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NARRATIVE UNDER THE MICROSCOPE:
EVIDENTIARY DISCOURSES IN VICTORIAN LITERATURE AND CULTURE,
1829-1876

By

LOUISE PENNER

A THESIS SUBMITTED
IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE
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ABSTRACT

Narrative Under the Microscope:

Evidentiary Discourses in Victorian Literature and Culture, 1829-1876

by

Louise Penner

This dissertation traces evidence of the competing epistemologies of the individual and the social through four Victorian novels and through the scientific, philosophical, and medical discourses that were emerging at the time that the novels were being written. Though the two types of epistemology are not necessarily inimical to each other, the heavily empirical and positivist climate of intellectual opinion between the years 1829-1876 fostered the notion that statistical observation was inherently superior to the study of individuals as individuals, a notion confronted by each of the studies my dissertation addresses. I describe how the discourses of medical statistics, natural history, physiology, and psychology inflected the narrative structures and styles of the industrial novel, sensation fiction. the high realist novel, debates about public health, and writings about the sciences themselves during a period of considerable scientific change, the years 1829-1876. The epistemological tensions I locate within the scientific discourses may better explain aspects of the novels that have been previously identified as thematic incoherences or confusions of genre.

All of the chapters together provide a sense of both the Victorians’ investment in and suspicion about the efficacy of empiricist claims of objectivity and certainty,
particularly the suggestion that the intense empirical study of aggregate populations would necessarily lead to the identification of fixed laws of nature and social behavior. As my readings of both earlier and later novels indicate, some Victorians hoped to move from observable laws to an understanding of the unobservable and unpredictable, perhaps even to provide a language for those words and behaviors that could not be plainly spoken or readily classified. This dissertation shows, however, a conflicted philosophical and scientific vision produced in each of these novels as a result of their dual focus on individuals and aggregates, a double vision that for us brings into focus the Victorians’ uncomfortable awareness of the limits of empiricist description.
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For all their tireless encouragement and love, my thanks to my family, who have never let me give in to my frequent doubts and insecurities. John Penner, Jane Penner Hoppe, Jamie Hoppe, and my ever-inspiring nephews, Wesley and Wilson, have helped me in ways too numerous to mention. The enthusiasm of my parents, Terry and Rosemary Penner, sustained me during the hardest periods of writing this dissertation. It would not have been written without their encouragement. This dissertation is dedicated to them.
CONTENTS

INTRODUCTION 1
“Comparative Investigations”: Competing Epistemologies

CHAPTER ONE 18
Resisting Statistical Fictions:
Contamination, Contagion, and Class Anxiety in Mary Barton

CHAPTER TWO 77
“Under the Microscope”:
Natural History, Detection, and The Woman in White

CHAPTER THREE 128
Lydgate’s Double Vision:
Realism, Empiricism, and Medical Reform in Middlemarch

CHAPTER FOUR 182
“Unmapped Country:
Uncovering Hidden Wounds in Daniel Deronda

CONCLUSION 223

WORKS CITED 225
Introduction

"Comparative Investigations": Competing Epistemologies

In George Eliot's Middlemarch, doctor Tertius Lydgate searches through his microscope for the "primary tissue," or building block of the human body. At the same time, he struggles to create a fever hospital where he might make "comparative investigations" among diseases and the diseased. The two components of his research, his microscopical search for a single underlying element to life and his "comparative investigations" of several cases of disease at once, together provide ways of getting at truths about the body and disease at the microscopic and statistical levels. His interests in microscopy and medical statistics are combined with an intense focus on the physical examination and individual testimony of each patient, thus suggesting a tension between medical and scientific observation concentrated on individual specimens and that focused on aggregate populations.

Lydgate's dual approach to medical observation serves as an appropriate place to begin a description of my dissertation, because this study too focuses on the epistemological tensions between scientific and literary investigations conducted on the individual and the aggregate levels. Though the two types of research are not necessarily inimical to each other, the heavily empirical and positivist climate of intellectual opinion between the years 1829-1876 fostered the notion that statistical observation was inherently superior to the study of individuals as individuals, a notion confronted by each of the literary, scientific, and philosophical studies my dissertation addresses. I thus trace evidence of the competing epistemologies of the individual and the social through four novels, each of which invokes in turn a different emerging scientific discourse: medical
statistics, natural history, physiology, and psychology. I describe how these scientific discourses inflected the narrative structures and styles of the industrial novel, sensation fiction, the high realist novel, debates about public health, and writings about the sciences themselves during a period of considerable scientific change, the years 1829-1876.

I trace these competing epistemologies in Victorian literature and culture in order to claim two things: first, that the epistemological tensions I locate within the scientific discourses may better explain aspects of the novels that have been previously identified as thematic incoherences or confusions of genre; and second, that the emergence of these new scientific discourses contributed to the development of realism in the novel, from the early experiments in realism in the industrial novel and sensation fiction, to the much more seamless interweaving of scientific discourses into the narrative structures and styles of the “high realist” novels of George Eliot.

It seems important here to identify what I mean by realism here and throughout the dissertation, since it is a concept that has been defined and redefined by countless critics. I will not attempt to account for all of these approaches here.¹ As Laurence Rothfield has recently argued, the “issue” most often discussed about realism is the perception of it as merely “a problematic of representation, of the relation between words and things, signifiers and signifieds, conventions and reality” (xi). I share Rothfield’s view that critical discussions focusing on it solely as a problem of representation can only take us so far before the debate gets reduced into unproductive discussions of whether or not particular realist works, or realism itself, is either transgressive or ideologically fettered. A more productive discussion of the realist novel is one that is attuned to the different kinds of cultural and scientific discourses that appear in novels, particularly as
their presence in the novel seems to afford the realist author a claim to narrative authority or authenticity. A concentration on the way that such discourses relate to each other and to the conventions of the particular genres to which the novels appear to conform may produce a more fruitful and dynamic discussion of both the discourses and the novels, as well as their relation to each other.

Thus in all of the chapters of my dissertation, I am interested in places where the pressures and expectations of the scientific discourses appear to come up against the pressures and expectations of genre. Though I want to be as specific as possible about each novel and each scientific discourse, I make the general claim that there is a shift in emphasis over the course of the Victorian period, from a scenario where the pressures of genre and convention always win out over those of the scientific discourses, to one where the reverse is possible. This shift is especially visible in the later fiction of George Eliot, where, for example, in *Middlemarch*, we see Dr. Terius Lydgate using scientific medicine to make a seemingly equivocal prognosis about the heart condition of Edward Causabon, an aging scholar who has recently married the novel’s young heroine, Dorothea. When Causabon asks for “an exact statement of [Lydgate’s] conclusions,” his doctor responds that his condition, “fatty degeneration of the heart,” is one for which “[a] good deal of experience — a more lengthened observation — is wanting.” The only prognosis Lydgate can give is that “death from this disease is often sudden. At the same time, no such result can be predicted” (292-93). Of course, the expectation that Dorothea will participate in a more traditional affective marriage plot assures us that Causabon will die, and probably suddenly, which soon after, and to no one’s surprise, he does. Scientific uncertainty, in this case about a heart disease, allows the conventions of the marriage plot novel to
govern the narrative trajectory without appearing to undermine the scientific and medical knowledge that informs the novel’s plot and narrative, subjects which I describe in much more detail in chapter three. In George Eliot’s later novel, Daniel Deronda, however, the use of scientific discourses, physiology and psychology in particular, to depict the character the novel’s heroine, Gwendolen Harleth, and her history of trauma do not allow her story to be reabsorbed into a conventional marriage plot. Science and scientific vision in this case do not allow for the individual history to be co-opted into a cultural history, a prohibition that is an important break with the typical realist novel and the novel in general.

As the previous medical and psychological examples illustrate, the time period my dissertation encompasses is marked by crucial transitions in literary and scientific epistemologies of evidence: the transition to high realism in the novel; the debate between anticontagionist and contagionist theories of disease origins and transmission in the medical field; the controversies raised by the introduction of the theory of natural selection into already existing debates about development theory; and disagreements among physiologists about the function of individual and collective memory. The dissertation is thus divided into two sections. Part one begins with novels written before the transition to high realism, Elizabeth Gaskell’s industrial novel Mary Barton (1848), and Wilkie Collins’s sensation fiction novel The Woman in White (1860), each of which, under the influence of contemporary empiricist trends in scientific thought, experimented with the inclusion of statistical and/or scientific rhetoric within their narrative mode. Both were written prior to the debates that followed the hurried publication of Darwin’s On the Origin of Species, and to the general medical acceptance of contagionist germ theories
beginning in the mid-1860s. Part two concentrates on the more seamless intersections between scientific and literary representation of "high realism," particularly George Eliot's *Middlemarch* (1870) and *Daniel Deronda* (1874), which appeared post-*Origin* and concurrent with the publication of Koch's and Pasteur's microscopical studies on fermentation and putrefaction, which confirmed the validity of germ theories of disease. These later novels appear to be conscious of the changing evidentiary notions brought on by these important medical and scientific developments.

I chose to focus specifically on the discourses of public health, natural history, medicine, physiology, and psychology for several reasons. Most generally, I chose to write about each of these discourses because each underwent dramatic changes either with regard to professionalization or popularity during the course of the nineteenth century and the dynamic character of each is reflected in each of the novels I discuss. It is also difficult to consider the emergence of any one of these discourses into nineteenth-century English culture without making reference to the others. As they underwent changes in the nineteenth century and before, the relationships between natural history, public health, medicine, physiology and psychology changed as well, becoming more specialized and discrete. According to Harold J. Cook, for example, a large number of physicians contributed to natural history in early modern Europe because they relied on knowledge of the natural world to develop their medicines and therapies. Cook writes, "For their scientia—the knowledge of health and disease—physicians shifted the foundations of medical learning from philosophical disputation to investigations of nature," thus also shifting their concentration from correct reasoning to "matters of fact" (91).² Londa Scheibinger takes up the story in the seventeenth century when, she claims,
academic botanists broke their ties with medical practitioners as a result of their need to concentrate on classifying the huge numbers of plant species that were being discovered and brought back to England by travelers to new colonies and naturalists on voyages of discovery in distant lands ("Gender and Natural History" 163-177). Thus, in Mary Barton, we have examples of two kinds of amateur naturalists. Job Legh, who has learned the Linnaean terminology and system of taxonomy and Aunt Alice, whose knowledge of field simples and plants helps her to care for her sick neighbors who cannot afford other medical care. As I describe in chapter one, Legh is the subject of some of the novel’s humor as his empiricist study of nature and zeal for classification is satirized by Alice’s son Will. And Alice’s care for the community will stand in marked contrast to the factory infirmary system’s ignorance and poor care for its employees. Thus the new empiricist discourses of public health and natural history are both the subject of critique in Gaskell’s novel. The discourses of physiology and psychology are also interwoven into Gaskell’s narrative as Mary Poovey has argued, a claim I consider in chapter one.

Perhaps the most important reason that I chose to discuss all of these discourses together, rather than focusing my project on a single example, is that all of them have been incorporated into a now familiar narrative of the supposed progress of nineteenth-century sciences toward an increasingly strict empiricist and positivist world view, one that emphasized the scientific study of aggregate populations over the study of individuals as individuals. Briefly put, positivism, as it was described by its founder, August Comte, referred to the attempt to use empirical observation to discover laws by which to understand and predict, not only the workings of the natural world, but also human behavior and interaction.
This narrative of social progress toward a positivist world view was endorsed by both Victorian scientists and social reformers hoping for the conversion of all scientific study to a positivist epistemology, and it has also been incorporated into the readings of contemporary critics of Victorian culture. Florence Nightingale argued that medical statistics connecting environmental factors to the presence of disease provided a scientific antidote to what she saw as the fraudulent narratives of contagion propagated by the uneducated peoples of Southern Europe. She saw contagion narratives in fiction and medical discourse as dangerous in their sensational nature, and therefore threatening to the objectivity of the reader and observer. She told her friend William Farr that statistics only “give us the results of our experience” (BM 43400, f.276). Her hope was that medicine would adopt such a positivist approach to issues of public health. Charles Kingsley saw natural history as a discipline whose focus on objective observation and neutral classification of animal and plant species was entirely divorced from the seductions of romantic narrative and what he termed “human-centered thoughts” (Kingsley 194). More recently, contemporary critic Jonathan Smith has connected natural history study to a resurgence in Baconian induction in the nineteenth century.

But the primary place where the narrative of scientific progress toward positivism has taken hold in contemporary criticism is in the treatment of the novels of George Eliot and her interests in medicine, natural history, physiology, and psychology. In *George Eliot and Nineteenth-Century Science*, for instance, Sally Shuttleworth claims that the organicist theories of George Henry Lewes and Auguste Comte gradually influenced George Eliot’s movement away from a focus on an inductive science, natural history, that made claims of objective certainty and “recorded a fixed, and static world,” to an
experimental science, physiology, that went from observations of the observable to establish laws by which scientists and other observers might then predict the unobservable workings of the mind and body of individuals and the social body. Those critics that focus on George Eliot’s interest in medical science, especially Jeremy Tambling and Laurence Rothfield, have seen the positivist medical science of Xavier Bichat and Francois Broussais, as they are described in Michel Foucault’s *Birth of the Clinic*, as the model for George Eliot’s narrative style in *Middlemarch*.

I would not want to suggest that empiricist sciences and positivist philosophy were not extremely influential on George Eliot, Elizabeth Gaskell, Wilkie Collins, and other Victorian novelists and intellectuals. John Stuart Mill and George Henry Lewes, in particular, wrote extensively about positivism and attempted to promote the philosophical ideas of its founder, August Comte, in their own philosophical work.⁴ I do want to suggest, however, that each of the authors this dissertation addresses was concerned with the status and perspective of the individual as the claims for the scientific authority of positivism grew and the influence of empiricist sciences such as statistics, natural history, physiology, and psychology threatened the status and validity of literature as a medium through which individuals and societies might be known. As Nightingale’s admonition about contagion theory illustrates, the literary and scientific world views were increasingly seen to be antithetical and authors such as Gaskell and George Eliot responded by appearing to endorse the scientific and positivist line. Collins, by contrast, makes that world view the subject of his humor in *The Woman in White*. As my chapters will illustrate, despite the apparent endorsement of positivism that we see in Gaskell’s and George Eliot’s novels, they, too, show an ambivalence about the authority of
empiricist description and statistical and positivist scientific methods. By the time of George Eliot’s writing of *Middlemarch*, she seems clearly to have questioned the new positivist medicine, as I describe in chapter three. And in her final novel, *Daniel Deronda*, I argue that she in fact tests the limits of positivism in her representation of Gwendolen Harleth, a representation whose impact is often missed because it requires close attention to reading the silences and absences in one plot against the abundance of history and testimony in the other. This strategy of telling one person’s story through the juxtaposition of it with those with those of others in another plot has often been misinterpreted as a failed attempt to make the two central narratives of the novel cohere to each other.

My thesis differs from other studies of the relationship between nineteenth-century literature and science for several reasons. Most historical and literary scholarship in this area focuses on a single novelist, a single scientist or scientific discourse, or a single genre of the novel. I do not attempt to provide a survey covering all Victorian genres of literature or all the scientific discourses that influenced Victorian fiction. Mary Poovey’s *Making a Social Body* and *The History of the Modern Fact* may be the closest approximation of that kind of study. My dissertation is informed by her impressive effort to trace what she calls a “historical epistemology” through the Victorian period and to describe the process by which particular emerging discourses, such as psychology, come into being through their “disarticulation” from other existing ones. I do not attempt to imitate the scope of Poovey’s books, but rather to look at specific instances of such “disarticulation” and to insist on the resulting and residual tensions that appear in fiction and in the sciences themselves as a result of that breaking away. In Poovey’s model, the
process of disarticulation seems to involve the redefinition of each discourse (both the emerging and the prior discourses) in favor of a social epistemology rather than an epistemology of the individual. In the readings I provide we see the novels resisting that movement toward the abandonment of a focus on the individual as an individual. This particular issue is addressed generally by Poovey, particularly in *Making a Social Body*, but I hope to bring to my readings the kind of detailed and specific reading of particular sites of intersection that my more limited focus allows.

I chose these four novels in particular because each author weaves the discourses of science into his or her narrative in order to comment not just on the social world the novel depicts, but also on the scientific, observational strategies through which that social world and its individual subjects were thought to be interpretable. Each novelist’s representation of the psyche of the narrator(s) of each novel as well as many of their individual characters provide, not just a representation of a social or an epistemological problem, but also a comment on the perspective through which those narrators and characters attempt to interpret and address those problems. Thus the reader’s perspective becomes one of observing observers as they struggle with the social and epistemological questions being addressed within their respective novels.

In trying to limit the scope of this already quite large project, I have had to omit discussion of other important novels and scientific discourses that would appear equally to fall under the rubric just described. I did not intend my dissertation to be a survey of Victorian novels, but rather a sample of different intersections between science and literature, particularly ones where the narrative seems, sometimes apparently inadvertently, to focus on tensions produced by the collision between the epistemological
world views of empiricist science and literature. I am thus interested throughout my dissertation in examining how the emergence of particular scientific discourses at particular moments in scientific, literary, and philosophical history influenced the way that novels of diverse genres attempted to represent their society and its individuals, particularly when that dual effort seems either particularly vexed or particularly important to the individual author.

In the cases of Gaskell and Collins, I saw each alluding to and borrowing from the rhetoric of specific emerging scientific discourses, but also found each to be continually undercutting his/her own apparent endorsement of those discourses in favor of a focus on the individual. George Eliot, whose last two novels are the subject of the second half of my dissertation, is the sole representative of the “high” realist novel, a focus that might seem to provide an unbalanced perspective on Victorian literature. George Eliot is the realist author most invested in the relationship between science and literature and her later novels in particular are the most intertextual in their method and epistemology. Rather than providing an artificially coherent narrative of progress toward positivism in the novel, or an equally artificial attempt at symmetrical representation of the authors of the period, I have focused on particularly important sites of intersection between science and literature and between the competing epistemologies of the individual and the social.

In chapter one, “Resisting Statistical Fictions,” I argue that in Mary Barton tensions between statistical observation and the literary and scientific observation of individuals are embodied in an apparent tension of genre between the industrial novel and the sentimental romance. In invoking these epistemological tensions, Gaskell often incorporates empiricist evidentiary notions common to anticontagionist social reformers
such as Florence Nightingale and Edwin Chadwick. She also, however, exhibits an apparently strategic playfulness with inexact numbers throughout the novel and, in her representation of the behaviors of several of her poor characters, consistently counters the conclusions made about the poor in statistical studies as different as those of Chadwick and James Kay. In doing so she distances herself from the theories of moral contagion that Kay was urging, and from the idea of contamination by environmental pollution maintained by Chadwick, thus suggesting a skepticism about the efficacy of empiricist observations of individuals and collectives.

In chapter Two, "Victorian Observation 'Under the Microscope': Natural History. Detection, and The Woman in White," I argue that Wilkie Collins highlights the failures of his central narrator, Walter Hartright, as he attempts to observe and classify individuals involved in a mystery in a neutral and unsensational way. Walter's failures reflect similar tensions in scientific efforts to classify species, while acknowledging and attempting to encompass those individuals who resist classification. In his efforts at detection, Walter continually invokes the rhetoric of natural history, a science that, according to such prominent natural historians as Charles Kingsley, was supposed to lead young male minds away from the feminizing influence of romance by encouraging them to eschew emotional considerations in the interest of "objective, empirical truth." Collins, however, seems to delight in mocking this perception of nature study, as the novel continually shows Walter's ill-fated attempts to carefully situate individuals within fixed "safe" taxonomical classifications. The novel's preoccupation with Walter's failures of observation and classification may reflect Collins's interest in popular science texts and public spectacles of nature observation and microscopy. This mid-Victorian trend, which
I call a “microscopic aesthetic,” highlighted the importance of observing observers, and in doing so, I suggest, may have contributed to the birth of the detective novel in this period.

Chapter Three, “Lydgate’s Double Vision: Empirical Observation and Medical Reform in *Middlemarch,*” returns to the questions about empirical observation, medical statistics, and narrative strategy raised in chapter one. *Middlemarch* was written and published at about the same time as the major developments in germ theory in 1870, but is set in the late 1820s and early 1830s. As a figure of reform poised at a pivotal moment in medical history, Lydgate's training in Paris in 1829 marks him as a transitional figure in the history of medical observation and diagnosis. Recent Foucauldian criticism has stressed the influence of Xavier Bichat's post-mortem examinations of individuals on Lydgate's and George Eliot's modes of investigating the human body and the human species more generally. Few critics, if any, have focused on the tension between Lydgate's interest in tracing the history of the individual specimen/body and his interest in “comparative investigations,” particularly his use of techniques of diagnosis that were forerunners of the standardized measures of health used regularly in medicine today, such as temperature and pulse. These techniques of modern medical statistics were being developed in Paris during the time that the novel tells us Lydgate studied there. This chapter examines the complexity of George Eliot's representation of Lydgate's dual approach to medical observation and suggests that her depiction of his methods of diagnosis and therapeutics reflects her hesitation in embracing the Comtean positivism enthusiastically endorsed by George Henry Lewes, John Stuart Mill and others.
Chapter Four, "'Unmapped Country': Uncovering Hidden Wounds in Daniel Deronda," extends my investigation of George Eliot's investments in scientific observation of individuals and collectives into the realms of Victorian physiology and psychology. In the figures of Gwendolen Harleth and Daniel Deronda, George Eliot provides descriptions of two types of memory: individual and collective, racial memory. While Gwendolen's individual history is alluded to only in powerful moments of seemingly unmotivated distress or anger, a notion of hereditary racial memory, including racially coded behaviors, structures the logic of the plot that centers around Daniel, his mother, and his future wife Mirah Cohen. The double-plot structure of the novel, when looked at through the lens of Victorian studies of the mind by Alexander Bain, Herbert Spencer, George Henry Lewes, and John Stuart Mill, reveals the way that George Eliot highlights the asymmetry in detail of history and memory between the novel’s plots. There is no racial memory that will make sense of Gwendolen's individual memories, particularly her most distressing memory of her stepfather's presence in her mother's home. By suggesting that there is a physical, hereditary, aspect to memory, Victorians' physiological and psychological theories provided a basis for the notion of racial memory. They also support my suggestion that Gwendolen's sudden memory of her dislike of her stepfather, occurring as it does at a moment of extreme psychological duress, is actually an account of what we might now call, albeit controversially, recovered memory, an idea that was circulating in the mid-Victorian intellectual community.

All of the chapters together provide a sense of both the Victorians' investment in and suspicion about the efficacy of empiricist claims of objectivity and certainty,
particularly the suggestion that the intense empirical study of aggregate populations
would necessarily lead to the identification of fixed laws of nature and social behavior.
As my readings of both earlier and later novels indicate, some Victorians hoped to move
from observable laws to an understanding of the unobservable and unpredictable, perhaps
even to provide a language for those words and behaviors that could not be plainly
spoken or readily classified. These chapters show, however, a conflicted philosophical
and scientific vision produced in each of these novels as a result of their dual focus on
individuals and aggregates, a double vision that for us brings into focus the Victorians’
uncomfortable awareness of the limits of empiricist description.
Endnotes

1 Among the most important discussions of realism in the novel for my purposes are. George Levine's *The Realistic Imagination* and *Darwin and the Novelists*; Georg Lukács' *The Historical Novel*; Gillian Beer’s *Darwin's Plots*; and Laurence Rothfield’s *Vital Signs*. The ideas of such theorists as Frederic Jameson and Mikhail Bakhtin have also influenced my thinking on questions of realism.


3 The reference here is to Nightingale’s *Notes on Hospitals* 10. I discuss her anticontagionist views extensively in chapters one and three.

4 See, for instance, George Henry Lewes’s *Biographical History of Philosophy* which concludes with Comte as not only the most recent, but the most sophisticated of philosophers. See also his 1866 essay “August Comte” first published in the *Fortnightly Review* in January of that year. Reprinted in *Versatile Victorian* 244-268. I consider Lewes' and Mill’s skepticism about other aspects of Comte’s positivism more extensively in my third chapter.

5 For instance, Rosemary Ashton’s and Sally Shuttleworth’s studies focus exclusively on the work of George Eliot and her complex and dynamic engagements with science in her novels.

6 For example, Gillian Beer’s *Darwin’s Plots* and George Levine’s *Darwin and the Novelists* describe Darwin’s influence on Victorian literature and culture, though Levine
is less interested in those who actually specifically read and refer to Darwin than the
more popular manifestations of Darwinism within Victorian cultural representation.
Laurence Rothfield’s Vital Signs concentrates solely on the discourses of medicine in
relation to the development of realism. Jonathan Smith’s Fact and Fiction focuses on the
resurgence of Baconian induction as having been encouraged by natural history
discourses.

7 To give some examples: Jenny Bourne Taylor’s In the Secret Theater of Home
concentrates entirely on sensation fiction, particularly the novels of Wilkie Collins.
Catherine Gallagher’s Industrial Reformation of English Fiction: Social Discourse and
Narrative Form, 1832-1867 and Joseph Childers’ Novel Possibilities: Fiction and the
Formation of Early Victorian Culture focus exclusively on the industrial or “Condition of
England” novel.

8 The term “Historical Epistemology” was, as Poovey notes, coined by Lorraine Daston
in her essay “Historical Epistemology.” In Questions of Evidence: Proof, Practice, and
Persuasion across the Disciplines, edited by James Chandler, Arnold I. Davidson, and
Harry Harootunian. Chicago: University of Chicago Press. 282-89. For more on Poovey’s
own sense of historical epistemology and her theory of the disarticulation of discourses
from the broader social field, see Making a Social Body 1-19, 132-54.
Chapter One

Resisting Statistical Fictions:

Contamination, Contagion, and Class Anxiety in Mary Barton

As they passed, women from their doors tossed household slops of every
description into the gutter... Heaps of ashes were the stepping-stones, on which
the passer-by, who cared in the least for cleanliness, took care not to put his foot...
You went down one step even from the foul area into the cellar in which a
family of human beings lived... After the account I have given of the state of
the street, no one can be surprised that on going into the cellar inhabited by
Davenport, the smell was so fetid as almost to knock the two men down. Quickly
recovering themselves, as those inured to such things do, they began to penetrate
the thick darkness of the place, and to see three or four little children rolling on
the damp, nay wet, brick floor, through which the stagnant, filthy moisture of the
street oozed up; the fireplace was empty and black; the wife sat on her husband’s
lair, and cried in the dank loneliness. (Gaskell’s emphasis, Mary Barton 66)

Previous critics of Elizabeth Gaskell’s Mary Barton have noticed the resemblance
between this description of John Barton and George Wilson’s visit to the home of the
dying worker Ben Davenport and his family, and contemporary blue book accounts of
government-appointed medical officers’ visits to similar regions.¹ Compare, for example,
Gaskell’s account of the Davenport cellar with this description from Edwin Chadwick’s
1847 address to Parliament on “The Health of Towns.” in which he describes the career of one such medical officer, and quotes from that officer’s reports: “In one small cellar, with no window, [he counted] eighteen persons in fever. lying in wet dirty straw. In one house he counted eighty-one, in another sixty-one. in every stage of fever, on straw in the corners. I believe these were (as I know one house with thirty-one cases was) uninhabited houses, into which poor people had crept for shelter” (6). The poorly ventilated, overcrowded cellar filled with wet dirty straw in this description is very like that occupied by Ben Davenport and his family.2 Leaving aside Gaskell’s stark detailing of the ooze, the “ashes,” the “slops of every description” (Gaskell’s emphasis), and the fetid smell, the same kind of anonymity applies to “the wife crying in the dark,” the “three or four children” playing in slop on the floor, even to Davenport himself. But why three or four children, by contrast with Chadwick’s exact totals (18, 81, 61, 31)?3 And why does Gaskell, in her preface, claim to have acquired her information about the conditions of the manufacturing workers, not from blue books, but from “one or two townspeople” whom she knows? Why all this numerical indeterminacy? The answers to these questions may lie in Gaskell’s conflicted attitude toward empiricist studies of the poor and, more generally, strict empiricist ways of knowing.

Many have connected this famous passage from Mary Barton with social reformers’ efforts to create statistical, empiricist studies of the conditions of the Manchester’s manufacturing poor in the 1840s. It seems designed to give the impression
early in the novel of some sort of kinship between its descriptions of the poor and the conditions being witnessed by those medical officers and clergy who visited the sick in the worst of environmental conditions. As social reformers and government officials of the 1830s and 40s began their struggle to address the poverty, overcrowding, and disease of urban areas, novelists, too, attempted to represent these social problems often in a style meant to convey that the representations had been drawn from first-hand empirical observations.

The style of narrative based on so-called empirical sources seems to have created challenges for novel writers and readers alike. It required, to take an example from the very matter of health and disease involved in the present passage, that novel readers work from very different sets of assumptions about the meaning of disease in narrative than they previously had. The idea that disease represented divine punishment for moral transgression was inherited by the Victorians through medical tracts and literature from previous centuries.⁴ It provided a familiar and easily accessible coding of the meaning of disease as a symptom or sign of sexual desire and/or moral failing for novel readers.⁵ Novels attempting to provide a more “real” picture of the presence and function of disease within society would have had to face the challenge of writing compelling stories out of the dismal accounts of sickness detailed by those medical officers and clergy. often presented publicly in bluebooks in the form of numbers, tables, graphs, and maps. Despite the fact that political and medical figures, such as Chadwick and James Kay,
produced powerful statistics to insist on the connections between poverty, overcrowding, poor sanitation, and disease, both men still repeatedly highlighted the familiar association between moral failing and disease in the debates about public health.

Gaskell, however, appears to resist such recognizable coding in her depiction of illness. Instead, she presents a more complicated picture of disease origins and means of transmission. The description of the Davenport cellar, perhaps the most memorable and striking scene in the novel, makes it abundantly clear that the insalubrious cellar filled with the putrid emanations of sick, rather than any kind of moral failing, has been the original cause of Ben Davenport’s ill health:

“The fever” was (as it usually is in Manchester) of a low, putrid, typhoid kind; brought on by miserable living, filthy neighborhood, and great depression of mind and body. It is virulent, malignant and highly infectious. But the poor are fatalists with regard to infection; and well for them it is so, for in their crowded dwellings, no invalid can be isolated. (68)

By initially identifying the original cause of the disease as poor environmental conditions, “the filthy neighborhood,” Gaskell seems to concur with those social reformers who insisted that the alleviation of environmental problems in urban areas would eradicate or substantially lessen the incidence of epidemic disease. By stressing as well “miserable living” and “great depression of mind and body” as explanations of disease origins, Gaskell directly counters the claim Chadwick makes in the Report on the Sanitary
Conditions of the Labouring Population of Great Britain that there is no causal relationship between either destitution or depressing passions and fever. When she says that disease is "virulent, malignant and highly infectious," she further complicates the rather more simple explanation of environmental disease origins suggested by the mention of the "filthy neighborhood," for the meaning of the term "infection" was the subject of much debate when Gaskell was writing Mary Barton. The question of whether infection referred to environmental pollutants or the diseased and contagious breath of a sick person was a complicated and controversial one that had important implications for wider debates about public health, empiricist scientific observation, and even novel writing, as I'll explain in detail later.

It is perhaps for strategic reasons, then, that the shocking representation of disease in the Davenport cellar occurs in the novel's early chapters; the efforts of the rest of the novel focus on explaining how moral and reasonable people might be brought to such a state of physical and emotional devastation in ways other than sexual or moral failing, and how they might possibly be lifted out of it. Convention may have dictated in most nineteenth-century novels that the denouement of the story be organized around the development and resolution of a marriage plot, but convention does not entirely explain why Gaskell shifts her focus to a marriage plot after already deeply investing her narrative in political and detective plots. These two plots, which initially drive the novel, center around the murder of a factory owner's son, Harry Carson, by Mary's depressed
and half-starved father—who is also the mouthpiece in the novel for the political critique of the factory system from the position of the collective poor—and around the subsequent murder trial for the wrongly accused, Jem Wilson, Mary's recently rejected suitor. After Mary testifies at Jem's trial, and publicly confesses her love for him, she suffers a mental illness or "brain fever." The novel then shifts its attention to Mary's illness and recovery, at the expense, some argue, of the representation of the political struggles and suffering of the workers. The novel's shift in emphasis has appeared to critics as a sign of the novelist succumbing to the middle class ideology of the domestic or sentimental novel (Gallagher, Industrial Reformation 79).

I argue that a more productive reading of this choice recognizes how it is intrinsically linked to debates about numbers, representation, and empiricism that dominated the discourses of public health of the 1830s and 40s. Gaskell is subtly suggesting an alternative method of observation and interpretation of the problems of the poor to the one that was increasingly being seen as the most comprehensive, accurate, and "real": the environmental statistics collected by medical officers. This alternative method appears in her representations of suffering and disease at the beginning of the novel, where, as I have suggested, numerical description is consistently undermined, and in her connection of these earlier descriptions to her account of the heroine's psychic illness at its end.

The criticisms of the novel's ending raise the question of what the limits are to
strictly empiricist description in the novel form. If, as Nancy Armstrong has argued, the marriage plot novel of the eighteenth and early nineteenth centuries relied for its social power on the development of a bourgeois hero or heroine whose maturity is eventually and inevitably secured through the marriage plot, then what place would there be in such a narrative for the representation of mass suffering? If the point of a novel based on empiricist description is to provide a view of the suffering of aggregate populations, then what space would be allowable for a concentration on particular individuals and their romantic interests, whether bourgeois or not?

As other critics have noticed, the narrative of *Mary Barton* actually seems to be a patchwork of narrative styles as it moves from political plot to romance plot: it resembles in places the sentimental novel and the blue book, of course, but also the Unitarian tract and even the farce.9 As one critic says, "the novel’s generic eclecticism points toward the formal self-consciousness of later British realism" (Gallagher, *Industrial Revolution* 87). While I agree that the novel is both a complex combination of different narrative styles and an experiment in realism, I also claim that there is a distinct and consistent agenda that runs throughout the novel having to do with the false, or at least misleading, conclusions drawn about the poor by empiricist studies of their behavior. I think Gaskell was ultimately trying to spin an affective narrative from the narratives and statistical studies drawn from medical officers’ and clergymens’ reports on the Manchester poor, but the characters and events of her narrative were designed explicitly to counter the
representations of the poor generated by the new and sophisticated weave of statistical studies. I hope to show in this chapter the ways that Gaskell's representations of the poor, even when they appear most to be based in empiricist observation of aggregate populations, at the same time, continually undercut the possibility of discovering any kind of deeper "truth" about either the moral character of the poor or the relation of moral character to disease through this means.

Gaskell's effort to rehabilitate her readers' image of the poor by drawing on and refuting statistical studies of their environmental and moral conditions obviously creates generic tensions in the novel between statistical description, based on observations of aggregate populations, and the description of the sufferings and diseases of quite particular individuals. In order to see better the origins and import of these generic tensions, I focus in my first section "Disease Theory, Statistics, and Narrative," on the representations of disease in the works of some of the most important figures in the nineteenth-century effort to study the poor and the workings of disease statistically, Chadwick, Kay, and Florence Nightingale. Though the intellectual histories of these figures have been the subject of much recent critical commentary, my concentration on their views of a specific controversy between theories of contagion and contamination reveals important distinctions between their views, and between theirs and Gaskell's. As we'll see, the controversy about disease origins often had a great deal to do with the motives of the proponents of empiricist and statistical description. I shall thus explain the
two philosophies of disease origins and transmission operating in nineteenth-century medical, political, and literary circles, contagionism and anticontagionism. and trace the epistemological premises behind each theory, premises that will have implications for our reading of the representation of the physical and moral conditions of “the poor” in Mary Barton and in the rhetoric of public officials in the early part of the nineteenth century. I connect aspects of this debate to Gaskell’s approach to realist description, in the process of which I unpack the important notion of “moral contagion,” which was integral to the views of statisticians such as Kay and even those contemporary intellectuals resistant to statistics, such as Charles Dickens. As we’ll see, the idea that moral contagion originates in the poor and threatens the middle classes is entirely rejected in Gaskell’s representations of both psychic and somatic illnesses, events that turn out be some of the novel’s most anti-empiricist moments.

In the second section, “Reading Against the Signs and Tokens: Gaskell’s Antiempiricism,” I trace Gaskell’s movement away from a statistically-influenced representation of somatic disease at the beginning of Mary Barton, to what I will call an antiempiricist representation of psychological disease. When I refer to her depiction of Mary’s illness and of the struggles of the poor more generally as antiempiricist, I should clarify that I am not suggesting that Gaskell saw herself as being strictly opposed to empiricist thought or even to statistics, but rather that the conclusions about the moral character of “the poor” being arrived at by statisticians such as Kay and Chadwick were
untenable. She thus appears to have approached the problem of representing the poor with the goal of countering strict empiricist studies of many kinds, including natural history and criminology in addition to statistics, by occasionally setting up her descriptions to appear to concur with such strict empiricist studies, but then complicating and refuting such descriptions at every turn.

