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POSSIBLE KNOWLEDGE: FORMS OF LITERARY AND SCIENTIFIC THOUGHT
IN EARLY MODERN ENGLAND

By

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ABSTRACT OF THE DISSERTATION

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This dissertation argues that the emergence of a new intellectual paradigm I call “possible knowledge”—encompassing projective, probable, counterfactual, hypothetical, conjectural, and prophetic ways of thinking—shaped literary and scientific writing in Renaissance England. The project uncovers a prehistory of scientific probability, still perceived as an Enlightenment-era phenomenon, by focusing on a constellation of speculative modes of knowing that drew on the imagination in the face of epistemic uncertainty. Possible knowledge emerges from elements crucial to our understanding of the literary, including mimesis, utopian discourse, and dramatic enactment, and it crosses generic boundaries. The disruption of prophetic certainty, for instance, informs the action in William Shakespeare’s *Macbeth*, while the unrepeatable epic events in John Milton’s *Paradise Lost* reveal why contemporary experimental methods—which could produce only probable knowledge about the natural world—were insufficient to explicate prelapsarian states of being. I engage with the history and philosophy of science to show how the techniques of writing associated with possible knowledge are visible across modern disciplinary divides: the error and the endlessness that govern Edmund Spenser’s

epic-romance, *The Faerie Queene*, are at the heart of the modern scientific epistemology laid out in Francis Bacon's inductive method. And as Margaret Cavendish's utopian experiment with cognitive realms in *The Blazing World* underscores, possibility could allow authors intellectual freedom and creativity in their engagement with the material world. By focusing on hypothetical and suppositional modes of thinking, I map the contours of the humanities and the sciences as these began to assume their modern disciplinary forms.

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Introduction

“The End of our Foundation is the knowledge of Causes, and secret motion of things; and the enlarging the bounds of Human Empire, to the effecting of all things possible.”¹ With these words, the father of Salomon’s House in Francis Bacon’s *The New Atlantis* (1627) launches into an account that famously captures—and deeply influences—the seventeenth-century impulse to pursue new methods of natural inquiry and reform ways of knowing the natural world. This narration ultimately hinges on an extremely ambitious desire: “the effecting of all things possible.” The father intimates that “all things possible,” though unknown or non-existent, can be known or actualized. Within his utopian narrative, Bacon forcefully brings the idea of actualizing possibility into the domain of natural knowledge. But he is not alone in reveling in the generative power of the “possible.” The idea of possibility—what Sir Philip Sidney in *The Defence of Poesy* had called the “may be and should be,” which he felt formed the essence of Renaissance poetic discourse—repeatedly captured the imagination of early modern thinkers.² It galvanized writers to create imaginary worlds and invent new methods for investigating not only nature but also, as Sidney writes, “forms such as never were in nature.”³ Possibility is an expansive concept: for instance, it carries within it ideas of open-endedness, suspension, incompleteness, future knowledge, and alternatives. As such, it became a critical instrument of knowing and imagining for Renaissance writers who found themselves in the midst of profound shifts in understanding, and who discovered

¹ Francis Bacon, *The New Atlantis* in *Francis Bacon: The Major Works*. Ed. Brian Vickers (Oxford World’s Classics, 2008), 480.

² Sir Philip Sidney, *A Defence of Poetry*. Ed. Jan Van Dorsten (Oxford: Oxford UP, 1966), 23.

³ *Ibid.*, 26.

that old systems and methods of knowing were inadequate to overcome an increasing sense of epistemic uncertainty about the nature of the universe, and of their place in it.⁴

Theories of Probability

Scholars typically foreground the rise of probabilistic knowledge in European thought in order to account for the ways in which Renaissance thinkers attempt to overcome the sense of uncertainty. In *The Emergence of Probability*, perhaps the most influential work on the topic, Ian Hacking argues “[p]robabilism is a token of the loss of certainty that characterizes the Renaissance.”⁵ Barbara Shapiro, in another prominent work on the subject, notes that seventeenth-century England witnessed “an enormous expansion of the realm of the probable and a contraction of the certain.”⁶ Her work serves as a survey and an invitation to explore the realms of probable knowledge in the fields of law, natural science, history, religion, and literature. Probability, however, itself had a much older history that extended across multiple disciplines. Aristotle’s distinction between probable and certain knowledge in the *Topics* shaped disciplinary divisions well into the sixteenth century. Philosophical inquiry traditionally aimed at obtaining certain knowledge and revealing the truth about causes. *Scientia* or *episteme*, achievable through

⁴ The story of changes in Renaissance epistemology is vast and varied. For an overview of several important transformations in astronomy, mathematics, empiricism, and medicine, see Steven Shapin, *The Scientific Revolution* (Chicago: U of Chicago P, 1996) and Peter Dear, *Revolutionizing the Sciences: European Knowledge and its Ambitions, 1500-1700* (Princeton: Princeton UP, 2001). For changes brought about by travel, see Mary Baine Campbell, *The Witness and the Other World: Exotic European Travel Writing, 400-1600* (Ithaca: Cornell UP, 1988) and Mary C. Fuller, *Voyages in Print: English Travel to America, 1576-1624* (New York: Cambridge UP, 1995).

⁵ Ian Hacking, *The Emergence of Probability: A Philosophical Study of Early Ideas about Probability, Induction and Statistical Inference* (Cambridge: Cambridge UP, 1975), 25. For a work that more broadly traces the increase in uncertainty in this period by linking it to the rise of skepticism, see Henry G. van Leeuwen, *The Problem of Certainty in English Thought, 1630-1690* (The Hague: Martinus Nijhoff, 1963).

⁶ Barbara J. Shapiro, *Probability and Certainty in Seventeenth-Century England: A Study of the Relationships between Natural Science, Religion, History, Law, and Literature* (Princeton: Princeton UP, 1983), 4.

logical demonstration, dealt with necessary, unchanging things.⁷ Probable knowledge, on the other hand, dealt with “questions of choice or opinion” and fell under the province of dialectic.⁸ These divisions were still prevalent, only in slightly modified forms, in the early modern university. The curriculum was divided into the *quadrivium* and the *trivium*, whose subjects mapped onto the domain of certain and probable knowledge respectively. The sixteenth-century student inherits the definition of probable knowledge from works like John of Salisbury’s *Metalogicon*, a defense of grammar, logic and rhetoric:

“Probable knowledge is concerned with propositions which, to all or to many men, or at least to the wise, seem to be valid....Probable logic includes dialectic and rhetoric.”⁹ It could not provide metaphysical explanations, which existed only for unchanging things.

