eliot and Nineteenth-Century Psychology*. Beer's seminal work identified a "shared discourse" that allowed ideas and narrative patterns to move between scientists and non-scientists. Shuttleworth shows how scientific ideas shaped Eliot's social vision, narrative structure, and fictional methodology, noting especially Eliot's interest in the time's parallel development of "social theories of organic evolution and scientific theories of dynamic, biological life."

phrenology in Eliot comes to represent the passive subject, while the possibility of agency is explored within physiological psychology. In fact, phrenology in *The Lifted Veil* creates a problem for the will that Eliot takes up again in *The Mill on the Floss*.

Eliot's legendarily comprehensive knowledge of contemporary philosophical and scientific advances,[17] along with her interest in moral theory, meant that she was particularly well-informed on questions of the Victorian will and its relationship to the physical body. The role of the will is central to Eliot's ethical vision, which permeates all her work.[18] She was heavily invested in the philosophical debates of the day that pitted idealism against associationism and empiricism, as Valerie Dodd notes in *An Intellectual Life*. Eliot repeatedly returned to the works of Thomas Carlyle and started reading Samuel Taylor Coleridge in 1841. Both men championed idealism throughout their careers. On the other hand, Eliot also avidly read Mill and had bought and read a copy of *System of Logic* by 1851.[19] Her contemporaries noted that she and Mill both shared an investment in seeking to synthesize diverging perspectives in the liberty-versus-necessity philosophical debate.[20]

Eliot, who first coined the term "psychological novel,"[21] was also well versed in the developing psychophysiological theories of the mid-nineteenth century. Her partner,

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[17] Vanessa L. Ryan writes in "Reading the Mind" that "Eliot's knowledge and understanding of contemporary science allowed her to speak with familiarity and authority about most of the important scientific theories of her time." (626). Similarly, Shuttleworth notes that "Scientific ideas did not merely filter through into the metaphors and images of her work; in constructing her novels she engaged in an active dialogue with contemporary scientific thought" (ix).

[18] For more on Eliot and the will, see John Reed, *Victorian Will*, John Kucich, *Repression in Victorian Fiction*, and Melissa J. Gantz, "Binding the Will." Kucich argues, in part, that Eliot protects the individual will through an alienation in which self-negation undermines interdependence (135). Gantz examines Eliot's treatment of he will within the context of the contemporary legal and philosophical treatment of the practice of promising as key to her vision of moral character.

[19] Book Six of *System* is Mill's most extensive treatment of the tension between liberty and necessity.

[20] See Dodd, 100

[21] As noted by Ryan in "Reading the Mind"

G.H. Lewes, was an influential philosopher, and Eliot shared his fascination with theories of the mind-body connection. As Vanessa Ryan writes, Eliot was clearly in the "vanguard of mental science;" she was either acquainted with or had read the work of most prominent psychophysiologists. She and Lewes read Carpenter's *Principles of Human Physiology*, for example, as early as 1855. Eliot was close friends with Spencer starting in 1851, and read his works. While there is less documented evidence regarding her exposure to Bain's work, her letters record that she and Lewes routinely visited with him socially. Her letters additionally show that she had certainly read Bain by 1879,

Eliot's own work shows an attempt to synthesize psychophysiological theories with the kind of agency needed for moral choice and growth. As Michael Davis argues in *George Eliot and Nineteenth-Century Psychology*, "Given the centrality to Eliot's ethical beliefs of the intellectual and emotional potential of the subject, it is a crucial question … whether the individual has any significance beyond simply that of a conduit for the causal factors, hereditary, physiological or social, which impinge on that individual" (117). This is especially important for her representation of sympathy. As Elizabeth Ermarth notes, sympathy lies near the heart of moral life for Eliot. It is not selfless benevolence, but "a difficult psychic negotiation between self and other" (*George Eliot*, 90). Both *The Lifted Veil* and *The Mill on the Floss* show a penultimate moment of sympathy that figures the moral growth of the main character – Latimer and Maggie, respectively. However, the process of sympathy, particularly in its relationship to the physiological body, varies significantly in each text. *Veil* creates an unresolved opposition between Latimer's phrenological determination and the agency that is produced by his experience of sympathy. Eliot makes Latimer's sympathy a rational process by following the famous

formula for moral sympathy developed by the 18th-century philosopher Adam Smith in the *Theory of Moral Sentiments*. *Mill* works through the tension created in *Veil* between physiological processes and a rational will, with a different conclusion. Here, psychophysiological connections create an affective sympathy which promotes intersubjective understanding. While Eliot continues to specify that the moral will must be rational in order to account for choice, Maggie's will is both rational and affective. Eliot's formulation owes much to her modification of Victorian psychophysiology through turning to the earlier work of Smith, and, in addition to Smith, Baruch Spinoza.

The Lifted Veil

The Lifted Veil has long been viewed as an aberration amidst Eliot's larger oeuvre of realist fiction, overlooked by both the public and literary critics. In recent years, however, scholars have found in the text's Gothic sensibilities a way for Eliot to differently explore the central issues with which she was preoccupied. Kate Flint, for example, writes that *The Lifted Veil* should be read as "inseparably linked to a developing contemporary debate about the relationship between physiology and psychology" (457).[22] She argues that precisely those elements whose presence seemed to delegitimate the text –phrenology, mesmerism and blood transfusion that brings a woman back to life – mark Eliot's engagement with contemporary scientific and philosophical discussions that had not ruled such possibilities out.

While it is nothing new to show that Eliot was engaging with the scientific discourses of her day, Flint's argument suggests that even Eliot's representation of the

[22] "Blood, Bodies and The Lifted Veil." See also Jane Wood in *Passion and Pathology.*

pseudosciences marks a thoughtful interaction with developing theories of the body and mind. Flint, however, focuses primarily on Eliot's treatment of blood transfusion. I argue that phrenology in *The Lifted Veil* is central to not only the novella's narrative, but marks Eliot's engagement with two polarized explanations for the psychology of the individual – here represented by the determinism of a hard physiology and an older, 18th-century moral sentiment philosophy. This represents a departure from traditional scholarship, which tends to see Eliot's use of phrenology in her works as either irrelevant or dismissive of the practice.[23]

The Lifted Veil tells the first-person story of Latimer, a morose failed poet who discovers he has the telepathic ability to read others' thoughts. Rather than enjoying this newfound power, it makes him even more miserable, and he marries the only person – Bertha – whose thoughts he is unable to read. Latimer is eventually able to read Bertha's thoughts as well, and discovers that she actually detests him. Early in the narrative, his parents take him to see a phrenologist. The phrenological reading is described in great detail. The practitioner, Mr. Leatherall, evaluates the subject and:

> took my small head between his large hands, and pressed it here and there in an exploratory, suspicious manner – then placed each of his great thumbs on my temples, and pushed me a little way from him, and stared at me with glittering spectacles. The contemplation appeared to displease him, for he frowned sternly, and said to my father, drawing his thumbs across my eyebrows – 'The deficiency is there, sir – there; and here,' he added, touching the upper sides of my head, 'here is the excess. That must be brought out, sir, and this must be laid to rest'. (6)

This passage should be read intertextually with the pervasive phrenological charts and heads that were easily accessible to mid-nineteenth-century readers. They were included, for example, in George Combe's popular phrenology book, *The Constitution of Man*. Mr.

[23] T.R. Wright, for example, calls Eliot's representations of phrenology "very trivial" ("From Bumps to Morals," 38).

Leatherall's location of a deficiency in Latimer's eyebrows would let the reader know that Latimer is lacking an ability to work well with form, size, weight, coloring, number – all of the elements that Latimer's subsequent scientific education is meant to correct.

The reading gives a correct assessment of Latimer's character. In fact, it is so accurate that it nearly gives away the rest of the narrative. Mr. Leatherall identifies the problematic "excess" on the "upper sides" of Latimer's head – where Combe's phrenological head shows the location of, among others, Ideality, a character trait that includes poetic feeling. According to Combe, abuses of poetic feeling include the "tendency to dwell in the regions of fancy and neglect the duties of life" (*Constitution*, 26). This reading anticipates, correctly, Latimer's subsequent descriptions of himself as having a "poet's sensibility" as well as his inability to deal with the practicalities of life. Also located on the upper side of the phrenological head is Cautiousness, the abuses of which include "excessive timidity, poltroonery, unfounded apprehensions, despondency, melancholy" (26), Wonder, whose abuses include belief in "supernatural absurdities" and Hope, whose abuses include "absurd expectations of felicity not founded on reason" (26). This reading correctly depicts the aspects of Latimer's personality that drive the narrative and indeed define his character. In particular, it foreshadows Latimer's increasing detachment from the world around him as he becomes absorbed with neurotic fears driven by his belief in his telepathic powers, his depressed, melancholic nature and his deluded love for Bertha. Because Latimer remains passive and only further confirms the reading throughout the text, Eliot's use of phrenology here serves to specify that the protagonist is lacking in the kind of Victorian will needed for character development and

moral progress. Phrenology poses a problem for the will and creates a subject who is passive and physiologically-determined.

The phrenological reading, which occurs early in the narrative, establishes two elements in Latimer's nature: the determining force of his body, and his passivity before it. Latimer, for example, conceives of himself as defined by his physiology, complaining of "the lot of being finely organized for pain, but with hardly any fibres that responded the pleasure" (36) and frequently referencing "my feeble nervous condition" (27) as an explanation for his actions. His telepathic facilities reinforce the idea that physiological processes render him unable to exert his will. Latimer's second sight is linked to his physical body, as he gains these powers after a lengthy illness, speculating that the illness had changed his "organization" by giving a "firmer tension to my nerves" (13). Thinking excitedly that this may be proof of poetic genius, he attempts to generate a vision by "exertion of my will" (14). However, this yields "prosaic effort" rather than the "rapt passivity" of his visions. His new powers, then, only serve to further negate his will, leaving him just as determined as he is by his phrenological traits. Indeed, Latimer soon discovers he doesn't want to see into the inner lives of others at all, but is forced to do so by his condition; he describes the experience as the "obtrusion on my mind of the mental process" of others (19) who would "force themselves on my consciousness" (19). The language here stresses external impact shaping Latimer's mind and consciousness against his will, with Latimer powerless to influence others in a similar manner. His supernatural powers work to reinforce the original phrenological reading, as he becomes even more timid, deluded and isolated as a result.[24]

[24] My suggestion that Eliot might have chosen to link Latimer's experience of telepathy to bodily sensations in order to emphasize their physiologically-produced nature, in keeping with the phrenological

Latimer's only respite from this passive condition comes when he unexpectedly feels sympathy for his father. The moment of sympathy occurs when his brother dies, and he suddenly feels "the presence of a new element" (41), which Eliot soon makes clear is sympathy. Rather than relying on – and being repulsed by – the double-consciousness that was forced upon him, Latimer now intentionally places himself in his father's position. This is described in active terms; Latimer writes that "As I saw into the desolation of my father's heart, I felt a movement of deep pity towards him, which was the beginning of a new affection" (42). His ability to "see" into his father's heart signals an investment, an intentional movement on his part towards his father, which yields "the first deep compassion I had ever felt" (42).

This signifies a change in psychological make-up, in which Latimer moves out from the determinist physiological model associated here with phrenology, psychophysiology and telepathy. Instead, his experience of sympathy follows a trajectory that has much in common with Smith's 18th-century moral sentiment philosophy: the subject imagines himself in the place of the other person. This imaginative transposition is motivated by a rational assessment of the situation using contextual knowledge. The person then feels a corresponding emotion – a self-produced emotion, prompted by rational understanding. In Latimer's case, his sympathy for his father occurs when he carefully evaluates his father's life experiences and compares them to his own. This rational assessment enables an imaginative transposition that creates an emotion of pity

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model of psychology that makes Latimer so passive, provides a more substantial reading of this element of her narrative than Thomas Albrecht, who similarly notes Eliot's emphasis on the sensory aspects of Latimer's telepathy, but reads them in a metaphorical light. In his article "Sympathy and Telepathy," Albrecht instead posits a failure of representation, such that "the representation of telepathy as heightened senses paradoxically points to the impossibility of representing telepathy" (453).

which trumps his own egoism. He no longer simply observes his father's pain but feels compassion for him.[25]

For the first time in the novel, Latimer is able to assert his will against that of another, and shape the situation to his desires. Although his father initially is bitter and estranged from him, Latimer's new compassion eventually wins him over, so that "it was only in spite of himself that he began to think of me with anxious regard" (42). Upon the second sympathetic exchange between son and father – as the father is dying – Latimer is finally freed of Bertha's dominance over his mind and is able to see her for what she is, again tying agency and self-determination to sympathy. He here acts in ways that explicitly challenge the phrenological reading and assessment of his character: he is no longer timid, and he is able to face up to reality. Even his melancholic nature is altered as he is instead happy, telling the reader that "the softened feeling I had for my father made this the happiest time I had known since childhood" (43).

Latimer's experience of sympathy, however, is not enough to create a lasting interest in others; his "horror of breaking in on the privacy of another soul" (58) keeps him from sympathizing with anyone else. He returns to his passive state, proving the initial phrenological reading right. The text remains ambiguous here: could Latimer have chosen to develop the capacity to live according to that altered state of consciousness produced by moral sympathy, or is his inability to do so confirmation that the original reading of his head was right all along? In any case, Latimer remains trapped in his

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[25] Rae Greiner in her article "Sympathy Time" has an interesting reading of Eliot's use of Smith's moral sentiment theory in *The Lifted Veil*, arguing that the telepathic Latimer "cannot imagine what others are thinking because he *already knows*" (304), precluding the distance needed for sympathetic exchange. She concludes that "*The Lifted Veil* is deeply cynical about the marriage between sympathy and knowledge" (307).

passivity, and this is underlined by the very circumstances of his death – his telepathic vision allows him to see the exact way in which he will die, but he is powerless to prevent it.