In the final section: “The Hyperempirical State: The Experience of Psychic Disease.” I describe how the account of Mary’s mental breakdown also presents an implicit critique of empiricist description of the poor. My reading builds on, but also questions aspects of recent critical efforts to account for the presence and significance of Mary’s psychic disease to the novel. The importance of her mental illness to the novel is specifically to counter the conclusions drawn about the poor by statistical studies of their somatic diseases. The placement of an implied critique of empiricist studies of the poor in the representation of Mary’s psychic disease allows Gaskell to make her point while avoiding the appearance of being at odds with social reformers’ insistence on the validity of statistical studies of somatic diseases. Gaskell’s focus on the psychic pain and illness of her characters thus seems to be a deliberate tactic in her effort to refocus the eyes of the middle classes on the struggles of the poor, rather than on their defeat under the supposedly deterministic forces of poverty, disease and immorality.

I undertake this tracing of Gaskell’s representations of the physical and psychic origins and impact of diseases on her individual characters and the poor more generally in
order to help illuminate Gaskell’s approach to questions of realism, empiricism, and novelistic truth, particularly the question of what kind of representation of the relationship between disease and the poor *Mary Barton* conveyed to Gaskell’s largely middle class reading public.

1. Disease Theory, Statistics, and Narrative

By the 1830s there was nothing short of a statistical boom in England in the fields of medicine and politics. These statistical studies of disease formed much of the basis for arguments made before parliament for sanitary reforms. Most of those involved in accumulating and using such statistical data were themselves “anticontagionists” as opposed to “contagionists.” The difference between the two theories is a complicated one. Put simply, anticontagionism explained the origin and transmission of disease entirely through environmental factors. For example, one of the most visible and enthusiastic anticontagionists, Florence Nightingale, insisted as late as 1860, that, “With proper sanitary precautions, diseases reputed to be the most ‘infectious’ may be treated in wards among other sick without any danger” (*Notes on Hospitals* 10)\(^{10}\) Thus only through prolonged or repeated exposure to contaminated air would one be at risk of transmission.

Contagionism, by contrast, explained the transmission of disease as occurring between individual bodies, in the products of the body: saliva, hair, sperm, and possibly even breath, though contagion through breathing was a hotly debated topic, as we will
see. According to the contagionist view, even one short contact with the hair, saliva, or blood of an infected person could lead to transmission. The implications of the debate for the different social classes seem obvious. If the anticontagionists were right about the origin and transmission of disease then the privileged classes were in far less danger of becoming vulnerable to transmission.\textsuperscript{11} especially if we imagine the geography of Manchester as being like Friedrich Engels described it in his famous study (1845), where he claimed that “a person may live in it for years, and go in and out daily without coming into contact with working people’s quarters or even workers” (Engels 85). His evocative description of the city’s geography bears repeating here:

And the finest part of the [city’s] arrangements is this, that the members of this money aristocracy can take the shortest road through the middle of all the labouring districts to their places of business, without ever seeing that they are in the midst of the grimy misery that lurks to the right and the left. For all thoroughfares leading from the Exchange in all directions our of the city are lined, on both sides, with an almost unbroken series of shops, and so are kept in the hands of the middle and lower bourgeoisie, which, out of self-interest, cares for a decent and cleanly external appearance and can take care of it. (86)

Though environmental pollutants would still certainly be a threat to the middle classes through the immense amounts of noxious air and effluvia emanating from poor sections of the city, they would surely, however, especially given the efforts of the city to section
off its poorer areas, seem less of a threat than contagion, which could be transmitted through the briefest and slightest of contacts.

One crucial question in the contagion/environment debate was probably unanswerable until the discovery of germ theory: Was infected air, the air breathed by a sick person like Ben Davenport, to be considered an environmental pollutant or an agent of contagion? Thomas Southwood Smith, for example, tried in 1829 to claim a middle ground between the contagion and environment positions by using the term “infection” to describe the transmission of disease in a neutral way, rather than strictly attributing the spread of disease to either environmental pollutants or contagion through physical contact (499-529). Florence Nightingale, objecting to just such means of fence-sitting, responded with a clear statement denying that the term “infection” provided any room for belief in contagion. She argued, “The word ‘infection,’ which is often confounded with ‘contagion,’ expresses a fact, and does not involve a hypothesis. But just as there is no such thing as ‘contagion,’ there is no such thing as inevitable ‘infection.’ Infection acts through the air. Poison the air breathed by individuals, and there is infection” (Nightingale’s emphasis, Notes on Hospitals 10) Smith’s strategy, as Nightingale rightly points out, does not provide an answer to the central question of the means of transmission of disease. It does, however, as the historian John Eyler has argued, provide us with a clear illustration of how close together the ideas of the contagionists and anticontagionists could sometimes be (Eyler 98-100).
Not every anticontagionist or contagionist was as dogmatic as Nightingale in siding with or against a particular disease theory. Many tried to claim a middle position between the two theories. There were, however, important differences in the epistemological grounding each theory claimed for itself that made such compromise difficult to argue. By the mid- to late-1830s there appeared to be a strong connection between anticontagionism, social reform efforts, and the massive collection of statistics. Statistical arguments for anticontagionism aligned well with nineteenth-century empiricist philosophy, particularly the idea, inherited from David Hume, that the only relationship that can be observed or proven between two or more phenomena are their occurrence in constant conjunction (Inquiry 17-20). For example, statistics would indicate that wherever there is poor sanitation, hygiene, and overcrowding, there will also be disease. Anticontagionists thus made their argument for the environmental origins of disease without reference to the controversial issue of causes and effects. While one could certainly speculate or try to infer cause-effect relationships between phenomena from observations, such assertions would not only be unverifiable, but might also easily lend themselves to the accusation of being metaphysical claims, which true empiricists, of course, rejected. It was thus important to the integrity of anticontagionists’ claims, and to their critique of contagion theory, that they not speculate on things that were not readily observable since, according to Hume, one can never observe any one phenomenon causing another. In the “Introduction” to the first edition of the Journal of the Statistical
Society of London in 1838, the authors make the influence of this approach quite clear: "The science of statistics . . . does not discuss causes, nor reason upon probable effects: it seeks only to collect, arrange, and compare, that class of facts which alone can form the basis of correct conclusions with respect to social and political government" (106). The logic of contagion, according to its opponents, assumes just such a cause and effect relation between something that cannot be witnessed or proven, and disease.

Anticontagionists argued that statistical studies provided a better explanation of disease functions in part because their facts were visible and verifiable in the form of charts, tables, graphs, and maps. Statistics also provided such scientifically detailed factors to consider as the altitude, district, season, etc. in which epidemics were most likely to occur, all of which, they argued, brought increased exactitude to speculation about disease. Anticontagionists thus saw their theories as being rooted in as many corroborative bits of evidence as possible, while contagion theory had only an unverifiable narrative behind it. According to some medical historians this attitude prevailed until the development of germ theory began in earnest in the 1860s (Ackerknecht, "Anticontagionism" 10). There has been debate among historians about whether anticontagionism ever truly dominated English medicine at this time, but whatever the specific climate of the debate among physicians, it seems significant that Florence Nightingale, one of the most recognized and influential people writing about disease (and writing about it to the general public as well as the medical profession).
could say as late as 1856,

The idea of “contagion,” as explaining the spread of disease, appears to have been adopted at a time when, from the neglect of sanitary arrangements, epidemics attacked whole masses of people, and when men had ceased to consider that nature had any laws for her guidance. Beginning with the poets and historians, the word finally made its way into medical nomenclature where it has remained ever since, affording to certain classes of minds, chiefly in the Southern and less educated parts of Europe, a satisfactory reason for pestilence, and an adequate excuse for non-exertion to prevent its recurrence. (Hospitals 9)

Nightingale thus makes her anti-metaphysical argument in such a way that the narratives of poets and historians are ultimately to blame for the spread of antiempiricist belief in contagion theory itself. The accusation made by someone so influential as Nightingale that contagion was, in fact, a literary invention might certainly have made the later authors of realist fiction sensitive to the notion of contagion itself. careful to distinguish themselves from sentimental fictions of the earlier parts of the century and much later from sensational fiction of the 1860s. Though it occurs later than her writing of Mary Barton, it seems significant that Gaskell met Florence Nightingale in 1854 and discussed the issue of disease theory with her. The conversation was important enough to warrant her writing to her friend Catherine Winkworth later that year that her “last authority,” Florence Nightingale, as well as “all the people who write about poor George
Duckworth’s death say that cholera is *not* infectious i.e. does not pass from one person to another” (Letters 305). 18

The various political and medical figures involved in the anticontagionist sanitary effort in England spanned a rather wide spectrum of opinion on the contagion question. Chadwick, for instance, apparently shared Nightingale’s outright dismissal of contagion theory. as his famous claim that “all smell is disease” in his 1846 “Address to the Metropolitan Sewage Manure Company” would indicate (“Address” X. 651). It is perhaps for this reason that in Chadwick’s Report on “The Health of Towns,” one speaker observed that the only person who could really see the true picture of disease in all its scope was the keeper of the mortality statistics of the country: the general register’s office. Speaking of the attempts of medical officers and public officials to understand the scope of the disease problem, the speaker claims: “But those of us who daily witness these things, even the individuals who see most of them, after all see but little; see only isolated spots. There is one man, however, who has a comprehensive view of them, and a cold, perhaps, and yet a vivid perception of their results, and that is the Registrar General” (11).

It is not be surprising that such a description of the “cold . . . vivid” observation of the poor would be objectionable to authors of fiction, equally concerned with bringing the plight of the poor into the consciousness of the middle class. One need only recall Dickens’s Sissy Jupe being scolded by her teacher Gradgrind for her unfactual definition
of the word “horse” in Dicken’s own scathing critique of empiricist and statistical
description in *Hard Times* (8-12). Gradgrind’s motto takes the empiricist model to its
logical extreme — “Teach these boys and girls nothing but Facts. Facts alone are wanted
in life. Plant nothing else, and root out everything else. You can only form the minds of
reasoning animals upon facts: nothing else will ever be of service to them” (1). Dickens,
of course, commissioned Gaskell’s work for *Household Words* and was sure to have been
attuned both to the proto-sociological effort at description in the account of the
Davenports’ cellar, and to Gaskell’s subtle efforts to undercut that “cold,” “vivid” style,
about which I will have more to say.

But not all novelists or statisticians were opposed to contagion theory. nor were
they all tied to the notion that detached observation was the best means of diagnosing
social ills. Another prominent figure in the debates, Dr. James Kay,19 claimed in his
pamphlet of 1832, “The Moral and Physical Condition of the Working Classes Employed
in the Cotton Manufacture in Manchester,” that poor environmental conditions simply
resulted in a predisposition toward the reception of contagious epidemic diseases.
Strangely enough, given that statistics were the chief method of anticontagionist theory
and social reform efforts of the 1830s to early 1860s, it was Kay’s staunchly contagionist
tract that appears to have culminated in both the founding of the Manchester Statistical
Society in 1833 (Messinger 45), and, more generally, in the enormous growth of medical
statistics in England.
Kay and Chadwick both worked in the hygiene reform efforts in Manchester in the 1840s and Gaskell and her husband were well-acquainted with both men during the time she was writing *Mary Barton*. An understanding of Kay’s notion of “moral contagion” may thus help provide a better sense of Gaskell’s own stake in representing the conditions of the poor and of the complicated explanation of disease origins she provides in her description of “the fever” afflicting Ben Davenport.

In his introduction, Kay suggests that the lack of attention paid to the moral conditions of the working classes leaves society as a whole open to “a mighty source of moral causation,” that would result in the spread of immorality and disease (5). Moral contagion, an idea inherited by the Victorians from previous centuries, meant both that immorality itself could be infectious, and that poor moral health would eventually lead to disease. Kay’s notion of moral causation, or, for that matter, causation of any kind is of course an anti-empiricist one. It would appear at first to resist the early-Victorian trend toward the strictly empiricist, and even proto-sociological observation of society, a trend that we recognize from Hume and see in an altered form in the work of the so-called “father” of sociology, Auguste Comte, whose *Cours de Philosophie Positif* was already influential among English intellectuals.

As one historian describes Kay’s insistence on moral contagion, “living in a religiously-oriented age, Kay wanted to convince his readers that the scientific category of ‘disease’ and the theological category of ‘evil’ were the same” (Messinger 43). The
message that runs throughout Kay's tract is clearly that, where immorality is allowed to spread, moral and physical contagion will be sure to follow.

Kay was by no means alone among Victorian intellectuals in his view of moral contagion. Dickens shows a similar insistence on the mutual relation between moral and physical contagion in his 1846 novel, *Dombey and Son*. In this passage, for instance, the narrator of Dickens' novel explains the inseparability of poor physical and moral conditions among the poor in the most wretched of living conditions:

> Those who study the physical sciences, and bring them to bear upon the health of Man, tell us that if the noxious particles that rise from vitiated air were palpable to the sight, we should see them lowering in a dense black cloud above such haunts, and rolling slowly on to corrupt the better portions of a town. But if the moral pestilence that rises with them, and in the eternal laws of outraged nature, is inseparable from them, could be made discernible too, how terrible the revelation!

(669-670)

In this passage, moral contagion appears in constant conjunction with environmental contaminants; it "rises with" and "is inseparable from" the presence of such "noxious particles," a reading that might conceivably be supported by statistics such as Kay's. But Dickens goes even further to insist that the inseparability of environmental pollutants and moral contagion is an "eternal" law of "outraged nature." In other words, the claim goes beyond what an empiricist might observe about the habitual association of two things,
beyond statistics and the observable, to create a law akin the laws of nature.

Unlike Dickens, whose scathing critique of statistics in his *Hard Times* mentioned earlier has been the subject of much critical commentary. Kay advocates the use of statistics in his treatise as the most “minutely accurate” form of investigation of disease origins (19). This is at least somewhat surprising given his firm insistence on moral contagion and the connection usually made between anticontagionism and statistics. Kay insists that moral contagion is a readily observable entity through statistical analysis. He associates the spread of disease with the “[n]atural progress of barbarous habits” originating from the Irish (81). He thus correlates the number of Irish with disease, as well as the number of drinking establishments and the numbers of faithful versus the numbers of dissenters. In other places, however, he seems to find limitations to statistical inquiry. For instance, at one point he insists that “The mutual relation of men [cannot] be subjected to a purely mathematical calculation” (63-64). I think we see a more discriminating awareness of the limits of empiricist description in the representation of the poor in *Mary Barton*.

For Gaskell’s novel, too, seems at first to be invested in a notion of moral contagion that the novel’s critics most often associate with the familiar narrative economies of reward and punishment for heroines in Victorian novels. These economies dictate that young female heroines suffer physical illness either to prevent sexual fall or as punishment for moral indiscretion. Thus Mary’s psychosomatic disease appears to be
the result of moral contagion associated with both her Aunt Esther’s fallen condition and the “deficiency of sense” attributed to her mother as a member of the agricultural poor.

To this point in the novel, however, its accounts of the poor have seemed to resist any simple notion of physical or moral contagion, insisting at first that the cause of “the fever” in Manchester can best be explained by the miserable and filthy living conditions of the poor, thus sustaining the novel’s earlier implicit claim to empiricist and anticontagionist depiction. The narrator also claims that the disease is a “malignant and virulent infection,” a description that, as I explained earlier, would suggest contagion, perhaps even moral contagion. The novel appears to be trying to balance the competing pressures of empiricist anticontagionism and the novelistic convention of using contagion as a trope. While physical illness like that suffered by Ben Davenport appears to result originally from poor environmental conditions, Mary’s psychic illness appears to result initially from the poor moral influence of her Aunt Esther and the constant association made by others between Mary, her mother, and her Aunt. The simple explanation provided by the notion of moral contagion eventually will itself be discredited by novel’s end; Gaskell will eventually eschew altogether the notion of moral contagion on which Kay’s statistical studies rest.

While Kay attempts to make morality a statistically measurable index in his effort to place accountability with the Irish, Gaskell instead shifts her focus to individuals, singling them out in order to provide evidence of their moral characters. In doing so, she
ultimately resists doling out moral accountability to any one person or group, as Kay does with the Irish and Friedrich Engels would later do with the manufacturers. She also, of course, in resisting placing accountability on the Irish, entirely avoids dealing with the Irish problem. She simply does not represent them. She cannot, therefore, be seen as defending them from the popular accusation of their moral accountability.

If any one figure carries the burdens of both disease and moral accountability in Mary Barton, it is clearly Esther, who meets the traditional demise of the Victorian fallen woman, despite the novel’s obvious effort to make her downward spiral into alcoholism and prostitution understandable as the desperate coping strategy of an abandoned woman devastated by the illness and death of her child. As a fallen woman, she is both typical and exceptional at the same time. What makes her exceptional is that she imagines herself as an agent of moral contagion, repulsing Mary’s efforts to embrace her, insisting passionately, “Not me. You must never kiss me. You.” (285). Whether she imagines herself literally spreading syphilis, a common contagious disease among prostitutes in urban areas and port towns, through her kiss, or whether she worries that even her touch might spread the immorality she has fallen into, is a distinction that is left deliberately and importantly unclear. The attitudes of both Mary and Jem to Esther, that she might be restored to health and sobriety under their care, if her poverty and illness could be alleviated, seems clearly an effort to undermine both Esther’s own perception of herself as an agent of contagion, and the reader’s fear of her potential contagion.
2. Reading against the “Signs and Tokens”: Gaskell’s Antiempiricism

Gaskell method of countering the conclusions made about the poor moral character of the laboring poor seems to be to provide examples of community support and care in times of crisis, as Joseph W. Childers has argued (160-63). But she also makes several individual characters stand out whose behaviors counter specific accusations made against the poor — accusations drawn largely from statistical findings. Alice Wilson, Mary’s neighbor and Jem’s aunt, is perhaps the best example of such a character. Over against the narrator’s rather detached depiction of the Davenport cellar with Gaskell’s undermining gesture of numerical uncertainty is the detailed representation of Aunt Alice’s root cellar. The contrast between the two cellars in terms of hygienic factors is enhanced by the contrast in the narrator’s tone toward her subject. The depiction of Alice’s cellar is sentimental, but extremely detailed; it stresses the exceptionality of both the woman and her cellar. It also suggests that the empiricist methods of observing the poor, including the proto-sociological ambition to numerical and statistical description, cannot possibly capture the individual moral character of such a woman (or, for that matter, of a community filled with such individuals). Gaskell’s description argues the need for other non-empiricist forms of representation that can account for the mysterious powers of love, mutual suffering, and understanding which the novel relies on both for its emotional impact and for the credibility of its movements between political, detective,
and romance plots. The description of the cellar is worth quoting at length:

It was the perfection of cleanliness; in one corner stood the modest-looking bed.
with a check curtain at the head, the whitewashed wall filling up the place where
the corresponding one should have been. The floor was bricked and scrupulously
clean, although so damp that it seemed as if the last washing would never dry up.
As the cellar window looked into an area in the street, down which boys might
throw stones, it was protected by an outside shutter, and was oddly festooned with
all manner of hedge-row, ditch and field plants, which we are accustomed to call
valueless, but which have a powerful effect either for good or evil, and are
consequently much used among the poor. The room was strewed, hung, and
darkened with these bunches, which emitted no very fragrant odour in their
process of drying. (15)

Perhaps most notable in this description are the exceptional efforts taken by Alice to
protect herself from the contaminating influence of street. Her home is triply guarded
from the effluvia and filth that so destructively seep into the Davenport home through the
walls, the broken window and the floors. Unlike the Davenports’ broken cellar windows.
Alice’s window has an outside shutter protecting it from the street boy’s stones. The
stones themselves serve as a metaphor for the hazardous influence of the street, of living
amongst those poor people, who, as we saw in John Barton and George Wilson’s walk to
the Davenport cellar through the fetid streets, are either unable or unwilling to keep their
homes clean and dry, and therefore have a contaminative effect even on Alice.

Beyond the shutters, Alice gives herself additional protection from the streets by placing plants outside her window. Gaskell’s claim of the plants’ “powerful effect either for good or evil,” particularly in the context of Alice’s use of them as medicinal herbs, appears to allude to the eighteenth-century moralistic interpretation of disease and cure as punishment and mercy, mentioned earlier. Alice’s use of field simples is also a romanticization of the past, before the field of medicine considered itself independent of natural history study in its search for effective therapies. In Alice’s hands, and in her home, the connotation of the plants is invariably good, associated as it is with health, protection, and vitality. Alice herself, with her sense of hygiene and cleanliness, stands as an assurance against the superstitious interpretation of her interests in herbal remedies. Reformers such as Kay lumped together “herb doctors and quacks” in their assessments of morality among the poor and herbalists were often viewed with the same type of disdain reserved for quacks in editorials in The Lancet. We might easily view Gaskell’s depiction of Alice Wilson’s homeopathic and nursing skills as a response to Kay’s and others’ dismissive assumptions.

Even Alice, however, with her meticulous cleanliness, cannot quite hold off the effluvial invasion of the streets. Though she protects from the seepage of the streets by whitewashing the wall next to her bed, as if cleanliness could itself be a bulwark against the infectious moisture from human waste that saturates the walls and floors of the
Davenports’ home. the constantly damp floor of her cellar attests to the permeability of the boundaries between homes amongst the poor.

The contrast of Alice’s relatively salubrious cellar with the Davenports’ is no more striking than the contrast in the representation of her health and vigor and the individualizing detail that sets her apart from the other poor at the beginning of the novel. and the lack of individuation, health, and even motion that John Barton and George Wilson perceive in the dank, stagnant home of the Davenports’. The exceptionality that the novel ascribes to Alice’s nursing skills and her own meticulously clean root cellar are introduced to the reader in the early pages of the novel as a counter-type to the representations of the physically and morally devastated poor to come. Consider our introduction to Alice in the first few pages of the novel:

Alice Wilson had but just come in. She had been out all day in the fields, gathering wild herbs for drinks and medicine, for in addition to her invaluable qualities as a sick nurse and her worldly occupations as a washerwoman, she added a considerable knowledge of hedge and field simples; and on fine days, when no more profitable occupation offered itself, she used to ramble off into the lanes and meadows as far as her legs could carry her. (15)

Though the reader has seen Alice bumble in her effort to bring cheer to the Bartons’ household in the second scene in the novel—her toast to “absent friends” reduces Mrs. Barton to tears with the thought of her missing sister Esther—, her care for her family and
neighbors is a vital part of that community. Given the incredible inefficiency and perhaps even ineptitude that we will soon encounter when George Wilson tries to procure medical help for Ben Davenport — first by means of an infirmary order, which he is denied till it is too late, and second by the "utterly powerless ... spirits of nitre" prescribed by the "druggist" (71) —, Alice's "invaluable qualities as a sick nurse" ought not to be taken lightly. They take on added significance as a kind of personalized alternative to the bureaucratic mess of the factory system infirmary, and the ineffective attempts of the druggist at diagnosis and treatment from afar (15).

Unlike Alice's careful ministering and attention, the druggist's method is based on a depersonalized rendering of facts, rather than any form of examination of the ill person's body or even that individual's testimony. The novel's representation of the failure of the apothecary's diagnosis and prescriptions thus appears to be a critique of the types of misdiagnoses made from afar by those who rely on second-hand empiricist reports. I connect this critique with the even more explicit critique in this novel made against bureaucrats, such as Kay, and factory owners who made hard-nosed pronouncements on the poor based on statistical reports. The discrepancy between the narrator's diagnosis of Davenport, "typhoid," a highly contagious disease, as we now know, and the apothecary's diagnosis of "typhus," a much less contagious, louse-born disease, may or may not be significant too, given the fact that hospital medical records in England don't distinguish between the two until the 1860s (Hardy 152).
The almost glowing representation of Alice's cellar, of her health, energy, and movement, and particularly of her knowledge of herbals and herbs and her qualities as a sick nurse, seem to provide an alternative depiction of "the poor," of community responsibility, and of personalized medical care. Gaskell presents Alice's kind of folk wisdom as standing apart from other forms of knowledge in the novel. Though it is romanticized and even perhaps mythologized, it nevertheless suggests an antiempiricist form of knowledge, despite the outward gestures toward statistical representation made in the Davenport cellar scene. In her representations of the efforts of the weak and sick poor to care for themselves and each other, Gaskell shows herself to be open to interpretive possibilities that would be entirely unacceptable to the strict empiricist.²⁸

The representation of disease becomes the place where folk wisdom takes over from what passed at the time for scientific explanation in the form of statistics or the strict empiricist observation of society. This is not to say either that Gaskell rejects entirely contemporary science or even empiricist-inspired accounts of observation, or that she self-consciously holds empiricism as the opposite, "masculine" form of knowledge to her "feminine" support of metaphysical or novelistic assumptions,²⁹ but rather that she wants to insist on the possibility of non-empiricist knowledge—types of knowledge or ways of knowing the poor that might not be regarded as adhering to strict empiricist standards. Perhaps the most powerful example of Gaskell's openness to such forms of knowledge is Aunt Alice's insistence that Mrs. Wilson stop "wishing" her sick twin
infants. that is, preventing them from dying by wishing them to stay with her. Alice tells Mary, “dunno ye know what wishing means? There’s none can die in the arms of those who are wishing them sore to stay on earth. The soul o’ them as holds them won’t let the dying soul go free: so it has a hard struggle for the quiet of death” (86). The description of what “wishing” is comes through Alice, which helps Gaskell to avoid any sort of narrative comment on Alice’s theory. Gaskell thus effectively distances her narrator from all positive or negative comment, thereby again avoiding the difficulty of being seen to be in opposition to scientific explanation and environmental statistics. The example of “wishing” defies strict empiricist explanation and at the same time insists on the humanity of the poor mother who must choose between her own “longing to keep [her child]” and the “hard death” that she consigns him to if she refuses to let him go. With great pain, Mrs. Wilson gives her son up to Aunt Alice to allow him to die quickly, and the narrative assures us that the remaining infant passes away the moment Mrs. Wilson stops “wishing” him.

At times Gaskell seems to be deliberately juxtaposing Alice’s type of folk wisdom to other empiricist forms of knowledge. For instance, Job Legh’s natural history studies rely on an empiricist perspective that gets undercut at a particularly significant moment in the narrative. Natural history study was similar to medical statistics in its interest in accumulating and classifying mass numbers of supposedly neutral facts. It surged in popularity among the working classes following the invention of the cheap microscope in
the early nineteenth century. Groups formed among the working classes with the object of
self-improvement through scientific study. Job Legh is one of those amateur natural
historians among the working classes that the narrator describes as “a class of men in
Manchester . . . who yet may claim kindred with all the noble names that science
recognises” (41).³⁰

Despite the respect with which the narrator describes the amateur scientists, we
see what appears to be an undercutting of Job Legh’s aspirations to better himself through
natural history and empiricist epistemology in a disagreement between Job and Alice’s
son Will about a tale of a sailor’s encounter with a mermaid in the chapter titled “A
Traveler’s Tales.” When Job objects to the unscientific nature of the story, Will responds
with his own assertion of “factual” information. The proof of his story, he asserts
ironically, lies in a comb left by the mermaid on a rock, and seen by his own eyes. “I
reckon it’s a sure proof of the truth of their story for them that wants proof.” Will says
(178). The antiempiricist critique embodied in Will’s teasing comments is obvious.
Relying on hard factual evidence may not be the means to acquiring a narrative that is
“true.” Will’s story points to the fact that all interpretations of facts rely on theories that
must fill in the gaps in knowledge with speculation. Will goes on to criticize Job’s mode
of classification by claiming that Job’s facts are given a false sense of legitimacy when
Job and other scientists provide them with Latinate names:

You’re one of them folks as never knows beasts unless they’re called out o’ their
names. Put 'em in Sunday clothes, and you know 'em, but in their work-a-day English you never know nought about 'em. I've met wi' many of your kidney; and if I'd ha' known it, I'd ha' christened poor Jack's mermaid wi' some grand gibberish of a name. Mermaidicus Jack Harrisensis; that's just like their new-fangled words. D'you believe there's such a thing as the Mermaidicus. master?

(179)

Again, it is impossible not to recall Sissy Jupe's inability to define the word "horse" here. Sissy recognizes the word "horse" in "work-a-day English" but finds her classmate's definition baffling. The playful joke of the mermaidicus, whether intentionally or not, appears to be part of the novel's critique of strict empiricist methods of observing and categorizing the world, and particularly those adherents such as Job Legh who, in their interest of bettering themselves, would discredit as absurd other, more traditional forms of knowledge. Like Will's story, the point of the novel's critique is not that natural history and other forms of empiricist study like statistics have no truth to them or that they aren't beneficial to society—Gaskell's initial description of the artisan botanists who devote what little free time they have to study natural history is clearly meant to invoke respect for the amateur scientists among the poor and insist on their capabilities—but rather that false conclusions may nevertheless be wrought from so-called "objective" study and thus the observer must be sensitive to all of the possibilities of interpretation available to him or her.
Perhaps the most obvious example of the novel’s critique of naïve empiricism comes in the description of the murder investigation of the manufacturer’s son Harry Carson, where all material evidence points to the innocent Jem Wilson. In describing the enthusiasm and over-confidence of the police force in their tracking efforts, the narrator’s tone is revealing:

there is always a pleasure in unraveling a mystery, in catching at the gossamer clue which will guide to certainty. This feeling, I am sure, gives much impetus to the police. Their senses are ever and always on the qui-vive, and they enjoy the collecting and collating of evidence, and the life of adventure they experience: a continual unwinding of Jack Sheppard romances always interesting to the vulgar and uneducated mind, to which the outward signs and tokens of crime are always exciting. (258-59)

The new paragraph that follows begins, “There was no lack of clue or evidence at the coroner’s inquest that morning.” That the evidence almost leads to a disastrous conclusion, one that might have cost Jem Wilson his life, is already apparent to the reader. The serious nature of the consequences that might result from such an emphasis on empirical evidence jars with the flightiness of the original observation of the “pleasure” of chasing down “the gossamer clue.”

The moral character of Jem himself becomes the subject of the detectives and amateur phrenologists alike during his trial. There spectators eagerly search his face and
body for the "signs and tokens" of his supposedly murderous nature. Here the narrator recounts a conversation between two trial spectators, one of whom grossly misreads Jem's face as one typical of a guilty murderer. That the observers mistakenly associate the markings of class with those of truth is made humorously obvious in the spectators' comparison between the faces of Mr. Carson, father of the murdered man, and Jem, the poor man on trial:

(Voice A) "That's Mr. Carson, the father, sitting behind Serjeant Wilkinson!"

(Voice B) "What a noble-looking man he is! So stern and inflexible, with such classical features! Does he not remind you of some of the busts of Jupiter?"

(Voice A) "I am always more interested by watching the prisoner. Criminals always interest me. I try to trace in the features common to humanity some expression of the crimes by which they have distinguished themselves from their kind. I have seen a good number of murderers in my day, but I have seldom seen one with such marks of Cain on his countenance as the man at the bar."

(Voice B) "Well I am no physiognomist, but I don't think his face strikes me as bad. It certainly is gloomy and depressed, and not unnaturally so, considering his situation." (376)

The voice defending the appearance of Jem (Voice B) appears to be the voice of reason
here: since the reader knows Jem is innocent, the speaker who asserts his experienced scientific conviction of Jem’s guilt (Voice A) appears foolish. It would be too hasty to dismiss the critique of phrenological reading here as a sweeping one. Rather, the narrative seems to wish to assert that there are good readers of physiognomy and bad ones: the good ones having both common sense and the ability to imagine possibilities of interpreting appearances outside of those models provided by scientific studies. the bad ones having only book-learned knowledge of the mapping of the head by phrenologists.

This difference becomes clearer as the conversation continues:

(Voice A)  “Only look at his low, resolute brow, his downcast eye, his white compressed lips. He never looks up, —just watch him.”

(Voice B)  “His forehead is not so low if he had that mass of black hair removed, and is very square, which some people say is a good sign. If others are to be influenced by such trifles as you are, it would have been much better if the prison barber had cut his hair a little previous to the trial; and as for the downcast eye, and compressed lip, it is all part and parcel of his inward agitation just now: nothing to do with character, my good fellow.” (377)

While Voice A speaks from scientific knowledge, focusing on the same things associated with “the criminal type” in phrenological texts, Voice B speaks from what appears to be (or, what the narrative would like us to believe is) common sense, characterized by that very willingness to be open to different interpretive possibilities. Again, the critique made
by Voice B is not of phrenology as a whole. It is easy to forget that this is the same voice that asserted the “classical features” of Mr. Carson and associated them with sternness and inflexibility —two traits that seem very much in keeping with the narrator’s descriptions of Mr. Carson to this point. But rather, that voice asserts a common knowledge about reading appearances that resists the scientific voice threatening to take hold more widely as the sciences of criminology and phrenology came together in the nineteenth century (a development to which I return in my next chapter); the voice of common sense dissociates the appearance of Jem and thus “the poor” from their moral nature.

The narrative performs the same type of dissociation of appearance and moral character as it begins essentially to rewrite the description of Mary with which the novel began, as apparently that of a doomed heroine of a seduction plot. By the novel’s end she seems a viable part of the novel’s effort to revise the perception of the poor as morally diseased and infectious to the higher classes, but the mental processes of the poor are initially depicted as if they were entirely observable through phrenological reading. They are initially characterized by appearance and generalized about by birthplace. The portrait that emerges from these generalizations, however, is ultimately undermined by the novel’s effort first to compare and then to differentiate Mary from the norms described.

In the opening pages of the novel, the narrator describes the people that occupy Green Hays field with the same tone of objective detachment that she applies to the plants
and hills:

Their faces were not remarkable for beauty; indeed, they were below the average with one or two exceptions; they had dark hair... dark eyes. The only thing to strike the passer-by was an acuteness and intelligence of countenance, which has often been noticed in a manufacturing population. (3)

Note again the sociological quality of Gaskell’s language of averages and exceptions.

Note also the numerical indeterminacy of the narrator’s claim of “one or two exceptions.” At the moment where the narrator is asserting a tone of scientific, even empiricist, authority over her subject, she undercuts that authority with scientific inexactness. The subjects of description themselves are depicted almost as if they were themselves resistant to statistical generalization:

Groups of merry and somewhat loud-talking girls, whose ages might range from twelve to twenty, came by with a buoyant step. They were most of them factory girls, and wore the usual out-of-doors dress of that particular class of maidens; namely a shawl, which at mid-day or in fine weather was allowed to be merely a shawl, but towards evening, or if the day were chilly, became part of a Spanish mantilla or Scotch plaid, and was brought over the head and hung loosely down, or was pinned under the chin in no unpicturesque fashion. (3)

The statistical language gestured toward in the narrative’s detailing of the age range and dress “of that particular class” is undercut by the factory girls’ imaginative refiguring of
themselves through their outward appearances.

Though the narrative in places resists statistical description, it also, however, seems to rely on the language of generalization to make its characters "readable" through signs that the reader is made to believe were easily recognizable without narrative prompting. For instance, the description of Mary's mother contains a generalization that is phrased in such a way as to make it sound like a commonly made assumption about "the poor" from rural districts: "She had the fresh beauty of the agricultural districts; and somewhat of the deficiency of sense in her countenance, which is likewise characteristic of the rural inhabitants in comparison with the natives of the manufacturing towns" (4). The contrast of the rural people with the urban people is stated as if it were a piece of factual scientific information. The "deficiency of sense" in Mary's mother will likewise be attributed to Mary, and will be combined with the narrator's sense of Mary's physical similarity to her Aunt Esther to suggest Mary's psychological predisposition toward sexual fallenness and mental instability. 32

Reading Mary's character at the end of the novel requires that one look at the metamorphosis that it undergoes as the novel progresses. When we meet her she is described by her neighbor George Wilson as being "as fine a lass as one can see on a summer's day," but "more her mother's stock than [her father's]" (7). Her mother's stock, also shared by her Aunt Esther, is defined by the "the fresh beauty" and "deficiency of sense . . . characteristic of the rural inhabitants" mentioned earlier. Her father, by contrast.
is a "thorough specimen of a Manchester man." He is "born of factory workers" who are known for their "acuteness and intelligence of countenance" (3-4).

Mary thus appears to have two strikes against her at the beginning of the novel: she apparently shares the striking beauty and "deficiency of sense" inherited by her mother and Esther as descendants of agricultural people. The inheritance seems intended to foreshadow that a dire ending awaits Mary, just as it did her aunt Esther and, though perhaps less socially destitute, her mother. According to George Wilson and John Barton, Esther is caught in the "sad snare" of her own beauty, "puffed up," "spoiled" by her much elder sister and the high wages she earns at a factory, and headed for the life of a "street-walker" (6). The novel warns us that "the sayings of her absent, the mysterious aunt Esther, had an acknowledged influence over Mary" (26) before reminding us to "think what are the silly fancies of sixteen years of age in every class, and under all circumstances" (27). The reader is thus advised to think of Mary as typical of a person her age, rather than of a person of a particular gender, class, or specific background.

