EVOLVING SCIENCE FICTIONS:
BIOLOGICAL REPRESENTATION IN NINETEENTH-CENTURY BRITAIN

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Abstract

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Biological representations, as found in both the literary and scientific texts of the nineteenth century, exacerbated epistemological problems in such a way that it became necessary for nineteenth-century intellectuals—whether explicitly concerned with epistemology or not—to begin formulating practical epistemologies and philosophies of scientific representation. In attempting to make these representations, these writers and scientists gradually became aware that scientific representation complicated scientific claims to objectivity and philosophical realism. Understanding this growing awareness of representational issues allows us to better understand the ways in which nineteenth-century biologies helped to create the theoretical emphasis on the difficulties of interpretation that continue to pervade academic conversations across the disciplines.

To this end, this dissertation examines the work of a number of nineteenth-century scientists and literary artists in an effort to understand the nature of the representational difficulties they encountered. The first chapter examines the medical work of John and William Hunter, as well as the plays and theater theory written by their niece, Joanna Baillie. In their collective work we see a continual preoccupation with the diagnostic difficulties that
medical misrepresentation can create. The second chapter explicates the use of phrenology in the novels of Charlotte Brontë; the contradictions found in the work of phrenology writer George Combe led Brontë to embrace a more open epistemic stance in her last novel, *Villette*. The third chapter discusses the concept of the biological archetype, as found in the work of Charles Darwin and George Eliot. The archetype allowed them to get beyond the epistemological difficulties encountered by Baillie and Brontë, but also placed a new emphasis on the importance of tentatively known contexts in scientific observation. The last chapter explores the work of Max Nordau and H.G. Wells; both were concerned about the possibility of distinguishing artistic representation from scientific representation. These last chapters document the emergence of “conceptual realism;” Wells and Eliot attempted to present narratives that simultaneously recognized the perceptual mediation that occurs in any apprehension of reality and at the same time insisted on the ability to know reality.
CONTENTS

INTRODUCTION...........................................................................................................1

CHAPTER ONE: “UNBALL’D SOCKETS” AND “THE MOCKERY OF SPEECH:”
DIAGNOSTIC ANXIETY AND THE THEATER OF JOANNA BAILLIE ..................16

CHAPTER TWO: “ACCORDING TO THE EYE WITH WHICH WE ARE VIEWED:”
THE TRIBULATIONS OF SKULL HERMENEUTICS IN THE NOVELS OF
CHARLOTTE BRONTÉ............................................................................................50

CHAPTER THREE: “MORE POETS THAN OBSERVERS OF NATURE:”
ARCHETYPAL REPRESENTATION IN DARWIN AND ELIOT ............................102

CHAPTER FOUR: WHEN SCIENTISTS DEGENERATE: WELLS, NORDAU AND
SCIENTIFIC/ARTISTIC REPRESENTATION ....................................................159

CONCLUSION........................................................................................................189

WORKS CITED.....................................................................................................196
INTRODUCTION

“A remnant of the mythical lurks in the very sanctuary of science. Forms or theories ever fall short of nature . . . To a certain extent they are reliable and complete; as a system of knowledge they are but intermediary and preparatory.”

--R.W. Mackay quoted by George Eliot in her review of The Progress of the Intellect.¹

The figure of a roaring loom with unique threads flying and interweaving beyond all human interpretation we owe to Goethe, the intellectual father of the nineteenth-century.

--H.G. Wells, “The Rediscovery of the Unique”²

Biologistic³ representations, as found in both the literary and scientific texts of the nineteenth century, exacerbated epistemological problems in such a way that it became necessary for nineteenth-century intellectuals—whether explicitly concerned with epistemology or not—to begin formulating practical epistemologies and

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¹ George Eliot: Selected Critical Writings (35).
² Early Writings by H.G. Wells (30).
³ I use this term to refer to disciplines such as anatomy, phrenology, evolution, and degeneration. I intentionally avoid the term ‘pseudo-biology’ when referring to phrenology and degeneration for two reasons. First, it seems to me that doing so anachronistically places recent science’s judgment on those disciplines and in doing so denies that they ever had any cultural legitimacy at all. It is important for this dissertation to recognize that they were taken quite seriously. Second, referring to them as pseudo-science denies the sometimes embarrassing role that these practices played in what we now regard as more legitimate sciences such as evolution and genetics; it is important to recognize the racially motivated goals of these early practices.
philosophies of scientific representation. By scientific representation, I mean those attempts on the part of nineteenth-century intellectuals, whether they were scientists, popularizers of science, or literary artists, to present images and definitions of the human body, organisms, or groups of organisms that were in some way scientifically accurate. Often these representations employed visual media, but just as often they used prose description and narratives. In attempting to make these representations, these writers and scientists gradually became aware that scientific representation complicated scientific claims to objectivity and philosophical realism. Understanding this growing awareness of representational issues allows us to better understand the ways in which nineteenth-century biologies helped to create the theoretical emphasis on the difficulties of interpretation that continue to pervade academic conversations in both the sciences and the humanities.

The recent attempt in Victorian literary studies, on the part of Amanda Anderson and George Levine among others, to resurrect objectivity as a regulative ideal for epistemological practices, as well as the emphasis such attempts place on combating the “hermeneutics of suspicion and insistence on the primary values of localism and particularism,” suggest that these problems of biological interpretation have contributed to the objective/relative distinction that continues to inform discussions to this day (Levine 14). Christopher Herbert’s alternative project

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4 See Amanda Anderson, The Powers of Distance: Cosmopolitanism and the Cultivation of Detachment. Anderson admits that objectivity, or “detachment” must “necessarily remain a precarious and merely regulative ideal,” but all the same she tries to resurrect a qualified notion of detachment and the objectivity it potentially creates (32). She writes: “While I believe that detachment takes many different forms, and produces many different effects—beneficial, harmful, and indifferent—I defend the progressive potentiality of those modern practices that aim to objectify facets of human existence so as to better understand, criticize, and at times transform them. In defending detachment, however, I do not mean to suggest that absolute objectivity can be achieved, or that one ever fully or finally inhabits any given practice of detachment” (6). George Levine, in Dying to Know, offers a similarly
celebrating the politically attractive elements of scientific relativity by tracing the
prehistory of the concept of relativity—and thus reclaiming it from marginalization—
confirms that the problems of interpretation that nineteenth-century scientific
representation created helped to shape cultural expressions of the objective/relative
binary. This dissertation provides an understanding of the nature of the scientific
representational problems that aggravated what was originally a local philosophical
difficulty into the wider cultural preoccupation that it is to this day. Many of these
writers did not always think in terms of objectivity and subjectivity and relativity, but
rather as they encountered a variety of representational difficulties they formulated
particular responses to particular representational issues. Looking specifically at these
representational issues moves us beyond the subjective/objective distinction to a
better practical understanding of how these intellectuals perceived themselves as
succeeding or failing “to know” something. Obviously an explication of the practical
epistemological problems, solutions, and failures of these nineteenth-century writers
does not provide a resolution to the subjective/objective binary; furthermore, the
excellent monographs on those subjects are successful in their attempts to explore the
degree to which various nineteenth-century intellectuals strived for objectivity and
detachment or sought to recognize the complexities of relativity. But by recognizing
that the distinction was often less a priority for nineteenth-century writers themselves,

utopian view of objectivity: “Isn’t there, after all, and (risking accusations of naïveté), something
pretty decent and creative in a struggle to get beyond the self?” (14). Christopher Herbert attempts to
give relativity a history that runs prior to the emergence of Einstein, and makes it clear that he sees that
relativity as more politically attractive than the alternative: “What is enacted in early relativity writings
is not only a rehearsal of ‘the struggle between Liberty and Authority,’ . . . but a positing of an ideal
regime of values. This ideal regime forms the inverse image of all systems of autocracy and
absolutism. Its presiding values are reciprocity; interconnectedness; the privileging of diversity,
dissent, and creativity; and the systematic demystification of established structures of authority. But
the greatest of these is reciprocity” (9).
the approach offered in these case studies has the merit of showing us the sometimes incomplete and less-than-systematic attempts to understand representational difficulty. We, in other words, come to understand better those intellectual conversations and issues that provided the impetus for an emphasis on objectivity or relativity.\(^5\)

As a result of relocating the emphasis of our understanding of nineteenth-century epistemological issues on the attempts to represent objects we also come to understand nineteenth-century realism—as a literary genre or a mode—as the attempt to meet, simultaneously, the demand for representation that was realistic in some way, and the demand to recognize how representation as representation complicated claims to realism. A recent, and prominent, attempt to understand the nineteenth-century realist novel, Nancy Armstrong’s *Fiction in the Age of Photography*, maintains that the nineteenth-century novel and the emerging art of photography helped to create and mutually reinforce a “shadow archive” of stereotypical images that endorsed what was ‘real.’ Armstrong’s study also recognizes that prior to the actual advent of photographic technology there was a desire for the “unmediated image” that photography would eventually supply (8-9). The initial chapter of this dissertation—which concerns the anatomist William Hunter, the surgeon John Hunter, and their niece, the playwright Joanna Baillie—complements that claim, giving us evidence of the desire for an unmediated image of the body in both anatomy

\(^5\) In the chapters themselves I engage the work of several critics who have examined more localized interactions between science and literature. Prominent examples include Sally Shuttleworth’s *George Eliot and Nineteenth-Century Science* and *Charlotte Brontë and Victorian Psychology* as well as Gillian Beer’s landmark *Darwin’s Plots: Evolutionary narrative in Darwin, George Eliot and Nineteenth-Century Fiction*. These studies, however, are less concerned with nineteenth-century epistemology, and more concerned with the ways in which specific scientific disciplines engaged specific authors. As a whole, however, this project is more concerned with broader representational issues.
and in the theater many years before the advent of the photograph. But it also shows us an awareness that even a photographic image would have been insufficient for them. This medical family became collectively aware of representational issues that would have made photographs just as unsatisfying as the engravings with which Hunter attempted to capture unmediated images of his subjects.

This preoccupation with representational issues continued throughout the nineteenth-century, spanning a variety of biologistic disciplines, as well as the novels that attempted to anchor their representations in those disciplines. As a result, there are a number of novels whose “realism” is anchored just as firmly in recognizing the difficulty or impossibility of objective, unmediated vision as other realistic novels are anchored in a shadow archive of supposedly unmediated images. We are better able to see these complications when we recognize that the photograph and the unmediated image it sought to produce were not the sole impetus for realism. Realism came at least as much from the attempt on the part of literary texts to co-opt the rising cultural authority of nineteenth-century science, and nineteenth-century biologies were consistently preoccupied with representational issues. As a result, we have the seeming contradiction of the ultra-realist novels Daniel Deronda and Middlemarch that repeatedly draw attention to their own status as representational products. But Eliot—I argue—did not see this as a contradiction; her repeated melding of scientific and representational metaphors suggest that highlighting representational elements—and the epistemic contingency it created as a result—was absolutely necessary to deem the work ‘real.’ The same mind-bending juxtaposition occurs in the H.G. Wells essay “The Rediscovery of the Unique,” which vacillates between a presentation of
science as the provider of the ultimate access to reality at the same time that it questions the deeply distorting effects of scientific practice.

Many of the representational problems explicated in the following chapters were created specifically by the nature of biological study; or, to put it in Ernst Mayr’s terms, these biologic disciplines struggled to apply the philosophy of science generated by the physical sciences in the seventeenth- and eighteenth-centuries to their own work in the nineteenth-century. Viewing nineteenth-century from his historical perspective, what we see is the repeated attempt to wield Lockean inspired empiricism onto biological entities that consistently proved resistant to empiricism. Biology, Mayr notes in *The Growth of Biological Thought*, is curiously resistant to the physical “laws” that much of seventeenth- and eighteenth-century physical science attempted to produce: “Generalizations in biology are almost invariably of a probabilistic nature. As one wit has formulated it, there is only one universal law in biology: ‘All biological laws have exceptions.’ This probabilistic conceptualization contrasts strikingly with the view during the early period of the scientific revolution that causation in nature is regulated by laws that can be stated in mathematical terms” (38). The probabilistic conceptualization is due in large part to the eternally shifting nature of organisms, both on the individual and species levels, which creates the representational problems detailed here. Nineteenth-century British biologies, therefore, offer a unique glimpse into the ways in which previous notions of scientific understanding—based on the physical sciences—were being undermined by biological approaches. It is important to note the use of the plural here; there were a variety of approaches that undermined the empiricism of the physical sciences in a
variety of ways. No one, with the possible, partial exceptions of Goethe or William Whewell, offered a systematic philosophy of science based on the biological sciences to help guide the emerging biological sciences. What we have then, is a variety of biologisms challenging the empiricism of the physical sciences in a variety of implicit ways. What does unify these biologic discourses is that they created a need for a greater level of theoretical sophistication in representation, which in turn created complex considerations of practical epistemology.

When understood in the terms of the empiricism of the physical sciences, that need for theoretical sophistication often leads to discussions along the subjective/objective binary; recent discussions in the history and philosophy of science, however, suggest that the need for theoretical sophistication can also be understood in terms of what some have termed conceptualism. This dissertation’s preoccupation with issues of nineteenth-century representation might be seen as a prehistory of conceptualism. David Depew and Bruce Weber, in their impressive volume *Darwinism Evolving* complicate Mayr’s portrait of Darwinism, and claim that while Darwinism did successfully distinguish itself from the physical sciences, it nonetheless incorporated features of Newtonian physics in formulating system dynamics for species populations. In making that argument, they make the following concise claim to a particular philosophy of science:

Our pervasive talk about background assumptions, ontologies, and research traditions suggests that we accord a large role to interpretive frameworks in determining how scientists view data and what they come to believe about how the world works. That puts us on the side of what might be called conceptualists rather than empiricists in the philosophy of science. Conceptualists, to be sure, can approve of the empirical method without being empiricists in philosophy. Indeed, given what modern science actually is and how it works, they had
better do so. In contrast to philosophical empiricists, however, who (whether they are inductivists or deductivists, confirmationists or falsificationists) make theory-neutral data decisive in scientific theorizing, conceptualists stress the role of antecedent conceptual schemes in glueing scientific theories together and bringing them to bear on the world. (21)

Depew and Weber’s conceptualism is instructive; the attempt to represent—in a specifically conscious and specifically scientific way—created the need for conceptualist thought introduced in Thomas Kuhn’s Structures of Scientific Revolutions. An individual scientist who wants to represent the objects of his study and the results of his research makes a claim to “objectivity” at the same time that he implicitly recognizes the need to be aware of the theoretical issues involved in making that representation. Conceptualism demands a simultaneous belief in the ability to know reality and recognition of the ways in which perception and representation shape that reality. The literary writers who employed scientific discourses in their work became conceptualists by necessity; as they attempted to represent reality as ‘real,’ and at the same time became extremely aware of the act of representation. Biologistic discourse—and its resistance to the empiricist philosophy of science created by the physical sciences—helped to create the need for what might be called a conceptualist approach to literary realism: the need to simultaneously insist on the ability to know reality while recognizing the perceptually mediated nature of any perception of reality.6

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6 A number of studies in both literary criticism and the history of science have suggested that nineteenth-century science produced the need for something resembling the hermeneutic method—this emphasis on interpretation gets at something similar to the proto-conceptualism I forward here. Historian of science Robert J. Richards’s extremely thought provoking book The Romantic Conception of Life argues that German “romantic biologists” such as Goethe came to think that “artistic experience and expression might operate in harmony with scientific experience and expression: the basic
In addition to giving us an understanding of this literary conceptualist realism, this emphasis on scientific representation also sheds light on the nature of the representational problems that nineteenth-century biologisms faced. The nineteenth-century in Britain saw the gradual professionalization of both literary studies and scientific practices, and as a result, there was an absence of the current dividing disciplinary wall between the two discourses. Baillie, Brontë, and Eliot, especially, employed scientific insights and practices directly into their work in a way that we do not see in more recent literature. All of the literary writers that I address in this dissertation were engaged in an attempt to produce and reproduce specifically scientific representations that could be easily recognized as such. They were not simply using scientific ideas, but replicating scientific images and prose descriptions in such a way that characters and situations could be recognized as ‘real.’ Baillie, the earliest and most outrageous example of this, not only expected to produce a scientific anatomy of the passions, but also expected it to have a diagnostic impact on her audience impact on her audience; in short, she expected to practice practical structures of nature might thus be apprehended and represented by the artist’s sketch and the poet’s metaphor, as well as by the scientist’s experiment and the naturalist’s observation. . . . [Furthermore] Romantic biologists maintained . . . that the aesthetic comprehension of the entire organism or of the whole interacting natural environment would be a necessary preliminary stage in the scientific analysis of respective parts: both art and science, comprehension of the whole had to precede that of the parts” (14). In her recent book on Victorian Hermeneutic thought, Victorian Interpretation, Suzy Anger discusses the philosophy of science of William Whewell, and in doing so concisely indicates the potential roots of this emphasis and the resulting interpretive preoccupation: “Trying to mediate between Lockean empiricism and Kantianism, Whewell sought to show that interpretive conceptions are crucial to the process of scientific discovery. Whewell was a realist about scientific knowledge; that is, he regarded it as providing a description that ‘conforms to the true order of nature.’ But he also believed that conceptions are furnished by the mind, and argued that knowledge depends on a ‘fundamental antithesis’ between mind and things (subject and object)” (89). Janis Caldwell’s Literature and Medicine in Nineteenth-Century Medicine has also been helpful in thinking through these issues. Her thesis is that: “Romantic materialists, as inheritors of the conceptual structure of natural theology, read the world through ‘two books’: the Book of Nature and the Book of Scripture. But unlike traditional natural theologians, Romantic materialists accepted disjunctions between the two ways of knowing and called for an interpretive method which tacked back and forth between physical evidence and inner, imaginative understanding” (1).
science and medicine herself in her literature. While that scientific urge is not quite as pronounced in the work of later authors examined in this dissertation, there is nonetheless an expectation that their work engages science not simply as a prop or a plot device—as we see in more recent science-fiction—but in such a way that their work borders on an attempt at scientific practice itself. And as these authors were engaged, by the very virtue of their literary work, in the task of representing plots and characters, they had a heightened awareness of the representational issues that science created; many of them had actually turned to scientific theories and practices in order to support their representational ambitions, and were disappointed when it proved more problematic than they expected. Furthermore, their very attempts to represent physical bodies and mental characters often produced problems that closely resembled biology’s evolving approaches to biological representation. In the following chapters I exploit the tendency of these writers to highlight the specific nature of the representational difficulties that the scientific discipline they are engaged with produced. I also strive to emphasize that these responses were not static, but developing. As an awareness of these representational issues grew, the expectations and strategies of these writers shifted. I have chosen, therefore, those literary writers who did not simply incorporate a scientific theory, but have specifically attempted to engage scientific discourse and even practice it in particular and complicated ways, and were specifically interested in science’s claims and abilities to produce effective representations.

It might be useful to say a further word about the writers I came to choose as a result of this method, who, as readers will no doubt notice, are predominantly
women. I did not specifically attempt to choose women writers for this project, but using writers who had directly engaged scientific practice seems to have produced a predominance of women all the same. Literary production seems to have been a way to engage in the incredibly exciting and truly cutting edge arena of nineteenth-century science that would have otherwise been excluded to them. Baillie, for instance, who initially showed a marked interest and talent in mathematics, would have been prevented by the cultural norms of her time from pursuing a career in medicine, as her brother did so successfully, and her plays seem to have been a more roundabout way of participating in that family business. Sally Shuttleworth has speculated that phrenology was attractive to Charlotte Brontë for class and gender reasons—that it essentially gave Brontë a material wedge against her over-determined marginalized status as a rural, lower middle-class woman. Eliot, of course, participated in a wide range of intellectual disciplines and conversations, and at times even helped her longtime companion G.H. Lewes in his scientific endeavors. For each of these women, literary production was not only an end to itself, but a way to participate in a discourse from which they would otherwise almost certainly have been excluded. As men were not excluded from those practices, it is not surprising, perhaps, that the men who chose literary careers were generally less interested in the specifics of scientific research and practice. Even H.G. Wells, the last of the literary writers that I consider, only narrowly missed a career in the sciences himself, and seems to have been attracted to science for similar reasons. As a product of the servant class, he was

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7 See Sally Shuttleworth, in Charlotte Brontë and Victorian Psychology: “[Brontë’s] social status . . . was decidedly marginal: middle-class and educated, but with few surrounding peers, and constantly under the threat of genteel poverty, she had, as a woman, no legitimate social outlet for her talents. . . In phrenology, [Brontë] would have found a philosophy which offered a legitimating faith in hidden talent, and suggested the possibility of an individual resolution to the social impasse” (66).
attracted to science and evolution at least in part because it was a political leveler. As
Adrian Desmond’s study *The Politics of Evolution* implicitly suggests, we might
expect to find those who were marginalized by either class or gender to be interested
in scientific pursuits and especially in evolutionary theory.

Because the dissertation pursues representation itself, rather than the historic
development of a particular concept, the chapters of the dissertation are presented as
case studies, not as a continuous narrative. Nonetheless, the alert reader will no doubt
note that the subjects of the chapters do follow one another in historic succession.
This is due to the fact that—while the chapters do each pursue distinctive cases of
scientific representations—there is a general shift in emphasis in middle of the
nineteenth-century that makes such an organization desirable. While a number of
studies have admirably undermined the position of Darwin as the exclusive originator
of evolutionary thought, his work might still be taken as an approximate guide to the
point at which evolutionary thought became more plausible to nineteenth-century
intellectuals than its alternatives. As a result, representation in the nineteenth-century
can be roughly divided into two periods.

In the first period, biological representation was concerned with the details
and development of the individual organism. Anatomy and phrenology both

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8 See Adrian Desmond’s *The Politics of Evolution: Morphology, Medicine, and Reform in Radical London*, Desmond examines the political origins of nineteenth-century evolutionary thought, and portrays many of the debates about evolution as a conflict between the Tory old guard and the “political radicals and scientific materialists” that forwarded evolution (5). Often, he maintains, evolution was a way for the politically marginalized to construct a way into the political conversations of the country. While not all of the women writers here can be considered politically liberal across the board—indeed, many of them were quite conservative when it came to other issues—they were marginalized by their gender, and some cases their class and nationality. Scientific practice and materialism were biological levelers.

9 In addition to Desmond, Mayr, and Depew and Weber, see also Peter Bowler’s *Evolution: The History of an Idea*, and most especially James Secord’s *Victorian Sensation: The Extraordinary Publication, Reception, and Secret Authorship* of *Vestiges* of the Natural History of Creation.
attempted to produce, as closely as possible, an accurate portrait of the individual body. For even as they attempted to provide a generalized guide of the body, that generalization was produced in such a way that it would guide the individual to an understanding of specific bodies. The first two chapters of this dissertation concern the attempt to reconcile the individual, always-changing body, with the generalized portrait that these disciplines attempted to create. In the first chapter, I examine the work of the medical family of William Hunter, John Hunter, and their niece, the playwright Joanna Baillie. I argue that Baillie, in her attempt to tutor her audiences in self-diagnosis, became aware of the representational issues that her uncles had come to realize. As a result, Baillie employed gothic tropes to contain the representational problems that her medical theater created. In the second chapter, I discuss the novels of Charlotte Brontë, and her ongoing engagement with the discipline of phrenology. As Brontë came to a greater awareness of the interpretational problems inherent in phrenology—especially as practiced by phrenology popularizer George Combe—she began to complicate its presence in her last novel, *Villette*. Both of these chapters show us the ways in which attempts to produce direct images of bodies undermined themselves.

With the growing awareness and acceptance of evolutionary theory, the emphasis changed. My third chapter argues that Darwin and Eliot were more concerned with representing aggregate groups of individuals as species, without eliding the differences between individuals that Darwin’s theory of natural selection demanded. This was a subtle shift in emphasis; Brontë, Baillie, the Hunters, and Combe wished to represent a generalized portrait of an individual that could be useful
to the individual, whereas Darwin and Eliot wished to represent, almost
simultaneously, the individual and the group. Darwin and Eliot, both aware of the
biological archetypal tradition that had been transplanted in Britain from its German
origins in the Natural Philosophy of Kant and Goethe, employed the archetype in
order to overcome that difficulty. As a result, they found themselves making unusual
epistemological claims, and more importantly, coming to a new realization of the role
in preconceived assumptions in their work.

The final chapter, which functions as an epilogue, attempts to explicate the
consequences of a heightened awareness of representational activity in work of
novelist and science journalist H.G. Wells and the degeneration theorist Max Nordau.
Wells and Nordau do, of course, participate in scientific discourses, but my emphasis
is on their common desire to segregate scientific representation from artistic
representation. That desire comes as a direct result of their awareness of the
similarities between artistic and scientific representation, and the new awareness of
representation as representation that comes as a result. Nordau obsessively resists the
idea that scientific representation suffers from the same problems as artistic
representation, but even his resistance presents us with the awareness that two forms
of representation are at least comparable. Wells more openly acknowledges the role
representation plays in science, but can no more successfully articulate a consistent
philosophy of science. Wells and Nordau, then, offer a perfect close to the study;
scientific representation, in their work becomes almost as important as scientific
practice itself. Their work—which continually vacillates between acknowledging the
subjective qualities of scientific representation and insisting on science as the
privileged epistemic mode—anticipates the academic discussions that continue to this day.
In 1799 the guardians of an eleven-year-old, club-footed boy were told by a famous physician that “if the proper means had been taken at the first in Infancy, the malformation might have been brought round. . . . But little could be done after the lapse of ten or eleven years” (Marchand 54). A famous surgeon—John Hunter—had been consulted shortly after the boy’s birth and reportedly proclaimed the foot to be beyond remedy (Marchand 25-26). The boy, later known as Lord Byron, suffered a lifetime of “bodily suffering,” and “mental agony” (25). The doctor who proclaimed Hunter’s original advice misguided was not a bitter rival in medical practice, but Hunter’s own nephew—Dr. Matthew Baillie, who would eventually attend the mad King George III. As medical practitioners working on the cutting edge of medicine, the Hunter/ Baillie family was aware of the dire consequences of misdiagnosis; when diagnosis fails in medical and anatomical science, a patient dies or experiences

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1 In the meantime, “a trussmaker” in a local hospital, a man named Lavender falsely claiming the title of surgeon, “tried to straighten the deformed limb by rubbing it with handfuls of oil and then screwing it up in a wooden machine that gave the patient excruciating pain” (Marchand 53n, 52).
excruciating pain that might have been prevented.² Or, as William Hunter would note in a posthumous article, the innocent can be tried and convicted as a result of medical misrepresentation. Joanna Baillie, famous Romantic-era playwright, sister to Matthew, and niece of the Hunters, also experienced profound anxieties about representational issues. This chapter argues that the work of this family—where medical and theatrical practice commingled in such strange ways—captures an early moment in the development of numerous scientific representational issues: the need to distinguish between idiosyncrasy and generalization, a developing awareness of the temporal body, and a need to recognize the very definition of life itself. Collectively these issues forced all of these family members to become—in both individual and collective ways—epistemologically aware. Furthermore, even as they strove for the unmediated image anticipated in the discourse surrounding the photograph, they gradually came to distrust the supposedly unmediated image.

This argument had its genesis in the following question: why did Joanna Baillie, a playwright who saw her Plays on the Passions as a distinctly scientific project, consistently employ the gothic, a genre typically associated with superficial excess? The surge of interest in Baillie over the past decade has taught us much about her gender politics,³ her scientific aspirations,⁴ and her use of gothic tropes.⁵

² This report comes from John Hansen, Byron’s guardian, so the nature of the apparent diagnostic disagreement between John Hunter and Matthew Baillie is not clear.

³ Catherine Burroughs, in Closet Stages, opened many of these important conversations about Baillie by pointing to the richness and complexity of Baillie’s theater theory, arguing more specifically that Baillie’s work “focus[ed] on the problem of how to deal with crushing social imperatives to enact one’s gender and sexual identity in extremely narrow ways” (87). Conversations about Baillie’s gender politics have continued, perhaps most notably in the work of Greg Kucich, who has compellingly argued for Baillie’s adoption of a “feminist historiography,” that can be seen in the “experimental technique of freezing stage action in tableau displays of communal sympathies” (108).
Marjean Purinton, in a recent series of articles, has addressed these critical conversations about Baillie’s use of gender and the gothic and suggests that Baillie used the gothic in order to challenge “the spectral use of bodies, rendering fictive what appeared to be objective, factual, and authentic science” as a way of challenging the way that Romantic-era science constructed women (“Science-Fiction”). With Purinton, I see interesting and strong connections between Baillie’s use of the gothic and her participation in scientific discourses, but am not convinced her plays exist solely to undermine the same scientific enterprise that Baillie employed to formulate the *Plays on the Passions* project. Baillie was interested in extending the project of her brother and uncles, especially in her desire to resolve the same representational difficulties that they encountered. I want us to take Joanna Baillie’s theatrical project as a serious scientific project in its own right. The past twenty years have produced key critical studies that consistently suggest that for much of the Romantic- and Victorian-eras, the rigid disciplinary divide that now exists between the academic

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4 In her article “‘Dr Baillie,'” Dorothy McMillan argued, quite correctly I think, that Baillie can be seen as continuing the medical project of her uncles and brother. More recently, Frederick Burwick, in “Joanna Baillie, Matthew Baillie, and the pathology of the passions,” and Alan Richardson in “A neural theatre: Joanna Baillie’s “Plays on the Passions,” have made the case that Joanna Baillie had specifically scientific aims for her theater. Burwick argues that she “shared in her early endeavors the typology of mania that her brother had forwarded in his lecture on the ‘Anatomy and Physiology of the Nervous System’” (48). Richardson demonstrates the ways in which Baillie’s theater collapsed the mind/body distinction: “The interpenetration and mutual interaction of mind and body . . . form the cornerstone of Baillie’s dramatic theory and practice” (132).

5 Jeffery Cox, in his anthology of *Seven Gothic Dramas,* has suggested that Baillie satirically employed gothic tropes in *Orra* to critique that genre’s impact on women (57). As discussed in the text Marjean Purinton has also addressed Baillie’s engagement with genre and gender issues. Gamer, in his chapter on Baillie in *Romanticism and the Gothic,* argues that Baillie attempted to distance her own use of gothic tropes by placing herself within the tradition of Shakespearean plays such as *Macbeth,* and in doing so participated in contemporary fears about the genre’s supposedly foreign influence on English culture.
This article suggests that Baillie saw herself as a mental anatomist. So another way to phrase my initial question might be: why did Joanna Baillie, as an amateur scientist, employ these gothic tropes?

The answer I give to this question—that Joanna Baillie employed these gothic tropes to mark moments when scientific and diagnostic uncertainty proved difficult to resolve with her theatrical project—reveals a number of important points to those scholars specifically interested in her work, as well as in issues of literary history and the history of science. In the case of Joanna Baillie, we see the scientific nature of her project heightening her awareness of issues of representation and interpretation. As a result, Baillie, so often seen as a supremely confident playwright, emerges as someone who persisted with her work despite serious doubts about the potential theatrical and scientific success of her project. This answer also suggests that Baillie’s use of the gothic was not solely a way of critiquing that genre, or that genre’s gender politics, as Jeffery Cox has suggested, but a conscious strategy that Baillie employed in order to overcome the interpretive doubts that she inherited from the specific scientific enterprises that influenced her the most. Nor are her plays aimed solely at demonstrating the shortcomings of scientific practice (although they may do that incidentally)—the epistemic failures in these plays are at least as much a part of regular scientific practice as they are a criticism of it. I am as interested in demonstrating the way in which her work reveals the tensions and conversations in late-eighteenth-century anatomy as I am in exploring the ways in which her literary

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6 Gillian Beer traced out the impact of narrative on the work of Darwin, George Levine has demonstrated the shaping influence of science on Victorian Realism. Alan Richardson’s *British Romanticism and the Science of the Mind* has investigated researches into the brain that were inspired by scholars, poets, and scholar poets. A more recent work that continues this line of thought in the history of science is Robert J. Richards’s *The Romantic Conception of Life*. 
work and theatrical criticism reflects those conversations. Scientific practice, in the
work of John and William Hunter, focused their attention on interpretive issues, and
continually led them to express doubt and frustration with scientific representation.
Concentrating on the work of the anatomists and physicians in Joanna Baillie’s family
helps to reveal the important ways in which these medical practitioners gradually
became aware of the highly subjective nature of their own projects.

There are, as we see in the case of Lord Byron, practical consequences that
repeatedly remind the medical practitioner that his or her range of knowledge is
limited. Attempting to represent the body, whether in medical texts or a medically
inspired theater, in the hopes of guiding diagnosis aggravated anxieties about
diagnosis, which in turn focused the family’s attention on the act of representation
itself. Joanna Baillie, writing plays about disease, concerned herself with the practical
failures of medical practice; her use of gothic tropes allowed her to represent medical
mistakes. Marking them in this way allowed her to confront the possibility of
medical misadventure—to recognize limited knowledge and ability—while at the
same time holding out the possibility of a better outcome for her audience. As she
became more pessimistic about the possibility of diagnosis, her plays give her
audience less hope. I will begin by examining Baillie’s introductory discourse and
key parts of William and John Hunter’s medical work, suggesting that all three
experienced similar interpretive difficulties. I will then show her plays De Monfort
and Orra manifest an increasing diagnostic pessimism. Collectively, I hope to show
a gradual dissatisfaction with the possibilities of visual realism well before the advent
of photographic technology.
I. Anatomical Anxieties

Joanna Baillie’s “Introductory Discourse,” which prefaced the first volume of her Plays on the Passions project, is arguably an extension of her family’s medical projects. Joanna, named after her uncle John, kept house, along with her mother and sister, for her brother Matthew at the anatomy school on Great Windmill Street in the years before his marriage. The poet Anne Home Hunter, herself the daughter of famous surgeon Robert Boyne Home, and who married John Hunter after meeting him as a medical student, first inspired Baillie to think of herself as a writer, and the young Baillie spent a considerable amount of time in the Hunter household (Slagle 55). The Plays of the Passions project was started at roughly the same time as her brother was completing his Morbid Anatomy, and she dedicated her second volume of Plays on the Passions to him, as “an offering of gratitude and affection for the unwearied zeal and brotherly partiality which have cheered and supported me in the course of this work” (Baillie Dramatic and Poetical Works 104). While no direct evidence exists that Joanna read the medical texts of her family, it seems likely that she would have at least been familiar with her brother’s work, and certainly would have had ample access to the work of her famous uncles. Certainly, between the home of John and Anne Home Hunter, and the anatomy school at Windmill Street, emerging medical debates would have been inescapable. In what follows, I will first unpack some of the key issues in Joanna’s introductory discourse, then move to the

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7 All citations from the “Introductory Discourse,” and De Monfort may be found in the 2001 Broadview Literary Edition of Baillie’s first volume of Plays on the Passions. All other quotations, from the third volume, including the introduction and Orra, are from the reprint of the 1851 Longman edition of Baillie’s works.
work of William and John Hunter in an effort to show the re-occurring anxieties that these family members experienced.

The “Introductory Discourse” announced Baillie’s intention to generate an abstract standard of the passions that would allow her audience to diagnose themselves before those passions wreaked physical damage on their bodies. She planned to accomplish this by exploring each passion in two plays, a comedy and a tragedy, through which she attempted to produce, for a lay audience, the same kind of comprehensive anatomy that her uncles gave their medical students. In these moving, breathing, and developing visuals in her plays, she attempted to recreate the visual abstract standard of her uncle William Hunter, while she also recognized the temporal emphasis of her uncle John Hunter. In Joanna Baillie’s work we simultaneously see the continuing scientific confidence of the entire family and the developing awareness of interpretive issues; all of these works, scientific and literary, express a strong and confident desire to correct misinterpretation in public and even theatrical ways; but their very emphasis on interpretation consistently forces complex interpretive issues to the fore.

In order to understand the anxieties that Baillie’s work produced, we must first understand what led her to this project in the first place: a desire to provide a guide for self-diagnosis. This emphasis on interpretation comes out almost immediately in the “Introductory Discourse.” Baillie’s theatrical project is based on her assumption of an innate human desire to interpret the bodies of others: “Every person, who is not deficient in intellect, is more or less occupied in tracing, amongst the individuals he converses with, the varieties of understanding and temper which
constitute the characters of men; and receives great pleasure from every stroke of nature that points out to him those varieties” (67-68). This desire to read others comes from a need for self-knowledge, the ability to read others allows us to know ourselves even better (74). Theater itself comes from the desire to read and achieve self-knowledge: “A man of this contemplative character partakes, in some degree, of the entertainment of the Gods, who were supposed to look down upon this world and the inhabitants of it, as we do upon a theatrical exhibition; and if he is of a benevolent disposition, a good man struggling with, and triumphing over adversity, will be to him, also, the most delightful spectacle” (75). In Joanna Baillie’s theater theory, humanity interprets itself to understand itself, and the theater, as it did in the anatomy school, provided the opportunity to perform that activity in a concentrated manner.

Baillie thought that the theater could provide a common way to discuss the passions. It is important for modern readers to remember that for the Baillies and the Hunters the passions were not simply psychological states, but physical states, with unique and particular dangers. Thus, in arguing strenuously for the proper physical representation of these passions in this first volume of *Plays on Passions*, Baillie was making an argument for anatomical representation as well as psychological representation. In making an argument for the passions’ proper physical representation, Joanna Baillie employed, as we shall see, rhetoric remarkably similar to William Hunter’s, which expressed a desired for a “universal language:”

[B]ut to the expression of passion, particularly strong passion, the dullest mind is awake; and its true unsophisticated language the dullest understanding will not misinterpret. . . . We cannot, it is true, amidst its wild uproar, listen to the voice of reason, and save ourselves from destruction; but we can foresee its coming, we can mark its rising signs, we can know the situations that will most expose us to its rage,
and we can shelter our heads from the coming blast. . . . Above all, looking back to the first rise, and tracing the progress of passion, points out to us those stages in the approach of the enemy, when he might have been combated most successfully. . . . (94 – emphasis mine)

These plays, by uniting the physical signs of the passion to the spoken symptoms of psychological distress, can guide their viewers through the temporal development of a diseased mind. Baillie’s patient/audience member can internalize that standard, so that he or she might quickly recognize those signs and thus avoid the disastrous physical effects of those passions.