The hard determinism of phrenology and Latimer's telepathic powers create a physiological body that shapes his character entirely apart from – and even at times against – the inclination of his will. Latimer is rescued from this passivity through Smith-like sympathy, here articulated in a way that re-creates a mind-body divide. Latimer's only experience with agency comes from a process of sympathy more rationalized than related to physiological influence. His emotion of compassion is produced by deducing the various aspects of his father's experience in order to imagine himself in his position. There is no indication in the narrative that this emotion is connected to physiological processes. The fact that Latimer flips from one psychological model to another points to a lack of integration, not only in his character, or in the relationship between mind and body, but also between the will, emotions and the intellect. *The Mill on the Floss* takes up just these issues, suggesting that Eliot found a more productive way to explore these questions in Victorian psychophysiology. Eliot here shows the integration of various elements – the will, a dynamic body, reason – that remain stubbornly separated in *The Lifted Veil.*

The Mill on the Floss

The Mill on the Floss, the most autobiographical of Eliot's novels, follows the life of Maggie Tulliver as she grows up in the small town of St Ogg's. Throughout the narrative, Maggie is forced to become acutely aware of the ways in which her stubborn,

intelligent yet sensitive nature does not conform to Victorian standards of femininity.[26] Maggie grows from a precocious child to a woman whose impulsive ways force her into conflict with her family and society. At the end of the novel Maggie and her brother Tom are suddenly killed in a flash flood. A line of scholarship argues that Maggie does not fundamentally change as a character. Barbara Hardy, for example, ascribes this to a narrative failure on Eliot's part, while others like Susan Fraiman argue that Eliot intentionally refuses to let Maggie enter the forward progress of the genre of the bildungsroman as a commentary on gender norms.[27] Attention to Eliot's psychology, however, reveals at least one clear change in Maggie's character: she moves from being primarily guided in her relationships through reactionary, physiologically-produced impulses to a will that is both rationally and affectively produced.

If Eliot took a break from writing *The Mill* to explore phrenology and telepathy in *Veil*, she addresses contemporary scientific theories in her realist novel. While *Veil* aligned phrenology and telepathy with a hard-line physiology that precluded agency, *The Mill* examines a more generative role for physiological psychology in the production of the will, especially the kind of will that can lead to moral action. In this way, Eliot shares with Bain a commitment to locating, within the psychophysiological body, the kind of agency that could answer to Victorian ideals of the will. However, as we have seen, Bain's concept of agency posits a spontaneous energy that is incompletely integrated into

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[26] F.R. Leavis, for example, writes that "Maggie Tulliver is essentially identical with the young Mary Anne Evans we all know. She has the intellectual potentiality for which the environment into which she is born doesn't provide much encouragement; she has the desperate need for affection and intimate personal relations; and above all she has the need for emotional exaltation…" (*The Great Tradition*, 18)

[27] Barbara Hardy in *Particularities* writes that Maggie as a character is not transformed (69) – she learns to live in a reserved and controlled way, but this is not a dramatic change, while Susan Fraiman in *Unbecoming Women* argues that the novel subverts the male-centered form of the bildungsroman by preventing Maggie from truly progressing.

the rest of the physiological body, and a will that is separate from both emotions and reason, even as it interacts with them. This produces a static body that acts on the will, sometimes even in order to stabilize it. Eliot's theorization of agency is more organic.

Eliot represents, in *Mill*, two different kinds of agency. One may be correlated to Bain's spontaneous energy, but in this case it is more dynamic than Bain's model of determining, one-directional physiological forces that act upon an inner spark of agency. Eliot's concern with fostering intersubjective understanding is worked out in her representation of physiological connection between bodies, so that she theorizes a kind of affective impact that creates dynamic interplay. However, she makes clear that this process is non-cognitive, and as such cannot be counted on to engender, on its own, the psychological dynamic that is her central concern: moral sympathy. Maggie undergoes an emotional education wherein she moves from purely affective sympathetic connections with others to a developed will,[28] a new kind of agency that enables her to make a moral decision. Where Bain figures, in moral decisions, a battle for influence between emotions, reason and the will which is finally resolved by using a static body to "fix" the will, Eliot turns to two philosophers with whom she was very familiar – Smith and Spinoza – to represent a Victorian will more organically integrated with the psychophysiological body.

She explores the potential benefits and limitations of a purely affective sympathy in Maggie's tumultuous relationship with her brother Tom. The moments of reconciliation between Maggie and Tom are depicted in language that stresses their physical connection, beginning with an episode in which Maggie accidentally kills Tom's

[28] This also resonates with Bain, who traced the development of spontaneous energy into a moral will. Both Eliot and Bain stress experience as shaping the development of the will, rather than positing an innate moral sense.

rabbits. Tom is outraged, and comes to Maggie intending to punish her. Instead, he finds himself kissing her and offering her his cake, and the change is entirely wrought by bodily impact, with the language heightening the physiological nature of this transaction:

> Maggie and Tom were still very much like young animals, and so she could rub her cheek against his, and kiss his ear in a random, sobbing way; and there were tender fibres in the lad that had been used to answer to Maggie's fondling; so that he behaved with a weakness quite inconsistent with his resolution to punish her as much as she deserved: he actually began to kiss her in return. (34)

The physical contact between the two is stressed, and then re-described as a contact with Tom's "fibres," a key term in psychophysiological discourse, relating to the nervous system. Bain, in fact, uses just this term when he describes emotion, noting that, "So far as mere feeling or emotion is concerned, a very few fibres, intensely excited, can kindle up the most vehement mental effects" (180). However, while Bain specifies here that the physiological impact is separate from agency, serving to trigger that "spontaneous energy" within the nervous system but not comprising it, Eliot examines a kind of bodily force at play between Maggie and Tom that resonates with current affect theory.

Eliot's ability to move beyond the confines of contemporary psychophysiological theory owes much to her familiarity with the work of Spinoza, whose *Ethics* she had translated just prior to writing *The Mill on the Floss*.[29] Spinoza, who posited that the mind was the idea of the body at a time when Descartes' mind-body dualism was the accepted line of thinking, develops a theory of affect as a modification of the body that can either increase or decrease its power, as well as the idea of those modifications,[30]

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[29] Kristie M. Allen specifies in her article "Habit in George Eliot's *The Mill on the Floss*" that Eliot was translating the *Ethics* from 1854-55. She also notes Spinoza's influence on Eliot's conception of psychology, but focuses instead on Eliot's treatment of the question of whether experience could alter individual habits.

[30] See Chapter 3 of the *Ethics*

which has been influential in current affect theory.[31] Importantly for Eliot's depiction of physiological processes, he also theorizes that, in general, any bodily affect comes from one body impacting another (*Ethics,* 96). This makes much more relational the kind of physiological influence Bain examines, and also makes it possible for Eliot to appropriate it for intersubjective connection. Here, Maggie and Tom affectively influence each other as their bodies resonate to each other's "fibres." Eliot makes this physiological influence into a dynamic process that reconciles brother and sister. However, the language here hints that there is something lacking in this kind of affectively-produced sympathy. The narrator states that the sister and brother have acted in "the mere impulsiveness of the lower animals" (34); and bear a "humiliating resemblance to two friendly ponies" (34) as they rub their noses together afterwards.

The siblings are repeatedly brought back to this originary scene of a physiologically-enacted reconciliation as the only means to resolve a deepening alienation that grows between them as they mature. The contrast in their natures creates a distancing detachment: Tom continues to coldly judge Maggie for her impetuous actions while Maggie increasingly seethes with resentment, sensing her brother's moral code is too strict and inflexible. When the two meet much later at Tom's apartment in St. Ogg's, the text suggests a great chasm between them in terms of understanding, with Maggie deciding that "It was no use trying to make Tom feel that she was near to him. He always repelled her" (318). Here their father's recent death serves as a "solemn memory surmount[ing] the immediate grievance" (318) but the decisive moment of transcendence

[31] Spinoza figures importantly in the work of Antonio Damasio, Brian Massumi and Gilles Deleuze, for example. Melissa Gregg and Gregory Seigworth note, in their introduction to *The Affect Theory Reader*, that Spinoza's assertion that "No one has yet determined what the body can do" has become one of the most oft-quoted lines in current affect theory.

occurs when Maggie hears "a little tremor in Tom's voice" and her "ready affection came back with as sudden a glow as when they were children, and bit their cake together in a sacrament of conciliation" (319). This tremor could be read as something that Maggie processes in a rational way. It signifies, after all, that her brother is not as emotionally-detached as he appears. However, the thrust of the narrative is towards a non-rational, physically-influenced event in which Maggie's "ready affection" is suddenly triggered by that tremor in Tom's voice. Furthermore, the narrator explicitly compares this reconciliation to the earlier childhood scene of affective influence through the reference to the former episode of eating cake together. Although Tom and Maggie grow and change into distinct, distanced adults, the physiological serves to loop them back to an earlier stage of relationship.

The penultimate scene of reconciliation between Maggie and Tom is, of course, that which takes place during the great flood. After the flood has poured the River Floss through St. Ogg's, Maggie is swept out into the waters in a boat and decides to row back home to save Tom and her mother. The narrative here stresses that the flood itself has somehow changed Maggie's psychological organization as "the threads of ordinary association were broken down" (418), in a reference to association psychology. The circumstance of the flood produces an altered state, both physically and psychologically. Under the influence of the "great calamity" of the flood, Maggie is "hardly conscious of any bodily sensations – except a sensation of strength, inspired by mighty emotion" (419). That emotion is the "strong resurgent love towards her brother that swept away all the later impressions of hard, cruel offense" (419). The overpoweringly dangerous nature of the flood gives Maggie a kind of transcendent agency by triggering an emotion so

powerful (her love for her brother) that she is made physically stronger. We are told that "more and more strongly the energies seemed to come and put themselves forth" (419) as Maggie rows, so that she is able to move the boat out of the strong current of the Floss and towards her old childhood home. The flood's psychophysiological impact here not only makes her physically stronger, but strips away years of hard feelings towards her brother. It works in this way not only on Maggie, but also on Tom, whose realization of Maggie's "almost miraculous divinely-protected effort" to rescue him prompts "a new revelation to his spirit" that comes with such "overpowering a force" (421) that he forgives her. This repeats the process of the previous reconciliations in which a primarily physiological influence creates an affective agency that moves the brother and sister to transcend their divisions, overcoming their resentments. That this scene loops back to childish dynamics is underscored by the first word Tom utters after his revelation: the childhood nickname "Magsie" (419).

The reconciliations between Maggie and Tom are produced by an affective exchange that Eliot clearly values for its ability to create an intersubjective bond. The psychophysiological nature of these events enables both characters to transcend personal grievances by circumventing their more rational understanding of each other.[32] The affective produces a mutually-transformative agency, one that enables them to influence each other into sympathetic feeling. In the same way, Maggie's body dynamically engages with her environment during the flood, granting her a strength she would not have otherwise possessed. However, Eliot's reluctance to endorse physiologically-determined character change is registered not only in the path of the

[32] This kind of reading differs from that of Barbara Hardy, who writes, "a great psychological novel is turned into a providence novel at the end" (*Particularities*, 65) as I argue that it is precisely because of Eliot's psychological explorations that Maggie and Tom are reconciled this way at the end.

narrative (the very flood that brings Tom and Maggie together also kills them), but also in language that highlights the primitive, undeveloped nature of Tom and Maggie's sibling relationship. If the two are described as bearing a humiliating resemblance to ponies in early childhood, Maggie's psychological condition during the flood is similarly akin to a primal state, produced by the calamity's ability to strip away the "artificial vesture of our life" and produce a physiological condition in which "we are all one with each other in our primitive mortal needs" (419). Neither Maggie nor Tom makes a conscious choice to be reconciled, and thus affective sympathy cannot, alone, serve to promote the kind of ethical action Eliot is concerned to articulate.[33]

While Eliot explores the potentially productive role of physiological processes in promoting sympathy between the siblings, Maggie's romantic relationship with Stephen signals the limitations of a purely affective agency in moral action. This storyline takes place in the third and final book of *The Mill*, and Maggie here is a young woman. The developing attraction between herself and Stephen troubles them both because they each have previous ties to someone else: Maggie has committed herself to Philip, and Stephen is engaged to Maggie's cousin Lucy. The mounting attraction between Maggie and Stephen that ends with an aborted elopement is couched in language that is explicitly psychophysiological.[34] For example, the moment of their first encounter is described in physical terms:

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[33] Davis similarly notes that Eliot wrestled with this tension in Victorian psychophysiology between an autonomous will and the shaping influence of external events and physical processes.See pages 126-129.

[34] Although Eliot's foregrounding of the body signals sexual and romantic desire, I read here along with Davis, who finds that Eliot's depiction of romantic desire is made expressly physiological, and produces a conflict between emotional, physical being and "unified, controllable self" (20). What I wish to particularly examine here is the way in which Maggie's inability to refuse Stephen is tied to a loss of agency, and explicitly figured in physiological terms.