The inheritance she receives from her mother is also potentially dangerous. Her mother is continually described in the novel's first three chapters as "fretting," unable to cope with the "shock to the system" that eventually leads to her death in childbirth (20). Mary's nerves too receive a severe shock by novel's end, one that the reader might suspect foretells her own death from nervous attack, given all the similarities between Esther, Mary, and her mother that George Wilson and John Barton observe. The narrator
insists, however, that Mary is “unconscious of the fact that she was far superior to the mother that she mourned,” a claim that undermines the phrenological reading of Mary as typical of the supposedly insensible agricultural poor (29). Mary is both typical of people her age, and atypical of the people from whom she descends; she is both exceptional and unexceptional at the same time. Though the narrative would appear in places to insist on the truth of its phrenological descriptions, they prove to be inaccurate in their ability to reveal or even predict character in Mary’s case. It seems important to stress here, that the phrenological predictions made through the association of Mary with her mother and Esther (most of which are observed not by the narrator, but by George Wilson and John Barton) do not bear out in the novel entirely because Mary is a heroine (and thus we would expect her to have an exceptional fate), but also because they represent another example of mistaken conclusions based on observation and interpretation, as we saw in the mistaken readings of Jem’s face in the murder trial scene.

3. Mary, Esther, and Psychic Disease

In Gaskell’s novel and in Victorian fiction generally, individuals with somatic illness are often depicted as exemplars of suffering under what appear to be deterministic forces acting against the individuality of the poor, as the example of the Davenport cellar has suggested to various critics. Psychological disease can function in a quite opposite way, as an individualizing force through which an exceptional character, in this case
Mary Barton, can ultimately surface as the hero or heroine of the novel. That surfacing is almost always troubling in Victorian novels because the illness that enacts it often acts also as a taming force through which the individual’s exceptionality is “cleaned up,” purified, or sanitized.

The apparent critique of statistical and empirical observation that even a depiction of somatic illness like the Davenport cellar scene suggests is echoed in Gaskell’s account of Mary’s psychological illness. Is the initial portrait one that requires revision by the end of Gaskell’s novel? Can we read against the supposed “common knowledge” of even the narrator with the knowledge we have of the critique of bad phrenology later on? Once again, disease functions as the narrative place where the critique of strict empiricism that I have been associating with Gaskell’s realism surfaces. With the onset of the nervous hysteria that follows Mary’s confession of her love for Jem in the trial scene, we see how disease brings about the necessary shutdown of the qualities in Mary that were reminiscent of Esther and her mother, and completes the transformation of Mary into a heroine no longer tainted by scandal or physical association with her aunt or mother.

It becomes part of the narrative process in the final sections of the novel to bring about the dissociation of Mary from the initial portrait given of her, one that suggested that her fate was determined by the metonymic associations connecting her to her Aunt Esther and her mother. Her psychic disease is the point at which that rupture is made complete.
In the beginning of the novel, Mary's unusual beauty and her lack of "sense" in dealing with Harry Carson are both factors that associate her specifically with her Aunt Esther and her mother. The change that happens in Mary as she develops into the proper prospective wife for Jem Wilson is one that will move her away from the type of physical exceptionality the narrator associates with the figures of her mother and Aunt. toward the type of exceptionality we have seen in Alice, Will, Margaret, and others, one associated with a romanticized notion of common sense, to the exclusion of strictly empiricist forms of knowledge. Given the critique of empiricist notions of truth that I have been mapping, it is notable that both Alice and Margaret should go blind in the course of the novel and that both find happiness and relative success in life in spite, or even because, of that inability to observe life in an empirical fashion. Likewise, Mary temporarily loses her wits and all knowledge of the activity going on around her at the climax of her own transformation.

Critics have complained that when Gaskell's focus turns to Mary at the end of the novel, the narrative dissolves into sentimentality. Actually, if anything, the sentimental narrative is eschewed by Gaskell in the early parts of the novel. Harry Carson is no Richard Lovelace, nor is he the Prince Charming Mary would imagine him to be. Her seduction is averted through her surprising and quite sudden recognition that she loves Jem. The narrator provides little explanation for the abrupt transformation of her feelings; instead, the narrative begins to assert that Mary has always already loved Jem from the
beginning and just hasn’t known it. The metalectic structure of Mary’s romance plot is most evident in the scene of her confession of her love at Jem’s trial. When asked on the stand who she preferred, Jem Wilson or Harry Carson, Mary responds, “Perhaps I liked Harry Carson once—I don’t know—I’ve forgotten; but I loved James Wilson.” She further explains that she never “found out” that she loved Jem till it was too late (383-83). The murder and trial follow so closely in narrative time on Mary’s realization that she loves Jem that her sudden decision seems as much to be the catalyst to the murder of Harry Carson and the termination of the seduction narrative, as Harry’s caricature of the striking workers.31 We will see other such metalectic plot structures at work later in the century in the double plots of George Eliot’s Daniel Deronda, which I discuss in chapter four.

In Mary’s case, she has come to recognize that Harry’s Carson’s wealth, financial security, and apparent freedom from contamination from the street, is no substitute for love, genuine care, and compassion. We see that internal transformation has been made when Mary, having come to regret her rejection of Jem Wilson’s love, sees a young boy in the street who complains of hunger. Her response to the boy, that hunger “is nothing,” shows the change in priority from material to spiritual things (270). Her reconsideration of the boy’s plea later on, and her subsequent return to feed him, may show Gaskell’s awareness of the danger she faced of trivializing the poverty of the poor whose characters she does not develop, in her efforts to present some characters as exceptional.
It is significant that almost immediately after Mary has made this recognition of the unimportance of “things” in comparison to love, she is forced into the realm of law to try to combat the overwhelming empirical evidence that has been collected against Jem. When she learns of the concept of the “alibi” from Job Legh, she goes on a wild chase to find Jem’s only alibi. Will, out at sea, an event that seems to begin the process by which her mind becomes unhinged, leading ultimately to her breakdown in court. The description of her mental state when she arrives back from the sea chase stresses that her powers of sensory observation have been painfully heightened by the traumatic events: they have become, in fact, hyperempirical: “For the spirits had thrown her into a burning heat, and rendered each impression received through her senses of the most painful distinctness and intensity, while her head ached in a terrible manner” (369). The “distinctness and intensity” of her impressions suggest that she has undergone a kind of sensory and physiological overload that is the result of her public confession of love in the legal realm where her testimony and her love are translated only as condemning empirical evidence of Jem’s guilt. The description of the hyperempirical state as one of “burning heat” implies that it is a highly sexualized condition, a reading that would agree with my sense of Gaskell’s antiempiricism as having a basis in moral conviction.

Following this state of sensory overload, Mary’s senses appear to shut down completely: “She was where no words of peace, no soothing hopeful tidings could reach her; in the ghastly, spectral world of delirium. . . . They told her Jem was safe, they
brought him before her eyes; but sight and sound were no longer channels of information to that poor distracted brain (394). Her return to “sanity,” to the proper physical response to “sight and sound,” is accompanied by what seems a strange, infantile, inability to observe critically: “She opened her eyes. Her mind was in the tender state of a lately-born infant’s. She was pleased with the gay but not dazzling colours of the paper; . . . And quite sufficiently amused by looking at all the objects in the room” (409). Her delirium is like that experienced by Alice, whose last hours are spent in a dream world, her mind having returned to sweet, childhood, memories, and who eventually dies a peaceful, joyful death. The world Mary’s mind retreats to is, by contrast, a “ghastly, spectral” one. but it, too, apparently cures her ailments as it erases the traces of fallenness left by the association earlier made between herself and Esther.

Those apparently inherited traces of fallenness and senselessness, qualities associated with a lack of moral intelligence, seem to have been erased at the moment she takes the stand in Jem’s defense. The narrator describes Mary’s beauty, the sign that most connected her to Esther, as creating less of an impression on the court crowd than the soul revealed through her eyes:

Many who were looking for mere flesh and blood beauty were disappointed; for her face was deadly white, and almost set in disappointment; while a mournful, bewildered soul looked out of the depths of those soft, deep, grey eyes. But others recognized a higher and a stranger kind of beauty; one that would keep its hold on
the memory for many after years. (381)

Mary’s disease thus occasions the transformation of her Esther-like appearance into one more suitable to an untainted heroine. As if to distance herself yet again from the romantic account given of Mary, the narrator claims, “I was not there myself, but one who was told me . . .“ (381), as if the narrator were afraid of being overly sentimental in her antiempiricist gestures.

Mary’s disease allows for the narrative to make the type of antiempiricist critique in favor of the other forms of “common knowledge” that I have been describing. With this in mind, the novel’s strange ending with mention of Job Legh’s natural history pursuits begins to make sense. Jem jokingly complains that Job wants to visit them in Toronto only to collect Canadian insect specimens, not to visit with them. Though Jem is commenting good-humoredly, Mary takes his criticism rather more to heart. The novel’s final words, Mary’s words, are subtly significant, despite their enigmatic quality on a first reading. The novel ends with the words, “‘Dear Job Legh!’ said Mary softly and seriously.” Mary, now apparently the novel’s moral barometer, takes “serious[ly]” Job’s failure to learn the lessons that she, Will, Alice and others have learned about the potential for coming to mistaken conclusions about the world when it is viewed through a strictly empiricist perspective, lessons that Job has not yet learned for himself.

Conclusion
Other critics, particularly Mary Poovey, have seen Mary’s psychic illness as having a much broader significance within Victorian culture. She claims that the effect of the amalgam of plots taken up and dropped in *Mary Barton* and culminating in a focus on psychic disease is the emergence of a relatively new field of scientific knowledge, psychology. According to Poovey, Gaskell’s “depiction of (proto) psychology suggests both that psychological complexity may be an effect of the violation of domesticity by the masculine worlds of work and politics and that the eruption of (what would eventually become) the psychological is ruinous to the feminized discourse of the novel” (134). Her claim requires the reader to accept two premises: first that the representation of psychological complexity somehow wasn’t already possible in fictions centered entirely within the domestic sphere, and second, that in Gaskell’s novel, there is a “feminized discourse” that is at odds with a masculine, scientific, and political one, a reading that requires the notion that the novel is a combination of competing gendered plots. I want to claim that rather than seeing those plots as competing, or even obviously (empirically or intuitively) gendered, we might understand better the function of Mary’s illness in this novel and even perhaps more broadly in larger questions about psychological complexity in domestic novels by seeing the points of connection between Mary’s psychic illness and the representations of illness and critiques of empiricist forms of knowledge that have preceded it in the novel.

Poovey’s reference to psychology as a “domain” of knowledge that emerges in
Mary Barton and other novels of the period presents a new way of thinking about “the hungry forties” (Poovey 147), which historians and literary scholars alike often describe in terms of the dehumanizing effects on the poor of social reformer’s efforts to conduct empirical studies of aggregate populations and the environmental factors affecting them. Citing Chadwick’s Report of the Sanitary Condition, Peter Logan, for instance, argues that during the forties there was a shift in emphasis in psychological studies from a focus on the nervous disorders of the upper classes, which dominated medical wisdom in the late eighteenth and early nineteenth centuries, to a concern with the desensitizing and dehumanizing of the working classes. In Nerves and Narratives, Logan writes, “[T]he new interest in the social problem posed by the industrial working class needs to be seen as a shift of focus away from the danger posed by too much sensibility, as in the late Georgian period, to the danger of too little” (145). Logan cites the Davenport cellar scene in Mary Barton as producing just such an image of the physical suffering of otherwise insensate poor (145). There seems also to have been, prior to this time, a scarcity of empirical (proto) psychological studies during the period, the single obvious exception being phrenological studies, the efficacy of which is questioned explicitly in Mary Barton as I have discussed.

Logan’s argument leads to the suggestion that perhaps Mary’s psychological illness at the climax of the novel is merely Gaskell’s way of providing her middle-class readership with a newly-made, middle-class heroine whose hysteria or “nerves” (much
like the princesses’s pea in the fairy tale) would serve as a recognizable indicator of her
fitness for ascension into the middle class by novel’s end. She was, in this “feminine”
narrative, in fact, a middle-class heroine all along; she simply wore the wrong clothes.
The representation of Ben Davenport’s illness, meanwhile, like that of the poor people
who populate the statistics of Chadwick and Kay, should be devoid of psychological
complexity, according to Logan’s and, I will argue, Poovey’s reading. The representation
of the Davenports does indeed appear to borrow from medical officer’s reports, with great
effect, but its impact seems to be primarily geared toward creating a portrait of working
class people’s compassion and care for one another that would counter the impression of
their immorality created by statistical reports such as those of Chadwick and Kay. 37 The
depiction of the two men who come to the family’s aid has far more psychological
complexity than such a reading allows for, if not the depiction of Davenport and his
family who are, after all, near starvation. It is significant that Mrs. Davenport reappears in
the novel to offer aid to her neighbors as it had been offered to her family during their
 crisis.

Poovey’s reading would appear to present a different way of thinking about the
focus on individuals in novels, but I think it is telling that she sees John Barton and Mary
as the only characters “cursed with (what we might call) psychological complexity”
(147). She seems to read the Davenport cellar scene in an almost identical way as Logan.
She writes particularly of the use of point of view in the passage, where the narrator puts
the reader into the position of George Wilson and John Barton as they descend into the cellar. Let me quote again this important section: “On going into the cellar . . . the smell was so foetid as almost to knock the two men down. Quickly recovering themselves, as those inured to such things do, they began to penetrate the thick darkness of the place” (54). About this passage Poovey writes, “some people may have become indifferent to fetid smells, this passage suggests, but noting their coarser senses should make those of us whom smells offend want to improve the conditions that have obliterated delicacy in the poor” (145). By putting the reader, however briefly, into the perspective of the two visitors (“you went down one step” . . . ), the point of the passage is not just to show how the imagined “you” would respond, but also to show us how the visitors themselves respond to being forced to act on their neighbors’ behalf in the worst of conditions.

Notice the smell is not so fetid as to almost knock “you” down, but as to almost knock “the two men” down. They have to “recover” from the fetid smell and proceed into the dark cellar. Though they are “inured” to recovering from such smells, they are hardly “indifferent,” nor is there even the implication that their senses are “coarser.” Rather, they actively will themselves forward in spite of the staggering smell, because they have to do so. To read the passage as suggesting that among the poor “delicacy” about fetid smell has been “obliterated” is to read along with Chadwick, rather than to see the effort made in the passage to have the reader perceive just how difficult and strenuous are the efforts poor people make regularly on each other’s behalf. The recognition of this struggle is
important lest we assume falsely that the poor are idle, dehumanized, uncaring, and only waiting for handouts, as some reformers described them.

The representation of Mary’s disease certainly does perform a different role in the novel than that of Ben Davenport’s somatic disease, putting the reader at times into the perspective of a suffering and confused young woman, learning, along with the middle-class reader, the difficulty of maintaining sanity and human compassion after great emotional loss and the shock of being misunderstood and publicly humiliated. But these two apparently different descriptions of illness do share a similar characteristic; they both stress the individual care and compassion that, the novel confirms over and over, are typical of the poor, rather than exceptional as Kay, Chadwick, and others assumed. Thus the two most prominent descriptions of illness, Ben Davenport’s and Mary’s, by showing poor people at greater and lesser levels of physical and emotional decline, serve as foils to each other, each helping the other to enhance the reader’s perception of the ways the poor have been misinterpreted especially within statistical, empirical study.

Endnotes

1 Peter Melville Logan, for instance, asserts that “Elizabeth Gaskell inserted parts of Edwin Chadwick’s Report on the Sanitary Condition of the Labouring Population of Great Britain as a realistic description of a street scene and the interior of the Davenports’ home in Mary Barton” (Logan, Nerves and Narratives, 145); See also Poovey, Social Body 144.
It is interesting to speculate whether in his account of the medical officer's narrative, the politician has been influenced by novelistic representations of disease. It is often assumed in historical readings of novels, particularly industrial and realist novels, that the novelist works from the social reformers more "truthful" account, but in this case, it seems at least possible that the reverse is true. For more on this idea of mutual influence, see Joseph W. Childers, Novel Possibilities, 86-109 especially.

It has been suggested to me that the indeterminate amount of children in the Davenport cellar scene reflects either the poor visibility in the room or middle class anxieties about the high birth rate among the working classes. Because the number of children described here is relatively small in comparison to the numbers one usually sees in sanitary and medical reports of this kind, and because I feel strongly that Gaskell is trying to rehabilitate the image of the working classes in the minds of her middle class readership, I read the indeterminate numbers here along with other references to indeterminate numbers in Mary Barton as registering Gaskell's anti-statistical mode of representation.

For a comprehensive discussion of the decline of moral explanations of disease in the nineteenth century, see Stanley Joel Reiser, Medicine and the Reign of Technology.

For an account of the use of eating, health, and disease as tropes for potential sexual fall, see Helena Michie, The Flesh Made Word 12-29.

Christopher Hamlin describes in detail what he sees as Chadwick's deliberate avoidance at strategic moments of the subject of disease origins, particularly in those places where
the issue of the relationship between destitution and depressions to disease arises (255-65)

Gaskell makes clear John Barton's position of "visionary" representative of the community of the poor in the following passage:

The actions of the uneducated seem to me typified in those of Frankenstein the monster of many human qualities, ungifted with a soul, a knowledge of the difference between good and evil.

The people rise up to life; they irritate us, they terrify us, and we become their enemies. The in the sorrowful moment of our triumphant power, their eues gaze on us with a mute reproach. Why have we made them what they are; a powerful monster, yet without the inner means for peace and happiness?

John Barton became a Chartist, a Communist, all that is commonly called wild and visionary. Ay! But being visionary is something. It shows a soul, a being not altogether sensual; a creature who looks forward to others, if not for himself. (219-220)

Gallagher describes the paradox of this passage that the community "ungifted with a soul" produces a John Barton who is "visionary" and thus shows "a soul" that has been made what he is by "us" (74-5).

The murder takes place after Harry Carson draws a caricature of starving workers during a meeting between manufacturers and Trade Union representatives. Jem Wilson, family
friend of the Bartons, as well as suitor to Mary, is wrongfully accused of the murder because the real culprit, John Barton, uses Jem’s gun, and because Jem and Carson had been observed earlier fighting over Mary.

9. For discussions of the stylistic and generic influences evident in Mary Barton, see especially, Hillary Schor, 13-44; and Catherine Gallagher, The Industrial Reformation, 62-87. On the possible influence of the Unitarian tract, see, Fryckstedt.

10. See also Florence Nightingale’s later reinforcement of this conviction in her 1859 book, A Contribution to the Sanitary History of the British Army During the Late War with Russia London 12.

11. It is important to note, however, that there were a few select diseases that had been proven to be transmissible through inoculation by the early nineteenth century, and so they were always unequivocally accepted as contagious: smallpox and syphilis among them. See Ackernecht, “Anticontagionism,” 569.


13. Nightingale goes on to claim that “With proper sanitary precautions, diseases reputed to be the most ‘infectious’ may be treated in wards among other sick without any danger” (Note on Hospitals 10).

14. For a more extensive account of Hume’s theory see Hume, An Inquiry Concerning
Human Understanding, 1-20.

15 Margaret Pelling sees, for example, Southwood Smith’s anticontagionist justification for his arguments about fever as being derived from the philosophy of Hume. She writes, “He placed most stress upon his having established from observation, the invariable events in fever, and the fixed order of these events, using an approach calculated to avoid speculation as to causes which Cullen had also employed deriving it directly from Hume” (20). For more on this approach, see Pelling 20-23.

16 M.J. Cullen has described how the founders of the Statistical Society of London were not rebels, but rather members of the reforming establishment. See Cullen 79-82. Eyler has described how shortly after this initial issue, the founders of the society began to soften their claims of disavowing speculation as to cause-effect relations (Eyler 14-15).

17 Pelling has specifically questioned Ackernecht’s conclusion that anticontagionist theories predominated in early Victorian England. For a more thorough account of their disagreement. See 1-33.

18 See The Letters of Mrs. Gaskell. Letter 211. October 11-14, 1854

19 Kay was later known as Kay-Shuttleworth after his marriage in 1842.

20 For an account of pre-nineteenth century ideas about disease, see Reiser 1-18 especially, and Ackernecht, “Bulletin.”

21 Cours was published in six volumes between 1830 and 1842.

22 See, for instance, Poovey, History, 303-307.
The longer quotation from Kay may be helpful here:

The absence of religious feeling, the neglect of all religious ordinances, affords substantive evidence of so great a moral degradation of the community, as to ensure the concomitant civic debasement. The social body cannot be constructed like a machine, on abstract principles which merely include physical motions, and their numerical results in the production of wealth. . . . Political economy, though its object be the means of increasing the wealth of nations, cannot accomplish its design, without at the same time, regarding their happiness as its largest ingredient, the cultivation of religion and morality. (63-64)

Religion and morality, which he tries to calculate numerically in his own statistics, will ultimately resist calculations designed for the study and accumulation of wealth.

My sense that Gaskell uses individual poor characters' behavior to rehabilitate the image of the moral character of the group as a whole appears to be supported by Childers, who argues, "Although it is individuals that Mary Barton is most concerned with as the novel makes clear when the narrator states, 'So much for the generalities. Let us now return to individuals,' it is the generalities that contribute so significantly to relations among individuals. . . . And it is through individuals that generalities are articulated and made apparent" (171).

For more on this historical splitting off of medicine from natural history, see Harold J. Cook, "Physicians and Natural History," 91-105.
26. For a full account of the fear of the depersonalizing of medicine and the dehumanizing of doctors in the nineteenth century, due to the de-emphasizing of patient examination and testimony, see Reiser.

27. The apothecaries’s diagnosis may spring from the fact that typhoid and typhus weren’t distinguished from one another in England early in the century, though Paris medical researcher Pierre Louis suspected there was a difference between typhoid and typhus as early as his 1829 essay on typhoid. See Anne Hardy, 152

28. With this observation in mind, I think Catherine Gallagher’s assessment of Gaskell’s notion of realism and her sense of the “real” is particularly apt, though I would amend it slightly. In *Industrial Reformation*, Gallagher writes,

The firm reliance on what is vividly seen and felt and an expanded use of the simple “language of men” are the hallmarks of Gaskell’s realism. The “real” reality for her does not lie behind human behavior in a set of scientific laws; it is on the very surface of life, and although it is often obscured by conventional modes of perception, it can be adequately represented in common language. (65)

I think the antithesis she sets up between common language and scientific laws should be amended to one that opposes the narrow application of empiricist observations such as those collected in so-called “objective” statistical studies to Gaskell’s willingness to embrace forms of knowledge that would be anathema to hard line empiricists.

29. This contrast is suggested by Poovey in her discussion of *Mary Barton*, though she
centers the contrast between the realms of the novel and political economy (Making a Social Body 133).

30 For an account of the association of natural history with working-class aspirations of class transcendence. See Lynn Merrill 11-12; and Anne Secord. “Science in the Pub” 269-311, and “Artisan Botany” 378-93.

31 This scene may constitute a critique of the police and their methods. The Manchester police force was substantially reorganized in the 1840s in part in response to hygiene reform efforts. See Messinger 119.

32 This argument has been made convincingly by Amanda Anderson in Tainted Souls and Painted Faces.

33 For a more extensive discussion of the determinism versus free will debate in the industrial novel genre, see Gallagher, Industrial Revolution 3-110. Childers describes the poor not as exemplars, but rather as a “community of suffering” in Novel Possibilities, 158-178.

34 Gallagher’s explanation of the plot’s dabbling in the genre the farce in this scene an effective reading of Gaskell’s narrative strategy here. I nevertheless want to highlight the strangeness of Mary’s sudden change of heart over Jem, and the signs the narrative gives that this is the moment at which her transformation into an appropriate moral heroine begins. See Gallagher, Industrial Revolution 68-70.

35 It is interesting that in Jem’s trial Will’s testimony becomes a kind of empirical
evidence of the truth of Jem’s innocence in a much more serious version of his own earlier insistence, made entirely facetiously, that the sailors’ testimony of the existence of the comb was conclusive evidence of the truth of their mermaid story in his debate with Job.

36 I am grateful to Helena Michie for pointing out to me the highly sexualized nature of the descriptions of Mary’s hyperempirical state.

37 The best discussion of this effort that I have seen to date is Childers’ discussion of the “community of suffering” in Gaskell’s novel. 86-109. It may allow us better to answer such questions as, how do we account for the similarity between the delirium suffered by Mary’s equally poor Aunt Alice and Mary’s psychological illness? How do we explain the psychological depth of John Barton, who is anything but a middle-class hero by the novel’s end? Gaskell’s representative strategy seems much more complex than Logan’s interpretation would seem to allow for.
Chapter Two

Victorian Observation "Under the Microscope":

Natural History, Detection, and *The Woman in White*

The critique of empiricist observation and statistical description that I identified in Elizabeth Gaskell's representation of the diseases affecting the poor in *Mary Barton* is not unique either to Gaskell's novels or to the industrial novel. Gaskell's introduction of the discourses of public health into her narrative, one already influenced by recognizably literary genres, such as the sentimental novel and the farce—reflects the struggle that she faced in attempting to seem authoritative about the conditions of the poor, but also true to her subjects—that is to a sense of the individual subjectivities of the people who make up "the poor." In that effort, I proposed that we could see a distinct critique of the tendency toward an over-reliance on empiricist forms of knowledge and the scientific and statistical narratives used as authorizing gestures for descriptions of the poor. I think we can recognize a similar critique of empiricist knowledge claims at work in Wilkie Collins's 1860 sensation fiction novel *The Woman in White*, a novel published twelve years later and as different from *Mary Barton* in content as it is in narrative form.

On an important level both novels are experiments in realism in the sense that both incorporate the rhetoric of empiricist sciences into their narrative form and both appear to do so self-consciously and in the interest of arriving at some kind of truth about the world they describe, while also acknowledging the often limited extent to which that truth is ultimately knowable. In each, the accumulation of detail contributes to or hampers
the unraveling of a mystery that involves being able to situate individuals within recognizable scientific and social categories usually figured in opposing pairs (criminal type or non-criminal type, sane or insane, male or female). And in each novel the misperceptions of observers, their misreading and poor categorizing of empirical evidence, interferes with that unraveling. Both Gaskell’s and Collins’s novels show a similar investment in the difficulties of adequate description with regard to placing individuals within established categories and thus they question the status of so-called empirical facts in relation to narrative authority and truth.

Gaskell was responding in Mary Barton to an empiricist and scientific imperative requiring factual, statistical description of “the poor,” and appears to have self-consciously attempted to incorporate such description into her narrative mode, while simultaneously undermining it. In a similar way, in his depiction of his central narrator in The Woman in White, Collins invokes the discourses of natural history and nature observation that insisted on the objectivity of their method and on the benefits of that objectivity to the development of the impressionable minds of youth, particularly the minds of young, working-class males. Though Walter is not a self-proclaimed natural historian, he is an art instructor who considers the ability to observe nature and reproduce it on canvas one of the “civilized accomplishments” undervalued in society (44). At the same time that Walter extols the virtues of neutral observation and classification, Collins appears to be continually undercutting that empiricist method of observation, or rather more precisely, that method’s claims to scientific certainty; Walter’s claims get little
endorsement elsewhere in the novel, outside of Walter’s own narrative.

In Collins’s novel, however, it is hard to determine what, if anything, is outside of the province of Walter’s own narrative. In the novel’s “Preamble,” Walter announces that he is actually a general editor for his story as well as a contributing narrator, but not the only narrator for the story. Thus he will describe the events of the story only when he “happens to be more closely connected than others with the incidents to be reported.” When his own experiences “fail,” he claims he will allow others more closely involved with the events to narrate their experiences, just as would happen in a court of law. Thus his goal as general editor is “to trace the course of one complete set of events, by making the persons who have been most closely connected with them, at each successive stage, relate their own experiences word for word” (1). The courtroom model he describes—where testimonies are recorded verbatim in an attempt at an objective presentation of the facts—appears to suggest a kind of inductive method to the story-telling strategy. The observations or “experiences” of eyewitnesses will be presented in sequential order and in total, and then conclusions will be drawn on the basis of the sum of the information.

Walter’s insistence that all of the narrators will speak “clearly and positively, [just] as [he] has spoken before them” suggests that the combined narratives will provide “neutral,” first-hand, and factual observations of events. As Jenny Bourne Taylor puts it, Walter’s incorporation of the other narratives allows him “to see[m] to be replacing divine judgement with empirical evidence that emerges as both reliable and relative” (110). What interests me particularly here, however, is Walter’s choice of words to
describe those places where he will "retire the position of narrator." He will do so when his "experience fails." Why did he not say "when I was not present at the events in question?" Why stress the failure of his experience? Failed experience or observation is, of course, a critical flaw in inductive reasoning; thus Walter's narrative might appear to gain in credibility by incorporating the other narrators.

And yet, as other critics have noticed, in the second part of the novel Walter's editorial interventions become more obvious and his use of other narratives more selective according to his own designs. Walter's authority as general editor appears at least somewhat tenuous given the enormous difficulty he seems to have in situating individuals within understandable or recognizable classificatory schema, a difficulty that other critics have rightly attributed to the novel's preoccupation with his sensations (Taylor 98). But there are other things at stake in Walter's transformation from the first part of the novel to the second, particularly the novel's questioning of empiricist modes of observing and ordering the world.

Thus, in this chapter I focus on the epistemological questions that circulate throughout Collins's novel and the ways that those questions emphasize vision and perspective, in particular the perspective associated with the then booming trends in natural history and microcopy. My emphasis on epistemological issues in the novel adds to the substantial critical work on Collins's novels that has focused specifically on their psychodynamic aspects. It is my claim that Walter's change from art instructor and apparently non-intrusive general editor at the beginning of the novel, to amateur detective
and all-controlling general editor at its end, is due in part to the fact that he gives up the inductive, empiricist search for truth and instead claims to have deduced answers to the many mysteries of identity that had baffled him previously. His deductive powers appear to culminate in his introduction of an ordering principle into his narrative which he will identify, but not represent or explain to his reader, a move that, I argue, echoes a particular kind of natural history rhetoric associated with preserving the mysteries of nature.

In the first section of this chapter, "Masculinity and the Microscopic Aesthetic," I describe how Collins's narrative frequently appeals to the powerful aesthetic and empiricist influence of natural history study as it was described by such prominent natural historians as Kingsley. I identify what I call a "microscopic aesthetic," which was pervading literature and culture of the mid-Victorian period as a result of the popularity of nature study. This aesthetic deals with the claims of objectivity and certainty made for scientific studies, the Victorian obsession with observing observers in spectacles of scientific observation, and the vexed questions that the issue of individual perspective raised for scientists' claims to objectivity, claims that, starting with Charles Dickens' publication of Bleak House, will also come from detective figures in nineteenth-century British novels. This discussion prepares the way for my account of the critique of objective description in The Woman in White where Collins repeatedly shows the novel's central narrator Walter failing in his efforts at objective observation and "neutral" classification. I connect Walter's failures of classification to Londa Scheibinger's account
of eighteenth-century natural historians' explicit use of human models of sexual behavior to classify plant reproduction and their "implicit use of gender to structure botanical taxonomy" ("Gender" 170). The resulting public scandals from such gendering of nature illustrate the way in which taxonomical classification in the natural sciences had always been affected by social constructions of gender. Thus, I show both how Collins invokes the popular microscopic aesthetic in his depiction of Walter only to undermine it, and how Collins plays on sensational controversies about taxonomy already existing within the intellectual communities invested in the interpretation of nature.

In the second section, "Interlocking Lives: Lewes's Rhetoric of Interconnection," I explore the natural history rhetoric of George Henry Lewes, who stresses throughout his scientific studies the organic interconnection between the human and animal worlds, insisting both on the impossibility of considering individuals outside of the social realm and on the futility of studying humans apart from the world of other species. His critique of Darwin's natural selection calls into question the very category by which development theory's opponents would attempt to differentiate humans from animals: the category of species. This destabilization of classificatory mechanisms is precisely the type of unsettling that prevents Walter from making the connections and distinctions among the appearances of various women involved in the mystery of the woman in white.

In the third section, "'The Brazen Tube': Gosse and the Rhetoric of Distinction," I expand my discussion of natural history rhetoric to show how one natural history study relates its methods of observing nature to those of forensic detective science through the
shared techniques of microscopical observation and taxonomical classification. In the emerging field of criminology, as in the then booming field of natural history, placing an individual accurately within the classifications established for a social field required that those classifications be fixed and recognizable. In *Evenings at the Microscope*, Philip Henry Gosse’s microscopical investigations compare samples from forensic criminal investigations with those of his own animal subjects in order to insist on the recognizable distinctions between man and animals under the microscope. Distinction is also a key notion in Victorian criminal investigations which often focused on assessing an individual’s similarity or difference from emerging notions of a criminal type, as we saw in the trial of Jem Wilson in *Mary Barton*.

Collins’s novel is similar to natural history texts in that each uses empiricist observation and classification in an effort to solve a mystery. Gillian Beer has argued that the structure of Darwin’s *Origin* may imitate that of Dickens’s *Bleak House*, which initially overwhelms the reader with a mass of details related to the mystery before revealing at the end of the novel the ways that all of these details, characters, and events are interrelated. Lewes’s and Gosse’s natural history studies and Collins’s novel also appear to imitate this narrative structure. Each of the nature studies proposes by its end the existence of an ordering principle by which to understand the relationship between humans and animals. Lewes, who essentially espouses development theory, proposes that this relationship can be observed by seeing the ways that all life is interconnected. Gosse, by contrast, claims that the only ordering principle in nature is God, and that the “brazen
tube," as if provided by an "Oriental Genie," can allow the observer access to God's ways. Collins's novel too is interested in the possibility of an ordering principle by which all aspects of the mystery of the woman in white might be neatly put together. In the concluding section of this chapter, "Ordering and the Unknowable," I will argue that in Collins's novel, as in Gosse's natural history study, the ordering principle involved in each mystery is ultimately presented as being ultimately unobservable and unknowable. Thus, in contrast to the narrative resolutions of Darwin's Origin and Dickens's Bleak House, which both reveal though empiricist observations the interrelations among the figures involved in a mystery, in Collins's novel empiricist observation is ultimately undermined, as is Walter's or any observer's ability to place people within fixed, "safe" categories of classification.

In its refusal to narrate the history and make up of "the brotherhood," the secretive and violent political organization to which both Fosco and Walter's friend Pesca belong, the novel emphasizes both the interconnectedness of individuals within societies and the arbitrariness of the categories by which we try to distinguish one individual from another. Thus the novel manages also to preserve a sense of the mystery of human relations, thematized so powerfully at the beginning of the novel in Walter's inability to see resemblances and distinctions between women.

In Walter's roles as general editor and as a specific narrator, he is preoccupied with the notion of objective observation and representation, an obsession that links his narrative style to the rhetoric of Victorian natural history. Like the statistical imperative I
described in the previous chapter, natural history study was thought to be concerned only with neutral facts, a mode of observing the natural world that factored out emotional considerations in the interest of ostensibly objective, scientific truth. Through Walter’s narration, Collins depicts the Victorian preoccupation with the “civiliz[ing] influence” of the arts of nature observation and faithful representation, particularly the ability of such pursuits to turn young male minds away from the feminizing influence of romance.\(^5\)

Of course, I am speaking of natural history rhetoric of a particular kind, one with which I associate Kingsley. From the natural philosophers to the post-Darwinian scientists of the fin-de-siècle, there is a huge variation in theories of what the aim of natural history should be.\(^6\) In recent critical work on science and the Victorian novel, however, there has been a pervasive association of natural history with realism and with objective description. In *George Eliot and Nineteenth-Century Science*, for instance, Sally Shuttleworth describes the “eternalizing nature of descriptions” in *Adam Bede*, claiming that “George Eliot’s theory of realism . . . commits her to an epistemology which is that of Natural History: a fundamentally static and isolating theory of knowledge. The role of the artist is to imply to reflect, or objectively record, an unchanging natural world” (27). There were, as Shuttleworth notes, competing accounts of natural history’s goals and methods, and I will explain some these differences later, but for now let me stress that this is the model of natural history study that Walter, the art instructor, seems to endorse—the faithful observation and reproduction of natural objects that conform to apparently fixed categories.
It is hard to know just how much influence natural history writings specifically would have had on Collins, who published *The Woman in White* in the same year George Eliot published *Adam Bede*, but the observation and careful, accurate representation of nature was of great importance to his father, a well-respected landscape painter, William Collins. Wilkie’s descriptions of his father’s paintings marked the son’s first attempts at professional writing and formed the basis of his biography of his father (Davis 26). Popular natural history texts also seem to have influenced Wilkie Collins’s account of his walking tour of Cornwall, *Rambles beyond Railways, Or, Notes in Cornwall Taken Afoot*, the title of which appears to have been taken in imitation of such natural history texts as Gosse’s *A Naturalist’s Rambles along the Devonshire Coast* (1853). In *Rambles beyond Railways*, however, Collins carefully describes and categorizes the people within landscapes; his emphasis is more concentrated on the human world than on the flora and fauna of Cornwall. It seems significant, though admittedly based on a debatable claim, that the focus of Collins’s father’s landscape paintings increasingly foregrounded human figures and “dramatic settings,” according to Wilkie Collins’s biographer Nuell Phar Davis. It is then not surprising that Collins emphasizes early in the novel the extent to which Walter values nature study and its “civiliz[ing]” influence (44).