As a result, Baillie aspired to a careful visual realism: “even the smallest indications of an unquiet mind, the restless eye, the muttering lip, the half-checked exclamation, and the hasty start,” were important (73). This realistic representation, in the work and minds of both the anatomist uncle and the playwright niece, had deadly importance, as Baillie’s metaphoric comparison to tempest and military failure attest. Real representation, as unmediated as possible, would allow for proper interpretation and diagnosis—unproblematic health and mental well-being, or disease, rage, and madness were the potential results of the game.

This desire for realistic representation resulted in another similarity to William Hunter’s work: anxiety over what Foucault has, in The Birth of the Clinic, called the “ever withdrawing horizon,” of “[t]otal description” (115). More specifically, she worried that detail would overwhelm context, or that context would obscure important detail: “This idea has prompted me to begin a work in which I am aware of many difficulties. . . . [T]he passions must be depicted not only with their bold and prominent features, but also with those minute and delicate traits which distinguish
them in an infant, growing, and repressed state; which are the most difficult to counterfeit, and one of which, falsely imagined, will destroy the effect of a whole scene” (104). Any number of difficulties, Baillie goes on to explain, prevents her from accomplishing this task as ably or as completely as she would like. The necessity of highlighting particular character traits against the rest of the cast, as well as the need for extended soliloquies that expose a character’s inner thought process (but destroy any semblance of realism) contribute to these anxieties (104-06).\footnote{Baillie writes: “The characters over whom they are made to usurp dominion must be powerful and interesting, exercising them with their full measure of opposition and struggle; for the chief antagonists they contend with must be the other passions and propensities of the heart, not outward circumstances and events. Though belonging to such characters, they must still be held to view in their most baleful and unseductive light; and those qualities in the impassioned which are necessary to interest us in their fate, must not be allowed, by any lustre borrowed from them, to diminish our abhorrence of guilt. The second and even the inferiour of persons of each play, as they must be kept perfectly distinct from the great impassioned one, should generally be represented in a calm unagitated state, and therefore more pains are necessary than in other dramatick works, to mark them by appropriate distinctions of character, lest they should appear altogether insipid and insignificant. As the great object here is to trace passion through all its varieties, and in every stage, many of which are marked by shades so delicate, that in much bustle of events they would be little attended to, or entirely overlooked, simplicity of plot is more necessary, than in those plays where only occasional bursts of passion are introduced, to distinguish a character, or animate a scene. But where simplicity of plot is necessary, there is very great danger of making a piece appear bare and unvaried, and nothing but great force and truth in the delineations of nature will prevent it from being tiresome. Soliloquy, or those overflowings of the perturbed soul, in which it unburthens itself of those thoughts, which it cannot communicated to others, and which in certain situations the only mode that a Dramatist can employ to open to us the mind he would display, must necessarily be often, and to considerable length, introduced. . . [T]o make speeches of this kind sufficiently natural and impressive, to excite no degree of weariness nor distaste, will be found to be no easy task. There are, besides these, many other difficulties peculiarly belonging to this undertaking, too minute and tedious to mention” (104-06).}

Temporal anxieties also manifest. As previously mentioned, Baillie worried about representing the passions “with those minute and delicate traits which distinguish them in an infant, growing, and repressed state” (104). Discussing De Monfort in particular, she explains: “The rise and progress of this passion I have been obliged to give in retrospect, instead of representing it all along in its actual operation,
as I could have wished to have done. But hatred is a passion of slow growth; and to
have exhibited it from its beginnings would have included a longer period, than even
those who are least scrupulous about the limitation of dramatik time, would have
thought imaginable. I could not have introduced my chief characters upon the stage
as boys, and then as men” (107-108). The theater will not allow her to present the
slow development of disease—time constraints limit her to showing the final
moments of a lifetime of hatred. The failure to appreciate the complete development
of disease threatens to undermine her project as much as the fear of contingent detail.

In order to understand the presence of both anxieties (detail/context and
temporal) in the work of Baillie and the Hunters, one must understand the difference
between William Hunter’s emphasis on morphology and John Hunter’s growing
awareness of the human body as a holistic and historically produced entity. These
differing approaches were informed by ongoing debates about the nature of
taxonomy. Phillip Sloan has argued that in the eighteenth century we see a gradual
shift from Linnaeus’s system of natural taxonomy, which proposed an abstract order
of natural bodies, to Buffon’s taxonomy, which suggested an understanding of the
species based on historic, genealogical development.9 Linnaeus produced an

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9 See Sloan’s “Buffon, German Biology, and the Historical Interpretation of
Biological Species.” Also see Ernst Mayr’s The Growth of Biological Thought: Diversity, Evolution,
and Inheritance: “The Linnaeans stressed discontinuity, Buffon continuity, Linnaeus adhered to
Platonic philosophy and Thomistic logic while Buffon was influenced by Newton, Leibniz, and
nominalism. Linnaeus concentrated on ‘essential characters’ . . . Buffon, by contrast, insisted that we
‘must make use of all parts of the object which he have under consideration,’ including internal
anatomy, behavior, and distribution” (181). Loren Eiseley’s Darwin’s Century: Evolution and the Men
Who Discovered It is instructive as well: “Buffon anticipated the need of a greatly lengthened time
scale in order to account for the stratification of the planet and the history of life upon. ‘Nature’s great
workman,’ he said, ‘is time’” (41). And Peter Bowler, in Evolution: The History of an Idea, has
written that “[Buffon] accepted that there were relationships between individual animals that allowed
them to be grouped into species, but he insisted that these were grounded in the process of
reproduction, which maintained populations through time” (76).
essential, ahistorical view of the organism by constructing a system that systematically placed the organism in order, phyla, genus, and species on the basis of a comparative morphology. Speaking broadly about this system that remained dominant in French natural philosophy throughout the eighteenth-century, Sloan writes: “[I]t is of critical importance to observe that such a theory of generation, in any of its many forms, effectively removed organisms from the temporal process. With the origin of living beings placed at the beginning of history, time and circumstance could have accidental bearing on them, serving to account for abnormal production, but leaving untouched a deep essentialism at the basis of the organic species” (110). Heavily influenced by Newton, Linnaeus’s system assumed a static, abstract standard for each individual species. Buffon, in contrast, put greater emphasis on the historic development of the organism than the comparison of the parts or phases of the organism. With Leibniz, Buffon saw space as inseparable from time. Sloan argues that, as a result, Buffon thought that “one could understand the various taxa at the different category levels—species, genera, orders, etc.—in two ways, in one as an ‘abstract’ entity of reason, and in the other as grounded on the succession of real time and space in the Leibnizian understanding of these concepts” (117). Buffon’s system, if accepted, moved the natural philosopher from analyzing and comparing the individual parts of a single species, to a consideration of the aggregate development of a species.

Understanding this evolution of taxonomy sheds light on key differences between John and William Hunter, and helps us to see the various anxieties in Joanna Baillie’s work. William Hunter’s anatomical philosophy, which appears to operate
within the Linnaean tradition, led him to experience unique interpretive problems as a result of that system—it is here we see an earlier version of Joanna Baillie’s worries about important detail being overwhelmed by contingent aspect. The Anatomy of the Gravid Uterus (published in 1774—Anatomia uteri humani gravidì tabulis illustrata) strives for “total description” of specific human parts, specifically the female reproductive system. To this end Gravid Uterus gives its audience the most complete visual representation of these parts that it possibly can. The representational difficulty that comes out of such a taxonomic system—does one produce those aspects of the body that appear to be idiosyncratic, or does one attempt to produce a representative, abstract body?—quickly arises in Hunter’s work, as it does in Baillie’s theater criticism.

In Gravid Uterus we find Hunter taking particular pride in having access to two corpses of pregnant women that allow him to produce especially accurate engravings; human sight, and the engraving art that duplicates it, according to Hunter, far surpasses language’s ability to give us clear and accurate conceptions of the human body. Engraving, like Baillie’s theater, produces an abstract standard that language can be checked against:

“The art of engraving supplies us . . . with what has been the great desideratum of the lovers of science, an universal language. Nay it conveys clearer ideas of most natural objects, than words can express; makes stronger impressions upon the mind; and to every person conversant with the subject, gives an immediate comprehension of what it represents. (Preface—emphasis mine)

Hunter obviously finds language inadequate; language obscures; engraving replicates these women’s bodies, producing an unmediated image. Like Linnaeus’s Systema
naturae, Hunter’s engravings, through the careful study and representation of individual parts, hopes to construct an accurate and universal standard for medical study.

Already aware of the representational difficulties that language presents, Hunter quickly shows himself aware of interpretive issues inherent in visual representation—these difficulties lead to a slight break with the Linnaean tradition. Hunter notes that there are actually two ways of producing accurate drawings of these two women’s corpses; one might represent “the object . . . exactly as it was seen.” On the other hand, the engraver and anatomist can produce a “representation of the object under such circumstances as were not actually seen, but conceived in the imagination.” While Hunter admits that the former sometimes shows evidence of idiosyncrasies, he prefers it because “it represents what was actually seen, it carries the mark of truth, and becomes almost as infallible as the object itself” (Preface). Should engraving attempt to produce a generalized body, which might lead the physician astray when they encounter variations, or should engraving produce exact representations that base themselves on actual corpses, and accept the risk of basing one’s conception of the body on individual variations? Within a few short paragraphs, the “universal language” of engraving has become complicated enough that Hunter must rhetorically qualify it as being “almost as infallible as the object itself.” Hunter attempts to make the bodies of these women the abstract standard, but even in the midst of his praise of, and confidence in, the ability of the engraver’s ability to reproduce those bodies, Hunter has to acknowledge the interpretive slippage contained in those representations. In the end, they are representations—not the
bodies themselves. Hunter’s treatise, along with the Linnaean system it is a part of implicitly asks: how do we recognize variation from the form, and how do we represent that variation scientifically?

While Hunter opted for individual variation in *Gravid Uterus*, he later showed acute awareness of the dangers of representing detail uninformed by an abstract standard. In a short work posthumously published by *The Universal Magazine* in 1784, Hunter became extremely concerned with the misleading effects of individual variation. Entitled “On the Uncertainty of the Signs of Murder in Bastard Children,” Hunter’s overt purpose in the article is to write against the conclusion that he felt many of his colleagues were making too quickly: that a dead illegitimate child necessarily implied a shamed mother willing to kill her infant either to preserve her dignity or to be free of the constraint of an unwanted child. Hunter blames an often misinformed medical community for these failures: “To form a solid judgment about the birth of a new-born child, from the examination of its body, a professional man should have seen many new-born children, both still-born, and such as had outlived their birth a short time only; and he should have dissected, or attended the dissections of a number of bodies in the different stages of advancing putrefaction” (11). The individual, exactly reproduced body is insufficient for physicians to diagnose properly live patients or dead newborns. Instead, these mothers and children must be judged by an abstract ideal produced by viewing an indefinite number of cadavers. Of course, Hunter might point out that the works do not contradict one another; *Gravid Uterus*’s carefully reproduced women are a good place to begin accumulating the experience necessary to proper diagnosis; they could provide the beginnings of
the universal language/experience filter necessary to understand multiple cadavers, which in their turn are necessary to the proper diagnosis of cases of supposedly murdered bastard children. But the particular, idiosyncratic women of *Gravid Uterus* are far from sufficient—they are merely the initial step in gaining the “universal language” necessary for proper diagnosis.

Thus *Gravid Uterus’s* confidence gives way to a plea in “Bastard Children” for interpretive doubt:

> In general I am afraid too much has been left to our decision. Many of our profession are not so conversant with science as the world may think; and some of us a little disposed to grasp at authority in a public examination, by giving a quick and decided opinion where it should have been guarded with doubt; a character which no man should be ambitious to acquire, who in his profession is presumed every day to be deciding nice questions upon which the life of a patient may depend. (11)

Later in the piece Hunter argues that the burden of proof should be placed upon those accusing these women of murder; the medical community’s knowledge is simply not sufficient to be determining these “nice questions” with any certainty. As Hunter writes about practical medical questions, he becomes wary of the knowledge produced by anatomy. *Gravid Uterus* and “Murder in Bastard Children” want an abstract standard they can use, and Hunter appears to have become increasingly sophisticated about the representational issues involved, but exactly how to relate the individual to the form is never precisely spelled out. “Bastard Children” suggests sheer repetition is the key; *Gravid Uterus* maintains the individual body speaks some specific truth as well. Interpretive doubt and diagnostic caution become the only
antidote (and a poor one at that) to these representational issues that Hunter could not completely resolve.

William’s younger brother, John Hunter, made a more distinct break with received methods of taxonomy and anatomy: he was a vitalist, and this led him to approach the organism with a distinctly different epistemic framework. Vitalism, and the temporal paradigm that it was a part of, produced its own interpretive problems. Vitalism maintained that organic life could not be reduced to chemical and mechanical causality, and John Hunter’s vitalism allowed him to see organisms in completely different ways than his older brother. “In treating of the animal body,” wrote John, “I shall always consider its operations, or the causes of all its effects, as arising from the principle of life, and lay it down as a rule that no chemical or mechanical property can become the first cause of the effects in the machine” (Hunter, I, 219). François Duchesneau defines it this way: “For vitalists, the phenomena of living possess sui generis features that make them radically different from physical and chemical phenomena. Furthermore, such vital phenomena would manifest the existence and activity of a ‘vital force’ with specific dynamical and purposive faculties” (259). Unlike organized crystals or geological formations, living matter sustains and reproduces itself; Hunter labeled this a vital force or a living principle. Hunter writes:

The principle of life has been compared to the spring of a watch, or the moving powers of other machinery; but this is not the case with an animal; animal matter has a principle of action in every part, independent of the others, and whenever the action of one part (which is always the effect of the living principle,) becomes the cause of an action in another, it is by stimulating the living principle of that other part, the action in the second part being as much the effect of the living principle of that part was the action of the first was of the living
principle. The living principle, then, is the immediate cause of action in every part; it is therefore essential to every particle of matter composing the whole. (Hunter, IV, 223)

Vitalism refuses to reduce the body to simple materialism; in doing so the body becomes even more difficult to interpret. Hunter’s vitalism led him to conceive a new research project that attended to the organism as an organic whole, which in turn led him to note that life was a distinctly different state than death. Robert Kilpatrick makes this distinction: “[William’s] anatomical approach provided William with anatomical answers to anatomical questions. John Hunter in contrast performed experiments on living animal to elucidate the actions of the animal oeconomy. The questions the brothers asked of nature, and the level at which they viewed the body—even the objects of inquiry were different” (187). William’s dead women were organized—but noting that organization did not allow him to capture the principle of life (187).

If William’s anatomical approach provided him anatomical answers, it also provided him with anatomical anxiety; John’s emphasis on life as the driving force produced vitalist anxieties. Disease, John noted, affects life, and should not be mistaken for decomposition. Interpretive doubts multiplied exponentially:

An animal body undergoes changes after death; but it has never been sufficiently considered what those changes are, or how soon they take place; yet till this is done it is impossible we can form an accurate judgment of the appearances which present themselves at the time of the inspection. The diseases of the animal body (mortification excepted) are always connected with the living principle, and are not in the least similar to the changes which take place in the dead body: without a knowledge of this, an opinion drawn from dissections must always be imperfect or very erroneous. . . . It is easy to see, therefore, how a man in this state of ignorance must blunder when he comes to
The state of the diseased body in death is hardly a reliable guided to the diseased body in life. John Hunter sees the body as a historic entity—its passage through various stages makes it increasingly difficult to say what the organism in any particular state should be. William Hunter’s corpses are not troubled simply by being idiosyncratic, but being subject to the processes of life and death—which moment do you choose to capture to create an abstract standard?10

William and John Hunter’s work, taken collectively, gives us a picture of evolving anxieties about anatomical representation. Joanna Baillie’s theatrical project, influenced and inspired to some degree by the medical world, obviously shared those anxieties, and these anxieties only increased with successive volumes of Plays of the Passions. The peculiar nature of the Romantic-era stage undoubtedly helped to exacerbate those anxieties; her project seems quixotic in retrospect. Drury Lane and Convent Garden had been expanded and now held up to 3,900 people (Dwyer 151, Cox “Staging Baillie,” 161). Actor Richard Cumberland complained about this enlargement: “[T]he stages of Drury Lane and Convent Garden have been so enlarged in their dimensions as to be henceforward theaters for spectators rather than playhouses for hearers. . . . There can be nothing very gratifying in watching the

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10 In The Morbid Anatomy of some of the Most Important Parts of the Human Body Matthew Baillie (Joanna’s brother) also recognizes many of the interpretive problems that come with this historic, temporal approach to the human body: “There are some appearances described, which I have only had an opportunity of seeing once, and which, therefore, may be supposed to be described less fully and exactly than if I had been able to make repeated examinations. There are others, which I have seen long before I had any idea of undertaking this work, and which I may be supposed to have observed less accurately than if there had been a particular object in view. There are others still, which I have had an opportunity of examining in preparations. In some of these, certain appearances may be supposed to be lost, which might have been observed had they been examined recently after death. All of these are sources of inaccuracy, which may be said in some degrees to be unavoidable” (vii).
movements of an actor’s lips, when we cannot hear the words that proceed from them. . . . What then is the poet’s chance?” (Cumberland 2: 384). These large spaces led the patent theaters to, as Jeffery Cox has written, “[resort] increasingly to stage spectacle, special effects, non-verbal communication, and a new passionate acting style” (Cox “Staging Baillie,” 161). This emphasis on grand spectacle and physical comedy, admitted Cumberland, “gave even the most distant spectator. . . his shilling’s worth of show” (2: 384). Baillie’s insistence on the “smallest indications of an unquiet mind, the restless eye, the muttering lip, the half-checked exclamation, and the hasty start” emphasized details that would have been completely drowned out in the monster truck atmosphere of the Romantic-era stage (73). Baillie’s severe difficulty in getting her plays staged is not a surprise in this context; the surprise is that she did occasionally see her work performed.

The plays met with mixed critical reaction: many appreciated her work—one reviewer compared her favorably with Shakespeare, and many regarded her as the best playwright of the age (Baillie Plays 462). But when her plays were performed, or the possibility of her plays being performed was discussed, reviewers were often skeptical. In 1800 De Monfort was performed, and the reviewer complained that rather than the complex realistic psychological portrait Baillie’s work had led him to expect, he saw a stage stereotype: “De Monfort, the hero of the piece, is a systematic villain, without one foil to his vices” (450). An 1803 reviewer of her first volume of plays suggests that the plays, if staged, would fail in their diagnostic project: “[T]he shades, by which a passion graduates into criminality, are so fine, and the temptations and apologies by which its seductions are made effectual, so variously and nicely
adapted to the circumstances of the imaginary character, that it is impossible to suppose . . . that any one can be taught to guard against them by the peculiar incidents of one dramatic representation” (Jeffrey 276). This reviewer, Francis Jeffrey, especially exacerbated fears about the ability of the plays to give a complete picture of the development of the passion:

To delineate a man’s character, by tracing the progress of his ruling passion, is like describing his person by the yearly admeasurement of his foot, or rather by the termly report of the increase of a wen, by which his health and his beauty are ultimately destroyed. . . . To delineate character, therefore, by the progress of such a passion, is like following a cloud of smoke, in order to discriminate more clearly the objects that it envelopes. (Jeffrey 272)

The Romantic-era stage, Jeffrey argued, was simply too crude an instrument for Baillie’s goals.

A far more experienced Baillie, in the third volume of *Plays on the Passions*, appears to agree with Jeffrey; like her uncles in their later work, she has become aware of the limitations of her particular representational project. She was still committed to that project, but she no longer holds hope that the contemporary English theater will adequately stage her plays: “the present situation of dramatic affairs is greatly against every hope of this kind” (231).¹¹ Plays that depend on careful delineations of character or subtle dialogue, she noted, suffer greatly from the effects of the massive Romantic-era theaters: “the words . . . are not heard or are heard but imperfectly by two-thirds of the audience, while the fine and more pleasing traits of

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¹¹ Baillie had hopes for the stages of America and Scotland however. Her letter dated 21 October 1809 to Sir Walter Scott celebrated the smallness of the Edinburgh theater (Baillie, *Letters, volume 1* 247), and her 5 January 1830 letter to Andrew Norton she complained of “our overgrown Theaters of Convent Garden & Drury Lane” and went on to say that “it must be native American Actors, bred in a small Theatre, who will ever think of having anything to do with me” (Baillie, *Letters volume 2* 917).
acting are still by a greater portion lost altogether” (231). Baillie even conceded the public’s taste for the massive spectacles of the time: “we ought not then to find fault with the taste of the public for preferring an inferior species of entertainment, good of its kind, to a superior one, faintly and imperfectly given” (232). In a long footnote toward the conclusion, Baillie expresses frustration with the lighting techniques of the Romantic-era stage, which cast light up from the footlights.12 Neither the interpretive difficulties noted in the first “Introductory Discourse,” nor the almost utter frustration she felt by the time of the third volume ever prevented Baillie from completing more plays; she obviously felt this medical theater was still worth her time, and if properly altered, could still serve her ends.13 After all, representational difficulties certainly did not keep the men in her family from practicing medicine. But the overall task of communicating these physical and medical truths to a greater audience had obviously heightened her awareness of interpretive issues and difficulties. Like her masculine, medical relatives, she became hypersensitive to the complexities of representation; Baillie appears, in this third volume of plays, convinced that her plays will never be fully realized as actual theater in the England of her lifetime.

12 “When a painter wishes to give intelligence to a face, he does not make his lights hit upon the under part of the chin, the nostrils, and the under curve-of his eye-brows, turning of course all the shadows upwards. He does the very reverse of this; that the eye may look hollow and dark under the shade of its brow; that the shadow of the nose may shorten the upper lip, and give a greater sense of character to the mouth; and that any fullness of the under chin may be the better concealed.” (234)

13 Baillie’s complaints indicate that she may well have had in mind the smaller, more intimate theater of her uncles’ and brother’s anatomy school at Great Windmill Street. A number of scholars have pointed out the theatrical nature of Romantic-era anatomy, so Baillie may have easily learned to associate the two. Roy Porter and Karen Dwyer, for instance, have both noted that Romantic-era “Hunter’s theater and [the actor] Garrick’s theater as rivals.” (Porter n31, qtd. in Dwyer 183). Baillie’s complaints indicate that she may well have had in mind the smaller, more intimate theater of her uncles’ and brother’s anatomy school at Great Windmill Street.
II. Horrors of misrepresentation in *De Monfort* and *Orra*.

We see this same movement in the plays themselves. *De Monfort* manifests Baillie’s desire for the realistic representation of the physical consequences of the passions, yet exhibits the corresponding uncertainty about the possibility of that representation. Despite that uncertainty, this earlier play is optimistic about the representation of the passions. In writing tragedies about the passions, Baillie was faced with a difficult task—her characters had to fail to diagnose correctly the same passion that the audience was supposed to be learning to recognize successfully. In *De Monfort* gothic tropes mark the moments when the abstract standard has failed for the characters of the play—but at the same time they help to amplify the agony of that failure for the audience. In this early play the gothic appears to be a deliberate solution to dealing with the problem of writing a tragedy concerning a passion, but perhaps in marking the moments when the abstract standard failed for the characters, Baillie became all the more aware of the representational difficulties she explicated in the “Introductory Discourse.” For when we turn to *Orra* we find a completely gothic play; here the gothic tropes that helped to delineate the horrors of misdiagnosis for *De Monfort*’s intended audience threaten to overwhelm the rest of the cast and even the audience. The carefully controlled doubt and optimism of the earlier play has been replaced with a nearly overwhelming fear of misdiagnosis.

In order to create the abstract standard she aspired to, Baillie attempted to direct action on the stage through copious stage directions; the proper representation of the physical attributes of the passions was crucial. It is worth remembering that Baillie had no assurance that these plays would be performed in 1789, and so the
stage directions take on a dual role. In the event the play was condemned to closet readings, the stage directions would remind the reader of the physical consequences of the passion. If the play were produced, the actors would have a clear guide to portraying the passion in question. We find a good example of these stage directions shortly after De Monfort has been informed that the Marquis Rezenvelt, object of his fully grown hatred, is in the neighborhood:

Starting from his seat, and letting the cup fall from his hand. . . .
Dashing his clenched hand violently upon the table, and overturning everything. . . Going furiously up to him . . . Becoming all at once calm, and turning sternly to Manuel . . . Servant attempts to speak—De Monfort stamps his foot . . . De Monfort goes to the door by which they went out; opens it, and looks. . . Goes to the opposite door, opens it and looks: then gives loose to all the fury of gesture, and walks up and down in great agitation. (312-313)

In the space of one and half pages of fairly large print, Baillie gives her audience two scripts—the visual, physical script is just as important as the spoken dialogue. The individual interpreter needed to make connections between the two discourses in order for it to be successful. As a result, Baillie forcefully unites, repeatedly, the visual discourse to the spoken discourse; characters continually note De Monfort’s physical appearance in connection with his emotional state. At the end of the play, after hatred has done its worst to De Monfort’s body, the monk Bernard takes on the dual role of Gothic device and medical examiner as he uncovers the body of De Monfort and traces the mutations that he finds there. He undoubtedly resembles the medical men of Baillie’s family, as they lectured on medicine and anatomy:

But see, I pray!
Here lies the murderer. What think’st thou here?
Look on those features, thou has seen them oft,
With the last dreadful conflict of despair,
So fix’d in horrid strength.
See those knit brows, those hollow sun’ken eyes;
The sharpen’d nose, with nostrils all distent;
That writhed mouth, where yet the teeth appear,
In agony, to gnash the nether lip . . .
Ay, and how changed too those matted locks!
JER. Merciful heaven! his hair is grisly grown,
Chang’d to white age, what was two days since,
Black as the raven’s plume. How may this be?
BERN. Such change, from violent conflict of mind,
Will sometimes come. (V, iv, 45-54, 57-61)

De Monfort’s hatred has aged and ravaged his body, and Bernard’s speech demands that audience and reader make these connections; behind them, Baillie seeks to ensure that the physical and spoken discourses are connected in the minds of the audience.

This relationship between the spoken script and the visual script underscores both her confidence and her insecurity: her confidence that such a relationship can and should exist, and her fear that additional, ever multiplying interpretations of the body are possible, or that these connections might go unnoticed. De Monfort’s body is supposed to be the abstract standard in the play, and the visual and verbal codes that make him so must continually be defined against one another.

Providing these mutually re-enforcing codes helped the viewer to diagnose the problems of passion; the Countess Freburg/ Jane De Monfort sub-plot provided a history of the disease that it was otherwise impossible to give. In this relationship, we see the early beginnings of hatred that we cannot see between De Monfort and Rezenvelt. Weary with her husband’s reminders of Jane De Monfort’s grace and beauty, Countess Freburg moves into hatred when her servant provides her with several robes cut in the same fashion as Jane De Monfort’s garments. “I hate them all,” she says of these Jane-inspired dresses (II, iii, 35), and she then proceeds to plot
revenge against Jane De Monfort by spreading the rumor that she and Rezenvelt are engaged. This petty hatred of Countess Freburg functions as a plot device; it provides the impetus for De Monfort’s eventual murder of Rezenvelt. But it also gives us hatred in an early state. At this point, Countess Freburg directs her hatred against dresses that were cut to resemble Jane’s and plots gossip in order to remind her husband that Jane is a “mortal woman” (II, iii, 49). The childhood rivalries of De Monfort and Rezenvelt, these scenes warn, could have had similarly inauspicious beginnings; they allow us to see hatred in its embryonic state.

As previously mentioned, Baillie must also direct her audience’s attention to the eventual failure of diagnosis—for our complete edification we must see hatred to its complete conclusion. As the play’s characters fail to correct De Monfort’s hatred, Baillie’s diagnostic anxieties increase and become conflated with the differing directives of her project, the gothic emerges. The play opens as a historical tragedy—a minor figure in the past struggles with his boyhood rival—and proceeds for three acts in that genre. He is properly diagnosed by his sister Jane, who puts him on a course of improving literature; he promises her that he “will strictly repress,” the “stern contradiction” of his “scowling brows” and curb his “crooked curving lip,” in an effort to meet Rezenvelt with “a tamed countenance” (III, i, 37-43). Baillie’s diagnostic techniques—the same she wishes to impart to the audience—are working, at least temporarily, for her title character. De Monfort promises to discipline his body accordingly—and the play has yet to show any overt gothic tendency.

De Monfort, however, fails to interpret his body correctly, and this misinterpretation is what Baillie seeks to highlight with Gothic tropes. In a key
moment in the second act, he exposes his hatred before his sister. The appearance of this hatred has a physical impact on Jane—De Monfort fears that he has killed her, but he still directs the blame at Rezenvelt: “O curse that villain! that detested villain!/ He hath spread mis’ry o’er my fated life:/ He will undo us all” (II. ii. 188-190). In the opening scene of the third act, when he promises Jane that he will discipline his body, he makes it clear that he feels himself incapable of disciplining his mind: “Alas! I cannot now so school my mind/ As holy men have taught, nor search it truly” (III, i, 31-32). He continues: “But this, my Jane, I’ll do for love of thee;(33)” De Monfort makes this initial attempt to curb his hatred only to please her, failing to internalize the proper interpretation of the passion and its physical consequences.

Thus, gothic tropes appear at those points when the audience must recognize De Monfort’s failure to employ his sister’s interpretation of his body. Baillie removes her hero to a lonely wood in the vicinity of a monastery—a place where unnatural things lurk and murders have occurred. The third act ends with De Monfort under the mistaken impression that Jane desires to marry Rezenvelt; De Monfort also misconstrues his sister’s motivations for his own healing: “Was it for this/ She urged her warm request on bended knee?/ Alas, I wept, and thought of sister’s love,/ No damned love like this” (III. iii. 110-113). In the following lines, De Mofort claims he will seek further proof, but it is clear that he already believes these falsehoods of Countess Freburg. As De Monfort plunges deeper into misconceptions about himself, his sister, and Rezenvelt, he is told that Rezenvelt has departed for a “lonely mansion,” where “Foul murders have been done, and ravens scream;/ And things unearthly, stalking thro’ the night,/ Have scar’d the lonely trav’ller from his wits” (III.
iii. 212, 220-22). As De Monfort completes his turn toward tragedy, giving himself over to his passion of hatred and murdering Rezenvelt in the fourth act, the audience finds itself gazing on “A wild path, shaded with trees” (361). The second scene in the fourth act is in a “Convent Chapel, of old Gothik architecture,” while a storm begins to rage, and a funeral procession of nuns enters the stage (363). In this typically gothic setting, we first learn that De Monfort’s murder is accomplished; his failure to correctly use his own self-interpretation and diagnosis manifests itself in a physically gothic setting and two mutilated bodies. De Monfort has become the naturalized monster of a gothic narrative. A monk, Bernard completes the trope and complicates it by leading the audience through the scientific explanation of the physical horror that is De Monfort’s body.

The gothic elements of the play are sudden and incomplete—they never do cohere into an actual gothic plot. Until the end of the third act, there is little indication that this is a gothic play. As soon as De Monfort’s failure is complete, gothic tropes abound. Yet there is no helpless female victim, held against her will until she agrees to marry a licentious lord or his spotty son. No lords populate a castle’s dungeon, and the monks of the play prove to be helpful and earnest, rather than demented and hypocritical. Baillie evokes a gothic atmosphere but avoids its substance, and the suddenness of the appearances of gothic tropes marks the title character’s interpretive failure with the surfaces of horror. These gothic tropes exist merely to highlight the horror of De Monfort’s interpretive failure for the audience. De Monfort’s failure to use the interpretation of Jane De Monfort becomes a distinct point marked with a deliberate shift in generic mood.
Where *De Monfort* was marked with the gothic after De Monfort’s failure to make proper use of diagnosis, so that it might offer the possibility that failure was avoidable, *Orra* is a thoroughly gothic play. *De Monfort* made use of gothic elements to mark interpretive failure; in *Orra*, a play that turns on interpretive failures, the gothic overwhelms the play’s characters. As mentioned previously, Baillie’s introduction to her third volume of *Plays on the Passions* demonstrates a continued frustration with the Romantic-era stage. In *Orra* Baillie attempted an attack on what she thought was a pernicious genre, but her interpretive skepticism made escape from that genre impossible.

Upon a first reading, the play appears to be a straightforward gothic tragedy that circumscribes its own gothic elements through a prevailing faith in naturalism. In this play Baillie gives her audience all of the proper gothic furniture from the beginning. Set at the end of the fourteenth century, the play opens in Switzerland and closes on the borders of the Black Forest. Orra is a young noblewoman who, because of the lands and riches attached to her inheritance, is quite the contested property. Glottenbal, son of Hughobert, her guardian, plots with his father for her person and her lands. Theobald, a “reduced nobleman” also wishes to win her hand and her land. Finally, Rudigere, resident bastard (in both the literal and figurative sense), also wishes to coerce Orra into some variety of sexual relationship. Hughobert has Orra removed to a decayed castle in the Black Forest in the custody of Ruddier and threatens to leave her there until she agrees to marry Hughobert. A band of robbers patrols this section of the forest and maintains the ghostly legend of the castle in order
to keep it for their headquarters. Baillie, in almost systematic fashion, moves through every aspect of the gothic formula.

Baillie circumscribes this gothic horror by connecting it to the failure to take proper heed of bodily symptoms and signs; after all, it is a play on the passion of fear, intended to keep its viewers from overindulging in fear (a fear represented by gothic tales). Where the horror of De Monfort is contained by realistic description and diagnosis, however, the terror of Orra remains undiagnosed. Alice, one of Orra’s attendants, does provide the typical Baillie description of physical consequences when describing her reaction to these gothic tales:

Such stories ever change her cheerful spirits  
To gloomy pensiveness; her rosy bloom  
To the wan colour of a shrouded corse.  
(To Orra) What pleasure, is there lady, when thy hand  
Cold as the valley’s ice, with the hasty grasp  
Seizes on her who speaks, while thy shrunk form  
Cow’ring and shiv’ring stands with keen turn’d ear  
To catch what follows of the pausing tale? (II, ii)

These descriptions give the gothic play its realistic base by providing a physiological description of the effect of gothic narratives on Orra’s body.

Yet even as Orra recognizes the psychological and physiological effects of these tales, she cannot help but consume them. As in the case of De Monfort, self-diagnosis does no good. But De Monfort ends with a monk making direct connections between the physical body of De Monfort and his emotive state. That commentary is comforting—spoken and visual texts are united, and De Monfort’s physical transformation is fully explained. Accordingly, the gothic in De Monfort is tied almost exclusively to his body and the outburst of hatred that comes from it.
Orra’s supporting cast certainly notice her changed looks in the midst of fear, but these descriptions are short; no extended commentary in the guise of an anatomy teacher exists as we find in *De Monfort*. In *Orra* Baillie still attempts to guide us to a proper interpretation of a bodily text, but she appears to trust the commentary that should unite physical and spoken spectacle much less.

*Orra* also distinguishes itself as a representative of the gothic tradition; while it does supply a Radcliffean explanation of her ghost, there are important differences that distinguish the gothicism of *Orra* from Radcliffe’s novels, and these differences tell us something of Baillie’s aggravated fear of misinterpretation. Unlike Radcliffe she re-centers the origin of gothic horror in *Orra*, not in the audience’s misinterpretation of events, but in the character’s misinterpretation. The result is a strange generic hybrid: a gothic play that insists on realism, but leaves its character, perhaps even its audience, in a gothic landscape. Radcliffe’s novels depend on making the reader/audience believe that natural events may be supernatural. Radcliffe’s novels indict character and reader in the superstition that the novel condemns; thus the novel participates simultaneously in the pleasure of the gothic while condemning the superstition that makes that pleasure possible. *Orra*—in contrast—carefully guides its reader/viewer through every misinterpretation; after being repeatedly told of Orra’s predilection for ghost stores, we listen in on Hughobert’s and Rudigere’s respective evil plans. And only the viewers of the play, as opposed to the play’s characters, can satisfactorily explain the mishap of

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14 Jeffery Cox has placed Baillie’s gothic theater in the Radcliffe tradition: her heroines experience a ghost that has a rational explanation and is surrounded by the usual tropes of the gothic tradition (Cox *Seven* 52). Baillie and Radcliffe do dismiss the possibility of superstition by eliminating the supernatural.
Theobald’s letter that leads to Oorra’s ultimate horror. When Theobald appears before Oorra as the ghostly huntsman, the audience/reader is not horrified by any supposition that this is an actual ghost; *misinterpretation itself* generates horror as Oorra takes Theobald for the actual ghostly huntsman. Oorra misinterprets, not because of an outmoded belief system, but because her epistemic faculties have been maliciously led into a situation meant to resemble gothic texts.