> Maggie felt herself, for the first time in her life, receiving the tribute of a very deep blush and a very deep bow from a person towards whom she herself was conscious of timidity… There was a new brightness in her eyes, and a very becoming flush on her cheek, as she seated herself. (304)

In this passage, Stephen's blush spreads from his face to Maggie's, a classic example of affective influence. Thus the beginning of Maggie and Stephen's mutual attraction is produced by a powerful psychophysiological process that overrides all other considerations. The play of affect between bodies enables each character to influence the other simply through physical presence, once again producing a non-rational agency. For example, when Stephen plays music as Maggie sits nearby, she is brought to rapt attention despite her previous resolve to ignore him, "her soul being played on by the inexorable power of sound" producing a "quivering through her whole frame" (337). The sound of Stephen's voice has a similar impact on her. At another point, the mere sight of Maggie's arm creates a "mad impulse" in Stephen who suddenly grabs it and showers kisses on it (358).[35]

As the relationship between the two develops, Eliot specifies that the affective influence between them is problematic precisely because, in being non-rational, it cannot accommodate a moral will. Maggie's decision to abortively elope with Stephen by taking a boat down the river Floss is couched in exactly these terms. On the afternoon of the elopement, Stephen's influence over Maggie is once again portrayed affectively: When she realizes she is alone with him, her heart "beats violently." She "trembled visibly" and has "trembling fingers" (373) until he comes near and looks into her eyes and "Maggie sat perfectly still – perhaps for moments, perhaps minutes – until the helpless

[35] The entire relationship, in fact, is described in a negative language of passivity that is tied to the physical influence between Maggie and Stephen. Maggie feels under an "oppressive spell" (329) in Stephen's presence; even Stephen feels like he is in a dream (328); and the first time she takes his arm for a walk in the garden is in "some dim dreamy state" (330) that prefigures her condition when they elope.

trembling had ceased, and there was a warm glow on her cheek" (374). Here Stephen's presence produces a strong physiological influence upon Maggie, altering her decision: the change is first wrought on her body, as she moves from trembling to a calmed blush. Prior to this moment, Maggie had told Stephen that she could not go with him on the planned boat trip without the company of Lucy and Philip, knowing this would put her in a compromised position. However, after this affective interchange, Maggie does an about-face and lets Stephen guide her down to the boat, feeling herself entirely under his influence, as if she is being led by "a stronger presence that seemed to bear her along without any act of her own will" (376). As the two float farther and farther down the river, Maggie continually reminds Stephen – and the reader – that her decision to be with him was co-opted by her physical reaction, and tells him that she never chose to be with him with her "whole heart and soul," "never consented to it with my whole mind" (386).

Maggie's further declaration here that "it has never been my will to marry you" (386) establishes an opposition between affective force and her will. While the reconciliations with Tom explore the ways psychophysiological processes can create relational resolution by circumventing rational understanding, here the problem is that Stephen's affective pull explicitly prevents Maggie from making a moral choice. Yet although Eliot's language seems to signal a Cartesian mind-body divide – Maggie's "heart and soul" and "mind" aligned with her will against her body's attraction to Stephen – Eliot is not here re-inscribing a disembodied will against a determined body. This tension is instead resolved by a synthesis that foregrounds psychophysiological processes as an essential, dynamic part of agency. Eliot forges a compromise between the Victorian scientific body and the Victorian will by turning to Smith and Spinoza.

What comes to Maggie's aid to help her establish her will is a process clearly indebted, in part, to Smith's moral sentiment theory. In a moment that resonates with Latimer's moment of escape from passivity in *The Lifted Veil*, this occurs when a change comes over Maggie, and Stephen can tell "that [she] had entirely lost her passiveness" (383). Stephen tries to persuade her to stay with him and cement their over-extended journey into an elopement by getting married, arguing that their mutual feeling constitutes a "natural law" (385). Her response is anchored in a description of the kind of sympathetic feeling Smith in *Moral Sentiments* figures as promoting altruism and grounding moral action. She tells Stephen that:

> I should never have failed towards Lucy and Philip as I have done, if I had not been weak, selfish, and hard – able to think of their pain without a pain to myself that would have destroyed all temptation. O, what is Lucy feeling now? (385)

This is a faithful articulation of Smith's sympathy principle, in which the individual rationally contemplates the position of another in order to imagine themselves in their shoes, and, by this process, feel a corresponding emotion. As Smith writes in *Theory of Moral Sentiments* when describing the operation of sympathy, "Whatever is the passion which arises in the person principally concerned, an analogous emotion springs up, at the thought of his situation" (66). In this case, Maggie's ability to rationally "think of [the] pain" of Philip and Lucy produces in her an emotion analogous to theirs. An imagined self-representation of the situation of the others is evoked in Maggie's cry "O, what is Lucy feeling now?" As in Smith's scenario, the sympathetic process triggered by a rational prompt to the imagination convinces Maggie to take a moral action on behalf of others.

Maggie is able assert herself against Stephen and his influence, and she now has the ability to act out her will, which she defines as not wanting to marry her lover, and to instead return to St. Ogg's to make amends with Philip and Lucy.[36] Her ability to make a choice by exercising her will is a demonstration of the psychological implications of Smith's moral sentiment theory regarding sympathy, which posits a rational, mental process that trumps the affective pull of the emotions. Smith writes that, during the experience of "fellow-feeling," emotions may appear to be "transfused from one man to another, instantaneously, and antecedent to any knowledge of what exited them" (67). However, Smith writes that this is not the case because the individual does indeed require knowledge of the situation, both to judge whether the afflicted person is worthy of sympathy, and to gather enough situational information to imagine themselves in the position of the other. Smith asserts that "our senses will never inform us" of what another person suffers; it is "by the imagination only that we can form any conception of what are his sensations" (65).[37] Thus sensations and emotions are not automatically transferred from one person to another, but only through a rationally-induced imaginative process that then produces a moral will.[38] In a similar manner, Maggie's sympathy for Philip and Lucy enables her to make a moral decision because she is consciously, rationally, choosing to put herself in their place, rather than being guided by a physiological

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[36] In her reading of this scene, Deborah Guth similarly locates a high point of Maggie's moral development (*George Eliot and Schiller*, 85). Guth is working with Schiller's philosophy of moral improvement through knowledge; I want to locate this development within an emotional growth**.**

[37] Smith's language stresses that the imagination is triggered by a rational process, for example: "As we have no immediate experience of what other men feel, we can form no idea of the manner in which they are affected, but by conceiving what we ourselves should feel in the like situation. Though our brother is upon the rack, as long as we ourselves are at our ease, our senses will never inform us of what he suffers" (65).Words like "conceive" and "idea" are contrasted to the operation of our "senses."

[38] For example, sympathy for moral emotions like grief, joy, and especially anger, requires information about the cause of the emotion. This rational process helps Smith build his moral system on sympathy as an emotion that is contingent upon moral approval. Furthermore, sympathy is so desired by all that persons will act morally to obtain it.

reaction. While, as Maggie tells Stephen, "I couldn't choose yesterday," now her "will was fixed unswervingly on the coming wrench. She had made up her mind to suffer" (384). Eliot shows Maggie's will must involve rational choice, if it is to enable her to make a moral decision.[39]

Yet Eliot does not follow Smith's lead in making Maggie's sympathy *primarily* a rational process. This marks a clear break from the kind of sympathy Latimer was capable of feeling in *The Lifted Veil*. A useful point of distinction comes in the role of conscience. Smith ultimately has recourse to a conscience that acts when sympathy falls short of motivating a person to do the right thing, especially when it means countering self-interest. He claims the "inner man" of conscience steps in; "a stronger power, a more forcible motive, which exerts itself upon such occasions. It is reason, principle, conscience, the inhabitant of the breast, the man within, the great judge and arbiter of our conduct" (106). Although he calls conscience "the inhabitant of the breast," the other terms he aligns with it – reason, principle, judge and arbiter – place it firmly within the province of the intellect, able to control the unstable emotion of sympathy. Eliot similarly posits Maggie's conscience as essential to her ability to engage with moral sympathy. However, she importantly revises Smith's theory. First, she makes clear that Maggie's conscience is shaped by her past life experiences, particularly her reading of a book by Thomas a Kempis, *Imitation of Christ*, which stresses renunciation as the path to moral good. Her conscience is based on her subjective interpretation of a Kempis'

[39] My reading of this scene as foregrounding Maggie's autonomous decision-making process coincides with that of Deirdre David, who writes that "what distinguishes Maggie Tulliver from all of Eliot's other women characters who experience a conflict between the drive of their own minds and the punitive governance … of their male culture, is that she consciously makes a choice – even if it is the choice to suffer" (*Intellectual Women*, 220).

ethics of renunciation, which ultimately puts her in conflict with the moral ideals of her family and St. Ogg's society.[40]

Secondly and perhaps even more importantly, her conscience marks the place where her intellect meets her emotions, in a theorization of emotion that once again owes much to Spinoza's articulation of an embodied human experience in his *Ethics*. Eliot's work in *Mill* shows Spinoza's influence not only in her depiction of the affective nature of physiological impact, but also in the idea that it is possible to develop to produce a reason-induced emotion, one strong enough to control unwanted affective influences. Maggie is articulating this kind of reason-emotion hybrid when she tells Stephen: "I should have felt [Philip and Lucy] pressing on my heart so continually, just as they do now when my conscience is awake – that the opposite feeling would never have grown in me, as it has done" (389). Maggie here describes just the kind of process that Spinoza theorizes when he stresses, in chapter fourteen of book two, that no emotion can be restrained by mere knowledge of good and evil, but only insofar as this knowledge functions as an emotion. Here, the "opposite feeling" – Maggie's affective, physiologically-determined attraction to Stephen – is contrasted to an emotion that is aligned with Maggie's conscience, functioning as a reason-induced emotion.[41]

This emotion is rational, both in the imaginative transposition required for Maggie to feel Philip and Lucy's pain, and in that the moral standards applied have been shaped by her intellectual understanding of books like *Imitation of Christ*. Yet at the same time it

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[40] While Smith's sympathy principle in general enables him to avoid claiming an innate sense of moral absolutes, here he is famously unable to do without a recourse to a conscience that naturally evinces a "love of what is honourable and noble" (107); somehow love of abstract absolutes, "divine virtues," are imprinted on the soul.

[41] Antonio Damasio has suggested that "central to [Spinoza's] thinking was the notion that the subduing of the passions should be accomplished by reason-induced emotion and not by pure reason alone" (Damasio 12).

is still very much an emotion, as highlighted in the language of "pressing on my heart." In fact, the logic of an external pressure on Maggie is repeated when she later tells Stephen:

> I see – I feel their trouble now: it is as if it were branded on my mind. I have suffered, and had no one to pity me; and now I have made others suffer (6.14).

"Branded on my mind" repeats Maggie's earlier language of "pressing on my heart," and both formulations mirror the logic of affective impact, with an external influence importantly acting to alter subjective experience. Eliot recruits a more traditional non-corporeal term like "mind" (rather than "brain," say) and combines it with the physiological, embodied connotation of "branded," in a way that resonates with Spinoza's rational emotion. I want to suggest that she is here exploring the possibility of a rationally-triggered affective component to the emotion of sympathy, made possible through the imagination. Maggie thinks of Philip and Lucy, imagines them before her in all their pain, and experiences a resulting feeling that binds her intersubjectively to them – their pain is now her pain, although, as Smith specifies, not the same pain. The physiological reaction is just as strong as that which prompted the reconciliations between Maggie and Tom, but here it is triggered by a rationally-induced sympathy, rather than the non-conscious affective play of bodies.

This means that Maggie's ethical decision is, finally, the product of her engagement in an imaginative process that is rational yet also emotional, which leaves her affectively impacted by Philip and Lucy.[42] Some critics, like Audrey Jaffe, have

[42] If Maggie's conscience – privileged in the text as enabling her moral action – operates as a reason-induced emotion, shaped by external events, what is highlighted here is the subjective nature of moral understanding. My reading therefore departs from critics like Bernard Paris, who argues that *Mill* shows a necessary shift from subjective to objective view of self and world in Eliot's system, writing that the texts shows a "recognition of moral law which is independent of self and to which the individual must submit

argued that Eliot's sympathy creates a specular insularity where the person sympathizing is so caught up in their imagination that they are ultimately sympathizing with themselves.[43] To some degree this is true – Maggie's will is distinguished from the kind of affective play of physiological influence that we see between Maggie and Tom and Maggie and Stephen. Her will is self-produced in as much as it is a rational and imaginative process. However, it is importantly also embodied, with a strong affective component connecting her to other bodies beyond her own. If Spinoza theorized that rational emotions develop out of affective states, Maggie's sympathy bears its affective traces in significant ways. As long as she chooses to sympathize with Philip and Lucy, Maggie is as influenced by them as if they were physically in front of her; the thought of their suffering bodies triggers a correlating sensation in her body. I read Eliot's use of the logic of affect here as a claim for the ability of a Smith-like rationally-induced imaginative process to not only figure the suffering of others, but create a physiological reaction that reaches beyond pure self-reflexivity to create an intersubjective bond. Maggie's powerful move to brand herself with the suffering of others constitutes a moral agency that is, finally, not the product of an autonomous will, nor is it simply a physiological reaction. Rather, this agency is the result of an organic process integrating Maggie's rational understanding with the affective forces of her body.

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himself" (Paris 144). My reading aligns with that of Elizabeth Ermarth, who claims that, for Eliot, "there is no such thing in human life, no abstract right, or final true word, but only the sum of subjective truths working collectively in various corners of a vast, imperfectly comprehended human enterprise," (Ermarth 36).