As Shapiro demonstrates, the language as well as the concept of the probable expanded across religious discourse, legal arguments, and experimental philosophy. By the 1660s, the notion of probability was increasingly associated with science and mathematics and came to be understood primarily as a degree of certainty. Hacking defines mathematical probability as an Enlightenment novelty. Drawing on Foucault’s distinctions between Renaissance and Classical thought in *The Order of Things*, Hacking argues “the emergence of *our* [a specifically European] concept of probability” takes place only around 1660.¹⁰ Before this, probability and probabilism were linked with

⁷ On the other hand, *praxis* and *poiesis* dealt with “practical and productive knowledge” of variable or changing entities. Henry S. Turner, *The English Renaissance Stage: Geometry, Poetics, and the Practical Spatial Arts 1580-1630* (Oxford: Oxford UP, 2006), 46. For distinctions between certain and probable knowledge in disciplinary and institutional contexts, also see Dear (2001), 10-49 and Douglas Lane Patey, *Probability and Literary Form: Philosophic Theory and Literary Practice in the Augustan Age* (Cambridge: Cambridge UP, 1984), 4-13.

⁸ Turner, 46.

⁹ John of Salisbury, *The Metalogicon of John of Salisbury: A Twelfth-Century Defense of the Verbal and Logical Arts of the Trivium*, Trans. Daniel D. McGarry (Gloucester, MA: Peter Smith, 1971, 1955), 79.

¹⁰ Hacking, 9.

opinion, and not knowledge. It is only from the 1660s that a dual notion of “aleatory and epistemological” probability comes into being.¹¹ Both Foucault and Hacking suggest the groundbreaking probability calculus only developed at this moment because of radical conceptual changes that had nothing to do with older, more mundane notions of the probable.

The response to this thesis, perhaps expectedly, has been strong. Douglas Lane Patey argues that “ordinary notions of likelihood” which Hacking dismisses or ignores were crucial to the emergence of mathematical probability.¹² He shows how distinctions between internal (“the nondemonstrative testimony of things”) and external evidence (“evidence of human witnesses”) that Hacking finds only after the Renaissance, actually existed much before.¹³ Hacking’s limited body of evidence (scholastic philosophy) enables him to propose this radical break. Patey demonstrates “the timetable [Hacking] inherited from Foucault is in error by two thousand years” by tracing the prevalence of these very modes back to earlier periods, and to approaches in dialectic, rhetoric, and learned testimony.¹⁴ Lorraine Daston, moreover, challenges the very basis of any radical shift by arguing that conceptual and mathematical probability (which Hacking links absolutely) had different origins: “seventeenth-century probability,” she claims, “had more than Janus’s two faces [as marked by Hacking]; it was more a group of visages loosely assembled in a family portrait.”¹⁵ She argues that the quantification of probability

¹¹ Ibid., 10.

¹² Patey, 272.

¹³ Ibid., 270.

¹⁴ Ibid., 271. Patey shows how the distinction between internal and external evidence can be found in Aristotle and Cicero, how “from the ancient rhetoricians it passes to dialecticians, logicians, and moral theologians—all long before the Renaissance.” He also shows “the theory of signs—indeed, the distinction between certain and probable signs—is crucial to the doctrine of the Hippocratics, Aristotle, and Sextus” (270).

¹⁵ Lorraine Daston, *Classical Probability in the Enlightenment* (Princeton: Princeton UP, 1988), 12.

is not a product of games of chance, as Hacking claims, but of expectations. It emerges out of practices and changes in the legal tradition. Tracing the shifts in the meaning of “probability” in the seventeenth and early eighteenth centuries, Daston provides a prehistory of Hacking’s mathematical probability in the domains of contract law, equity, and risk management.

“Probability,” then, refers to a range of ideas and concepts, and it has emerged as the dominant term through which scholars understand the Renaissance’s gradual shift away from scholastic philosophical categories towards newly scientific ways of thinking. Yet it alone cannot account for the varied ways in which early modern thinkers made sense of an uncertain and unknown world. Prediction, contingency, and uniqueness were as important as likelihood, learned opinion, and degrees of certainty in an epistemic landscape where the scope of what constituted suitable objects of “knowledge” and “philosophical inquiry” were undergoing tremendous shifts. At the largest level, the Copernican revolution reoriented not only one’s understanding of the structure of the universe, but also of one’s place in it. Man was forever displaced from his stable position at the center of a geocentric cosmology. But shifts in epistemic attitudes, concerns, and aims extended beyond the realm of astronomy. At the turn of the seventeenth century, natural philosophers came to understand wonders, marvels, and accidents not merely as signs or portents but singular entities or events that actively demanded scrutiny.¹⁶ These natural anomalies erupt unexpectedly and are often so unique that one could not predict

¹⁶ The status of wonders, as unique and rare objects, and as affective modes of cognition, has received a lot of attention since Lorraine Daston and Katharine Park’s, *Wonders and the Order of Nature, 1150-1750* (New York: Zone Books; Cambridge, MA: Distributed by MIT P, 1998). For examples of literary scholarship on wonders, see Mary Baine Campbell, *Wonder & Science: Imagining Worlds in Early Modern Europe* (Ithaca: Cornell UP, 1999) and Michael Witmore, *Culture of Accidents: Unexpected Knowledges in Early Modern England* (Stanford: Stanford UP, 2001).

their emergence through degrees of probability or reliance on learned opinion. As Michael Witmore notes, “there could be no science of accidents; by definition these events had unique causes rather than general ones and so could not be brought into the purview of genuine philosophical inquiry.”¹⁷ It was impossible to provide systematized, generalized explanations of wonders or accidents because they were improbable and rare events.