Yet for all this insistence on a realistic explanation of Oorra’s psychological damage, *Oorra* still gives us a profoundly gothic story; this is not a gothic satire in the style of Jane Austen’s *Northanger Abbey*. At the end of the play, Oorra is still in the gothic play, incapable of escaping it, her faculties having produced the gothic nightmare. Where Catherine Moreland’s gothic fantasies are continually undermined by reality, and Radcliffe’s heroines are rescued by reality, Oorra’s subjective reality is still gothic: her uncle, cousin, and bastard cousin would still be plotting sexual violence even if she could see through the gothic narrative that they have constructed to deceive her. Furthermore, while Oorra responds to a ghost that is not a ghost in a haunted castle that is not actually haunted, her reaction, and the consequences of those reactions, are the same as if they were real. Where Radcliffe’s and Austen’s heroines safely escape ghostly gothic narratives into happy realism, Baillie’s heroine is condemned to a real gothic tale, one where her uncle really is out to get her, and where she eventually is overcome by the reality that they generate for her. *Oorra* is, in turns, a realistic play that satirizes the gothic but offers only a gothic reality, and a gothic play that offers no escape into a real world divorced from the fantastic.
Orra gives its viewers no escape from misinterpretation or the failure of diagnosis; Baillie never attempts to have Orra’s symptoms explained through a commentary on her symptoms, and the play’s ending re-enforces this diagnostic pessimism. Like the inmates of Plato’s cave in The Republic, when finally brought into the sunlight, Orra’s senses are sent into shock: “Come back, come back! The fierce and fiery light” are the first words she speaks after the shock that has sent her into madness (V. ii). And like Plato’s captives, she mistakes the real forms before her as the shadows: “athwart the garish light,/ Things move and seem to be, and yet are nothing” (V, ii). Orra, who once feared the night, now longs for it to help her interpret things according to her misguided senses: “your faces waver to and fro/I’ll know you better in your winding sheets/When the moon shines upon you” (V, ii). Orra does not die, but lives on in a shadow world of ghosts and goblins. This gothic scenario does not end in an enlightenment reflection upon the evils of superstition, or in a medical discourse that explains and systematically describes her illness. The characters that surround her vaguely understand that she has undergone some awful trauma, but are incapable of completing the total description or commentary that would contain illness. The illness is contained to the extent that we, as an audience of a piece of theater, recognize its material origins, and its purpose as a representation of disease for the purpose of warning—as a representative of the Plays of the Passions. But this is cold comfort since Orra herself was aware of the pernicious effect of gothic tales; her deranged senses seem unavoidable and inescapable. In the final image of Orra, this threat is completed as it ends with evocations of blindness and nonsensical speech:
Oh! the void
Of hollow unball’d sockets staring grimly,
And lipless jaws that move and clatter round us
In mockery of speech! Back, Back I say!
Back, Back! (V, ii)

As Orra screams these last words of the play, she grabs Theobald and Hughobert, gothic hero and villain, and pulls them back into the cave. Speech and sight are presented as useless in the last image of the play, as two male figures, one a symbol of present patriarchal authority, one a symbol of future authority, are pulled back into that epistemic darkness. The commentary between aural and physical texts is good only for highlighting the ultimate failure as Orra ends with the heroine in an epistemic madness that promises to spread to her masculine persecutors.

Along with the medical practitioners in her family, Baillie sought to create complete representations of the body, both through an abstract standard, and through a complete narrative of the disease. As she continued this project, she too became increasingly aware that the possibilities of interpretive multiplicity, which she feared undermined this theatrical/medical project. Thus, even in texts that strive for a scientifically systematic verisimilitude, the gothic emerges, not as a coincidence, or as a compromise with a popular genre, but as a way to express the anxiety that such a project generated.
CHAPTER TWO

“ACCORDING TO THE EYE WITH WHICH WE ARE VIEWED:” THE TRIBULATIONS OF SKULL HERMENEUTICS IN THE NOVELS OF CHARLOTTE BRONTË

As Thackeray attested in 1854, readers of Villette have had a mixed relationship at best with the novel and its nearly incomprehensible heroine Lucy Snowe. As a number of critics have suggested, Lucy herself is a resistant text; during the course of the novel, she becomes a text that refuses to be completely comprehended, frustrating readers within Villette as well as readers of Villette.¹ The interpretive resistance of the novel and Lucy appears, at first blush, to run counter to Brontë’s use of phrenology. Phrenology, which taught that definitive characteristics of the mind were revealed by the ossified bone tissue that surrounded the physical brain, ostensibly preached a doctrine of hermeneutic optimism. Jane Eyre, Brontë’s first published novel, as well as The Professor, Brontë’s original attempt at novel writing, follow the lives of people who are familiar with phrenology, and use that knowledge to read and

¹ See, for example, Mary Jacobus’s, “The Buried Letter: Feminism and Romanticism in Villette;” Kate Millet’s chapter on Villette in Sexual Politics, Brenda Silver’s argument in “The Reflecting Reader in Villette;” as well as Karen Lawrence’s “The Cypher: Disclosure and Reticence in Villette.”
interpret the characters who populate their respective fictional universes. *Villette,* however, departs from this pattern. Despite the continuing prevalence of the practice and vocabulary of phrenology in *Villette,* the novel’s characters, including its heroine, find themselves making interested, subjective, and ultimately misguided interpretations of one another. Lucy must reorient her original interpretations of other characters to bring them in line with actuality, even as she becomes ever more aware of conflicting interpretations of her own self on the part of other characters. Janis Caldwell, in her recent study, questions critics’ assumption that Brontë accepted phrenology unquestioningly (109). I too question readings of Brontë’s work that assume the discipline is woven seamlessly into the fabric of her oeuvre. I want to complicate recent readings of Brontë’s work as it encounters phrenology, and argue that as she struggled to incorporate phrenology in her work, she found contradictions within the discipline that both furthered her development as a novelist and hindered it. Phrenology allowed Brontë, as Sally Shuttleworth has suggested, to develop deep and complex characters, even as, as Nicolas Dames suggests, it put emphasis on a surface visuality and eliminated the need for memory or a deep past.² The novel, with its

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² Shuttleworth, in *Charlotte Brontë and Victorian Psychology,* writes: “Phrenology . . . treated the external . . . as a system of signs to be decoded to determine what lay below: the sign itself was not directly expressive of inner quality, but was only an indicator of quantity” (61). She continues: “By undermining ideas of intrinsic psychological unity, and establishing the notion of internal multiplicity, phrenology laid the foundations for later nineteenth-century explorations into the complexities of the unconscious. . . . Phrenology offered an explanatory structure for the experience of internal division which was crucial to Brontë’s work. Her fiction draws on the vocabulary and assumptions of phrenology in exploring the relationship between physiological force and mental control: her protagonists shift constantly between a sense of power and autonomy and its converse, a feeling of helplessness in the face of irresistible internal forces” (62).

In “The Clinical Novel: Phrenology and Villette,” Nicholas Dames argues convincingly that attention to phrenology commends us to read *Villette* with a “different model of visuality” (368) than our own. Dames goes further to say that “In a phrenological or clinical world the hermeneutics of depth psychology no longer apply; powerful secrets and disfiguring pasts are replaced by instantly legible signs” (368). Dames in this sentence and throughout the article sets up an opposition between “depth psychology,” wherein we are constantly interpreting one another in an attempt to get to truth,
dependence on the illusion of deep character development, especially as Brontë practiced it, was both furthered and hindered by a discipline that suggested deep, unrevealed, and contradictory emotional energies while simultaneously insisting on the ease with which those energies could be read on the human skull. Furthermore, phrenology simultaneously distanced the individual knower from its social context and emphasized the importance of that social context. As a result, Villette, Brontë’s last work, is the most perfect realization of the opportunities and frustrations that phrenology presented for a Victorian novelist.

Nancy Armstrong, in Fiction in the Age of Photography, has suggested that photography and the disciplines (such as phrenology) that preceded photography helped to create the idea of unmediated image as what is truly real; reading the difficulties in interpretation in Villette allows me to question—once again—whether or not the Victorians truly accepted the unmediated image. According to Armstrong, the reason we now know what we see is a result of the desire for the supposedly unmediated image that these disciplines created and photography’s apparent fulfillment of that desire, which was further reinforced by the novel. In making this argument, Armstrong defines the “shadow archive”—set cultural images fiction and photography simultaneously referred to, by way of one another, in order to earn for themselves greater cultural authority (31). Armstrong writes that this shadow archive was a “cultural spatial classification system specific to their mutual moment and class of consumers . . . [that] contained the bodies, possessions, and practices of these in

and Brontë’s surface, phrenological, psychology, where a person’s past and personality float on the surface for any moderately skilled interpreter to construct meaning. Dames, in his recent book Amnesiac Selves again proclaims that “I will suggest that attention to a different model of visuality – the clinical project of phrenology and physiognomy – compels us to revise, or nuance, our more usual privileging of depth over surface . . .” (86).
relation to those whom the Victorian readership considered outside the boundaries of self, home, class and nation” (28). The stated aim of Armstrong’s book is not only to “show how photography authorized fiction as a truth-telling medium,” but also to “demonstrate that the reverse was true as well, that in order to convince readers fiction was indeed offering them mastery of the world of objects, fiction had to authorize the transparent, reproducible image” (27). According to Armstrong, fiction (realism most especially) and photography made use of this “shadow archive” in order to establish their claim to a certain reality. Phrenology, as Armstrong briefly observes in that argument, was one of the disciplines that first created the desire for the kind of supposedly unmediated images that photography could supply, even as it stocked this “shadow archive” with the very images that insured that those photographic images were mediated.

I want to deepen the picture of interpretation that Armstrong has given us by returning to this pre-photographic discipline and suggesting that Brontë’s work becomes increasingly troubled by these set images. In this chapter I bear Armstrong’s argument out in a specific discipline and in two specific novels, in so far as I successfully make the case that Brontë’s work and phrenology helped to create these stock images that guided Victorian interpretation. But while Armstrong’s “shadow archive” vocabulary does important intellectual work, it perhaps grants too much reality to those stock images, and suggests that the Victorians accepted them uncritically, even unconsciously. Instead, Villette bears evidence of a gradually increasing understanding of the mediated nature of the image that phrenology presented; Brontë’s work, then, was not wholly amenable to realism, at least as it has

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been defined by Armstrong. Instead, one of the tropes that we principally associate with the realist novel, the deep self, proves resistant to the stereotyping action of the shadow archive. As we shall see throughout this study, fiction itself, even realism, at key moments resists the endorsement of the supposedly real unmediated image that Armstrong so brilliantly examines in her study. Realism’s dependence on that unmediated image continually proves to be its undoing, as the very desire for that unmediated image creates awareness of its impossibility. Instead of a ubiquitous, impossible to escape “shadow archive,” we have an interpretive grid—one that, while persuasive and pervasive, is not irresistible or undetectable.

Brontë’s difficulties with phrenology find form and focus in Villette’s curious gothic subplot. Along with recent interest in Brontë’s belief in phrenology, a number of critics have explored Villette’s debt to the gothic genre. Michiko Sonya and Toni Wein, have mapped out the ways in which Ann Radcliffe’s The Mysteries of Udolpho and The Italian, and even more spectacularly, Matthew Lewis’s The Monk helped to shape Villette. In these readings the gothic is a way for Brontë to express coded sexual desire—and in making these arguments, Soya and Wen appear to add credence to Shuttleworth’s argument about Lucy’s self, which can only be created through resisting other interpretive agent. Interpretive penetration must be repulsed, and the self continually maintained through a sustained game of granting and withholding. This chapter argues that the novel’s gothic plot reintroduces interpretive anxieties inherent in the gothic form, but instead of pairing the gothic with anxieties about political, economic, or sexual uncertainties, it instead focuses on the contradictions within a particular scientific practice and argues that the gothic revealed the anxiety
of misinterpretation on the part of phrenology’s practitioners. In the gothic plot of *Villette* scientific practice becomes simply one more mode of interpretation, as prone to subjective prejudice and social influence as any other interpretive practice. By revealing the complicated social nature of phrenology and epistemology in general, the gothic plot pushes Lucy and Paul, those most directly involved in the gothic subplot of the novel, toward an open epistemic stance; the epistemic certainty that is the ostensible promise of phrenology is rejected in favor of an educated uncertainty; they withhold judgment in the hopes of encountering further evidence. The gothic, in *Villette*, becomes not just a barometer of interpretive anxiety, nor simply another way to defend realism, but an advocate for a particular kind of epistemic uncertainty. The gothic of *Villette* both affirms an epistemic reality (it does not indulge any epistemic nihilism) even as it shows that the unmediated image is, in fact, mediated. The gothic, in *Villette*, is where the shadow archive ceases to lurk in the shadows.

This gradual shift on Brontë’s part, from an implicit faith in phrenology, to a continual struggle and frustration with the discipline, and finally to a rejection of the discipline’s epistemic promises, can be better understood in light of the context of the problem of the relation between the social epistemology and individual epistemology in phrenology. We all know many things only as a result of complicated epistemological social networks. Phrenology, at various moments, attempted to recognize this, while simultaneously insisting on the ability of the individual knower to realize complete independent knowledge. In recognizing the social nature of any epistemic practice, phrenology threatened the very certainty that it promised—the very individual knower who was supposed to come to independent and objective

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3 Armstrong makes this argument about the “fantastic,” in *Fiction in the Age of Photography*. 
conclusions threatened to disappear, or worse, to be ruled by the very society whose influence and judgment from whom phrenology was supposed to provide an escape. Charlotte Brontë’s novels, as an *oeuvre*, recognize the same difficulty. Brontë’s heroines value phrenology for the emphasis that it places on their individual interpretations. Jane Eyre, orphan and social outcast, finds much of her power in her ability to correctly read and catalogue the other characters of the novel—that ability allows her to remain in control of the most desperate situations. But Lucy, whose almost complete social isolation seemingly allowed her to achieve the greatest perceptive objectivity, goes nearly insane, and finds herself often unable to make any reliable interpretation. The very things that should provide complete objectivity—and thus interpretive stability—instead result in almost complete interpretive chaos.

In this chapter I will first examine the critical response to *Jane Eyre* and Brontë’s other novels in order to argue that Brontë’s audience recognized and responded to this phrenological technique, which they saw as an attempt to give her characters greater depth and verisimilitude. This relationship with her critical audience helps us to understand why Brontë incorporated phrenology, and also allows us to see the visual tension that phrenology produced in much of her work, and helps us to see the beginnings of the stereotyped images that Armstrong discusses. I will then review the practice of phrenology as it is explained in George Combe’s *System of Phrenology* and *The Constitution of Man*—those sources with which Brontë would have been most familiar, and explicate Brontë’s use of those principles in *Jane Eyre*—and in doing so I will also point out the epistemic paradoxes which phrenology produced. I will also discuss a number of periodical reviews of phrenology that
demonstrate not only a skepticism about the practice of phrenology, but also reveal some of the more broadly recognized epistemological contradictions that may have complicated Brontë’s intention to give her characters the accuracy she desired. I will then turn to *Villette*, first examining moments of interpretive confusion within that novel in order to contrast them with *Jane Eyre*, before finally turning to the gothic plot of the novel. The picture of *Villette* (if I may use that troubled metaphor) that emerges is one of continual interpretive tension—a tension between the visual accuracy that Brontë hoped to achieve, and the deep emotional accuracy necessary to her novels, as well as a tension between the heroics of the individual knower and the social interdependence of all epistemic knowledge.

I. Phrenology, Brontë, and *Jane Eyre*.

Before any other question, it is worth examining Brontë’s attraction to phrenology. Why was she convinced by it, and even more importantly why did she incorporate it into her novels? Even though it is impossible to answer such a question with any definitive answer, posing such a question helps to clarify what issues were at stake in phrenology. Historians of phrenology have established its highly controversial nature—as we shall see later it was often criticized in the press and in the medical community. But phrenology was also practiced by a large number of physicians and surgeons. Roger Cooter has established that the discipline appealed largely to the middle-class, because, as Sally Shuttleworth concisely puts it: “Phrenology offered the perfect philosophy for the new industrial economy: whilst challenging privileged interests, it suggested in their place not a levelling, but a new
social hierarchy, which claimed for itself the legitimating authority of science” (64).

Shuttleworth, correctly I think, speculates that at least part of Brontë’s attraction to the discipline can be traced to similar concerns: “Her social status . . . was decidedly marginal: middle-class and educated, but with few surrounding social peers, and constantly under the threat of genteel poverty, she had, as a woman, no legitimate social outlet for her talents. . . . Phrenology offered a double-edged sword: one need not despair of one’s present situation, since the potentiality for self-improvement was unbounded: but in addition, one could also comfort oneself with the sense of superiority of one’s innate endowment” (65-67). Brontë’s status as a middle-class woman, and an initial outsider to the London literary community certainly would have made a discipline like phrenology attractive; it did not abolish a sense of social stratification, but redeployed it along the lines of innate talents and gifts.

While this class argument for Brontë’s attraction to the discipline has merit, it leaves unexplored another explanation for her interest. Shuttleworth hints at this possibility when speaking about Brontë’s personal life: “The language of faculties allows her to draw a distinction between conscious desire and unruly internal energies” (66). Brontë’s fascination with phrenology may have been more than only personal; as a woman aspiring to become a professional novelist, phrenology offered up the possibility of a complex visual code that could be imparted via the written word. For the vast numbers of those Britons who had purchased copies of Combe’s work, precise phrenological descriptions provided relatively precise mental images of

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Brontë’s characters. As we shall see, it seems quite possible to put characters such as Bertha Mason, Mr. Rochester, St. John Rivers and Jane against the charts and grids of the phrenologists and emerge with fairly distinct ideas of how Brontë must have pictured them. Furthermore, such descriptions did more than represent her characters physically; the novel’s readers almost immediately knew something of these characters emotional lives as well. Phrenology may have, at least initially, appealed to Brontë as a novelist—writing for a population familiar with its principles, she could effectively and efficiently describe her characters with the added cultural authority of science.

Reviews of Brontë’s novels support this idea—many saw her as a pioneer of a newly rigorous realism. Almost universally she was praised for her powers of description, which many compared to the talents of a visual artist—and a large number of reviews connected her skill at psychological description to her ability to give those descriptions physical shape. G.H. Lewes, reviewing Jane Eyre in Fraser’s Magazine claimed that Brontë’s

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5 In The Brontë’s: The Critical Heritage, (edited by Mariam Allott) one can find this praise across the spectrum of Charlotte’s literary career. There are too many examples to be comprehensively catalogued here, but aside from the examples quoted in the following paragraph, here are further illuminating examples: “as an analysis of a single mind, as an elucidation of its progress from childhood to full age, [Jane Eyre] may claim comparison with any work of the same species” (77); “The charm of [Jane Eyre] lies in its exquisitely truthful delineation of female character” (121); “the power of graphic delineation and expression is intense. There are scenes [in Jane Eyre] which strength and delicacy of emotion are not transcended in the range of English fiction” (127); “The grand secret of [Jane Eyre’s] success . . . was its reality. From out of the depths of a sorrowing experience, here was a voice speaking to the experience of thousands. The aspects of external nature, too, were painted with equal fidelity” (163); “[P]ower is manifested [in Shirley] in the delineation of character: her eye is quick, her hand certain. With a few brief vigorous touches the picture starts into distinctness” (166); “The characters [of Villette], in description at least, are capital; not pleasant, not very interesting in themselves. . . . yet painted with the hand of a master, and full of life and vigour” (194); [The plot of Villette] afford[s] no great scope for exciting incident; but furnish[es] full play for that masterly delineation of character and analysis of emotion in which the writer excels” (178). All of these examples attest to Brontë’s descriptive ability—many of them suggest (in their use of phrases such as external nature and delineation) that this praise was based on an awareness of the principles of phrenology.
faculty for objective representation is also united to a strange power of subjective representation. We do not simply mean the power over the passions—the psychological intuition of the artist, but the power also of connecting external appearances with internal effects—of representing the psychological interpretation of material phenomena.

( emphasis mine-Allott, 86)

Although Lewes does not specifically mention phrenology by name, this passage, especially its last phrase, suggests that he is praising her for her ability to communicate phrenological truths. Lewes’s praise suggests that Brontë’s reasons for incorporating phrenology into her novels went beyond her own personal attraction to the discipline—phrenology allowed her to present a more holistic description of the person. Using phrenology allowed Brontë to blur the mind/body distinction in such a way that her written descriptions could do double duty as physical description and psychological description. Phrenology provided the shadow archive of human images that would allow a novelist to present clear and supposedly unmediated images of her characters through the written word.

Phrenology also allowed Brontë to invest her first person characters—such as Jane and Lucy—with an almost scientific detachment. As she wrote the majority of her novels in the first-person auto-biographical form, the conscious insertion of phrenology helped give her characters the ability to speak with a certain authority.

An unsigned review of Villette, published in The Spectator commented on Lucy Snowe’s dispassionate description of her past friends:

the curious thing is, that the morbid feeling so predominant in the [fictional] writer [Lucy] – the hunger of the heart which cannot obtain its daily bread, and will not make believe that a stone is bread – does not in the least reflect itself upon these characters. They are as distinctly drawn, as finely appreciated, as if the soul of the writer were in perfect harmony with itself and with the world, and saw men and
things with the correct glance of science, only warmed and made more piercing by a genial sympathy. (Allott, 182-83)

For all of Lucy’s difficulties, she is set up as someone who wants to see the past with a more or less objective eye. The language of phrenology—which grounded psychological assertions in a material reality, gave her central female characters an authority that they might not have otherwise had.

These arguments for Brontë’s professional attraction to phrenology are further buttressed when relevant portions of Combe’s phrenological system are reviewed; Combe’s books might have been seen as a novelist’s guide to producing realistic physical and psychological characters. Combe valued phrenology for the discipline’s ability to permit its practitioners to avoid common mistakes in knowing: knowing themselves and knowing others. By recognizing the common signs of predilections and propensities, one could avoid common mistakes that arose from dealing with others: from those of different races and religions, to one’s servants or masters, to one’s prospective mate. Instead of erasing the need for narrative in a surface hermeneutic, phrenology implied that a body’s narratives, past, present, and future, could be read on the body. And by recognizing the abilities and deficiencies of one’s own person, the individual practitioner could better shape his own narrative.

Combe establishes early in his treatise *System of Phrenology* the essential materialism of his discipline, arguing against those who “are acquainted with Mind and with Body, as two distinct and separate entities” (6). Instead Combe sought to maintain, for the purposes of scientific endeavor, that “the brain is the organ of the mind” (8). Human behavior could be completely comprehended in terms of the physical artifact, the brain: “[E]very act of will, every flight of imagination, every
flow of affection, and every effort” is a result of the material brain. The brain in turn
is “formed before the bones which invest it,” (71) and is gradually surrounded by
ossifying bone structures. The result, if these processes form normally, is a skull
which reflects the shape of the brain: “Thus, then, there is no obstacle in general to
the discovery of the figure of the brain, by observations on the form of the skull” (73).
Phrenology, at the most basic level, was a system for reading the signs left from the
formation of the skull around the brain.

While Combe’s work acknowledged multiple faculties (35 distinct organs), it
is important to keep in mind that these organs were organized in visual system that—
with relative ease—helped the practitioner to group and generalize about a number of
these faculties at the same time. Combe’s system acknowledged two different
“hemispheres” of the brain, which were divided by “a strong membrane, called the
Falciform process of the dura mater.” Visually represented in his work, this was a
line that ran from just above the nose, over the top of the head to the base of the skull
establishing two distinct regions. On each side of this membrane, there was a set of
35 distinct “organs,” but for the sake of simplicity Combe combined those organs
which met in near proximity near the center of the skull. These “organs” named those
aspects of the brain which controlled various appetites, characteristics, and
intellectual capacity (see figure 1).
(Figure 1—front matter selection from System of Phrenology)\textsuperscript{6}

\textsuperscript{6} George Combe, System of Phrenology, 6\textsuperscript{th} American Edition from the 3\textsuperscript{rd} Edinburgh Edition (Boston: Marsh, Capen, Lyon, and Webb), 1839.
Despite these 35 distinct organs, Combe separated these categories into distinct areas in such a way that a casual observer could tell much about a subject with a simple glance. He divided these organs into two distinct categories, those of the affective, and those of the intellectual. The affective faculties were further divided into the “propensities” (those animal characteristics which determine our most basic behavior, sex, love of offspring, combativeness) and “sentiments” (those moral feelings which channel our animal characteristics into their proper spheres). The intellectual faculties were divided into two camps as well, although not as clearly defined: “the perceptive,” (those organs that simply allow us to take in information from the world) as well as the “reflective” (those features which allow us to compare that information, and assimilate it for our own use). The intellectual faculties were located in the “anterior lobe” which ran from the forehead back to the organs of “Constructiveness and Benevolence” (79). On phrenological busts this would have been a theoretical line, at roughly a 45 degree angle, running from the top of the skull back to a midpoint between the eye and the ear (see figure 2). The intellectual faculties thus rested in a roughly triangle shaped area on the front of the head, with the reflective faculties toward the top, and the perceptive faculties toward the bottom. The rest of the brain, the affective faculties, were divided by a line that ran horizontally from the first line (again, the midpoint between the ear and the eye) to the back of the skull. The portion beneath this line, or “the posterior lobe,” wrote Combe, is “devoted to the animal propensities . . . [w]henever this and the basiliar region are large, the animal
feelings will be strong” (80). The top portion, or the “coronal region of the brain” is “the seat of the moral sentiments” (80). Combe warns that “if the whole region of the brain rising above these organs is shallow or narrow, the moral feelings will be weakly manifested when high and expanded, they will be vigorously displayed” (80).

The result is a head segregated into four distinct areas, the animal propensities, the moral sentiments, the perceptive faculties, and the reflective faculties. These descriptions are accompanied by profiles of convicted murderers Burke and Hare, with lines drawn at the appropriate places. No specific faculties are noted in these illustrations—all that is given is a simple grid—and this grid alone, implies Combe’s text, should help you to see the depravity of Burke and Hare. Practitioners of phrenology did not need to precisely measure every single faculty—one educated glance could, at least potentially, tell much about a person’s personality traits.
Combe went to great lengths to emphasize that the discipline was a contextual science; the whole had to be appreciated before individual elements could be properly interpreted. The organs were determined, at least in part, by their location in the previously described regions, but these regions were determined to no little extent by

(Figure 2—System of Phrenology, p. 80)
the presence of individual organs. Combe appears to have been aware of this contextual difficulty, and wrote that “The whole organs in a head should be examined, and their relative portions noted” (85). Like anyone learning a new language, practice was extremely important to learning phrenology—Combe repeatedly recommends a thorough course in the discipline. In order to prove phrenology’s truths to the uninitiated, it was necessary to restrict the would-be converts’ attention to a single head, and have them “compare the different organs of [that] same head” (91). Once one had accepted the truth of phrenology, and was training to become a practitioner, it became acceptable to compare organs on other heads, in order to gain further mastery of the expression of these organs in distinct bodies (85). So while Combe did establish a precise grid of measurement for each individual organ, he directed most of his casual readers to a reading of the entire head—a reading that he saw as necessary context to the individual organs.  

So while Combe’s phrenology did focus on individual organs, it also provided a relatively simply way for the average reader to produce generalized images of various body types. In *Jane Eyre*, as has been noted by a number of critics, Charlotte Brontë shows herself intimately acquainted with the details of this discipline, but Brontë’s characters never use calipers or a craniometer to measure specific organs. Jane’s practice of phrenology, along with Mr. Rochester’s and St. John Rivers, is restricted to a general knowledge of principles and the visual grid previously described. They are familiar with the discipline, but it is a familiarity that clearly

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7 Consisting of twenty different gradations, running from “Idiocy” and “Very Small” all the way to “Rather Large,” “Large,” and “Very Large,” with half-way points in between, these allowed the experienced phrenologist to carefully measure organs with specific instruments such as calipers, or the “new craniometer” (90).
marks them as non-professional practitioners. Brontë’s use of phrenology, as a result, focuses on giving us visual impressions of her characters—phrenology would have helped an audience of phrenology amateurs to glance at Brontë’s characters in the same way that they may have met and surveyed a new acquaintance. In the first volume of the novel, and in the first encounter that employs phrenology, Jane performs a reading of Mr. Rochester’s head that employs this visual, contextual whole:

He lifted up the sable waves of hair which lay horizontally over his brow, and showed a solid enough mass of intellectual organs; but an abrupt deficiency where the suave sign of benevolence should have risen. (138)

Jane gives her readers a picture of Mr. Rochester’s head that could have easily been superimposed on Combe’s grids. While she does mention one specific organ, benevolence, it is one of the border organs, where, as Combe noted, the intellectual faculties ceased and the moral sentiments began. As a result, a phrenologically informed audience could picture Rochester even as they took in important psychological information about him—they would have been able to picture his prominent forehead, followed by a fairly low or shallow rise over the top of the skull, even as Brontë informed them that Rochester was not likely to be patient with the elderly and kind to dogs.

Rochester, while in his guise as the gypsy fortune teller, also performs a phrenological reading that is based more on this general visual approach. He tells Jane that “destiny” is not in the “palm” but that is in “‘the face: on the forehead, about the eyes, in the eyes themselves, in the lines of the mouth.’” Jane responds “‘Now you are coming to reality . . . I shall begin to put some faith in you presently’” (207).
Rochester reads her brow, and declares that it shows that “Reason sits firm and holds the reign, and she will not let feelings burst away and hurry her to wilds chasms. The passions may rage furiously, like true heathens, as they are; and the desires may imagine all sorts of vain things: but judgment shall still have the last word in every argument, and the casting vote in every decision” (211). Rochester’s reading clearly relies on Combe’s general categories—unlike Jane he does not note even one particular phrenological organ. But this is still clearly a phrenological reading.

Rochester, and Brontë through Rochester, presents Jane to herself as someone whose animal propensities are well under the control of her intellectual organs. The educated reader knows then, that she, like Rochester, must have a prominent forehead. And in noting that “the passions may rage furiously” in Jane, Rochester acknowledges the presence of the animal faculties in Jane, but that they are in relation to her forehead, not overly developed. While this does not give us an absolutely clear picture of Jane, it does give us some clue as to how her head might be shaped (a prominent skull base, but with an even more prominent and high brow). Again, the physical and mental descriptions meld conveniently into one for Brontë the phrenological novelist.

Finally, in Bertha Mason and St. John Rivers, we see these general rules applied to give a fairly distinct visual and psychological description of these characters. Bertha Mason, Rochester tells Jane, has a “pigmy intellect” combined with “giant propensities” (323). Her skull base, in other words, must overwhelm the rest of her head, much as Combe’s illustrations of Burke, Hare, and Pope Alexander VI. She is ruled by her animal propensities—and when Jane first encounters her, she
tells her reader that she “could not, at first sight tell,” if it was “beast or human being” (307). In contrast to Bertha, St. John Rivers has a “high forehead,” (363) St. John’s intellectual propensities appear to overwhelm his animal drives—while he claims to be tempted by the beautiful Rosamond Oliver, he maintains that “he should despise himself for the feverish influence it exercised over him” (414). Jane, who learns to find this imbalance almost as terrifying as Rochester found Bertha’s imbalance terrifying, repeatedly describes his forehead pejoratively: “a high lofty forehead, still and pale as a white stone” (413).

*Jane Eyre* also appears to echo, to no little degree, the cautionary tales of Combe’s great masterwork, *The Constitution of Man*. In fact, *Jane Eyre* replicates Combe’s warnings against interracial marriage to such a degree that it becomes difficult to see the plot of *Jane Eyre* as anything but the narrative of an English hereditary line reclaimed from the pernicious influence of a racial other. Phrenologists often celebrated their discipline for its ability to guide human reproduction, and in *The Constitution of Man* Combe went to great lengths to make the differences between the races clear, and thus argue for racial purity. Racial difference was directly connected to intellectual capacity; interbreeding could destroy superior stock:

> An undeniable proof of the effect produced on the character and dispositions of children by the form of brain transmitted to them by hereditary descent, is to be found in the progeny of marriages between Europeans, whose brains possess a favourable development of the moral and intellectual organs, and Hindoos and native Americans, whose brains are inferior. All authors agree (and report the circumstance as singularly striking) that the children of such unions are decidedly superior in mental qualities to the native, while they are still inferior to the European. (194)
Phrenology was a way to mark differences between the races, and thus avoid unbalanced marriages that might result in “weak, imbecile, and vicious children” (223). In these passages Combe employs the same kind of generalist phrenology language that he does when introducing phrenology—the same language that Brontë consistently employs throughout *Jane Eyre*. The various nations and tribes of the earth can be categorized according to general shapes of the head—Bertha’s head, with its broad skull base, varies more dramatically from Rochester’s, Jane’s or St. John’s Rivers, clearly marking her as a racial other. Rochester, in marrying Bertha, runs the distinct risk of producing such inferior children.

Combe’s treatise is filled with numerous cautionary tales of ill-matched husbands and wives who spend their days in domestic torment producing disappointing and immoral children. Combe describes one such marriage: an older man married “an unhealthy young woman, deficient in moral development, but of considerable force of character; and several children were born. The father and mother were far from being happy; and when the children attained to eighteen or twenty years of age, they became adepts in every species of immorality and profligacy” (224). The moral deficiency of the mother is almost intrinsically linked to racial difference—this physical taint, in Combe’s system, would almost have to come from even more unfortunate marriage in the woman’s past. Bertha and her mother, women of dubious racial heritage and subject to a hereditary insanity, are more than physically damaged, but “intemperate,” “unchaste,” and “infamous” (306).

Combe also loathed the social rituals that paired couples before they were fully capable of recognizing and judging one another’s defects, and quotes Johnson to
drive this point home: “‘What... can be expected but disappointment and repentance from a choice made in the immaturity of youth, in the ardour of desire, without judgment, without foresight, without inquiry after conformity of opinions, similarity of manners, rectitude of judgment, or purity of sentiment? Such is the common process of marriage’” (qtd. in Combe 187). When Combe writes of the hypothetical marriage between someone endowed with “the splendid cerebral development” of the reformer Melancthon and a female “like that of Hare or Williams” he supposes that it would be done “under the excitement of youthful passion” (185). Rochester’s first marriage is determined and damned under almost exactly these circumstances: “They showed her [Bertha Mason] to me at parties, splendidly dressed. . . . I was dazzled, stimulated: my senses were excited; and being ignorant, raw, and inexperienced, I thought I loved her” (305). It is, of course, a short time before Rochester finds that Bertha’s nature is “wholly alien” to his, and that he cannot “pass a single evening, not even a single hour of the day with her in comfort” (306). The natural conclusion to this cautionary tale, of course, would be the degenerate profligate children Combe repeatedly describes. The youthful Rochester has flaunted the lessons of phrenology and should have to watch a number of ill-bred children overtake his estate. Instead Jane rescues Rochester and produces an heir free of the taint of the Caribbean. Jane produces an alternative ending to phrenology’s cautionary tale of human mating—but the narrative is still essentially phrenological, reading to its contemporary audience as a stern warning about the dangers of racial miscegenation.
Worth noticing is the apparent failure of the young Rochester as a phrenologist. Rochester calls himself “ignorant, raw, and inexperienced,” and those contemporary readers educated in the discipline might have concluded that he became fully indoctrinated to the discipline only as he repented of his disastrous first marriage in his later leisure. While *Villette* has a gothic subplot, *Jane Eyre* is actually a phrenologically naturalized gothic story in its entirety. Brontë has essentially grafted a cautionary tale against interracial marriage onto the classic gothic tale of an isolated or orphaned female who encounters a Byronic hero. The gothic threat of the past, the sin that comes to haunt our Byronic hero, can actually be traced to a failure to either know or practice phrenology. *Jane Eyre* ends by insisting on Jane’s ability to overcome that prior epistemic failure, but, as we shall see, *Villette* will focus the dynamic of epistemic failure and the gothic on to phrenology itself.

Three things of related interest about the phrenological interpretations found within the pages of *Jane Eyre* bear repeating, because they show us not only that Brontë used phrenology, but suggest that she trusted in it completely, and intentionally used it as a novelistic device. First, the almost complete absence of any conscious practice on the part of their practitioners; even as they employ the language and visual schema of phrenology, they felt little need to call attention to phrenology as a discipline; Brontë’s faith in the interpretive grid is apparent in the complete, nearly unaware trust that her characters place in their practice. Second, these interpretations consistently use Combe’s more general areas of organs, rather than specific organ names themselves. With a few minor exceptions, they make reference to animal propensities and intellectual organs, not to the organs of amativeness or
causality. Three, the very narratives of phrenology—the cautionary tales against interbreeding—appear to be employed in Jane Eyre. Rochester’s narrative of marriage to Bertha is such a cautionary tale used to forward the plot’s action. So while Brontë’s characters use phrenology almost unconsciously, it appears that she may have used it quite deliberately. Phrenology puts character on the outside easily readable for all. But conversely, it allows the novelist to make her psychological descriptions do double duty—fairly clear physical descriptions emerge from a few key technical phrases. These character descriptions would have allowed her readers to place her characters against the phrenological busts and manuals available.

Combe’s grids seem to lurk behind all of Brontë’s major characters.

If we accept that Brontë’s attraction to phrenology was more than simply a personal, class based attraction—that the discipline may have offered benefits to her as a professional novelist, as her use of the discipline and her novels’ critical reception suggests—then it is conceivable that the discipline may have offered difficulties to her, as a novelist, as well. Nicolas Dames, in his article “The Clinical Novel: Phrenology and Villette” suggests that “In a phrenological or clinical world the hermeneutics of depth psychology no longer apply; powerful secrets and disfiguring pasts are replaced by instantly legible signs” (368). Dames in this sentence and throughout the article sets up an opposition between “depth psychology,” wherein we are constantly interpreting one another in an attempt to get to truth, and Brontë’s surface, phrenological psychology, where a person’s past and personality float on the surface for any moderately skilled interpreter to construct meaning. Dames further suggests that our mode of visuality has led us to misinterpret
*Villette*, leading us to search for an interiority to her characters that is actually non-existent (369). While recognizing that Dames has helpfully pointed out the tension between a surface hermeneutic and a depth psychology, I want to argue that a tension between the two actually exists within the novel. Brontë obviously attempted to employ phrenology, but she also attempted to give her characters deep pasts and deep motivations. She also employed an often-overlooked aspect of George Combe’s phrenology—the insistence that one’s epistemic faculties are dependent on social context. Furthermore, as any number of the popular magazines of the time (with which Brontë was familiar) were eager to point out, phrenology at times rested on shaky interpretive principles. *Villette* highlights all of these contradictions; a thorny nexus of contradictory impulses, the novel contains a heroine and hero with deeply disfiguring pasts continually attempting to read each other and others objectively with a surface hermeneutic, and who border on the fringes of madness when in the social isolation that allows objectivity. Phrenology is not rejected outright, but its shortcomings become increasingly clear in the novel form, and as a result the phrenological epistemology of *Villette* threatens to collapse in a morass of contradictions.