[43] See Jaffe's *Scenes of Sympathy*

Chapter Four:

Inheriting Character: Problems of Progress in the Evolutionary Psychology of Wilkie Collins and Herbert Spencer

This chapter examines a popular strand of post-Darwinian hereditary theory – the belief in the transmission of acquired characteristics – that marked an important, if vexed, attempt to marry the Victorian preoccupation with progress and development to the often-subversive theories of evolutionary psychology. Neo-Lamarckism explicitly linked hereditary influence to these ideals of liberal agency. The stepchild of neo-Lamarckism, degenerative theory, attempted to identify and contain what was deemed to be a fatal decline in civilization.

This dissonance between the language of liberalism and biological determination is perhaps nowhere more prominent than in the work of psychologist and philosopher Herbert Spencer, whose theories dominated discussions of evolutionary theory from the mid to late century. Spencer was an avid proponent of neo-Lamarckism, and used that theory to support his political positions regarding laissez-faire social and economic policy. Yet at the same time, he places such a stress on the all-powerful natural course of the evolutionary process that he has trouble articulating a convincing explanation for the progress he assumes to be at the heart of the process. I furthermore argue that this tension is exacerbated in his seminal work *Principles of Psychology* by his attempt to distinguish his brand of determinism from the pseudoscience of phrenology. Phrenology becomes a problem which puts a focus on Spencer's untenable contradictions between determinism and the agency required for progress.

Wilkie Collins exploits just this kind of contradiction in his exploration of hereditary theory, *The Legacy of Cain*. As Jenny Bourne Taylor notes, Collins tends to examine "the most striking features of psychological science, but he also questions and satirizes its authority as an overweening and at times repressive form of modern knowledge" (*Secret Theater*, 83). Collins explicitly engages with neo-Lamarckian theories, and turns to phrenology and physiognomy to show that biological determinism cannot be compatible with the ideology of self-control and progressive self-development. In this way Collins forces the language of neo-Lamarckian hereditary theory and liberalism into a fundamental incompatibility. His solution to the problem of psychological evolution ultimately explores intersubjective agency rather than the autonomy of the individual.

Hereditary Evolutions

The late nineteenth century saw a proliferation of theories of the hereditary transmission of character traits. These theories, which formed a central debate within the developing field of psychology, stemmed directly from the evolutionary theories that were revolutionizing scientific thought in the mid to late century. Primary among these, of course, was Darwin's *Origin of Species* (1859) and subsequent texts. However, although Darwin's theory of evolution by natural selection revolutionized science, he was unable to resolve the question of hereditary transmission. This left the period wide open for debates on the topic, which became increasingly polarized around the question of whether and how characteristics, both innate and acquired, were transmitted from generation to generation. As Shafquat Towheed argues, this debate was taken up not only

in empirical science, but in psychology, philosophy, literature and economics[1]. The debate raged until the turn of the century, when the re-discovered work of Gregor Mendel established the first verifiable explanation for hereditary transmission and laid the foundation for genetic theory, making debates about acquired characteristics unnecessary.

In fact, the mid to late nineteenth-century was not at all settled on Darwinian theory as the accepted explanation for evolution, in large part because of the lack of an empirically-validated theory for the transmission of hereditary traits. The hereditary theories of an early precursor to Darwin – Lamarck – were taken up post-Darwin by those who were unhappy with the implications of natural selection.[2] Although the majority of Lamarck's system was incompatible with post-Darwinian ideas of evolution, the "neo-Lamarckians" salvaged Lamarck's mechanism for inheritance. As historian Peter J. Bowler explains, Lamarckism "is based on the assumption that changes of structure produced by the activity of the adult organism can be reflected in the material of heredity and passed on the to the next generation" (*Evolution*, 257). In the hands of the neo-Lamarckians, this meant that socially formed patterns of biological and learned behavior could be transmitted to future generations. This proposition was abetted by the fact that, towards the end of his career, Darwin made some room in his own theory for use-inheritance, the idea that use and disuse affect the transmission of hereditary traits. This seemed to open the door, within Darwin's terms, to hereditary transmission of acquired as well as innate characteristics. Both Darwinian and Lamarckian positions claimed and were perceived by contemporaries to be scientific.

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[1] See "The Creative Evolution of Scientific Paradigms."

[2] For more on this, see Towheed, Peter J. Bowler in *Evolution: The History of an Idea*, Jenny Bourne Taylor and Shuttleworth in *Embodied Selves*, and Snait Gissis in his article "Late Nineteenth-Century Lamarckism and French Sociology."

Much of the appeal of Lamarckism lay in its support for Victorian ideals of agency. Lamarckism, with its claim that evolution was powered by the inheritance of acquired characteristics, was available for appropriation by liberal ideology in a way that Darwinism was not. In its articulation by neo-Lamarckians, the theory was optimistic, arguing for evolution from less to more complex structures, in a linear trajectory of purposive progress. In addition, it granted the individual will a role in producing that progress, as an evolutionary mechanism involving acquired traits meant that the process could be directed by personal effort that shaped which character traits would be bequeathed to successive generations.[3] Importantly, this meant that moral traits could be inherited, yielding an upwards evolutionary trajectory. In *Victorian Psychology*, Rylance claims there is a theoretical homology between Lamarckian theory and nineteenth-century economic theories of banking, money circulation and Smilesian ideas of social and economic advancement (223), noting that "rather than the chance of evolutionary theory, the evolutionary process becomes directional, and can be controlled somewhat by the individual … the biological equivalent of a free, mobile society" (224).[4] The great champion of neo-Lamarckian evolution was Hebert Spencer, who explicitly wed the theory to liberalism. Darwinian evolution, on the other hand, driven by natural selection and sexual selection, is less responsive to – indeed potentially subversive of – ideals

[3] As Bowler explains, the appeal for neo-Lamarckians was that "there was a widespread belief that inheritance of acquired characteristics would allow man to take charge of his evolution in a far more positive way. Lamarckism became the philosophy of hope for the future" (296).

[4] Gillian Beer in *Darwin's Plots* makes a similar distinction, arguing that "*Intention* is the key to Lamarck's concepts" (19), which was optimistic as it stressed intelligent adaptation and intelligent succession in which solutions can be engendered by acts of will (20). Darwinian evolutionary theory, on the other hand, was much more ambivalent; its ideas of development and energy could be co-opted by theories of progress, but it also emphasized extinction and annihilation equally with transformation (12), and Beer stresses Darwin attempted to eliminate the idea of the will as a force for change.

linking success to intentional, purposive progress. Successive generations are unable to inherit the moral capital of their parents.

As the century drew to a close, another important strand of evolutionary theory developed which presented a much bleaker outlook on human and social development. Degeneration theory, originally purveyed by continental thinkers like the German Max Nordau and the French B.A. Morel, strongly influenced late-Victorian British thinking on evolution and cultural progress in general. Degeneration theory was a form of biological determinism that became an explanatory myth, representing society's boundless capacity to decline.[5] Degeneration took Darwinian evolution and went back down the ladder. A key 1880 text by zoologist Edwin Ray Lankester, entitled *Degeneration: A Chapter in Darwinism*, for example, describes a gradual change in which organisms become less varied and less complex. The evolutionary mechanism for degeneration was once again hereditary transmission. The theory often worked with the premise that both innate and acquired characteristics could be transferred from generation to generation, only this time without assuming the forward progress of civilization. Degeneration theory therefore also owed much to neo-Lamarckian evolutionism in its focus on the organism's adaptation to the environment rather than natural selection as the driver for evolutionary changes.[6]

Where degeneration theory clearly parted ways with neo-Lamarckism was in its emphasis on decline, rather than an optimistic Lamarckian stress on progressive improvement. The theory had strong appeal for a late-Victorian world in which progress

[5] As William Greenslade explains in *Degeneration, Culture and the Novel*, degeneration theory "represented the boundless capacity of a society to 'generate' regression: on the one hand, generation and reproduction, on the other, decline, degradation, waste" (16).

[6] Lamarckian biological theories "dwelt on the gradual transformation of the whole species … as an indispensable component in the process by which complexity was reached, i.e. a developmental rather than selectionist mechanism. Direct adaptation to the environment on the basis of trait and habit formations was a core factor in the mechanism. The subsidiary notion of degeneration had arisen within this conceptualization" (Gissis, 73). See also Bourne Taylor and Shuttleworth, 288, and Greenslade, 17.

no longer seemed inevitable in the face of economic, social and cultural changes triggered by industrialization.[7] In contrast to the neo-Lamarckians, degeneration theorists like Henry Maudsley were fatalistic, leaving no room for the ideology of free will. Maudsely, one of the most influential voices in England at the time, stressed case histories of families declining through generations, noting in *Body and Mind* (1873) that

> The moral element is an essential part of a complete and sound character; he who is destitute of it, being unquestionably to that extent a defective being, is therefore on the road to, or marks, race degeneracy; and it is therefore not a matter of much wonder that his children should, when better influences do not intervene to check the morbid tendency, exhibit a further degree of degeneracy, and be actual morbid varieties (67).

Where Lamarckism focused on a boundless capacity for self-improvement through the inheritance of moral traits, degeneration theorists like Maudsley posited a hereditary influence that could just as easily be comprised of immoral traits. Furthermore, that influence tended to limit the individual's ability to shape their moral progress.[8]

Both phrenology and also physiognomy had a prominent role in degeneration theory through the criminology of the Italian Cesare Lombroso (1835-1909) and those who followed in his footsteps. Lombroso's contribution to degeneration theory was that he claimed empirical proof for atavism, the idea of evolutionary throwback. His system entailed correlating physical stigmata with behavioral traits, with the goal of being able to identify – and thus ultimately sequester – the "criminal type." This focus on external signs denoting internal character traits breathed new life into the older pseudosciences of phrenology and physiognomy, whose semiotic systems often formed the basis for scrutiny of the criminal head. Physiognomy, developed by John Caspar Lavater in the

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[7] Greenslade adds, "Bafflement and disillusionment found release in a theory which seemed to identify the sources of rot" (15).

[8] See Bourne-Taylor and Shuttleworth, who argue that degeneration theory tended to be fatalistic in the hands of Maudsley and others.

18th century, claimed that character could be discerned through reading facial features. Phrenology, the fad pseudoscience of the nineteenth-century discussed in earlier chapters, focused instead on various aspects of the shape of the skull. The two were fundamentally different doctrines as physiognomy emphasized a holistic relationship between body and character predicated on the animating and unifying force of the soul, while phrenology was a materialist exploration of the correlation between the brain and character traits. However, they were both popular throughout the nineteenth-century, and were often used together in character evaluations. Late nineteenth-century hereditary theory tended to strip the complex underpinnings of the diverging approaches, and take them up simply to provide further corroboration for the "criminal type."

While Lombroso's stigmata were deemed unreliable by British criminologists, they followed his lead in foregrounding a correlation between inner and outer traits in theories of criminality and hereditary degeneration.[9] Although Maudsley later worked to revise his theories to eliminate the idea of the criminal type,[10] his focus on the assessment of physical traits was so thorough that contemporary Bernard Hollander read his work as supporting phrenology in his 1901 tome *The Mental Functions of the Brain*. Hollander specifically cites Maudsley's assertion that "The bad features of a badly formed head would include a narrowness and lowness of the forehead, and a flatness of the upper part of the head," so that "A man so formed might be expected, with some confidence, to be given over hopelessly to his brutal instincts" (343). This makes use of a combination of phrenology and physiognomy. In the focus on the narrow and low forehead, Maudsley's reading has much in common with the section in Combe's phrenology textbook, *The*

[9] Maudsley, "the most important English theorist of degeneration, firmly and succinctly tied sign to essence," according to Stephen Arata in *Fictions of Loss*.
[10] Talairach-Vielmas, 183

Constitution of Man, that examines the head of the corrupt Pope. His analysis of the rest of the features makes use of physiognomy. Phrenology and physiognomy, despite their differences, therefore had similar roles in these hereditary theories. Here, they both function as biologically deterministic in being recruited to establish a fixed connection between body and character that could serve as evidence of evolutionary change from generation to generation.

Spencer's Problem With Progress

Although Spencer is little read today, he was in the mid to late nineteenth-century one of the most influential voices in psychology, physiology and evolutionary theory. Many historians argue that his influence among his contemporaries was stronger even than that of Darwin. According to Edward Reed, Darwin was "probably less generally influential in the short and middle term than, say, Spencer" (172).[11] This was in large part because of the complexity of evolutionary theory; people at the time did not fully understand what Darwin's unique contributions were in a discussion that included many voices on the topic. It was, in fact, Spencer who popularized the term "evolution," coined the phrase "survival of the fittest" and "created the popular belief that [evolution] denoted an essentially progressive process" (238), according to Bowler. Spencer was convinced that evolution could create progress, both in terms of the improvement of society, and the moral growth of the individual.[12] Spencer's works articulated a belief in laissez faire

[11] Beer writes that "Herbert Spencer was the other major theorist of evolution in England in the 1850s" (258); see also Thomas Dixon in *From Passions to Emotions*, 137.

[12] Bowler notes that "Spencer's support for laissez-faire was evident from his earliest writings … to late works. He saw the development from primitive, authoritarian societies to modern capitalism as a key step in human evolution. Freedom was essential to allow progress through the cumulative effort of many individuals… Spencer insisted that the state should concern itself solely with external affairs; internally, it

economics and social policy, supported by the idea that society would naturally improve over successive generations through a gradual alignment of inner resources with external conditions.