Natural history was undergoing a huge boom in popularity during the early and mid-Victorian periods. According to Lynn Merrill, much of the credit for this emphasis on the benefits of nature study is given to the excitement generated by the introduction of the cheap microscope in the 1830s, a technology that made natural history an activity in
which all but the very poorest classes of people could participate. Natural history writers often capitalized on that popularity in order to transmit middle-class values to their reader, thus functioning like conduct books. Many, such as Arabella Buckley's *Life and Her Children*, anthropomorphized nature to show plant and animal creatures learning moral lessons, a strategy that Donna Harroway has critiqued in contemporary scientific studies of nature.7

Many natural history books were constructed like tour guides where the reader was supposed to imagine him or herself accompanying the narrator on a tour of the flora and fauna of a particular place or region, meeting friendly, human-like animal creatures. The perhaps more “scientific” nature studies of scientists such as Kingsley, Lewes, and Gosse took advantage of the popularity of natural history collection and natural history guides among the various social classes by borrowing from the rhetoric of the popular texts in their introductory chapters in order later to present their own scientific and philosophical views about the controversial issue of humans’ relationship to other species and to each other, including such complicated matters as distinctions between individuals with regard to race and gender. I think Collins too introduces his mystery story with an emphasis on the sensational, only to replace that emphasis with one of deductive, rational thinking, in order to make an underlying point about epistemology and the ultimate failure of certain methods of knowing. The natural historians’ concern with accurate observation and taxonomy is the central focus for much of the humor and much of the epistemological anxiety reflected in Walter’s narration.
1. Masculinity and the Microscopic Aesthetic

In 1846, Charles Kingsley proposed that the mental health and stability of young men required that they “get rid of self,” by turning their thoughts away from human-centered studies and focusing instead on the empirical study of nature. Best known as an avid proponent of “muscular Christianity,” a term used to describe popular ideals of masculine moral and physical strength, Kingsley was obsessed with protecting the moral character of youth from perversion. Laura Fasick has recently documented Kingsley’s belief in the importance of practicing a healthy sexuality to preserving secure mental health and a fixed gender identity (Fasick 91-113). But Kingsley’s scientific lectures advocating the study of nature as an ordered and fixed combination of observable facts are less well-known. To Kingsley, natural history represented a “path of mental honesty; a study in which [young people] shall be free to look at facts exactly as they are.” It thus provided a means of protecting the youthful imagination from being “thrown inward, and producing a mental fever, diseasing itself. . . by feeding on its own . . . morbid feelings” (294).

Recent attempts to account for natural history study’s profound effect on mid-Victorian literature and culture suggest that most of natural history’s proponents shared Kingsley’s confidence in its ability to provide the observer with an objective view of nature. For example, critics such as Shuttleworth and Jonathan Smith point to George Eliot’s use of natural history metaphors in her early novels as part of her realist project of
presenting so-called facts about the natural world "exactly as they are."

Here, I suggest an alternative view of mid-Victorian natural history, one that appears to resist Kingsley's early appeals to objectivity. I propose that by mid-century a "microscopic aesthetic" is present in popular literature and diverse areas of Victorian culture. Like the "aesthetic of particularity" identified in Victorian poetry by Carol Christ, the microscopic aesthetic describes an obsession on the part of the observer with minute, particular details (Christ 1:33). But the aesthetic I describe ultimately has as much if not more to do with the watching and classifying of people watching as with the actual specimens being observed. As David Allen has argued in his account of Victorian natural history "tastes and crazes," nature study was not just an intellectual pursuit, but a "taste," one that broadly affected popular culture and relationships among the different classes in England (394-407). Anne Secord, for instance has focused on the presence of artisan botanist meetings in pubs, where information and books about natural history were exchanged among working class men and where Linnean taxonomical vocabulary was taught and memorized ("Artisan Botany" 378-93). Thus, the self-perception of the working-class men was bolstered by their natural history pursuits, as we saw in the last chapter in the character of Job Legh.

The microscopic aesthetic thus also stressed the self-consciousness of the observing self as part of the spectacle of science, with its rapidly advancing visual technologies. This aesthetic to greater and lesser degrees undermined natural historians claims to objectivity by providing perspective and orientation for the observing spectator.
In other words, as the example of Will's critique of Job Legh's epistemology in *Mary Barton* shows, both the physical and philosophical positioning of the spectator are as important in the description of observation as the actual object(s) being observed.\(^\text{10}\) This is the aspect of nature study that Wilkie Collins appeals to in his representation of his primary narrator in *The Woman in White*, art instructor Walter Hartright.

In Collins's 1860 novel, Walter initially presents his narration as a model of objective truth arrived at by emotionally detached, observation—in essence, a kind of Kingsleyan natural history applied to human behavior. As we shall see, many Victorian representations of social relations between peoples of different classes employed a similar rhetorical strategy. The irony of Collins's depiction of Walter's transformation from art instructor to amateur detective is that Walter is only able to complete it after the failure of his attempts to follow the Kingsleyan prescriptions that so clearly associate natural history study with objective observation and masculinity. D.A. Miller rightly describes this critical juncture as the moment where the novel begins to excise its sensational elements as Walter asserts his masculinity.\(^\text{11}\) I will suggest that it is not only the novel's preoccupation with sensation that should draw our attention here, but also the profound shift in Walter's description of his own methods of observation and classification. This shift suggests that Collins's representation of Walter is both an ironic comment on and participant in the microscopic aesthetic popularized by natural historians such as Kingsley.

To understand how deeply this aesthetic had saturated Victorian culture by mid-
century, one can point to the presence of microscopes at the center of popular exhibitions. Mid-Victorian play-places featured many new visual technologies associated with their ability to trick the eye with elaborate optical illusions. By contrast, the microscope and camera lucida used to make microscopic engravings were technologies designed to ascertain, if not the truth about the natural world, then the closest possible approximation of it. And yet, these exhibitions too appear to have been centered as much around the watching of people watching as around the objects of study themselves. One play-place that often featured exhibits and lectures on microscopy cleverly played upon this aspect of its enterprise by naming itself The Royal Panopticon. [See fig. 1]. This name, with its obvious Benthamite and for us, additionally, Foucauldian resonances functions almost like a pun in suggesting that what people ended up doing in these venues was observing observers. Another example of the importance, if not primacy, of the spectacle of the microscope appears in the Great Exhibition of 1851, where one popular attraction was the microscopic engraving inscribed to Queen Victoria [See fig. 2].

This particular engraving illustrates the effort made by scientists to preserve the microscope and microscopy as the emblems of class distinction that they were in the late-eighteenth and early-nineteenth century when microscopes were exclusively owned by the very rich and were implicitly linked with notions of the infallible accuracy of empirical science. The fear of adulteration of upper-class masculine scientific pursuits brought about by the popularity of the cheap microscope also seems to have been accompanied by a recognition of the possible didactic uses of the microscopic aesthetic
for educating the working classes in middle-class morality. The phrase "under the microscope" came to symbolize truth in the face of deceptive appearance, as is evident from Swinburne's use of it as the title of his famous invective against contemporary critics in 1872 and, less famously, in Emily Steele Elliot's use of the same phrase as title to her 1860 industrial novel about a young factory woman who, despite extreme poverty, an abusive alcoholic father, and the death of her young brother after a factory accident, learns to have faith in God by looking through a microscope at an engraving of the Lord's prayer [See fig. 3]. The lesson of the microscope teaches the heroine to accept that the poor often simply need a higher-powered lens or "lens of affliction" to understand God's ways. She eventually forgets her initial anger at the conditions of her life and learns to feel gratitude toward the kindly factory owner who pays for a nurse for her injured brother before his death. Emily Elliot's Under the Microscope thus appeals to the microscopic aesthetic to assure readers of the benevolence of the paternalist factory system.

Another example of the microscopic aesthetic as applied to the observation of human behavior appears in How to Live in London; or the Metropolitan Microscope (1828), a sociological study that presents a taxonomy of all of the types of swindlers, frauds, prostitutes and other criminals awaiting the innocent newcomer to London [see the complete descriptive title in fig. 4]. Its narrative style is similar to that of, for example, Lewes's Studies in Animal Life (1860), in which the narrator gives the reader the impression that he or she is accompanying the narrator on a tour of the natural
Fig. 1 Interior of the Panopticon. John Johnson Collection. London Play Places
Fig. 2: Queen Victoria and Prince Albert.

Fig. 3: Frontispiece to Emily Steele Eliot's *Under the Microscope* (1860)
HOW TO LIVE IN LONDON;
OR, THE
METROPOLITAN MICROSCOPE,
And Stranger's Guide;
ELUCIDATING THE MANNER AND MEANS BY WHICH
THOUSANDS EXIST IN APPARENT RESPECTABILITY
WITHOUT FRIENDS, PROFESSION, TRADE, OR
FORTUNE;
EXPLAINING ALSO
HOW THIS MAY BE EFFECTED HONESTLY;
AND, ON THE OTHER HAND, CONTAINING
HINTS TO THE UNWARY.
To avoid the Intrigues of Swindlers, Tricks of Thieves, Gamblers,
Cupids, and all who live by Falsifying those they appear to
believe, with a few necessary and instructive Reminders on
LAWYERS, PAWNBROKERS, AND AUCTIONEERS.

BY TWO CITIZENS OF THE WORLD.

LONDON:
PUBLISHED BY JOSEPH SMITH,
NO, HIGH HOLBORN.
1808.
specimens of a particular place or region. In *How to Live in London* the anonymous authors often imitate the rhetoric and the immediacy of the natural history text as, for example, when they take their readers for a stroll through the city:

A few words more, and then to dinner with what appetite you may. You see those polonies and German sausages, blooming freshly on the counters of the cook shops; they look as if they were made this morning—not so, but they were *oiled* last night! (anonymous authors’ emphasis 2)

By positioning their reader alongside of them as they describe their specimens in language that evokes the language of nature study (e.g. “blooming” sausages), the authors firmly place themselves at the center of their study. Yet, they also distance themselves from it in their preface both by appealing to scientific objectivity and by claiming their need to remain anonymous as protection from retaliation by the subjects of their study. The double-positioning of the observer here is quite similar to that occurring in later detective fiction which positioned the reader as the observer of the primary observer, the detective. The birth of the detective novel during this period would seem to happen as a logical consequence of this cultural obsession with observing observers.

Collins makes a similar connection between natural history observation and detection in his depiction of Walter Hartright’s movement from art instructor to amateur detective in *The Woman in White*. In describing Walter’s continual failures of observation and classification Collins presents an ironic comment on the double-
positioning of the observer in the spectacles of natural history and scientific detection.

Walter was, for Victorian readers, a sort of failed Inspector Bucket; for twenty-first
century readers, he is additionally a kind of failed Sherlock Holmes.

Ronald R. Thomas has described how the detective plots in fiction, particularly
the earliest English and U.S. detective stories and novels of Edgar Allan Poe and Charles
Dickens, seem to have come into being alongside and influenced by the development of
photography. In both the narratives of Poe and Dickens, particularly “The Murders of the
Rue Morgue” and Bleak House respectively, the photograph “did not only represent its
subject; it attained an ontological equivalence, a ‘perfect identity’ with its referent”
(Thomas 136). As Thomas notes, however, the power of the detective and the photograph
to capture a person is not a passive one, but rather one that allows for both surveillance
and control. He attributes the peculiar observational powers of Bucket, and later in
fiction, Holmes, not just to the same ability to “capture” their subjects as the new visual
technology of the camera, but also to their ability to notice and draw attention to
distinctions among seemingly like or common things. Bucket, for example, is described
as “remarkable” within the novel for his ability to “take [things] in” both “individually
and collectively” (Dickens 593).

Thomas focuses too on the ability of both the literary detective, as represented by
Bucket and Holmes, and the camera to “redefine” the identities of their subjects, to make
the reader view their subject as they do. They “giv[e] us a means to recognize the
criminal in our midst by changing the way we see and by redefining what is important for
us to notice” (Thomas 135). Their vision, Thomas claims, is by no means objective, but is the result of deductive reasoning. While I agree in general with Thomas’s assessment of the epistemological method of nineteenth-century literary detectives, I also want to stress that Holmes’s success, in particular, comes from his knowledge and encyclopedic memory of the natural history, flora, fauna, etc. of particular regions, and of the social mores of a broad range of cultural types, a cumulative knowledge attainable only through an inductive approach to observation. Holmes’s and Bucket’s rare failures come about when their own cultural expectations, drawing inductively from that wide array of cultural knowledge, cause them to misread individual identities, and those misperceptions occur in the case of both detectives particularly in the reading of women. In Bleak House Bucket fails to recognize Lady Dedlock in working class clothing, assuming that the outer appearance of the woman conforms to her actual social position. And, in the first story of The Adventures of Sherlock Holmes, “A Scandal in Bohemia,” Holmes is outwitted by a woman in a man’s clothing. He does not recognize her because he has not considered that a woman of her class would disguise herself in such costume, an expectation he would not have had of a man. As Thomas notes, in the first scene of “Scandal,” Holmes sees through the King of Bohemia’s disguise, much to Watson’s amazement, thus further suggesting that Irene Adler’s gender and Holmes’s expectations of feminine behavior are the factors that facilitate the success of her disguise. Walter’s movement from art instructor to amateur detective does signal his shift from an inductive to a deductive approach, but as the examples of Bucket’s and Holmes’s failures indicate,
expectations based on notions of appropriately gendered behavior and appearance often lead to error.

While the character of Holmes will later became famous for his detached and deductive powers of observation, Walter’s powers as an objective observer are, at least initially, presented quite ironically. As Miller has argued, our experience of Walter’s narration in the beginning of the novel involves registering his physiological sensations of surprise when people’s appearances and actions don’t conform to his expectations. But, Walter initially describes himself as having been carefully trained in the objective study of nature, a study that he considers the antithesis of the sensational. To Walter the ability to study nature objectively is a marker of education and sophistication:

No uninstructed man or woman possesses it . . . most [are] universally insensible to every act of Nature not directly associated with the human interest of their calling. Our capacity of appreciating the beauties of the earth . . . is, in truth, one of the civilized accomplishments which we all learn, as an Art; and, more, that very capacity is rarely practiced by any of us. (44)

Walter’s belief in the “civiliz[ing]” influence of nature study detached from human interest and almost synonymous with truth reads much like Kingsley’s argument that natural history serves as a necessary antidote to the susceptibility of the young to morbid passions. For us, his model of detachment also reads as a kind of “Holmesian” approach to observation, in which emotions can, according to Dr. Watson, constitute “a crack in one of [Holmes’s] own higher-powered lenses” (“Scandal” 9).
This echo of Kingsley becomes more pronounced when Walter describes his efforts to cure himself of his own obsession with Laura Fairlie as a kind of taking refuge from the self in objective thinking.

I began to doubt whether my own faculties were not in danger of losing their balance. It seemed almost like a monomania to be tracing back everything that had happened. . . . I resolved, this time in defense of my own courage and my own sense, to come to no decision that plain fact did not warrant, and to turn my back resolutely on everything that tempted me in the shape of surmise. (69)

The opposition set up here between the ostensibly objective “plain fact” and the sinister and subjective “shape of surmise” is one that will prove to be false as Walter’s story progresses. These words uncannily almost directly echo Kingsley’s warning that “youth will always be the period of imagination” and thus the young should be encouraged to study natural history to avoid the detrimental effects of “heating the brain or exciting the passions.” 13

We see Walter’s efforts to “get rid of self” by seeing the “facts exactly as they are” shaken profoundly in his first meeting with his pupil Marian Halcombe. In a long passage he describes Marian as if she were a specimen coming into focus through his microscope lens.

The easy elegance of every element of her limbs and body as soon as she began to advance from the far end of the room, set me in a flutter of expectation to see her face clearly. She left the window—and I said to myself, The lady is dark. She
moved forward a few steps—and I said to myself, The lady is young. She
approached nearer—and I said to myself (with a sense of surprise which words
fail to express), The lady is ugly!

Never was the old conventional maxim, that nature cannot err, more flatly
contradicted—never was the fair promise of a lovely figure more strangely and
startlingly belied by the face and head that crowned it. The lady’s complexion was
almost swarthy, and the dark down on her upper lip was almost a moustache. (25)

As Marian gradually comes closer, Walter classifies her into categories: dark, young,
ugly. While Thomas claimed photography as the operating metaphor to describe the
deductive processes of Holmes and Bucket, I will claim microscopy as the operating
metaphor for Walter’s. His enumeration of details as the passage continues recalls similar
descriptions in natural history studies of specimens viewed under lower and then greater
magnifications before being classified among known species. The structure of the
description, with its delayed element of surprise, as Marian’s faces comes gradually into
focus, is reminiscent of the structure of natural historians’ narratives, which set up
expectations about their specimens, only to surprise the reader with the discovery of
something unexpected as the objects comes into focus. Walter’s specific attention to
Marian’s “swarthy complexion” and the “dark down” on her upper lip also echoes
passages in Lewes’s Studies and Gosse’s Evenings at the Microscope that concentrate
specifically on the hair follicles of skin or the cilla of internal organs to point out
particular similarities (in Lewes’s case) or distinctions (in Gosse’s) among species.
Clearly Marian does not fit into Walter’s familiar classification of female. His bewilderment at viewing her almost playfully defies another of Kingsley’s ideas, the popularly held belief in the rigid separation of masculine and feminine genders, or “doctrine of complementarity,” the history of which Thomas Lacquer has recently described (1-40).14

Walter’s sensational inability to process his vision of Marian as he observes her moving more closely into focus is similar to the reactions of some scandalized readers of the discourses of natural history in the eighteenth century. Scheibinger describes how the sensational reactions of some to the Linnean taxonomical system had already produced anxieties about the association between natural history and gender (“Gender and Natural History” 163-77).15 Natural history was, in fact, already a gendered and highly sexualized form of classificatory knowledge.

In like manner, when Marian does not exhibit the expected feminine facial characteristics, Walter simply labels her an “err[or] of nature” (25), and entirely displaces the “eerie sense of resemblance” between himself and her onto “a dream-state,” thus revealing that Walter and, one might add by association, Kingsley, cannot observe natural phenomena and order them in a objective, rational way when the visual details observed, in Walter’s words, “strangely and startlingly” defy their means of classification (25).

Walter’s failure in the “civilized accomplishment” is thematized by Collins repeatedly throughout the early sections of the novel, in his inability to recognize the apparently striking similarity between Laura Fairlie and Anne Catherick, and in his
failing to identify a mysterious “something wanting” in his early descriptions of Laura’s appearance. Collins even claims to have made his villain Fosco fat in order to resist the traditional classification of criminals into types.\(^{16}\)

You ask me why I made him fat? His greatest beauty in the opinion of the majority of competent judges. You give me good reason for making him fat: that fat men are malevolent and ruthless and that the first Napoleon was a fat man, together with the chemical demonstration that fatty substances when heated above a certain temperature develop an acid known as butyric acid. I knew all this but none of these considerations influenced me. I had begun to write my story, when it struck me that my villain would be commonplace, and I made him fat in opposition to the recognized type of villain. (Davis 214)

Collins’ self-proclaimed resistance to typing is reflected in the novel’s approach to detection, one which continually evokes familiar classifications only to destabilize them.

Walter makes a shift from objective to deductive observation, but even his deductive method is presented more cynically here than in the Sherlock Holmes stories or Bleak House, because Walter’s “narrow[ing] of our view” involves, in direct contradiction to the inductive method he adopts earlier, becoming more selective in his approach to both disclosure and truth. Walter’s initial inductive method and his epistemological shift reflect many of the central issues involved in competing nineteenth-century natural history rhetoric. Before describing the implications of Walter’s new epistemological approach, let me first suggest some connections between Walter’s
description of his initial approach to the mystery and the competing rhetorical approaches of the natural historians Lewes and Gosse.

2. “Interlocking lives: Lewes’s Rhetoric of Interconnection”

As we have seen, Kingsley represented natural history study as an antidote to the issues affecting human lives. In 1846, he told a Reading audience that the purpose of natural history studies was to counter what he saw as the negative effects of human-centered studies. “Studies that have to do with man’s history, man’s thoughts, are,” he argued, “too personal, alas too tragical, to allow us to read them calmly at first.” Rather, we “read history as we do a novel” (294). Kingsley’s view of natural history as being the study of “facts exactly as they are,” rather than a series of competing narratives, is similar to the view of natural history as understood by contemporary scholars writing about the use of natural history metaphor in realist fiction. Shuttleworth, for instance, claims that the empirical method of natural history is imitated by George Eliot in her early novels, The Mill on the Floss (1860) and Adam Bede (1859-60) where the imperative of natural history writings is, she claims, “[t]o record, to describe truthfully what [the naturalist or author] saw: a creed of realism based on a belief that a novelist, like a scientist, records a pre-given world” (1). Though Shuttleworth recognizes that there was a more dynamic model of natural history emerging in the mid-nineteenth century, her claim for George Eliot’s epistemological approach in particular is that the natural historian and the realist author both provide an objective catalogue of details of unchanging external forms.
Shuttleworth connects this method with what she calls the “static conception of society and character” in George Eliot’s early novels (x). Rosemary Ashton, by contrast, argues that natural history metaphors appear in these early works of George Eliot as illustrations of the dynamic process of Darwinian natural selection, which George Eliot applies to the motives and actions of her characters. Ashton’s realist author and natural historian observe and record transformation over time, rather than describing static uniform details.

The contrast between Shuttleworth’s and Ashton’s interpretations of George Eliot’s use of natural history reflects differences in the approaches and ambitions of mid-Victorian natural historians themselves. A closer look at the rhetoric of the works of Gosse and Lewes, along with that of Kingsley, reveals the diversity of reactions among naturalists to the growing acceptance of various versions of evolutionary theory before the publication of *On the Origin of Species* (1860). The rhetoric of each of these writers reflects, to differing degrees, anxieties about the impact of evolutionary theory on their discipline. Each addresses questions about the role of human observation and microscopy in establishing and maintaining scientific claims to objectivity, and each is concerned with the propriety of examining specimens of the human body (literally and figuratively) under the microscope, at the risk of placing humans more firmly in their evolutionary position, and in the hope of advancing or maintaining popular interest in natural history studies.

As we have seen, Collins represents Walter’s difficulties in recognizing similarities and differences among and relationships between the different “species” of
women as a significant part of his inability to solve the many mysteries of the woman in white. The “mystery” in which the natural historians embroiled themselves is similar (despite Kingsley’s claims to the contrary), though its implications are much broader-ranging, i.e. the evolutionary relationship of humans to other animals. In a rhetorical gesture similar to Walter’s and Kingsley’s, Lewes suggests in the opening pages of *Studies* that his readers “[a]vert the eyes awhile from our human world, with its ceaseless anxieties, its noble sorrows’ (2). Unlike Kingsley, however. Lewes explains that the separation he has just posited is an artificial one, as he urges readers to focus on the “calmer activities of that other world with which we are so mysteriously related” (2).

Lewes’s acknowledgment of the mystery story that he and other natural history writers participate in telling is, however, only briefly stated in the book’s beginning. In fact, most of the first several numbers of *Studies* seem far more invested in drawing readers into natural history studies through elaborate rhetorical maneuvering than in convincing those readers of any given position on evolutionary theory. Lewes’s rhetoric in the early parts of *Studies* borrows from such earlier popular natural history books as Buckley’s *Life and Her Children*, which creates melodramatic, anthropomorphic narratives for the animal species it describes in order to teach readers moral lessons and insist on the rewards attendant on virtuous behavior. Lewes does not anthropomorphize nature, but his instructions to the reader to “look at nature with a more intimate and personal love,” along with his own figurative descriptions of nature, function in a similar way to make nature familiar and akin to the human world. For example, here he endows
all aspects of nature with aspects of human life: “[n]ature lives; every pore is bursting 
with life; every death is only a new birth, every grave a cradle” (Lewes’s emphasis, 3). 

Note that even in this early part, his rhetoric is always one of interconnectedness between 
species, things that human and animal species share, encompassing even life and death. In 
the introduction to *Studies*, Lewes writes:

> Around us, above us, the great mystic drama of creation is being enacted, and we 
> will not even consent to be spectators. Unless animals are obviously hurtful to us. 
> we disregard them. Yet they are not alien, but akin. The life that stirs within us, 
> stirs within them. We are all “parts of one transcendent whole.” (3)

While stress on interconnectedness here may seem merely to be a rhetorical strategy for 
drawing in his readers, we will see that his conviction is actually much more profound. 

Those readers who press on to the end of Lewes’s text discover that his attempt to 
elicit excitement for nature study and collection through enthusiastic description of 
specimens and the rhetoric of interconnectedness that he constantly employs in that effort 
are actually a long preface to a sustained philosophical argument at the end of his essay in 
which he questions specific aspects of Darwin’s theory of natural selection. Like 
Buckley, Lewes’s ultimate purpose in writing thus appears to be implicitly didactic. 

Lewes avoids, however, the stress on the “masculinizing” effects of objective nature 
study that Kingsley insisted on, and employs in the early parts of his study a style more 
reminiscent of Buckley, one that is more “feminine” and “engaging” according to Robyn 
Warhol’s distinction between the engaging and distancing narrator in nineteenth-century
literature. This “engaging” narrative strategy draws his reader in before it presents its natural selection theory.

Lewes’s critique of natural selection is, in part, that Darwin’s “new” theory is actually only a recasting of earlier “development” theory, as evolutionary theory was called pre-Origin. Lewes’s objection to Darwin’s theory rests more specifically in his belief that the category of species on which Darwin’s theory relies is an arbitrary, human-imposed, and often unreliable means of organization. In his later 1868 review of Origin, Lewes states this objection more specifically as originating in his belief that the category of species is a “subjective creation with no objective existence” (Versatile Victorian 302). Interestingly, Lewes’s “engaging” narrative strategy of attempting to elicit subjective responses to nature is preface to an argument that declaims the lack of “objective” means of verification in Darwin’s popular theory. In the later argument, Lewes goes so far as to dismiss arguments made about fertility and interbreeding that had previously been asserted as proof of the distinctions between species.

Lewes’s critique of Darwin’s use of the category of species, that Darwin’s means of categorization do not rest on objectively observable distinctions between types of animals, can be read alongside Walter’s reaction to Marion Halcome’s masculine facial features in The Woman in White. Walter’s sense that those features represent an “err[or]” of nature illustrates the same failure of classificatory means that Lewes identifies in Darwin’s work. Both Collins and Lewes defy the mid-Victorian emphasis on natural history as a means to masculine, objective observation because the categories of
taxonomy used to interpret nature are always inadequate. We recall that Collins thematizes Walter’s failures of observation and classification in several places where the external appearances of women do or don’t conform to Walter’s sense of rigid gender and class distinctions. Clearly, he thinks Marian should look more feminine, more like Laura. and at the same time, the similarity between upper-class Laura and working-class Anne Catherick is equally disturbing to him once he allows himself to realize it. Walter is ultimately forced to recognize what Lewes claims to already know: that the masculine concept of objective description requires a stable means of categorization, means that Lewes appears to think are never unquestionably available to the observer.


While Lewes uses a rhetoric of interconnectedness to draw his reader in before launching into his critique of Darwin, his contemporary, Gosse, employs a rhetorical style as different to Lewes’s as his anti-evolutionary, theoretical leanings are to Lewes’s belief in organic, unified development.18

Like Lewes, Gosse also tries to sell his own views of evolutionary theory through his natural history writings. Unlike Lewes, Gosse appeals to natural history as a source of confirmation of his faith in God and a divinely ordered universe. Even before the publication of Darwin’s Origin in 1860, naturalists such as Gosse, who were also devout Christians, found themselves answering challenges raised against their faith by development theory. Faced with this crisis, and with his desire to utilize natural history in
defense of his beliefs, Gosse wrote Omphalos (1857), in which he argues that strata and fossils, as well as animals and humans, are all created by God in such a way as to sustain the illusion that they have undergone evolutionary development. Gosse hoped that his work would ease religious conflict with science; instead, both adherents to development theory and creationists uniformly denounced it. Kingsley, in particular, vehemently objected to its premise, insisting that God would not perpetrate “one enormous and superfluous lie” (qtd in Gould 109).

After this disappointing critical failure, Gosse presented his next work, not overtly as a theoretical answer to the question of natural selection theory, but rather as a proposed means of understanding “the myriad wonders of creation,” and “the display of Divine power and wisdom” made miraculously more visible through the optician’s art of microscopy (Evenings iii). Where Lewes appealed to his readers with a feminine “engaging” style that argued for interconnectedness and similarity, Gosse, in the preface to Evenings at the Microscope: or, Researches Among the Minuter Organs and Forms of Animal Life (1860), describes microscopy as an entrance into an entirely foreign, exotic realm: “[l]ike the work of some mighty genie of Oriental fable, the brazen tube is the key that unlocks a world of wonder and beauty before invisible, which one has once gazed upon it can never forget and never cease to admire” (iii). Gosse, in using the Genie figure to promote the “brazen tube,” borrows from the language of romanticism to exalt the instrument that allows his readers and himself privileged visual access to God’s miraculous wonders.
While one might assume that Gosse's romantic rhetoric would be representative of an engaging narrative style, Gosse's insistence on the microscope's singular ability to provide access to the fantastic through description of microscopical observations also reads as a kind of privileged paternalism. It recalls the rhetoric used by Emily Steele Elliot in her novel *Under the Microscope, or Let Me Call Thee Father*, where she invoked the microscopic aesthetic to endorse the paternalist factory system. Gosse's agenda, however, is centered more emphatically on proving that God is, at bottom, responsible for all of creation. He appeals to his wide audience of working- and middle-class amateur naturalists with the assurance that they will indeed be entering a mystical world when they look through the microscope, though their specimens will all be familiar: "almost all the objects selected for illustration," he writes, "are common things, such as anyone . . . with access to the sea-shore and country-side, may reasonably expect to meet with" (*Evenings* vi). Gosse clearly hopes that his romantic rhetoric will help his reader to experience his or her examination of common objects as a fantastic accomplishment only available through the wonders of a sophisticated, scientific, and perhaps even divinely inspired invention.

Where Kingsley insisted on separating human studies from that of other animals, and Lewes denied that any such separation was possible, Gosse combines human and animal study, but only in order to emphasize the differences between humans and animals. He places hair and blood from humans and animals under the microscope to emphasize the distinctions between the human and animal specimens which are apparent
even on the most minute level. His studies also, however, connect the method and epistemology of natural history with that of the emerging fields of criminology and detection. One result of that connection is that he observes specimens of hair and blood from humans to prove their racial specificity. For instance, in his chapter on blood in *Evenings*, Gosse begins by describing the use of a microscope in a murder investigation to examine a particular blood stain. He then lists facts discovered by the eminent professor of microscopy: “1. The stain was certainly blood. 2. It was not the blood of a piece of dead flesh, but that of a living body; for it had coagulated where it was found. 3. It was not the blood of an ox, sheep, or hog. 4. It was human blood” (29). The professor’s discoveries become increasingly specific until he ultimately determines that “with the knife the throat of a living human being, which throat had been protected by some cotton fabric, had been cut” (30). Here is evidence enough to convict the prisoner when added to already strong circumstantial evidence. Gosse’s stirring account of the professor’s use of the microscope in this legal investigation is preface to his detailed, technical discussion of the ways that human blood can be distinguished from that of animals when closely examined through the microscope. Like Lewes, Gosse appeals to human sensation repeatedly as he describes his observations, particularly in his introductions to individual sections. But, Gosse’s descriptions have a distancing effect on his reader, particularly in their insistence that the divine wonders witnessed through the careful and exacting use of the microscope are ultimately only glimpses of that unknowable realm.

Gosse’s investment in differentiating humans from animals on a microscopic level
is also evident in his first chapter on “Hairs, Feathers, and Scales,” which he begins with another fantastic story of a criminal investigation. He describes an eminent microscopist’s examination of a “minute portion of dried skin” and his remarkable discovery from the fine hairs on the skin that this specimen belonged to a “fair-haired” human. The microscopist’s findings purportedly confirm a thousand-year-old story of a Danish robber who had been nailed to a church door in Yorkshire for his offense. Gosse places the human skin sample taken from the door under the microscope alongside an animal hair in order to give a detailed account of their differences.

By association then, Gosse’s accounts of forensic investigations at the beginnings of both these chapters connect the human world of criminology and forensic investigation with the world of nature and its mysteries. Gosse hopes for a tidy resolution to the mysteries he describes and tries to insist on the special power of the “brazen tube” to reveal the hidden distinctions between apparently similar things.

Gosse clearly sees microscopy as a means of solving mysteries, murder mysteries as well as philosophical ones. And yet, while his purpose is to assert evidence that God is the source of all creation, and that humans and animals are distinct entities, he does not want to claim that he, himself, has empirically “proved” these things. Rather he wishes to preserve the mysteries of nature study and humans’ relationship to other species by insisting that both are ultimately divine operations, and thus by definition unobservable and unknowable. There is an ordering principle to the universe as Gosse describes it. The figures of the genie and the “brazen tube” are invoked to show the divine nature of that
ordering principle and the wonders of being able to catch “glimpses” of it in operation. but the invocation of those figures also suggests that the magical view of creation allowed by the “tube” is a divine gift that will not allow all of its secrets to be revealed.

Ordering and the Unknowable

In the second half of Collins’s novel, the same preoccupation with issues of distinction and ordering is present, but a change has come over Walter after his return from Central America. Exactly why Walter’s view of his role as an observer and chronicler has become more that of a detective—why he decides that now he feels his “mind can rely on itself”—is unclear. The events that precipitated that change go unnarrated, so its origin cannot be accounted for in the text (373). The ordered view of the world that he originally sought in the natural historian’s method of observing and taxonomically ordering the things and people he observes, however, appears to have been entirely undermined in that unnarrated period, perhaps, the narrative seems to suggest obliquely, because his life has been threatened and almost lost several times during that voyage of self-discovery. Even prior to his trip to Central America, however, Walter’s failures of observation and classification become more explicitly connected with his mental instability, as his fear of monomania indicates. The result of his efforts to suppress his feelings in objective study is ironically that Walter himself become “insensible” to nature, obsessed with “[his own] human interest.” For he soon forgets his earlier claims that nature study helps in the forgetting of human interest and begins to insist instead on
the "lack of inborn sympathy between humans and their natural surroundings," claiming "[t]he grandest mountain prospect that the eye can range over is appointed to annihilation. The smallest human interest that the pure heart can feel is appointed to immortality" (45). Walter’s response to self-repression is to render nature "the product rather than the object of [his] perception, the landscape becomes a reflection of human psychology rather than organic variety" (Krasner 6), an emotional state that James Krasner has recently argued is only characteristic of much later post-Darwinian narratives such as those of Conrad and Hardy (3-32).20

Walter’s recovery from self-obsession and his swift metamorphosis into a detective come about not only as a result of his newly asserted masculinity, but also because of his adoption of a new method of observation, as we see when Collins returns to the metaphor of the observing self in relation to the landscape.

A life suddenly changed—its whole purpose created afresh; its hopes and fears, its struggles, its interests, and its sacrifices, all turned at once and for ever into a new direction—this is the prospect which now opens before me, like the burst of view from a mountain’s top. (379)

Where Walter once described himself as alienated from his surroundings, viewing "the grandest mountain top" only to imagine its future annihilation, he now transforms his subject position to one poised atop the mountain taking in the all-inclusive view that his new perspective allows. He now begins to request, collect, and condense all of the relevant narratives of the events of the story, rather than including them individually in
their own words "always in [their] most direct and most intelligible aspect," as he said he would at the beginning of his narrative in order to present the story (1). He asserts editorial control over the information he receives, holding back those facts that he deems prudent to withhold, ostensibly in the interest of protecting others.

Collins’s presentation of Walter as a man transformed thus appears quite consciously to mock the microscopic aesthetic that appears so prominently in Kingsley, and to some extent also in Swinburne, George Eliot and Emily Steele Elliot, and the anonymous authors of How to Live in London, by asserting the failure, and even the impossibility of objective observation. Though Collins would appear to dismiss entirely the possibility of scientific objectivity, the final section of this chapter will return to the question of why his replacement for it is an ostensibly subjective eye with both a panoramic perspective and sole editorial control.

The question of underlying ordering principles is also, of course, central to the detective novel. While Walter’s newfound editorial control over the narrative of The Woman in White might be seen as a pulling back from the idea of panoramic perspective suggested by the passage describing the new “burst of view from the mountain’s top” (in that he decides to hold back those details that he deems prudent to withhold), that control is actually his means of introducing an even larger interrelation in the novel that ties together its comic and detective plots, its beginning and ending, and Walter’s past and present. For the conclusion of the novel brings together Pesca, Walter’s bumbling friend who we meet at the beginning of the novel as an apparently simple and warm-hearted
teacher of Italian, and Walter’s arch-enemy Fosco in the mysterious Italian
“brotherhood.”