II. The Problems of Phrenology.

In order to understand the difficulty that came from phrenology’s relationship to social epistemology, let us turn back to Combe’s *The Constitution of Man*. *The Constitution of Man* spends much less time than Combe’s earlier work explicating actual methods of phrenological examination and practice, and makes broader
arguments for the discipline’s social significance. The main thesis of the book is that phrenology describes certain basic physical and organic laws. In the same way that we have learned to live with forces such as gravity and heat, we must learn to live with the nature of our mental states. A key part of this argument, according to Combe, is that one’s interpretive faculties can be affected, negatively or positively, by one’s social environment. This will prove to be an unresolved difficulty for Combe’s system: if one of the desirable features of phrenology is its ability to give its practitioners certain knowledge about others, then that ability rests, to some extent at least, on the social context of the practitioner. The individual knower of phrenology depends on a social context.

In arguing for the social nature of interpretation, Combe spends more time on the intellectual faculties in The Constitution of Man, and wishes to make clear the difference between the “Knowing Faculties,” and the “Reflecting Faculties” (104). The Knowing Faculties refer to those epistemic abilities that make simple distinctions—this is air, that is dirt—that is limestone, that is clay (104). Combe, throughout the book, grants the knowing faculties (perhaps in varying degrees) to all animal organisms. The Reflecting Faculties separate humanity from the animals, by allowing them to “take cognizance of the causes of these phenomena; and acting along with the knowing powers, they discover the means by which wet soil may be rendered dry, clay pulverized, light soil invigorated. . .” (104). Like the animal propensities and the moral sentiments in the posterior lobe, the reflecting faculties rest on the top half of the anterior lobe, over the lower organs of the knowing
faculties. Combe’s reflecting qualities allow humanity to put bits of information into a context of causes and means, which in turn can be manipulated and employed.

Combe further argues that both the Knowing and Reflecting qualities must be regularly exercised, and in order to be exercised, they must be employed against and with other people. Social interaction is thus imperative for the proper exercise and care of the Reflecting qualities. Combe sets out three rather Lockean principles for human knowledge:

First, Every individual of the race is born in utter ignorance, and starts from zero in the scale of knowledge, and thus has the laws to learn from himself, either from his predecessors or from experience; Secondly, The laws of nature, compared with the mental capacity of any individual, are of boundless extent, so that every one may, to the end of his life, be learning something new; Thirdly, By the actual constitution of man, he must make use of his acquirements habitually, otherwise he will lose them. (108)

Combe’s use of the treatise’s title in the third point underscores its extreme importance for his system. Humanity, ignorant of the laws that guide its mental existence, too often slips into the animal Knowing Faculties, makes too little use of the more human Reflecting Faculties, and these faculties atrophy as neglected muscle might. Combe returns to this theme repeatedly, reminding his reader that the need to be always “learning something new” does not simply refer to the acquisition of new facts. Human social interaction is singularly important because it allows us to exercise the reflecting qualities. He uses the example of a game of chess: “The pleasure really consists in discovering the intentions of our adversary, and in calculating the effects of our own play; a certain degree of ignorance of both of which is indispensable to gratification” (109). And so, in the next chapter, after recommending regular physical exercise, Combe recommends regular mental
exercise: “So many hours a-day should be spent in the sedulous employment of the knowing and reflecting faculties; in studying the qualities of external objects, and their relations; also the nature of animated beings, and their relations; with the view not of accumulating mere abstract and barren knowledge, but of enjoying the positive pleasure of mental activity” (118). One must exercise the mind, and regular social interaction is a key part of those mental calisthenics.

Combe continues to sound the importance of mental exercise via social interaction in the early stages of the treatise, and so it is hardly a surprise that Combe later meditates on the consequences of a lack of mental exercise. He writes that of those that suffer: “in want of objects on which the energy of their minds may be expended, the due stimulating influence of their brains on their bodies will be withheld. . . : all the functions will, in consequence, become enfeebled; lassitude, uneasiness, anxiety and a thousand evils, will arise; and life will become a mere endurance of punishment for infringement of institutions calculated in themselves to promote happiness and afford delight when known and obeyed” (153). Combe even goes so far as to name a specific segment of society that is especially susceptible to these problems: “This fate frequently overtakes uneducated females, whose early days have been occupied with the business or the cares of a family, but whose occupations have ceased before old age has diminished corporal vigour. It overtakes men also, who, uneducated, retire from active business in the prime of life” (153). Mental lassitude attacks the uneducated, who too quickly do not have enough to do, and “In some instances . . . insanity is the consequence” (153). Madness, thus, is often a direct result of inadequate social and mental stimulation. So Combe’s
phrenology, which emphasized the ability of the individual epistemic agent, via the proper deployment of organic principles and laws, to reach a certainty otherwise unavailable, also maintained that the individual mind was constantly dependent on the interaction and stimulation only available in social interaction.

Phrenology’s inconsistent approach to social epistemology, as well as the tension between its emphasis on surface interpretation and its doctrine of conflicting psychological impulses, were not the only problems with phrenology. When Brontë, a reader of *Blackwood’s Edinburgh Review* since her childhood, which was a constant critic of phrenology, came to write her last novel she would have been aware that phrenology had been questioned, not only in its empirical claims about the brain, but as an interpretive practice: reviewers constantly questioned the discipline’s connection to an actual reality. In the April 1817 issue, a letter writer attacked phrenology pioneer Spurzheim’s repeated failures, in public dissections, to demonstrate key connections between “two orders of fibres” within the mind, which Spurzheim claimed as absolutely necessary to his system. More importantly, however, once the writer established the fact of Spurzheim’s faulty anatomy, he then satirically speculated about phrenology’s apparent success as a method of bodily interpretation; the heart, the writer supposes, could, as easily as the brain, “be made the basis to a system of CORDIOLOGY?” (38). The letter continued, mocking the traveling lecturers on phrenology: “[someone] may surely discover such a difference in the twisting of these fibres;--in the curvature of its valves;--the sweeping of its arteries;--or the arrangement of its nerves” (38). Any system of interpretation, this

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8 “The Craniological Contraversy: Some Observations on the late Pamphlets of Dr. Gordon and Spurzheim,”
Blackwood’s writer suggests, can be based on any object of the body sufficiently complex to provide enough difference to base different passions on those differences. In an 1821 essay another Blackwood’s writer satirically attacked phrenology, again, not as a faulty scientific practice, but as a faulty system of interpretation. He reminds his readers that “It is a well-known fact, that the human cranium may be moulded, in early infancy, into any conceivable shape, from the elastic nature of the bones of which it is formed” (74). This pliancy of the skull, suggests the reviewer, could be profitably combined with insights from phrenology. Rather than simply attempting to breed successful characteristics into the English race, as the phrenologists suggested, “nothing more is required, to give a new and definite direction to the thoughts and feelings of the next generation, than to mould the infant head to a given form, by the simple application of an unyielding head-dress, formed so as only to permit the development of the required organs”(75). In both reviews, phrenology is treated as a complex system that has been arbitrarily attached to a system of physical signs. Phrenology works as a systematic way to judge character, despite its apparent disregard for anatomical fact, because it provides the appearance of certainty through its complex generation of meaning based on minute anatomical difference. Once one accepts a system of character interpretation based on physical difference as true, that system’s truths become self-evident.

9 “Essays on Cranioscopy, Craniology, and Phrenology.”

10 Not only is this possible, but “it is equally well ascertained, that several tribes of savages take their distinctive mark from the form of the skull. It is fashionable among one tribe, for instance, to wear their brain in a case shaped like a sugar-loaf, while others prefer to have their terminating prominence in imitation of a cocoanut” (74-75).
A September 1826 review of Combe’s *A System of Phrenology* in *The Edinburgh Review* made these points in a more serious manner: in the system of phrenology, what counted as evidence, and could anything actually be considered as evidence hostile to the discipline of phrenology?\(^{11}\) The writer of that review wondered if every human characteristic were to be given its own separate organ:

If we are thus to take all the tastes, habits, accomplishments, and propensities by which grown men are distinguished, in the concrete, and forthwith to refer them to some peculiar original faculty or principle, imagine for the mere purpose of accounting for them, the original faculties of the phrenologists may at once be multiplied to 360 or 3600—and and room must be made upon the skull for as many new organs. (269)

There is, in the end, nothing observable to distinguish one organ from the next, or to prevent the continual multiplication of organs to account for various human behaviors. The reviewer continues this train of thought later in the review:

Their pretended Organs, unfortunately, are not such as can ever be proved to be organs, by any decisive, or even intelligible test; and the presence or absence, the strength or weakness, of their pretended Faculties, are equally incapable of being determined by any precise observation or experiment. . .

The only way they find them out is, by comparing the size of the organ, in persons who have the faculty in unusual strength, with its size in other cases. If all men had their faculties therefore nearly in an equal degree, it could never have been known or suspected that they had any such organs at all: and . . . what assurance could they possibly have that the bumps on their head had anything to do with it? (297)

No concrete evidence of a phrenological organ exists; only the subjective observation of the relative strengths and weaknesses in an individual. All of these reviews point to a similar difficulty in the process of phrenology—it is impossible to falsify—once accepted, one can imagine no variety of evidence which an adherent would accept as definitively damning.

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\(^{11}\) Titled, simply, “Phrenology.”
A suspicion that individual interest guides its teachers and practitioners lies implicitly at the heart of all of these arguments. As Roger Cooter, phrenology’s historian, has pointed out, a significant number of people made livings reading the skulls of the middle and lower classes. *Blackwood’s* and *The Edinburgh Review* persistently mock the itinerant phrenologist, who made good livings giving lectures to the rural workers of England, and providing their employers with physiological character references. These two criticisms combine to make a powerful case against phrenology; unwilling to produce definitive evidence for its claims, and unwilling to accept any evidence against it, its disciples were painted as either overly gullible or overly interested. The phrenology of *Villette* produces vague readings, and its consumers are often shown to be interpretive agents with deep emotional investments in the outcomes of these readings. Ultimately the novel rejects the kind of character certainty that phrenology promised.

III. *Villette* and the Rejection of Certainty.

These difficulties—the social paradox found within phrenology itself, and the interpretive difficulties noted by external critics of the discipline—combined in Brontë’s last completed novel to create a deeply complex and confusing portrait of, and response to, phrenology. *Villette*, like all of Brontë’s work is clearly informed by *System of Phrenology* and *The Constitution of Man*. But *Villette*, perhaps more than any other of Brontë’s novels, appears to question its characters’ ability to properly interpret. Phrenology is present; characters gaze at each other’s head and form interpretations, but these interpretations are frequently wrong, misinformed, and
obviously subjective: Lucy Snowe, M. Paul, and John Bretton too often see what they would see. Lucy is turned back from physical interpretation, and only finally understands M. Paul in terms of his emotional past, rather than his physical head. Furthermore, it seems that the characters of *Villette* can at least occasionally mask themselves from the interpretive gaze of others. Phrenology is present in *Villette* almost as much by its absence as by its presence; whereas the cast of *Jane Eyre* could form almost instant opinions about one another, the cast of *Villette* constantly struggles to come to any proper reading of each other’s character. In this way, *Villette* shows an anxiety about phrenology similar to the concerns of the *Blackwood’s* reviewers—phrenology as a system of interpretation becomes suspect. But it does more than this as well: by substituting Lucy’s knowledge of Paul’s past, late in the novel, for any phrenological reading, *Villette* suggests that that past, more than any surface reading, allows Lucy to know him intimately. And while it still withholds much of Lucy’s past from the reader, that very ellipsis suggests the importance of that past: *Villette* never lets us truly know Lucy. In addition to the problems I and the nineteenth-century reviewers have noted, Brontë adds the tension between a character’s deep past and phrenology’s claim to produce simple surface readings.

These difficulties begin to emerge quickly after Lucy’s arrival in Villette; phrenology is consistently employed, and just as consistently fails to produce useful, accurate readings. Lucy Snowe subjects herself to the gaze of M. Paul Emanuel at the behest of Madame Beck. Madame Beck lauds his skill in reading countenances: “I want your opinion. We know your skill in physiognomy; use it now. Read that
countenance” (66). But Emanuel’s interpretation gives little concrete information to his employer:

“I read it,” he pronounced.
“Et que’en dites-vous?”
“Mais—bien des choses,” was the oracular answer.
“Bad or good?”
“Of each kind, without doubt,” pursued the diviner (66-67).

Brontë’s use of the words “oracular,” and “diviner” implicitly compares M. Emanuel’s phrenological and physiognomic skills to a fortune teller. This quasi-magical reading is given in the place of a reference, but, “The judgment, when it at last came, was as indefinite as what had gone before it. . . . And with a bow and a ‘bon soir,’ this vague arbiter of my destiny vanished” (67). This first and most deliberate presentation of a phrenological encounter leaves its reader with little information about our heroine than we had before; none of Lucy’s particular organs have been noted, the overall strength of the forehead contrasted with the lower animal propensities is not even mentioned. On the strength of such an ambiguous reading, especially from a phrenological point of view, Lucy is accepted into the household.

Further incidents in the novel suggest that phrenology is ineffective. Not surprisingly, M. Beck appears to be less than satisfied with Emanuel’s reading. That night, she examines Lucy in her bed for a quarter of an hour, before finally turning to Lucy’s garments and possessions in an attempt to form a more concrete opinion of her character. This, as many critics have noticed, is an elaborate scene of surveillance and counter-surveillance; the novel suggests that Lucy, supposedly asleep, should be in such a relaxed posture as to reveal her true self. In contrast Jane Eyre never suggests that the presence or absence of sleep could aid a phrenological reading;
character is there in the ossified skull for all to read. Even stranger, Lucy’s attempt to read Beck is similarly, mysteriously repulsed: “Of what nature were the conclusions deduced from this scrutiny? Were they favourable or otherwise? Vain question. Madame’s face of stone (for of stone in its present night-aspect it looked: it had been human, and, as I said before, motherly, in the salon) betrayed no response” (70). Beck, apparently like Lucy, can somehow resist such readings—a most unphrenological ability.

Dr. John Bretton also attempts multiple medical readings of Lucy, and his, while perhaps more specific than M. Paul’s, are all the more erroneous for their specificity; in fact, his readings meet with phrenology’s oldest charge—that of materialism. In Dr. Bretton, we see a character described who, by occupation should be an excellent interpretive agent, but whose vary nature undermines that apparent ability. Bretton dismisses Lucy’s nun, and the light in her wardrobe as “optical illusion[s]—nervous malady, and so on” (257). While Lucy momentarily entertains the thought that Bretton may be right, and fears for her own sanity (250), we soon find her dismissing John’s dismissal. After he notices her “symptoms” of fear, she proclaims to her audience: “Not one bit did I believe him; but I dared not contradict: doctors are so self-opinionated, so immovable in their dry, materialist views (257). The narrative eventually supports Lucy in her belief in the reality of these apparitions, but even within the moment of these episodes, Lucy appears to be rejecting Bretton’s epistemology, along with his definition of her person. John is obstinate, and believes in the virtue of his own definition more than he desires to seek the truth.

Furthermore, his views are “dry” and “materialist:” the very charges that were often
leveled against the discipline of phrenology. Shortly after, when he pronounces his opinion of the actress who plays Vashti, she notes that “a strange smile went wandering round his lips, a smile so critical, so almost callous! I supposed for natures of that order his sympathies were callous” (260). Curiously, the materialist language of phrenology is absent even as Lucy levels that charge—Bretton’s descriptions of Vashti and Lucy never employ Combe’s grids or brain sections—instead this phrenological language is replaced with the language of character virtues. In these passages phrenological ability itself is questioned, and John’s specific phrenological and medical skill is at least curtailed, (if not altogether absent) by a prejudiced and arrogant disposition.

Lucy continues to highlight John’s tendency to mistake subjective character judgments for medical diagnosis by focusing on his own character deficiencies. Lucy dismisses John’s diagnosis of her alleged delusion; after all, it comes in the wake of her own charge of delusion against him: “‘Dr Bretton,’ I broke out, ‘there is no delusion like your own. On all points but one you are a man, frank, healthful, right-thinking, clear-sighted: on this exceptional point you are but a slave. I declare, where Miss Fanshawe is concerned, you merit no respect; nor have you mine’” (189). Lucy goes on to note that John lacks the social and sympathetic faculties necessary to make him a great epistemic agent. While John has a broad range of emotions for himself, he does not have the propensity for “seize[ing] quickly another’s feelings” (190). Almost apologetically, Lucy explains of her desired object of affection: “Make your need known, his hand was open. Put your grief into words, he turned no deaf ear. Expect refinements of perception, miracles of intuition, realize disappointment”
(190). And shortly after wrongly diagnosing Lucy’s nun as a delusion, John references his own previous delusion as a product of “melancholy” and advises Lucy “to cultivate happiness;” Lucy’s inward reply follows: “No mockery in this world ever sounds to me so hollow as that of being told to cultivate happiness” damns this reading as hollow arrogance (250). We are already well prepared, by the time of the incident of the nun, to suspect that John is a faulty epistemic agent, and John’s shallow, facile advice only confirms this view.

Phrenological theory does, however, guide Lucy’s development as an epistemic agent, as her sanity and interpretive ability is thrown into question in the middle of the novel; left alone for an entire summer with an idiot, Lucy’s own mental abilities begin to break down. Throughout the novel we can see that Lucy Snowe consistently suffers from a lack of social interaction and stimulation in the manner that Combe describes in The Constitution of Man. Rarely is Lucy truly in community with any of the book’s other characters. She stands as a family outsider/observer in the opening chapters of the novel, a nurse and observer in the interim before she moves to Villette, and becomes a teacher and observer for the rest of the novel. She carefully avoids revealing any details about her own family, never marries, and declares herself vaguely Protestant but rotates her visits to various Protestant churches. Both family and faith are constantly weighed and either reject her, or are rejected. Unattached to any particular Protestant sect, she nonetheless resolutely rejects any attempts by her confessor to convert her to Catholicism. Her interactions with Bretton and his mother often closely simulate a family—this interaction is certainly the best cure for her summer with the cretin—but too often both Bretton and
his mother prove their indifference to Lucy. They like and appreciate her, but she is not as crucial to their happiness as they are to hers. Toward the end of the novel, as she contemplates marriage with M. Paul, she comes close to community and a closer social interaction, as she interacts with his own social circle, namely the mother of his lost fiancé and the priest, but this ultimately disappears into the odd ellipses that makes up the novel’s ending. As Amanda Anderson has observed Lucy consistently “cultivates a distinctly critical discourse. Not simply looking back over her life and describing it to us, Lucy seems always already to have constituted herself an onlooker of her own existence” (53). Lucy is always first and last an observer of her own life—and Combe would find such a stance distinctly unhealthy. This social distance makes Lucy an untrustworthy practitioner of phrenology.

So as Lucy also attempts to use phrenology to read, diagnose, and compare John Bretton and M. Paul, we find, instead of the instant and completely correct interpretations that Jane Eyre produces, that Lucy must force herself to employ phrenology against her own wishes. Lucy, a distinctly isolated individual, is far too subject to her own interests. In the chapter entitled “The Concert,” Lucy weighs the two men against one another. She finds Paul’s “redundancy of alertness” “half-vexing, half-ludicrous” (220). The sentence that follows this, however, betrays a certain reluctance on the part of Lucy to admit to M. Paul’s virtues, and her own awakened sexual attraction:

Yet in the midst of prejudice and annoyance, I could not, while watching, avoid perceiving a certain not disagreeable naïveté in all he did and said; nor could I be blind to certain vigorous characteristics of his physiognomy, rendered conspicuous now by the contrast with a throng of tamer faces: the deep intent keenness of his eye, the power of his forehead—pale, broad, and full—the mobility of his most flexible
mood. *He lacked the calm of force, but its movement and its fire he signally possessed.* (220—emphasis mine)

Lucy must force herself to note M. Paul’s apparent potential for sexual potency and intellectual ability. The terms “physiognomy” (phrenology’s parent discipline), characteristics, and forehead betray Lucy’s use of the discipline. She is using phrenology in “the midst of prejudice and annoyance.” Even the act of contrast suggests that she is, as Combe would train his students to do, comparing M. Paul’s organs with those of the other heads in the room. Lucy wants to confirm her disapproval of M. Paul, but instead finds evidence of his superiority. In contrast, “Graham was quite cheerful all the evening, and his cheerfulness seemed natural and unforced” (223). Lucy goes on comparing him to M. Paul:

> Who could help liking him? *He* betrayed no weakness which harassed all your feelings with considerations as to how its faltering must be propped; from *him* broke no irritability which startled calm and quenched mirth; *his* lips let fall no caustic that burned to the bone; *his* eye shot no morose shafts that went cold and rusty and venomed through your heart beside him was rest and refuge—around him, fostering sunshine. And yet, he had neither forgiven nor forgotten Miss Fanshawe. Once angered, I doubt if Dr. Bretton were to be soon propitiated—once alienated, whether he ever to be reclaimed. (223)

The unacknowledged backdrop to Bretton, is, of course, the merciless M. Paul;

Bretton is only described in the absence of M. Paul’s qualities. Phrenological language drops out of this paragraph—Lucy avoids portraying him against that particular grid. To put it simply, Lucy Snowe, midway through the novel, appears to be in a vexed interpretive situation. She wants to believe in the innate goodness of the attractive Dr. John Bretton, but willfully ignores the practice of phrenology; she wants to believe in the essential hostility of M. Paul, but cannot avoid his
phrenologically proclaimed virility and intelligence. Phrenology, as a technique, might be trustworthy, but can she trust herself to practice it correctly?

Phrenology is thus present, but continually undermined throughout the novel. Not merely the folly of a masculine medical gaze, (although it is that as well), it is rarely, if ever, unaccompanied by interested desires, Lucy’s not the least. *Villette* appears to highlight one of the subtle contradictions of Combe’s work: it was supposed to help the individual knower encounter other individuals by separating impressions from social prejudices, even as he contended that the only way to keep epistemic faculties in proper order was to exercise them regularly in a social context. As the novel progresses, Lucy becomes excessively aware of the social interpretations that are exchanged, and the personal interests that dominate them. Toward the end of the second volume, she reflects, not for the last time, on the competing interests that determine wildly different interpretations that those interests produce:

The light in which M. de Bassompierre evidently regarded “Miss Snowe,” used to occasion me much inward edification. What contradictory attitudes of character we sometimes find ascribed to us, according to the eye with which we are viewed! Madame Beck esteemed me learned and blue; Miss Fanshawe, caustic, ironic, and cynical; Mr. Home, a model teacher, the essence of the sedate and discreet: somewhat conventional perhaps, too strict, limited and scrupulous, but still the pink and pattern of governess-correctness; while another person, Professor Paul Emanuel, to wit, never lost an opportunity of intimating his opinion that mine was rather a fiery and rash nature—adventurous, indocile, and audacious. I smiled at them all. (301)

Lucy refers again to these wildly competing interpretations at the end of the second volume, taking joy in the epistemic play that allows her anonymity. M. de Bassompierre, himself an amateur scientist, also fails truly and fully to know Lucy. Some of these characters claim to practice phrenology, some do not, but all fail to
capture anything more than a glimpse of Lucy’s true personality. Phrenology in *Villette* is only one more interpretive practice, and one as subject to the influence of interested desires as any other interpretive practice. Phrenology, in so much as it fails to produce an objective reading of any prominent character in the novel, fails as a scientific effort. Granted, Combe’s actual phrenology does appear to guide occasionally interpretive attempts for the characters. Occasionally Lucy uses it to describe the “Labassecouriens,” who she concludes “must have a large organ of philoprogenitiveness” (101), or in another case, a servant girl, but these examples are only hastily and tentatively applied to strangers. Phrenology does Lucy little good with those that she lives and works with on a daily basis.

And in so much as phrenology fails, and in so much as *interpretation* itself continually fails, the illusion of Lucy’s deep self is created. It is as if, in an attempt to create a deep character, Brontë herself needed to continually highlight the contradictions within phrenology, and highlight the contradictions from outside the discipline. Lucy’s self, in the passage cited above, continually escapes phrenology, masculine medical interpretation, and even the interpretation of the novel’s reader. There is no clearer indication of the failure of phrenology, and the failure of interpretation generally, than the phrase: “What contradictory attitudes of character we sometimes find ascribed to us, according to the eye with which we are viewed!” (302). Phrenology should impart the power to one of these characters (as it appears to impart to Rochester and Jane in their readings of one another) to know Lucy. The subjective nature of interpretation overwhelms the phrenology of *Villette*. Instead Lucy creates a private self that repels phrenology.
And Brontë fortifies Lucy’s protection of her deep self and its roots in her unrevealed past by, in counterpoint, revealing another character’s past: M. Paul Emanuel’s. Despite Lucy’s continual attempts to compare his head to Bretton’s, and her own attempts to read him, it is the revelation of his past, and that past’s connection to his present, that finally permits her to know him in his entirety:

I had known him jealous, suspicious; I had seen about him certain tendernesses, fitfulnesses—a softness which came like warm air, and a ruth which passed like early dew, dried in the heat of his irritabilities: this was all I had seen. And they Père Silas and Modeste Maria Beck . . . opened up the adytum of his heart . . . (397)

Madame Beck and Father Silas accomplish this by revealing Paul’s past. In contrast to what Lucy has seen in her own experience of Paul, she truly knows Paul with an intimacy phrenology has proven impotent to grant. The use of the term adytum, the inner sanctum of a temple, suggests a deep interiority beyond the penetration of surface readings.

These interpretive difficulties find further focus in the gothic subplot of the novel. The gothic, as we have seen in the introduction and the first chapter, relentlessly questioned the efficacy of the epistemological faculties. Radcliffe used the genre to affirm her faith in rationalism; Lewis used the genre to terrify his audience with the possibility of epistemic failure, and Baillie used the genre to signal and contain epistemic failure. In contrast, Brontë, in Villette, welcomes the gothic as a generic mode where the faulty epistemology of phrenology, and the materialism behind it, can be exposed. As mentioned in the introduction, Villette, of all Brontë’s novels has the clearest connections to the gothic genre. The novel’s much discussed aversion to Catholicism, the legend of the doomed nun, further complicated and
echoed by M. Paul Emanuel’s own story of repressed love and, and even the appearance of tremendous sea-storms that anticipate shipwrecks, deaths, and madness all echo the works of Radcliffe and Lewis. Yet the novel remains distinct from those works as well. On one level the action of the novel imitates the classic Radcliffe formula: the ghostly nun is revealed to have a perfectly rational explanation. On another, the ghost replicates the formula of *The Monk*: the legend of the nun, which the lovers use for their purposes, is one of love frustrated by an overbearing, hostile Catholic Church. What distinguishes *Villette* from both of these narratives, and in the process undermines one of the central tenets of the gothic, is that these appearances are immediately explained by an agent of scientific, medical rationality; rationality is not restored at the end of this narrative, as we see in Radcliffe, it is always present. Dr. John Bretton reads the nun as a kind of psychological Radcliffian text—the product of Lucy’s melancholy disposition. But Bretton, who is the representative of masculine and materialist scientist, reads that text completely incorrectly; instead of exposing the superstition of the gothic to the light of rationalism, the explanation of the gothic reveals the shortcomings of Bretton’s materialist explanations. Irony of ironies, Bretton’s materialist science actually posits a ghostly, mentally produced nun, denying the reality that Lucy’s sense correctly apprehend. The gothic often portrayed the uncertainty produced by clashing epistemologies at the end of the eighteenth-century, and here it is resurrected to give evidence to the inadequacy of the very epistemology that traditionally banished the gothic. Instead, the gothic story of the nun has a reality that completely escapes Bretton’s professed enlightened materialism.
To completely understand this point, it is important to note that the gothic tale of *Villette* is doubled within the text of the novel — Lucy’s experiences of the nun as related to John Bretton, and Lucy’s shared experience of the nun with Paul Emanuel. By doubling the gothic tale in this way, Brontë represents two different approaches to epistemological problems. For John, the nun is a related, but disbelieved narrative, while for Paul it is the confirmation, through shared sense experience, of an actual event. Thus the story of the nun also highlights the superior moral and epistemic stance of M. Paul. Paul, unlike John Bretton, perceives the nun, but refuses to pass judgment as to its nature; Paul’s own story echoes, albeit imperfectly, the gothic story; and thus while both men seek to define Lucy, Paul’s openness to the existence of the ghost, his openness to a gothic story, marks him as the more open, and thus more accurate, epistemic agent. This dynamic between the gothic narrative and Paul and John sets the stage for the novel’s ending, which prizes an open ended epistemic stance, one that refuses certain judgment and closure.

Thus the nun becomes a contested site between Bretton’s rationalism, and Paul’s developing hermeneutic humility. *Villette*’s gothic narrative, as recent critics have pointed out, always unfolds in the vicinity of Lucy’s would be suitors, and reflect her own troubled remembrance of them (as an elderly narrator) and the experiences of the ghost. Early on in the novel, the house at Rue Fossette is established as a potentially gothic setting. An apparently refurnished convent, the house sets on a vault, that, according to local legend shelters the bones of a nun who was “buried alive, for some sin against her vow” (106). Sexual sin, dramatically punished by a threatening Church, gives the reader the established furniture of the
gothic tale, but this is quickly dismissed by Lucy as “romantic rubbish” (106). It is only as she sits in solitude, in order to read the letter of John Bretton that she first experiences the nun. As if recalling the entire event, and John’s eventual response to the incident, Lucy as narrator does not trust her own remembered senses. Coming not too long after the epistemic difficulties of “The Long Vacation,” she hedges her first apprehension of the ghost with rhetorical qualifiers: “Say what you will, reader—tell me I was nervous, or mad; affirm that I was unsettled by the excitement of that letter; declare that I dreamed: this I vow—I saw there—in that room—on that night—an image like—a NUN” (245). Lucy herself provides alternative explanations—explanations that suggest her own troubled faculties—before qualifying the ghost as only an image.

Lucy’s qualifiers, in her role as the narrator, foreshadow John’s response to the tale. He implores her to tell him what she saw, for he “will hear it in my professional character: I look on you now from a professional point of view, and I read perhaps, all you would conceal—in your eye, which is curiously vivid and restless; in your cheek, which the blood has forsaken; in your hand, which you cannot steady” (248). John’s medical training, he thinks, will allow him to read Lucy as a simple text. Lucy becomes, in the wake of this gothic scene, an organic body to be read and deciphered, and his diagnosis of Lucy as suffering from “long-continued mental conflict” suggests that her own qualifiers in the original description of the incident are a retrospective reflection of that diagnosis. In deciding to read Lucy’s body, instead of the nun, Bretton exposes his own interpretive prejudices: ghostly nuns do not exist, and feeble women are likely to imagine them. Thus John takes a
related tale and manufactures a new variety of gothic tale himself, one that places Lucy as the helpless female, victim to the vagaries of her own mental delusions.

Lucy’s own interpretation of John is undermined in this same passage; she becomes, at least temporarily, this mental gothic heroine that Bretton imagines. Shortly before Lucy describes John cruelly plays with her feelings, by only revealing that he has the lost letter after she reveals that she wants it, she notes that

I have been told since, that Dr. Bretton was so nearly perfect as I thought him: that his actual character lacked the depth, height, compass, and endurance it possessed in my creed. I don’t know: he was as good to me as the well is to the parched wayfarer—as the sun to the shivering jail-bird. I remember him heroic. Heroic at this moment will I hold him to be. (247)

In contrast to this expressed insistence to read Bretton as “heroic,” Lucy then proceeds to describe John’s cruel “manoeuvre,” almost as if she, as the narrator, now sees the incident in a new light. John’s own character is called into question, even as she recalls her own original acceptance of his interpretation of the nun. A ghost demands evaluation of interpretive faculties, and no sooner does it appear in Villette than it begins to complicate Lucy’s trust in her own faculties, as well as her remembered trust in John’s faculties. John begins to emerge as a unreliable interpreter, and perhaps it should not be a surprise that his interpretation provides the only true ‘ghost’ of the novel: the suggestion that Lucy’s senses have produced this ghostly, hallucinated ghost may rest on materialist reason, but that suggestion produces an unreal entity that haunts Lucy for much of the novel.

As Lucy’s relationship with John fades in the light of his new interest and eventual affection for Polly, so too does the nun; the nun only reappears as her relationship with M. Paul Emanuel intensifies. In her relationship with John, the
appearance of the nun caused interpretive confusion, both as Lucy remembers the incidents from a more advanced age, and as she experienced them at the time. The second round of appearances of the nun shows us Lucy’s interpretive affinities with M. Paul. Lucy, while a protestant, finds the lines between protestant rationalism and Catholic superstition blurring. Her relationship with John pointed to the insufficiencies of a rational, protestant materialism. Her relationship with Paul points to the openness of Catholic superstition. Instead of John’s materialism which appears to multiply ghosts and confuse interpretation, Paul’s openness leads to the elimination of ghosts and clarifies interpretation by affirming Lucy’s abilities as an interpretive agent.

Shortly before the reappearance of the nun, M. Paul and Lucy find that they have both received “impressions” of the nun—this similarity points to reluctance, on both parts, to either deny what they have seen, or conversely, to judge it completely. Paul and Lucy, unlike Lucy and John, remain unconstricted by a scientific epistemology that demands immediate judgment. Paul immediately links this to a similarity in their interpretive approach:

I was conscious of rapport between you and myself. You are patient, and I am choleric; you are quiet and pale, and I am tanned and fiery; you are strict Protestant, and I am a sort of lay Jesuit: but we are alike—there is affinity. Do you see it mademoiselle, when you look in the glass? Do you observe that your forehead is shaped like mine—that your eyes are cut like mine? . . . But these ‘impressions,’ as you say, with English caution. I too, have had my ‘impressions.’” (367)

Paul notes interpretive abilities both in her phrenological make-up (her forehead) and in her eyes. Paul goes on to explain his experience of the nun: “Something comes and goes here: there is a shape frequenting this house by night, different to any forms
that show themselves by day. I have indisputably seen a something, more than once; and to me its conventual weeds were a strange sight, saying more than they can do to any other living being. A nun!” (367). Although Paul teases Lucy for her “English caution” in deeming the nun an impression, he too retains a certain reluctance to judge exactly what the nun is, even as he insists on its reality. Referring to it as a something, but at the same insisting on his certainty that he had seen it, suggests that Paul is perfectly willing to trust his senses, but unwilling to classify what those senses have produced. Paul prefaces his belief about the purposes of the nun saying: “Whether this nun be flesh and blood, or something that remains when blood is dried and flesh wasted,” the nun could be either (367). As if to confirm their common experience—and their common interpretive approach—the nun appears to both of them.

Shortly after this incident, Lucy is presented with another gothic tale that, in some respects, echoes that of the nun they think is haunting them: M. Paul Emanuel’s own. The story of M. Paul’s lost love Justine Marie, denied to him by an overzealous family, and relegated to both a living and figurative death in a convent, gives us a background that helps to explain Paul’s openness to the legend of the nun. Paul, it seems, has actually lived a gothic tale, and so it is not surprising that he is open to the possibility of some gothic reality. It appears to Lucy and Paul both that the nun may actually be Justine Marie returned to haunt their present relationship. Lucy wonders “Was I, then, to be frightened by Justine Marie? Was the picture of a pale dead nun to rise, an eternal barrier?” (398). Paul reinforces this interpretation of the ghostly figure, even as he attempts to inoculate Lucy against it: “‘You did not, nor will you
fancy,” pursued he, “that a saint in Heaven perturbs herself with rivalries of earth? Protestants are rarely superstitious; these morbid fancies will not beset you?” (408).

Paul’s own fears are evident in this statement—he needs Lucy to disconfirm the very hypothesis about the ghost that has suggested itself to both of them. Paul’s openness, shaped by a gothic reality, suggests the possibility of a gothic reality. Catholic superstition, it seems, leads to an epistemic openness. Lucy reiterates that openness when she replies to Paul by saying: “I know not what to think of this matter; but I believe a natural solution of this seeming mystery will one day be arrived at” (408).

As if to reward Lucy and Paul for this epistemic openness, the resolution quickly follows. The nun reveals herself to be Miss Fanshawe’s courtier and eventual husband. Justine Marie, who Lucy briefly regards as the nun somehow reincarnated, proves to be M. Emanuel’s ward and god-daughter. These solutions run counter to every prior speculation—the nun actually exists, contrary to Dr. Bretton’s assertion—but neither is it the ghostly figure of the convent’s nun, nor is it some ghostly figure warning against the developing relationship between Lucy and M. Emanuel. Paul and Lucy’s insistence on openness precede a simple solution to the epistemic problem; clarity comes with the refusal to pass hasty judgment.

All of the usual valences of the gothic tale are thus completely reversed, and the gothic becomes a site where epistemic confidence is systematically undermined. On one level, the gothic, it turns out, is real, and those materialist explanations that suggested a ghostly mental projection, are banished as immaterial and false. M. Paul really has lived a gothic life, which allows him to recognize a gothic reality. John Bretton’s materialism, which should reveal the gothic for a sham, instead produces
ghosts of its own. Paul’s confidence in shared sense experience, coupled with a refusal to casually categorize that experience allows the characters to recognize the limitations of their own epistemology and thus come into closer contact with an actual reality. *Villette*, as a novel, refuses to endorse a particular epistemological approach. Unlike previous gothic tales, which either gloried in epistemic confusion, or proposed rational solutions to that confusion, *Villette*’s gothic subplot instead recognizes the shortcomings of epistemology itself even while insisting on the possibility of apprehending reality.