Although Spencer's ideological orientation helped start the movement referred to as social Darwinism, his primary mechanism for evolution was taken not from Darwin, but Lamarck. Spencer was committed to the idea of the hereditary transmission of character traits, and remained so throughout his career, even after support for Lamarckism had long dwindled within the scientific community.[13] Towheed notes that in an 1893 debate with August Weisman regarding the latter's theory of a "germ-plasm" that ruled out the transmission of acquired characteristics, Spencer "declared that 'either there has been the inheritance of acquired characters or there has been no evolution'" (259). Spencer, whose works even helped revive the movement in France,[14] relied on neo-Lamarckian faith in progressive improvement over generations through the transference of moral traits to justify his ideas of laissez-faire social policy. This enabled him to promote liberal ideals without turning to the idea of free will, to which he was adamantly opposed.

Yet Spencer's liberalism sits uneasily with his psychophysiological theories, and this is perhaps nowhere more evident than in his treatment of phrenology. Although phrenology, along with physiognomy, had had a new life breathed into it by theories of criminology, its practitioners were no longer attempting to claim it was a science by the

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had no business trying to regulate the lives and activities of people"(287) See also Robert Young in *Mind*, 153-154.

[13] Young notes that "Spencer defended his position in the face of growing objections in the last quarter of the century, and reiterated it as late as 1899" (188).

[14] Gissis writes that, regarding neo-Lamarckism, "one of the principle cultural agents of diffusion had been Herbert Spencer, who had an enormous impact on France until the late 1880s" (73).

late century.[15] Spencer's treatment of phrenology in *Principles* is particularly revealing because he both explicitly discounts phrenology as a science and as a doctrine, even as he salvages certain elements of the theory as part of his new biologically-based psychology. In his attempt to both repudiate and incorporate phrenology into his own psychological theories, phrenology comes to mark the limits of his ability to account for the progress and development of the liberal individual. Spencer corrects phrenology's static body by turning to a combination of hereditary and environmental theory to explain how the Victorian individual might grow over time. However, his attempt to marry liberal ideals to a stringent physiological determinism without turning to the postulate of a free will leaves him unable to account for agency.

He was an early adherent to phrenological doctrine, according to Robert Young,[16] who reports that he had his head read at twenty-two by a reputable phrenologist, and was actively involved in advocating phrenology between 1842 and 1848. While phrenological psychology informed his 1851 work *Social Statics,* Spencer had moved on to his melding of association psychology with biological theories of evolution by the time he wrote his influential tome, the *Principles of Psychology*, first published in 1855 but with two subsequent editions. However, contemporaries still saw phrenology playing an important role in his scientific theories.[17] Phrenology comes in as both a point of departure and corroboration in *Principles*, where he gives an account of his theory of the hereditary

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[15] Cooter notes, regarding phrenology, that "From the aspiration to science the whole of it slipped into a easily ridiculed art of character analysis" (256).

[16] According to Young, Spencer published several articles in phrenological journal *The Zoist* advocating revisions to the phrenological system regarding the function of the organs and their location, and he even in 1846 developed a mechanical devise to make more accurate measurements of the skull than those done solely with the hands – called a 'cephalograph' (153)

[17] Young also writes that "Spencer's general theory of evolution and the biological, evolutionary basis of his psychology grew out of the arguments for specialization of functions which he elaborated in the context of his phrenological interests." (161).

transmission of character qualities. This work represents Spencer's first extensive application of evolutionary principles to psychology, and lays the foundation for the hereditary theories he would champion for the rest of his life.

Cerebral localization was phrenology's signature contribution to psychology, and Spencer explicitly salvages this aspect of the theory, claiming that his fellow physiologists have been too quick to reject it because of their "antagonism to the unscientific reasonings of the phrenologists" (607). What Spencer wants to keep is the "conviction that different parts of the cerebrum subserve different kinds of mental action" – a conception that the phrenological head makes abundantly clear in its maps of distinct psychic characteristics overlaid on the human skull. The language Spencer uses here is very striking in its focus on liberal values – he ties his theory directly to the concepts of division of labor and individualism that stemmed from Victorian economic theories:

> If there is some organization, it must consist in that same "physiological division of labour" in which all organization consists; and there is no division of labour, physiological or other, of which we have any example, or can form any conception, but what involves the concentration of special kinds of activity in special places (608).

In making this argument, Spencer uses economic theory as a justification for the phrenological concept of cerebral localization that he now wants to link to physiological psychology in general. He appropriates the concept of division of labor as a universal truth that confirms the division of character traits. By this argument, both phrenology and psychophysiology function as exemplars of capitalist ideology, proving that "separateness of duty is universally accompanied with separateness of structure." Furthermore, this reinforces notions of productive individualism. Just as each person has a unique place in society, so each psychical quality has a unique, separate and productive

space in the brain: "among these higher psychical activities *there are distinctions of kind*, … these more or less distinct kinds of psychical activity must be carried on in more or less distinct parts of the cerebral hemispheres" (609). Like Alexander Bain, Spencer praises phrenology for its ability to identify the unique character of each individual,[18] and links this to psychophysiology by implying a correlation between the phrenological, physiological and capitalist divisions of labor – in each case, the division turns on "distinctions of kind."

Spencer does, however, also distinguish his theory from that of the phrenologists.[19] As evidence of the "unscientific reasonings of the phrenologists," Spencer criticizes the "very faulty, unanalytical nomenclature of the faculties" (610) presented by the phrenological head. But his most elaborate critique here is targeted at phrenology's neglect of environment and external influences in favor of its view of the static nature of character traits. Spencer writes that "the phrenologists are wrong in assuming that there is something specific and unalterable in the natures of the various" (610) character traits. Instead, Spencer argues, any number of changes in the relationship between organism and environment could produce corresponding changes in the organism's traits, which are only as "fixed and specific" as are the external relations. Spencer is here adding evolution to phrenological theory to account for growth in the

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[18] According to Young, phrenology for Spencer also highlighted the unique constitution of each person, as each person had a different combination of faculties in size; "no two individuals contain the same combination of elements" (Young, 155).

[19] He claims that "At best, Phrenology can be but an appendix to Psychology proper; and one of but comparative unimportance, scientifically considered." Spencer, in fact, goes to great lengths to spell out his position that phrenology should not be counted as a science, complaining that the phrenologists are wrong to "put forth their body of doctrines as in itself a complete system of Psychology. To one who has read thus far, it is needless to point out the absurdity of their position" (609). With his characteristic self-assurance, Spencer offers his own work as a point of contrast with phrenology, with the former's proper use of scientific methodology disqualifying the latter.

individual: the faculties, he argues, change over time as a result of environmental influences, undermining the phrenologists' conception of a fixed head chart. Spencer's example here is particularly instructive:

> A habit—say of sitting in a particular place in a particular room, and of being uncomfortable elsewhere—is nothing but an incipient feeling answering to that particular group of outer relations; and were all the successors of the person having this habit, to be constantly placed in the same relations, this incipient feeling would become an established one (610).

In this case, a person sitting in a room forms a feeling in response to outer relations, and this feeling is passed on to successive generations that share the same environment, eventually becoming biologically transmitted. Here, Spencer's theory of hereditary influence specifically undermines the fixed nature of the individual proposed by phrenology.[20] Spencer's individual is more malleable, subject to the influence of both environmental factors and the hereditary traits passed down from generation to generation. The human race is not at the mercy of an unchanging chart of phrenological faculties, and can grow and progress over time – insuring an element of liberal ideology that Spencer champions throughout his work.

His Lamarckian emphasis on an upwards trajectory through evolution enables him to claim a specifically moral progress not only for the individual, but for society as a whole. He distinguishes Europeans from "inferior races" by suggesting that these other races have not yet attained the same level of development:

> And thus, the large-brained European differs from the small-brained savage, not simply in the complexity of his manifestations, intellectual and *moral* (sic); but

[20] Spencer spells out his mechanism for inherited character traits: "*Hereditary transmission* (sic), displayed alike in all the plants we cultivate, in all the animals we breed, and in the human race, applies not only to physical but to psychical peculiarities" (526). In proposing the biological evolution for both physical and psychical traits, Spencer not only claims innate traits, but via his stress on the inheritance of emotions, opens the door to the transference of acquired psychological traits.

> these have been step by step made possible by successive complications of faculty (465).

This requires Spencer to assume a progression in hereditary development: for the other civilizations to be in the "already-not-yet," everyone must be on the same developmental path, with the same capacity to advance in psychic, intellectual and moral traits. After noting differences between races, Spencer writes that "the true interpretation is, that the cognitive faculties have not reached a complexity equal to the complexity of the relations to be perceived." He goes on to place this within a moralistic framework: "Among various of the lower races, acts of generosity or mercy are utterly incomprehensible" (465). Here, Spencer ties hereditary evolution to the liberal notion of an ever improving civilization. The most civilized are at the apex of evolutionary development, as evidenced by their moral qualities. Spencer therefore works this language into his account of biological evolution via the progressive development of inherited qualities from generation to generation.

Yet despite these optimistic views of a progressive evolutionary development through inherited characteristics, Spencer is finally unable to account for human agency. Indeed, his trouble with agency was seen as a major flaw by many of his contemporaries, including the American psychologist William James. In the above-cited section on the hereditary transmission of "psychical peculiarities," Spencer also writes that:

> It is not simply that a modified form of constitution produced by new habits of life, is bequeathed to future generations; but it is that the modified nervous tendencies produced by such new habits of life, are also bequeathed: and if the new habits of life become permanent, the tendencies become permanent (610).

He here claims that psychological traits are transmitted biologically. New habits acquired by the individual over time and through successive generations produce the "modified

nervous pecularities" of the body that account for new psychic states. Yet, to go back to the example of the person sitting in the room, environmental influence permit individual choice. For Spencer here defines habit as "nothing but an incipient feeling answering to that particular group of outer relations." Habit itself is completely produced by external circumstance, and so what is bequeathed from generation to generation is environmentally determined and then biologically determined as well, leaving no room for individual agency.

Such stringent emphasis on physiological determinism is finally unable to sit convincingly within a rhetoric of change, progress and moral improvement.[21] In Spencer's theory, there is a fundamental contradiction between the language of evolutionary progression and morality, which imply individual choice, and the inability to account for human agency. This contradiction is exacerbated by an unsuccessful attempt to make phrenology stand as the outer limit of his own theory. Phrenology serves as a point of departure for Spencer in its focus on cerebral location and individuation, but his bid to define his work as an exemplar of psychological science in contrast to the pseudoscience of phrenology ultimately fails. He is unable to offer a convincing mechanism that would locate agency within his theory's biologically-determined body and thereby distinguish it from the staticity of the phrenological skull. Instead, he keeps all the language associated with the liberal will – including reference to progress and moral growth – without providing an explanation for how the individual gains the agency needed to participate in those processes. Although he cloaks his hereditary theory in

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[21] Spencer's position regarding biological determinism was not shared even by all neo-Lamarckains, some of whom argued for more of a role for human agency. See Bowler, pp 296-297. Here he notes that another branch of contemporary Lamarckism similarly took for granted a progressive evolution, but thought that human effort could speed up the process**,** unlike Spencer who argued the process was more complex because reliant solely upon nature**.**

language of liberalism, Spencer is ultimately unable to account for the progress he extols. Collins exploits this very contradiction in *The Legacy of Cain.*

The Excessively Determined Self in The Legacy of Cain

While Collins' early works such as *The Woman in White* and *The Moonstone* now occupy a secure place in the canon of Victorian literature, the general scholarship has tended to largely ignore his later works, based on the assumption that they represent a narrative decline. As Bourne-Taylor notes, the novels Collins wrote during the 1870s and 1880s are "generally regarded as a long drawn-out creative twilight" (80),[22] triggered by the loss of Dickens and Collins' growing dependence on laudanum, among other factors. Yet he published thirteen full-length novels during this time period, as well as novellas and short stories, which found large audiences and an intrigued, if sometimes ambivalent, response from critics. Recent scholarship, following Bourne-Taylor's lead in *In the Secret Theatre of Home,* has begun the task of excavating these later works in large part by showing the sophisticated approach Collins took to engaging with the social issues of his day.[23]

The Legacy of Cain, published in 1889, represents Collins' last completed novel. Jay Clayton notes that while scholarship charged the novel reveals Collins' "supposed misunderstanding of Darwin"(8), Collins actually presents a sustained exploration of contemporary hereditary theories.[24] More recent scholarship has shown Collins was up-to-date and informed regarding contemporary scientific developments throughout his

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[22] See Taylor, Jenny B. "Later Novels" *The Cambridge Companion to Wilkie Collins* (2006)
[23] This includes the recent publication of scholarly editions of later works like *Heart and Science*, as well as the kinds of scholarship I cite in this section.
[24] Clayton in "From Inherited Behaviour" cites Robert Ashley, *Wilkie Collins* (1952) and William H. Marshall, *Wilkie Collins* (1970)

career, and was continually revising his ideas.[25] The majority of the scholarship that focuses on the way this novel interacts with contemporary scientific debates attends to its engagement with degeneration theory and criminology, primarily through the works of Maudsley.[26] For example, even though Bourne-Taylor argues that the novel is "Explicitly set up as a debate with the post-Darwinian theories of hereditary criminality and insanity that had become so prevalent by the late 1880s" (94), she focuses on Collins' familiarity with Maudsley's *Body and Mind*, arguing that *Legacy* can be read as "an extended meditation on Maudsley" (94). However, an understanding of Collins' critique of contemporary hereditary theory in *Legacy* is incomplete without a discussion of the neo-Lamarckian elements he takes up.[27] Collins is not simply questioning the downward spiral proposed by degeneration theory; he is also examining the more optimistic theories of hereditary evolution.