These are only some examples of how new understandings of the universe—at the cosmological and terrestrial levels—demanded new approaches to knowing it. As early moderns embraced the idea that the world was fundamentally in flux, they recognized the necessity of developing new modes of knowing (such as a communal, local experimental practice), as well as the imperative to appropriate some modes (such as prophecy) that might not automatically fit into established disciplines. My dissertation provides an account of the emergence of a new intellectual paradigm under the rubric of “possible knowledge,” a term I use to refer to a constellation of intellectual modes—encompassing projective, conjectural, probable, predictive, conditional, counterfactual, and prophetic ways of thinking—that shaped literary and scientific writing in the Renaissance.

This focus allows us to see how poets and natural philosophers—who defined, tested, and pushed the boundaries of fabricated and real worlds—shared, appropriated, and refigured indeterminate and unclassifiable modes into powerful tools of thinking, knowing, and imagination. At a moment when Renaissance astronomers and natural philosophers were grappling with new accounts of the cosmos and the terrestrial realm, literature was engaged in a parallel philosophical endeavor that sought to furnish explanations about physical and metaphysical worlds. Early modern literature, from

¹⁷ Witmore, 2.

allegorical romance to tragic drama to epic poetry, repeatedly displays the features that are characteristic of possible knowledge. At the same time, hypothetical and predictive techniques of thinking extended across domains of natural inquiry, and they were especially critical to the development of experiment, induction, and theories of probability in the sciences. The concept of possible knowledge, then, emerges out of different methodologies and fields of study. It enables us to uncover a prehistory of scientific probability, still perceived as an Enlightenment-era phenomenon, by situating new objects (such as romance narratives) and varied modes (such as prophecy and allegory) within an intellectual history of the formation of modern disciplines.

Questions of Literature and Science

The study of scientific probability has largely remained in the domain of history of science, but historians of science and sociologists have also examined seventeenth-century theories and practices of natural knowledge in a variety of ways. By focusing on different venues¹⁸ and practices¹⁹, these scholars have questioned the dominant view of scientific knowledge originating in the minds of exemplary, often solitary figures.²⁰ In the

¹⁸ For examples of different sites of producing natural knowledge, see Steven Shapin, "The House of Experiment in Seventeenth-Century England," *Isis* 79.3 (1988): 373-404; Bruno Latour, *Science in Action: How to Follow Scientists and Engineers Through Society* (Cambridge, MA: Harvard UP, 1987); Paula Findlen, *Possessing Nature: Museums, Collecting, and Scientific Culture in Early Modern Italy* (Berkeley: U of California P, 1994).

¹⁹ For examples of work on scientific practices, see Thomas S. Kuhn, "Mathematical versus experimental traditions in the development of physical science," in *The Essential Tension* (Chicago: U of Chicago P, 1977), 31-65; Steven Shapin and Simon Schaffer, *Leviathan and the Air Pump* (Princeton: Princeton UP, 1985); Steven Shapin, "The Invisible Technician," *American Scientist*, lxxvii (1989): 554-563; Peter Dear, *Discipline & Experience: The Mathematical Way in the Scientific Revolution* (Chicago: U of Chicago P, 1995); Pamela O. Long, *Openness, Secrecy, Authorship: Technical Arts and the Culture of Knowledge from Antiquity to the Renaissance* (Baltimore: Johns Hopkins UP, 2001); Pamela H. Smith, *The Body of the Artisan: Art and Experience in the Scientific Revolution* (Chicago: U of Chicago P, 2004); William R. Newman, *Promethean Ambitions: Alchemy and the Quest to Perfect Nature* (Chicago: U of Chicago P, 2004).

²⁰ These ideas, and the emergence of the concept of the "Scientific Revolution" can be seen in early historiography of science. For example, see Herbert Butterfield, *The Origins of Modern Science, 1300-1800* (New York: Macmillan Co., 1951). Thomas Kuhn's *The Structure of Scientific Revolutions*

last thirty years, history of science as a discipline has simultaneously narrowed and expanded the concept of natural knowledge in the early modern period, by shifting attention to practice (from theory), process (from product), materiality (from ideas), multiplicity of perspectives (from internal thoughts or changes in individual perspectives), bodies (from minds), and by identifying new objects and venues of natural inquiry.²¹ At the same time, microhistories of figures, institutions, and practices (exemplified by works like *Leviathan and the Air Pump*) have expanded the methodological scope of historical inquiry.²² Moreover, the “social” turn in history of science is as much concerned with historiography and disciplinary concerns within the field of history as it is with the actual modes of knowledge production in the sixteenth and seventeenth centuries.²³

But while historians of science have asked how rhetorical strategies were crucial to the production of scientific knowledge, they have paid less attention to the status of the “literary” as a comparable and competing system of explanation and knowledge production in the early modern period.²⁴ In recent years, literary scholars have

(Chicago: U of Chicago P, 1962) remains an important turning point that marked shifts in scholarship in the history and philosophy of science.

²¹ For examples of “new” objects that form a part of science, see William Eamon, *Science and the Secrets of Nature: Books of Secrets in Medieval and Early Modern Culture* (Princeton: Princeton UP, 1994). Also see Daston and Park, Pamela H. Smith, Long. For the importance of material changes to the emergence of ideas, see Elizabeth L. Eisenstein, *The Printing Press as an Agent of Change: Communications and Cultural Transformations in Early Modern Europe* (Cambridge: Cambridge UP, 1979). For a revision of Eisenstein’s argument in light of works such as Shapin and Schaffer, see Adrian Johns, *The Nature of the Book: Print and Knowledge in the Making* (Chicago: U of Chicago P, 1998).

²² Findlen’s work provides another kind of microhistorical account. She focuses on the museum in Italy as it evolves within a limited period of time. Also see Mario Biagoli, *Galileo, Courtier: The Practice of Science in the Culture of Absolutism* (Chicago: U of Chicago P, 1993), for an account of how changes in disciplinary practices can provide more focused accounts of canonical figures of the “Scientific Revolution.”

²³ I would identify Shapin and Schaffer’s *Leviathan and the Air Pump* as an extremely important marker for shifts in the study of early modern science in this context.