The final chapter’s first lines point to the novel’s emphasis on this epistemic openness: “Man cannot prophesy. Love is no oracle. Fear sometimes imagines a vain thing” (493). The novel itself ends in indeterminacy—hinting at the possible death of M. Emanuel, but refusing to provide the reader with any certainty about that death. In the final chapter Lucy also tells us that the three years of M. Emanuel’s absence “were the three happiest years of my life” (493). As a narrator, Lucy shuns the finality of the shipwreck, while she celebrates the open-ended nature of anticipation. The critical literature to this point has often expressed a desire to resolve the ending for the novel’s readers, but this desire entirely misses the point: *Villette* should leave the reader longing for the indefinite nature of those three years of anticipation. In the contrast that *Villette* provides we see the limitations of the Victorian novel in general; rather than providing a solid ending, which is so often suggestive of particular political messages and solutions, *Villette* seeks to remain in a moment of suspended epistemology. *Villette* expresses a regret, not about death or
failure, but about resolution itself. The continual strive to know for certain is itself undermined.

I began this chapter by citing Armstrong’s argument regarding the “shadow archive” in Fiction in the Age of Photography. My argument regarding Brontë’s use of phrenology, specifically her response to it in Villette suggests that she became increasingly aware of the insufficiencies of the phrenological system and the interpretive nexus that it provided. In Brontë’s last completed novel, the deep self lies beyond any interpretive grid. At the end of a thick three volumes, Lucy successfully remains as much of mystery to us as she was on the first page. Villette, on one level informed by the insights of phrenology, which promised the relatively quick and certain reading of character, produces on another level a deep character that is produced through the very resistance of such quick and easy readings. In the end, no one ever completely reads or determines the reading of Lucy. Gothic epistemic openness defeats scientific phrenological certainty.
CHAPTER THREE

“MORE POETS THAN OBSERVERS OF NATURE:” NARRATIVE AND ARCHETYPAL REPRESENTATION IN DARWIN AND ELIOT

Writing to Hooker on Christmas Eve 1856, Charles Darwin examined the mess that was the contemporary species concept—or concepts as the case might be:

I have just been comparing definitions of species . . . It is really laughable to see what different ideas are prominent in various naturalists’ minds, when they speak of ‘species’; in some, resemblance seems to go for nothing, and the creation is the reigning idea—in some descent is the key—in some, sterility an unfailing text, with others it is not worth a farthing. It all comes, I believe, from trying to define the undefinable.

*(Correspondence 6: 309)*

Darwin’s loss of faith in the species concept came gradually between his voyage on the H.M.S. Beagle in the 1830s and the eventual publication of (the rather ironically titled) *On the Origin of Species by Means of Natural Selection* in 1859. Darwin spends much of the first four chapters of the *Origin* proving that species are much more plastic than the underlying essentialism of the concept had—to that date—suggested. As has been well documented, Lyell’s geology gave Darwin vast new

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1 See also Ernst Mayr’s *The Growth of Biological Thought*, where he traces Darwin’s dismissal of the species concept to nineteenth-century botanists, including William Herbert. Mayr quotes Herbert: “There is no real or natural line of difference between species and permanent or discernible variety . . . nor do there exist any features on which reliance can be place to pronounce whether two plants are distinguishable as species or varieties” (267). Mayr’s larger point is that the botanists were much more skeptical of the species concept than zoologists or other scientists, and that Darwin was much influenced by this botanical line of thought.
stretches of time with which to work; these early chapters of Origin write temporality into the species in such a way that the concept ceased to have any clear meaning. I begin with Darwin’s dismissal of the essentialism still latent in the nineteenth-century species concept, because it helps to delineate the important shift in biological representation I will be examining in the following chapter. Many of the interpretive and representational problems that Baillie and Brontë experienced were attempts to use biological essentialism; although they were not thinking of the individual/species relationship when wrote, they implicitly assumed that they could generalize about human bodies; the specific difficulties they and their scientific counterparts engaged attests to this assumption. Along with the scientists and scientific practices with which Brontë and Baillie were familiar, they were gradually becoming aware of the limitations that biological essentialism imposed on biological representation. With the advent of Darwin’s theories, that essentialism became more clearly visible, and as a result, came closer to ceasing to inform the educated mind of the nineteenth-century Briton. In this chapter we see the beginning of taking the temporal impact on the body as a granted—as well as time’s impact on society and biological groups (at whatever biological level). As a result, intellectuals who participated in this shift were much less concerned with choosing the correct method for conveying representational truth rich in particular details, and much more interested in the problems of context. Since an individual could only be understood in relation in time and to other individuals, and to other species, and to the environment that had shaped both, constructing contexts that made that understanding possible became a priority. Instead of attempting exact verisimilitude, these writers wished construct plausible and probable
narratives—a key shift in scientific representation, both in the biological tradition and in the literary writers connected to that tradition.

In placing emphasis on plausible and probable narrative context, these writers became even more profoundly aware of the representational element inherent in their scientific practice. Dealing with the species question, Darwin made an interesting move that forced these issues to the fore: he historicized the archetypal concept that had been developing in German and British natural history since Kant and Goethe. By implicitly insisting that the biological archetype had a correspondence to an actual and real organism—the ancestor that preceded the organisms that had developed from it—Darwin launched himself into uncharted epistemological territory. In accepting evolutionary theory, the theorist had to accept a narrative beyond empirical verification that gave meaning and shape to empirically observed phenomena. In utilizing a historical version of the biological archetype Darwin had to construct a plausible narrative in order that he might make claims about what had happened, while simultaneously keeping in mind that his narratives were constructed. Darwin’s narratives about species were true—in that they made the claim that had developed in a manner similar to the one described, but at the same time they were provisional; it was impossible to know for sure if species development had occurred in a particular way. Darwin, to make use of the vocabulary of Thomas Kuhn’s Structures of Scientific Revolutions, had to accept a new paradigm in order to make sense out of species. But he had to do more than simply accept a new paradigm; he also had to become aware that paradigms could be shifted. Darwin, in The Origin of Species, gives us evidence of this growing consciousness of the theory-laden nature
of observation, and I argue that this was more than simply because of a shift in his own thinking, but a direct result of utilizing the archetypal representation of the vertebrate. The species question forced Darwin to a position that anticipates the conceptual realism I discuss in the introduction—the insistence on a theory’s reality that must recognize its conceptual schema in order to aid its claim to reality.

Heavily invested in epistemological issues, George Eliot had a problem similar to the species problem; as a number of critics have suggested, her novels show a consistent preoccupation with reconciling the individual to the community. The question that drives her later novels is: how does the individual participate in a community, yet retain enough individuality to effect political action in the community? The question bears a remarkable similarity to Darwin’s species question: how does one recognize the individual as an individual uniquely distinct from the community at the same time one recognizes it as a member of that community? Eliot, as we shall see, reached for the biological archetypal tradition that had informed Darwin’s own. In Daniel Deronda, Eliot presents Daniel as the product of archetype, and as potential new archetype. We also come to see Mordecai as the visionary who uses that archetype to recognize and predict Daniel’s role in the Jewish race. Eliot’s odd beliefs about the Jewish race led her to believe that it was uniquely capable of giving evidence of archetypal evolutionary development, and Mordecai’s and

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2 There is, of course, a wide literature on the epistemological problems in George Eliot. David Carroll’s George Eliot and the Conflict of Interpretations: A Reading of the Novels, is especially excellent in its presentation of Eliot’s novels as sites where hermeneutic conflicts take place. George Levine’s chapter “Daniel Deronda: A New Epistemology,” in Dying to Know: Scientific Epistemology and Narrative in Victorian England presents that novel as an experimental re-exploration of the possibilities of objectivity. Suzy Anger’s lucid explication of “George Eliot and Philosophy,” is also helpful in The Cambridge Companion to George Eliot. Alexander Welsh’s George Eliot and Blackmail does not deal explicitly with epistemology, but traces the way in which the possession and manipulation of knowledge repeatedly finds its way into Eliot’s novels.
Daniel’s relationship bears this out. By adopting that biological archetypal tradition, however, Eliot was led to similar epistemological territory; her realism is consistently marked as a realism that is always dependent upon the antecedent acknowledgement of theoretical frameworks. In order to be real, it must be acknowledged that it is a theory-laden observation; Eliot does not proceed with her realism in spite of the theory-laden nature of all perception, rather, acknowledging that perception is theory-laden drives her realism. In adopting and historicizing the archetypal concept in the ways that they did, George Eliot and Charles Darwin show us the ways in which the emerging British biological tradition anticipated conceptual realism.

I. Darwin and the archetypal tradition.

To make an argument for natural selection, Darwin had to undermine the essentialism that had been, up to that point, an inherent part of most species concepts. Darwin’s attack on that essentialism took the form of a historicized archetype; he proposed that the vertebrate archetype had once had an actual existence. In making that claim, Darwin subtly deemphasized experiential evidence, and placed a tremendous amount of importance on contextual narratives.

To help us understand the epistemological trade-offs in which the archetypal concept was involved, I return to the Buffon and Linnaeus taxonomic debates; more precisely, I want to highlight the Kantian distinction between Naturbeschreibung (Natural Description) and Naturgeschichte (Natural History) that helped to influence and frame much of the evolutionary debate in the early nineteenth-century. Kant’s distinction between the two helped to put extreme emphasis on empirical evidence
that retarded the growth of evolutionary thought. Kant framed these two differences between Buffon and Linnaeus’s attention to a “single diagnostic [character]” contrasted to Buffon’s insistence on “including internal anatomy, behavior, and distribution.” As Ernst Mayr puts it: “When Buffon classified mammals into domestic and wild animals, he justified the division as being ‘the most natural one.’ From him ‘natural meant practical, not ‘reflecting the essence,’ as for Linnaeus” (Mayr 181).

Phillip Sloan, in a forthcoming article, argues that Kant exploited this distinction when dealing with the question of whether or not different races of human beings could be classified as different species.³ Kant’s explication of the differences provided categories that would be employed well into the nineteenth-century:

In the animal kingdom, the natural division into genera and species is based on the law of common propagation and the unity of genera is nothing other than the unity of the reproductive power that is consistently operative within a specific collection of animals. For this reason, Buffon’s rule, that animals that produce fertile young with one another belong to one and the same physical genus (no matter how dissimilar in form they may be), must properly be regarded as only a definition of a natural genus of animals in general. A natural genus, may, however, be distinguished from every academic genus. An academic division is based upon classes and divides things up according to similarities, but a natural division is based upon the common stem, which divides animals according to kinship from the standpoint of generation. The first of these creates an academic system for memorization, the latter a natural system for the understanding. The first has only the intent of bringing creatures under names; the second has the intent of bringing them under laws. (qtd. in Sloan 11)⁴


⁴ Sloan uses, with modifications, the translation of the 1777 version of Kant’s essay by J.M. Mikkelsen in Bernasconi and Lott’s anthology The Idea of Race. I have retained Sloan’s modified translation because it helps to highlight his, and eventually my own, argument. Kant illuminated the difference in a footnote: “We generally take the designations ‘description of nature’ and ‘history of nature’ in a single sense. But it is clear that knowledge of natural
Sloan’s argument in this article follows Kant’s initial attraction to “Natural History” (Buffon’s ‘natural taxonomy) and his gradual shift to “Natural Description” (the academic system for memorization). That shift, Sloan argues, provided “the sources of the opposition to transformism that is found in Cuvier and in the emphasis on biogeography over history in such authors as Alexander von Humboldt” (17). This distinction would prove crucial, because it placed any attempt to do “Natural History,” or “Natural Taxonomy” on weak epistemological footing; such attempts betrayed the principles of Newtonian inductive science. Kant would come to feel that “[t]o explain, however, how the line itself might have come into existence is a task that lies completely beyond the boundaries of any physics possible for human beings. I certainly believed, therefore, that I had to hold myself within these boundaries” (qtd. in Sloan 21). “Natural Description” allows us to make use of concrete observations; “Natural History,” only allows us to tell interesting, possibly true, but ultimately non-confirmable narratives. Our ability, as beings limited in space and time, to confirm or disconfirm the speculations necessary to “Natural History,” is severely limited—we can only make limited claims about these potential truths.

Kant’s emphasis on experiential evidence, however, was not his only important contribution to nineteenth-century biological thought. Kant not only supplied the epistemological road-block to evolutionary transformist categories, but he also supplied the conceptual tool that would eventually allow Darwin to overcome species essentialism. Kant initiated interest in “fundamental organic types,” or

things as they are at present leaves us wishing still for cognition of how they formerly were, and through what series of changes they have undergone to arrive at their present location in their present circumstances” (qtd. in Sloan 11-12).
archetypes, that would be further developed by the likes of Schelling and Goethe (Richards 8). Much of Robert Richards’s *The Romantic Conception of Life* concerns the gradual development of the archetype:

Kant had maintained that the archetypal structure of organisms suggested that they had been produced by the very ideal that they embodied. Such an ideal might reside only in an *intellectus archetypus*, a mind whose conceptions would be productive—the Divine mind. Yet Kant also held that the proper scientific analysis of nature required the investigator to employ only the categories of Newtonian science. The necessary and universal laws of nature, including living nature, had to be parsed mechanistically—that is, so that an organism and its activities be understood as the determinate consequence of the operations of its parts. The Kantian biologist, then, should only deploy archetypal notions heuristically, *as if* organisms had been the product of an ideal plan, while yet searching for proper mechanistic causes. (9)

The archetype—which was an instance of natural taxonomy—could be used as a heuristic that could guide its user to the experiential knowledge that was necessary to understand the creature. The archetype, in this form, did not undermine species essentialism, but rather reinforced it.

It also kept Kant’s archetype in line with Newtonian inductive science. By clinging to “Natural Description” Kant put an extreme emphasis on observable phenomenon, and in doing so imbued the species concept with an essentialism that would prove difficult for future writers to overcome. We see both Kant’s archetype, and the insistence that that archetype functions only as a regulative ideal, in the work of French naturalist Georges Cuvier. Cuvier makes use of this distinction between the two methods of taxonomy when he dismisses transformism, and insists on an essentialist understanding of species:

[W]e should conclude [?] that there are no links in that in that imaginary chain of successive forms, in which one form can serve as
the other, since none of these could exist by itself. Nor is that other, no less fictitious, chain of simultaneous and graded forms, which has its existence only in the imagination of some naturalists, *more poets than observers of nature*. Rather fish belong to the real chain of coexistent beings of creatures necessary to each other and to the whole, which, by their mutual interaction, maintain, the order and harmony of the universe, a chain which no portion can exist without all the others, and in which the coils ceaselessly united or dispersed, embrace the globe in their contours.

(I, 551)

In rejecting attempts to connect similarities in the forms, Cuvier adopted Kant’s stance of archetypal teleology. Noting the similarities between creatures is useful, and can help guide our understanding of creatures, but as these observations are dependent upon human comparison, they are not useful making concrete claims about ancestry or development. Cuvier puts his emphasis on ‘real creatures.’ The implicit species concept in this passage is a concrete and discrete entity with an essential stamp that each individual carries.

Cuvier continued to employ these Kantian distinctions even as he paved the way for evolution by noting similarities between species in his law of the “correlation of parts” which claimed that if an organism had certain features, the organism had to have certain other complementary features. This law allowed Cuvier to explain obvious similarities between creatures without yielding to transformist evolutionary lines of thought. In his *Natural History of the Fishes*, Cuvier noted that “Some anatomists have wanted to seen an analogy between the opercular bones of fishes and the ear bones of mammals” (I 551). But that analogy was dangerously close to evolutionary thinking:

We ought, therefore, conclude that if there are resemblances between the structures of the fishes and those of other classes of vertebrates, it is only insofar as there are similarities in their functions. Let us
conclude that it can be said that the sea animals are ennobled mollusks... it is only to be understood in an abstract and metaphysical sense. Even then it is a necessary conclusion only insofar as this abstract expression organizes our legitimate ideas” (I, 551, translated by P.R Sloan).

By emphasizing function rather than morphology or form, Cuvier could conduct his taxonomy without worrying about historical connections between the organisms. Cuvier recognized the need for an organizing idea that would guide taxonomy. Even if he refused the materialist, transformist narrative offered to him by Lamarck and Etienne Geoffroy Saint Hilaire, Cuvier’s acknowledgment of this ‘unity of type’ laid the groundwork for similarities being explained by an evolutionary narrative.\footnote{For more on this see Peter Bowler’s \textit{Evolution: The History of an Idea}: Bowler notes that “[Etienne Geoffroy Saint-Hilaire] opposed Cuvier’s system of classification and declared that the underlying unities between divergent forms should be sought—including between Cuvier’s four basic types. Although similar in its results to the idealistic perspective, Geoffroy’s was a materialistic philosophy in which resemblances were the product of natural forces” (127).}

Cuvier recognized, and to a limited extent even used, the archetype, but the transformist debates with Geoffroy and Lamarck possibly led him to regard it defensively. Goethe’s Kantian archetype, developed and inspired by Kant’s third critique, and shaped by Schelling, would eventually find its way into the work of Joseph Green, who would also shape the work of Richard Owen. Richards outlines one important epistemological consequence of Goethe’s development of the archetype in his “Essay on a General Theory of Comparison.” Richards writes:

\begin{quote}
In the essay Goethe highlighted a particular aspect of Kant’s proposal concerning teleological judgment, namely, that organisms, while they displayed an internal teleology, should not be regarded as elements of an external teleology—final causes in a more cosmological sense. In this Kantian light, he urged that the anatomist not conceive the structures of animals and plants as designed for human usage or divine messages, rather that the researcher should understand those structures
\end{quote}
as having their raison d’être in the functional organization of the entire creature. (445-45)

The archetype allowed Goethe to free that same concept from the teleology that Kant had invested in it. It became possible to think of a creature not being consciously designed, but still having a localized purpose. Richards continues:

Living organisms thus derived their structures from two forces: an intrinsic one, which determined the general pattern—and Goethe ventured in his essay that there was a single pattern (einziges Muster) for all animals; and an extrinsic [environmental] force, which shaped an organism to its particular circumstances. Goethe had replaced divine teleology with natural causality, though a causality that retained a telic feature. (445)

In severing the archetype from divine teleology, Goethe made a subtle epistemological shift—he implied that there was something very real about the resemblances in type, and that particular human produced categories allowed the mind to see those real connections. Working with the archetype, as Richards puts it, brought Goethe to the position “that observation itself was theory-laden. One simply had to be aware of that fact and become reflectively cautious” (439). Goethe’s consciousness of the theory-laden nature of perception would anticipate Darwin’s own awareness.

Of course, Goethe’s severance of divine teleology from the archetype did not take hold in all those who followed—as Richards notes, a line of followers would continue to “[detect] the ultimate intentions of the Creator expressed in such proximate causes” (445). Goethe’s version of the archetype, however, did open up the possibility of a new philosophy of science. In 1840 Joseph Green gave the Hunterian Lecture at the Hunterian museum, and therein preached the possibility of a science that was not always dependent on Newtonian induction from particulars. Human
reason could, through its own recognition of order in the universe, recognize patterns that would guide and correct experiential evidence. Heavily influenced by Kant and Goethe via Karl Solger and Schelling (Richards 192) Green maintained that science could not advance solely on induction from particulars:

Does the history of the grand discoveries of science offer any sufficient evidence that they were only the result of a laborious collection of facts and observations of particulars? If indeed that the great master-piece of the generalizing faculty, the Ptolemaic System of Astronomy, still retained its authority, it might have been held up as a triumphant proof of the success of the method: but, alas! ‘its cycles and epicycles, orb within orb,’ have vanished like a summer morning’s mist before the piercing glance of him, who penetrating deeper than appearances, solemn dicere falsum ausus est,—have vanished before a reason, which can correct experience, and has authority to annul the reports of the senses, and the dicta of the faculty judging according to sense. (Green 13)

Green goes on to argue for the archetype as a real category for scientific investigation. Since God had undoubtedly shaped the natural world with the archetype, it seemed only logical that reasoning humanity could use that archetype as a guide to as yet unknown aspects of nature:

Again, the terms, “Type, Pattern, Exemplar, Model, . . . .,” have been used as in some degree synonymous with Idea, since they imply that, according to which any result or product is perfected. . . . Such then is an Idea; and we may describe it as a causative principle, combining both power and intelligence, containing, predetermining, and producing its actual result in all its manifold relations, in reference to a final purpose; and realized in a whole of parts, in which the Idea, as the constitutive energy, is evolved and set forth in its unity, totality, finality, and permanent efficacy. (Green xxiv-xxv)

Since one was, presumably, investigating the work of God, one could investigate type without the aid of generalized particulars. Indeed, as implied by the previous passage, reason could actually correct experience. While Green brings God back into the
archetypal concept, that divine teleology has been somewhat weakened—the
teleology in the animal exists for that animal’s own sake, not to serve humanity.

In Green, then, we see the conflict of two lines of thought had their origin in
Kant. Kant had insisted on artificial (“Natural Description”) taxonomy on the basis
that doing so adhered to the canons of experienced evidence and generalized
particulars. Kant’s archetype, however, as expressed in the third critique, had allowed
Goethe to imagine a way of thinking about organisms prior to the investigation of
particulars, which Green had exploited. Green, therefore, made a case for natural
taxonomy—which for Kant would have been equated with “Natural History,” on the
basis of the evolved version of Kant’s archetype. In his 1865 *Spiritual Philosophy*,
Green made it clear that he thought the archetype allowed him to go beyond Artificial
Classification:

[I]f we are to go beyond the merely logical or artificial method of
classification--as indeed by our constitution as rational beings we are
bound to do--and at all events to approximate as far as we are bound to
do--and at all events to approximate as far as we are able to a method
of Natural Classification, that is, one coincident with the laws of
nature impressed thereon by the Creator, we have to discover
principles, which though not superseding the use of logic, transcend
the boundaries of empirical knowledge. . . .

We are in short no longer within the precincts of the faculty
judging according to experience, but are appealing for light and insight
to the higher faculty of Reason. It is hence only that is revealed to us
the Type as the antecedent and genetic unity, which confers the
essential and abiding character on any and every group, and which,
whilst preserving the unity, manifests itself in the diversity of forms or
products, of which the group consists, at once entire in each and in all:
--and it will be our business to find in every relative and subordinate
type that which connects it with some higher type, until, proceeding
from lower to higher, we arrive finally at the highest and absolute
Archetype, even the Divine Humanity, who is Deus Alter. (84-86)
Kant’s archetype had undermined artificial taxonomy and the Newtonian epistemology that Kant used to justify it. The archetype, at this point, was an image in the mind of God that superseded and produced all of its physical manifestations. It was also a category that human reason could recognize and use in order to guide further research into the natural world. Green’s theory implies that it could guide human apprehension of particulars, rather than inductively generalizing from objectively observed phenomena.

Richard Owen, curator of the Hunterian museum, was of course present when Green gave his lecture, and edited the printed version of it. He began to use Green’s vision of the archetype to develop his own Ideal Archetype, which would allow him to free himself somewhat from Cuverian functionalism. Nicholas Rupke notes that throughout the 1840s Owen began to resent his designation as the “English Cuvier” because he had “begun to side with the so-called ‘philosophical anatomists’, the followers of German Naturphilosophie who believed that ‘form’ rather than ‘function’ offered the right solution to the problem of organic diversity” (161). By 1846, Owen had produced On the Archetype and Homologies of the Vertebrate Skeleton where he described a version of the vertebrate stripped of any particular adaptations (Bowler 125). Owen’s archetype then, was hardly revolutionary, but his use of it to articulate a difference between homologies and analogies was. Making that distinction allowed Owen to make a convincing case for natural taxonomy. Analogous biological features were “unrelated organs that have a superficial resemblance,” and homologous features were “different modifications of the same organ” (125). Rupke also recounts how Owen gave demonstrations of homologous
connections drawn between the human frame and the full range of vertebrate life: “All vertebrates appeared connected, bone for bone, by invisible threads” (169).

Owen’s progressivism—he believed that the Creator had generated versions of this ideal archetype throughout time, as environmental and geological conditions shifted—was neatly described by this law; God had simply improvised on the archetypal vertebrate as conditions demanded. To twenty-first century eyes, already convinced of evolutionary theory, it should be obvious that Owen had provided a key conceptual wedge for evolutionary theory.

Meanwhile Darwin had begun his work on the barnacles (cirripedia) that would finally convince Darwin that contemporary species concepts were fundamentally misguided. In 1835, while still on the Beagle, Darwin had discovered an “unusual barnacle . . . a strange creature with two penises but which otherwise appeared to be a degenerated form in comparison with the female” (Glick and Kohn 118). In 1846 Darwin would turn to that barnacle as the last species left unclassified from his Beagle voyage. Darwin initially thought that the project would only take him a few months, or perhaps a year (Desmond and Moore 339). Instead, the project bloomed into a full monograph on the sub-class cirripedia that delayed his larger work by some years; none other that Louis Agassiz, the natural history professor at Harvard, convinced him that a full work on barnacles was needed. Richard Owen himself prolonged the project, when he suggested that, as a Darwin biographer puts it: “Surely barnacles mirrored an ‘archetypal’ crustacean in some way or another?” (Browne 475). Eventually Darwin would have specimens sent to him from all over the world, as he became increasingly interested in the difficult classification problems
that the barnacles presented. His classification efforts were continually frustrated by
the physical presence of new specimen barnacles sent to him—he simply could not
make coherent distinctions between species, varieties, and variations in such a way
that would allow him to give essential characters to the species. The essentialism
inherent in the species concept was strained to the breaking point: how could he
produce a species concept flexible enough to account for the obvious similarities
between species, yet rigid enough to make meaningful distinctions? In A Monograph
of the Sub-Class Cirripedia, Darwin voiced this frustration with the concept, and his
joy in the difficulties that a particular species of barnacle presented for that concept:

I will allude to the marvelous assemblage of beings seen by me within
the sack of an Ilba quadrivalis—namely, an old and young male, both
minute, worm-like, destitute of a capitulum, with great mouth, and
rudimentary thorax and limbs, attached to each other and to the
hermaphrodite, which latter is utterly different in appearances and
structure; secondly, the four or five, free, boat-shaped larvae, with
their curious prehensile antennae, probosciformed mouths, and only
three pair of natatory legs; what diverse beings, with scarcely anything
in common, and yet all belonging to the same species! (Glick and
Kohn 126).

Darwin’s barnacle work, in short, convinced him that species were plastic enough to
evolve. Writing to Hooker on May 10, 1848, he made it clear that he regarded
barnacles as a form in transition that allowed him to make an assault on more
traditional species concept (Darwin, Correspondence 4: 140). Darwin’s frustration
with contemporary species concepts would reemerge in another letter to Hooker in
1856, as we have seen in the passage cited at the beginning of this chapter.

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6 An important article on Darwin’s early barnacle work is Phillip Sloan’s “Darwin’s
Invertebrate Program, 1826-1836: Preconditions for Tramformism.” See also Alan Loves’s “Darwin
and the Cirripedia Prior to 1846: Exploring the Origins of Barnacle Research.” Janet Browne’s
Charles Darwin: Voyaging (475-486) and Adrian Desmond and James Moore’s Darwin (339-343)
provide interesting summaries of the production of the monograph.
With the development of the archetype, and the epistemological trade-offs that it represented in mind, we can better see the epistemological ground that Darwin was about to break. Darwin would use the archetype—that scientific representation of an organism that was no particular organism—to claim that it could represent an actual historical organism. *The Origin of Species* accomplished this on two fronts: by deconstructing current species concepts, and suggesting that a historical archetype—one which species had developed from—best explained the divergences we see in “Natural” Taxonomy. The second chapter of *Origin* explicitly seeks to blur the distinction between species and varieties; Darwin notes from the outset that naturalists have had difficulty separating the two (47). He then spends much time working out the difficulties that naturalists have had, and at last coming to the conclusion that: “Certainly no clear line of demarcation has as yet been drawn between species and sub-species—that is, the form which in the opinion of some naturalists come very near to, but do not quite arrive at the rank of species; or again, between sub-species and well-marked varieties, or between lesser varieties and individual differences. These differences blend into each other in an insensible series; and a series impressed the mind with the idea of an actual passage” (51). Darwin’s eventual analogy between selective breeding, and ‘natural selection’ in Chapters 3 and 4 completed the deconstruction of the species concept.

Deconstructing the species concept allowed Darwin to inject narrative into taxonomy; varieties were, in fact, incipient species; species, at one time had been varieties, and taxonomy could be understood as a development narrative. The thirteenth chapter of *Origin* subtly reworked taxonomy, bringing Kant’s “Natural
History” and “Natural Description” debate to an elegant synthesis; descent and characters both have a role to play, Owen’s homology/analogy distinction, Cuvier’s correlation of parts, and Linnaeus’s emphasis on distinctive characters all illuminate evolutionary history. Owen’s version of Goethe’s archetype provided Darwin with the perfect tool for exploding the essentialism of the current species concept by giving him an archetype to relate individuals to without granting that archetype the power to convey essence.

A key element of this synthesis was employing the empirical strain within Owen’s version of the archetype. Sloan points out in an article on the influence of William Whewell on Owen, that Owen’s concept was not exclusively essentialist and metaphysical. Thanks to the influence of Whewell, there was a strong sense of empiricism as well: “The tendency in the literature to emphasize only the ‘transcendental’ aspects of Owen’s concept can easily blind us to the fact that it is both and empirical and a transcendental concept. This necessary attention to the inductive and empirical aspects of science is fully in keeping with Whewell’s Aphorism XII of his 1844 ‘Antitheses’ essay, which argued that Ideas and Conceptions cannot be employed except in relation to empirical science” (58).

Towards the end of the thirteenth chapter, Darwin summarizes his argument, and makes use of Owen’s concept of homologies: “On this same view of descent with modification, all the great facts in Morphology become intelligible,—whether we look to the same pattern displayed in the homologous organs, to whatever purpose applied, of the different species of a class; or to the homologous parts constructed on the same pattern in each individual animal and plant” (456-7). The archetype, Darwin suggests,
was not a metaphysical construct, but a historical organism. We can see, in passages from the thirteenth chapter, a similarity to Green’s assertion that every type can be subordinated to a higher type:

[T]he several classes of facts which have been considered . . . in this chapter, seem to me to proclaim so plainly, that the innumerable species, genera, and families of organic beings, with which this world is people, have all descended, within its own class or group, from common parents, and have all been modified within the course of descent. (457-8)

The archetype was an actual historical organism.

Although Darwin never explicitly names Cuvier in this discussion of morphology, Darwin also uses Cuvier’s insights while slightly modifying them—the correlation of parts is materialistically explained when a historical version of the archetype has been adopted. The correlation of parts, he suggests, did indicate a law-like similarity between the adaptive function of individual body parts and their environment; but that similarity is best understood as the response of the natural selection mechanism to varying ecological niches. Darwin writes:

The importance, for classification, of trifling characters, mainly depends on their being correlated with several other characters of more or less importance. The value indeed of an aggregate of characters is very evident in natural history. Hence, as has often been remarked, a species may depart from its allies in several characters, both of high physiological important and of almost universal prevalence, and yet leave us in not doubt where it should be ranked. Hence, also, it has been found, that a classification founded on any single character, however important that may be, has always failed; for no part of the organisation is universally constant. (417)

Darwin goes on to give a number of examples where this system of taxonomy by single character has in fact failed, and suggests that descent best explains the
inconsistency in the correlation of parts, even as it explains why the correlation of parts has been so useful.

Finally, Darwin referred back to Linnaeus’s insistence that taxonomic categories were (contrary to Kant’s explication of Linnaeus) natural, and not artificial. Essential differences between species, Darwin suggests, do exist, and they are best explained by descent from an archetype:

Such expression as that famous one of Linnaeus, and which we often meet with in a more or less concealed form, that the characters do not make the genus, but the genus gives the characters, seem to imply that something more is included in our classification, than mere resemblance. I believe that something more is included; and that propinquity of descent,—the only known cause of the similarity of organic beings,—is the bond, hidden as it is by various degrees of modification, which is partially revealed to us by our classifications. (413-14)

The essential differences between species (or reproductive populations, as Darwin’s theory indicates) do not suggest that there is an underlying essence to the species. Classifications are natural, but only because they can be traced through evolutionary speciation. Linnaeus was right to trust in natural taxonomy, but he did so for the wrong reasons. A historical archetype gave Darwin the best grounds for believing in natural taxonomy.

Of course, the historical archetype itself would be regarded as suspect. In arguing for the historical archetype, Darwin supplied a grand narrative of evolution that repeatedly produced new evolutionary archetypes. In constructing such a theory, Darwin’s narrative failed to meet the Newtonian-inspired inductive epistemology of Cuvier and Owen; instead he had to rely heavily on the explanatory power of modification through descent. In the acknowledgement of that difficulty, we see
Darwin’s awareness of his own reliance on an unprovable arch-narrative. Darwin attempted to provide indications that evolutionary transformism was possible from the variations commonly seen in the pigeons and domestic livestock he and others had produced, but he still repeatedly came back to the explanatory force of his argument to make his final case.

A strong dependence—and awareness of that dependence—on speculated narrative emerges in Darwin’s ninth chapter—“On the Imperfection of the Geological Record.” Therein, Darwin implicitly insisted that plausible and probable narrative were warrant enough, at least in the short term. On the second page of his “Introduction” to the *Origin* he had already made it clear that the difficulty of meeting these kinds of epistemological demands would be a preoccupation: “I am well aware that scarcely a single point is discussed in this volume on which facts cannot be adduced, often apparently leading to conclusions directly opposite to those at which I have arrived” (2). In responding to potential criticism of evolutionary theory that certain species seemed to appear suddenly, and without precedence, in the fossil record, Darwin maintained in the ninth chapter that the geological record was far too incomplete to draw definite conclusions. Writing directly against Cuvier and Owen, Darwin insisted that the absence of intermediate forms, linking distinct species, could not be counted as proof against evolution, since the partial nature of the geological record, coupled with the vast amounts of time contemporary geology suggested had taken place, made any such speculations about the existence or non-existence of such creatures indefinite. In doing so, Darwin embraced a vision of the scientist as reader

122
of narrative—and an incomplete narrative at that. The final passage of that chapter is extraordinary:

Those who think the natural geological record in any degree perfect, and who do not attach much weight to the facts and arguments of other kinds given in this volume, will undoubtedly at once reject my theory. For my part, following out Lyell’s metaphor, I look at the natural geological record, as a history of the world imperfectly kept, and written in a changing dialect; of this history we possess the last volume alone, relating only to two or three countries. Of this volume, only here and there a short chapter has been preserved; and of each page, only here and there a few lines. Each word of the slowly-changing language, in which the history is supposed to be written, being more or less different in the interrupted succession of chapters, may represent the apparently abrupt changed forms of life, entombed in our consecutive, but widely separated, formations. On this view, the difficulties above discussed are greatly diminished, or even disappear. (311)

Belief in an overarching narrative that allows for evolutionary narrative allows Darwin to generate a fluid species concept that explains discrete populations without assuming they contain some unseen essence. But Darwin asks us to believe in this narrative even as he states in the same paragraph that it is unknowable; the reader has to imagine this development as if it were true in order that he might see how it could be true. In the final chapter of the treatise Darwin acknowledges the epistemic difficulties created:

Although I am fully convinced of the truth of the views given in this volume under the form of an abstract, I by no means expect to convince experienced naturalists whose minds are stocked with a multitude of facts all viewed, during a long course of years, from a point of view directly opposite to mine . . . . Any one whose disposition leads him to attach more weight to unexplained difficulties than to the explanation of a certain number of facts will certainly reject my theory. (482)

Repeatedly, Darwin gives us evidence in the Origin that, while completely convinced of his own theory, he realized that it rested on an arch narrative that was—as is any
narrative—unobservable. Although Darwin pays homage to the idea of impartiality, he at the same acknowledges—as he did at the beginning of the treatise—that facts can be viewed in profoundly different ways, dependent upon the initial assumptions of the observer. The passages cited here implicitly argued for a new assumption—that species are related, and have transformed.