Specifically, I want to argue that Collins exploits just the kind of contradiction Spencer seems to be unable to avoid in his treatment of Lamarckian evolution in *Principles of Psychology*. If Spencer's Victorian optimism concerning progress and moral improvement through evolution finally cannot be sustained by his emphasis on biological determination, Collins shows a similar disconnect in *Legacy*. The contradiction is exacerbated, once again, by the presence of the pseudoscience of phrenology. *Legacy,* in fact, contains explicit references throughout not only to phrenology, but its cousin

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[25] Jane Woods in *Passion and Pathology* writes that Collins was "no stranger to the developments of mental science" and "continually researching and refining his ideas," adding that, "throughout a long writing career, his novels bear witness to the shifting credibility of a number of theories, including associational psychology and 'unconscious cerebration'" (116). See also Clayton, and Bourne Taylor.
[26] For example, see Laurence Talairch-Vielmas in *Wilkie Collins, Medicine and the Gothic* and Anna Mordavsky Caleb in "Questioning Moral Inheritance in *The Legacy of Caine*," as well as Bourne Taylor.
[27] Clayton makes a similar argument, writing that "it is not Darwin whose ideas are being explored in this novel so much as the neo-Lamarckians writing in the 1880s" (8).

physiognomy. By overlooking the sustained critique Collins makes of neo-Lamarckian idealism, several scholars have misread the complex criticism Collins is making of contemporary theories of hereditary evolution.

The Legacy of Cain operates as a case study, both in form and content. As with many of Collins' novels, this narrative is told in an epistolary form comprised of the first-hand accounts of several characters. This framework imitates that of an empirical scientific study. The various transcribed narratives function as evidence in testing scientific hypotheses. Throughout the course of the novel, those hypotheses are revised in light of the evidence, and new conclusions are reached. Two rival hypotheses concerning hereditary theory are proposed at the beginning of the novel, occasioned by the circumstances surrounding a woman – identified first only as The Prisoner, and later as the murderess – who is scheduled to be hanged for the murder of her husband. She has an infant daughter, Eunice, and begs the local minister, Mr. Gracedieu, to adopt her. Mr. Gracedieu agrees, raising her as his child along with his own daughter, Helena, treating both equally well and keeping the origins of the murderess' child a secret. This triggers a debate between the Governor of the prison and his friend the attending physician, which centers on whether the minister has doomed himself to a tragic life by adopting the daughter of a murderer, in light of scientific theories of the inheritance of hereditary traits. As the Doctor asks the Governor, "Are you one of those people who thinks that the tempers of children are formed by the accidental influences which happen to be about them? Or do you agree with me that the tempers of children are inherited from their parents?" (14). The hypotheses therefore pit environmental against biological theories of psychological development.

The Doctor takes the side of hereditary determinism, using the rhetoric of scientific authority and claiming that the twenty years he has spent "studying the hereditary transmission of qualities" have not only convinced him of this evolutionary theory, but also led him to believe "vices and diseases descend[. . .] more frequently to children than virtue and health" (20). In his emphasis on the hereditary transmission of personality traits, and his pessimistic assessment of decline from generation to generation, the Doctor is echoing degenerative theory.[28] Scholars typically locate the primary thrust of the novel's critique of hereditary theory within the Doctor's views.[29] This approach, however, overlooks the Governor's contribution to the debate, or takes for granted that the Governor is what he says he is – a reliable narrator – and that he therefore represents Collins' perspective on the matter.

The Governor manages to support his side of the nature versus nurture debate by making an argument for environmental influence.[30] While this debate marks the Doctor's last appearance in *Legacy*, the Governor plays an important and recurring role in the progression of the narrative. Although he does not solve the criminal mystery of the novel – rather, another doctor suddenly appears to perform this feat and then just as suddenly disappears – he is constantly articulating and revising his theories about hereditary and environmental influence as related to the events of the story. This has led some critics to assume the Governor represents Collins' position on hereditary theory: Mordavsky-Caleb, for example, writes that "Collins not only argues that heredity is a

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[28] Bourne-Taylor, who notes that the Doctor's views "clearly corresponds to contemporary degenerative theory" (*Secret*, 238), locates Maudsley's theories in the Doctor's language.

[29] See Bourne-Taylor, Mordavsky Caleb and Talairch-Vielmas

[30] Thinking of the various circumstances which could shape the child, the Governor lists education, religion and kindness, and concludes that "It was barely possible that I might succeed in putting my positive friend in the wrong." (21).

factor in the composition of a person's morality, but also seems to suggest that environment and an innate sense of morality exert influences beyond a person's direct lineage" (132), which is also a summary of the Governor's final position. This kind of reading does not acknowledge the possibility that Collins is using the Governor to critique another scientific perspective: neo-Lamarckism. Collins is expressly critiquing this branch of evolutionary psychology when he has the Governor develop a theory for hereditary influence that will enable Eunice, the adopted daughter, to morally develop into a cohesive self able to control the inherited evil from her mother. Collins subtly undermines the Governor's position through his unacknowledged reliance on phrenology and physiognomy, and in so doing contradicts the Victorian liberal idealism expressed in his theory of hereditary influence. This opens the narrative to a different kind of agency, one only possible through physiological processes and not necessary predictive of moral progress.

Although the Governor is outside the scientific profession, he conducts his investigation into the potential character development of the daughters as a psychological inquiry into hereditary influence. In this capacity, he calls to mind another lay detective-psychologist in one of Collins' earlier works: Walter Hartright, who, in *The Woman in White* (1860), is able to solve the mystery of a double-identity by analyzing character traits.[31] The difference is that in *Legacy*, the Governor does not merely use the methods of psychological analysis to solve a mystery; rather, the psychological development becomes the central mystery itself as the Governor searches for a theory of hereditary influence that will explain the girls' character development. Also, unlike Walter, the

[31] As Andrew Mangham notes, "throughout *The Woman in White*, Walter Hartright's detective work has much in common with the perceived analytical skills of nineteenth-century psychiatrists" (118).

Governor is in a position of authority as he runs a prison. This earns him respect in the eyes of the other characters and is something the Governor makes use of in establishing his credibility as a narrator. As he explains his version of hereditary theory, he specifies that his conclusions are not based "on what I have observed in one instance only" but that he, as the governor of a prison, has "had other opportunities of investigation, and that my conclusions are derived from experience which refers to more instances than one" (201). His authority and expertise are therefore supported by the prestige of the scientific establishment and of governing office. As the Governor of a prison, he is well versed in hereditary theories and even contemporary ideas of criminology,[32] all based on a physiologically-driven psychology that gives little room for self-formation and other attributes of the Victorian will. Yet at the same time, the Governor claims his position has given him a sound ability to judge character. The vehemence with which he condemns not only the murderess but other characters in the novel, including Helena, shows that he holds them morally responsible for at least some degree of self-formation, implying they are not fully determined by their physiological make-up.[33] His motivation in espousing neo-Lamarckism, then, is to manage a reconciliation between deterministic theories of physiological psychology and the kind of free, self-determining will required within the criminal justice system's assumption of moral culpability.

After the Governor's first entry, the narrative is conveyed through the perspective of both Eunice and Helena, via extracts from their diaries, before it is taken back up by

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[32] Talairach-Vielmas makes a similar observation, noting that the Governor/Doctor debate is aptly located in a prison as it "highlights contemporary debates on the criminal, most of which were actually carried out in prisons" (194)

[33] When the murderess, for example, asks him how the execution will take place, the Governor loses his temper and: "I could remain silent no longer. 'Is there no human feeling left in you?' I burst out. 'What do these horrid questions mean?" (23). The Governor is even more decided in his negative judgment of Helena, as I will discuss later.

the Governor, who then interprets their experiences in light of hereditary theories. Through the diary entries, the reader learns that both daughters have similar religious and moral beliefs and love their father. However, Helena steals Eunice's near-fiancé, causing a breach in the formerly close relationship of the sisters. The reader learns of Eunice's identity as the adopted daughter through an entry in which she records her reaction to Helena's betrayal, thus solving this mystery less than halfway through the novel, and putting the emphasis instead on the nature of hereditary influence. Eunice is revealed as the adopted daughter through an opium-induced trance reminiscent of that experienced by Franklin Blake in *The Moonstone* (1868).[34]

Collins' explorations of altered states of consciousness and their implications for the stability of the self are threaded throughout his literary works, and are present also in his depiction of Eunice's opium-induced trance.[35] However, here another factor is thrown into the mix: hereditary influence. Eunice is under the influence of both on the night she nearly suffocates Helena. Having trouble sleeping after she discovers that her sister has stolen Philip away from her, she takes some of her father's laudanum. She enters a trance, and her mother appears in ghost-like form – a personification of hereditary influence – and urges her to kill her sister. Both the narcotic and the hereditary influence are presented as beyond the power of her control. Once under the influence of the drug, Eunice's typically kind and moral personality changes, and she recalls with interest three methods of killing. Next, her murderess-mother appears again, whispering to her and urging her to stand up for herself and kill her sister. This apparition impacts Eunice as

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[34] In that novel, the mystery of a stolen diamond is solved when it is revealed that Blake, in an opium-induced trance, had placed it in a cupboard for safekeeping. They key to the mystery is unlocked by probing Blake's unconscious.

[35] See Bourne Taylor and also Woods.

easily as the opium, so that when she asks, “Will you kill her?” (147), Eunice replies “Show me how” (147). Both hereditary influences and the opium produce altered psychological states in Eunice merely by physiological means. Eunice, still in her trance, goes to Helena’s bedroom, where her mother commands her to kill the sleeping girl. Still in her somnabulic state, she takes up the pillow to smother her sister, but stops when she sees a portrait of Philip, which recalls her to her moral character.

Eunice’s drastic changes in character means that she is unable to possess a coherent identity. In subsequent episodes, she again experiences altered consciousness, but here only as a result of the hereditary influence of her mother. In each case, her character is suddenly stripped of all its moral qualities, so that she exclaims to the Governor, “Where does this horrid transformation of me out of myself come from?” (198). Third-person confirmation of Eunice’s freakish ability to transform into another character comes through the narrative of Miss Jillgall, who witnesses the pivotal confrontation between Eunice and Helena. This occurs when it is discovered that Helena, not Eunice, is the would-be murderess, as she poisons Philip when he decides to return to Eunice. Eunice confronts her in the hall as she attempts to enter Philip’s room. In this scene, Eunice transforms from a girl of a “sweet nature” to a vision so frightening that even her friend Miss Jillgall is frozen in her tracks. Eunice both looks and acts differently; she now looks like a “fearful creature” (296) and is able to command her sister. That this transformation is a product of hereditary influence is signaled by the fact that she appears to be “listening to something” (296), presumably the voice of her mother. After Eunice successfully cows Helena, she is so completely “restored to her

own sweet self" that Miss Jillgall "could not believe what I had seen, not an hour since" (298).

It is left to the Governor to create a cohesive self out of Eunice, which he does with the help of his version of hereditary theory, an attempted reconciliation between human agency and control of biological influences that bears much in common with contemporary neo-Lamarckian theory. Upon hearing Eunice's story, the Governor revises his original postulate that environmental influences trump biology in determining character. He concludes instead that, while Eunice is clearly affected by a "hereditary maternal taint" (201), she also possesses other inherited qualities that enable her to resist that influence. He turns to a mixture of biological and environmental theory to argue that Eunice has benefitted by inheriting the "better qualities in her father's nature" (201), which were then nurtured through the Minister's influence. However, these have been just as passively produced as the "hereditary maternal taint," and the Governor does not locate Eunice's moral agency here. Instead, he identifies another element within what he calls the "counterbalancing influences for good which had been part of the girl's birthright" (201): love. His description of love contains a strange mixture of gendered biological determinism and ideals of moral agency when he writes:

> "With the great, the vital transformation which marks the ripening of the girl into the woman's maturity of thought and passion, a new power for Good, strong enough to resist the latent power of Evil, sprang into being, and sheltered Eunice under the supremacy of Love." (201)

As Clayton has noted, the Governor's description of love is gendered; Eunice's capacity to love is a product of her maturing from girl to woman.[36] Her love thus becomes yet

[36] Clayton, who also sees the Governor's position as embodying the neo-Lamarckian perspective, argues that the Governor's turn to a gendered explanation for Eunice's capacity to love posits an unacknowledged reliance on innate traits that limits Collins' otherwise rigorous critique of neo-Lamarckian evolutionary

another biologically-derived element of her character, which she possesses simply because she is a woman. The text itself stresses the biological connection by grouping it with her other inherited traits as part of her "birthright," and indeed this appears to be another quality Eunice experiences passively, as she is "sheltered" under its influence.

At the same time, however, the Governor attaches a language of agency to Eunice's love: it is a "power for good" that is able to "resist" evil. He furthermore claims that "there are inherent emotional forces in humanity to which the inherited influences must submit; they are essentially influences under control – influences that can be encountered and forced back" (202). This, then, becomes the cornerstone of the Governor's neo-Lamarckian theory: the possibly degenerative forces of hereditary influence "must submit" and are under "control," because they can be "encountered and forced back" through the power of "inherent" emotions like love. His language here reflects the optimism of the liberal ideals attached to neo-Lamarckism: evolutionary forces can be controlled, forced to submit, and moral progress promoted. In Eunice's case this means the "hereditary taint" is contained. Love functions to insure an upward trajectory in evolution between mother and child, preventing further degeneration across generations. Love is the moral component that controls the evolutionary process, functioning as "her guardian angel," ennabling her to make the moral choice to act against her maternal inheritance. The Governor later reassures Eunice that she will not be determined by her mother's traits because, although "those whispered temptations overpowered you again, when you and Helena met on the stairs" (324), yet "love conquered once more, when you were next seen sitting next to Philip's bedside" (324).