²⁴ For an example of the study of rhetoric, see Peter Dear, “Totius in Verba: Rhetoric and Authority in the Early Royal Society,” *Isis* 76 (1985): 144-161.

demonstrated how various literary forms and genres were crucial to the development as well as the practice of natural inquiry. Only partially in direct engagement with questions raised by historians of science, and also drawing on the work performed in science studies, this scholarship has moved beyond studying scientific content and imagery in literary works that was the primary focus of early and mid-twentieth-century criticism.²⁵ It explores analogies between scientific and literary practice, the relationship between science and other contemporary discourses, and formal issues that demonstrate how imaginative literature and fiction were crucial sites for knowledge production. For example, Mary Baine Campbell's *Wonder and Science* examines the relationship between pleasure and learning, and between fiction and reality, through the concept of "wonder" in English and Continental works, as she traces the links between imaginative writing and anthropology.²⁶ In *Labors of Innocence in Early Modern England*, Joanna Picciotto traces the links between physical and intellectual labor in seventeenth-century England by examining a tradition of "experimentalist literature." Picciotto's experimentalist authors are aligned in their methods with the experimenters in the Royal Society, as both demonstrate a "commitment to collaborative empiricism" and replicate the "crucially prosthetic, collective, and processual character of experimentalist

²⁵ I am thinking of early works like M.H. Nicolson, *Science and Imagination* (Ithaca: Cornell UP, 1956). For an example of the divisions drawn between historiography and literary criticism, see Elizabeth Spiller, "Introduction: making early modern science and literature," in *Science, Reading, and Renaissance Literature: The Art of Making Knowledge, 1580-1670* (Cambridge: Cambridge UP, 2004), esp. 13. All citations to Spiller's writings are to this work, unless stated otherwise. Bruno Latour's work in science studies has been especially influential in literary studies. In "Science Studies and the History of Science," *Critical Inquiry* 35.4 (2009): 798–813, Lorraine Daston traces the history of "history of science" and "science studies" to show their gradual disciplinary separation. For a critique of Daston's separations, see Peter Dear and Sheila Jasanoff, "Dismantling Boundaries in Science and Technology Studies," *Isis* 101.4 (2010): 759-774.

²⁶ Witmore, too, provides another history of concepts. He takes as his starting point the fact that one of the most "traditional sources" of "wonder," "accidental events" has not been studied in any detail.

insight.”²⁷ Jessica Wolfe’s *Humanism, Machinery, and Renaissance Literature* uncovers “how machinery plays a central and transformative role in the way Renaissance humanists reassess their understanding of all manner of instrumental means” before the rise of mechanistic philosophy, which led to more explicit dualistic understandings of humans and machines.²⁸ Wolfe’s work provides an early example of the study of objects, matter, and materialism that has emerged as a prominent subfield in early modern studies.²⁹

In addition to examining the complex history and cultural significance of specific concepts and practices, scholars have also uncovered broader relations between knowledge and practice in different literary forms. In *Science, Reading, and Renaissance Literature*, Elizabeth Spiller argues that while early modern science was often practiced as an art, “imaginative literature provides a form for producing knowledge”; knowing in this period became predicated on making.³⁰ In *The English Renaissance Stage*, Henry Turner demonstrates how early modern stage practice conceptualized “problems of theatrical representation” in terms of “contemporary developments in early-modern technology, applied mathematics, and pre-scientific thought.”³¹ He argues this attention

²⁷ Joanna Picciotto, *Labors of Innocence in Early Modern England* (Cambridge, MA: Harvard UP, 2010), 26, 16.

²⁸ Jessica Wolfe, *Humanism, Machinery, and Renaissance Literature* (New York: Cambridge UP, 2004), 2.

²⁹ See for instance, Jonathan Gil Harris, *Untimely Matter in the Time of Shakespeare* (Philadelphia: U of Pennsylvania P, 2009); Jonathan Goldberg, *The Seeds of Things: Theorizing Sexuality and Materiality in Renaissance Representations* (New York: Fordham UP, 2009); Gerard Passannante, *The Lucretian Renaissance: Philology and the Afterlife of Tradition* (Chicago: U of Chicago P, 2011).

³⁰ Spiller, 2.

³¹ Turner, 3.

to practical geometry and mechanical arts enables us to rethink not only dramatic content but also dramatic form.³²

Drawing on a variety of sources, and by adopting different methodologies, this scholarship has highlighted the capacity of literary writing to raise and explore intellectual questions. It has enriched our understanding of the relations between literature and other disciplines (geometry in Turner, anthropology in Campbell), or ways of knowing (“making” in Spiller, experimentalism in Picciotto). In several cases, scholars juxtapose Renaissance works that in retrospect (and some cases even in their moments of production) are marked as literary and scientific respectively (Spiller and Campbell, in slightly different ways, adopt this approach). Frédérique Aït-Touati’s recently published *Fictions of the Cosmos* relies on this model, as she juxtaposes astronomy and literature in the service of excavating the commonalities between imaginative works and writings on cosmology. While Aït-Touati frames this attempt to “combine these two [scientific and literary] corpuses” as a new approach, her methodology—and even the texts she focuses on—closely resembles some of the scholarship I mention above.³³

³² There are various other strands to the scholarship in the field of literature and science. For examples of the study of relationships between science and politics, see Denise Albanese, *New Science, New World* (Durham: Duke UP, 1996) and John Rogers, *The Matter of Revolution: Science, Poetry and Politics in the Age of Milton* (Ithaca: Cornell UP, 1996). Collections of essays like *Science, Literature and Rhetoric in Early Modern England*, Eds. Juliet Cummins and David Burchell (Burlington: Ashgate, 2007) and Carla Mazzio (Ed.) *Shakespeare and Science: South Central Review* 26.1-2 (2009) demonstrate how specific aspects of what we consider the “literary” are also commenting on or engaged with “scientific” practices and disciplines. For examples of scholarship on mathematics, see *Arts of Calculation: Quantifying Thought in Early Modern Europe*, Eds. David Glimp and Michelle R. Warren (New York: Palgrave Macmillan, 2004). Also see Gail Kern Paster, *The Body Embarrassed: Drama and the Disciplines of Shame in Early Modern England* (Ithaca: Cornell UP, 1993); Jonathan Sawday, *The Body Emblazoned: Dissection and the Human Body in Renaissance Culture* (New York: Routledge, 1995); *The Body in Parts: Fantasies of Corporeality in Early Modern Europe*, Eds. David Hillman and Carla Mazzio (New York: Routledge, 1997), for examples of the body in relation to early modern knowledge production. Also see Mary Thomas Crane, *Shakespeare’s Brain: Reading with Cognitive Theory* (Princeton: Princeton UP, 2001) for cognitive science and its application to Shakespeare.