The implications of Darwin’s use of the historicized archetype should be made clear at this point—Darwin had argued for a natural taxonomy which went against the Newtonian inductive principles that had inspired Kant’s rejection of natural taxonomy and his embrace of academic, artificial taxonomy. Kant’s own archetype, which had evolved considerably through Goethe, Green, and Owen, (among others), allowed Darwin to make a historical claim about something beyond the possibility of experiential evidence. Darwin had used the metaphysical features of the archetype to make a claim about what we can know—or at least theorize about—the actual historical past. Darwin did so, on the micro level, by anchoring the ancestry of specific reproductive communities in modified forms of Richard Owen’s version of the archetype. On the macro level, Darwin needed to acknowledge gaps in the fossil system, and suggest that those gaps implied a larger, yet undiscovered narrative. Doing so provided context that made Darwin’s new conception of species, as ever-changing reproductive communities understandable. Adopting the archetype had, in other words, had led Darwin to, at least on a practical level, reject a Newtonian philosophy of science based on induction.⁷

⁷ David Hull, in “Darwin’s science and Victorian philosophy of science,” notes that Darwin felt he had formulated his theory “according to the best canons of science held at the time – chiefly those he derived from reading Herschel’s Preliminary Discourse. With respect to true causes, Darwin thought he was on safe ground” (178). Certainly Darwin had accumulated a large store of observed
Not surprisingly, plausibility and explanatory power, and the overarching narrative that made them possible, were not enough for everyone; these complaints, highlight the threat Darwin’s theory proposed for the accepted inductive philosophy of science, as well as the threat it posed to accepted conceptions of species. David Hull, in his article, “Darwin’s science and Victorian Philosophy of Science,” has suggested that the Newtonian inspired principle of \textit{vera causae}—as evinced in the philosophy of science of John Herschel, was behind many of these complaints. Hull describes this default philosophy of science:

No matter what methodological tenets one espoused at this time, they had to be described as ‘inductive,’ and have as their source Bacon and Newton. Hypotheses were suspect. After all, the great Newton never feigned such things. Direct experience was sacred. . . . Rather, the causes used to explain natural phenomena had to be true causes—‘\textit{verae causae},’ as Newton’s admirers called them. According to Herschel, theorists had to limit themselves to ‘causes recognized as having a real existence in nature, and not being mere hypotheses or figments of the mind.’ (175)

Hull convincingly documents the rejection of Darwinian theory by Herschel and Whewell on the basis of his violation of the principle of “\textit{verae causae}.” We can see direct evidence of this in one of the earliest substantial reviews of the \textit{Origin}, by Cambridge mathematician William Hopkins. His July 1860 Fraser’s review of the \textit{Origin} attacked Darwin for the same reasons that Kant had earlier attacked attempts to do natural taxonomy. Hopkins prefaces his criticisms with a brief statement on scientific theory and observation that echoes the appeal to \textit{verae causae}:

\begin{quote}
The results thus obtained must then be compared with the observed phenomena and the proof that our assumed cause is the true one will consist, first, in the accuracy with which we can determine its necessary consequences; and, secondly on the degree of accordance
\end{quote}

phenomena, but as Hull’s article points out, Herschel and Whewell were both less than satisfied with the supposedly ‘inductive’ nature of Darwin’s theory.
which we can establish between those consequences and the existing observed phenomena. (741)

Hopkins wanted the same kind of proof for biological theories: “no determination of the nature of vital forces, nor any explanation which they may afford of vital phenomena, can be rendered complete and demonstrative except by the process of reasoning and investigation we have described” (774). Hopkins briefly conceded that in investigating “vital phenomena,” the lack of “all knowledge of the real nature and laws of vital forces” makes it “impossible to investigate directly the consequences of those forces under assigned conditions” (750). Instead, “other indirect and far more imperfect modes” of investigation must be employed. But, as it remained impossible to observe evolution or species change, and only possible to observe phenomena left by evolution, Hopkins saddles Darwin’s theory with a burden of proof that it is difficult to imagine ever being met. In the second part of the article, Hopkins complains that “This kind of argument demands our assent to a proposition, because it is not impossible. . . . We had not dreamt that because the objections to a theory could not be proved to be absolutely insuperable, we were called upon to accept it as true” (84). In the next sentence, Hopkins cites the “laws of reasoning” laid down by such as “Newton and Laplace, Fresnel and Faraday,” who supported their theories with “positive reasons” (84).

Of course, Hopkins’s argument rested on an unquestioned assumption of his own—namely the immutability of species, which led him to ignore one of Darwin’s most basic points—that current species concepts were untenable. We see this failure to comprehend in Hopkins’s complaint about the natural/artificial selection analogy: not only are Darwin’s observed phenomena few and far between, but the observed
phenomena in question are produced under circumstances unobservable in nature. In nature, there is no indication that animals with superior variations will successfully mate with one another often enough to produce marked changes in the species as a whole. Beyond that, there appears to be a limit, even under artificial conditions, to the degree of change that can be effected. Hopkins did not dwell on issues of variation, but his points, combined with his insistence on positive proof for any theory of evolution, lead him to dismiss natural selection as improbable. Hopkins recognized that there could be variation—but his basic assumption that species were immutable prevented him from recognizing the degree to which variation undermined the species concept.

G.H. Lewes—George Eliot’s longtime companion—had long been aware of these issues. Conversant with the German Natural Philosophy tradition, he reviewed Joseph Green’s *Spiritual Philosophy* in 1866. Perhaps even more tellingly, Lewes’s two volume biography of Goethe (1855, and reworked in a second edition of 1864) had “elaborated the contrast between the metaphysical and empirical methods, and showed how this contrast implied divergences between subjective and objective vision” (Dodd 260). In an April 1868 *Fortnightly Review* article Lewes made it evident that he understood—perhaps better than Darwin did himself—the linguistic difficulty Darwin’s attack on the species concept had created: the species concept had to be rejected in as much as the term ‘species’ referred to any essential reality in the natural world, and yet the word had to be retained as an acknowledgement of key similarities between individuals. Naturalists had to recognize the natural reproductive communities of which species consisted while recognizing the ultimate mutability of
these groups. Concerning Darwin’s attack on the concepts of species, genera, and phyla, as anything more than linguistic descriptions of biological groupings based on difference, Lewes wrote: “That these resemblances and diversities exist objectively—that is to say, that the corresponding phenomena are thus related—is indisputable; and it is therefore not only true, but a truism, to affirm that the Names by which we designate them have fixed meaning; but it is not true, it is a falsism, to assert that these relations are immutable, being, as they are, the relations of variable individuals” (305). Darwin’s new taxonomy, Lewes tells his readers, has presented us with a linguistic problem. Lewes recognized that the term species needed to be retained, albeit with a different definition. To do so, he employed the archetype concept:

Why, if species are variable, have they not varied during [the] four thousand years [we have a record of]? . . . ‘Species,’ as a term designating a group of relations, is not variable; but the parts related are variable; and when ‘Species’ designates particular animals, we affirm that those animals which have been produced under similar conditions continue the type which has thence resulted, but those animals which have been produced under dissimilar conditions present corresponding variations from this type. (310).

The language of types allowed Lewes to formulate a species concept that grouped organisms according to descent in similar environmental conditions. Lewes had found a way to turn the central difficulty of the species concept—the intuitive recognition of species, which conflicted with easily observable variation—against Darwin’s opponents. He writes: “Species, except as a subjective classification of resemblances, has no existence. Only individuals with variable resemblances exist; and as these individuals propagate, the propagation is necessarily a continuance of the species” (315). Lewes’s explication of the linguistic difficulties that natural selection created did not negate Hopkins’s objections to evolutionary theory—the problem of
mutations and sports being swamped by a species as a whole would remain a problem that only Mendel’s more rigorous approach to inheritance could solve. Lewes’s linguistic sophistication simply underlines the shift in the species concept; evolution was plausible, not provable, because it refused to grant anti-evolutionists their given: that species were essential and immutable. As Darwin had predicted, the acceptance or rejection of evolution had come down to a prior disposition regarding basic assumptions.

The archetype of Kant, Goethe, Green, Owen and a host of others had given Darwin the ability to make a claim about organisms and phenomena that he could not directly experience. Darwin, in his passage on the incompleteness of the fossil record, and throughout the *Origin*, reiterated the tentativeness of his theory. He insisted only that his theory explained the facts of existence better than any other theory once one recognized one fact, which has since been recognized as incontrovertible: the mutability of species. The epistemological trade-offs of the archetypal theory, in other words, allowed Darwin to shift his assumption to species mutability. Once he had recognized that possibility, a historical, archetypal approach to classification provided a tentative, yet usable narrative for research into evolutionary development. Eliot would exploit the archetype to ground a realistic narrative for a similar utility.

II. The archetype in George Eliot’s *Middlemarch* and *Daniel Deronda*.

Heavily invested in problems of epistemology, and in relations between individuals and communities, Eliot struggled with a problem similar to Darwin’s: the role of narratives beyond individual human comprehension in knowledge formation.
Of course, Eliot also struggled with the problem in a form that had added dimensions beyond the epistemological value of narratives; she also wanted an epistemology that would enable individuals to shape their communities for the better. This need for epistemologically well-grounded political action was, of course, absent in Darwin’s consideration of species communities. Yet Eliot seems to have sought, either in Darwin himself or in the intellectual milieu that produced both of them, something in the concept of the biological archetype that would allow her to place the individual in the community, and yet allow that individual to shape the community as well as be shaped by it.

Eliot’s attempt to reconcile the individual with the community is well documented: Terry Eagleton, Suzanne Graver, and more recently Amanda Anderson have addressed the ways in which Eliot attempted to reconcile her individual characters to the communities to which they belonged. Sally Shuttleworth’s emphasis on Eliot’s use of ‘organic’ communities also addresses

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8 See Criticism and Ideology, 110-129. Eagleton, in the passage most germane to this argument, claims that: “Eliot’s fiction, indeed, displays from the outset a conflict between ideological totalities which outstrip classical liberalism, and a fear of the disruptive effect of such totalities on the ‘personal’ values bred by that liberal lineage. . . . Fiction is organic totality, but phenomenological totality; its creation of seamless, symmetrical wholes must be achieved without damage to the integrity of immediate experience.

. . . It is only with Daniel Deronda, who combines synoptic vision with settled allegiance, that this ideological dilemma can be finally dissolved.” (118).

9 See George Eliot and Community. Graver states, early on, that: “My major interest is the relationship between the concreteness her fictional communities attain and a tradition of social thought in which community becomes an abstraction, a qualitative ideal rather than a perceived reality—but an ideal that addresses an actual world, immediately present, dominated by individualist values and struggling to recover communal ones” (9).

10 See The Powers of Distance. In her chapter on Daniel Deronda, Anderson wants to show us how Deronda’s separation from, yet simultaneous inclusion within, the Jewish race allows him to have commitment and detachment: “Through the story of a deracinated Jew who comes slowly to learn of, and affirm, his cultural heritage, Eliot articulates a complicated cosmopolitan ideal that promotes critical detachment not only as a means to self-fulfillment but also as the basis for an ever-expanding horizon of ethical and political engagement” (119).
Eliot’s scientific contexts.\textsuperscript{11} With Graver and Shuttleworth, I see Eliot as nostalgic for a lost sense of community; with Eagleton, I agree that Eliot was attempting find agency for the individual within these communities while still acknowledging the tremendous shaping force of the community upon the individual. The biological archetype provided Eliot’s last novel, \textit{Daniel Deronda}, with the kind of simultaneously empirical and metaphysical contextual narrative she needed to ground individual political action within a given community.

With many of these critics, I see \textit{Daniel Deronda} as an important answer to the problems posed in \textit{Middlemarch}; more specifically however, I argue that the Jewish question, and the Jewish race (or at least, how Eliot imagined the Jewish race to be) allowed Eliot to use the biological archetype to save the individual from being too easily erased by the social conventions of his community. The biological archetype, as it is portrayed in \textit{Daniel Deronda}, allows Daniel to be Jewish and English, and yet not be restricted by the social conventions of those particular racial or national communities. Daniel’s biology becomes an important tool for superseding restrictive human institutions. Eliot’s vision for political agency may be extremely limited—but even that narrow strand of agency is dependent upon Daniel’s knowledge of his distinctive racial heritage. Certainly, as Eliot was familiar—both in her own right and through the influence of Lewes—with the works of Kant, Whewell, and, Goethe, she could not have helped being informed by the archetype.

First, let us turn to Eliot’s 1856 essay review “The Natural History of German Life,” wherein Eliot, early in her career, employed the archetype. Sally Shuttleworth has argued that the term “Natural History,” suggests a static taxonomic approach to

\textsuperscript{11} See \textit{George Eliot and Nineteenth-Century Science: The Make-Believe of a Beginning.}
realism. Kant’s use of the term *Naturgeschichte* might lead us to a different sense of Eliot’s use of “Natural History.”

Eliot, like Darwin, sought to fold in both senses of the word, as well as the two sides of the ongoing taxonomic debate. The result was an archetypal concept remarkably similar to Darwin’s:

If any man . . . would devote himself to studying the natural history of our social classes, especially of the small shopkeepers, artisans, and peasantry,—the degree in which they are influenced by local conditions, their maxims and habits, and the degree in which they are influenced by religious doctrines, the interaction of the various classes on each other, and what are the tendencies in their position towards disintegration or towards development,—and if . . . he would give us the result of his observation . . . his work would be a valuable aide to the social and political reformer. (265-66)

Anticipating Darwin’s desire to investigate the complex relations in the tangled bank (which would come roughly three years after this essay), Eliot wants a close examination of the working classes’ environment and their relationship to it; in fact, the environment, to a large degree, appears to be the peasant in this passage. This is not a static taxonomy, nor strictly a history of developing changes, however; it is an attempt to mediate between taxonomy and history as her emphasis on “development and disintegration” suggests. Further comments on the German peasant, which I quote at length, reinforce this temporal taxonomic approach:

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12 Shuttleworth writes that: “The fact that George Eliot endorsed Riehl’s choice of the term ‘natural history’ is in some ways rather curious, for the expression stems from a practice which had been superseded by biology, and which had originally been *ahistorical*. Natural historians, concerned only with the details of external form, drew no distinction between the study of animate or inanimate matter. ‘Natural history,’ therefore, implied neither the study of actual life processes nor an investigation of evolutionary history. Yet in ‘The Natural History of German Life,’ George Eliot employs the term to describe Riehl’s theories of social evolution, his conception of society as ‘incarnate history.’ This usage is coupled, however, with a more customary one: natural history as the precise description of external form receives equal stress and attention” (25). My argument suggests that this ambivalence finds its genesis in Kant’s appropriation and discussion of Buffon, and that Eliot was possibly aware of the changing conception of the word.

In Germany, perhaps more than in any other country, it is among the peasantry that we must look for the historical type of the national physique. In the towns this type has become so modified to express the personality of the individual, that even the “family likeness” is often but faintly marked. But the peasants may still be distinguished into groups by their physical peculiarities. In one part of the country we find a longer-legged, in another a broader shouldered race, which has inherited those peculiarities for centuries. For example, in certain districts of Hesse are seen long faces, with high foreheads, long, straight noses, and small eyes with arched eyebrows and large eyelids. On comparing these physiognomies with the sculptures in the church of St. Elizabeth, at Margurg, executed in the thirteenth century, it will be found that the same old Hessian type of face has subsisted unchanged, with this distinction only, that the sculptures represent princes and nobles, whose features then bore the stamp of their race, while that stamp is now to be found only among the peasants. A painter, who wants to draw mediaeval characters with historic truth, must seek his models among the peasantry. This explains why the old German painters gave the heads of their subjects a greater uniformity of type than the painters of our day: the race had not attained a high degree of individualization in features and expression. It indicates too, that the cultured man acts as an individual: the peasant more as one of a group. Hans drives the plough, lives, and thinks just as Kunz does; and it is this fact, that many thousands of men are as like each other in thoughts and habits as so many sheep or oysters, which constitutes the weight of the peasantry in the social and political scale.

This passage gives a wide variety of approaches to representation. Phrenology and physiognomy play a part in the taxonomic impulse; Eliot describes these German subjects using those vocabularies when she describes their eyes, foreheads, and noses. The tendency to group these characteristics into types on the basis of those distinctive characteristics—as well as the belief that Hans and Kunz are, like sheep or oysters, practically indistinguishable—gives us evidence of a certain Linnaean or “Natural Description” tendency implying that the Germans in general, and the German individual in particular, can be identified by key characteristics. But there is also a sense of Buffon’s and Kant’s “Natural History,” as well; there is an awareness that
body types develop and differentiate over time, even when speciously applied to the German peasantry. The German peasant, in Eliot’s archetypal evolution, is a primitive type for the more highly evolved and differentiated German noble. Eliot, who was already aware of and somewhat predisposed to evolutionary theory, appears to be utilizing the archetypal concept that had evolved in the German Natural Philosophy tradition. Published shortly after Lewes’s biography of Goethe, and a number of years after Green had employed the archetype in his Hunterian Lecture, Eliot’s essay shows an acute awareness of the archetypal tradition.

As we shall see, this archetypal concept proved attractive to Eliot in its possibilities for realism. The conjunction between an archetypal development of a race and the artistic representations that document development will reappear in *Daniel Deronda*. The Mallinger line, represented by painted portraits, is implicitly compared with the living development of the Jewish line, beginning with the Cohen family, and ending with the more evolved Daniel Deronda. A reader could imagine, visually, the biological similarities between family members, or, in the case of *Daniel Deronda*, its absence. Eliot’s emphasis on the possibilities for visual representation underscores the possibility of creating the illusion of a physical reality for the reader, in a manner somewhat similar to Brontë’s use of phrenology within *Jane Eyre*.

However, the biological archetype also does a different sort of work altogether by welding a narrative onto the visual representation of types. In Darwin’s reworking of Owen’s concept, the individual representative of the species becomes a specific episode in a narrative of development. The individual exemplar is an individual—it is not completely subsumed into the species or genus it comes out of—but its very
structure is a portion of the development of that species. Using this concept allowed Eliot to recognize an individual as a member of a group and as an individual not wholly subsumed into that group at the same time. Her anxiety about the possibility of the individual being overwhelmed by the group can be seen in the comparison of poor Hans and Kunz to indistinguishable sheep and oysters. Yet Mordecai’s recognition of Daniel, and Daniel’s subsequent adoption (albeit to a lesser degree) of Mordecai’s narrative for himself, allows Daniel the agency to overcome the historical and social roles imposed upon him. In order to see, as clearly as possible, the importance of this biological archetype for Daniel, it will be useful to look first at two other orphaned archetypes of Eliot’s: Tertius Lydgate and Dorothea Brooke.

Lydgate and Dorothea of *Middlemarch* are similar to Daniel in that they are related and introduced to us through the use of historical archetypes; we understand them on the basis of historical figures. Eliot also puts all three in the position of bringing potential political and social change to their respective communities; they have the potential to become archetypes themselves—Dorothea could become a new St. Theresa, Lydgate a medical pioneer, and Daniel a political reformer. Eliot’s very use of the archetype after this fashion in both novels suggests the three-pronged problem found throughout her oeuvre. First, how does one have the knowledge to effect social change? Second, how does one separate oneself sufficiently from the community in order to effect social change? Third, how does one simultaneously participate in the social community to a sufficient degree in order to effect social change? Using archetypes, whether they are social, historical, or biological, allowed Eliot to plumb the depths of this problem, for archetypes asked her readers, almost
immediately, to connect individuals to their historical and social contexts and in doing so effectively highlighted her central problematic.

Unlike Deronda, however, Dorothea and Lydgate are not as explicitly connected via biological metaphors to a biological archetype. Eliot announces her intention to use a historical archetype in the Prelude; Dorothea is one of any types of St. Theresa; “the offspring of a certain spiritual grandeur,” but she remains an archetype for the narrator and reader alone (3). Eliot does sound an evolutionary theme, suggesting that the novel will be an examination of one of the varying experiments of humanity: Saint Theresa “was certainly not the last of her kind” (3). Dorothea Brooke, to whom we will shortly be introduced, is one of “Many Theresas [who] have been born who found for themselves no epic life . . . perhaps only a life of mistakes” (3). But the emphasis remains on their historical similarities and dissimilarities to the novels’ protagonist, not on any concrete genetic connection to her. Eliot suggests that the lack of a coherent faith, provided in Theresa’s historical context, prevents Dorothea from having access to the knowledge and agency needed to fulfill her potential:

With dim lights and tangled circumstances they tried to shape their thought and deed in noble agreement; but after all, to common eyes their struggles seemed mere inconsistency and formlessness; for these later-born Theresas were helped by no coherent social faith and order which could perform the function of knowledge for the ardently willing soul. Their ardour alternated between a vague ideal and the common yearning of womanhood; so that the one was disapproved as an extravagance, and the other condemned as a lapse. (3)

Dorothea is a woman who can see that there could be more to life than that to which she hitherto had been granted access—but is incapable of getting the vantage point
that a contextual “social faith and order” could provide. Eliot does not invoke biological types—but she does invoke the relationship between the individual and type, which in turn produces questions about the connection between the individual and their social context. The prelude suggests that in the period shortly before the Reform Bill—a time of transition—no clear way of appropriating an organic faith or tradition existed.

Dorothea, and the novel’s other frustrated political agent, Lydgate, are instead continually forced into the categorization imposed upon them by the rough and ready taxonomy of their community. Their failure to realize unique roles within their community damns them to political inefficacy. For the purposes of this argument, it might be useful to think of the community’s approach to them in the terms I set out earlier in the chapter. “Natural History,” is of no interest to Middlemarch’s inhabitants; “Natural Description”—characteristics generated for a particular purpose (academic memorization) based on individual characteristics and the instrumentality of those characteristics—is everything. That instrumental taxonomy is detrimental to individuals such as Lydgate and Dorothea, who could transform society if not for the social roles continually imposed upon them. The absence of any concrete biological connection that is latent in the “Natural Description” taxonomic systems offered by Linnaeus prevents any sense of community beyond that of the sociological. Much of the novel concerns the reduction of these characters who might potentially reshape these communities into something better to the kinds of mundane types the community can actually comprehend. Middlemarch, the town, uses its own, more primitive classification, relentlessly. Lydgate, the herald of medical reform, within
the Darwinian system, can be seen as the new organism introduced into an old
community, but the community works to make him fit into their own system:

No one in Middlemarch was likely to have such a notion of Lydgate’s
past as has here been faintly shadowed, and indeed, the respectable
townsfolk there were not more given than mortals generally to any
eager attempt at exactness in the representation to themselves of what
did not come under their own senses. Not only young virgins of that
town, but grey-bearded men also, were often in haste to conjecture
how a new acquaintance might be wrought into their purpose,
contended with very vague knowledge as to the way in which life had
been shaping him for that instrumentality. Middlemarch, in fact,
counted on swallowing Lydgate and assimilating him very
comfortably. (144)

The community completely disregards Lydgate’s history; for them there is no
genealogical or historical concern, there is only the attempt to bring Lydgate into their
own classificatory system. The conflict implied in this passage is between the
community’s insistence on this older form of classification, and the individual’s (in
this case Lydgate’s) actual history, evolution, and impact (albeit potential impact) on
the community. Rosamond Vincy will insist on understanding him as a gentleman;
the community will insist on understanding him as a doctor in terms of what they
understand medical men to be; both will ignore, and in doing so ultimately defeat,
Lydgate’s own desire to be a self-made man who will transform medical practice in
the community. The older classification, however ineffective it may be in some
ways, effectively overwhelms the individual by insisting on a preset purpose for that
individual. Lydgate’s individual development, and the particular abilities and
perspectives he might bring to the community, are set aside in favor of seeing
Lydgate as he should be within that community.
Dorothea, perhaps, is an even better example of the conflict between the narrator’s emphasis on potential agency and the community’s ability to make use of a morphological classification that, however unintentionally, frustrates that agency.

Dorothea is the local reproduction of the archetypal saint in a particular environment, but that environment consists of a social network—which continually insists on classifying her in its particular way. And their classificatory system has no category for saints. Mr. Brooke continually reduces her to the classification of ‘young female,’ and, as he puts it, “[y]oung ladies are too flighty” (18). Mr. Casaubon makes his decision to marry, not exclusively on Dorothea’s particular merits, but because he had “made up his mind that it was now time for him to adorn his life with the graces of female companionship, to irradiate the gloom which fatigue was apt to hang over the intervals of studious labour with the play of female fancy, and to secure in this, his culminating age, the solace of female tendance for his declining years” (58).

Casaubon is thus surprised when Dorothea fails to content him according to type: “There was no denying that Dorothea was as virtuous and lovely a young lady as could have been obtained for a wife; but a young lady turned out to be something more troublesome than he had conceived” (392). Sir James Chettam, in turn, cannot conceive that a young woman’s likes could be directed anywhere but toward a handsome a baronet as himself, and depends on the insight of typicality: “A man’s mind—what there is of it—has always the advantage of being masculine,—as the smallest birch-tree is of a higher kind than the most soaring palm,—and even his ignorance is of a sounder quality. Sir James might not have originated this estimate; but kind Providence furnishes the limpest personality with a little gum or starch in the
form of tradition” (20). All of these categories, of course, stem from Victorian
gender classifications typical of the time—but Eliot goes out of her way to connect
that sexism to a particular kind of categorical thinking. These men are unable to
recognize variation from type—they do not think in terms of archetype and
variation—but simply in terms of type. Dorothea is a woman, and as such, can be
understood as a woman. Their failure, and the community’s failure, to treat her as an
individual, plays a large part in the story of this “Saint Theresa, foundress of nothing”
(4). As a result of struggling with this categorical thinking on the part of their
community, both Lydgate and Dorothea fail to comprehend their potentially
archetypal roles.

As the narrator attempts to undermine this stereotypical/morphological
classification, he also undermines the unification of that narrative, and implicitly
suggests other ways to understand this otherwise authoritatively presented narrative
so as to satirize the kind of categorical thinking that prevents Lydgate and Dorothea
from realizing their potential. Rosamond’s appropriation, for instance, of Lydgate’s
fate to her own is presented as vain and small-minded. The community cannot
comprehend Lydgate’s medical methods, and so “the opinion at the Tankard in
Slaughter Lane,” categorizes him as a quack (415).14 But these attacks lead to
strange moments where the narrator conflicts with himself, as can best be seen in the
reluctant descriptions of Mr. Casaubon. The narrator refuses to allow us to see him as
the man of “blinking eyes and white moles objectionable to Celia, and the want of

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14 Like a number of earlier critics, I find it easier to refer to the narrator with the masculine
pronoun in order to distinguish that novelistic convention from George Eliot.
muscular curve which was morally painful to Sir James” (261). In order to do so, the narrator interrupts his own narrative:

One morning some weeks after her arrival at Lowick, Dorothea—but why always Dorothea? Was her point of view the only possible one with regard to this marriage? I protest against all our interest, all our effort at understanding being given to the young skins that look blooming in spite of trouble; for these too will get faded, and will know the older and more eating griefs which we are helping to neglect. (261)

The narrator catches himself and the reader out in the same kind of interested approach to this narrative that Rosamond brings to Lydgate, or Causaubon brings to Dorothea; he chastises himself and his readers for their persistent interest in pretty young women. Society’s sexual proclivities, he suggests, guides the type of narratives that are generated, and even the focus of our attention in those narratives. The indictment of the phrase, “griefs which we are helping to neglect” suggests that this is more than a joke (although it is that too), but it is also a moral failure of sympathy. The prejudices of Sir James and Celia are our prejudices, and, like the candle in the pier glass, guide the kinds of fictions that we are likely to consume.

These initial paragraphs of Chapter 29 gives us Casaubon’s point of view, but the rest of the novel continues to focus (in this particular plot line) on the emotions of Dorothea. The narrator’s correction forces us to pay attention, momentarily, to Casaubon’s narrative, but just as quickly returns us to Dorothea’s narrative. The result is a raised consciousness on the reader’s part: our interest is as artificial as Rosamond’s.

The narrator also calls attention to the limited nature of his own context. He contrasts himself with Fielding, who “glori[ed] in his copious remarks and
digressions as the least imitable part of his work, and especially in those initial chapters to the successive books of his history,” saying that he instead has “so much to do in unraveling certain human lots, and seeing how they were woven and interwoven, that all the light I can command must be concentrated on this particular web, and not dispersed over that tempting range of relevancies called the universe” (132). In making a claim to this small context, the narrator implicitly acknowledges the limited nature of that context. While *Middlemarch* may provide its narratives with greater detail than Fielding, it ignores the greater connections of the web she does describe. The narrator’s acknowledgement of this limited knowledge on his part impacts our reading of the famous pier glass passage of Chapter 27, wherein the “fine series of concentric circles” appear to cluster round “that little sun” of the candle (248). Our own reading of this particular novel is just such a candle, and our perspective is not only constructed by the candle, but also very narrow and small.

*Middlemarch* is a novel about the failure to find the kind of knowledge that would enable effective political agency. Lydgate never fully escapes, especially in the form of Rosamond, from the expectations of the community; Rosamond’s narratives of genteel romance effectively rewrite his narratives of the self-made medical pioneer. Dorothea partially escapes the narratives imposed upon her by Casaubon, Brooke, and Chettam, but only by severing herself from the community, and in doing so, failing to shape the community in the way she desires; the utopian community she envisions is never embodied. The narrator’s subversion of his own narrative complements these failures by continually pointing to the limited nature of this narrative representation even as he attempts a panoramic view of the community.
The individual, separated from any larger narrative, and consequently incapable of understanding the larger narratives that shape him or her, can only succumb to, or impotently rebel against, the narratives proscribed by the community.

In *Deronda*, Eliot did a number of things differently; instead of loosely connecting her main character to a social or historical archetype, she connected Daniel to a biological archetype; she also underlined the importance of that biological archetype by first putting Daniel within a misunderstood historical type—which was eventually replaced with the more robust hereditary understanding. Standing behind these plot differences, which I will explore in detail shortly, is Eliot’s odd (at least from our point of view) eugenics. Eliot makes it implicitly clear in *Deronda*, and explicitly clear in “The Modern Hep! Hep! Hep!” that she favored the racial purity that she saw as the natural consequence of the unique nature of the Jewish Diaspora. Eliot repeatedly uses biological metaphors to describe Jewish separateness, comparing their distinction to unique bird-calls and mammal hides. Eliot goes on to suggest that European Gentile discrimination has created the racial separation that has, in turn, produced the vices of which they complain:

> With a people so treated one of two issues was possible: either from being of feeblter nature than their persecutors, and caring more for ease than for the sentiments and ideas which constituted their distinctive character, they would everywhere give way to pressure and get rapidly

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15 See “The Modern Hep! Hep! Hep!,” *Impressions of Theophrastus Such*. Nancy Henry, ed. Eliot tells us that “Every nation of forcible character—*i.e.*, of strongly marked characteristics, is so far exceptional. The distinctive note of each bird-species is in this sense exceptional, but the necessary ground of such distinction is a deeper likeness. The superlative peculiarity in the Jews admitted, our affinity with them is only the more apparent when the elements of their peculiarity are discerned” (148). Later in the essay, Eliot implicitly suggests that the seclusion of the Jews from the rest of European society has heightened their distinctive characteristics, and once again marries that exceptionality to a biological metaphor: “More exceptional—less like the course of our own history—has been their dispersion and their subsistence as a separate people through ages in which for the most part they were regarded and treated very much as beasts hunted for the sake of their skins, or of a valuable secretion peculiar to their species” (151).
merged in the populations around them; or, being endowed with uncommon tenacity, physical and mental, feeling peculiarly the ties of inheritance both in blood and faith, remembering national glories, trusting in their recovery, abhoring apostasy, able to bear all things and hope all things with the consciousness of being steadfast to spiritual obligations, the kernel of their number would harden into an inflexibility more and more insured by motive and habit. They would cherish all differences that marked them off from their hated oppressors, all memories that consoled them with a sense of virtual though unrecognised superiority; and the separateness which was made their badge of ignominy would be their inward pride, their source of fortifying defiance. (152)

But Eliot also hints that this biological and cultural separatism are not entirely negative; they have produced an especially distinctive variety of the human species: perhaps the most distinctive variety in the world. The Jews, Eliot hints, are robust enough to take pride in their separation. Furthermore, she hints that pride in their separation gives the Jews a unique access to agency. They are used to standing outside of the social roles imposed upon them by local communities and continuing to act. This distinctiveness has its benefits: towards the end of “The Modern Hep! Hep! Hep!” Eliot proclaims that:

Every Jew should be conscious that he is one of a multitude possessing common objects of piety in the immortal achievements and immortal sorrows of ancestors who have transmitted to them a physical and mental type strong enough, eminent enough in faculties, pregnant enough with peculiar promise, to constitute a new beneficent individuality among the nations . . . (emphasis mine--164)

This last passage indicates that the biological analogies were not simply analogies; Eliot thought that the unique history of the Jews, both racial and historical, gave something distinct to humanity. They have a type so strongly marked that it has become a new variety of humanity, and as such, in a position to give humanity a
particular benefit in its difference. Eliot also hints at what that benefit might be—in noting the “immortal achievements” of Jewish ancestors, she suggests that the Jews have the opportunity to see their racial and cultural development as it unfolds from the human archetype and into a new, more specialized Jewish archetype. As we shall see in *Daniel Deronda*, because the Jews can see how they have developed to this point, they can, perhaps, see how they will continue to develop. It is important, therefore, that the Jews realize a more concrete political existence that would allow them to preserve this “peculiar promise” and continue its particular contribution to humanity.

Eliot’s belief that the Jews promised some unique benefit to the national community finds greater elaboration in *Daniel Deronda*; the Jews, it seems, provide a particular opportunity for political agency through a historical consciousness enabled by their racial development. In contrast to the lack of biological connection and context that we find in *Middlemarch*, Eliot grounded her Jewish plot line in a specifically biological archetypal reality and set that archetypal realization of Jewishness—Daniel Deronda—in an initial state of ignorance regarding his biological and cultural heritage. This initial ignorance allows Daniel a provisional objectivity about Jewish history that allows him to act outside of his heritage even as he acts on the knowledge it provides. Like Darwin, Daniel can treat the narrative of Jewish development that Mordecai wants to impose on him as tentative in regard to particular detail, but true in generality.  

Daniel gets the concrete connection a

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16 Daniel Novak, in a recent and excellent essay “A Model Jew: ‘Literary Photographs,’ and the Jewish Body in *Daniel Deronda*,” comes to many of the same conclusions that I do about Mordecai, albeit from a different source. Novak suggests that Mordecai is performing an activity similar to Francis Galton’s (cousin of Charles Darwin and the “father of eugenics” [58]) “composite
biological Jewish heritage provides him, while simultaneously having access to the
dispassionate judgment his English cultural heritage affords him. Daniel has the
advantage of culturally standing outside of the Jewish line, while belonging to it
genetically, and the advantage of being culturally English while standing outside of it
genetically. He, more than any other character in Eliot’s canon, can see what has
caused him to develop into what he actually is. Much previous criticism has focused
on Mordecai as the figure of the scientist (and I find those readings extremely useful
and insightful), but I would like to shift attention to Daniel, as the figure of the
practical scientist, who must use the narrative that gives him meaning, even as he
recognizes its provisional nature. Mordecai uses a vision that is akin to “Natural
History” in order to understand Daniel’s role in history, and in imparting that
narrative, and therefore that role to Daniel, grants him the possibility of political
agency. Daniel’s grandfather has specifically bred him for this purpose, and Lenora
Halm-Eberstein’s attempts to sever Daniel from this biological heritage only give him
better cultural tools to make use of it when the time comes. Daniel’s biological
connection to the Jewish community justifies action within and for that community—
and at the same time he is able to hold it at a distance—as Amanda Anderson has ably
explicated, Daniel never completely succumbs to the particularities of Mordecai’s
vision. Daniel tells Mordecai that he must not “ask me to deny my spiritual
parentage, when I am finding the clue of my life in the recognition of [his] natural

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photography,” wherein Galton attempted to create concrete archetypes of criminals by assembling and
compositing large numbers of photographs of particular kinds of criminals. Our arguments are hardly
mutually exclusive. Galton’s attempt to create this visual archetype comes from the same cultural
milieu as Owen, Darwin, and Eliot; rather than looking for one single identifiable source for this
archetypal impulse, we see a developing fascination with the biological archetype in which all of these
writers and scientists participated.

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17 Powers of Distance, 135-36.
parentage” (751). While specifics are not given, Daniel makes it clear that he must maintain a will of his own, over and above his biological heritage, and it is his cultural heritage that allows him this freedom of intention.

Like Dorothea, Daniel is compared to a historical archetype in the early pages of the novel, with a couple of key differences. It is Daniel himself who makes this connection to a historical archetype, and it is, of course, completely false. Furthermore, that initial historical understanding acts as a foil to the biological archetypal understanding that eventually replaces it. As a young boy, the narratives of mediaeval popes and their illegitimate ‘nephews’ leads Daniel to believe that he is Sir Hugo’s illegitimate son (643-65). The narrator immediately contrasts Daniel’s misunderstanding with the long row of paintings in the “gallery over the cloisters” that Daniel continually walks under. In a description that recalls Eliot’s conjunction of German painting and German ancestry in her earlier essay, the narrator traces the development of the “refined editions of the family types” as represented by artists such as Lely, Kneller, Renyolds, and Romney (166). Our narrator points out that “in the nephew Daniel Deronda the family faces of various types, seen on the walls of the gallery, found no reflex” (166). We are to understand, from the beginning, that Daniel’s understanding of his parentage is mistaken, and our understanding is based on the absence of key physical features. Daniel does not bear out the features, as it were, of the Mallinger archetype. Sir Hugo jokes that Daniel must be like Napoleon, misattributing the quote “Je suis un ancêtre,” and foreshadows Daniel’s own destiny to be a new type (163).
Eventually Daniel must come to an understanding of his own biological and cultural heritage, but the novel first demonstrates the impact that Daniel’s ignorance about his parentage has on his own will: in as much as Daniel accepts the falsehood of an English heritage, he is paralyzed into non-action. In an effort to make that connection clear, the novel goes to some lengths to connect paralysis to both the true Englishman, Grandcourt, and to the culturally conditioned Englishman, Deronda.

The narrator, in speaking of Grandcourt, tells us that

We English are a miscellaneous people, and any chance fifty of us will present many varieties of animal architecture or facial ornament; but it must be admitted that our prevailing expression is not that of a lively, impassioned race, preoccupied with the ideal and carrying the real as a mere make-weight. . . . [the Englishman] also objects to looking inspired. (102)

The English do not appear to be as distinctively bred as the Jewish race, but they do have a type, and Grandcourt fits that type quite well. He often suffers from a curious “languor of intention,” that comes over him “like a fit of diseased numbness, when an end seemed within easy reach: to desist then, when all expectation was to the contrary, became another gratification of mere will, sublimely independent of a definite motive” (150). Grandcourt’s aspect is utterly free “from grimace or solicitous wrigglings; also it was perhaps not possible for a breathing man wide awake to look less animated” (111). Grandcourt, as the consummate English gentleman, has been bred to lack desire—even the desire to impact the world around him.