Fosco is ultimately dispatched by “the brotherhood,” who have been hunting him
down since he abandoned the principles of their organization for individual gain several
years before. He is not punished by the law for his crimes against Walter, Laura, Marian,
and Anne Catherick, but rather by the brotherhood for believing that he can act as a self-
interested, individual agent independent of any larger order. Walter learns of the
brotherhood and its wide reaching tentacles only at the end of the novel when Pesca
acknowledges to Walter that he is part of a secret organization that opposes tyranny and
has power even over Fosco. Only then does the reader understand the ironic significance
of Pesca’s comment to Walter early in the novel, “when you are on the top of the ladder,
remember that Pesca, at the bottom has done it all” (13). This comment analeptically
suggests an ordering principle to the narrative. The importance of Walter’s connection to
Pesca and Pesca’s to the brotherhood is not that either connection neatly ties together
beginning and ending and all loose ends of the novel: neither does. Nor is their
importance in any clarification they might bring to any of the earlier narrated or
unnarrated events of the novel. Rather, these connections assert that there is in fact an
ordering principle for the mystery story while also claiming the necessity of keeping that
principle vague and unobservable. The strategy of not disclosing the details of the
ordering principle echoes Walter’s omission of how he comes to his new approach to
deductive observation and selective presentation of “the facts” after his trip to Central
America. Walter insists that his silence on aspects of the brotherhood and its working is necessary for the supposed protection of the safety and identity of his friend Pesca. Like Gosse's genie, Collins's introduction of "the brotherhood" at the end of *The Woman in White* protects the author and narrator from having to explain or to solve the mysteries of their work.

U.C. Knoepfelmacher has argued that *The Woman in White* presents a celebration of the anarchic and "Manichean underworld" that most Victorian novels represent only to show how their heroes and heroines ultimately resist it. Collins's novel, Knoepfelmacher maintains, is best understood as "depict[ing] a collision between a lawful order in which identities are fixed and an anarchic lawlessness in which these social identities can be erased and destroyed" (362). The observation that Collins's novel celebrates the criminal element in a unique way seems to me apt. But to see either the world of "the law" or even "the law-abiding" in Collins's novel as the place where identities are ever fixed, or "the underworld" as entirely the place of anarchy, is, I think, to miss the pleasure that Collins takes in turning these expectations on their head. For instance, it is in the legal realm, as well as in Walter's confused psyche, where the confusion of Laura and Catherine's identities are most perplexing, while the criminals, Fosco and Percival Glyde, are never anything but clear on the distinctions. Nor is Fosco ever in doubt as to which of the women involved in this mystery is the most worthy of "heroine" status; the novel celebrates Marian's keen intelligence and heroic behavior primarily through the observations of Fosco, while Walter becomes instantly smitten with Laura. As others
have noticed, Laura's similarity to Anne Catherick in both her appearance and behavior appears to be Collins's way of satirizing the ideal of the Victorian submissive woman. (Taylor 106). It is Walter's expectation of a readable or interpretable social order based on familiar identities that is consistently undermined even before the criminal element is introduced into the novel.

To see the criminal element as anarchic in opposition to this other supposedly ordered world is also to miss Collins's delight in showing just how much better ordered the criminal world is. It is significant that Fosco's downfall comes about as a result of his belief that he can stand apart from or escape his connection to "the brotherhood." When Laura and Marian try to assert the existence of a different underlying order in the universe by repeating common platitudes about criminals and heroes, such as "crime causes its own detection" and "virtue is its own reward" (210-11), Fosco scoffs at their faith in such order. His dismissal is less important for the fact that the narrative appears to confirm the platitudes (Fosco's treachery does, in fact, cause his detection when Walter turns in desperation to Pesca for help), as they are for exhibiting Fosco's mistake in assuming the world can be ordered according to his own machinations, independent of those already operating in the "Underworld." The fate of Fosco at the hands of "the brotherhood" illustrates Fosco's own arguments about the hidden nature of most successful crime, but it also suggests that ultimate control over society is not something that any individual can hope to maintain alone or indefinitely, while the rigidly structured "brotherhood" successfully dispatches its enemies and protects its own anonymity. The message for
Walter seems to be that once something of this nature is observable and explainable, it becomes ineffective. Collins plays on Fosco’s own misconception when he has Madame Fosco write in her biography of the Count, “His life was one long assertion of the rights of aristocracy and the sacred principles of order” (552). One assumes that the content of her biography is as much the product of Fosco’s wishes as if he had written it himself.

“The brotherhood,” fractured as it is by traitors like Fosco, and situated as it is in a particular historical time and place, nevertheless reveals the interconnectedness of society over time, even after days of rupture and revolution are over. Collins is not suggesting that there is a fixed order to “the Underworld” Knoopfelmacher describes, but rather that there is some kind of order, and that its success and its importance rest in keeping it anonymous, even from the people who make up its population.21 Fosco’s silencing by “the brotherhood” ultimately allows Walter to close his narrative without having to explain in detail this or any of the other of the novels many mysteries and secret connections.

Collins’s ordering principle, “the brotherhood,” has been read as a plot device and even a failure of imagination. I read his introduction of such a principle as potentially a statement about the inscrutability of the world and its many mysterious relations among social groups and “species.” To represent those mysteries from their many gendered and social perspectives, Collins borrows from the “masculinizing” rhetoric of Kingsley only to show the inadequacy of the detached empirical perspective Kingsley advocates. The introduction of “the brotherhood” seems to serve the same purpose as Gosse’s invocation
of the “Oriental genie” that gives glimpses into the secret workings of the universe. And yet, Collins’s ordering principle is not one that is detached from human relations like Gosse’s; it is, rather, one that insists on interconnectedness as Lewes does in Studies. It insists on an organic society that is only understandable to the individual viewer in bits and pieces depending on the perspective and orientation of the observer. That Walter appears to know the secrets of “the brotherhood,” that he also presents himself as perched at the ultimate observational viewpoint, “like the burst of view from the mountain’s top,” should not mislead us into thinking that Collins sees Walter as omniscient, objective, or in any way all-seeing. Collins’s primary observer, Walter, is still presented ironically as the novel closes.
Endnotes

1 Both D. A. Miller and Jenny Bourne Taylor comment extensively on the change in Walter's narrative style in the second half of the novel. According to Taylor, "in the second part he continually uses 'hearsay evidence', and controls the comings and goings of other narrators as well as the story's beginning and end" (110). I comment on Miller's reading of the change later in this chapter.

2 Taylor, for instance, describes how Walter's definitions of "sane" and "insane" are shaken by his experiences with Anne Catherick and her similarity to Laura Fairlie (98-100).

3 Mark M. Hennelly Jr. also comments on this shift, but not as a factor of Walter's observational methods. Rather, he describes the plot of the novel as moving in three stages of reader responses: from one of an "exciting escape into sensationalism and melodrama," to "a stage of purely intellectual exercise," to the final stage of what he calls "enlightened entrapment" (459). My reading also sees a connection between the novel's sensationalist aspects and its epistemological endeavor, though I do not see these as divided stages. Rather, I see the first part of the novel exhibiting the collision between the sensationalism and Walter's efforts to observe the world as a natural historian would.

4 For more on the use of gender in the taxonomical ordering of species, see Scheibinger, "Gender and Natural History" 163-177; and also Nature's Body.

5 "Muscular Christianity" and Kingsley's sense of nature study as a masculinizing endeavor both appear to be a response of some sort to romanticism's notion of nature
study as access to the sublime. It seems that the romanticist’s focus on the details of nature to reveal the divine gets translated in mid-Victorian terms into the belief that the close observation of details of nature would reveal “the truth” about the world in “objective” terms. When I refer to “the feminizing influence of romance,” however, I do not refer to romanticism. That relationship seems too complicated to be worked through here, especially as it is tangential to the purpose of this chapter.

6 For a broad-ranged and wonderfully detailed collection that attempts to account for some of the various aims and cultural effects of natural history study from the sixteenth through the late nineteenth century, see Cultures of Natural History, ed. N. Jardine, J. A. Secord, and E. C. Spary.

7 For more description of such anthropomorphizing texts, see Lynn Merrill, The Romance of Victorian Natural History; and for an account of how such anthropomorphic and gendered narratives are still used in biology and zoology today, see also Donna Haraway’s chapter “Women’s Place is in the Jungle” in Primate Vision 279-303.

8 See Shuttleworth 27-30; and Jonathan Smith, Fact and Feeling.

9 For a fuller account of these groups, see Secord, “Artisan Botany” in Jardine, Secord, and Spary, 378-393. See also her “Science in the Pub” 269-305.

10 In my last chapter, we saw this self-consciousness in Mary Barton’s representation of Job Legh, where the narrative was less interested in his findings as it was in his social position as an amateur scientist within his community.

11 This enormously influential reading can be found in both Miller’s own book, The

12. For more on the interpretation of detection as having been derived from deductive thinking, see Ronald R. Thomas. “Making Darkness Visible” 134-68.

13 It is perhaps not strange, given the sardonicism with which Collins presents his central narrator’s reactions to sensations, that passages such as this that suggest Walter’s skepticism should sound so similar to those appearing in the work of the rationalist philosopher Descartes. Consider these passages from the Discourse on the Method and Rightly Conducting the Reason and Seeking Truth in the Sciences. As Descartes is describing the method by which he came about his method of seeking truth, he claims,

The first [of these rules of method] was never to accept anything for true which I did not clearly know to be such; that is to say, carefully to avoid precipitancy and prejudice, and to comprise nothing more in my judgement than what was presented to my mind so clearly and distinctly as to exclude all ground of doubt.

(Pt. II, para. 7)

This reads much like Walter’s suggestion that he will “come to no decision that plain fact did not warrant, and . . . turn [his] back resolutely on everything that tempt[s] [him] in the shape of surmise.” The sense that Walter is narrating events that occurred in the past revealing the mistakes in his prior thinking also appears in Descartes’ account of his method in Meditations:

It is now some years since I detected how many were the false beliefs that I had
from my earliest youth admitted as true, and how doubtful was everything I had
since constructed on this basis; and from that time I was convinced that I must
once for all seriously undertake to rid myself of all the opinions which I had
formerly accepted, and commence to build anew from the foundation, if I wanted
to establish any firm and permanent structure in the sciences. (Meditations 1, para.
1 tr. E.S. Haldane)

Even Walter’s description of the “civilizing influence” of nature study seems echoed in
Descartes’ account of his own entrance into the discourses of philosophy in his Discourse
on Method.

Of philosophy I will say nothing, except that when I saw that it had been
cultivated for many ages by the most distinguished men, and that yet there is not a
single matter within its sphere which is not still in dispute, and nothing, therefore,
which is above doubt, I did not presume to anticipate that my success would be
greater in it than that of others; and further, when I considered the number of
conflicting opinions touching a single matter that may be upheld by learned men,
while there can be but one true, I reckoned as well-nigh false all that was only
probable. (Pt. I, para. 12)

Walter too claims to have decided to consider anything “well-nigh false” that is only
“probable” and not definitively true. I do not know if Collins might have been
consciously suggesting a link between Walter’s skepticism and the philosopher’s, but, if
so, that connection is made in the spirit of much of what Collins does with Walter, with
the object of humor.

14 Scott Eathron connects Walter's "aesthetic anxiety over individual variation" and concern with "irregularities in class-based identity" to Collins's own interest in Romantic portraiture, claiming that Walter's initial fears exhibit a Reynoldsian hostility to Romantic sensibility, which disappears after his trip to Central America (7-10).

15 For a much more comprehensive account of the use of gender in taxonomies, see also Nature's Body.

16 As Thomas notes, such classificatory systems were combined with photography much later in the century in Havelock Ellis's composites of the criminal type (153).

17 Lewes's direct addresses to the reader in Studies conform to Robyn Warhol's definition of the "engaging," feminine narrator. See Gendered Interventions. Introduction.

18 Lewes's views on this are complicated even within Studies, as the shift from appeals to the sensations of readers leads him to a more rational argument about species, the same type of shift I identify in Walter's narrative in The Woman in White.

19 Stephen Jay Gould identifies the main problem of Gosse's thesis as his expectation that his readers would study fossils with precision while also expecting them to believe that these fossils have no existence in real time (Gould 101).

20 In The Entangled Eye, Krasner echoes George Levine's claim that One of the consequences of Darwinian theory to the observation of human behavior is that all observation is ultimately observation of the self. . . . . The universal is first reduced to the empirical, which cannot be universal; the
empirical no longer means direct access to the thing in itself but mediated access.

through one's own perceptual equipment; observation, then, is observation of the

self perceiving, not of the thing perceived. (Darwin and the Novelists 218)

As Pesca explains, members of the Brotherhood only ever meet the president and the

secretary of their branch. They do not see or recognize their other members (535).
Chapter Three

Lydgate’s Double Vision: Realism, Empiricism, and Medical Reform in *Middlemarch*

As the first part of my dissertation illustrated, the incorporation of scientific discourses within the narrative structures and styles of early Victorian novels, such as *Mary Barton* and *The Woman in White*, produced the appearance in these texts of thematic inconsistencies and confusions of genre, an appearance that I argue might be explained better by an accounting of the competing epistemologies of the individual and the social within each novel. In George Eliot’s *Middlemarch*, the interweaving of medical and scientific discourses into the fabric of the novel takes on a much more seamless appearance. This more fluid integration of discourses is possible because the goals of medical discourse, as adopted by *Middlemarch*’s fictional doctor Lydgate, and the goals of George Eliot’s realism in this novel are the same: to hit an ethical balance between a focus on individuals and aggregate populations.

In her introduction to chapter nineteen of *Middlemarch*, George Eliot displays a narrative technique that resonates throughout her novel. The chapter begins, “When George the Fourth was still reigning over the privacies of Windsor, when the Duke of Wellington was Prime Minister, and Mr. Vincy was mayor of the old corporation in Middlemarch, Mrs. Causabon, born Dorothea Brooke, had taken her wedding-journey to Rome (130). Here George Eliot juxtaposes world-historical events, such as the reign of an English king, with the honeymoon trip of the novel’s heroine, Dorothea Brooke, an event of momentous import perhaps only to Dorathen herself. This passage’s rapid movement in focus from events of social significance to ones of individual importance is typical of the way that the novel’s narrative itself constantly oscillates between a focus on
the responses of the Middlemarch community to various aspects of political and social change, and a much narrower focus on individuals’ emotional responses to social and personal events affecting their lives.¹

One might suspect that George Eliot’s decision to call her novel, “Middlemarch,” after the town in which its characters live, rather than after either Dorothea Brooke or Dr. Tertius Lydgate, its two central characters, suggests the greater importance to the author of the representation of the social body of the community than the delineation of individual characters or psyches. Middlemarch is, after all, a historical novel: it was written in the late 1860s and early 70s, but is set back to the years 1829-32, a period marked by important debates about social and political reform. While politicians of the late 1820s were arguing about whether or not to extend the vote to a greater proportion of men in England, reform movements of different kinds were affecting other aspects of English social life, including even the changing relationships between doctors and their patients. The novel’s detailing of Lydgate’s struggle to establish a successful practice in Middlemarch, employing the controversial new medical practices he learned in his education in the leading medical schools of Paris and Edinburgh, reflects George Eliot’s deep interest in the debates about reforming British medical education and practice.

In what follows I explore the connection between the novel’s interest in medical reform and George Eliot’s unique narrative style in Middlemarch. Does George Eliot’s interest in the history of medicine and science affect her representation of the Middlemarch community? She did keep several writing notebooks where she detailed, among other things, events and discoveries in the history of medicine.² But were those historical facts simply sprinkled throughout the novel to provide accuracy about historical
detail, much like film representations of nineteenth-century novels prove their authenticity by finding “authentic”-looking costumes, sets, and props? Or is medical history woven into the fabric of Middlemarch in a deeper way, one that influences even the way that the stories of these individual characters and their community are told?

The representation of the individual psyche is something we, for obvious reasons, associate with novels and with the history of the novel, as described by literary critics such as Nancy Armstrong. But how might the inclusion of scientific discourses into the language, structure, and style of a novel affect that focus on individuals? This question is especially important given the fact that most of the popular sciences of the nineteenth century involved the observation of aggregate populations, as we saw in the first two chapters about public health and natural history. I claim that the narrative voice in Middlemarch often appears to imitate the observational and diagnostic techniques of its fictional doctor Lydgate, a character who stands at a pivotal moment in medical history with one foot in the medical past and another in its future.

One of the central tensions in medical practice of the years 1829-32 when the novel is set is the fear that close, personal doctor-patient relationships of the past are gradually being replaced by doctors’ new scientific interests in statistical and microscopical investigations of aggregate populations. I claim that this tension between the observation of individuals and aggregates also governs George Eliot’s mode of realism in Middlemarch. Lydgate’s efforts to balance his focus between his comparative medical researches and his treatment of individual patients serves as a model for George Eliot’s own effort to balance her representation of the effects of social change on an entire community with her depiction of individual characters’ reactions to the social and
personal changes affecting their lives. I claim that it is both the realist project and the ethical project of the novel to maintain that balance, just as it is Lydgate’s ethical project (and what makes him so special) to maintain the same double vision in his practice.

To support these claims, I need first to describe some of the most important social and scientific changes occurring around 1829, the historical setting of Middlemarch, changes that relate both to medical history and the history of the novel. In part one, “Novel Medical History: Lydgate’s ‘Comparative Investigations’ and Microscopy,” I describe the changing structure of the doctor-patient relationship in nineteenth-century literature and culture and discuss the impact on that relationship of the growing scientific and popular interest in rapidly emerging technologies of medical observation, particularly microscopy and medical statistics. In part two, “Keeping Up (Medical) Appearances,” I explain why Lydgate’s double-focused practices are so threatening to his Middlemarch patients and colleagues. In part three, “Statistics, Anticontagionism, Positivism,” I trace how the perception of disease, its origins and means of transmission, changes as a result of the new medical methods of observation and diagnosis. I use this historical context to connect the views of Middlemarch’s fictional doctor Lydgate regarding medical observation, diagnosis, and therapeutics, to George Eliot’s own narrative mode of realist representation. In the final section, “Disease, Novelistic Desire, and Prediction,” I distinguish George Eliot’s views regarding realism, science, medicine, and empiricism, from those of some of her intellectual contemporaries with whom her views are often conflated. Recent critics of the novel connect George Eliot’s realist project in Middlemarch with her interest in the protosociological positivist and organicist philosophies of Victorians belonging to the same intellectual circles as those to which
George Eliot and her partner, George Henry Lewes, contributed. Briefly put, positivism, as it was described by its founder, August Comte, referred to the attempt to use empirical observation to discover laws by which to understand and predict human behavior and interaction. Mid- to late-nineteenth-century organicism, as Sally Shuttleworth summerizes it, was "the belief that the growth and interdependence of society—the social organism—are governed by operations of the same immutable laws that govern physiological life" (5). In other words, the laws that govern nature (e.g. gravity), or that govern the inevitable growth of an individual child into an adult, also govern society and its inevitable development. While I acknowledge the usefulness of these previous studies, I want to resist their unidirectional model of influence (i.e. the claim that the scientific views George Eliot puts forth in her writing were the result of her having been influenced by those intellectuals around her, rather than the reverse).

Instead, I want here to illustrate how, in its depiction of Lydgate’s radical, double-focused methods of observation, diagnosis, and therapeutics, the novel reproduces the methodological problems faced by the realist author attempting to provide a "true" picture of the lives of individuals and their communities. The complicated and multi-layered model of realism she presents here, at the same time that it appears to advocate a positivist and organicist study of human interactions, may actually, particularly in those places focused on medicine and disease, present a critique of positivists’ over-investment and even over-confidence in discovering laws by which to understand human behaviors and interactions.

1. Novel Medical History: Lydgate’s “Comparative Investigations” and Microscopy
Lydgate’s difficulties in establishing a practice in the town of Middlemarch arise partly from the simple fact that doctor-patient relationships in the early part of the nineteenth century usually involved long-standing, personal relationships between families and their trusted physician. Nineteenth-century doctors on the whole, and country practitioners such as Lydgate in particular, had neither the social status nor the paycheck that they do today. Thus one can imagine the difficulty a new comer might face when trying to build a clientele in a middle-sized, traditional community such as Middlemarch, particularly when that newcomer employs new instruments and espouses radical theories that conflict with the traditional medical wisdom of the old guard of Middlemarch physicians. It is important for appreciating Lydgate’s obstacles to understand why he is so different from the other physicians.

Medical historian Stanley Joel Reiser characterizes the doctor-patient relationship of the early nineteenth century and previous years as one of a trusted family servant who knew the history of the family’s general constitution and was thought to have a particular instinct for determining the source of patients’ medical problems. Family physicians usually made diagnoses on the basis of three types of observations: first, their visual observation of a patient’s condition (with almost no actual touching of the patient even to take a pulse); second, their knowledge of the patient’s family medical history; and third, the patient’s own testimony about his or her condition. From such information the family doctor would then intuitively determine a diagnosis and the therapeutics best suited to the ailment in question. Middlemarch gives us a good picture of what the traditional doctor-patient relationship and its intuitive diagnoses may have looked like.
For everybody's family doctor was remarkably clever, and was understood to have immeasurable skill in the management and training of the most skittish and vicious diseases. The evidence of his cleverness was of the higher intuitive order, lying in his lady patient's immovable conviction, and was unassailable by any objection except that their intuitions were opposed by others equally strong; each lady who saw medical truth in Wrench and "the strengthening treatment" regarding Toller and "the lowering system" as medical perdition. (97)

Clearly the narrator also sees an intuitive element to early nineteenth-century medicine. But while Reiser, a medical historian writing in the 1990s, attributes the instinctive nature of medical diagnosis and treatment to the doctors, George Eliot ascribes it to the doctors' lady patients, thus avoiding —however biting the sarcasm directed at these practitioners may be —any direct commentary on this older type of medicine. Her apparent discretion may have been wise given that she and her partner, George Henry Lewes, were often themselves in poor health and in frequent need of medical attention.  

Lydgate's practice differs from those of the other medical practitioners in part because he engages in three different types of medical observations: first, he wants to perform "comparative investigations" in a fever hospital, measuring what we would now call "vital signs" with the aid of the stethoscope and thermometer. He would have learned about medical statistics of this sort during his medical education in Paris where such techniques were being developed in order to provide doctors with an alternative to the almost entirely intuitive method of diagnosis. Second, Lydgate also wants to pursue his microscopical investigations in order to search for the "primitive tissue," or "common basis" from which all anatomical structures were thought to be formed. According to
Xavier Bichat's physiological studies, tissues were the smallest known unit of life. Cell theory had been proposed by the time George Eliot was writing *Middlemarch*, but it would not have been known during the time the novel is set.⁴

I want to stress here that both of Lydgate's first two methods mentioned here concentrate on aggregate populations, because in his microscopical investigations Lydgate assumes that each primitive tissue or "building block" in one body is exactly the same as those in every other human body. In other words, Lydgate assumes that what he discovers about the primary tissue in one body will reveal to him universal truths about the primitive tissue. Lydgate combines these first two methods, "comparative" and microscopical observations, with a technique reminiscent of the more traditional *Middlemarch* physicians: close observation of the physical appearance and testimony of each patient.

We see Lydgate using this combined approach to medical observation when he treats the heart condition of his patient, Edward Causabon, an aging and frail scholar who has recently married young, idealistic Dorothea Brooke. The narrator tells us, "Lydgate seemed to think the case worth a great deal of attention. He not only used his stethoscope (which had not become a matter of course in practice at the time), but he sat quietly by his patient and watched him" (197). In combining statistical and microscopical observations with the older, personal model of doctor-patient relationship, there is, in Lydgate's practice, an implicit and ever-present tension between the clinical study of aggregate cases, specimens, or symptoms and the study of individuals as individuals, in need of individual attention, diagnosis, and therapeutics.
The novel is careful to insist that despite his interest in comparative investigations and the microscopical observation of the body’s tissues, Lydgate never loses his compassion for his patients, or what we might now call his “bedside manner.” The narrator assures us that for Lydgate, “medicine offered the most direct alliance between individual conquest and the social good. Lydgate’s nature demanded this combination: he was an emotional creature, with a flesh-and-blood sense of fellowship which withstood all of the abstractions of special study. He cared not only for ‘cases,’ but for John and Elizabeth, especially Elizabeth” (99). In describing Lydgate’s special qualities as a doctor capable of caring not only for his research, but also for his patients—particularly female patients whose constitutions were largely considered by medical professionals to be the more delicate and weak—George Eliot also hints that his balanced perspective may be in jeopardy where women are concerned. I will describe the process by which Lydgate’s loses that balance in his personal life in a moment. First, let me describe some of the historical antecedents to Lydgate’s medical double vision.

Lydgate’s concentration on his patients as individuals, rather than simply as “cases,” implies an ethical commitment to his patients. Prior to the eighteenth century, there were apparently no codes of medical ethics in English medicine. The concept of etiquette between physicians was, however, enormously important. When Lydgate begins to treat other physicians’ patients whose illnesses have been misdiagnosed, and when he publicly declaims other physicians’ dispensing of drugs, he is seen by the other Middlemarch practitioners as having broken with traditional medical etiquette. In the eyes of the narrator, however, it seems that Lydgate’s decisions in these cases would accord with the relatively new concepts of medical ethics. Medical historians generally
attribute the first treatise written specifically on the subject of medical ethics to John Gregory, professor of physic at the University of Edinburgh. In *Lectures upon the Duties and Qualifications of a Physician* (1772) Gregory claimed that “The chief of these [moral qualities required by a physician] is humanity; that sensibility that makes us feel for the distresses of our fellow-creatures, and which, of consequence, incites us in the most powerful manner to relieve them” (19). As historian Albert R. Jonsen has argued, Gregory’s views are adapted from David Hume’s concept of sympathy. For Hume, Jonsen explains, “the entire moral life is founded on a natural and intuitive sympathy with the moral sentiments of others” (60). Hume and Gregory were colleagues and friends at the University of Edinburgh and Hume’s moral philosophy was widely influential there. Lydgate, of course, did some of his medical studies in Edinburgh, though considerably later. This model of the compassionate physician in eighteenth-century medicine was in the nineteenth century and is today a difficult one to maintain in the wake of developments in medical practice, particularly medicine’s increased specialization and the gradually increasing value afforded to medicine involving statistics and microscopy.

That the novel places a value on compassion is clearly seen in Lydgate’s practice, where, for instance, after spending much time by the bedside of Dorothea “while her brain was excited” during the period after her husband’s death, Lydgate recommends that Dorothea’s initially over-protective sister, Celia, and brother-in-law, James Chettam, allow Dorothea to “do as she likes. . . . She wants perfect freedom more than any other prescription” (341). Shortly thereafter we see Dorothea admiring her future second husband, Will Ladislaw, for being “a creature who entered into every one’s feelings, and
could take the pressure of their thought instead of urging his own with iron resistance” (344). The reader is, I think, supposed to see in both Lydgate and Will a model of compassion that the egoism of Causabon prevents him from sharing.

Though the influence of the medical ethics of Gregory seem evident in the depiction of Lydgate, his combined approach to medical observation may well have been modeled more particularly on that of a physician in Paris, Pierre Louis, who Lydgate studies with in the novel, and whose treatises on fevers are particularly influential on him. The influence of Louis’s philosophy and methods is a point that I will return to when I discuss George Eliot’s investments in positivism later. Let me elaborate first on Lydgate’s own methods and the similarity I see between his double vision and that of Louis.

The first of Lydgate’s controversial approaches to medical observation, “comparative investigations,” is a reference to medical statistics: Lydgate envisions himself studying the workings of disease in a new “fever hospital” over which he would preside, thus allowing him to oversee many cases of fevers and draw comparisons and contrasts between them. The term “medical statistics” itself therefore appears to mean something quite different from what it meant in Edwin Chadwick and James Kay’s statistical studies of the 1840s discussed in chapter one. Medical statistics in England of the forties referred primarily to the recording of environmental factors related to disease and to the mortality statistics of particular regions or social groups. Medical statistics in Paris of the late 1820s had a different object of investigation, namely the measuring of standardized indicators of health, such as pulse, breathing, and temperature.
The novel tells us that Lydgate studied with Louis in the late 1820s when the Paris physician was becoming famous in medical circles for several reasons, perhaps most famously for establishing a distinction between typhoid and typhus fevers. He was also known widely for his microscopical researches, for revolutionizing the method of taking patients' histories, and finally, for keeping careful records of each of his patient's appearance, pulse, and temperature in a fashion that resembles the keeping of vital statistics today, where standardized measures of health are taken often in advance even of a physician's entering the examination room. As one medical historian puts it, Louis was "the first to make statistics the basis of medicine" (Ackernecht, Paris Hospital 10).

While it may seem surprising now that information provided by technologies as old as the thermometer, the stethoscope, and the microscope would be challenged, these instruments were not yet accepted by the medical profession in part because of their invasive nature. Lydgate's use of a stethoscope and a thermometer on his patients, let alone his touching the patient to take a pulse, would have been seen by many as an unseemly penetration of the body, particularly when that body was female. It is telling as to George Eliot's own position on the new medical techniques that we see Lydgate taking the pulse and temperature of the novel's heroine, Dorothea, without narrative comment of either a positive or a negative kind. Perhaps as important an objection to these new technologies associated with medical statistics, however, was the scientific claim that the operations of such instruments were not yet standardized in any foolproof way. In the case of thermometry, the use of farenheit as a standard in the beginning of the eighteenth century greatly advanced its reliability. Nevertheless, debates continued about its use into the first third of the nineteenth century. According to Reiser, it was not until the end of
the 1860s — the period around which George Eliot was writing *Middlemarch* and some thirty years after the novel is set — that physicians in England and the U.S. began to accept the value of temperature readings gained through the thermometer. Only then, Reiser claims, was there a general critique of the accuracy of doctors’ subjective judgments of fever. In the late-1820s in England, when the novel is set, these practices were almost universally denounced primarily because of the lack of such reliable “healthy standards” by which to measure each individual reading.

The novel tells us that Lydgate worked with Louis on his studies of typhoid and typhus fevers, which theoretically would have exposed him to Louis’s methods of research into fevers, one that was entirely unique for his day. Historian James Cassedy explains Louis’s diagnostic regime as consisting of several important methods: “the observation and description of details, systematic record-keeping, rigorous analysis of multiple cases, cautious generalizations based solely upon observed facts, verification through autopsies, and therapy based more on the curative power of nature than on the deliberate practice of the art of medicine” (Cassedy 60-61). The novel’s representation of Lydgate’s approach to medical observation, diagnosis, and therapeutics would suggest that Louis’s fictional influence on the younger medical student extended much farther than simply Lydgate’s interest in his mentor’s studies on fever, though Louis’s name only appears in the text on the significant occasion where we see Lydgate reading Louis’s very treatise on typhoid and typhus fevers. Of course, we later see Lydgate successfully diagnosing Fred Vincy with typhoid after the Vincy family doctor, Wrench, has misdiagnosed Fred’s illness as typhus (a much less virulently contagious disease, as we now know).
We see the influence of Louis’s theories and methods on George Eliot’s representation of Lydgate’s practice in this description of Lydgate’s treatment of an auctioneer suffering from pneumonia:

Mr. Trumbull was a robust man, a good subject for trying the expectant theory upon —watching the course of an interesting disease when left as much as possible to itself, so that the stages might be noted for future guidance. . . . [H]e went without shrinking from his abstinence from drugs, much sustained by application of the thermometer which implied the importance of his temperature, by the sense that he furnished objects for the microscope, and by learning many new words which seemed suited to the dignity of his secretions. For Lydgate was acute enough to indulge him with a little technical talk. (311)

In this example, Lydgate’s regime is quite similar to Louis’s in his conservative therapeutics —no use of drugs, bloodletting, cupping, or any of the more aggressive therapeutic techniques —and in his careful observation and recording of the “course” of the disease. The similarity is especially clear if we take into consideration that the new fever hospital Lydgate envisions running will give him the opportunity to do the “rigorous analysis of multiple cases” that Louis is famous for and which Lydgate envisions as “comparative investigations.”

Even Lydgate’s personal interaction with his patient, Mr. Trumbull, recalls Louis’s methods of treating patients to a certain extent because it bespeaks his sense of the powerful importance of the patient’s own sensations to his or her diagnosis and treatment. Louis placed heavy importance on observing patients and listening to their testimonies of illness, something historians traditionally associate with the older
eighteenth-century model of doctor-patient interaction. His diagnostic regime is thus interesting from an empiricist's standpoint not simply because he introduced the rigorous use of statistical data into his medical regime but because he tried to objectify all of the elements of diagnosis, including the interaction between patient and physician. Here, for instance, Reiser describes Louis's unique method of eliciting a patient's testimony: "Under [Louis], it became a wholly different clinical instrument, as he insisted that the physician must direct the unfolding of the patient's story, although he must not question in a way that invited a particular answer" (32). It's true that Lydgate flatters Mr. Trumbull with his use of important-sounding words in order to secure his patient's cooperation while undergoing the highly unusual "expectant method" of observing disease. But Lydgate's method is truly unorthodox in comparison to his colleagues' unquestioning use of aggressive therapeutics. In the examples of Lydgate's treatment of both Mr. Trumball and Edward Causabon, Lydgate's resistance to aggressive forms of therapeutics and his willingness to engage his patient in determining a diagnosis and method of therapy all suggest that his teacher Louis has influenced his multi-focused model of medical observation.

Having argued for the influence of Louis on the representation of Lydgate, let me now stress that the novel's representation of Lydgate's struggles to establish a practice in Middlemarch and his particular investment in medical researches and reforms all situate him within a specifically English context. The conservative Middlemarch community is an ideal setting against which to offset the radical nature of Lydgate's views. Early in the novel it becomes clear that Lydgate's new hybrid brand of medical practice will be a hard sell in the close-knit, traditional community of Middlemarch. The town itself is already in
the throes of debate about political reform, a conflict that culminated in the 1832 reform bill, which appears to have disappointed almost everyone involved. Lydgate becomes a standard bearer for the new medical practices he learned from his education in the late 1820s in Edinburgh and Paris, and an adjutant for the reform of medical education and practice in England.

As many critics have noted, we see Lydgate in confrontation with the old guard of Middlemarch physicians over several crucial issues in the larger debates about medical reform. These included the tyranny of the three main branches of the English medical field over the rest of the profession, the legality of physicians dispensing drugs, the importance of medical etiquette among physicians, the reform of medical education, and the appropriate training for coroners. The novel's treatment of these specific issues raises larger questions about the novel's representation of medical reform, particularly the gradual professionalization of medicine in the Victorian period and the changing evidentiary notions in medicine, both of which highlighted for Victorian intellectuals the different ways that medical evidence might be valued and interpreted.

All of these specific and general issues were being raised in the medical journal, The Lancet, during the years in which the novel is set, the late 1820s and 30s. Most of them appeared in the editorials of Thomas Wakely, which are frequently mentioned in George Eliot's writing notebooks for Middlemarch, particularly one she titled "The Quarry." On the issue of medical professionalization, we see that both the novel and the "Quarry" address the question of what constituted good medical training. Both argue the need for the reform of British medical education and certification so that medical students educated in institutions outside of Oxford and Cambridge could get comparable medical
instruction and accreditation, thus cutting down on the number of “quacks,” about whom there was many anxious editorials in *The Lancet* (“Quarry” 614-615, *Middlemarch* 99-100). Both texts also describe what many in the medical community began to see as the tyranny of the three major professional medical organizations: The Royal College of Physicians, the College of Surgeons, and the College of Apothecaries (“Quarry 609. 611. 613, 615; *Middlemarch* 99-100, 108). Both the “Quarry” and the novel also question what should be the appropriate parameters of the physicians’ job. As I have mentioned, we see Lydgate confronting his colleagues over the illegality of physicians dispensing drugs according to the Apothecaries Act of 1815, a law that other Middlemarch doctors disregard in the interest of financial gain, if not survival in some extreme cases (“Quarry” 609-610; *Middlemarch* 101n.9); and we see Lydgate being accused of having breached medical etiquette when he treats other physicians’ patients that he rightly recognizes as having been misdiagnosed. Finally, we see both texts anxiously addressing questions of medical versus legal evidence. We see Lydgate sharing Wakely’s unpopular view, expressed in the September 11th and 18th, 1830 issues of the *Lancet*, that coroners should have medical, rather than, or in addition to legal training so that reliable death certificates and mortality statistics could be taken (“Quarry” 607, 607n. 2; *Middlemarch* 107-108).

All of these issues are addressed in detail in the novel’s account of Lydgate’s vexed relationship with the old guard of Middlemarch physicians and in each case the historical sources are carefully documented in “the Quarry” or in one of George Eliot’s other writing notebooks.

There are other references in *Middlemarch* to these and other important issues in medical history that aren’t so immediately traceable to a particular reference in one of
George Eliot's notebooks. For those Middlemarchers not involved in the medical community, not to mention those readers not so interested in specific medical issues, the more important questions involving Lydgate, his professionalism, and his epistemology of evidence, have to do with the success, or the appearance of success, of his three-fold model of diagnosis and therapeutics.