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theory. My argument is that the gendered influence is grouped together with other biological traits, and is thus an informed of Collins' critique of the Governor's position.

Yet there is a problem with the Governor's logic: the power ascribed to love comes from the fact that it can be used to control inherited traits, and force them into the right moral, progressive trajectory. While the Governor's language gives agency to love, Eunice herself remains curiously passive in the process. She participates in the agency of love just as she participates in the agency her mother gives her: through biological influence. The Governor's optimism is therefore misplaced, as he has no language with which to explain how Eunice might actively possess this moral agency. Instead, there is a strange disconnect between his claim that inherited influences are "essentially influences under control – influences which can be encountered and forced back" (128), and the fact that Eunice's character is as biologically determined by the specific inheritance from her mother as by the more general inheritance from her gender. The language here uses terms associated with Victorian ideals of self-formation: the ability to control psychological processes and "force them back" to ensure moral development. While this kind of liberal ideology would typically be aligned with the idea of an autonomous will, the Governor sticks to his purely scientific reasoning as to determination by particular passed-down traits and, more generally, by gender at birth, so that there is a gap in his logic that is never resolved. The Governor's discussion of the "emotional forces in humanity" remains vague, and he has no scientific explanation to support his belief that the good will triumph in Eunice's nature. Instead, a strain of idealism creeps into his theory, as he assumes that the agency provided by love will serve as Eunice's guardian angel. This idealism becomes a substitute for scientific rationale in his attempt to articulate the Victorian will, although he never uses that term. It enables him to optimistically assume the forward progress of Eunice's moral development, without requiring him to specify

how that agency is linked to her psychological processes. Additionally, his assumption that Eunice will morally progress is tied to his approbation of her character; he assumes a level of self-direction for which he is entirely unable to account. This effectively illustrates the tension at the heart of neo-Lamarckian theory, as well as Spencer's treatment in *Principles*.

The Governor assumes the position and power of the detective, sorting through the physiological components of human psychology, cobbling together an explanation for hereditary traits based on Eunice's experiences. He fashions a theory that accounts for both biological influence and an agency that allows for self-control and reliable forward progress. In arriving at a conclusion that admits the hereditary transmission of psychological qualities but tempers that with the optimistic belief in moral progression and control, the Governor turns to neo-Lamarckian theory to counteract the degenerative theory that would have made Eunice entirely subject to biological influence, helplessly oscillating between various identities. Yet his reliance on the reductionist pseudo-sciences of phrenology and physiognomy exposes the inherent contradictions of his theory. Although physiognomy and phrenology are distinct practices of reading character based on traits of the face and skull, respectively, Collins here follows the practice of contemporary criminology and uses them in a similar manner. As such, they both stress an over-determined connection between body and character. Furthermore, he makes love operate in a materialist way, driven by physiological impulses that only reinforce its biological origins, so that the Governor's idealist assumptions about the kind of self-formational agency it grants Eunice are undermined.

Collins has the Governor rely on theories that were, by the end of the nineteenth-century, classified as pseudosciences and roundly criticized by the scientific establishment. This very much suggests a pointed critique on Collins' part rather than a lapse in narrative cohesion. Collins was knowledgeable about both physiognomy and phrenology, and informed about their position within scientific debates. His depiction of the Governor shows his awareness that both had crept back into the discourse of hereditary theory via criminology. Furthermore, he makes use of physiognomy in many of his novels. Jessica Cox in "Reading Faces" argues that Collins "clearly engages with Lavater's theories in fiction, employing physiognomical ideas as a means of both creating and confusing the reader's impressions of characters" (119). Collins turns to physiognomy as a reliable indication of character in such early texts as *The New Magdalena*, but questions the practice in later novels such as *Heart and Science.* Collins in *Legacy* also has the Governor explicitly rely on phrenology in making his character assessments. While phrenology is less frequently mentioned in Collins' fiction, he was clearly well-informed on the subject: his library contained Sir Benjamin Brodie's *Psychological Inquiries (1855).* Brodie was a strong opponent of phrenology and devoted an entire chapter to a critique of the practice.[37] While physiognomy and phrenology have a storied and varied history throughout the nineteenth-century, Collins represents them both here in a manner that stresses their kindred reliance on physiological determination. In this way, the Governor's allegiance to these practices functions to undermine his credibility when the mismatch becomes evident between these pseudosciences and the more liberal doctrine of personal agency to which he adheres.

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[37] See Baker, *Wilkie Collins's Library*

The Governor himself initially critiques the practices of face and skull-reading, prominent in Victorian criminology. He begins his narrative not only with the discussion of hereditary theory, but with a dismissal of the practice of physiognomy. This occurs after the he discovers, to his surprise, that the murderess looks like the "changeless and familiar type" of the Madonna herself. The Governor asserts that there is no "criminal type" and adds that, "daily observation of all classes of criminals, extending over many years, has considerably diminished my faith in physiognomy as a safe guide to the discovery of character" (7). He then gives examples of a wicked inmate whose appearance won the sympathies of all he met, and of laborers judged by his friends to display "criminal atrocity" in the physiognomy of their faces, when in fact they are "a group of honest labourers (whose only crime was poverty)." The Governor references the contemporary use of physiognomy to locate and evaluate criminal types, and his point in each case is the same: the features of the head cannot serve as accurate indicators of the moral character of an individual. According to Sharrona Pearl in *About Faces*, works such as Henry Mayhew's *The Criminal Prisons of London* relied heavily on physiognomical descriptions in classifications. Pearl notes that the practice of physiognomy relied on a combination of instinct and skills, so that the ideal practitioner had experience with human character, typically in an official position.[38] As the overseer of a prison, the Governor falls into this category, as he himself remarks several times throughout the text. For example, he asserts that his self-professed expertise in character evaluation is based on years worth of "daily observations" of all sorts of criminals. However, the Governor cites precisely this experience as the reason why he does not

[38] Pearl writes that "Often, those whose jobs and even lives depended on assessing others, including kings and generals, had the most finely tuned physiognomic instincts" (27).

believe in the accuracy of physiognomy. His experience, he claims, has shown him the disconnection between facial features and character. Moral traits cannot be reduced to the shape of an eye or the bumps of a skull.

Yet the Governor spends the rest of the narrative doing just that: judging character through both physiognomic and phrenological readings. Although he never mentions phrenology by name, he uses recognizably phrenological descriptions in a similar manner as in the physiognomical readings. Almost immediately after his declaration against face-reading, the Governor performs both a physiognomical and phrenological reading of Mr. Gracedieu's wife, remarking that "I never remembered having seen any other person with such a singularly narrow and slanting forehead as this lady presented; and I was impressed, not at all agreeably, by the shifting flashing expression in her eyes" (30). He here makes a physiognomical assessment of Mrs. Gracedieu's eyes, and a phrenological reading of her head. According to phrenological charts, the language of a "narrow and slanting forehead" refers to a deficiency in the organs of benevolence and conscientiousness. The Governor's opinion of Mrs. Gracedieu's character, that she is cruelly selfish and "shamelessly deceitful" (37), clearly falls in line with his phrenological assessment. He is dabbling in the very criminology he has just rejected; the traits he reads – both the shifty eyes and the sloping forehead – could very easily function as Lombrosian stigmata denoting the "criminal type." He similarly spends the rest of the story attempting to judge characters by the features of their faces and skulls. While the Governor returns to his ideas regarding hereditary theory and revises them as events unfold, he never again discusses physiognomy or phrenology, and seems completely unaware that he is contradicting himself in practicing them. Unlike his self-aware and

intentional use of hereditary theory, the Governor does not examine the implications of the assessments he makes using physiognomy and phrenology.

The Governor's use of these pseudosciences to make moral judgments of both Eunice and Helena creates a contradiction out of the same factors that form a tension in his assessment of Eunice's susceptibility to hereditary influence. This problem is further exacerbated by the fact that the Governor actually uses these pseudosciences as proof of hereditary influence. His moral assessment of Eunice and Helena assumes a level of personal agency, even the possibility of self-formation, that stands in sharp contrast to the reductionist, determinist pseudosciences he uses to judge them. For example, the Governor judges Helena immediately upon their first meeting based on his phrenological reading of her face, by which he concludes that she has inherited her mother's moral deficiencies[39]. He uses this reading to arrive at a moral evaluation of her character before gaining any knowledge of her actions. By the end of this first conversation, he pronounces Helena "As hard as her mother, as selfish as her mother, and, judging from those two bad qualities, probably as cruel as her mother" (155). He is right, but his language is extreme based on the information he knows at the time. Clearly his phrenological reading has biased him against Helena, as strongly as his physiognomical reading will bias him in Eunice's favor. In both cases, his strong views assume a level of personal responsibility that neither the pseudosciences nor his own hereditary theories can account for.

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[39] The reading: "Miss Helena recalled to me her mother's face, infinitely improved by youth and health, and by a natural beauty which that cruel and deceitful woman could never have possessed. The slanting forehead and the shifting flashing eyes, that I recollected in the parent, were reproduced (slightly reproduced, I ought to say) in the child" (152).

The Governor is predisposed to like Eunice because of the attachment he formed with her when he first met her as a baby in the prison on the eve of her mother's death. Yet he is clearly swayed by her appearance. When she first meets him as a young woman, he describes her eyes as "the sweetest, truest, loveliest eyes I ever saw in a human face" (193). When the Minister worriedly asks the Governor whether there is anything in the girl's face that reminds him of her mother, he closely scrutinizes it for an answer. He again focuses on her eyes and determines that "It was impossible to think of the eyes of the murderess when I looked at the child" (194). Not only are Eunice's eyes a different color, but they show a different moral character, with traits such as "an exquisite tenderness and sincerity" as well as a "gentle uncomplaining sadness" (194). Her smile, "simple and sweet" is "certainly not an inherited smile on the maternal side" (195). Her lower features look different as well, so that "not the faintest trace, in feature or expression, of Eunice's mother was to be seen in Eunice herself" (195). The Governor is providing a classic physiognomical evaluation, assuming a stable connection between Eunice's features and character that allows him to definitively assert, in the face of hereditary theory, that she is nothing like her mother.[40]

The Governor's complimentary language accompanying his physiognomical assessment of Eunice shows his moral approbation of her character, and indeed he subsequently serves as her advocate. Throughout the remainder of the narrative, he acts as a grandfather-like figure to Eunice, promoting her interests and praising her moral fortitude.[41] However, his admiration for her moral character cannot be reconciled with the

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[40] Eyes were a popular feature to read, along with noses (Pearl, 43); other features included lips, hands, feet and forehead.

[41] For example, he describes himself as humbled by her ability to forgive Philip for having betrayed her (196).

physiognomical reading by which he judges her nature. If Eunice's character is indeed reliably connected to her facial features, this implies a static psychophysiological make-up that she is powerless to change, either for the good or the bad. Instead, her complete passivity before various deterministic forces – hereditary, environmental, and now physiognomical – is further enforced. She is not responsible for her moral attributes, and not deserving of all the praise the Governor heaps upon her.

Eunice looks so little like her mother that the Governor asks himself, "In the absence of physical resemblance between parent and child, is an unfavorable influence exercised on the tendency to moral resemblance?" (201), and he decides that this must be the case. This further solidifies the connection he makes between physiognomy and moral character, and extends it to the question of the inheritance of moral traits. Directly after this, he launches into the above-discussed section regarding hereditary evolution, surmising that "Assuming the possibility of such a result as this, Eunice (entirely unlike her mother) must" (201) have qualities that can resist evil. The Governor's physiognomical reading of Eunice forms the basis for his articulation of a theory of hereditary influence in which evil forces of heredity can be controlled by the beneficial influence of a moral emotion like love. Yet the Governor here has apparently forgotten his previous experience with Eunice's mother herself, in which he observed a severe disconnect between her benign features and her murderous nature.

This unacknowledged contradiction in the Governor's thinking places his entire theory of hereditary influence on shaky ground. If Eunice's physiognomy does attest to her character, it becomes one more physiological aspect of her nature that she does not, finally, control. This makes even more explicit the fact that the Governor is unable to

account for an agency in Eunice that would support his assertion of her moral development, of her ability to encounter and "force back" evil influences. There is no evidence to ground his optimistic assessment of evolutionary progress. On the other hand, if Eunice's physiognomy is not linked to her character, then there is no basis for the him to assert that she is predominantly moral, as her facial features were the basis for his original assessment of her character.

The rest of the Eunice plot line tends to exacerbate this tension in the Governor's position. Collins describes Eunice's features as radically changed when she is under the hereditary influence of her mother, thereby undermining the very factors the Governor based his views on. As noted before, when Eunice confronts Helena, she undergoes the "horrid transformation" (296) that changes her out of her "sweet self" to an aspect so frightening she prevents her sister from killing Philip. This horrid transformation is written out on her face. She is now a "fearful creature" and her facial features directly contradict her previous looks. Her "glittering eyes" (297) are mentioned three times, stressing the contrast with the Governor's description of her eyes as "the sweetest, loveliest, truest" he had ever seen – eyes that, he claimed, could bear no resemblance to the eyes of a murderess.[42] Similarly, her lips are now drawn back, showing "her clenched teeth" (297), belying the "smile, simple and sweet," that had previously seemed to disprove maternal inheritance. Here, with "raised hair" and a flushed face, Eunice is an image so physically terrifying that Miss Jillgall is transfixed with horror and Helena's murderous impulses tamed.