³³ Frédérique Aït-Touati, *Fictions of the Cosmos: Science and Literature in the Seventeenth Century*. Trans. Susan Emanuel (Chicago: U of Chicago P, 2011), 4. Her claim that the field of literature and science “has remained centered on the literary canon and included scientific texts only for comparison” (3)

My dissertation contributes to this field of scholarship by excavating the varied ways in which early modern thinkers drew on the imagination in order to convert uncertainty and inconclusiveness into generative forces of learning. Possible knowledge names a collection of formal, cognitive, and figurative techniques that shaped literary and scientific writing in the Renaissance. The techniques I explore, from hypothesis to conjecture, from prediction to prophecy, overlap in complex ways and define how Renaissance actors came to think and know, and how they represented their ways of knowing. My work locates a prehistory of scientific probability neither in specific disciplines (such as dialectic) nor in particular methods of inquiry (such as calculus), but *across* disciplines and methods, and often outside the purview of existing fields and predefined methodologies. It argues that unclassifiable and indeterminate modes of knowing were pivotal to the refiguration of disciplines in this period. Beginning with the intellectual processes that underlie poetic and dramatic forms in the 1590s and the early-seventeenth century, I trace how literary epistemologies were crucial to the shapes that disciplinary knowledge took in the natural sciences in the mid-seventeenth century. From there, I follow fictional works that expand the epistemic scope of imaginative writing in the wake of methodological and institutional transformations in the sciences.

Literary writing made fabrication, creation, and imagination preconditions, rather than deterrents, to learning about the self and the world. In the dissertation, I explore how specific literary forms and genres produced their own instruments of inquiry. For instance, I show that romance and utopian texts generated a theory of endless learning; tragic drama deployed the epistemology underlying prophetic discourse; epic poetry

seems to ignore the previously mentioned criticism, and in many ways, her text follows the exact form of Spiller's work, or Campbell's, as she places Kepler's writings alongside Godwin's, or Hooke's alongside Cavendish's.

transformed events into unique instances of producing certainty. These techniques demonstrate that imaginative writings were not only creative and ethical enterprises but philosophical endeavors that engaged with the actual world through techniques of hypothesis and conjecture. This is not to say, of course, that authors like John Milton or Edmund Spenser were not thinking of their works as “poetic,” or that writers like Bacon were not distancing themselves from fiction. But by taking a closer look at the various techniques they employ—allegory, prophetic performances, induction, epic events, and materialist worldmaking—we can trace a history of ideas that cuts across emerging or existing divisions, even though writers like Spenser and Bacon demarcate their own disciplinary and methodological boundaries.

Possible Knowledge and Literary Reference

Elizabethan poetry—distanced from verifiable facts but aiming to affect the real world—provides an ideal starting point for defining the contours of possible knowledge. Elizabethan writers theorizing poetry often evoked Aristotle’s definition in the *Poetics*, where he states “the function of the poet is not to say what *has* happened, but to say the kind of thing that *would* happen, i.e. what is possible in accordance with probability and necessity.”³⁴ The poet, then, is not responsible for historical truth or empirical fact but only states “what is possible.” By expressing the “kind of thing that *would* happen,” he privileges plausibility over propositions with determinable truth-values. Moreover, his

³⁴ Aristotle, *Poetics*, 51b, in *The Complete Works of Aristotle*. Ed. Jonathan Barnes (Princeton: Princeton UP, 1984). Modern scholarship often draws on Aristotle’s definition of poetry to explore the relationship between truth and fiction. For example, Catherine Gallagher uses it to equate the works of the counterfactual historian and the poet and theorizes a “‘poetics’ of counterfactualism,” which is the “ability to transform the actual into merely one probability among others.” See Catherine Gallagher, “When Did the Confederate States of America Free the Slaves?” *Representations* 98 (2007): 53-61, esp.58. In *The Aesthetics of Mimesis: Ancient Texts and Modern Problems* (Princeton: Princeton UP, 2002), Stephen Halliwell suggests for Aristotle, mimetic work is the “representation of human action in a possible world” (28) and that “a mimetic art form” represents “the features of the possible worlds” (163). Also see Halliwell, 163, 166-167, 193.

ability to speak about the universal rather than the particular aligns poetry closer to philosophy and distances it from historical knowledge. However, operating within the laws of “probability or necessity,” Aristotle’s poet is constrained to provide certain kinds of reference to reality as well as to plausibility.

Before turning to Elizabethan poetry’s theorization of possibility, I want to focus on the notion of reference as a key to understanding the relation between reality and fiction, on the one hand, and between truth and fabrications, on the other. Reference provides a crucial link between ontology and epistemology, by bringing together questions of knowledge, truth-values, and existence in literature, philosophy, and science. Modern philosophers understand reference as something very specific: the definition is built on Gottlob Frege’s distinction between sense and reference.³⁵ In this formulation, reference is synonymous with denotation and extension. It is supposed to point to entities in the physical world, while sense, connotation, and intension signify their meanings.³⁶ Such a model is limited, not least because it classifies fiction and literature as false: since one can only refer to real objects, talking about fictional entities—characters, events, places—leads to “referential failure.”³⁷ This denotative concept of reference, which signifies by pointing to a physical entity in the real world, is insufficient to address the

³⁵ See Gottlob Frege, “On Sense and Reference,” in *Translations from the Philosophical Writings of Gottlob Frege*, Eds. G.P. Geach and M. Black (Oxford: Blackwell, 1960), 56-78.

³⁶ For the basic difference between the three pairs, sense-reference, connotation-denotation, intension-extension, as used and understood in philosophy, see A.C. Grayling, *An Introduction to Philosophical Logic*, 3rd Ed. (Oxford: Blackwell, 1997), 21-24. Grayling explains, “[s]peaking informally, the first family of terms concerns what we would ordinarily call the ‘meaning’ of a term, and the second concerns the range of items to which it applies” (21). For extension of a sentence as its “truth-value,” see Rudolf Carnap, *Meaning and Necessity: A Study in Semantics and Modal Logic*, 2nd Ed. (Chicago: U of Chicago P, 1956), 25-27. Carnap defines the intension of a sentence as the “proposition expressed by it” (27). The intensional nature of the statement separates it from its truth-value; a sentence may be meaningful without being true. Carnap draws on the work of C.I. Lewis and A. von Meinong to show that intension allows us to talk about meaning without truth-value of “nonactual, possible things” (65).