His approach to medical observation is clearly objectionable to his Middlemarch colleagues on several counts. His use of the thermometer, stethoscope, and microscope is particularly scandalous and threatening to his older, more traditional colleagues in part because it implies that the members of the old guard are behind the times. The theoretical arguments against such methods of observation had been the subject of debate in medicine and science for some time, and many of these debates went far beyond such superficial objections. Important medical figures in history discounted adamantly the findings of microscopical researches on empiricist grounds. For instance, René Laennac, one of Louis's heroes in the novel, feared that,

if the causes of severe diseases are sought for in mere microscopical alterations of structure, it is impossible to avoid running into consequences the most absurd; and, if once cultivated in this spirit, pathological anatomy, as well as that of the body in sound state, will soon fall from the rank which it holds among the physical sciences, and become a mere tissue of hypotheses, founded in optical illusions and fanciful speculations, without any real benefit to medicine. (Hudson 205)

Bichat, whose work in pathological anatomy initially sparks Lydgate's fascination with medical research, also denounced microscopy (Reiser 74). The objection to microscopy
in Laennac’s passage and more generally had to do with its supposed unreliability due to chromatic aberrations and the poor preparation and mishandling of specimens. Especially for a “radical empiric[ist]” such as Laennac, it probably also had to do with the fact that one had to accept theoretical assumptions about the workings of optics in order to argue that the microscope provides absolutely accurate information (Ackerman, *Paris School* 10). To put it another way, one would have to accept entirely all of the theories of optics (and, of course, assume that the microscopist accurately prepared specimens and lenses) in order to claim that what one sees through a microscope is exactly the same as what would be visible if one were approximately the same size as the microscopic object being observed. Unlike Laennac and Bichat, Louis, Lydgate’s teacher in Paris as the novel claims, was an early proponent of microscopy as a means to assist in the disease diagnosis other forms of medical research.

2. Keeping Up (Medical) Appearances

By setting her novel back almost forty years and attempting to put Lydgate on the cutting edge of early nineteenth-century medicine, George Eliot clearly faced the problem of keeping up Lydgate’s appearance of uncanny medical foresight, while also making him appear to be a product of the time and place of his medical education. As others have noted, in the world of the novel the perception of Lydgate’s medical practice is based most often on whether or not he *appears* to be doing something aggressive for his patients, rather than whether what he does is scientifically sound. ⁹ Despite a good beginning in *Middlemarch*, where Lydgate is at first seen as “not altogether a common country doctor, and in *Middlemarch* at that time such an impression was significant of
great things being expected of him." Lydgate soon begins to fare rather poorly in popular opinion, in part because of the suspicion of doctors engaged in new technologies and practices (96). The misconceptions about Lydgate are broad and even spectacular at times. His interest in autopsying a Mrs. Goby leads to an accusation that Lydgate is a grave robber or even a vivisectionist bent on opening up bodies before they are quite dead. Peter Logan rightly sees that Lydgate really does want use his unconditional methods to see inside the living organism and understand how it functions, though he is certainly no grave robber or vicarious vivisectionist (Logan 179).

George Eliot plays on these misconceptions, but the playful tone of her narrator sometimes disguises the presence of what may be commentary on rather significant medical issues related to observation and diagnosis, such as the new research in medical statistics. Take, for example, a passage seldom commented on by the novel’s critics which describes the Middlemarchers’ take on Lydgate after he first arrives:

Lydgate had not long been in town before there were particulars enough reported of him to breed much more specific expectations and to intensify differences into partisanship; some of the particulars being of that impressive order of which the significance is entirely hidden, like a statistical amount without a standard of comparison, but with a note of exclamation at the end. The cubic feet of oxygen yearly swallowed by a grown-up man—that a shudder they might have created in some Middlemarch circles! ‘Oxygen! nobody knows what that might be—is it any wonder that cholera has got to Dantzie? and yet there are people who say that quarantine is no good! (306)
The passage is difficult because it makes what seem to be huge conceptual leaps from talk of "particulars," to "statistical amount[s]," to cholera, contagion, and quarantine, without explaining the sources of the references. The "statistical amount without a standard of comparison" that she refers to in this passage, when connected with the idea of measuring "the cubic feet of oxygen yearly swallowed by a grown up man" probably alludes specifically to efforts to produce a standard by which to study respiration.

In his 1846 monograph, "On the Capacity of the Lungs, and on the Respiratory Functions, with a view of establishing a Precise and Easy Method of Detecting Disease by the Spirometer," Dr. John Hutchinson describes his invention, the spirometer, which was the first such instrument devised to standardize the medical observation of breathing. Reiser argues that part of the purpose of Hutchinson's invention was to change medical observation from a process where an individual doctor observed symptoms and then subjectively diagnosed them, to a process where those symptoms could be measured quantitatively and graphed so that many doctors could have a numerical medical record that was apparently objective and verifiable.

Hutchinson's device was supposed to show how breathing changed during times of normal growth versus disease. It measured what Hutchinson called the "vital capacity" of the lungs. The patient breathed through a tube connected to a receiver that was elevated by each increment of expired air; then the amount of air expired was measured with help of a graduated scale, also invented by Hutchinson, called the "vital capacity index" (Reiser 92-93). As Reiser describes it, the benefits of the device were not just its purported ability to detect lung disease faster than any other currently acceptable method (i.e. auscultation or percussion), but that doctors could then determine who was or was
not fit for armed service work and other public duties (93). Thus a method of establishing a standard measure of breathing was seen as having the potential to participate in the effort to quantify the social value of individuals.

In an article written two years earlier for the Quarterly Journal of the Statistical Society of London entitled “Contributions to Vital Statistics, Obtained by Means of a Pneumatic Apparatus for Valuing the Respiratory Powers with Relation to Health,” Hutchinson pitches his spirometer as “a new method of determining the effect of trades upon health, by ascertaining the presence of disease, and the extent of deterioration in the health of the living individual” (193). In this article he presents the results of his measurement of the capacity of the lungs of eleven hundred and fifty-one individuals of different occupations. By lung capacity, Hutchinson means the “quantity of air which an individual can force out of his chest by the greatest voluntary expiration, after the greatest voluntary inspiration” (194). His measurements are taken in cubic inches. He claims that he was able to determine a “healthy standard” inductively after recognizing that there was a relation “intimately existing between [lung] capacity and power, and the height of the individual” (197).

Though some were skeptical of the claims Hutchinson made for his invention from the beginning, criticism for of the spirometer, the “vital capacity index,” and “healthy standard,” came primarily when it was discovered that Hutchinson’s spirometer would indicate a deficiency in vital capacity in people who were believed to be otherwise perfectly healthy. This initial failure convinced many that physiological activities were too complex to represent numerically and that a statistically produced normal standard could not be relied on to determine normal from pathological states (Reiser 94). George
Eliot may have been among those early skeptics, though it is important to note that spirometers are still the primary instrument used today in the study of asthma and other respiratory problems.

George Eliot probably did share in the general skepticism about spirometers and other methods of standardizing measures of health in part because the boom in medical statistics of all kinds had already subsided by the time that Eliot began writing Middlemarch. The reason it declined is the same reason the narrator identifies in the passage above: the absence of reliable standards of comparison by which one could determine the fit from the unfit using statistics. Hutchinson's spirometer came under heavy criticism at almost exactly the same time that many of Louis's efforts to produce statistical indicators of health and disease were also coming under attack (Ackerncht, Paris School 104). By the early 1850s Louis's influential role in Paris was essentially over and his methods had then been discredited, though their lasting influence is present in routine medical check-ups today.

Another possible explanation for George Eliot's hesitation in identifying Louis more directly as an influence on Lydgate, or even including mention of the word "statistics" in describing Lydgate's method of diagnosis, is the resentment shown by some researchers in the mid-century medical community to what they saw as the overvaluing of statistical studies of health in the wake of the statistical boom in medicine of the 1840s associated with the studies of social reformers such as Chadwick and Kay. In one editorial from the June 11, 1859 issue of The Lancet, statistics are branded as the work of dilettantes from outside of the medical community whose ignorance of medical research threatened to distort statistical findings:
We live in increasing danger of being overridden by statisticians, who, sitting in snug cabinets, marshal huge columns of figures, put them through elaborate evolutions, and gain, to their own satisfaction, imposing victories over common sense, fact, and direct observation. These gentlemen rarely suspect that their numerical facts may be but a congeries of falsehoods, of imperfect observations, of preconceived notions, and errors of infinite sources which it is impossible to trace back. Hence it is, we presume, that your thorough-bred statistician never indulges in analysis. ("Lunacy Question")

In the hands of government bureaucrats, it was feared, statistics would be manipulated by chance or, as suggested by the references to the “snug cabinets” and to the bureaucrats’s acting to “their own satisfaction,” in the interests of personal or political ends, rather than scientific ones. The suggestion that the “thorough-bred statistician never indulges in analysis” accords well with accounts of the objective nature of “true” statistics made by empiricists such as Nightingale.

Even eight years after the publication of Middlemarch began, microscopist and medical researcher, Lionel Beale, complained that interest in medical statistics had hindered the progress of microscopy in medicine,

Much labor and money have been spent in obtaining statistical information concerning many diseases. Careful observations of a general kind have been prosecuted, and doubtless thoroughly well prosecuted, and accurately recorded in Government, and an enormous amount of information has been recorded in blue books. But why can we not have, in addition to this, the results of very minute and
careful investigations by physicians who have made themselves skilled physicians, chemists, and microscopists? (Beale 3)

It is clear in Beale’s introduction, in his mention of the beaurocratic emblem of the government blue books, that one of the reasons statistics and microscopical research are in competetion for attention is that the former already had the support of liberal social reformers outside of the medical community and in government who were interested in sanitation and hygiene. Beale’s concern, however, is not just that social reformers have swayed the tide of medicine away from research but that, in the process, liberals have produced a suspicion of scientific research as having dehumanized the once-kindly doctor. Beale writes, “not a few benevolent persons will perhaps think that the scientific investigation of disease means, in plain English, performing scientific and necessarily unjustifiable experiments on the sick poor” (9). It is not hard to make immediate connections between the concerns expressed by Beale and the novel’s representation of the panic produced in Middlemarchers when Lydgate asks for permission to autopsy the body of Mrs. Goby, who was indeed a respectable and poor member of the Middlemarch community. Perhaps the novel’s resistance to the term statistics, except in sardonic narrative intrusions such as that mentioned earlier which referred to Lydgate as a “statistical amount without a standard of comparison,” reflects a concerted effort on George Eliot’s part to distance her doctor from too close association with those whose well-intentioned efforts, according to Beale, may have slowed down the progress of medical research in the years to come.
Statistics, Anticontagionism, Positivism

As the example of Beale's editorial shows, there appears to have been a division in the medical community at mid century between those who advocated the use of environmental and mortality statistics (as opposed to what I call the physiological statistics of Louis) and those proponents of microscopy. This may have had much to do with the debate about germ theory that I described in chapter one, where statistics were associated almost exclusively with an anticontagionist view of disease origins. The discovery of germ theory, which finally disproved anticontagionist theories, came about through the microscopical researches of Koch and Pasteur on fermentation and putrefaction and of Lister on bacteriology. The rather hysterical passage referring to Lydgate as a statistic without any comparative standard goes on to wonder at the measuring of "[t]he cubic feet of oxygen yearly swallowed by a grown-up man," before leaping into a statement about the spread of cholera and the necessity of quarantine regulations: "'Oxygen! nobody knows what that might be —is it any wonder that cholera has got to Dantzig? and yet there are people who say that quarantine is no good!" The anxiety reflected by the medically and scientifically uninformed Middlemarchers (I assume here that George Eliot's narrator is adopting their personas here) over the possible lifting of quarantine regulation, which could only be done if disease were generally thought to be entirely a matter of environmental pollutants and not caused by contagions that were as yet invisible to the medical doctor, would suggest George Eliot's own anticontagionist stance, given the seemingly sardonic tone of the narrator. Yet, the late 1860s, when George Eliot was writing Middlemarch, was the precise period when
germ theories of disease were beginning to be universally accepted. While Lydgate does not comment directly on the disease theory question, he does recognize that Fred Vincy is suffering from typhoid and not typhus (diseases which were not distinguished from one another until Pierre Louis’s famous 1828 tract, which we see Lydgate reading early in the novel), while Wrench, a traditional Middlemarch physician, mistakenly diagnoses Fred with typhus, a much less virulently contagious disease.¹⁰

George Eliot’s position on disease theory is thus important to any account of her epistemological and ethical approaches to medicine and literature. To give a sense of the epistemological and ethical questions at stake in disease theory debates, let me review briefly the debate between anticontagionists and contagionists that I describe in much more detail in chapter one. On the anticontagionist side, proponents often made claims for the factual nature of statistical studies. All such studies were supposed to be made without the interference of presuppositions or theoretical assumptions. Theories and narratives of disease involving mysterious causal agents were seen as opposite to the so-called neutral facts collected in “thoroughgoing” statistical studies (“Lunacy Question”). George Eliot’s letters show that she met and spoke at length with the avid anticontagionist, Florence Nightingale, more than once in 1852 and that she admired Nightingale very much for her “loftiness of mind” (Letters 2:45). Probably the most visible advocate of medical statistics in nineteenth-century England, Nightingale personally launched a massive campaign after her return from Crimea and her experience of the poor hygienic conditions of hospitals there to advocate the use of medical statistics in the English army and in hospitals throughout Great Britain. In one of her many attacks on the doctrine of contagion, she dismisses contagion as a fiction invented by “poets and
historians" which “finally made its way into medical nomenclature where it has remained ever since, affording to certain classes of minds, chiefly in the Southern and less educated parts of Europe, a satisfactory reason for pestilence, and an adequate excuse for non-exertion to prevent its recurrence” (Hospitals 9). She saw statistics as the only way to combat such insidious fictions. In a letter to the social reformer and statistician William Farr on the death of the founder of the statistical movement of the nineteenth century, Adolphe Quetelet, Nightingale describes the vital importance of statistics to that scientific observation:

I cannot tell you how the death of our old friend touches me: the founder of the most important science in the whole world for upon it depends the practical application of every other: the science essential to all Political & Social administration, all Education & Organization based on experience, for it only gives us the results of our experience. (Nightingale’s emphasis, BM 43400, f.276)

Nightingale sees an antithesis between the “results of our experience” and those narratives that she describes in the preceding passage as having been initially provided by poets and historians and as having eventually made their way into medical nomenclature.

Nightingale was not alone in believing that contagion was the product of fictional and inaccurate historical narrative. While she was as adamant in this regard as earlier anticontagionists, she was not quite so paranoid as others; Charles Maclean, for instance, suggested that contagion was an idea invented for political reasons as part of a Papist plot. In The Evils of Quarantine he describes contagionists as simultaneously ridiculous for holding such beliefs, but also as insidious in presenting themselves as exclusively “initiated into the mysteries, and acquainted with the secrets, of this inscrutable agent”
(Maclean 209). Moreover, he argued that the doctrine of contagion had been deployed since its inception as a means of “arbitrary power,” “propagated as a ‘medical religion’ in the universities and schools of physic” (Eyler 100).

Philosophical arguments such as Nightingale’s and political ones such as Maclean’s relied on the apparent antithesis between theories and narratives of disease on one side and the supposedly factual empiricist studies provided by statistics on the other. Given the narrative space allotted in Middlemarch to false notions about Lydgate and his diagnostic method, the distinction between empiricist fact and fictional theories and narratives embodied in the contagion/anticontagion debate has immediate relevance to the novel’s representation of Lydgate’s researches.

George Eliot’s well-documented interest in such intellectual movements as the positivism of Auguste Comte would suggest that she would have had sympathy with anticontagionists’ suspicions of theories of a mysterious agent of contagion. His protosociological theories included a disbelief in the efficacy of theories of causation in favor of the study of “laws of succession and resemblance.” Disease would be better understood as being, in Hume’s words, “constantly conjoined” with certain factors that could be observed: poor hygiene, sanitation, etc., than as being caused by a mysterious and unidentifiable agent. According to Comte’s own theory of the progressive history of science, such an approach to disease would move the science of medicine in the direction of other such positivistic sciences as astronomy and chemistry.

Briefly put, Comte’s philosophical system or philosophy of history held that there were three stages in the history of any science: (1) the theological, (2) the metaphysical, and (3) the positivist.11 In the theological stage “man thinks that every thing is animated
by a will and a life similar to his own.” There are three phases of this stage: A) animism or fetishism, where each object has its own will, B) polytheism, in which divine wills impose themselves on objects, and C) monotheism, where the will of one god imposes itself on all objects. In the metaphysical stage, “abstractions” are substituted for a personal will, and “causes” and “forces” replaces the desire of divine wills. Instead of monotheism, one great entity, nature, prevails over all. Finally, in the positive stage, man abandons the search for absolute knowledge, knowledge of a first cause or a final will, or indeed any causes whatsoever, and concentrates his research on “relations of succession and resemblance” (Edwards).

Comte’s philosophy is, of course, based on that of Hume, who believed that what we know of the world, we know only through the observation of phenomena. We acquire a belief in cause-effect relations between phenomena only because of our experience of having observed them occurring in constant conjunction. Thus, we can never actually observe cause-effect relations; what we understand through custom as cause-effect relationships are only our associations of ideas that we read into reality.

Comte is working from a similar premise when he suggests that the task of any scientist in the positivist state is to abandon the search for causes, avoid the temptation to pervert observations to suit any preconceived theory, and, instead, set up hypotheses about invariable relations of events which can then be tested. He suggests that the observation of things that occur in constant conjunction can reveal the laws that govern the sciences. The notion of law that he was working with here was, he claimed, an entirely observational and non-metaphysical one. His idea of law appears to have been entirely shared for some time by such prominent figures as George Henry Lewes and
John Stuart Mill, both of whom wrote extensively about Comte.\footnote{12} Hume, however, would not have accepted Comte's idea that the observation of things that occur in constant conjunction could provide us with any such laws. He would instead have claimed, as Comte's critics did, that Comte's notion of law was no more positive or observational than the notion of cause. Hume would have found Comte's notion of laws of succession and resemblance no less metaphysical than notions of cause and effect. William Whewell makes just such an argument in an 1866 article "Comte and Positivism," in Macmillan's Magazine.\footnote{13}

We can see Comtean ideas in the language of those proponents of medical statistics, such as Nightingale, who stressed the importance of "the results of our experience" in her praise of statistics quoted above. We might also see Comtean, though not Humean, ideas in her suggestion that through the study of sanitary statistics we might learn "what the laws of nature really are, and how they are to be obeyed" in order to avoid "the baneful consequences of such doctrines [contagion]" ("A Contribution" 12).

We know that George Eliot read Comte and contributed to positivist organizations (Voegler 412-14). She was thus influenced by Comte and positivism, though perhaps not to the same extent as were Lewes, Mill, and many other of her contemporaries.\footnote{14} And yet, there are aspects of her representation of Lydgate in relation to this contagion/environment question and the debates over medical statistics of the early and mid-nineteenth century that would suggest her skepticism of the whole-hearted embrace of Comte's philosophical ideas that we see in Nightingale's and Lewes's work in particular.
This skepticism may appear in one of the many possible misconceptions about Lydgate’s medical training, a seemingly subtle one that critics seem not have noticed. Mr. Farebrother, one of the townspeople probably most educated about medical issues, claims that Lydgate is a protégé of the famous Paris school physician Francois Broussais, who, like Louis, would have been in Paris in the late 1820s when Lydgate was studying there. Mr. Brooke too claims that Lydgate “knew” Broussais in Paris, but in his theories and methods Lydgate’s practice seems hardly to resemble Broussais’s at all. Dorothea probably is better informed than Brooke or Farebrother about Lydgate’s medical influences since she has clearly heard about them from Lydgate herself. She tells Lydgate during the worst of his personal crises that she hopes he can overcome his troubles and “win great fame like the Louis and Laennac [she has] heard [him] speak of” (527). The late 1820s was an extremely pivotal moment in the history of research into disease and Broussais, Laennac, and Louis were major figures in this transitional moment. For this reason, the fact that the narrator emphasizes that Lydgate worked with Louis, while Farebrother and Brooke believe, perhaps mistakenly, that Lydgate worked with Broussais, turns out to be an important misconception, one that has been shared by contemporary critics interested in the influence of clinical medicine on George Eliot’s realism.  

Among other things, Broussais was famous for his aggressive therapeutic technique of copious bloodletting, a technique the novel comments on in the following passage:

For the heroic times of copious bleeding and blistering had not yet departed, still less the times of thorough-going theory, when disease in general was called by
some bad name, and treated accordingly without shilly-shally—as if, for example, it were to be called insurrection, which must not be fired on with blank-cartridge, but have its blood drawn at once. (97)

The tone of the passage toward its subject is obviously sardonic. While the “heroic times” being described here might resemble the medicine of the eighteenth century, there is also likely a reference to debates about therapeutics of the early part of the nineteenth century. Louis’s 1828 essay on the ineffectiveness of bleeding as a therapeutic technique in treating disease helped to dethrone Broussais as the leading medical figure at the famous Paris school of medicine, a position Broussais had held since around 1816.

During his figurative reign in Paris, Broussais also had an enormous influence on American and British medical students alike as a champion of “heroic” medicine, a practice that rejected the popularly held Hippocratic theory of the curative powers of “nature” and the patient’s own “natural” setting. Vis medicatrix naturae, as this particular Hippocratic theory was called, is exemplified in the “expectant method” that Lydgate practices with Mr. Trumbull. Broussais’s prescriptions for excessive bleeding, by contrast, called for an aggressive attack on disease at its specific location in the body.

If George Eliot is thinking of Broussais in the passage above, then it looks as if she is suggesting that Broussais himself was falling into “metaphysics” in calling disease “by some bad name,” and aggressively treating it as “insurrection,” an observation I will return to shortly.

Broussais’s diagnostics and therapeutics were based on his theory that all disease consisted of a single fever. Rather than considering disease to be an independent element existing within and attacking the body, Broussais argued that disease was actually a
change in function, an inflammation, most often (in Broussais’s own work) of the gastrointestinal tract. Broussais is credited by many, including such eminent medical figures as Charcot, with shifting the popular emphasis in disease theory from the old concentration on symptoms and essential fevers, as illustrated in Phillipe Pinel’s Nosographie Philosophique (1798), to a new focus on what was to become known as “physiological medicine” (Ackernecht, Paris Hospital 61-82). According to Broussais, Pinel’s nosology was simply “arbitrary” ontology. Broussais’s critique of Pinel’s nosology sounds, of course, very Comtean. In the conclusion to his history of medical perception of the eighteenth century, The Birth of the Clinic, Michel Foucault describes the new era of physiological medicine and its anatomo-clinical method as having been ushered in by Broussais and transformed into “the historical condition of a medicine that is given and accepted as positive” (Foucault 197). 18

According to Comte, too, Broussais was “the founder of positive pathology” (648). Comte describes how Broussais’s theories built on the work of Bichat, whose discoveries are the catalyst for Lydgate’s “moment of vocation” (Middlemarch 98). In an 1828 essay entitled “Examination of Broussais’s Treatise on Irritation,” Comte describes Broussais’s indebtedness to Bichat:

M. Broussais, starting from the general anatomy founded by Bichat, placed pathology on its true basis, presenting it as the investigation of deteriorations to which tissues are liable and of the phenomena thence resulting. He first clearly recognized diseases are only symptoms, and that functional derangements cannot subsist without the lesion of organs or rather of tissues. (648)
Clearly Broussais’s influence during the period about which George Eliot is writing—particularly his antiontology, antinosology, and localism—and his decline in popularity following the more successful explanations of disease of Louis and others, are pertinent to the presentation of Lydgate’s approach to disease in *Middlemarch*. Broussais’s rejection of ontology as simply “romans” in which “symptomatologist mistakenly mistook the event for the cause” was enormously important for his time (Ackernecht, *Paris Hospital* 68). In its rejection of causative explanation it was for obvious reasons attractive to Comte and his admirers.

George Eliot’s implicit critique of Broussais, however, if I am correct in reading the passage about aggressive therapeutics from *Middlemarch* quoted above as such, would suggest that her attitude contrasts with Comte’s, for Comte treats the single fever as precisely *non-*metaphysical, i.e., “positive,” just a matter of symptoms. And in this George Eliot may be seeing deeper. The single interior fever, even if thought of as a neurophysiological entity, may be no more scientifically positive a notion than the notions of “contagions.”

Broussais’s 1832 monograph on the recent outbreak of cholera from the position of “physiological medicine” revealed the inability of his theory to explain or to treat cholera successfully and thus precipitated his decline as a prominent theorist in Paris (Ackernecht, *Paris School* 66-7). The failure of his anticontagionist theory reopened discussion of the possibility that while some forms of epidemic disease, such as yellow fever, might be popularly held not to be contagious, typhoid, cholera, and others probably were contagious (to a greater or lesser extent in each case). Louis’s 1828 study of typhus and typhoid had already created much controversy over the single-fever question.
Broussais's failure in the 1832 report on cholera simply confirmed his critics's views. In the "Quarry," George Eliot claims that the Broussaisian single disease theory was the very stumbling block that prevented English doctors from recognizing the distinction between typhoid and typhus:

The question excited considerable interest in France, but less in England where a strong bias has always prevailed towards a belief in the doctrine of a Single Fever. But dissenters arose. Scotch, English, and American physicians, familiar with the fevers of their own countries, began to visit Paris to study fever there; & they were not long in learning the chief points of difference between the two fevers.

("Quarry" 616)

Clearly George Eliot saw the single fever theory as already having been shot down in Paris by the time that Lydgate is supposed to have been studying there. Later in her notebooks she describes Louis's work on typhus and typhoid, by contrast, as "the first to give a complete and connected view of symptoms as well as of post-mortem lesions in the fever common in Paris" ("Quarry" 616).

I stress the importance of Louis and the references to the decline of Broussais in the journals and the novel because recent critical attempts to investigate the novel's investment in medical models of observation and diagnosis, particularly its complicated interweaving of medical discourse within its own narrative mode, have focused often uncritically on the birth of clinical medicine as described by Foucault as the primary model for the novel's realism. I argue that the novel's epistemology and narrative structure reflect a more complicated attempt to represent flux in the medical climate and in its approach to understanding disease, a flux that persistently dealt with ethical
questions in the practice of medicine. Thus George Eliot's representation of Lydgate's methods of medical observation and her own overall narrative strategy in *Middlemarch* are dominated by a heightened attention to the tensions produced by a simultaneous focus on individuals and aggregates. The differences between Broussais's and Louis's approaches to disease diagnosis and therapeutics tell us much, not only about Lydgate's approach to the medical observation of individuals and comparative, statistical measures of health, but also about George Eliot's approach to representing the thoughts and interactions of individuals and collective populations.

4. Disease, Novelistic Desire, and Prediction

The novel's representation of Lydgate's theories and methods differs not just from the other Middlemarch doctors, but also from other fictional representations of doctors in the nineteenth century, perhaps in large part because disease means something very different in this novel than it does in other novels employing fictional medical doctors. As Helena Michie has noted, in earlier eighteenth- and nineteenth-century English novels disease was usually thought to reflect some kind of moral failing on the part of an individual or, in the case of epidemic disease, a community. As my first chapter illustrated, this view of disease as having a connection to morality, even a causal connection, was a diagnosis often shared by real physicians of the period. In nineteenth-century novels, when, for instance, Mary Barton or Marianne Dashwood in *Sense and Sensibility* falls ill, we know, as educated novel readers, that she is likely either to die or to be changed fundamentally by her fever. And both characters appear to have been cured
of their previous rebellious and sexually dangerous behavior at the end of their respective novels.

In *Middlemarch* the narrative function of disease is harder to recognize and predict as the pressures and expectations of the marriage plot appear to come up against those of Lydgate's medical epistemology. There are three important cases of illness within the novel, those of Fred Vincy, about which I have already said much, Causabon, and Raffles. In each case, Lydgate provides a scientific diagnosis that appears to suit the plot function that each disease seems designed to fulfill. Fred's illness prompts readers' sympathy for him whose mistakes have cost much to those who have supported him. Raffles' "delirium tremens" (483n2) causes the crooked dealings of Bulstrode to be exposed and it also highlights the extent to which financial matters have compromised Lydgate's integrity; and Causabon's illness, "fatty degeneration of the heart," frees Dorothea to enter into an affective marriage plot with Will Ladislaw. To combat the impression that the diseases are mere plot devices, George Eliot makes reference to historical figures and treatises, in each case to show that Lydgate is acting under the latest and most reputable medical knowledge. In the case of Fred's typhoid, the novel refers to Louis's treatise on fevers. In the case of Raffles' delirium tremens, the narrator tells us Lydgate "rehears[es] the whole argument which had lately been much stirred by the publication of Dr. Ware's abundant experience in America, as to the right way of treating cases of alcohol poisoning such as this" (483). And Lydgate's diagnosis of Causabon's "fatty degeneration of the heart" is based, he tells Causabon, on the theory of Laënnac who first diagnosed the ailment. Lydgate's prognosis for Causabon is that "death from the disease is often sudden," but his condition may also be consistent with living "another
fifteen years of even more” (293). We know that Dorothea must be freed from her marriage in order to enter into a second marriage plot, only this time an affective one. Thus Causabon is dispatched by his medically unpredictable condition within a few short chapters.

Just as the novelist has to sustain a precious balance between the pressures of the scientific discourse versus those of the marriage plot, at the same time that she has to maintain a balance between a focus on individuals and aggregates, she also must maintain a balance between Lydgate’s statistical and microscopical scientific interests and his care for the individual patient. Lydgate, however, loses his ability to maintain a balanced medical focus as a result of the financial and emotional pressures of maintaining his wife and himself at the high standard of living to which they have both been accustomed. Lydgate faces the added burden of attempting to gather funds for his fever hospital from Bulstrode whose ethics he has begun to question. As these pressures take their toll on Lydgate, it is significant the first change in him that becomes apparent to his friend Farebrother is the loss of his medical double focus. When Farebrother comes to see Lydgate, he observes the following:

Lydgate had talked persistently when they were in his work-room, putting arguments for and against the probability of certain biological views; but he had none of those definite things to say or show which give the way-marks of a patient uninterrupted pursuit, such as he used himself to insist on, saying that ‘there must be a systole and a dyastole in all inquiry,’ and that a man’s mind must be continually expanding and shrinking between the whole human horizon and the horizon of an object glass. (442)
While it might seem that this is just a general metaphor about viewing the macrocosm versus the microcosm, the narrator's specific choice of words is important. The "whole human horizon" refers at least in part to patients, while "the horizon of the object glass," in Lydgate's case, probably refers to his microscopical search for a universal primitive tissue. Comparing Lydgate's double focus to the expansion and contraction of the heart muscle suggests the vital nature of Lydgate's oscillating vision for his own survival as a researcher and practitioner.

The reader has been alerted to the possibility of Lydgate's decline early on in the novel, before Lydgate makes his decision to marry Rosamond, because we see him making the mistake of thinking that his scientific pursuits and his domestic life are separate worlds requiring different levels of consideration for success. After Lydgate has spent time at the Vincy house, ostensibly caring for Fred, but also happily flirting with Rosamond, he comes home, picks up Louis's treatise on typhoid and typhus, and forgets about the implications of his flirtation for Rosamond and himself:

He went home and read far into the smallest hour, bringing a much more testing vision of details and relations into this pathological study than he had ever thought it necessary to apply to the complexities of love and marriage, these being subjects on which he felt himself amply informed by literature, and that traditional wisdom which is handed down in the genial conversation of men.

(113)

We are reminded in this passage of Nightingale's caution of the ways that stories of causal agents repeated often enough can gradually come to be accepted as fact. Lydgate's acceptance of "traditional wisdom" in his personal life — the belief that a woman's
appearance can reveal her inner character — while in his scientific life he requires a constant “testing vision of details and relations,” tells the reader that Lydgate will have missed the “details” of Rosamond’s behavior and the possible “relation” between her behavior and her mistaken assumptions about his social position; thus he will not likely have “seen” her at all.

Lydgate’s vision where other women are concerned seems, if similarly misguided, at least more contemplative. After meeting Dorothea, he observes, “‘She is a good creature—that fine girl—but a little too earnest.’ . . . ‘It is troublesome to talk to such women. They are always wanting reasons, yet they are too ignorant to understand the merits of any question, and usually fall back on their moral sense to settle things after their own taste’” (63). Dorothea’s moral sense will come to be enormously valuable to Lydgate when she champions him against the bad opinion of most of the rest of the Middlemarch community after his shady ties to Bulstrode surface in the public eye. But Lydgate’s simple view of women — shaped by “traditional wisdom” which assumes the “ignorance” and weakness of women’s characters — does not allow him initially to acknowledge or value the strength of her moral and ethical character. The narrator even appears to draw humor from the idea that Lydgate would bring a testing vision of details and relations to his observations of women, remarking, “Plain women he regarded as he did the other severe facts of life, to be faced with philosophy and investigated by science” (64), as if these were not the proper subject of scientific vision. The alternative, however, to the vision that oscillates between the individual and their social milieu, in the personal realm as well as the scientific one, is a dangerous reliance on assumptions. So Lydgate assumes that Dorothea’s company will be trying to him because of her questioning
nature, while Rosamond's will be quite the opposite: "[Dorothea] did not look at things from the proper feminine angle. The society of such women was about as relaxing as going from your work to teach the second form, instead of reclining in a paradise with sweet laughs for bird notes, and blue eyes for a heaven" (64).

So while Lydgate assumes that the personal and domestic life can somehow be separated from that of the scientific and professional, Dorothea, who originally marries in order to forward social progress by helping her husband in his work, has never had that luxury. She, however, appears to bring the same kind of oscillating and "testing" vision to her personal life that Lydgate brings to his studies. In helping her husband to assemble his Key to All Mythologies out of the mass of materials that he has collected on the subject, Dorothea soon sees that Casaubon's intellectual pursuit is futile; his ability to see the larger picture with regard to his subject is severely limited by his egotism. Here the narrator describes Dorothea's more discriminating intellectual vision:

The poor child had become altogether unbelieving as to the trustworthiness of that Key which had made the ambition and the labour of her husband's life. It was not wonderful, that, inspire of her small instruction, her judgment in this matter was truer than his: for she looked with unbiassed comparison and healthy sense at probabilities on which he had risked all his egotism. (331)

Her ability to make "comparison[s]" and to see probabilities is in many ways comparable to Lydgate's "testing vision of details and relations," which he applies to his work but not his marriage. The need to carry over one's scientific and intellectual methods of observation into one's personal life is underscored by the narrator's description of Casaubon's intellectual and personal failings. His work, from which Dorothea senses he
has wanted to keep her aloof, has been conducted without reference to and without ever having been tested by or against the views of others.

But Mr. Causabon’s theory of the elements which made the seed of all tradition was not likely to bruise itself unawares against discoveries: it floated among flexible conjectures no more solid than those etymologies which seemed strong because of likeness in sound, until it was shown that likeness in sound made them impossible: it was a method of interpretation which was not tested by the necessity of forming anything which had sharper conditions than an elaborate notion of Gog and Magog: it was as free from interruption as a plan for threading the stars together. (332)

The individual theory that is “free from interruption,” or assembled without reference to the thoughts and ideas of others has no likelihood of “bruising itself unawares against discoveries” (331); the egotism of Causabon thus prevents him from seeing the lack of sense and connection within his own fragments of a theory.

While Causabon’s egotism seems to be opposed to the compassion and the scientific vision of Lydgate and of Dorothea, the doctor’s inability to carry over his combined focus on individuals and aggregates in his personal life leads to his decline as a medical researcher and practitioner in Middlemarch. It is significant and perhaps surprising given its seemingly anachronistic character that George Eliot should use the trope of contagion to describe this process of decline; the confirmation of contagion theory had not yet been made at this point in medical history — though Lydgate’s interest in Louis’s researches appears to be leading him away from anticontagionist theories of disease, many leading English medical figures at this time still adamantly supported
them.²⁴ Using the trope of contagion to describe the process by which people with brilliant potential such as Lydgate wind up achieving only mediocre goals suggests that contact or interaction with others always affects the individual’s life, and thus to miss the significance of these seemingly smaller, less significant interactions in an attempt to see the big picture, is to miss almost entirely the process by which change in an individual and a society happen:

The story of their coming to be shapen after the average and fit to be packed by the gross, is hardly ever told even in their consciousness. . . . Nothing in the world more subtle than the process of gradual change! In the beginning they inhaled it unknowingly: you and I may have sent some of our breath towards infecting them, when we uttered our conforming falsities or drew our silly conclusions: or perhaps it came with the vibrations from a woman’s glance” (99 my emphasis).

The scene of Lydgate’s engagement to Rosamond contains a similar type of description of the process by which individual lives are affected by the seemingly random interactions between people. When Lydgate realizes that Rosamond expects to marry him, and that her expectation is appropriate given his flirtatious behavior toward her, he tries desperately to extricate himself from her influence over him. At the very moment that Lydgate makes it evident to Rosamond that he wants not only to leave her presence, but also her influence, Rosamond’s distress at recognizing his rejection sparks Lydgate’s compassion for her, and thus leads inevitably, the narrative implies, to their engagement.