Superficially, Daniel suffers from a similar inability to effect change; his lack of heritage, with the provisional guess that he is the ‘under the rose’ son of Sir Hugo,
leads to paralysis. It is important to underline that the source of Grandcourt’s repeated paralysis differs in key respects—coming as much out of the acceptance of his particular social and biological lot as Daniel’s comes from his inability to accept his—but the effect is much the same: “meditative numbness” instead of “diseased numbness” (354 & 150). Grandcourt embraces his disease as the birthright of an English gentleman; Daniel seeks to free himself from it and discover guided agency. As different as these respective cases of paralysis are, however, they establish a connection between Englishness and detachment. We are told that “Deronda’s demerits were likely to be on the side of reflective hesitation” (180). Continually Daniel is portrayed as wanting to act, and acting with definite will when he sees a particular end; his determined effort in tutoring Hans, and the project he makes out of rescuing Mirah speaks to his ability to see out a project. But his lassitude about his own fate, the narrator suggests, comes from a lack of “more definite place and duties” and the “half-known facts of his parentage made him an excuse for lingering longer than others in a state of social neutrality” (180). The narrator continues later:

A too reflective and diffusive sympathy was in danger of paralysing in him that indignation against wrong and that selectness of fellowship which are the conditions of moral force; and in the last few years of confirmed manhood he had become so keenly aware of this that what he most longed for was either some external event, or some inward light, that would urge him into a definite line of action, and compress his wandering energy. (364-65)

Daniel, of course, unlike Grandcourt, is not English, and presumably that fact explains his desire for action. His default assumption of being the illegitimate son of an Englishman, however, creates the same practical effect that seems to be an essential part of Grandcourt: indifference and detachment.
Daniel’s social/historical archetypal understanding of himself—and the social neutrality that misapprehended English heritage creates—is contrasted with Mordecai’s understanding of him as the fulfillment of the Jewish biological archetype, and the drive that it creates within Mordecai, and eventually for Daniel. Mordecai embraces a Darwinian approach to Daniel in that he, like Darwin, weds a natural historical understanding to taxonomic emphasis on physical features. This method of identification allows him to recognize Daniel as the fulfillment of the Jewish political agent he seeks. He knows Daniel for what he is, because Daniel matches the type for which has been searching, and is well fitted to Mordecai’s utility as well. Eliot describes Mordecai searching the National Gallery: “[s]ensitive to physical characteristics, he had, both abroad and in England, looked at pictures as well as men, and in a vacant hour he had sometimes lingered in the National Gallery in search of paintings that might feed his hopefulness with grave and noble types of the human form, such as might well belong to his own race” (472). The National Gallery fails to give him this form, but reflections on the forms he finds there, coupled with his own visionary longing, eventually produces an image: “a face became discernible, the words youth, beauty, refinement, Jewish birth, noble gravity, turned into hardly individual but typical form and colour: gathered from his memory of faces seen among the Jews of Holland and Bohemia, and from the painting which revived that memory” (474). Daniel, it seems, is to be a more developed Jew, much like the more developed German noble that Eliot had described in her much earlier essay. Mordecai takes the paintings of the Jewish race, and pairs them with his own memories to create what Eliot suggests is a more developed Jew.\footnote{Audrey Jaffe, in \textit{Scenes of Sympathy: Identity and Representation in Victorian Fiction},}
The evolutionary development of the Jewish race—her continual comparison of Mordecai and Mirah to the Cohen family, as well as the comparison between Daniel and Mordecai and Mirah, suggests the gradual unfolding of the Jewish type.

Examining Mordecai’s recognition of Daniel as archetype reveals the explicitly biological archetypal language Eliot employs to discuss Daniel’s heritage and Mordecai’s vision. Mordecai’s visionary sight, the narrator suggests, is based on his use of, and place in, the taxonomy of archetypes:

[I]t is a matter of knowledge that there are persons whose yearnings, conceptions—nay, travelled conclusions—continually take the form of images which have a foreshadowing power: the deed they would do starts up before them in complete shape, making a coercive type; the event they hunger for or dread rises into vision with a seed-like growth, feeding itself fast on unnumbered impressions. They are not always the less capable of the argumentative process, nor less sane than the commonplace calculators of the market. . . . No doubt they are abject specimens of the visionary, as there is a minimum mammal which you might imprison in the finger of your glove. That small relative of the elephant has no harm in him; but what great mental or social type is free from specimens whose insignificance is both ugly and noxious? One is afraid to think of all that the genus ‘patriot’ embraces . . . . (emphasis mine—471)

The taxonomic language employed in this passage gives us a strong indication of the ways in which Eliot was approaching this problem. Eliot makes use of an apparently disagrees with my reading of these scenes: “As a model and, implicitly, copy, Deronda occupies a niche less in a specific family history than in an aesthetic imaginary, as a descendant of idealized types and portraits rather than particular individuals. Both passages, in fact exemplify the novel’s duck-rabbit, now-you-see-it-now-you-don’t approach to Deronda’s appearance, evoking stereotypes only to cancel them in their attempts to describe the character whose distinctive feature will be his ability to do the same: to evoke a type, belong to a group, without being constrained by that membership” (123). Jaffe goes on to suggest that Mordecai ultimately fails to imagine Daniel’s body with any concreteness. Deronda’s relationship to these types is vexed—but only because Eliot is attempting to imagine a sort of evolutionary/social step forward in the body of Deronda. A figure of Spanishness, Jewishness, and even Englishness at alternate points in the novel, Deronda does seem to be an “aesthetic imaginary.” But Eliot’s repeated use of Deronda’s would-be and actual ancestors indicate that Eliot was (at least attempting) to do more than simply evoke stereotypes without constraining Daniel to them. Mordecai’s almost instant recognition of Daniel as Jewish, and quite possibly as his particular Jew, as well as the constant recognition of Daniel as a physically unique individual, supports this argument.
evolutionary archetype, much like Darwin’s own reworking of that concept. Mordecai is a visionary, and we are meant to understand him within that genus: as something that may develop into something else. Eliot’s use of the minimal mammal image is a perfect representation of Darwin’s version of the archetype. But his visionary ability also comes from the ability to manipulate the archetypal—he, using the paintings of the National Gallery and his memory of Jewish faces, is able to construct the Jewish type he needs for his purposes. He is able to foresee Daniel, using material observations and projecting their temporal development.

As suggested above, all of this specific biological language regarding Daniel comes within Eliot’s repeated use of biological vocabulary and historical archetypes in reference to the Jewish characters of the novel. When Deronda first meets Mordecai, we once again see and hear similarities to Eliot’s essay on German Natural History: Daniel notes that “It was a finely typical Jewish face. . . . The features were clear-cut, not large; the brow not high but broad, and fully defined by the crisp black hair. . . one might have imagined one’s self coming upon it in some past prison of the Inquisition, which a mob had suddenly bust open” (386). Mordecai is a typical Jew, and his typical features allow Daniel to imagine his place in the history of the Jews. Coming to the Cohens, Daniel tries to perceive whether or not Mirah could have kinship to these people: “He was sorry to see no absolute negative to his fears . . . so it was not impossible that his mother might have had a lovely refined daughter whose type of feature and expression was like Mirah’s. The eyebrows had a vexatious similarity of line” (388). In this case Daniel is mistaken in his conjectures, but the common blood lines of the Jewish people, the narrator suggests, makes this difficulty
possible. When Daniel sees the Cohen children, he notes that both have “black eyes and black-ringed hair – looking more Semitic than their parents, as the puppy lions show the spots of far-off progenitors” (389). Even young Jacob’s voice “was hoarse in its glibness, as if it belonged to an aged commercial soul, fatigued with bargaining through many generations” (390). Later, Mr. Ram’s description incorporates a natural history parallel: “his very features –broad and chubby—showed that tendency to look mongrel without due cause which, in a miscellaneous London neighborhood, may perhaps be compared with the marvels of imitation in insects, and may have been nature’s imperfect effort on behalf of the purer Caucasian to shield him from the shame and spitting to which purer features would have been exposed in the times of zeal” (504). Mordecai’s instant recognition of the possibility that Daniel is a Jew (387) as well as the recognition, repeatedly, throughout the novel, by Jew and Gentile alike that Daniel’s appearance “was of a kind to draw attention. . . . His own face in the glass had during many years been associated for him with thoughts of some one whom he must be like” (186). Banks the bailiff also notes, obliquely, that Daniel carries this Jewish mark visibly on his face (170). As offensive as this racial stereotyping is for us today, it is all the more interesting that Eliot regarded these stereotypes as evidence of positive as well as negative traits; she is suggesting the development of a separate human strain in the Jews that will be a positive variation on the human form.

Eventually Daniel comes to understand himself in this biological way; on this framework of what might be taken as a usual preoccupation with a character of doubtful parentage’s looks, Eliot constructs a more definite sense of an archetype
unfolding. Mordecai proclaims that he believes “in a growth, a passage, and a new unfolding of life whereof the seed is more perfect, more charged with the elements that are pregnant with diviner form” (526). When Daniel confronts his mother, he rebukes her efforts to hide his Jewish nature, by saying that: “The effects prepared by generations are likely to triumph over a contrivance which would bend them all to the satisfaction of self. Your will was strong, but my grandfather’s trust . . . is the expression of something stronger, with deeper, farther-spreading roots, knit into the foundations of sacredness for all men” (663). This sense of something growing through Daniel’s grandfather, his mother, and himself, as well as the Jewish race, is once again given a biological metaphor when Daniel informs Mirah and Mordecai of his Jewish parentage:

It is you who have given shape to what, I believe, was an inherited yearning – the effect of brooding, passionate thoughts in many ancestors – thoughts that seem to have been intensely present in my grandfather. Suppose the stolen offspring of some mountain tribe brought up in a city of the plain, or one with an inherited genius for painting, and born blind – the ancestral life would lie within them as a dim longing for unknown objects and sensations, and the spell-bound habit of their inherited frames would be like a cunningly-wrought musical instrument, never played on . . . (750)

Eliot, in case her readers have missed the biological metaphors of species, variation, and development, hammers it home yet again, by telling us that even Daniel’s Jewish heritage is unique within the Jewish race. Daniel comes of a “a strain [of Jews] that has ardently maintained the fellowship of [the] race – a line of Spanish Jews that has borne many students and men of practical power” (748). This repeated emphasis on strain, inheritance, and offspring suggests that Daniel is the fulfillment of Mordecai’s archetypal vision.
Eliot reasserts this description of Daniel as the evolved Jew repeatedly, and in these comments we find a reassertion of why Eliot chose the Jews as the fit race to represent these issues. Joseph Kalonyomos uses an evolutionary metaphor in recalling the words of Daniel’s grandfather: “What [Charisi] used to insist on was the strength and wealth of mankind depended on the balance of separateness and communication, and he was bitterly against our people losing themselves among the Gentiles; ‘It’s no better,’ said he, ‘than the many sorts of grain going back from their variety into sameness’” (274). In the response to evolutionary theory, both in response to Robert Chambers’s *Vestiges of Natural Creation* as well to Darwin’s *Origin*, questions of the varietals of domesticated agricultural products were often raised. Charisi suggests that wheat has in fact developed (unlike those who maintained that the varieties of wheat had been the same since creation) and that that differentiation is a positive. In the same way, Jewish distinctiveness, bred across the centuries, brings a distinctive contribution to humanity. Charisi, after all, went to the trouble of forcing his daughter to marry her cousin, in an effort to breed Daniel for his specific purposes, carrying for his daughter only as a “makeshift link” (631-632). Charisi is the model Jew of Eliot’s “The Modern Hep! Hep! Hep!” who recognizes that Jewish separateness creates a unique opportunity for humanity—a new strain of humanity, that, more than usually conscious of their biological and cultural development, can evolve beyond, or at least differently than, the rest of humanity. Daniel is the archetypal progenitor, the ancestor of Sir Hugo’s tasteless joke that can continue a branching line separate from the Gentiles. Daniel, raised in an English tradition that Eliot repeatedly links to dispassionate objectivity, is able to observe and
act once he has his Jewish heritage as a foundation. He is in a unique position (and any archetype must be in a unique relation to their environment) to apprehend his biological and sociological heritage, and yet still retain a political agency. Unlike Dorothea and Lydgate, Daniel can see in his face and body the physical heritage that determines his actions. Unlike the English, who, as the descriptions of Grandcourt suggest, are bred to detachment, Daniel’s body is bred and selected by the development of the Jewish race for a particular action. At the same time, the English detachment he has been culturally raised within allows him a rational way to understand that heritage, and make it his own by way of assent, rather than the blind acceptance of social role.

The narrator of *Deronda* differs from the narrator of *Middlemarch* as well; the self-questioning interruptions are absent, and instead we have, at the beginning of the novel, two looped narratives that place an unusual importance on context. And here too, we can see why the biological archetype was so important for Eliot: it supplied a concrete contextual narrative without insisting that it was a definitive narrative. Eliot, the narrator’s tone and the placement of epigrams, continually acknowledges the relative nature of any knowledge, but by placing a tremendous amount of importance on context, anchors the novel’s narratives. The initial epigram announces that: “Men can do nothing without the make-believe of a beginning. Even Science, the strict measurer, is obliged to start with a make-believe unit” (7). Eliot then begins with a single moment—Gwendolyn’s losses at the gambling table, and Daniel’s careful scrutiny of her actions. She then follows with two distinct narratives that bring Daniel and Gwendolyn to the gaming-table at Leubronn. While there is nothing
specifically evolutionary suggested in these facts, we are supplied with a single moment that is given impressive amounts of narrative context. The moment at the gaming table is a unit—but that unit can only be understood in terms of other units:

“Science too, reckons backwards as well as forward, divides his unit into billions, and with his clock-finger at Nought really sets off in *media res*. No retrospect will take us to the true beginning” (7). Eliot repeatedly compares, in the epigrams, her actions as a novelist to that of a scientist seeking to construct some ultimate context:

> Men, like planets, have both a visible and invisible history. The astronomer threads the darkness with strict deduction, accounting so for every visible arc in the wanderer’s orbit; and the narrator of human actions, if he did his work with the same completeness, would have to thread the hidden pathways of feeling and thought which lead up to every moment of action, and those moments of intense suffering which take the quality of action . . . (164)

These epigrams continually remind us of the tremendous project that Eliot’s narrator is attempting to complete: an entire personal context for the narratives of both Deronda and Gwendolyn. The epigrams also suggest the possibility of failure, even as they provide confidence in what is successfully told; the epigram to the eleventh chapter informs us that: “The beginning of an acquaintance whether with persons are things is to get a definite outline for our ignorance” (111). This epigram, perhaps, best describes the narrator’s contradictory confidence in the face of a stated belief of relative knowledge and constantly evolving conditions. An archetypal approach to evolution gives on enough context to discuss the individual and isolated unit.

Darwin sought to deconstruct the species concept in such a way that he might reconstruct Owen’s metaphysical archetype as a historical, actual archetype. It is important to realize that Darwin did not simply historicize a metaphysical context; in
many ways it retained its metaphysical features in that it remained tentative and ultimately unknowable in any definitive sense. But at the same Darwin insisted that something like the archetype must have existed; it was a tentative narrative that at the same time made a claim to actual reality. In Eliot, we see a novelist who wished to recognize the difficulties and limitations of interested knowledge without forfeiting all claims to any knowledge. She recognized the tentative nature of overarching narratives, but found that she could anchor political agency grounded in knowledge that was in turn based in the possibilities of an unfolding archetype. Unlike many of the protagonists of her earlier novels, Daniel does achieve agency; Daniel’s status as the fulfillment of the Jewish archetype, and the possible beginning of a new kind of Jewishness, allowed her to give her narrative a context beyond the borders of that narrative, while still recognizing the tentative nature of that context. The potential downside—that Daniel’s potential political agency is only enacted by dizzying amounts of extremely contingent narrative context—is the downside of all evolution. Most organisms fail to engender a completely new race. Darwin and Eliot recognized the importance of narrative itself in communicating and constructing scientific knowledge, so much so that the interpretive anxiety in these texts comes from the lack of contextual narrative, rather than the shortage of empirical observation. In the next chapter, we shall see the ways in which the trust in those narratives began to be undermined.
CHAPTER FOUR

WHEN SCIENTISTS DEGENERATE: WELLS, NORDAU AND

SCIENTIFIC/ARTISTIC REPRESENTATION

This dissertation, to this point, has traced the increase in two different features of scientific writing and the literature that encountered it: the need to supply narrative (and with it contextual narratives) for observation, and the growing awareness of the theory-laden nature of empirical observation. In the first two chapters we saw the Hunters, Baillie, Brontë, and Combe increasingly aware that an individual observation could not be understood apart from contexts such as time, development, and social epistemology. In the third chapter, we saw Eliot and Darwin dependent on plausible but unprovable narratives; they began to construct potentially true texts that would allow them to interpret individual moments, persons, or organisms. This left them in the interesting epistemological position of having to recognize that overarching narratives they had constructed were tentative, even as they argued that the meaning those narratives allowed to individuals were more or less true. Truth was not unreachable—it was simply always provisional. Theirs was a hermeneutic
optimism that rested on recognizing the difficulties of scientific interpretation, but refusing to allow that lack of certainty to restrict them to an epistemic stalemate.

Of course, this recognition of the contextual dependency of scientific discourse did not always end in such optimism. In the work of the degeneration writers such as Max Nordau, and in the novels and essays of H.G. Wells, there is a consistent preoccupation with the possibility of over-interpretation. Evolution itself, suggests Wells, allows some of its less sophisticated readers to over-interpret the organism. Furthermore, evolution, which was often misinterpreted as an endorsement of consistent and steady progress, was free of the teleology that had informed works such as Paley’s *Natural Theology* or even Robert Chambers’s *Vestiges of the History of Natural Creation*. As a result of that lack of telos, interpretation of the natural world itself was incredibly difficult, and often impossible. In the work of Wells and Nordau, we see a consistent preoccupation with preserving scientific discourse as a way of accessing an objectively knowable reality. Concomitant with that preoccupation is the anxiety that scientific discourse is subject to the same interpretive difficulties as art and literature. Nordau’s *Degeneration*—a lengthy attack on the artists, musicians, and writers of the nineteenth-century—is an attempt to distinguish between artistic representations of the world, and scientific representations. Bad art, Nordau tells us, is bad representation, which is directly contrary to the good representation that science strives to achieve. Wells shares Nordau’s concerns about literary representation but, especially in his essay output of the 1890s, more readily admits that scientists might be as subject to representational
problems as anyone else; he even suggests that their assumption of direct contact with reality may lead to a greater self-deception.

As a result of Wells’s lack of confidence in scientific discourse’s ability to separate itself from representational problems, we find in a number of his novels the figure of the self-deceived, or would-be scientist who manages—not only to misinterpret reality—but also to inflict those misinterpretations on reality as well.\(^1\) Perhaps the most interesting case of this self-deception and reality shaping is Dr. Moreau, of *The Island of Dr. Moreau*, who claims to be doing completely disinterested, telos-free science. His attempts to replicate the human form, belie this claim; he replicates those readings of evolution that see the human body as the pinnacle of development. In doing so, Moreau replicates many of the manias that had been explicated by Max Nordau in *Degeneration*. Like the ‘insane’ artists who attempt ‘realism’ even as they suffer from mysticism and/or ego-mania, Moreau attempts to create, from the materials afforded him by the lower animals, a realistic human form. Moreau is more dangerous than these artists however, in that his distorted view of reality impacts reality itself. The issue is no longer simply one of a scientific representational problematic, but of representation’s potential impact on reality. That shift in emphasis highlights the degree to which Wells and Nordau—even as they attempted to safeguard science as an epistemologically reliable

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\(^1\) While none are as fully developed as Moreau, there are a number of examples of deluded and insane scientists in Wells's novels. The time-traveler expects to find a utopia in the future, believing in an ever progressive evolution that, as we shall see, Wells himself disdained. The Invisible Man invents invisibility for the sake of criminal enterprise, but overlooks many of the practical difficulties of being invisible. The Martians of *War of the Worlds* are obviously sufficiently scientifically advanced to accomplish space travel and interplanetary invasion, but their advancement has distanced them from a familiarity with the impact of viruses.
method—accepted that science was inextricably implicated in the difficulties of representation and interpretation.

I shall first turn to Wells’s essay output of the 1890s in order to explicate his vexed attitude about the ability of science to provide access to an objective reality. I shall then turn to Nordau’s *Degeneration* in an attempt to give a similar explication of Nordau’s barely suppressed anxieties about the representational nature of scientific discourse. Wells’s novels, in turn, show us what Nordau would regard as an especially dangerous collapse between the artist and the scientist. Because the scientist has some access to an objective reality, and is able to manipulate it, his representational problems threaten reality itself. Evolutionary discourse opened up the possibilities for misrepresentation and misinterpretation that threatened to rewrite evolutionary and physical realities.

A word, perhaps, should also be said about the function of the word *science* in this chapter. Hitherto, I have specifically avoided using the words ‘science’ or ‘scientific discourse’ apart from specific scientific theories and practices. Here, however, I am specifically concerned with Wells’s and Nordau’s attempt to position what they refer to as ‘science’ against literature or other artistic discourses. That attempt, I argue, suggests their concern to keep representation separate from scientific observation. These writers—especially Nordau—use the word science defensively, to define something that is a proper way of knowing the world against an epistemology they found dangerous. This epistemological privilege they grant to science—and their attempts to support and defend that privilege—show us the degree to which it was important for the Victorians to believe in the epistemological power of science.
I. Wells the essayist.

In the novels and essays of H.G. Wells scientific discourse simultaneously functions as a way to access reality and the destroyer of its ability to know that reality in any meaningful way. A number of critics have traced the impact and role of evolution and degeneration in Wells’s texts, and certainly his novels repeatedly give us races that are the products of reverse evolution. However, as Hurley has noted, there is an anti-degeneration element to Wells’s essays, which describe “a narrative model more consistent with Darwin’s own: a model of random movement, non-directive, non-telic, aimless and errant” (89). The reverse telos of degeneration is attacked by Wells in these essays, and in making that attack Wells reveals the tenuous nature of scientific discourse itself. Evolution, in Wells’s estimation, leads to a worldview deprived of teleology, which in turn makes it difficult to make any sense of reality. As a result of this loss of teleology scientific discourse itself comes under suspicion. On the one hand scientific observation reveals reality to us better than any other discourse, but on the other, the discourse necessary to represent those observation warps our understanding of reality. Scientific discourse—combined with an innate desire to discover meaning—leads humanity to more intensely warped interpretations of reality than what might be inflicted on reality apart from it. Although this distinction is never stated explicitly by Wells, he seems to fear

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2 See, for instance, Kelly Hurley’s *The Gothic Body: Sexuality, Materialism, and degeneration at the fin de siècle*, which attempts to draw strong parallels between degeneration discourse and Wells’s novels. See also John Glendening’s “‘Green Confusion’: Evolution and Entanglement.”
science’s power once it passes from *observation* into *discourse*. Since he is also quite aware that scientific practice is never completely separable from discourse, scientific practice take on aspects of the horrific. These contradictions would later blossom in *Moreau* in the figure of a scientist who successfully molds reality into physical misinterpretations because he reinserts the human shape as the pinnacle of evolution.

Let us begin exploring this contradiction in Wells’s essay output with Wells’s refusal to accept any latent teleology of evolution. In “The Rediscovery of the Unique” (1891) Wells would credit “Darwin and Wallace” for freeing us from the “rigid reasonableness, from the last trace of the trim clockwork thought of the seventeenth and eighteenth centuries” (29). In “Zoological Retrogression” (1891) Wells argued that evolution was being misunderstood as a progressive force, that “the great scroll of nature has been steadily unfolding to reveal a constantly richer harmony of forms and successively higher grades of being” (158). Many, Wells tells us, believe that this upward and progressive evolution will continue ad infinitum. Just as fallacious, he suggests, is “the opposite idea, which is its essential complement. . . . the too sweet harmony of the spheres would be enhanced by a discord, this evolutionary antithesis—degradation” (158). Wells contrasts both degeneration and progressive evolution with the proper concept of evolution, and compares the development of a phylum to the “busy man moving about a great city.” Sometimes the development of the phylum is visible, sometimes, like the busy man, it has disappeared from view. Wells’s imagery suggests that there may be a teleology to evolution, but that it is one beyond our apprehension: “Upward and downward these threads of pedigree interweave, slowly working out a pattern of accomplished things
that is difficult to interpret, but in which scientific observers certainly fail to discover
that inevitable tendency to higher and better things which the word ‘evolution’ is
properly associated” (159). There is no telos, simply a pattern that only exists in
relation to the present moment—and even that pattern, because it exists apart from
any goal other than survival, is almost completely unknowable.

In Wells’s refusal to accept any teleology in the concept of evolution, we
begin to see the first glimpse of his intuition that nature itself is to some degree
unknowable. Human perception, in these passages, is continually set against the
reality of nature, because we inevitably look for patterns where there are none. Our
interpretation is not only wrong, but seeks to impose meaning where there is none to
be had. Wells makes this point by bringing his audience on a time traveling thought
experiment in order to expose the latent teleology in Linnaean taxonomy. In doing so
he highlighted the degree to which humanity’s preoccupation with meaning and with
its insistence on seeing itself as the end result of evolution warped its understanding
of natural processes. “Zoological Retrogression” continues this critique by showing
the degree to which Linnaean taxonomy had allowed humanity to think of itself in
this way. To prepare his readers for the specifics of that thought experiment, Wells
first evoked the comparative anatomy of Cuvier (albeit in a Darwinian manner) and
earlier recapitulation experiments by reminding his readers that “[t]he extremely ugly
[bird or mammal] embryo . . . has gill slits, sense-organs, facial parts, and limbs
resembling far more closely those of a dog-fish than its own destined adult form”
(165). He does this in order so that he can point out that the higher mammals first
effectively develop into something like fish, before turning “round and complet[ing]
their development in an entirely opposite direction” (165). Embryonic development itself is non-teleological, and the reason for this is the non-teleological nature of evolutionary development itself, which embryonic development imitates. Wells then takes his readers to the past, asking them to imagine “some bodiless Linnaeus” visiting the world “during the upper Silurian period” who turns his attention to classifying the ancient landscape before him. Seeing that the “highest life would certainly be the placoid fishes of the seas,” these “ancient representatives of the sharks and rays” would “[o]n the diverse grounds of size, power, and activity . . . would head any classification he planned” (165). Of course, this ghostly Linnaeus would be completely wrong; Wells conjectures that if this imaginary taxonomist had instead turned his attention to some of the muddy rivers of the tropics, he might have discovered “[s]wimming in the pluvial waters, or inert and caked over by the torrid mud . . . what he would certainly have regarded as lowly, specially-modified, and degenerate relations of the active denizens of the ocean” (166). In that mud-fish, our disembodied Linnaeus would have found an adaptation of the swimming bladder—which would be a proto-lung. Wells points out that, at least by our human standards, these organisms were degenerates: “they had failed in the struggle, they were less active and powerful than their rivals of the sea, and they had taken the second great road of preservation—flight. . . . They preferred dirt, discomfort, and survival to a gallant fight and death. Very properly, then, they would be classed in our zoologist’s scheme as a degenerate group” (167). In “Zoological Retrogression” Wells skillfully brought his readers to the realization that they were already degenerates, perhaps
several times over, in as much as they decided to accept the false telos of Linnaean classification.

“Zoological Retrogression” makes a fairly straightforward argument for the ability of correct evolutionary theory to clear up a misapprehension that scientific discourse—in the form of evolutionary progressivism informed by teleological Linnaean taxonomy—might cause, yet this clear and defined separation of scientific understanding from scientific misunderstanding was not one that Wells was always able to maintain. In “The Rediscovery of the Unique” (1891) Wells argues that scientific investigation will allow humanity to overcome the epistemic difficulties created by the imprecise nature of language. But that very argument leads him to acknowledge that, in as much as scientific research can only be conducted and communicated via the medium of language, it is subject to the same problems. The implication: not only is Linnaean taxonomy to blame, but taxonomy itself can lead the epistemic agent down the primrose path. In this essay, science both reveals and conceals reality. Or, perhaps more charitably, it reveals reality to be something so beyond comprehension as to make scientific understanding incredibly difficult. The argument is based upon the premise that “All being is unique, or, nothing is strictly like anything else. . . . we only arrive at the idea of similar beings by an unconscious or deliberate disregard for an infinity of small differences” (23). The argument, in turn, is that this quiddity of all things makes any linguistic attempt to label them quixotic: “Hence the common noun is really the verbal link of a more or less arbitrarily determined group of uniques” (24). Language itself deceives humanity; it convinces its users that they have apprehended something real when they have not.
Wells, as previously quoted, felt that Darwin and Wallace had effectively proven the unique nature of all living organisms, and further suggested that much of scientific enterprise needed to follow their example in recognizing the unique nature of all things. In these initial paragraphs, Wells seems convinced that scientific observation frees us from the misunderstandings that language inflicts on its users.

Of course, as we might point out today, scientific observation is hardly free from discourse, and Wells was aware of the ways in which science had to participate in discourse; Wells actually uses examples of scientific practice to show the degree to which language deceives. The result is confusing: scientific observation should free us from misunderstanding, but much of scientific discourse leads us to the same linguistic difficulties. Not only is scientific discourse as misleading as the rest of discourse, but because it claims access to reality, Wells implies that it throws scientific practitioners into an especially inauthentic relationship to reality. Atomic theory, for instance, Wells regards as a farce: “[t]here is absolutely no ground in human experience for a presumption of similar atoms, the mental entanglement that created one being now unraveled, and similarly the certainty of all the so-called laws of physics and chemistry is now assailable” (27). Each atom, Wells maintains, is unique, and exists beyond the slippery linguistic tools the scientist would bring to explain it. Wells goes on to compare the scientist who insists that these generalizations can still be used to discuss atoms to shamans:

‘I grant,’ the scientist will say—in fact, does say—‘that any presumption in favour of identically similar atoms disappears upon analysis; I grant that our original suspicion of such atoms arose from a mental imperfection; yet I still keep my theories intact with—experimental verification.’ Thus the whirligig of time brings us round
its revenges; here is science taking up the cast-off armour of religion and resting its claims on prophecy! (27)

Even the scientist is, at best, an imperfect realist—he can only approximate the atom that is always too unique for perfect representation. Wells goes on to note that chemists often have to manipulate their results in order to make their actual results comprehensible (28). In these passages Wells implies that in order to do scientific observation, these practitioners have to recognize something akin to the thrust of this argument, that all things are unique. But in order to practice science and produce results for an audience of scientists, the scientist has to bracket that knowledge and proceed as if these groupings were not misleading. If, as Wells had suggested in an earlier part of the essay, simply teaching a child to count “poisoned its mind almost irrevocably” by putting that mind into an inauthentic relationship to reality, then the “educated man, [who] knows perfectly well that the shape of the earth’s orbit and the earth’s velocity are things constantly changing” lives in those misunderstandings deliberately and perversely. He fails to acknowledge the “unique series of unique gyrations on the part of the earth we inhabit.” The educated man “lets a watch and a calendar blind him to the fact that every moment of his life is miracle and a mystery” (26). Scientific discourse is continually distorting reality for even the would-be scientific observer, preventing him from perceiving it in all of its unique strangeness.

So paradoxically, scientific observation and practice reveals the degree to which scientific discourse deceives us about the world. Wells ends “The Rediscovery of the Unique” with an image that goes some way toward capturing the contradictory attitude toward science he conveys throughout the essay:
Science is a match that man has just got alight. He thought he was in a room—in moments of devotion, a temple—and that his light would be reflected from and display walls inscribed with wonderful secrets and pillars carved with philosophical systems wrought into harmony. It is a curious sensation, now that the preliminary sputter is over and the flame burns up clear, to see his hands lit and just a glimpse of himself and the patch he stands on visible, and round him, in place of that human comfort and beauty he anticipated—darkness still. (31)

Wells grants that science has allowed humanity to pierce the darkness, but argues that the reality is much more alien than anyone could have anticipated. Reality itself is such that even science will have a difficult time making sense of it, because science itself rests on scientific discourse, and discourse—because it is, by nature, taxonomic, and has to assume some kind of teleology—is inherently misleading. Thus, the wild riot of reality is always beyond our ability to penetrate it; science only helps to illuminate the very difficulties of perceiving reality. There is no escape in the end, even through scientific practice; there is only darkness.

So the loss of teleology—caused by scientific observation—leads to the mistrust of scientific discourse; that mistrust in scientific discourse leads to another point that Wells makes explicitly or implicitly in many of his essays: the degree to which the human mind mistakenly craves order and meaning. That desire for order and meaning—the very impulse that drives science in the first place—Wells would eventually portray as being capable of physically distorting reality in Moreau. “On Comparative Theology” (1898) anticipates the potential danger in a meeting of a ‘mystic’ imagination with the scientific method. Referring to Bacon, Wells suggests that scientific method was “essentially a systematization of Fetish, a permanent record of experiences, the sane correlation of effects and causes, and the elimination
of sham from operative Fetishes” (44-45). The scientific method, however, has led to its own undoing, having “finally carried scientific certitude in many directions beyond the reach of experimental verification” (45). This is perhaps Wells’s most interesting implication of the essay: that science has somehow reached the limit of what it can prove by its own method, and that there are aspects of reality that are simply beyond scientist’s ability to know or test. Even more interesting is the implication that science’s preoccupation with certainty creates difficulty, causing scientists to profess certainty even when they lack the grounds. Perhaps as a result, for many practitioners, “the scientific method has ever been unsatisfactory; a certain imaginative type is perpetually reaching out towards some transcendent parallelism or systematisation of phenomena, irrespective of the causative relationships of ordinary experience” (45). Wells suggests that this imaginative tendency has led to the metaphysical anatomy of Richard Owen, claiming that, “Comparative anatomy is always sliding towards mystic interpretations” (emphasis mine--45). The human need to find patterns leads even scientific minds to find order and telos where there is none.

In another essay, “Bye-Products of Evolution” (1895) Wells had suggested that evolution itself provided an opportunity for inflicting telos even within the framework of what was supposedly a theory of telos-free development. Wells points out that “people who understand a little of the theory of evolution but not very much of it, will attempt to explain every feature of the structure of a living thing, down to its minutest curves, as the reaction of that organism to its necessities” (204). Vestigial, useless organs, Wells suggests, or as yet useless modification, have no existence when humanity insists on interpreting everything. Of course, for evolution
itself to proceed, both vestigial organs and pointless modifications would have to exist. Evolutionary theory, coupled with humanity’s hermeneutic demands, yields a fertile paradigm for further misperceptions of reality. The persistence of telos in the human mind continually inflicts interpretation on a nature that lies beyond interpretation.

Throughout these essays Wells attempts to maintain the possibility of some objective scientific practice. But scientific practice often leads to misperception. Scientific discourse participates in the same deceptions that are an innate part of all language. Furthermore, in as much as it reveals the possibility for meaning beyond common perception, evolutionary theory fuels humanity’s need for teleological meaning and in doing so leads to misrepresentation. Objective science rarely makes an appearance in these essays before shortly being eclipsed by deceptive scientific discourses. As soon as science must represent something for Wells, it becomes misleading. The scientific potential for misperception and misinterpretation would blossom into something quite dangerous in Wells’s novels.

II. Nordau’s Degeneration.

First, however, it will be useful to look at Nordau’s *Degeneration*; his anxieties about the nature of representation, and his earnest desire to sequester scientific observation from artistic representation mirrors many of Wells’s own concerns in the essays. Initially published in 1892, and translated into English in 1895, *Degeneration* was, in the words of one critic, *the* book of the 1890s.³ At the

³ Hurley writes that “Degeneration was the book of the 1890s, phenomenally popular throughout Europe. It was perhaps the most successful example of that late-Victorian sub-genre, the
same time, the book was largely attacked and reviled by the medical community; reviewers such as William James suggested that Nordau himself was a degenerate, and that his “pathological book on a pathological subject” demonstrated many of the manias and disorders that Nordau had outlined in the book.  There is no evidence to suggest that Wells had ever read Nordau, but as a book reviewer and scientific writer during the height of Nordau’s fame, he would have almost certainly been aware of the book. The possibility of a direct influence on Moreau and Wells’s later novels, however, is not the point. The book’s clear desire to preserve scientific observation from the dangerous implications of artistic representation and literary realism provide us with a fin-de-siècle vocabulary for discussing Wells’s novels that allows us to see the kind of debates in which Wells was intervening. Moreau and Wells demonstrate a similar anxiety about the impact of language and discourse on scientific observation. Moreau, as we shall see, resembles Nordau’s mystic and ego-maniac. Furthermore, Moreau’s attempts to replicate exactly the human form suggest that his preoccupation with a kind of vivisectionist realism indicates that he represented what Nordau, along with Wells, feared most—the collapse of the distinction between the artist and scientist. Wells, as we have already seen to some extent in the essays, and we shall see even further in the novels, found that he could not extend immunity from misrepresentation to the scientists; he found that collapse terrifying, and Nordau can

sociomedical text, incorporating biology, evolutionism, psychopathology, moral philosophy, and sociocultural analysis into one sweeping critique of modernity.” (76). Daniel Pick, in Faces of Degeneration writes that Nordau’s books was “Perhaps the best-known instance of [the] bizarre ‘social diagnosis’” type of treatise (23-4). Pick goes on to say that “Nordau’s work was sometimes celebrated, but also frequently denounced as charlatanism. It was nonetheless charlatanism deemed significant enough to merit refutation” (25).

Interestingly, James does not really question Nordau’s science in this book—he seems to think that Nordau had proven degeneration pretty well, but had also demonstrated that he was a degenerate along the way.
help us to see the exact nature of that terror. In this section I will discuss what Nordau felt scientific observation should be, how he thought artistic representation differed from it, why he felt that was dangerous, and the degree to which he failed to maintain a useful distinction between artistic and scientific representation.