³⁷ Marie-Laure Ryan, *Possible Worlds, Artificial Intelligence, and Narrative Theory* (Bloomington: Indiana UP, 1991), 14.

propositional nature of language, or other systems of thought that produce meaning through connotation. In order to consider how fiction can refer and express propositions, philosophers have attempted to separate the “discourse about fiction” from “discourse about actuality.”³⁸ Literary scholars have adapted and modified one particular method that considers the referential status of non-existent objects—possible worlds semantics—to examine what Marie-Laure Ryan terms “the problem of truth in fiction and in the relation between semantic domains and reality.”³⁹

The status of the possible worlds of philosophy, which converted Gottfried Wilhelm Leibniz’s metaphysics of “the best of all possible worlds” into tools of modal logic, is controversial: while most philosophers accept them as logical constructions and empirical tools (for instance, Ryan draws on Nicholas Rescher’s work to suggest they are constructs of the mind and are dependent on the “mental process to which they owe their existence”), very few follow David Lewis in defending modal realism.⁴⁰ At the opposite end, the philosopher Nelson Goodman does not even entertain the thought of possible worlds. He rejects possible worlds for “multiple actual worlds” and argues the “so-called possible worlds of fiction lie within actual worlds. Fiction operates in actual worlds in much the same way as nonfiction.” Thus, Goodman seems to give all forms of worldmaking an actual, and not only actualizable, ontological and epistemological

³⁸ Keith S. Donnellan, “Speaking of Nothing,” *The Philosophical Review* 83.1 (1974): 3-31, 5.

³⁹ Ryan, 3. For the application of possible worlds semantics to literary texts, see Ryan. A constructionist view of literature has been dominant since Saul A. Kripke’s seminal work postulated a semantics for modal logic. Kripke claims, “[p]ossible worlds are stipulated, not discovered by powerful telescopes.” Saul A. Kripke, *Naming and Necessity* (Cambridge, MA: Harvard UP, 1980), 44. For the basic tenets of modal logic and possible worlds semantics, in addition to Kripke, see David Lewis, *On the Plurality of Worlds* (New York: B. Blackwell, 1986), David Lewis, *Counterfactuals* (Cambridge, MA: Harvard UP 1973; revised printing Blackwell, 1986) and Alvin Plantinga, “Actualism and Possible Worlds,” *Theoria* 42 (1976): 139-160.

⁴⁰ Ryan, 19. Lewis’ basic claim is that there are many entities that can be described as “ways things could have been” and he can call these entities “possible worlds” (Lewis, 1973), 84.

identity.⁴¹ Theories of possible worlds of fiction derive from but ultimately separate from modal logic and possible worlds semantics in philosophical discourse. Possible worlds of fiction are supposed to be ontologically distinct from actual worlds, and as Lubomir Dolezel claims, there can be infinite number of these “uncountable possible, nonactualized worlds.”⁴² Dolezel suggests that since these worlds are fictional, one does not encounter some of the main problems—including essentialism—that haunt possible worlds semantics.

At an obvious level, scientific writing claims to denote existing entities in the physical world through symbolic and semiotic reference, while literature is the domain of the connotative, and in many cases, the intensional, since it refers to entities—physical and mental—that have no empirical existence. Scientific writing—or inscription, to use Bruno Latour’s terminology—claims to translate the world into signs through semiotic systems that ultimately refer back to the physical realm.⁴³ But in contrast to the analytical philosophers mentioned above, Latour offers a more flexible model of scientific reference as “circulating.”⁴⁴ He distinguishes “circulating reference” from philosophical meanings

⁴¹ Nelson Goodman, *Ways of Worldmaking* (Indianapolis: Hackett Pub. Co., 1978), 2, 104. Goodman claims that worldmaking—in all art, not only in literature—is a way of knowing. His multiple actual worlds are not created ex nihilo, but worlds are made “*from other worlds*” (6). For good summaries of the main tenets and problems of possible worlds semantics and modal logic, see Graying, 49-71, and Michael J. Loux, *Metaphysics: A Contemporary Introduction*, 2nd Ed. (New York: Routledge, 1998), 176-214.

⁴² Lubomir Dolezel, *Heterocosmica: Fiction and Possible Worlds* (Baltimore: Johns Hopkins UP, 1998), 13. Also see Thomas G. Pavel, *Fictional Worlds* (Cambridge, MA: Harvard UP, 1986), 11-29, for the application of possible worlds semantics to literary texts.

⁴³ Latour defines inscriptions as “all types of transformations through which an entity becomes materialized into a sign, an archive, a document, a piece of paper, a trace,” in *Pandora’s Hope: Essays on the Reality of Science Studies* (Cambridge, MA: Harvard UP, 1999), 307. My understanding of “reference,” as Latour defines it, is particularly influenced by the essay “Circulating Reference,” in *Pandora’s Hope*, 24-79. In both “Circulating Reference” and in *Science in Action*, Latour is talking about experimental science and technology, and the notion of pure mathematics might not fit in easily with this idea of empirical science.

⁴⁴ He defines “reference as “the many practices that end up articulating propositions. ‘Reference’ does not designate an external referent that will be meaningless (that is, literally without means to achieve its

of “reference,” and he demonstrates how different elements—maps, notes, specimens, instruments, etc.—create chains of reference, or varying systems of signs which point to material units on one side, and are pointed to by more formal units on the other.⁴⁵ Finally, if we trace back from the final inscription (usually written) in this chain, we can point to the original entity located in the physical world. In general scientific writing would understand itself to be referential precisely because it can point to the physical world and can designate through specialized semiotic systems. When in the early 1600s Bacon rues the fact that “men study words and not matter,” he articulates just such an understanding of natural philosophy—to study and write about “matter.”⁴⁶ Such a form of reference, I would suggest, is ultimately representational in that it converts—translates, in Latour’s terms—physical entities into systems that denote or designate symbolically.