At this moment she was as natural as she had ever been when she was five years old: she felt that her tears had risen, and it was no use to try to do anything else than let them stay like water on a blue flower or let them fall over her cheeks,
even as they would. That moment of naturalness was the crystallising feather-touch: it shook flirtation into love. (208 my emphasis)

The verb "shook" in this passage is a subtle reference back to the contagion of the "vibrations of a woman's glance" mentioned in the earlier passage. George Eliot's use of the trope of contagion in the two passages above is a reminder that when Lydgate makes his decision to marry, he chooses his partner entirely because of individual interaction, or attraction, divorced from consideration of social pressures and the social good.

Essentially, he makes the opposite choice to the one that Dorothea makes when choosing her first husband. Dorothea makes a passionless marriage to the aging scholar Causabon in order that she might help him finish his work, and thus she might participate in the social good. The narrative thus traces his downward trajectory while her return to the affective marriage plot might seem a reward for her ethical motives the first time round. The narrative mourns the loss of the researcher and the man, because the strength of the researcher lay partly in his humanity, in caring "not just for cases but for John and Elizabeth, especially Elizabeth."

Like Lydgate, Dorothea does not make a balanced decision between her individual fulfillment and the social good. But her plot has a much different trajectory. By virtue of her husband's death, she is granted a second shot at fulfilling both her need for individual fulfillment in romantic love and her need to better the social sphere in her second marriage to an aspiring politician, whose political gifts as I mentioned earlier include his ability to enter into the thoughts of others and see their concerns, the same quality that the narrator credits Lydgate with having in his bedside manner with patients. Thus George Eliot creates almost a fantasy ending, representing in Dorothea's second
decision to marry (if not in her married life)\textsuperscript{25} the balance between the individual and the social that Lydgate aspires to in his practice.

It is, I think, consistent with George Eliot’s ethical project that Dorothea, whose unbalanced decision in marriage was made for the social good, rather than for individual fulfillment, should be the one granted the second shot at marriage, though not because Lydgate doesn’t care about the social good. Obviously he does care about contributing to the community and its individuals. But he imagines that his efforts toward the social good can be divorced from the personal and domestic life, something Dorothea has never had the luxury of imagining.

Let me conclude by reiterating that my reading of the novel’s investment in maintaining a balance between the epistemologies of the individual and the social questions a recent trend in scholarship on George Eliot and her engagement with science and medicine. Recent critics who emphasize the influence of positivist medicine on the representation of Lydgate and on George Eliot’s realist project in \textit{Middlemarch} seem to lose the important focus on individuals in Lydgate’s practice and George Eliot’s novels, as well as the novel’s emphasis on maintaining an oscillating vision that moves between the individual and the community. When critics claim, for instance, that “the purpose of George Eliot’s realism . . . is to point to . . . a realm of signification that is free from the limitations of individual experience” (Logan 195), they miss the importance of the representation of individual experiences of diverse kinds to any attempt to understand the workings of the social body, particularly the complex ways that individual’s interactions have broad-reaching social effects.
The importance of Lydgate's oscillating vision as a model for George Eliot's realism in *Middlemarch* is not simply that it provides an apt metaphor, but that it signals the connection that George Eliot felt novelistic representation could have to scientific study. I think George Eliot saw herself as participating in ongoing debates of the 1860s and 1870s about the dangers of scientific research to the humanness of the scientist, and the dehumanizing potential of the increased specialization and professionalization of scientific and medical discourses, one symptom of which was the great decline in general knowledge journals in England during this period (Rothfield 99). Of course, George Eliot had a strong investment in such journals because her novels are so clearly informed by and invested in commenting on contemporary debates in science, philosophy, and medicine. I think George Eliot saw the realist novel and medical realism as the way to make her own contribution to the fields of both science and literature and to insist on their importance to each other.
Endnotes

1 J. Hillis Miller sees differently what I am describing as an oscillating narrative focus between a concentration on the individual and the social. He describes George Eliot’s narrative strategy as one of “compression” which allows the author to provide a totalizing picture of the world she portrays. “Eliot’s strategy of totalization,” Miller argues, “is to present individual character or event in the contest of that wider medium and to affirm universal laws of human behavior” (126). The positivist search for laws that Miller and others see as George Eliot’s realist project is one that I will be calling into question throughout this chapter.

2 The most widely known of the notebooks for Middlemarch is now reprinted in the Norton edition of Middlemarch, edited by Bert G. Hornback, as the “Quarry for ‘Middlemarch’.” 607-42. Other edited versions of this and other Middlemarch notebooks have been published, such as George Eliot: A Writer’s Notebook, 1854-1879; and Uncollected Writings, ed. Joseph Wiesenfarth; George Eliot’s “Middlemarch” Notebooks: A Transcription, ed. John Clark Pratt and Victor A. Neufeldt; and most recently, The Journals of George Eliot, ed. Margaret Harris and Judith Johnson.

3 The Haight collection of George Eliot’s Letters is filled with references too numerous to all be mentioned here to Lewes’s and George Eliot’s poor health and difficulty writing because of it.

For a more detailed account of Hume’s influence on John Gregory, see Laurence B. McCullough, “Hume’s Influence,” 376-95.

According to Reiser, in the beginning of the eighteenth century the use of Fahrenheit as a standard greatly advanced the reliability of thermometry though debates about its reliability were ongoing. In the first third of the nineteenth century, diagnosis advanced by localizing disease through the techniques of physical diagnosis (observation of visible symptoms) and autopsy meant physicians tended to ignore the signs of disease that represented general functions (Reiser 112-113). By the end of the 1860s physicians in England and the U.S. began to attach a greater value to temperature readings and to criticize the accuracy of the subjective judgements of fever.

According to Martin Pernick, Louis even tried to come up with a statistical method to help physicians with the difficult task of deciding whether the risks and pain involved in certain therapies were worth inflicting on the patient versus the possible benefits of those therapies. “The physicians task,” summarizes Pernick, “was to compare directly the objective statistical magnitude of each harm regardless of its source, and act so as to maximize the overall benefit to the patient” (103). While this effort to standardize decisions about aggressive therapeutics and the risky use of anesthesia through the application of statistics might seem to dehumanize the decision-making process, it also requires that the patient’s experience of pain, and prior patients’ experiences of pain be factored into the “calculus of suffering,” a perspective that the “heroic medicine” of Broussais and others left out. See Pernick 98-112.
For more complete explanations of why microscopy was not generally accepted by the medical profession until the latter part of the nineteenth century, see Reiser, 69-77 and Ackernecht, *Paris School* 8-10.

This is a point that Peter Logan has noted in his reading of the Middlemarchers' response to the various practitioners' treatments for "lowering" and "strengthening." Logan writes, "[George Eliot] describes the perception of medical practice. concentrating on its visible surface and on the public response to that surface. . . Thus, in the older client-based medicine, the doctor's practice lives and dies in the breath of popular opinion, for when effectiveness is illusory, a practitioner's 'management and treatment' of his reputation is a more substantial part of his work than the management of disease" (Logan's emphasis, 175-76).

It bears repeating here that, according to Anne Hardy, despite Louis's treatise proposing a distinction between typhus and typhoid, hospitals did not distinguish between the two diseases in England until the 1860s. See *Epidemic Streets*.

This description is taken largely from the entry on Auguste Comte in the *Encyclopedia of Philosophy* and from George Henry Lewes's description of positivist philosophy in the third edition of his *Biographical History of Philosophy* (653-662).

Despite their suspicion about other aspects of Lewes's theories, Lewes's and Mills's accounts of Comte's positivist philosophy of science are almost entirely uncritical even in Lewes's case, as late as the 1867, third edition of *The Biographical History of Philosophy* in which Comte appears as its modern hero (653-662). In "August Comte," first printed in 1866 in the *Fortnightly Review*, Lewes claims himself to be a disciple of
the positivist philosophy of Comte, having "for three and twenty years found it a luminous guide." He also, however, proclaims himself a dissenter from Comte’s ideas on religion which, he claims "arbitrarily arrang[e] individual and social life according to [Comte’s] conceptions (260). See also Mill’s *August Comte and Positivism* for a similar claim.


14 Critical discussion of George Eliot’s interest in positivism and the possible influence such ideas may have had on her work began at least as early as an 1877 review in the *London Quarterly* entitled, “George Eliot and Comtism.” (Vogler 406). Since then, many critics have attempted to explain the extent to which the novelist was influenced by Comte and, more generally, positivism. Critics of the 1970s and early 1980s, such as Martha S. Voegler and James F. Scott are largely skeptical about the influence of positivist ideas on George Eliot, despite her financial support of positivist organizations and her close friendship with English positivists such as Frederic Harrison. Scott, for instance, focuses particularly on how the disastrous relationship between Bulstrode and Lydgate presents a satiric version of Comte’s notion of the fellowship that should exist between the "men of commerce" and representatives of the so-called "scientific order" in an ideal positivist society (*Comte, Cours* 6: 354; Scott 72-73). In a recent article on heroism in *Middlemarch*, William Deresiewicz connects Scott’s reading of the Bulstrode-Lydgate relationship to the way that the organic nature of society makes Lydgate’s downfall in *Middlemarch* inevitable. Most recent critics who discuss the influence of positivism on the novel, however, focus more particularly on Lydgate’s method of
medical observation, which they see as representative of the positivist medicine practiced by Francois Broussais and others in Paris of the 1820s. See Lawrence Rothfield and Jeremy Tambling in particular. Others, such as Sally Shuttleworth point specifically to George Henry Lewes’s investments in positivism in arguing that his, rather than Comte’s, version of positivist philosophy had a more profound impact on George Eliot than earlier critics acknowledged. I am convinced that these later critics, particularly those that focus on positivist medicine as a model for George Eliot’s “medical realism,” underestimate the subtlety with which George Eliot critiques positivist medicine in her representation of Lydgate’s medical double vision.

15 Tambling, for instance, sees Lydgate’s interest in pathological anatomy as the model of medical observation that entirely governs George Eliot’s narrative strategy in Middlemarch. His interesting reading of how the novel presents Causabon as a kind of walking corpse that allows the narrator to trace back the course of his disease (figured as egoism, I believe, in Tambling’s reading) seems to me to neglect the other methods of medical and literary observation that the novel alternately presents.

16 For a fuller account than I will provide in the pages that follow of eighteenth-century medicine and the dramatic shift from nosological to clinical medicine, see Michel Foucault, The Birth of the Clinic.

17 For an account of the enormous influence of Broussais and Louis on American medicine and, more generally, on medical students at the Paris school, see Cassedy, 58-65.
18 For an extensive account of Broussais’s debt to the ideas of Bichat and others, see the chapter “Crisis in Fevers” in Foucault, The Birth of the Clinic, 184-85.

19 In the introduction to Vital Signs, Rothfield provides a useful overview of fiction focusing on medical subjects. He shares my sense that in at least in English fiction, there are no other novels that more deliberately and successfully weave medical discourse into their narrative mode.

20 Fred has gambled away money he borrowed from the kindly Caleb Garth whose daughter Fred hopes to marry. Fred’s losses cause great hardship to the Garths and appears to spoil Fred’s chances with Mary. Illness, it seems, allows the possibility for Fred’s redemption by the end of the novel.

21 A long passage from Ware’s treatise on delirium tremens is quoted in “The Quarry” (622)

22 George Eliot refers to Laennae’s “First Memoir on Auscultation,” 1818, in “The Quarry,” as well as to an article by a physician named Elliotson on diseases of the heart in the October 2, 1830 issue of The Lancet (“Quarry” 608).

23 It seems possible that Lydgate’s main research question, “what was the primitive tissue?” is off, or “not [put] quite the way required by the awaiting answer” (102), not just because it doesn’t anticipate the discovery of cell theory, but also perhaps because Lydgate poses the question as one of universals, rather than particulars.

24 This issue has been the subject of debate among medical historians. Margaret Pelling, in particular, has argued that contagion theories were much more prevalent than Ackernecht and other historians have acknowledged. George Eliot’s account of the
traditional doctors and the Middlemarchers’ hysteria about contagion would seem to suggest that the general belief about disease in this community is still anticontagionist, with Lydgate being an important and singular exception.

25 I would not like to present this supposedly happy ending as more ideal than it is. The narrator’s observation about Dorothea’s married life at the end of the novel stands as a healthy reminder that though her choice may appear balanced in consideration of individual romantic fulfillment and social improvement of the sort Dorothea imagines Will doing, there is still yet a greater imbalance between the ability of the aspiring Dorothea to do good in the world as her own agent, and the ability of men with the same aspirations. “Many who knew her, thought it a pity that so substantive and rare a creature should have been absorbed into the life of another, and be only known in a certain circle as a wife and mother. But no one stated exactly what else that was in her power she ought rather to have done” (576)

26 For a comprehensive discussion of George Eliot’s use of metaphor in Middlemarch see J. Hillis Miller’s “Optic and Semiotic in Middlemarch.” I differ from Miller about the impact of the use of metaphor, which Miller sees as a method of “condensing” the broad, universal focus for which George Eliot strives in her novel. I see the oscillation as necessary to the ethical projects both of Lydgate’s medical vision and George Eliot’s realism.

27 Another example of this suspicion of the dehumanizing of medicine through research can be seen in Lewes essay “On the Dread and Dislike of Science” where he takes up particularly the issue of vivisection. See Versatile Victorian 317-18 especially.
Chapter Four

“Unmapped Country”: Uncovering Hidden Wounds in Daniel Deronda

There is a great deal of unmapped country within us that would have to be taken into account in an explanation of our gusts and storms. (Eliot, Daniel Deronda 321)

In the last chapter, we saw Lydgate failing in his proposed attempt to “take a scientific view of women,” largely because he thinks that his private and professional lives can be considered in isolation from one another. The imbalance in Lydgate’s thoughts about marriage between individual desires and the social good leads him not to recognize the ways in which his attraction to Rosamond is imprudent. In her last novel, Daniel Deronda, George Eliot seems to have herself adopted the project of taking a scientific view of women. In its account of Gwendolen Harleth, the novel seems to present three different ways of describing the appearance and behavior of its heroine: the narrative uses, of course, the figurative language that we might think of as typical of novels, but it also adopts the language of the emerging sciences of physiology and psychology, and, perhaps most notably, it employs the strategic and pregnant silences that dominate so much of Gwendolen’s story. The novel thus suggests that where an individual’s history and memory are characterized by silence, one can only read that character’s story by reflecting on the corresponding presence of such elements within the stories of others. The difficulty of reading Gwendolen’s psyche is thematized throughout the novel in narrative intrusions such as the one I use as an epigraph for this chapter.

With the suggestion that the mind consists largely of “unmapped country,” the narrator of Daniel Deronda appears to invite readers to map Gwendolen Harleth’s psyche,
to trace its history, the places it has been, and the events that appear to have been.

whether voluntarily or involuntarily, erased from her memory. This passage is typical of
the way that questions of identity in George Eliot’s last novel seem consistently to reflect
emerging Victorian concepts of memory.

Probably as a direct result of the burgeoning interest in the positivist philosophy
of Auguste Comte that my previous chapters have described, we see at mid-century a
general trend toward the empirical study of the mind according to the model used in the
natural sciences: observation and taxonomical classification. Scientists thus observed the
physical attributes and behaviors of individuals and then attempted to classify each within
the larger species of humans and their behaviors. From this point, scientists would then
speculate about the existence of general categories or even laws governing the functions
of the mind. It comes as no surprise, then, that those writing most prolifically on
physiology and psychology at mid-century also wrote important tracts about nature study:
George Henry Lewes, Herbert Spencer, and John Stuart Mill among others. And, as other
critics have noted before me, Eliot includes references to both types of science in her
works.¹

The general categories and laws inferred from the observation and classification
of individuals’ physiologies and behaviors were most exciting to positivist philosophers
like Lewes when they followed the patterns set by natural laws.² Lewes, for example,
insisted that all memory functioned according to the physical law of nature in which all
matter is conserved. In his 1860, Studies in Animal Life, Lewes applies what he calls “the
theory of universal metamorphosis” explicitly to memory and the workings of the mind.
In all of the universe, Lewes writes, “there is change, but no loss... Nothing leaves us
wholly as it found us. Every man we meet, every book we read . . . every word or tone we hear, mingles with our being and modifies it" (Studies 77-78). Thus Lewes claims that texts and stories themselves form layers of memory that “mingl[e] with” and “modif[y]” other pre-existing layers of memories, the complicated combinations of which make up selves.

The many representations of the complex functions of memory in George Eliot’s novel often imitate this notion of layers of recollections, narratives, and texts. This is especially true of the representation of Daniel Deronda’s painful struggle with his identity. As Cynthia Chase among others has noted, Daniel’s remarkable discovery of his Jewish parentage at the end of the novel comes only after the long and gradual emergence of his interest in and seemingly natural affinity for Judaism. Prior to that discovery, Daniel finds both comfort and a feeling of recognition in the multiple texts and narratives about Judaism; his interest in these narratives appears, in fact, gradually to replace his concern with the absence of information about his individual history. In essence, the collective history of Judaism subsumes Daniel’s individual identity crisis long before his Jewish identity has been revealed. Daniel’s plot is thus marked by a sense of racial memory. The presence of multiple texts and individual and collective stories of Judaism appears as the consequence of his affinity for Judaism. The mystical transference of Zionist leader Mordecai’s soul into Daniel’s at the end of the novel seems, according to this narrative logic, to be a “natural” transference of one carrier of Zionist soul and memory to another. Of course one can trace this notion of hereditary racial memory to its roots in natural history study, particularly in the belief held by Spencer and Lewes that psychological aspects of character and memory were themselves hereditary.
The presence of racial memory and history in Daniel’s plot is in stark contrast to the remarkable sense of the absence of history and memory in the plot that centers around Gwendolen Harleth. No such racial memory emerges to make sense of Gwendolen’s recollections of her past. Instead, we are forced to read signs of some kind of psychological wounding in Gwendolen’s youth from her many otherwise inexplicable fits of “timidity or terror” (95) and the “fierceness of maidenhood” that leaves her repulsed by the efforts of anyone but her mother to be intimate with her (101-102). Her psychic wounds are not translated into the written or spoken word. We must read her story through its significant absences, and learn to hear her history being spoken through silence. The oscillation between the presence and absence of texts and testimony in the double plots of Daniel Deronda make for a complicated but revealing method of recounting personal memories and collective ones often through the novel’s stark juxtaposition of narrative with silence.

Attention to the function of memory in the two plots thus highlights the absences that characterize Gwendolen’s individual recollections, her family history, and even the confession that she makes to Daniel regarding her inaction during her husband’s drowning. Gwendolen’s tortured, halting confession has its parallel in the long and detailed confessions of paternal abuse that Daniel’s mother and Mirah Cohen make to Daniel. Yet, even within the idiom of confession, Gwendolen speaks with “an inward voice of desperate self-repression,” leaving the impression that there is much more to her story than what has been said (753). It may be that Gwendolen’s silences speak to the fact that she has no collective memory or even language with which to tell her own story.
Though the silencing of Gwendolen by the end of the novel has been much discussed, Judith Wilt was the first to recognize how the novel leaves evidence of a possible explanation for Gwendolen’s psychic distress, even as it converts Gwendolen’s presence to absence (313-38). More recently, Carol Stone has proposed that these symptoms “uncannily” resemble Freud’s case studies of hysteria, a condition brought on, Stone argues, by Gwendolen’s unconscious desire for her father and successfully treated by Daniel through a Freudian “talking cure” (Stone 57-68).

Gwendolen’s symptoms can be read through Victorian psychological theories of recovered memory as well as through contemporary psychoanalysis. The idea of recovered memory was, indeed, circulating in the mid-Victorian period and George Eliot would surely have known about it. As she was agonizing over the writing of Daniel Deronda, her partner Lewes was working on his Problems of Life and Mind, in which he attempted to detail the complicated interaction between physiology and psychology in the workings of the human mind (Bodenheimer 187). We know from George Eliot’s letters that Lewes, Spencer, and Mill were also at this time avidly reading and reviewing two new volumes on the mind written by Alexander Bain. The Senses and the Intellect and The Emotions and the Will were attempts to create a natural history of the mind. Though George Eliot did not herself review either volume of Bain’s natural history, both her partner Lewes and their friend Spencer did. Bain and his wife also appear to have been quite frequent guests and correspondents of Lewes and George Eliot.

Perhaps, given that trend toward the empirical study of psychology, it should come as no surprise that Lewes himself presented an account of recovered memory in an early natural history study titled Studies in Animal Life (1860), one that provides a
fascinating intertext for Gwendolen’s story. He describes a phenomenon in which “ignorant women” responded to psychological trauma by instantly beginning to utter words in Greek and Hebrew, though they themselves had only ever heard the languages spoken by their masters as children. “Under ordinary conditions,” Lewes explains, “the traces [of memory] were there, and in the intense light of cerebral excitement they started to prominence” (Studies 78). Lewes creates an image of light piercing through the obscurity of the mind, bringing submerged recollections into prominence.

The novel presents just such a moment of “cerebral excitement” in the scene of Gwendolen’s confession to Daniel of her inaction during her husband Grandcourt’s drowning. Her revelation is accompanied by a striking suggestion of the surfacing of a painful childhood memory. She begins,

I want to tell you what it was that came over me in that boat. I was full of rage at being obliged to go--full of rage--and I could do nothing but sit there like a galley-slave. . . [I]t came over me that when I was a child I used to fancy sailing away into a world where people were not forced to live with someone they did not like--I did not like my father-in-law to come home. (760)

The excitement, the rage that Gwendolen feels toward her tyrannical husband, appears to spark this return of a disturbing memory of forced intimacy. After this particular part of her confession, the narrator hints that not all of this memory has been or can be told, describing Gwendolen as “submerged by the weight of memory which no words could represent” (760).

Parallels between Victorian scientific theories, including those developed by Lewes, and George Eliot’s depiction of the function of memory in her novel go beyond
this account of memories that return in response to a traumatic event. The anecdote about the "ignorant women" is only Lewes's first illustration of the theory of universal metamorphosis, which claims that "nothing ever perishes," not even memories. The first example is followed by a second, which also resonates profoundly with the representation of Gwendolen's psyche in Daniel Deronda. The experiment he describes involves a key, a sheet of paper, and light:

If a sheet of paper, on which a key has been laid, be exposed for some minutes to the sunshine, and then instantaneously viewed in the dark, the key being removed, a fading spectre of the key will be visible. Let this paper be put aside for many months where nothing can disturb it, and then in darkness be laid on a plate of hot metal, the spectre will again appear. (78)

In her writing notebooks for Daniel Deronda, George Eliot refers to a similar experiment described in John Tyndall's Six Lectures on Light involving the projection of spectral images in alternating light and darkness. The image of the illumination of spectres in darkness used by Lewes and Tyndall resembles the many places where the narrator in Daniel Deronda claims to illuminate the dark inner-workings of the psyche. It echoes, for instance, the description of Gwendolen's mind as she contemplates how, in wishing for Grandcourt's death, the "thought of his dying" would turn as with a dream-change into a terror that she should die with his throttling fingers on her neck avenging that thought. Fantasies moved within her like ghosts, making no break in her more acknowledged consciousness and finding no obstruction in it: dark rays doing their work invariably in the broad light. (669)
The image of the dark rays/spectres “doing their work . . . in broad light” recalls the spectral image of the key, which has made its imprint unobserved. It also suggests the impression that we are left with at the close of Daniel Deronda when Gwendolen has been at last excised painfully from the text. It might appear that the “Gwendolen plot” simply depicts the way that Gwendolen’s presence is gradually converted to absence by the end of the novel. The experiments of Lewes and Tyndall, however, suggest that we look further for traces of her history and memory. The spectral image that returns to Gwendolen in the traumatic moment of Grandcourt’s drowning--the return of her unwelcome step-father--actually illuminates some of that undisclosed past. The possibility of interpreting Gwendolen’s past history, her silences and half-revealed memories, appears at the end of Daniel Deronda like the spectral image of the key in Lewes’s experiment, as the only remaining presence of the original.

1. Spectral Keys

If, as I have been arguing, the reader of Daniel Deronda is invited to think of the “unmapped country” of Gwedolen’s mind as a kind of puzzle or map to which the reader might be able to discover a figurative or interpretive key, then two instances in the novel, one at the beginning and another at the end, seem particularly apt places to begin this process. The first passage, which occurs in the opening section of the novel, “The Spoiled Child,” gives the reader his or her first opportunity to observe Gwendolen in her domestic situation:

“Oh Gwendolen!” said the small Isabel, in a tone of astonishment, while she held open a hinged panel of the wainscot at the other end of the room.
Everyone, Gwendolen, first, went to look. The opened panel had disclosed the picture of an upturned dead face, from which an obscure figure seemed to be fleeing with outstretched arms. “How horrible!” said Mrs. Davilow, with a look of mere disgust; but Gwendolen shuddered silently, and Isabel, a plain and altogether inconvenient child with an alarming memory, said –

“You will never stay in this room by yourself Gwendolen.”

“How dare you open things that were meant to be shut up, you perverse little creature?” said Gwendolen . . . Then in snatching the panel out of the hand of the culprit, she closed it hastily, saying “There is the lock – where is the key? Let the key be found, or else let one be made, and let nobody open it again; or rather, let the key be brought to me.” (56)

This scene reintroduces the reader to the difficulty of reading the character of Gwendolen Harleth, one that has been identified by the narrator from the novel’s first lines: “Was she beautiful or not beautiful? And what was the secret of form or expression which gave the dynamic quality to her glance? Was the good or evil genius dominant in those beams?” (35). The first lines appear to move abruptly from a question about physical beauty to one of morality. Is she, in fact, a corrupter to her observer Daniel? Or a soul in need of his saving? This moral question is taken up in the later passage as well as in the section title. Though we know from the subtitle of this beginning section that Gwendolen is “spoiled,” the text invites us in such scenes to speculate on the process of that spoiling and even to question what exactly the author means by the term “spoiled.” Is she merely prideful? Or has she been in some way damaged? Gwendolen clearly has an important prehistory when the narrative begins in medias res. 9 She has obviously been
through *something* to prompt her sister’s claim that she “will never stay in this room by
[her]self” (56). As readers, we are given evidence of this prehistory by Gwendolen’s
“plain and altogether inconvenient” sister Isabel, who has, significantly, “an alarming
memory” (56). But why should Isabel’s memory be alarming? Because she remembers
things so well? Or because the memories she harbors might alarm either Gwendolen or a
reader?

In asking these sorts of questions, I see myself in the position of the “perversive
little creature,” trying to open up the “things which were meant to be shut up,” things that
Gwendolen would rather be left unprobed. In giving a glimpse at the offending painting,
however, the text has clearly also given us insight into the Gwendolen’s “locked up”
psyche by showing the response that the particular image provokes. We begin to
recognize that such glimpses into Gwendolen’s troubled psyche are not particularly rare.
In *Daniel Deronda*, there are many scenes in which Gwendolen’s emotions get away from
her. When her unexplained terrorized “fits” happen in public. This unexplained excess
pain leads me to infer that the process by which the child Gwendolen was “spoiled,” and
indeed the very nature of the spoiling, have far less benign implications than critics have
traditionally imagined.10 While I cannot read Gwendolen with the “alarming memory” of
her other “perversive” interpreter Isabel, I can, however, draw attention to the descriptions
of memory and excess psychic pain in George Eliot’s novel. And I can further attempt to
read them through scientific studies of memory that appeared in the major periodicals of
mid-late-Victorian England.

Interestingly, in the beginning of Gwendolen’s confession she tells Daniel about a
key that she had used to lock up a weapon that she had contemplated using to murder her
husband. She explains how after dropping it into deep water, she “began to think how [she] could open the drawer without the key” (756). Gwendolen’s efforts to protect herself from her murderous thoughts by locking them away appear to fail precisely at the moment that her memory of her step-father returns. Figuratively, at least, that memory returns as the spectral key that unlocks the drawer of Gwendolen’s mind.

2. Other Returning Spectres: Memories in Juxtaposition

Reading the traces of evidence of psychological trauma in Gwendolen’s story is not the only way that George Eliot elliptically “tells” her reader about Gwendolen’s traumatic past. As critics have noticed, other women in the novel, Mirah Cohen and the Alcharisi in particular, are given substantial narrative space to tell their personal histories. George Eliot’s narrative seems strongly invested in encouraging the reader to make such comparisons between stories. There are significant ways in which the stories of these women detail something of the undisclosed past that is missing from Gwendolen’s.  

The method of drawing attention to an incomplete story by telling it in opposition to other more detailed narratives is one that accords with Victorian psychological theories of how consciousness functions in the human brain. These theorists propose that consciousness itself requires that every emotion be experienced in juxtaposition with other emotions that are either opposite to them or which put them in relief. In his influential 1859 book *Emotions and the Will*, Alexander Bain argues just such a premise: “To know a thing, is to feel it in juxtaposition with some other thing differing from it or agreeing with it” (589-90). The issues Bain raises in his work about the working of emotions, consciousness, and memory in the human brain are precisely those most
frequently alluded to in *Daniel Deronda*. The critical responses to Bain’s work by Mill, Spencer, and Lewes, help illustrate the complicated representational strategy at work in George Eliot’s depiction of the workings of consciousness and memory in her last novel.\(^{12}\) Considering the amount of narrative space devoted to Gwendolen’s inexplicable outbursts of emotion, the lack of motivation given for her pain appears as a very present absence, particularly given the author’s familiarity with scientific accounts of the connections between emotions and memory.

The scientific context provided by Bain’s work and the critical response it received point to aspects of George Eliot’s narrative technique of displaying Gwendolen’s largely untold story in comparison with Mirah’s, Daniel’s, and the Alcharisi’s.\(^{13}\) This element of juxtaposition may well be part of the novel’s attempt to raise readers’ expectations of narrative detail in Gwendolen’s story, an expectation that would make the absence of such detail notable. There would certainly appear to be support for this notion of using juxtaposition to draw attention to emotions in Bain’s influential work. “Interpretation.” Bain claims, “consists in determining what things the writer excluded, as opposites to, and looked at as agreements with, the thing named” (*Emotions* 638-640). The primary element shared by the stories of Gwendolen, Mirah, and the Alcharisi, “the thing named,” is a history of paternal abuse.

Before elaborating on this argument, let me briefly provide an overview of Bain’s controversial work *Emotion and the Will*. His study opens with the claim that his method of studying the emotions is one commonly thought of as a “Natural History Method.” He observes emotions and the attempts to classify them. In the second part of the book concerning “the will,” he tries to depart from the metaphysical problem of “Liberty and
Necessity," which so often, he claims, govern all discussions of the will, in order to explain "the nature of the faculty itself, its early germs, or foundations in the human constitution, and the course of its development." Finally, after the "detailed survey of the facts of the mind" contained in the first two parts, he concludes with a section on the workings of consciousness (Preface). The critical response to Bain varied from attacks on his scientific method to claims that he had not taken his method far enough. The issues raised in the different reviews seem clearly to be reflected in the depictions of Gwendolen's, Daniel's, and other characters' psyches.

In Mill's review of *Emotions and the Will* in The Edinburgh Review, he claims that Bain's ideas are so notable they indicate "the sceptre of psychology has returned to this island [England]." claimed, as it were, from the Europeans. He particularly admires the book for its idea (derived, as Mill notes, from Hobbes) that "[c]onsciousness is only awakened by the shock of the transition from one mental state to another. . . . [I]f any one mode of sensation or feeling were always present, we should probably be unconscious of its existence" (319). Taken together with Lewes's account of the recovered memories of the "ignorant women," Mill's reaction to Bain supports my suggestion that the reader educated in scientific theories of the mind might interpret Gwendolen's situation as something like the following: the emotion of watching Grandcourt drown triggers the return of Gwendolen's painful memories of dreading her step-father's returns home from the sea. Her memory of feeling oppressed by her step-father raises into consciousness when it is brought into relief by the experience of Grandcourt's drowning, a moment in which Gwendolen feels herself finally being freed from his own brand of oppression.
Bain, in fact, has an entire section devoted to the emotions engendered by the sudden release after long periods of restraint (*Emotions* 49-51).

Different aspects of Bain’s argument, however, complicate this reading of the representation of Gwendolen's psyche. Spencer’s review of Bain, by contrast to Mill’s, takes a less admiring, though respectful, tone toward *Emotions and the Will*. His 1860 critique, published first in the *Medico-Chirurgical Review*, complicates Mill’s assumptions about the functions of emotion and memory in ways that are revealing both in regard to Lewes’s account of the “ignorant women” and George Eliot’s accounts of the functions of memory in *Daniel Deronda*.

According to Spencer, the most interesting part of Bain’s work is his attempt to create a “natural history of the mind” (121). Bain’s largest failing, Spencer argues, is that his taxonomy of the mind fails to see how memory can be a hereditary attribute passed down to subsequent generations. The only way that the hereditary nature of the emotions can be understood, according to Spencer, is through the extensive study of the behaviors of children and people from non-white races. After all, he claims, researchers in the natural sciences have already recognized that taxonomical studies must consider, if not entirely focus on, the early stages of an organism’s development in order to classify it, particularly in terms of race. Here, for instance, he emphasizes race and childhood in the study of the inheritance of emotions:

For when we find that there exist in a man feelings which do not exist in a child, and that the European is characterized by feelings which are wholly or in great part absent from the savage—when we see that, besides the new emotions that arise spontaneously as the individual becomes completely organized, there are new
emotions making their appearance in the more advanced divisions of our race; we are led to ask—How are new emotions generated? The lowest savages have not even the ideas of justice and mercy. . . . There are aesthetic emotions common among ourselves, that are scarcely in any degree experienced by some inferior races; as, for instance, those produced by music. (131)

Spencer’s critique of Bain—that accurate taxonomical classification requires a complex understanding of the evolution of emotions and their hereditary transmission—bears on our understanding of the emotions described and not described in Daniel Deronda. His racist views on memory actually appear to be supported by the novel’s suggestion that hereditary racial memory is apparently what allows Daniel to be an ideal receptor for the mystical transference of Mordecai’s soul by the novel’s end. In other words, Daniel inherits his aptitude as a Zionist leader through emotions that have a hereditary, physiological basis in the mind. Of course, neither George Eliot nor Spencer himself would have included Jews among the “inferior,” non-European races Spencer describes. Yet, Spencer and Lewes would have interpreted Jews differently than other non-Jewish Europeans, attributing certain behaviors to their racial specificity. In an 1856 article in the Westminster Review entitled “Hereditary Influence. Animal and Human,” Lewes addresses the racial specificity of Jews in his own argument supporting the theory of the inheritance of physical and psychical characteristics in humans and animals. “The Jew,” Lewes claims, “whether in Poland, Vienna, in London or in Paris, never altogether merges his original peculiarities in that of the people among whom he dwells. He can only do this by intermarriage which would be a mingling of his transmitted organization with that of the transmitted organization of another race” (“Hereditary Influence” 161-
162). According to Spencer and Lewes then, the responses to emotion which humans of
different races exhibit are formed by habit over time, and then passed to subsequent
generations. Daniel's intuitive response to Mordecai, Mirah, and Zionist teachings shows
that the appropriate conditioned responses are, in his case, already in place.

What, then, about the conditioned responses of Jewish women? Why, especially
given the fact that the Jewish faith is supposed to be transmitted through the female line,
does Daniel and not the dutiful Mirah receive the soul of Mordecai? Why, too, do the
emotions of both women seem, like Gwendolen's, to involve so much fear and even
revulsion toward their fathers? What seems clear is that both women's stories function to
put the memories of Gwendolen in relief, to bring out the absences that might otherwise
not have been striking. We thus might posit a kind of collective memory operating among
women who, as we've seen, do not necessarily share in the collective memories passed
down between men. Yet, as we'll see, these parallel stories (Gwendolen's, Mirah's, and
the Alcharisi's) do diverge from one another in significant ways, particularly with regard
to issues of race.

In the case of Mirah, George Eliot invites the reader to draw comparisons by
stressing how both she and Gwendolen are valued against and traded for jewelry by their
father and step-father respectively. In a long recitation to Mrs. Meyrick in which she
confesses her father's plans to prostitute her to a European Count, Mirah details how her
father Lapidoth traded his paternal authority over her to Daniel in exchange for Daniel's
ring. Gwendolen's step-father Davilow also runs off with his wife's jewelry in exchange
for his parental authority over Gwendolen's family. The text does not disclose why the
Captain ran off; instead, it shows us the silencing effect that his abandonment has on
Gwendolen and her mother. Unlike Mirah’s story, the motivations behind the stepfather’s actions in Gwendolen’s family drama are never explained. Where Mirah’s story and, indeed, Mirah’s perfectly trained voice are fetishized in her long and extremely detailed confession to Mrs. Meyrick, the “Gwendolen plot” instead draws attention to the silencing of Gwendolen’s voice by comparison. As Ellen Rosenman explains, Gwendolen’s confession is notable for the way that it “implies that her most powerful responses appear only as gaps, as absence” (239). The presence of the theme of exchange of women for jewels, together with the marked oscillation between presence and absence of individual recollections in each plot suggests a connection between the narrative economy of women’s stories and Lewes’s theory of universal metamorphosis. Presence in one plot highlights absence in the other. Absence begins to reflect the significant presence of unnarrated history.