Nordau’s definition of science is often a shadow to artistic representation—it is what artistic representation is not. Late in the treatise, Nordau deigns to tell us that, unlike literary realism—which presents itself as objective description—science really is “[t]he purely objective description of objects. . . when it is worth anyone’s while to acquire of them as clear a representation as may be communicated by words with the assistance of image or number” (483). Nordau, even in this passage, acknowledges that there is something artistic about scientific representation, because “it rises into art while remaining of an inferior species, when it chooses words so well that it follows the most delicate peculiarities of the objects, and at the same time calls out the emotions that the observer experiences during his observations, i.e., when the words employed have not only the value of a just portrayal of sensuously perceptible properties, but have an emotional colouring, and appear accompanied by images and metaphors” (484). These passages suggest the extremely qualified nature of Nordau’s faith in scientific representation. Scientific description is only as objective as language will allow, and of course, must make occasional use of images and metaphors. Nordau’s definition serves merely as a foil for excoriating Zola’s naturalism (which he conflates with realism) and is never elaborated on in any more detail than what has already been cited. And for good reason, perhaps, for his
definition had acknowledged that scientific description participated in perception and representation which, as we shall see, was the root of all artistic evil for Nordau.

Nordau’s theory of how human beings receive sense impressions created the problem of representation for Nordau. His theory of sense impressions—a kind of warmed over empiricism—leads him to give us a portrait of individuals always on the brink of being overwhelmed with sense-data and the ideas that are produced by that data. There is, apparently, a rush of blood to the appropriate place on the cerebral cortex caused by every impression. The result is a brain constantly busy with “thousands of impressions of regularly decreasing distinctness; and since unnumbered thousands of external and internal organic stimuli are carried to the brain, so continually thousands of stimulus waves are coursing through it” (48). Nordau goes on to cite the passage from Goethe that Wells references in the epigram of this chapter essay; we are continually selecting from this onrush of sense-data in order to make coherent interpretations of reality out of the chaos that our senses present to us. The fact that both use the Goethe quote is instructive, for they both felt that humanity had a tendency to interpret—and more importantly misinterpret—at some basic level. Where Wells saw a problem with the way taxonomy erased difference, Nordau sees a problem inherent in the body’s biology. Degenerates, he suggests, are simply unable to make coherent pictures of the world for themselves, and as a result they flounder in the misrepresentations caused by their faulty wills.

This constant mountain of sense data leads people to make interpretive priorities so that we can maintain a consistent reality, and it is upon the nature of those priorities, according to Nordau, that he bases his distinction between the sane
and the degenerates. Sane men learn to prioritize these impressions through careful attention, which is informed by a healthy and strong will. Nordau gives an example of his own will and attention as he recounts the physical and mental effort necessary to focus on a passer-by in the street. His will allows him to filter out the non-necessary information (54). Nordau’s explication of the process of receiving these sense impressions, and imposing one’s will upon them, gives us a portrait of the individual always in danger of misrepresenting if their will should fail. As Nordau’s treatise progresses, it becomes increasingly clear that no representation of reality is ever completely sufficient. The very use of the word ‘will,’ is problematic of course, with its ethical implication in conflict with Nordau’s professed biological materialism. In this early section of the book Nordau seems to regard a weak will as analogous to a weak muscle, but later in the treatise he will equivocate, and suggest that the ego-maniacs are ethically reprehensible for this lack of will. This basic contradiction at the fundamental level of his philosophy of mind creates future problems—his inability to distinguish between a biological failure and an ethical failure makes the distinction between a degenerate and a normal mind hard to maintain.

The entire purpose, of course, for labeling misrepresentation degenerate is to keep open the possibility of accurate representation. Degeneracy allows him to taxonomize the kinds of epistemic failures he finds dangerous. Having to choose between these sense impressions could lead to interpreting significance where there is none, or confusing the meaning of one impression for another, and this is exactly what Nordau attempts to contain as he discusses the degenerate ‘mystic.’ The mystic artist’s will is, for whatever reason, decrepit, and as a result he fails to give proper
attention to subjects, and as a result, confuses them. Mysticism is an interpretive failure—and it leads to a similar kind of hermeneutic over interpretation with which Wells was concerned. Mysticism “describes a state of mind in which the subject imagines that he perceives or divines unknown and inexplicable relations amongst phenomena, discerns in things hints at mysteries, and regards them as symbols, by which a dark power seeks to unveil or, at least, to indicate all sorts of marvel which he endeavors to guess, though generally in vain” (45). The mystic is continually ascribing significance to things that have no significance, and insisting on interpretive complexity where there is no complexity. Their lack of will—their inability to produce a coherent picture of the world—leads to confusion and interpretive chaos.

The individual will necessary to keep these categories separate proved to be a danger as well; however, the “ego-maniac” is not wholly abnormal, he has simply failed to outgrow the natural misinterpretation of self-absorption from which we all initially suffer. Nordau tells us that the healthy mind, in the course of normal development in childhood, begins to perceive that there are perceptions that have causes outside of itself. We assume the existence of a “‘not-I,’ of an external world, and project into it the cause of the excitation which it perceives in the nervous system” (249). The individual matures to the point where not everything is interpreted in reference to itself. The healthy mind gets to the point of a relative altruism: “an individual concerns himself about another being from sympathy or curiosity, and not in order to satisfy an immediate, pressing necessity of the body” (252). The brain of the ego-maniac never reaches this state of altruism, but persists in a state that prevents the individual suffering from the disorder from interpreting anything apart from itself.
Where the mystic sees significance where there is none, the ego-maniac can only see significance in reference to itself. Nordau writes: “Is he a painter? he has no doubt that the whole history of the universe only hinges on painting, and on his pictures in particular. Is he a writer of prose or verse? he is convinced that humanity has no care, or at least no more serious care, than for verses and books” (258). The degenerate ego-maniac’s hermeneutic overdrive is applied to himself; he, and his work, are the most important things in the world. As a result “[t]he ego-maniac is a mental Robinson Crusoe, who in his imagination, lives alone on an island, and is at the same time a weak creature, powerless to govern himself” (259). Nordau also suggests that the ego-maniac will be unable to imagine sufficiently the pain of others, and “[h]e who is not capable of imagining the pain of another with sufficient clearness to suffer the same himself will not have compassion, and he who cannot exactly feel for himself what impression an action or an omission on his part will make on another will have no regard for others” (253). The ego-maniac is simply unable to adapt himself to normal human society: “He must, therefore, necessarily suffer from the world and from men. Hence at heart he is bad-tempered, and turns in wrathful discontent against Nature, society and public institutions, irritated and offended by them, because he does not know how to accommodate himself to them” (263). Nothing, for the ego-maniac, can be understood apart from himself, and so the ego-maniac becomes a society, even a culture unto himself.

Nordau’s attempts to contain misrepresentation and misperception to the confines of artistic representation consistently fail. The first part of this failure comes in Nordau’s acknowledgement of the difficulties that language presents for
representation. Given Nordau’s philosophy of mind, he, not surprisingly, comes to a conclusion similar to Wells’s in regards to language: in as much as language is representation, it offers opportunities for misrepresentation and misperception. This acknowledgement of the dangerous qualities of language leads him occasionally to acknowledge that scientific discourse might not be free of the same dangers. Nordau tells us that: “Speech, that great auxiliary in the interchange of human thought, is no unmixed benefit. It brings to the consciousness of most men incomparably more obscurity than brightness. It enriches their memory with auditory images, not with well-define pictures of reality” (67). Nor is speech alone misleading: “We forget that language was only developed by the race as a means of communication between individuals, that it is a social function, but not a source of knowledge. Words are in reality much more a source of error” (68). Words are used, through reading and through hearing others speak, instead of direct perception and experience. Here we begin to see Nordau’s first tacit acknowledgement that scientific discourse might be subject to the same problems and difficulties: “Many erroneous explanations of natural phenomena, the majority of false scientific hypotheses, all religious and metaphysical systems, have arisen in such a way that mankind, in their thoughts and opinions, have interwoven, as equally valid components, ideas suggested by words only, together with such as were derived from direct perception” (68). Of course, Nordau has already acknowledged that direct perception itself is an inherently hermeneutic activity, since the human will must be exercised in order to make sense out of the mass of sense-impressions.
Nordau’s failure to confine degeneracy to artistic representation then manifests itself in his inability to distinguish the disorder from normal behavior, or bad artistic representation from good scientific representation. As we all must select from the massive amounts of sense-information that we receive, we must interpret. As we all interpret, and sometimes misinterpret, we suffer from the same difficulties as the so-called degenerates. Nordau admits that we all suffer from mysticism, to some small degree at least: “In one part or another of his mental field of vision each of us therefore is a mystic. From all the phenomena which he himself has not observed, everyone forms shadowy, unstable presentations” (69). The distinction between healthy, sane representation, and unhealthy degenerate representation collapses when it is acknowledged that all suffer from the disorder to some degree, and that even scientific hypothesis might have much of the mystical within them. Religion and science, Nordau tells us in one revealing passage, are not always as distant as we would prefer, and some scientists turn empirical observation into superstitious speculation:

The mystic, nurtured in religion and nourished with dogma, refers his shadowy impressions to his beliefs, and interprets them as revelations of the nature of the Trinity, or the condition of existence before birth or after death. The technologist who has fallen into mysticism worries over impossible inventions, believes himself to be on the track of the solution of the problem of a perpetuum mobile, devises communication between earth and stars, shafts to the glowing core of the earth, and what not. The astronomer becomes an astrologist, the chemist an alchemist and a seek after the philosopher’s stone; the mathematician labours to square the circle, or to invent a system in which the notion of progress is expressed by a process of integration, the war of 1870 by an equation, and so on. (60)
There are, apparently, mystical scientists. There is good objective scientific representation, as we saw in the passage above, but there are times when scientists can be taken in by false analysis, and Nordau never successfully distinguishes between the two. Nordau even feels the need to defend ego-mania against the accusation that we all suffer from it to some degree: “Let it not be objected that this is not peculiar to ego-maniacs but is the case with the vast majority of mankind. Assuredly everyone thinks what he is doing is important, and that man would not be worth much who performed his work so heedlessly and so superficially, with so little pleasure and conscientiousness, that he himself could not look upon it with respect” (258). Nordau’s very acknowledgement that everyone has to interpret their activity with reference to themselves speaks to an implicit admission that in addition to the pervasiveness of mysticism, we are all ego-maniacs to some extent.

Nordau’s anxieties and contradictions come to a head in one of his final chapters on the dangers of literary and artistic realism; Nordau argued that many of the nineteenth-century naturalists and realists dangerously blurred an already fuzzy line between artistic and scientific representation. Exactly what Nordau thinks “realism” refers to is never made clear, and he groups a baffling conglomeration of artists together under the term, including Zola, Eliot, Thackeray, and Flaubert. Nordau even makes it clear that he refuses to grant “realism” a consistent definition: “the word ‘realism’ itself has no aesthetic significance. In philosophy it denotes an opinion for which the general phenomenon of the world is the expression of a material reality. Applied to art and literature, it possesses no conception whatever” (475). Practically speaking, Nordau uses realism to refer (rightly or wrongly) to those
writers who supposedly aspire to scientific veracity in their work, and perhaps claim scientific significance for their work. Repudiating them provides an opportunity to strengthen the distinction between artistic and scientific representation.

In order to repudiate these would be realists, Nordau focuses on the representational qualities of all art. Visually realism is impossible, because “[I]t would never occur to a painter or a sculptor to place himself before a phenomenon, and reproduce it without selection, without accentuations and suppressions” (476). There was, for the artist, something that attracted him to that subject, and in that very act of selection, there is a suppression of sense-data. If the artist’s visual picture is problematic, than all the more so the imaginative writer, who must frame his subjects in more dimensions than the visual artists. Thus, his “‘realistic work always reproduces his thoughts only, his interpretation of reality, his interest in it, and not reality itself’” (477).

The realistic writer, then, is pernicious in that he attempts to pass off expressions of his own personality as scientific document and fact. Zola is the exemplar in this regard, and Nordau’s desire to squash Zola’s pretensions to scientific significance shows us his anxieties about the scientific/artistic distinction:

M. Zola calls his novels ‘human documents’ and ‘experimental novels.’ . . . Does he think that his novels are serious documents from which science can borrow facts? . . . Science can have nothing to do with fiction. . . . *A scientific experiment is an intelligent question addressed to nature, and to which Nature must reply, and not the questioner himself*. M. Zola also puts questions. But to whom? To Nature? No; to his imagination. . . . The results at which M. Zola arrives in his pretended ‘experiment’ do not exist objectively; they exist only in his imagination. . . (emphasis mine--490)
Implicit in the quote that initiated this section is Nordau’s acknowledgement that scientific observation itself ends it representation: “The purely objective description of objects. . . . when it is worth anyone’s while to acquire of them as clear as a representation as may be communicated by words without the assistance of image or number” (emphasis mine—483). Nordau’s entire screed against a poorly defined and understood realism ends up, ironically, being an expression of his own desire to keep art and science completely divided.

III. Moreau’s alternate reality.

For both Wells and Nordau, then, the line between artistic representation and scientific representation was an important one to define and maintain; as we have seen, Wells found it more difficult to ignore those places where scientific discourse and artistic representation overlapped, and The Island of Dr. Moreau is perhaps the best example of the horror he saw in the confusion between the two. Much criticism of the novel has focused on the evolutionary and degenerate horrors that the beast-people and Moreau represent.⁵ Hurley and Glendening have, respectively, suggested that Moreau represents Lombroso’s criminal mind and that the confusion on the island is a result of the contingency that evolution has suggested.⁶ I would like to

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⁶ Hurley, for the most part focuses on the way in which the beast-people embody a fear of the human body as an evolutionary palimpsest. She does suggest, however, that Moreau resembles Lombrosos’s degenerate criminal: “The inevitable corollary of the ‘extraordinary imagination’ of the vivisectionist Moreau is the stunted morality he shares with beast people and with Lombroso’s ‘born criminal.’ He has ‘fallen under the overmastering spell of research’ to the point of monomania,’ and pursues his bloody science with no particular end but the fulfillment of his own curiosity. (109).

Glendening, who focuses for the most part on the evolutionary contexts that inform the novel, suggests that those evolutionary discourses did have an impact on epistemology. “The Island of Doctor
focus on the confusion of epistemologies—scientific and artistic—that we find in the figure of Moreau himself. Moreau not only fails to maintain a line between artistic representation and scientific representation, but blends them together so completely that his artistic endeavors actually shape physical reality in horrifying ways. There is, in Moreau, more than the fear of misrepresenting reality, as we saw in Wells’s essays and Nordau’s *Degeneration*, but a fear of the impact that scientific representations of reality can have on reality. Reality is no longer something static that can be increasingly understood through a series of gradually better or more objective descriptions, but malleable, and as such at least somewhat subject to the interpretations imposed on it.

Wells, in an 1896 *Fortnightly Review* essay, made it clear that he felt the novel was about the conflict created by the imposition of “artificial” human cultural

*Moreau* picks up on the negative implications of natural selection that the entangled bank disguises. In Wells’s text entanglement means disorder, not order or harmony: it entails the commingling of objects, processes, and qualities that strike the human mind as incompatible or antagonistic because they upset boundaries and categories; and it point to the limits of knowledge, since the mind, caught in the very processes it tries to understand, is continually confounded by contingencies, like those governing the course of Darwinian evolution, too complex to be anticipated or fully comprehended.” (573)

Roslynn Haynes in “The Unholy Alliance of Science in *The Island of Doctor Moreau*” in The *Wellsian: Selected Essays on H.G. Wells*, John S. Partington ed., (London: Equilibris Publishing, 2005) also suggests that it is the figure of the scientist that is under attack in *Moreau*. She writes: “Thus Wells’s composite picture of scientists at this stage of his writing is far from flattering. He depicts them as either arrogant or helpless, crassly asserting the supremacy of abstract rationalism or failing in the attempt to combine humane values with experimental science. . . . [It is] a trenchant satire on the cult of research for its own sake, on the exclusiveness and isolationism of science with its contempt for the layman and ultimately for humanity.” (66)

Harvey Quaman, in “Unnatural Interbreeding: H.G. Wells’s *A Modern Utopia* as species and genre” *Victorian Literature and Culture* 33 (2005) 67-84, also suggests that Wells was an anti-realist when it came to taxonomy. Quaman makes some interesting claims about formalism and scientism—that early twentieth century literary critics were importing scientific taxonomies in order to taxonomize genres, and that Wells, especially in *A Modern Utopia* was writing against than taxonomic practice. Instead, he wanted to avoid literary types, and investigate pieces as literary particulars. *A Modern Utopia* is thus a “generic hybrid” (67) in opposition to the early “adventure tales in the style of classical realism” (67).

While my own reading focuses on Moreau’s attempts at an artistic realism, it is obviously indebted to these readings.
categories on “natural” impulses and desires—in his explication of that conflict we can see the outline of Wells’s anxieties about the nature of scientific representation. Wells had implied that “reasoned thought,” as well as human morality and tradition, contributed to the artificial restraints that human culture placed on natural man. In placing reasoned thought into the category of the artificial restraints of civilized man, Wells suggested that scientific discourse was a way of shaping human reality that encompasses more than the drives and desires of man: he is the “culminating ape . . . a type of animal more obstinately unchangeable than any other living creature” (217).

While the essay implicates reasoned thought—and scientific discourse as a result—his emphasis was on the way in which morality is an artificial constraint on human nature: “In this view, what we call Morality becomes the padding of suggested emotional habits necessary to keep the round Palæolithic savage in the square hole of the civilised state. . . . Sin is the conflict of two factors—as I have tried to convey in my *The Island of Dr. Moreau*” (217). Morality, inflicted by Moreau on the beast people, is an artificial invention that keeps the natural impulses of the beast people in check. Obviously, Moreau does use a parody of Christian morality and liturgical practice to restrict the animal drives of the beast people. Moreau recalls the rhetoric of Wells’s essay when he tells Prendick that “much . . . of what we call moral education is . . . an artificial modification and perversion of instinct” (99). Moreau continually sets his own scientific perception over and above the moralism of the beasts and Prendick. The novel continually undermines that distinction however: Moreau’s participation in scientific discourse marks his own failure to see reality and his lack of awareness of the artificial nature of his relationship to nature in a manner
similar to the blindness that morality imposes on the beast people. Moreau fails to see how his own scientific discourse, also marked in his own peculiar variety of religious language, might be a perversion created by his desperate need to inflict his conception of reality onto reality. And even if (as Harvey Quamann has argued) the artificial is not invoked pejoratively in Wells, Moreau’s failure to recognize scientific discourse as artificial condemns Moreau to a similarly inauthentic relationship with nature. Wells underlines Moreau’s failure of self-knowledge by presenting him as the scientist artist—the vivisectionist who repeatedly attempts to recreate the human form, and in doing so suggests that humanity is the pinnacle of a progressive evolution. Moreau is a scientist who physically represents one beast as another, insists that he is simply practicing science, and deeply damages nature in his refusal to see his own participation in the artificial nature of human civilization. His representations are more than simply misleading; they threaten to confuse reality itself.

Moreau’s descriptions of his attempts to shape animal flesh into an exact replication of the human form suggest his preoccupation with a variety of visual reality and the (albeit unconscious) acceptance of the kind of evolutionary progressive telos that Wells reviled in his essays. Moreau is not simply a mad scientist, he is a mad artist, attempting to recreate the product of thousands of years of evolution (107). It is worth looking at a number of these passages in order note Moreau’s preoccupation with the human form, and his emphasis on an exact visual replication of that form:

I began with a sheep, and killed it after a day and a half by a slip of the scalpel; I took another sheep and made a thing of pain and fear, and

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left it bound to heal. It looked quite human to me when I had finished, but when I went to it I was discontented with it. . . . The more I looked at the clumsier it seemed, until at last I put the monster out of its misery.

Then I took a gorilla I had, and upon that, working infinite care, and mastering difficulty after difficulty, I made my first man. All the week, night and day, I molded him. With him it was chiefly the brain that needed molding; much had to be added, much changed. I thought him a fair specimen of the negroid type when I had done him. . . .

The human shape I can get now, almost with ease, so that it is lithe and graceful, or thick and strong: but often there is trouble with the hands and claws—painful things that I dare not shape too freely. . . .

Each time I dip a living creature into the bath of burning pain, I say, This time I will burn out all the animal, this time I will make a rational creature of my own. After all, what is ten years? Man has been a hundred thousand years in the making. (103-07)

In the last paragraph, Moreau suggests that he wants to mimic evolution. But he implicitly betrays a preoccupation with a human oriented telos—he wants to create a rational creature. Moreau claims that he chose the human form “by chance,” but that claim rings hollow, as his subsequent admission that “there is something in the human form that appeals to the artistic turn of mind more powerfully than any animal shape can” reveals (99-100). Moreau’s obsessive preoccupation with the human form suggests that he unconsciously sees humanity as the pinnacle of evolution, even if he explicitly refuses to accept his participation in that telos. Even Moreau’s sharp distinction between rational humanity and irrational beasts (a distinction continually mocked by the overall effect of the novel itself) suggests that he is re-inscribing telos into evolution. Moreau’s use of gradually more complex mammals, and his attempt to turn a gorilla into a “fair specimen of the negroid” type suggest a racial and hierarchal taxonomy that places the white European male as an end result of evolutionary
development. Irrational animal flesh and mind becomes the raw material for representing the human form and rationality; Moreau’s end goal is a “rational creature” that looks, we suspect, much like himself. And Moreau’s attempt to produce this rational creature is counter-pointed by his results. In his attempt to get outside of any representation of reality, to the scientific question itself, Moreau only succeeds in creating more beasts; instead of achieving the human form through beasts, Moreau’s experiments end with the final, and solely permanent, transformation of Prendick into a Beast-Man.

Moreau, as an artist, resembles Nordau’s degenerate artists in a number of particulars, and noting these resemblances allows us to see the degree to which he participates in scientific representation, rather than observation or research. Inclined to cloak himself, his experiments, and the animal representations of humanity he produces in varying kinds of religious vocabulary, Moreau resembles Nordau’s degenerate mystic. Moreau defines himself as a religious man—at defining Prendick as a materialist for putting ethical emphasis on the animals’ pain:

I am a religious man, Prendick, as every sane man must be. It may be I fancy I have seen more of the ways of this world’s Maker than you—for I have sought His laws, in my way, all my life, while you, I understand have been collecting butterflies. And I tell you pleasure and pain have nothing to do with heaven or hell. What is your theologian’s ecstasy but Mahomet’s houri in the dark? This store men and women set on pleasure and pain, Prendick, is the mark of the beast upon them, the mark of the beast from which they came. . . . (101-102)

Moreau’s mystic gnosticism regarding materialism ends with a curious reworking of St. John’s warnings about the mark of the anti-Christ in the book of Revelations.

Moreau’s religious language definitely sets him apart from Wells, who regarded
himself as a strict materialist, and, as critics have suggested, probably put more of himself into the figure of Prendick. Moreau, like Nordau’s degenerate, is confusing categories; science has become religion for Moreau. The mark of the anti-Christ has become the mark of our evolutionary ancestors. Transcendence, for Moreau, comes from a close examination of the physical laws that bind us; science allows Moreau to play the role of Creator artist. His “sympathetic pain,” allowed him to see the thing as an animal; his experimental passion allows him to see it as a scientific problem. Moreau’s mysticism, wedded to his belief in his scientific objectivity, produces a solely scientific way of seeing reality that excludes other explanations or interpretations. Moreau’s science is mysticism that allows him to purge the irrational animal with pain and produce a rational creature. Moreau’s science elevates him to the level of a god—the ultimate mystical self-deception.

In dismissing the importance of pain, Moreau also resembles Nordau’s ego-maniac. Moreau, exiled mentally and physically from the English scientific community, has forgotten any compassion for his beasts: “Sympathetic pain—all I know of it I remember as a thing I used to suffer from years ago” (102). Like Nordau’s ego-maniac, the pain of others is inconsequential in the light of his own research. Interestingly, it is evolutionary theory itself that Moreau uses to justify this ego-maniacal lack of compassion; pain is the useless stimulation of nerve ends that intelligent men learn to ignore, and Moreau “never yet heard of a useless thing that was not ground out of existence by evolution sooner or later” (101). Nordau’s lack of regard for the pain of sentient beings is—instead of being an aberration of his scientific approach—directly tied to it. It is tied to the question he is asking of nature,
the scientific experiment, which has become his monomaniacal pursuit. Everything, for Moreau, exists so that he can find answers to the questions he is putting to nature.

Moreau’s confused state is highlighted even more as, in the following paragraph, he invokes a definition of scientific method that resembles Nordau’s quite closely. Moreau believes in attempting to ask questions of nature for the sake of specific, objective answers, but his language betrays an awareness of the way in which his own consciousness shapes those questions and answers:

‘You see, I went on with this research just the way it led me. That is the only way I ever heard of research going. I asked a question, devised some method of getting an answer, and got—a fresh question. Was this possible, or that possible? You cannot imagine what this means to an investigator, what an intellectual passion grows upon him. You cannot imagine the strange colorless delight of these intellectual desires. The thing before you is no longer an animal, a fellow-creature, but a problem. . . . I wanted—it was the only thing I wanted—to find out the extreme limit of plasticity in a living shape.’ (102)

Moreau’s scientific experiments claim an objective approach to reality in that they assume a reality of which he can ask questions. But those very questions deform his own view of reality—the animal becomes something else. Moreau’s initial noun for the animal/problem is actually ‘the thing,’ which suggests that it has no existence apart from the way that Moreau sees it. Moreau’s language demonstrates a curious double-consciousness that allows him to recognize the limits of scientific epistemology even as employs it to further his own ends. Science allows him to see the object in and of itself, even as it transforms the object.

Moreau’s mystic, ego-maniacal scientific imagination initiates a spiraling loop of inauthentic relationships to reality that it is impossible to stop once initiated. Once science is exposed as subject to the unconscious whims of human imagination and
perception—and consequently misperception—it becomes impossible to trust any interpretation as definitive, and a completely authentic relationship to reality becomes inconceivable. Moreau, whose own perception of his own supposedly religious motives is questionable, in turn deliberately misrepresents himself to the beasts as a god, believing that he can control the beasts through false social and religious conventions similar to the ones that already constrict much of humanity. The Beast-People, who repeat their “law” at the behest of the Ape-Man priest, do more than satirize Christian liturgical practices; they illuminate the ways in which the mystic imagination inflicts meaning onto physical circumstances where simpler explanations would suffice. Moreau’s attempt to transform an ape into a man, for instance, is completely unnecessary from an evolutionary point of view; an ape and a man are already evolved for their respective ecological niches, the only purpose lies in Moreau’s need to know the limit of organic plasticity. The manipulative attempts of Moreau, Prendick, and Montgomery to control the beasts through a religious system of their own invention further isolates Moreau, Prendick, and Montgomery from any human social convention; since they can no longer believe in the kinds of social conventions they inflict as fictions on the beasts, they begin to resemble beasts themselves. *The Island of Dr. Moreau*, far from condemning the artificial constraints of civilization, implies that bestial nature is the only alternative to representations and misrepresentations of reality.

Moreau’s scientific discourse, coupled with what appears to be a degenerate mind, has allowed him to create and shape a distinct reality of his own, and that alternate reality brings Prendick to a horrifying awareness of the contingency of any
apprehension of reality. The “strange creations of Moreau’s art” create a reality on the island that shapes Montgomery’s and Prendick’s own. Montgomery, we are told, “had been with them so long that he had come to regard them as almost human beings” (114). Prendick himself becomes more accustomed to the Beast People: “a thousand things that had seemed unnatural and repulsive speedily became natural and ordinary to me. I suppose everything in existence takes in color from the average hue of our surroundings” (116). Prendick accepts, for the better part of year, their reality, all the while attempting to keep Moreau’s cult—the reality he had created—alive. As already shown, Moreau’s oddly destructive reality becomes his own; he recognizes the emptiness of the Beast People culture, but in recognizing it, cannot go back to believing human culture substantial.

The best example of the way that the island warps Prendick’s apprehension of reality comes in his description of the Monkey Man, who “assumed, on the strength of his five digits, that he was my equal, and was forever jabbering at me. . . . He had an idea, I believe, that to gabble about names that meant nothing was the proper use of speech. He called it ‘big thinks’ to distinguish it from ‘little thinks’—the sane everyday interests of life” (170-171). The irony is, of course, that the Monkey Man is actually right about the nature of speech, given Wells’s views on language. Prendick realizes this after he returns to civilization and finds that the civilized preacher “gibber[s] Big Thinks even as the Ape Man had done” (184). Prendick has difficulty

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8 Steve McClean, in “Animals, Language, and Degeneration in H.G. Wells’s The Island of Dr. Moreau, The Undying Fire 1 (2002) 43-50, has made the interesting suggestion that Wells was actually responding to the American naturalist Richard Garner who “conducted experiments with monkeys in his native America in 1884 and concluded he had found a number of Capuchin monkey words including those for food and drink” (43). McClean concludes his essay by stating that: “Wells creates a distinction between human and animal language, but then undercuts it by showing human language subject to reversion, or even more radically, its higher reaches turn into the same forms of gabble as that of the Beastfolk” (49).
seeing humanity as anything but “Beast People, animals half-wrought into the
outward image of human souls. . . they would presently begin to revert and show first
this bestial mark and then that” (182). And yet, this view of humanity as “Beast-
People,” is more correct than a faith in the conventions of human society. This
awareness of the contingency of reality is what eventually destroys Prendick’s mind:

I fell indeed into a morbid state, deep and enduring, alien to fear,
which has left permanent scars upon my mind. I must confess I lost
faith in the sanity of the world when I saw it suffering the painful
disorder of the island.

A blind fate, a vast pitiless mechanism, seemed to cut and
shape the fabric of existence, and I, Moreau (by his passion for
research, Montgomery (by his passion for drink), the Beast People,
with their instincts and mental restrictions, were torn and crushed,
ruthless, inevitably, amid the infinite complexity of its incessant
wheels. (134)

At the end of the novel, it is not Darwinian evolution, or even post-Darwinian
degeneration, that informs the horror of this novel. The horror of Moreau is the
knowledge that all representations are limited—even scientific representations. Each
fails to fully encounter a definitive reality, and in the ignorance that failure produces
it lays open the cast of the novel to the crushing complexity of reality.

The novel’s frame narrative, as well as a number of hints in the novel itself,
suggest that Prendick has hallucinated the entire narrative; that possibility amplifies
the collapse of scientific and artistic representation.⁹ Prendick tells us that he is seeing
a mental specialist who was familiar with Moreau’s experiments. We are also told, by

⁹ John Glendening, in “Evolution and Entanglement” has suggested something similar:
“These evidentiary speculations do not prove that Prendick’s tale is false, only that its degree of
accuracy cannot by objectively determined, that truth and falsehood cannot be disengaged. . . . It . . .
reminds us that narrative fiction necessarily commingles truth and falsehood, with the human mind
predisposed to participate in this entanglement. . . In a number of respects Wells’s novel does not
merely depict pervasive uncertainty, it actively enlists readers into it in such a way as to accentuate this
aspect of the human condition that most people are quite willing to overlook” (577).
Prendick’s nephew, that nothing like the beast people, dead or alive, was found on Noble’s Isle. Prendick, in this scenario, has substituted an erroneous narrative based on actual scientific experiments. The result is another dizzying spiral of qualifications: Prendick, who has imagined a series of scientific experiments based on actual scientific experiments, has come to a mental specialist, who, presumably, will use scientific methods to bring Prendick back into a proper relationship with reality—or a reality at any rate. Prendick must choose between what his senses and memory have told him is reality, and what scientific discourse tells him is reality—when, of course, his hallucinations make a claim to a scientific reality as well. Wells’s novel brilliantly demonstrates the mental confusion that resulted once he allowed that scientific practice was enmeshed in language as much as art was; his novel takes Nordau’s arguments and anxieties to their natural conclusion.

Wells, of course, did not completely lose faith in scientific discourse; throughout his life he advocated strongly for scientifically managed governments that would supplant religious ideology. But his novels just as often betray disquiet about the nature of scientific discourse. In addition to the figure of Dr. Moreau, perhaps one of the greatest symbols of Wells’s vexed attitudes toward scientific discourse comes in the substance of quap, which Wells gives us in his 1909 novel *Tono-Bungay*. Perhaps a play on the word ‘crap,’ which was just then coming into slang usage as a term for feces, quap is described in the vocabulary of a scientific discourse: “little molecular centres of disintegration, of that mysterious decay and rotting of those elements, elements once regarded as the most stable things in nature” (38). Wells’s protagonist George Pordervo continues: “there is something—the only word that
comes near it is cancerous—and that is not very near, about the whole quap, something that creeps and lives as a disease lives by destroying; an elemental stirring and disarrangement, incalculably maleficent and strange”(328). Like Wells’s unique atoms, quap is indescribable, and that indescribability threatens an entire scientific discourse. George Pordervo attempts to steal quap from the African coast in an effort to prop up his uncle Edward’s failing patent medicine business. Tono-Bungay—the patent medicine, is itself a metaphor for misleading scientific discourse wedded to the deceptions of capitalistic advertising and the impulses of the sex drive. Edward tells George that quap will be the salvation of their quickly failing Tono-Bungay empire, because its where the “Ideal and the Real!” will meet (310). They will have a truly useful commodity to sell, instead of one propped up by the false discourse of advertising. The reality of quap that George and Edward look to for their salvation proves to be destructive of reality itself. Scientific description lets George look at reality even as it disintegrates before his eyes. As the novel closes, George tells us that he still clings to his belief in scientific truth: “Sometimes I call this reality Science, sometimes I call it Truth. But it is something we draw by pain and effort out of the heart of life, that we disentangle and make clear” (388). For Nordau and Wells, scientific representation always ended in epistemic vertigo, as it became clear that no representation could successfully anchor itself completely in reality.
CONCLUSION

Rather than reassuring its users of epistemological reliability, scientific representation continually forced its users to become aware of their own epistemology. Joanna Baillie—along with her medical family—became aware of the manifold issues that surround any representation of the individual body. Phrenology led Charlotte Brontë to become aware of the manifold ways in which the mind is always dependent upon interpretation, even as it attempts to use a theoretical construct such as phrenology to explain itself. Darwin’s, and especially, Eliot’s use of the biological archetype itself was an acknowledgement of an epistemological lacuna; the archetype was a metaphysical way of imagining an empirical past that would otherwise be beyond scientific apprehension. As a result, Eliot’s realism itself became dependent upon an acknowledgement of the tentative nature of realistic representation. The extreme anxiety about the confusion of artistic and scientific representation in the work of Max Nordau—as well as the anxiety about, and perverse joy in, that same confusion on the part of H.G. Wells—suggests that anxieties about scientific representation may have hastened the end of nineteenth-century realism. For Eliot, Darwin, Nordau and Wells, epistemology had become such an abiding preoccupation that it made realism—at least as we have been taught to understand it—untenable.
Of course, this dissertation’s argument undermines that very understanding of realism—as an attempt to give unmediated verisimilitude—itself. In *Narrating Reality*, Harry Shaw suggests that nineteenth-century British realism has been fundamentally misunderstood:

I hope to show that realism doesn’t trade in ‘transparent’ representation, because it doesn’t need to and doesn’t want to. Realism doesn’t need to, because nothing about the nature of language requires that an attempt to make contact with the real world must involve ‘transparent reference’ to a putative ‘world prior to language.’ Realism doesn’t want to, because it’s often interested in the issue of how we can best come to the grips with the world, and because it’s always interested in engaging the reader, not in some sort of illusion of ‘direct’ contact with the world, but in a dialogue in which the stakes are more rhetorical than epistemological and have more to do with the will than with a certain (inadequate) model of knowing. (39)

Shaw’s study—which excludes any discussion of nineteenth century science—is preoccupied with showing that nineteenth-century novelists were as aware as we are today that language shapes, on the most fundamental of levels, our perception of the world. My study has suggested something similar. In the epistemic awareness that scientific representation seems to have invariably created, literary artists and scientists became profoundly aware of the theory-laden nature of their own perception. There is, in the literary artists I have discussed, little or no naiveté about the nature or possibility of realism. There is—and perhaps this where I disagree with Shaw—an attempt to work out a way of knowing the world without surrendering to a naïve epistemology. While they may not have arrived at the philosophical conceptualism articulated by Kuhn’s *Structure of Scientific Revolutions* in the 1960s, we can see in these scientists and writers the philosophical space which created Kuhn. Like Depew and Weber in *Darwinism Evolving*, they wanted to acknowledge the
conceptual frameworks that shaped their perception, even as they continued to have faith in the ‘reality’ that perception had created. They were empiricists in practice, but profoundly aware of the philosophical issues that eventually made conceptualism necessary.

It is that tension between the two that I have personally found illuminating and instructive. The “conceptual realism,” as I have termed it, is perhaps best articulated in Eliot’s *Daniel Deronda*. For all of its weird racial speculation, I find Eliot’s insistence on acknowledging the limitations of realism as a necessary precondition to knowing reality at all, refreshing. Rather than insisting on subjectivity and relativity as a default positions, Eliot seems content to acknowledge the ways in which conceptual paradigms shape her perception, and to proceed with that reality all the same. Darwin’s own proto-conceptualism seems to have been an inherent part of his success in convincing European naturalists to take evolutionary transformism seriously. His consciousness of the way in which prior assumptions inform your perception of reality, came out of his own questioning of contemporary basic assumptions. Rather than reducing the tension between objectivity and subjectivity, Eliot and Darwin seem to have been content to abide in that tension.

Often we have attempted to reduce a complex nineteenth-century British culture to a set of easily demarcated positions that obviously reflect our own epistemic troubles. Perhaps even this study, in replicating preoccupations with subjectivity and objectivity, can to some degree be accused of the same sin. Too often we have also made the mistake of assuming static beliefs and convictions on the part of the writers and intellectuals that inhabit the nineteenth-century British intellectual
canon. The reality, however difficult that reality may be to know, is almost certainly far messier. Wells, Eliot, Darwin, Brontë, Baillie, and the Hunters, among others, all found themselves living in the complicated day-to-day epistemological world that we ourselves inhabit. Their epistemic beliefs, like our own, were almost certainly a patchwork affair that allowed them to function in the world on a practical basis. The story this study has tried to tell is the way in which they—and as a result, we—became aware of that continually shifting epistemological matrix.
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