Literary language, on the other hand, creates as well as represents, without an attempt to refer back to “matter.” Instead of designating physical or mental constructs, it relies on connotations in order to generate meanings and thus has a different relation to empirical or verifiable truth. Poetry refers to entities, ideas or physical objects and it might, but it does not necessarily, refer back to the physical world.⁴⁷ Poetic language refers directly—or points—to fictional objects in fictional worlds, which constitute its

movement), but the quality of the chain of transformation, the viability of its circulation” (*Pandora’s Hope*, 310).

⁴⁵ Scientific inscriptions operate through symbols and chains of “reference” and push representational elements in two directions, formal and material. The “formal” and the “material” constantly exchange places as information is translated and transmitted through this chain. See “Circulating Reference,” esp. 29-31, 69-79.

⁴⁶ Francis Bacon, *Advancement of Learning* in *Francis Bacon: The Major Works*. Ed. Brian Vickers (Oxford World’s Classics, 2008), 139.

⁴⁷ In some cases, literary scholars also adopt a limited notion of referential as “real” or “experiential”: Fuller argues that “referential claims” of voyage literature correspond to the fact that “these things really happened, and that they were recorded by men who had experienced and witnessed them” (3).

ontological, epistemic and formal domain.⁴⁸ These worlds can of course be representations of “real” world entities, much like denotative writing, but they are often created, when poets give form to abstract ideas and concepts that do not exist empirically. In giving form to ideas, such writing depends on connotations, in the sense of “that which is implied in a word in addition to its essential or primary meaning.”⁴⁹ As such, the knowledge that literature provides cannot be studied under the rubrics of reality, designation, and verifiability, even though they affect our understandings of the actual realm.

But literary writing, or *poesie*, to borrow the common early modern terminology, also highlights the dual nature of reference both as activity and object: *poiesis* signifies “productive knowledge” where “making finds its ends in its object,” in this case the literary artifact.⁵⁰ In this scenario, one must consider two things while talking of reference: one refers *to* something, and one refers to *something*. Early modern writers understood poetic production as a form of making, and thus any discussion of reference must simultaneously consider the act of referring as well as the entity being referred to. Early modern literature, unlike scientific inscription—or even historical writing, which was shifting to more fact-based approaches in this period⁵¹—theorizes and enacts this

⁴⁸ Possible worlds theorists would ask us to understand fictional worlds like we read real worlds, often suggesting there is no explicit ontological difference. As a result, we can always talk of direct “reference” to a separate ontological domain, the fictional world. The problem might be in the “pseudoreality” of fictional worlds: “we ontologically know they are different, but in immersion, we can experience them as real” (Ryan, 22). Ryan provides a useful way of thinking about this difference, perhaps, by defining the actual as a world that is particularly experienced: “‘To be actual means: ‘to exist in the world from which I speak.’ Alternative possible worlds (APWs) cannot be actual for me, since I consider them from another planet in the universe of possibilities. I may therefore speak of unactualized possible worlds and unactualized possibilities. But insofar as they exist absolutely, APWs are real, and every possibility is realized in some world” (18).

⁴⁹ OED Online. March 2013. Oxford University Press. (accessed April 21, 2013).

⁵⁰ Turner, 46-47.

⁵¹ See Shapiro, who shows how the emphasis of seventeenth-century history-writing shifted from morals to facts.

dual notion of reference by drawing attention not to real but to imaginary worlds that are being created by authors. In their acts of fabrication, poets do not presuppose an extant world to which one refers; they engage in an open-ended activity that brings forth possible worlds, adapting denotative or circulating notions of reference. Literary writings employ a form of reference that circulates only internally in a work, or within multiple textual works.

Towards a Poetic Epistemology: Sidney's *Defence*

Sidney's *Defence of Poesy*, which theorizes the work performed by Elizabethan poetry, explores creative and denotative notions of reference as it defines the epistemic and ethical scope of poetic production. Drawing attention to the absence of historical reference and employing Aristotle's definition, Sidney suggests that verisimilitude and moral certainty define the scope of poetic knowledge.⁵² Sidney argues that the lack of historical truth-value makes poetry a superior and unique vehicle of moral education. Aiming to "teach and delight," poetry is an epistemic tool that performs an ethical function through its unique capacity for "delightful teaching."⁵³ Poetry is an imaginative

⁵² See Patey, x, on verisimilitude as the province of literary works since Aristotle. Sidney's own definition of poetry is explicitly Aristotelian, but whether his theories of poetry are Aristotelian or Platonic, or a mixture of both, has occupied critics for a long time. S.K. Heninger, Jr., *Sidney and Spenser: The Poet as Maker* (University Park: The Pennsylvania State UP, 1989), draws attention to both aspects of the *Defence*. On Sidney's affinity with Platonism, see John P. McIntyre, "Sidney's 'Golden World,'" *Comparative Literature* 14.4 (1962): 356-365 and Henry Partee Morriss, "Sir Philip Sidney and the Renaissance Knowledge of Plato," *English Studies* 51.5 (1970): 411-424. On the relationship between Sidney's *Defence* and Renaissance Italian theories of poetics, see Ronald Levaio, *Renaissance Minds and Their Fictions* (Berkeley: U of California P, 1985), 103-133. For more on particular influences on Sidney see Michael Mack, *Sidney's Poetics: Imitating Creation* (Washington, D.C.: Catholic U of America P, 2005) and Robert Stillman, *Philip Sidney and the Poetics of Renaissance Cosmopolitanism* (Aldershot: Ashgate, 2008), 29. On the relationships between Plato and Aristotle in Sidney, see A.C. Hamilton, "Sidney's Idea of the 'Right Poet,'" *Comparative Literature* 9.1 (1957): 51-59. For Sidney's argument as Aristotelian, and a rejection of Platonism, see Kenneth Myrick, *Sir Philip Sidney as a Literary Craftsman* (Lincoln: U of Nebraska P, 1965). The question of influence has also come up in recent work on "literature" and "science." For the importance of Aristotle's *Nicomachean Ethics* to Sidney's work, see Turner, 82-113. For a discussion of how the *Defence* provides an "accommodation between Neoplatonic idealism and Aristotelian mimesis," see Spiller, 27.