The Alcharisi’s story also details something of the undisclosed parts of Gwendolen’s past. As Wilt convincingly describes, the Alcharisi’s story of being haunted by her father’s ghost after she has left the Jewish part of her past behind echoes significantly in the return of Gwendolen’s step-father to her memory in the traumatic moment of Grandcourt’s drowning. As is the case with Mirah’s confession, the sheer length, detail, and theatrical presentation of the Alcharisi’s narrative draws attention to the absence of such detail in Gwendolen’s confession, which she has to struggle to articulate while coping with traumatic “inward vision[s]” (757).

Clearly, racial memory functions quite differently in the stories of Jewish women than it does in Daniel’s: there is no mystical transcendence in store for either Mirah or the Alcharisi. In Mirah’s case, however, the account of paternal abuse functions to illustrate
that she, like Daniel, has inherited the appropriate conditioned responses to her
environment. Just as Daniel shows a "natural" affinity for Zionist teachings, Mirah shows
a "natural" aversion to acting and the theater. Mirah's resistance to her father's will—
particularly his attempt to make a "public woman" of her in the acting profession, as well
as in prostitution—functions to reveal her "natural" aversion to such behavior.

The haunting of the Alcharisi by her dead father appears to occur precisely
because of the absence of such an impulse toward self-maintenance and devout faith.
Gwendolen is clearly more like the Alcharisi than either Mirah or Daniel. Both women,
for instance, envision a career on the stage as a means of escaping dependence, an
important similarity to which I will return in the final section. The haunting by her dead
father prompts the Alcharisi's decision to confess her Jewish identity to Daniel, despite
her proclaimed hatred of Judaism, and thus it points to the policing function of racial
heredity in relation to women. In her case racial memories lead to mystical transcendence
of the physical world only in the character of discipline apparently originating in a spirit
external to the body (though one could also argue that so-called "spirit" is actually a
hallucination induced by a conscience overwrought by guilt). Both Jewish women's
stories are remarkable for the fact that they detail paternal abuse. The presence of these
confessional stories functions to highlight the half-revealed memories of parental abuse
in Gwendolen's.

George Eliot thus seems to be applying the psychological theory of juxtaposition
in two ways: first, to elicit response from her reader (by juxtaposing Gwendolen's story
with those of Mirah and the Alcharisi); and second, to represent the inner workings of
Gwendolen's psyche (by suggesting that the experience of watching Grandcourt drown
causes Gwendolen to recover traumatic memories of her step-father). Bain himself applied his theory both to literature and to speech. In an 1868 article in the *Fortnightly Review*, he invokes Thomas Carlyle to explain how consciousness of the distinction between silence and speech itself is heightened by their juxtaposition. Bain writes, “When it is said, as by Carlyle and others, ‘speech is silvern, silence is golden,’ there is implied a condition of things where speech has been in excess, and but for this excess, the assertion is untrue” (“Mystery” 384). Were there not a superfluity of confessional speech and detail by other women in the novel, Gwendolen’s own gap-filled confession would not stand out to such a degree. Bain explains further how the different genres of literature appear prominently when they make a sharp break from tradition, citing the simplicity of poetry by Cowper and Wordsworth as an example of such novelty. We might see Daniel Deronda itself as illustrating such a break from tradition, with its intricate double plots and unusual hero and heroine. We might read such melodramatic scenes as that in which Daniel first sees Mirah contemplating suicide by the side of a lake, as being in juxtaposition to the almost entirely new type of story and heroine that George Eliot details through an accounting of silences in the Gwendolen plot. In telling such different types of stories together, George Eliot would appear to be following Bain’s prescription that “[t]he wonderful always rises from the common[.] . . . You must always keep up a standard of the common, the easy, the comprehensible, if you are to regard other things as wonderful, difficult, inexplicable” (“Mystery” 389). According to Bain, such awareness allows the interpreter of human behavior, just like the interpreter of nature, to appreciate those things that resist immediate empirical classification. He thus connects his argument
about the workings of the mind to nature study as he did in the earlier treatise *Emotions and the Will*. Here, he specifically focuses on those things that are inexplicable:

Mystery always supposes certain things that are plain, intelligible, knowable, revealed; and, by contrast to these, refers to certain other things that are obscure, unintelligible, unknowable, unrevealed. When a man’s conduct is all plain, straightforward, or accounted for, we call that an intelligible case; when we are perplexed by the tortuosities of a crafty, secretive person, we say it is all mysterious. So in nature, we consider that we understand various phenomena—such as gravity, and all its consequences. . . . On the other hand, earthquakes and volcanoes are very mysterious. ("Mystery" 389)

In this later piece, Bain stresses further the connection between the empirical study of the mind, and the empirical study of nature. He was, in fact, responding to critiques such as Spencer’s whose criticisms highlight for us the growing importance in Victorian culture of the study of the emotions of non-anglo people and children to the attempt to understand the workings of the mind and to order them taxonomically. The Bain’s response to Spencer’s criticisms also helps us to recognize the special function of racial memory in regard to Daniel, Mirah, and the Alcharisi. This recognition in turn draws our attention to the unique and rare glimpses of Gwendolen’s history and childhood memories.

Lewes’s review of Bain, too, highlights aspects of George Eliot’s representation of Gwendolen’s psyche, particularly those short, provocative moments in which Gwendolen’s seemingly inexplicable behavior toward her family and admirers is described. Lewes’s review in *Blackwoods* focuses on Bain’s approach to questions of the
will and the individual’s conditioned responses to external stimuli, a subject that also
preoccupied George Eliot in her creation of the characters of Mirah and Daniel, as I have
been arguing. Lewes is particularly interested in a distinction that Bain makes between
voluntary and involuntary actions in response to external stimuli. This is, of course, not
surprising given his account of the so-called “ignorant women” who respond to trauma
by the sudden recall of memories of Greek and Latin. Bain’s conception is that there is a
difference between involuntary actions like hearts beating, and eyes blinking, and
voluntary ones, like the deliberate winking to communicate something ironic. In cases
such as voluntary winking, Bain claims that the action is always accompanied by an
emotion that prompts it, while actions such as blinking are accompanied by no such
triggering emotion.

Lewes’s insists, by contrast, that there can be no such division between voluntary
and involuntary actions. Though some actions normally thought to be voluntary are
occasionally done involuntarily and some actions thought to be involuntary are done
voluntarily, they are all in Lewes’s final analysis ultimately voluntary. As evidence, he
quotes from a fellow physiologist, Müller, who uses the example of a fetus that moves its
limbs simply because it can as evidence that there is no essential distinction between
voluntary and involuntary action. “The voluntary excitation of the origins of the nervous
fibers, without objects in view, gives rise to motions, changes of posture, and consequent
sensations. Thus a connection is established in the yet void mind between certain
sensations and certain motions” (Lewes’s emphasis; qtd. in Lewes, “Voluntary” 299).
When the developing fetus gradually learns that some movements stop pain or bring
pleasure, it makes those motions without reflecting on them. Those motions are
nevertheless, according to Lewes, learned responses. “They are all voluntary. They all
spring from consciousness. They are all determined by feeling” (298).18

These arguments bear on my reading of Gwendolen’s responses to her family and
to her admirers because they suggest that her spectacular and sometimes even violent
responses to seemingly harmless stimuli are traceable through her history, particularly to
her experiences as a child. This is, of course, quite different than arguing that her
responses are acquired through heredity, as I claimed of Daniel’s “natural” affinity for
Judaism and Mirah’s “natural” aversion to the stage. Like the Alcharisi, Gwendolen does
not appear to exhibit the proper immediate responses either to her mother or her admirers:
in fact, she often appears to experience her extreme emotional outbursts at people’s
attempts either to be intimate with her, or to manipulate her, as occurring against her will.

Lewes’s critique of Bain, however, reminds us that the Victorians were of mixed
opinion about the function of the will in general. Gwendolen’s frequent, apparently
unmotivated outbursts of emotion appear to support Lewes’s notion that all responses to
stimuli are “voluntary” ones; all are determined by “feeling.” As we will see,
Gwendolen’s “scenes” often follow on experiences where her will has been contradicted.
Her seemingly involuntary reactions appear to be clearly rooted in intense feelings which,
molded by years of repetition, have become conditioned violent response. Thus her sister
Isabel’s insistence, supported by her “alarming memory,” that Gwendolen will never stay
alone in the room with the “ghastly” painting at Offendene. George Eliot illustrates such
behavior by Gwendolen in occasionally unsubtle ways. For instance, she describes “a
disagreeably silent remembrance of [Gwendolen] having strangled her sister’s canary
bird in a final fit of exasperation at its shrill singing which had again and again jarringly
interrupted her own” (53). This moment suggests Gwendolen’s subsequent violent reaction to the silencing of her own voice, to any attempt to repress her own will.19

One must ask what initially provokes Gwendolen to develop such excessive, defensive postures? Reading such scenes requires attention to both the problems of narrativity posed by the narrative itself and to the layered account of Gwendolen’s memories that develops as Gwendolen herself is gradually excised from the story. It is to these questions of narrativity and memory that I now turn.

3. Uncovering Hidden Wounds: Questions of Narrativity and the Theme of Circumcision

Perhaps the most compelling way that George Eliot, albeit elliptically, “tells” the untold story of Gwendolen’s psychic wound is in the theme of circumcision that she embeds in both of the gendered plots of Daniel Deronda. As Chase has argued, the issue of whether or not Daniel is circumcised may call the narrative logic of the novel into question. A close examination of the text’s thematization of literal and figurative circumcision reveals that while Daniel’s unnarratable wound functions both to delay and then to produce closure in his plot, Gwendolen’s hidden psychic wound renders her plot, in D.A. Miller’s terms, “nonnarratable,” or incapable of generating a story. Consequently Gwendolen herself ultimately becomes the excess that must be symbolically circumcised from the text.20

In 1976 Stephen Marcus first called into question the narrative logic of “the Daniel plot” or those parts of Daniel Deronda that are devoted to Daniel’s emerging vocation as a Zionist leader. Marcus claimed that Daniel surely would have been
circumcised as an infant since he was born to Jewish parents and lived with them for two years. Though the reader and Daniel himself only learn the truth about his parentage in the final chapters of the novel, his circumcision should have revealed to him much earlier that he was Jewish, particularly after his extensive study of the Jewish faith and customs as an adult.²¹

Building on Marcus’s arguments, Cynthia Chase claimed that the subject of Daniel’s circumcision helped reveal that the narrative structure of the “Daniel plot” is characterized by metalepsis, or the disruption of the temporal sequence of cause and effect. In her words, “It is not the event of Deronda’s birth as a Jew that is decisive for his story, but the knowledge or affirmation of it. This disclosure, as far as the plot is concerned, is the event with causative powers: yet it appears, too, as a mere effect of the account of Deronda’s emerging vocation” (219). In other words, by the time the narrative finally discloses the fact of Daniel’s Jewish birth (in chapter fifty-one), the reader finds the confirmation of his Jewish identity to be an effect of his increasing involvement with the Jewish faith and particularly his close friendship with his Zionist friends Mordecai and Mirah, Daniel’s future wife. Chase also interprets a cryptic letter Daniel receives (in chapter fifty-two) from his friend Hans Meyrick as further evidence that history and causality are deconstructed by the Daniel plot. Hans’s ironic reference to “the present causes of past events” suggests the same reversal of cause-effect relationships as Mordecai’s premature identification of Daniel as a Jew.

Despite these powerful arguments for the deconstruction of the Daniel plot, Chase’s assumption that, given his extensive research into Jewish ritual, Daniel would certainly have known that he was Jewish, has been questioned by, among others, K.M.
Newton, who points out that circumcision was also practiced in the Victorian period for other medical and social reasons, particularly as a deterrent to masturbation and inherited sexual promiscuity. Newton suggests that Daniel’s circumcised penis therefore functions as an “ambiguous sign.” For most of the novel Daniel is unsure of his own parentage and may have thought he was circumcised as a result of being an illegitimate child.\(^{22}\)

If Daniel’s circumcision functions as an ambiguous sign, then one can more readily explain why the narrator claims that Daniel “felt himself in no sense free” to pursue his initial interest in Gwendolen (202). Perhaps the ambiguous sign of his circumcision serves as a self-policing mechanism for him until he learns that it does not signify “impure” or “tainted” birth, but is instead a sign of the “purity” of his Jewish blood. He never asks the question of his parentage out of respect for his adoptive father Sir Hugo Mallinger, but his question is nonetheless answered for him by his mother’s confession and by the important chest of Jewish family papers left to him by his grandfather. The burden of proof as to Daniel’s identity thus becomes a question of spoken and written evidence and Daniel’s plot reaches closure through the legitimizing effects of material evidence. His Jewish identity allows him to complete both his marriage plot with Mirah Cohen and the mystical transference of Mordecai’s soul into his own body so that he may carry on Mordecai’s Zionist work after his death. Thus his individual memories of psychic struggle can be immersed in the collective memory of Zionist struggle.

Circumcision motifs in the Gwendolen plot function much differently: they prevent the narrative from moving toward revelation or closure. And yet, the metalepsis that Chase identified in the Daniel plot also characterizes the Gwendolen plot. Consider
Gwendolen’s premature knowledge of the contents of the mysterious package she receives in her hotel suite (containing the necklace she had earlier pawned), and her instinctive knowledge of the sender’s identity before opening it. I would suggest a parallel between this event and Mordecai’s identification of Daniel as Jewish (before Daniel himself knows it) without having to look under his wraps to see if he were circumcised. Gwendolen’s reception of the Jewels might be said to be the present cause of her past embarrassment under Daniel’s gaze at the beginning of the novel--her sense of his disapproval of her participation in gambling and other forms of exchange that George Eliot would later claim “debas[e] the moral currency” (Eliot, Theophrastus Such 81-87). One can also read Gwendolen’s terrorized reaction to the ghostly picture in her mother’s home (56), described earlier, as the effect of her devastating experience of watching her dreadful husband drown, an event which occurs much later in the novel. All of Gwendolen’s “timidity or terror” and revulsion toward intimacy might be briskly explained away as the effect of her painful disaster of a marriage (95).

The problem with this reading of the Gwendolen plot is that all of the evidence of Gwendolen’s psychic distress before her marriage is ignored, just as Daniel’s psychic distress before the revelation of his parentage has gone relatively unnoticed in the novel’s criticism. The novel is both more interesting and problematic if both Daniel’s circumcision and Gwendolen’s psychic wound are interpreted as ambiguous signs. Evidence of Gwendolen’s psychic wound is most strikingly apparent in the many seemingly inexplicable, painful, and sometimes violent moments in her behavior. For example, when Gwendolen’s disastrous tableau vivant is interrupted by the fall of the ghostly painting from behind the sliding panel in her mother’s home, the narrator depicts
Gwendolen’s own wonderment at her extreme reaction. She is vexed that one of her apparently irrational “fits” should have occurred in public and not “as usual in solitude”:

“She wondered at herself in these occasional experiences, which seemed like a brief remembered madness, an unexplained exception from her normal life” (my emphasis; 94-5). The suggestion that Gwendolen’s terror is like a “brief remembered madness” strongly insinuates that a memory, suppressed from both Gwendolen’s mind and, to an extent, Eliot’s text, lies at the root of her distress.23

Evidence of her unhappy childhood and adolescence abounds. For example, there is the narrator’s ambiguous statement that “now the life of passion had begun negatively in her,” and there is the unexplained severity of her reaction to most people’s attempts to become intimate with her (114). Her complete aversion to (at least hetero-)sexuality is evident in her cry to her mother, “I can’t bear for anyone to be very near me but you,” and in her rough rejection of Rex Gascoigne’s affections (114).24 After she comments to Rex that she “never saw a married woman who had her own way,” a statement that suggests her fear of losing her independence in marriage, she reveals her more immediate fear in this later passage: “Besides, she objected, with a sort of physical repulsion, to being directly made love to. With all her imaginative delight in being adored, there was a sort of fierceness of maidenhood in her” (101-2). When poor Rex continues his suit, Gwendolen fiercely responds, “[p]ray don’t make love to me! I hate it” (114).

The textual evidence of Gwendolen’s psychic wound is abundant, yet its origin is never explicitly revealed. The reactions of pain and hatred that any mention of her step-father Captain Davilow elicits from her more specifically mark her experiences with him as the most probable explanation of her pain. The reasons for Gwendolen’s hatred of
her step-father are never made perfectly clear, but the strained nature of Gwendolen’s and her mother’s relationships as a result of it are often apparent. One revealing scene from their past is recounted by the narrator. After her mother shows her some memorials of her late father, Gwendolen asks her why she married again. Mrs. Davilow’s response is one of humiliation:

Mrs. Davilow colored deeply, a slight convulsive movement passed over her face, and straightaway shutting up the memorials she said, with a violence quite unusual in her—“You have no feeling child.” Gwendolen, who was fond of her mamma, felt hurt and ashamed, and had never since dared ask a question about her father. (52-53)

Mrs. Davilow’s reaction is notable both for its intensity and for the response it elicits from Gwendolen, which is complete silence on the subject of her father and her step-father. Gwendolen’s inability to ask questions about their unhappy past makes evident a strong element of psychological repression existing within her before her marriage to Grandcourt. This forced silence echoes Daniel’s reticence on the subject of his parentage out of respect for Hugo Mallinger, only Gwendolen’s silence is permanent. Significantly enough, it is immediately following this description of Fanny Davilow’s silencing of Gwendolen that the narrator recounts Gwendolen’s strangling of the canary bird, an episode that also suggests Gwendolen’s subsequent violent reaction to the silencing of her own voice long before her marriage.25

Captain Davilow’s effect on the mother-daughter relationship is also evoked to explain the origin of Gwendolen’s “domestic empire” within her mother’s household (71). Her position of authority over her mother and step-sisters is depicted as being at
least partially the result of the fact that “her mamma had always been in an apologetic
state of mind for the evils brought on her by a step-father” (71). Perhaps the narrator’s
allusion to these “evils” begins to explain why Gwendolen fears being alone and sleeps
on a bed or couch in her mother’s room whenever possible.

My sense of Gwendolen as having been victimized by her step-father, indeed as a
victim of incest at his hands, is solidified by the strange intrusion of Captain Davilow into
the confession that she speaks “[w]ith an inward voice of desperate self-repression.”
Her halting, gap-filled narrative suggests the return of memories that she cannot yet
process verbally: “[Gwendolen] unconsciously left intervals in her retrospect, not clearly
distinguishing between what she said and what she only had an inward vision of” (757).
She depicts her desire to be rid of Grandcourt as recalling to her mind her childhood wish
to escape her step-father. She tells Daniel, “[i]t came over me that when I was a child I
used to fancy sailing away into a world where people were not forced to live with any
one they did not like--I did not like my father-in-law to come home” (760). Her words
suggest that her fear of intimacy stems not from a premonition of her future marriage, but
instead from a memory of forced intimacy that she can neither understand nor express to
Daniel or her mother.

Perhaps the most gripping example of the way in which George Eliot thematizes
this excess pain is the passage in which she most explicitly invokes circumcision
thematics in the Gwendolen plot. Before Gwendolen’s marriage, when she is trying
desperately to avoid being married to Grandcourt, she considers becoming an actress to
support her family. When she is told by a music teacher that she does not have the talent
or commitment to be a great artist, the narrator reflects on Gwendolen’s desperate faith in
her own ability: "The belief that to present herself on stage must produce an effect such as she had been used to feel certain of in private life, was like bit of her flesh--it was not to be peeled off readily, but must come with blood and pain" (298-99). Mary Wilson Carpenter has argued that Gwendolen's confidence in her beauty and social talents is being sorely tested in this passage, and that the "bit of her flesh" described here refers to Gwendolen's "phallic pride." One must also remember, however, that what is really at stake here is Gwendolen's ability to control her own life. If she can become a successful actress, she will never again have to live with someone she does not like. It is her sense of independence, even more than her pride in the power of her beauty, that is slowly and painfully excised from her, bit by bit, until she has, by the end of the novel, become completely dependent on Daniel's words and teachings for her sense of worth.

4. Recovered Memory and the Problem of Naming

I recognize that even my provisional "naming" of Gwendolen's hidden wound as the result of a repressed memory of childhood incest puts me in an admittedly uncomfortable position analogous to those contemporary psychotherapists who argue for their patients' need for recovered memory therapy. As the recent debate between Frederick Crews and several psychotherapists in the editorial columns of the New York Review of Books has vividly shown us, memory is a slippery and manipulable thing. This only emphasizes the need, however, to historicize the question of memory, as many Victorianist scholars have done before me. My intertextual reading of Gwendolen's recovered memory with Lewes's work on psychology and physiology reflects and
responds to previous critical discussions of George Eliot’s interest in science, and, more generally, Victorians’ obsession with seeking out and providing evidence of origins.

For instance, Sally Shuttleworth has argued that George Eliot’s depictions of the individual psychologies of her characters often appear to be heavily influenced by Victorian scientific discourses on the complex processes of memory. She refers specifically to Lewes’s theory of the palimpsest in his later work Foundations of a Creed as influencing George Eliot’s representation of how different emotions operate simultaneously within the mind at different psychic levels (192-200).²⁷

Though Shuttleworth is interested in the scientific influences evident in George Eliot’s representation of Gwendolen, her readings of particularly significant passages from Lewes’s Problems of Life and Mind are especially evocative when she uses them as intertexts for her discussion of the psychological effect on Bulstrode of Raffles’ return in Middlemarch. Her argument that, in her depiction of Bulstrode, George Eliot both “uses physiology to suggest that for the individual, as much as for the society or culture, there is a vital interdependence in history,” is almost equally applicable to the reading of Gwendolen’s psyche that I have proposed (154). In both cases—Gwendolen’s and Bulstrode’s—a traumatic event triggers the return of repressed emotions. However, where in Bulstrode’s case, a repressed emotion—”shame”—returns with the reappearance of Raffles, in Gwendolen’s case, a traumatic event triggers the return of both a repressed emotion—the overpowering wish that her step-father not come back—and a repressed memory of psychological trauma.

The representations of the workings of memory, both those embedded in George Eliot’s representations of Bulstrode and Gwendolen and those appearing in Lewes’s
psychological theories, are distinctly gendered. In Gwendolen's story, as in Lewes's example of the "ignorant women," a traumatic event triggers the return of a repressed childhood memory to a female mind inscribed on by the words and actions of others. In both cases those buried memories consist of the imprints left by men in dominant positions over them.

Where there is even a suggestion of recovered memory in the "Daniel plot" of Daniel Deronda, namely in Daniel's instinctive affinity to and aptitude for Zionist preaching, there is apparently no single traumatic event that prompts his interest (unless, it could be argued, that traumatic event occurs in the moment of his first recognition of his circumcision and its possible implications). His preoccupation with Judaism appears rather to be the result of a gradually increasing sense of recognition. Again, however, the reversal of cause-effect relations suggested by the very question of the origin of Daniel's interest and aptitude for Zionist preaching helps illuminate the invitation that Eliot makes to her reader to trace the origin of Gwendolen's wound.

This invitation George Eliot makes to map the "unmapped country" of Gwendolen's mind is not merely an implicit one, nor is it necessarily surprising given the intellectual climate of the time. My reading of the passage as an invitation to interpret the cause of Gwendolen's symptoms of psychological trauma supports Gillian Beer's claim that people in the mid-nineteenth century in general had a fixation with origins (194-95). It may also account for Beer's sense of the "absence of transformation [that] is a severe emotional and intellectual strain in this work" (189). According to Beer's argument about nineteenth-century plots, their solutions should "confirm the validity of the clues proposed," but in Gwendolen's plot no such confirmation occurs, despite the wealth of
circumstantial evidence George Eliot provides. If, as Beer argues, nineteenth-century plots assume that "what is hidden may be uncovered, and that what lies beyond the peripheries of present knowledge may be encompassed and brought within the account by its completion" (162), then the absence of transformation in the Gwendolen plot begs explanation. The unanswered question of why no such transformation from unknown to known occurs in the case of the silencing of Gwendolen and her memories calls for critical attention.

In this search for origins and for the relation between the two stories told or not told in *Daniel Deronda*, the presence and absence of traces of evidence--historical, testimonial, literary, and scientific--appear themselves to oscillate in importance in each gendered plot. That oscillation, when read as a function of gendered scientific theories of the mind, may itself be the key to bringing the hidden wounds of both plots and their mysterious relation to each other out of obscurity.
Endnotes

1 Both Ashton and Shuttleworth describe a development in George Eliot's approach to science over the course of her novel writing, though their views on this development differ, as I explain in greater detail in my second chapter.

2 In calling Lewes a positivist philosopher I do not overlook Lewes's skepticism about the religious aspects of Comte's positivism, which I describe in detail in the previous chapter.

3 Chase first suggested that questions of Daniel's Jewish identity in the "Daniel Plot" were characterized by metalepsis, or the reversal of cause and effect relations. See Chase 215-227.

4 For a complete view of their criticisms see Spencer, "Bain on The Emotions and the Will" 120-142; and Lewes, "Voluntatary and Involuntary Actions" 295-306. William Myers also addresses the similarities between George Eliot's representations of the function of the mind and those of prominent figures like Bain and Spencer. See The Teaching of George Eliot and "The Two Eternities: Race and Soul in Daniel Deronda" 197-206.

5 For other accounts of the silencing of Gwendolen, see Carpenter 1-23; Rosenman 237-56; and Meyer 733-58. Carpenter reads the silencing of Gwendolen in psychoanalytic terms as an effect of having had her "phallic pride" excised from her in the course of the novel. Rosenman links Gwendolen's confession and subsequent silencing to the testimonies of other female characters in the "Daniel Plot." Meyer sees the silencing of
Gwendolen as a function of the novel's displacement of Gwendolen's initial rebellion against traditional gendered roles and desire for escape onto Daniel.

6 I strongly disagree with Stone's benign reading of the relationship between Daniel and Gwendolen as a therapist and "cured" patient at the end of the novel. I read the disciplining of Gwendolen by Daniel much more skeptically. For a thorough account of Daniel's disciplining of Gwendolen see Anne Cvetkovich's "The Inside Story: On Sympathy in Daniel Deronda" 128-164.

7 For accounts of visits, conversations, and correspondence between George Eliot, Lewes, and Bain, see especially Eliot, Journals 125; and Eliot, Letters 4: 266.

8 Extracts from John Tyndall's Six Lectures on Light, Delivered in America 1872-1873 and Fragments of Science for Unscientific People are contained in George Eliot's Daniel Deronda Notebooks. See 16-23. The following entry in the Notebooks from Six Lectures seems particularly appropriate to my argument:

If the walls of a large room were covered with photographic apparatus, the small amount of light reflected from the face of a person situated at its centre would simultaneously imprint his portrait on a multitude of recipient surfaces. Were the cameras absent, but the room covered with photographic paper, a change would equally take place in every portion of it, though not a reproduction of form and figure. As other substance not commonly called photographic are known to be affected by light... every portion of light may be supposed to write its own history by a change more or less permanent in ponderable matter, (my emphasis 20)
The significance of the novel’s “make-believe of a beginning” in medias res has been the subject of interesting criticism (35). Sally Shuttleworth, for instance, argues that the striking beginning marks a shift in George Eliot’s scientific interests from an emphasis on natural history in her earlier fiction to psychology and other experimental sciences in her later fiction. See Shuttleworth (1-23.).

Mary Wilson Carpenter interprets Gwendolen’s spoiling as “phallic pride,” a reading that suggests a less troubling origin to Gwendolen’s strange, often terrorized reactions to others’ attempts to be intimate with her. See Carpenter 1-23.

For a more detailed discussion of Mirah’s confession, see Wilt 318-320. I merely wish to show here how Mirah’s long, detailed narrative invites comparison with Gwendolen’s halting gap-filled confession. My reading of these confession scenes and of the novel as a whole was influenced greatly by a 1993 seminar on the novels of George Eliot and Anthony Trollope at Rice University led by Helena Michie.

For a different account of the strong influence of Alexander Bain’s work on George Eliot’s, see Myers, “The Two Eternities,” 197-206; and, The Teaching of George Eliot (especially intro.)

Interestingly, in an 1868 article in the Fortnightly Review, Bain invokes George Eliot as illustration of his theory of juxtaposition, called here the “law of Relativity” in human behavior. “The author of Romola,” he writes, “says of the hero and the heroine . in the early moments of their affection that they could not look forward to a time when their kisses should be common things” thus illustrating how the frequent presence of emotion dulls one’s ability to be conscious of it. He summarizes, “What is called on these
occasions the force of custom is the application of the law of change, comparison, or Relativity.” See “Mystery and Other Violations of Relativity” 383.

14 There are many other instances of the exchange of jewelry for persons, information, or moral value. For instance, Lydia Glasher’s transfer of Grandcourt’s diamonds to Gwendolen is made in exchange for Gwendolen’s guilt. This exchange is later answered by the transfer of Grandcourt’s fortune onto Mrs. Glasher’s son and the substitution of Gwendolen into Mrs. Glasher’s former place of exile. For more on the subject of exchanges of property and women in Daniel Deronda, see Gallagher “The Prostitute and the Jewish Question: George Eliot and Daniel Deronda.”

15 For much more thorough treatments of parallels between the Alcharisi’s confession and Gwendolen’s, see both Wilt and Crosby.

16 For an interesting discussion of the theatricality of the Alcharisi’s confession, see Bodenheimer 187.

17 Twelve years later, in 1872, Charles Darwin would write his own treatise on this subject. The Expression of the Emotions in Man and Animals.

18 It is interesting to compare Lewes’s insistence on the inseparability of emotions and action here with his comments on the connection between emotion and gesture in his theater criticism. In one, great actors need not feel emotions intently, they need only perform them. Mediocre actors might feel roles intently, but be unable to perform them. We might even read Gwendolen as one of the mediocre actors who feel intensely that Lewes describes. See Lewes, On Actors 27 and 59. George Eliot describes a successful performance by an actor in both “person and action” in a letter to her friend Sophia
Hennell on August 10, 1866. “Mr. Lewes, who, you know, is keenly alive to everything ‘stagey’ in physiognomy and gesture, felt what I am saying quite as much as I did, and was much moved” (297). See Letters 4: 297.

19 Stone mentions this incident, but stresses only that it “foreshadows [Gwendolen’s] future” silencing by Grandcourt and her desire to play the role of the “oppressor masculinist” (59). Bonnie Zimmerman similarly claims that in strangling the canary, Gwendolen is actually “strangling the woman inside herself” (208). Wilt suggests that the episode illustrates Gwendolen’s “cruelty to women, her contempt for the . . . feminine” (325). I see this incident as a sadistic display of exasperation, though not one directed at women or the feminine generally but at the silencing of her voice. I do not read it as foreshadowing.

20 In Narrative and Its Discontents, D. A. Miller distinguishes between the “unnarratable”—that which cannot be narrated because it is taboo—and the “nonnarratable”—that which is incapable of generating story (introduction).

21 George Eliot appears to have had an extensive knowledge of Jewish customs, as is evident from her “Daniel Deronda” Notebooks. It is also proudly boasted of by George Henry Lewes in a letter to her publisher claiming, “only learned rabbis are so profoundly versed in history and literature as she is” (qtd in Crosby 15).

22 Wilt takes issue with Chase’s and Marcus’s claims that Daniel would have been circumcised, citing the Alcharisi’s more than ambivalence about Judaism and her ability to manipulate her weaker-spirited husband. I question whether the menacing father who forced her to marry would have allowed her to decide not to circumcise her child. This
possibility seems equally unlikely. In either case, Eliot's inability to mention the subject confirms for me its status as an ambiguous sign.

23 Interestingly, in “Gwendolen Harleth--Character Creation or Character Analysis?,” Richard Bates points to these particular passages as evidence of the way that Eliot’s “inadequa[te]” prose enacts a “belittling of the kind of experience she is dealing with” by moving from “desperate” descriptions of Gwendolen’s terrors to the more “cool, judicious” reflections of the narrator (40-41). Bates sees no need for the force with which Eliot depicts Gwendolen’s psychic distress. By contrast, I would argue that the descriptive moments that Bates finds so inadequate are actually some of the novel’s most provocative and revealing ones.

24 Stone lists frigidity as one of the symptoms of hysteria exhibited by Gwendolen, but in her reading “[f]rigidity is a symptom of [Gwendolen’s] conflict over her sexual identity. . . [she] is greatly discontented with being a girl” and, further, “[h]er guilt over her sexual feelings towards [her father] makes her reject him and thus all men” (61).

25 Stone mentions this incident but stresses only that it “foreshadows her future” silencing by Grandcourt and her desire to play the role of the “oppressor masculinist.” See “Case History” 59. Bonnie Zimmerman similarly claims that in strangling the canary, Gwendolen is actually “strangling the woman inside herself” (208). See Zimmerman, “Gwendolen Harleth and 'The Girl of the Period’,” in George Eliot: Centenary Essays and an Unfinished Fragment, Ed. Anne Smith. Totawa, NJ: Barnes and Noble, 1980. Wilt suggests that the episode shows Gwendolen’s “cruelty to women, her contempt for the . . . feminine.” See “‘He Would Come Back’” 325. My reading of this passage is closest to
Wilt's. I see this incident as a sadistic display of exasperation (though not one directed at women or the feminine generally but at the silencing of her voice), not as masochism or foreshadowing.

26 Some readers of this manuscript have asked why Gwendolen's psychic wound could not be a result of something other than incest. For instance, Catherine Rasmussen, who proofread this manuscript and provided helpful comments, asked why the origin of the psychic wound could not be interpreted as something less sinister. Some alternative interpretations that have been suggested are that the wound results from Gwendolen witnessing a Freudian "primal scene," or from simple jealousy at her mother's remarriage. Since I am reading her wound through Victorian theories of memory, I would reject the first suggestion of the "primal scene" explanation as anachronistic. The second suggestion has been made eloquently by Carpenter. Yet, the severity of Gwendolen's psychic distress, the ambiguity of our introduction to Gwendolen as "spoiled" and as subject to frequent fits of "timidity or terror," the repulsion she feels toward intimacy, and the specificity of the memory of her fear of her step-father's return all lead me to surmise that the abuse she has suffered is sexual in nature and has effected her more severely than the jealousy theory would account for. Of course, I must admit, as Wilt admitted before me, that I cannot ultimately prove that my theory is the correct one.

27 Lewes's description of the palimpsest bears repeating here:

The sensitive mechanism is not a simple mechanism, and as such constant, but a variable mechanism, which has a history. What the Senses inscribe on it, are not merely the changes of the external world; but these characters are commingled
with the characters of proceeding inscriptions. The sensitive subject is no tabula rasa: it is not a blank sheet of paper, but a palimpsest. (Lewes, Problems 1: 162)

28 In a complicated and provocative argument, Christina Crosby asserts that in George Eliot’s novel women are erased as agents from history in the effort to depict the historical transcendence of men. The erasure of Gwendolen’s history, however, is thematized so prominently that I think there is more to George Eliot’s depiction of women. Gwendolen in particular, than the transcendence of men. See The Ends of History 12-43.
Conclusion:

As chapter four argues, the only way that *Daniel Deronda* can tell the otherwise unnarratable story of Gwendolen Harleth is to weave into its narrative the structure and style of physiological and psychological discourses that theorize the ways that silences may often speak. Thus Gwendolen’s story is interpretable only through the absence of history and memory in her narrative. There is no small significance to the fact that the scientific discourses do not allow Gwendolen to be reabsorbed into a familiar marriage plot. In *Daniel Deronda* the pressures and expectations of the scientific discourses win out over those of the marriage plot in a way that would be unfathomable in the earlier Victorian novels. *Daniel Deronda* shows us the limits of the Victorian positivism and thus it is no surprise or coincidence that shortly after the publication of George Eliot’s last novel the heyday of “high realism” was over.

While this dissertation appears to trace a pattern of the increasing influence of scientific epistemologies on Victorian novels, it does not make claims about the relative merit of the earlier and later novels. Rather the goal of each of these chapters is to focus on a different scientific discourse and on the effects of that discourse’s emergence in Victorian culture on a particular novel. The chapters nevertheless arrive at similar conclusions about the results of that interweaving of scientific and literary genres. All of the chapters argue for a method of critical interpretation of the novels and non-fiction studies that is not so much concerned with questions of realism simply as a problem of representation, as with the effects of the existing and emerging cultural discourses on the novel form.
In these chapters, my concentration on the intersections between cultural and literary discourses allows me to see the competing epistemologies at work in these studies. The chapters thus explain aspects of the novels that have previously been seen as stylistic or thematic confusions as reflecting instead the uncomfortable intersection between the competing epistemologies of the individual and the social. Critical attention to these points of intersection reveals much about Victorians’ concern with the question of how best to represent their world.

Though I have been necessarily limited in my choice of Victorian novels and scientific studies, the passages I discuss from each point to wider issues about Victorian intellectual discourse. My readings produce, I hope, a more fluid and contestatory picture of Victorians’ conceptions of the relationships between science, literature, truth, and fiction than previous critical studies have acknowledged.
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