[42] Instead, Eunice's "glittering eyes" now make her resemble the evil Count Foscoe in *The Woman in White*, whose eyes Collins describes in the same manner

Collins preserves the link between facial feature and moral character – but divests it of any predictive power because both change. Eunice's facial features cannot serve as the Governor's guarantee that she will triumph over her mother's hereditary influence, if they change along with that influence. The influences are not "under control." None of his attempts to locate that control within her body – whether in her womanly love or her physiognomical features – can serve to support the moral progress he wants to ascribe to her, because fundamentally he has no explanation of what kind of agency might enable this kind of cohesion in her character. He never claims Eunice possesses a free will that operates apart from her psychophysiological processes. However, the language he uses – of self-control, self-formation, and individual responsibility for moral growth – assumes that Eunice posses within herself an agency that operates very much like the liberal will. The Governor finally fails in his attempt to meld liberal ideology to a static physiological body.

The novel further complicates the Governor's neo-Lamarckian ideas of agency by re-scripting the relationship between hereditary and environmental influence, making room for a kind of intersubjective agency that is only possible through an exchange of physiological influences. Eunice's impact on Helena is described in explicitly physiological terms. According to Miss Jillgall, when Helena encounters Eunice waiting for her at the bottom of the staircase, her hand shakes and she staggers as she seeks for the bannister to hold herself up, and her voice trembles when she attempts to speak. Miss Jillgall decides to creep forward until she can "see the face which had struck the murderous wretch with terror" (296). What is being described here is a kind of affective impact, in which bodily influence shapes experience without rational intention. Eunice's

body, and her face in particular, exert a kind of agency in their power over Helena, registered in physiological terms. Even after Eunice verbally tells Helena to leave Philip alone, what is shown by the text as cowing Helena is her body: "Helena shrank away from her – daunted by her glittering eyes, mastered by her lifted hand pointing up towards the stairs" (297).

At the same time, it is because of Helena's presence that the transformation occurs in Eunice. This is also registered on physiological lines as an affective impact, stressing a dynamic interchange between bodies. Earlier in the narrative Eunice tells the Governor that she experiences murderous impulses anytime she sees or speaks to Helena, and in one episode she even goes into another trance when Helena approaches. In all these cases, Eunice's physiological reactions to Helena are evidence that the latter's presence has triggered in Eunice a strong hereditary influence from her mother. For example, in the trance, Eunice is listening to her mother telling her to harm Helena (204).

The kind of static body Spencer describes in *Principles* – one that is passively shaped by environmental influence, then bequeaths that formation to successive generations – gains a sort of affective agency here. That agency is produced through an exchange between Helena and Eunice: Helena impacts Eunice, triggering a biological influence in her, but Eunice is empowered, through that biological influence, to impact Helena in return. Precisely because Eunice is typically a sweet, passive woman, this interchange stands out in the text as a new kind of agency for her. Contrary to the Governor's assumptions, Collins shows that inherited traits can be a source of agency in and of themselves. In Eunice's case, her affective interchange with her sister enables her to override her rational, conscious acceptance of a moral code that makes her submissive.

Paradoxically, she is therefore able to defeat a would-be murderer and save Philip's life, her mother's influence enabling her to attain a moral end. The affective nature of the physiological exchange is comprised of a productive interplay of hereditary and environmental influences. What Collins suggests through this affective exchange is that the inherited traits do not necessarily determine character. In Eunice's case, she has inherited her mother's traits, but they dominate her character only when triggered by an environmental influence. If this is the case, Eunice can choose which environmental influences to subject herself to, thus enacting a level of intentional agency.[43] This is exactly what happens in her relationship with Philip.

Philip's influence on Eunice is also described physiologically. For example, when Eunice catches Philip and Helena kissing in the garden, her murderous hereditary traits take over and she rushes up to the other girl, fastening her hands around her throat. However, she is immediately calmed when Philip comes to the victim's defense. The narrative, taken here from Helena's diary, stresses the impact of Philip's touch on Eunice:

> When he touched her, in the act of forcing her back from me, Eunice's raging strength became utter weakness in an instant. Her arms fell helpless at her sides – her head drooped – she looked at him in silence which was dreadful … (131)

The language here again shows an affective impact. This time, Philip's touch completely incapacitates Eunice by ridding her of the influence of her mother. Similarly, after the episode in which Eunice's fearsome transformation frightens Helena away, the hereditary traits leave Eunice once again when she goes to Philip's bedside. Miss Jillgall describes seeing Eunice and Philip sitting hand in hand, with Eunice "so completely restored to her old self that I could hardly believe what I had seen" (298). And, earlier in the narrative,

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[43] Footnote to Damasio!

Philip's affective influence on Eunice is so powerful that merely seeing his picture in a locket on her sister's chest prevents Eunice from killing Helena in her drug-induced stupor. At this moment, she drops on her knees and implores the photograph to restore her to her former self, "Let the love that was once my life, be my good angel still" (149). This language resonates with the Governor's theory that Eunice's love for Philip will serve as her guardian angel.

However, the actual mechanism is different than what the Governor had thought when he hypothesized that, as a woman, Eunice experiences in love "a new power for Good," an "inherent force in humanity" that forces the "inherited influences to submit" (202). What Collins specifies is that Eunice's love quells the evil hereditary traits because it serves to affectively connect her to Philip. Love does not give Eunice, herself, the power to control the "hereditary taint." Rather, it makes her susceptible to an environmental factor – the presence of Philip – that supersedes hereditary forces. This challenges the Governor's neo-Lamarckian optimism. If Eunice is influenced by Philip, she is also impacted by her sister; the affective nature of this environmental influence can work to trigger or to control the biological inheritance from her mother.

The agency Eunice achieves through her love for Philip is not a guarantee, as Eunice acknowledges when the Governor recalls the way "love conquered once more" when she was seen quietly sitting next to Philip after her confrontation with her sister. He asks her, "Tell me – have you any misgivings now? Is there fear in your heart of the return of that tempting spirit in you, in the time to come?"(324). To this question, she replies, "Not while Philip lives!" (324). Her love is not a biological "birthright" – feminine or not – that will enable her to somehow continually resist the immoral traits

she has inherited from her mother. The agency she derives, in this case to continue along the moral path she consciously chooses when not under her mother's sway, is entirely dependent upon Philip's affective influence. Eunice's answer to the Governor shows her understanding that she does not possess the capacity to control psychophysiological processes. But the answer is not to be found her in capacity for a transcending, idealistic womanly love. Rather, her initiative is to choose to be with a person who will help her live out the kind of moral life she wants, through a kind of intersubjective agency. By putting herself in Philip's physical proximity, Eunice gains a measure of self-formation, but only of a kind that is produced in conjunction with another person. Eunice's answer, which makes her moral well-being contingent upon Philip's continued presence in her life, implicitly shows that there is no self-produced agency strong enough to guarantee moral progress.

Conclusion

These novels present a profoundly altered the form of the liberal individual by exploring an intersubjective agency facilitated through psychophysiological processes. This complicates criticism of the Victorian novel that charges it with a failed attempt to represent an "intersubjective ideal." A seminal work in this line of criticism is John Kucich's argument, in *Repression in Victorian Fiction*, which charges that novelists fail to represent a truly interdependent vision, because they attempt to resolve social conflict through the psychology of a self-enclosed individual. Similar to Kucich, Anne Cvetkovich in *Mixed Feelings* argues that writes like Eliot fail in turning to intersubjective relations to critique Victorian political and cultural norms.

Other critics, like Amanda Anderson, are more recuperative. For example, Anderson in *The Powers of Distance* examines how and when Victorian ideals of detachment "do and do not extend beyond a narrowly characterological emphasis to embrace forms of experience that are intersubjective or collective" (31). Lauren Goodlad stresses in *Victorian Liberalism* "the intersubjective utopianism at the heart of prominent strains of liberal thinking," involved in such projects as civic volunteerism, but grants Victorians a self-awareness about that process. For example, she characterizes writers of the period as recognizing that the "self-originating force of character, cherished personal intimacy… cultivating individuality, and … intersubjective utopia" cannot be "isolated from underlying material conditions" (233), with the result being disjunctive tensions in their works.

Along with Anderson and Goodlad, I argue that the Victorians novelists I take up here are critically engaging with the idea of intersubjective experience. These writers turn to contemporary physiological psychology to explore ways of connecting individuals that often challenge the liberal ideology that underwrote political and cultural norms. If the individual was, as Hadley writes, the necessary agent of Victorian political ideology, the affective rewriting of the individual will in these novels calls into question hallowed terms of liberalism, such as self-formation, autonomy, progress and moral growth, that Mill and others identified as essential to the promotion of civilization. To the degree that the writers I take up are able to imagine an intersubjective form of agency, they articulate a subjectivity that implicitly moves beyond the strictures of liberalism from the inside out, by rewriting the terms by which agency was scripted into the body. However, this alternative form of agency in the novels is always in tension with the liberal will.

Villette shows a thorough integration between self and other that seems to defy the idea of an autonomous, self-enclosed individual. If Combe turned phrenology into a self-help creed in order to accommodate liberal ideals of self-fashioning, *Villette* strips that language away to reveal the determining body at the core of the pseudoscience. Brontë locates a productive form of agency in the phrenological body precisely because its thorough connection between agency and body means that it cannot support the individual will postulated by physiological psychology. Instead, phrenology offers Lucy the opportunity to connect with M. Paul in a manner, as I have argued, that resonates as affective impact. The end of the novel – which finds Lucy so thoroughly integrated with M. Paul that he is the "spring" that moves her even from oversees – articulates an intersubjective agency clearly at odds with the autonomy of the individual. There remains

a question, of course, as to whether this form of agency is written out of the novel along with M. Paul. I believe Brontë's language of interdependence and integration is too strong to allow the ending to be read as anything but a tragedy. The form of the individual is not revived at the end through M. Paul's death.

Hard Times bears a remarkable similarity to Carpenter's *Principles of Psychology* in its articulation of a category of human automatons who do not function as individuals, and of another category comprising the clearly privileged "free agent." However, there is an important distinction. Carpenter in *Principles* does not grant any sort of agency to the automaton. The automaton is in a condition clearly devoid of liberal values, unable to grow, progress, or engage in self-formation precisely because it does not possess a will. For Carpenter, the subject must possess a liberal agency, or none at all, and the only way to achieve this is to ascend to the ranks of the individual. Dickens clearly preserves this privileged category in the figure of Sissy, who is the novel's free agent. However, the degree to which Dickens imagines an alternate form of agency for his automaton-like characters, especially Louisa, strikingly diverges from Carpenter's kind of system. As I've shown, Louisa is able to obtain a limited amount of self-formation through a physiological process that connects her to the free agent, Sissy. This enables her to develop as a character, in a way that Carpenter does not imagine possible for the automaton. As an automaton, Louisa is not autonomous, and her only real agency comes from the affective exchange with Sissy; this clearly does not conform to the ideology of the individual. As such, Louisa – and the Circus performers – present a sustained exploration of an agency produced in and through the body's processes, and of a form of subjectivity that is precisely not that of the individual. The world of *Hard Times* is

primarily comprised of persons who are moved by psychophysiological forces rather than individual will, so that Sissy's character seems more nostalgic than anything.

Eliot in *The Mill on the Floss* expands the Victorian individual to include affective agency and so creates a new hybrid form of subjectivity. Eliot articulates a more complex and dynamic model for the mind-body connection than her contemporary, Bain. As I've shown, Bain locates the will in the body but finally has recourse to determining physiological processes that act on the will – whether to set the "originary spark" in motion, or to place a moral control on the will through habit. Bain's concern to keep the will a separate entity allows him to protect the autonomy of the individual will, but this is precisely what keeps him from imagining an agency fully integrated within the body's processes. As a result, he creates a binary of the will versus the body, where the will is both connected to the body yet needing to be protected from that very connection in order to maintain liberal agency. Eliot, on the other hand, turns to a combination of affective physiological processes and rationally-induced sympathetic imagination to create the moral will. If affective influence is what opens Maggie to the influence of others, reason clearly circumscribes that influence. However, Eliot's articulation of emotion keeps both affective and rational elements operating, so that Maggie's character development is a product of both. The distancing role of reason is counterbalanced by the intersubjective pull of affect; her moral will is changed from the inside out and is specifically not an autonomous process. Although Eliot rejects a purely affective form of subjectivity, she presents an intrinsic critique to the form of the liberal individual that, finally, leaves Maggie exceeding that form.

Collins' critique of neo-Lamarckian hereditary theory in *The Legacy of Cain* finally results in a contradiction of almost every term associated with the liberal will, including forward progress, moral growth, and autonomy. Proponents of neo-Lamarckism, like Spencer, sought to use evolutionary theory to attach liberal values to a primarily physiological explanation of the individual. As I show with Spencer, this results in an explicitly psychopshyiological determination theorized to occur in the form of both biological and environmental influences. Meanwhile, the individual is still assumed to have a self-fashioning agency. Collins' Eunice follows just this format of determination. However, Collins shows that this means an autonomous will is impossible for her. Instead, he abandons the form of the individual. Pushing the connection between body and agency beyond confines necessary to preserve the articulation of the liberal will, Collins grants Eunice an intersubjective agency comprised of her connection to other characters, especially her fiancé. Collins shows that this agency does not insure Eunice's morality or growth, as it is contingent on her relationship with these characters. However, if she does not possess the capacity for self-definition, she can choose which characters will impact her. Eunice represents a form of agency that moves into an articulation of subjectivity that is not compatible with the individual.

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