⁵³ Sidney, 25, 27.

discourse that produces *idealized and possible fictions*, which furnish unique methods and replicable models for action in the real world. Even though a poet creates a “golden” world that is always fabricated, he aims at “well doing” and not merely “well knowing” in the poet’s, and the reader’s, world.⁵⁴

Sidney separates the ideal and possible worlds of poetry from the real by stressing the poet’s creative power: “Nature never set forth the earth in so rich tapestry as divers poets have done; neither with so pleasant rivers fruitful trees, sweet-smelling flowers, nor whatsoever else may make the too much loved earth more lovely. Her world is brazen, the poets only deliver a golden.”⁵⁵ The poet’s “golden” world exceeds the realities of nature’s “brazen” world, with and within which all other artists have to work; while the astronomer, geometrician, arithmetician, musician, the natural and moral philosopher, and the physician are “tied” to the “subjection [of nature],” the poet “lifted up with the vigour of his own invention, doth grow in effect another nature, in making things either better than nature bringeth forth, or, quite anew, forms such as never were in nature.”⁵⁶ The poet’s capacity to exceed nature’s bounds and escape the limits imposed by natural laws allow him to transcend the physical world and produce a fictional one. This ability for worldmaking—to produce “golden” worlds or “another nature” that either betters nature or creates new ones—demonstrates the power of an art that uses unhistorical events or unempirical methods to promote ethical change in the real world.

Sidney’s “mimetic” art is a creative process, a “figuring forth.”⁵⁷ The poet

⁵⁴ Ibid., 24, 29, 29. For golden world as an idea, see Mack, 124-126, 139-156. For the relationship of the golden world to England, see Spiller, 24-45.

⁵⁵ Sidney, 24.

⁵⁶ Ibid., 23. For the relationship of poetry to productive arts, see Turner, 43-113. Also see Heninger and Myrick.

⁵⁷ Sidney, 25.

performs the kind of mimesis that Phillippe Lacoue-Labarthe, drawing on Aristotle, terms “general mimesis.” In contrast to a restricted notion of mimesis, or “the reproduction, the copy, the reduplication of what is given (already worked, effected, presented by nature),” Lacoue-Labarthe defines “general mimesis” as a productive, and by extension a creative act,

which reproduces nothing given (which thus re-produces nothing at all), but which *supplements* a certain deficiency in nature, its incapacity to do everything, organize everything, makes everything its work—*produce* everything. It is a productive mimesis, that is, an imitation of *phusis* as a productive force, or as *poiesis*. It accomplishes, carries out, *finishes* natural production as such.⁵⁸

General mimesis is “productive” because it does not re-produce; instead it produces out of nothing, absence and lack. Instead of imitating the objects in nature, the artist imitates nature’s “productive force,” or nature *as* a productive force. Sidney’s mimesis too draws on this notion of nature’s “*gift of nothing*,” except the gift of “pure and ungraspable poiesis.”⁵⁹ Sidney terms the emulation of this productive force the poet’s “vigour,” which enables the poet to escape the “subjection” of the natural world and create “forms such as never were in nature.” Sidney’s poesy is primarily an art that employs, in Stephen Halliwell’s terms, “the idea of mimesis as the creator of an independent artistic heterocosm, a world of its own.”⁶⁰

These novel “forms” or “golden” worlds are imagined versions of worlds and things as they “may be and should be”—the possible and the ideal, which Sidney does

⁵⁸ Phillippe Lacoue-Labarthe, *Typography: Mimesis, Philosophy, Politics*. Ed. Christopher Fynsk (Cambridge, MA: Harvard UP, 1989), 256-257.

⁵⁹ *Ibid.*, 259. For a fuller exploration of the relevance of “general mimesis” to early modern poetics, see Michael C. Clody, “Shakespeare’s ‘Alien Pen’: Self-Substantial Poetics in the Young Man Sonnets,” *Criticism* 50.3 (2008): 471-500.

⁶⁰ Halliwell, 4.

not separate.⁶¹ These modal claims separate the poet's method and scope from the work of the historian, who deals with the "bare Was" and is "captived to the truth of the foolish world, [which] is many times a terror from well-doing."⁶² These models do not create or produce physical references in the external world; what the poet, and subsequently the reader, refers to are entities *within* the fictional worlds. These models are historically or empirically non-referential but are poetically referential. Any act of readerly engagement must occur through a reference to entities within the poem. While other practical artists, as well as the historian, rely on verifiable facts, poetry is limited to the poet's imaginative power, as he "freely rang[es] only within the zodiac of his own wit."⁶³ *Because* it is distanced from actuality, poetry can provide knowledge more "freely" through possibilities and ideals, even though its ultimate aims might be political or practical like that of other arts.⁶⁴ While truth and facts imprison the historian, limit his scope and potentially prevent him from "well-doing," the poet is free to invent precisely because of the suspension of historical truth or historical reference.

Employing the terminology of logical debate, Sidney counters the claim that "the poet is the least liar" because only they lie who

take upon them to affirm. Now, for the poet, he nothing affirms, and therefore never lieth. For, as I take it, to lie is to affirm that to be true which is false. So as the other artists, and especially the historian, affirming many things, can, in the cloudy knowledge of mankind, hardly escape from many lies. But the poet (as I said before) never affirmeth...He cited not authorities of other histories, but even for his entry calleth the sweet Muses to inspire into him a good invention, not labouring to tell you what is or is not, but what should or should not be. And therefore, though he recount things not true, yet because he telleth them not for

⁶¹ Sidney, 26.

⁶² Ibid., 36, 38.

⁶³ Ibid., 24.

⁶⁴ See Ronald Levaio, "Sidney's Feigned Apology," *PMLA* 94.2 (1979): 223-233 for the relationship between the ideal and the actual. Sidney's poetry "becomes a conduit, leading the ideal to flow into the actual" (223).

true – he lieth not.⁶⁵

Sidney's paradoxical claim, which defends poetry against accusations of lies, also transforms the very absence of truth-value into an asset. The value of poetry lies in its lack of "affirmation," either of truth or falsity. The poet actively distances himself from empirical verifiability and proof through the act non-affirmation. His work cannot be evaluated under the same rubric as the historian's because his function is purely imaginative and opposed to the world of "what is or is not." Within this state of non-affirmation, which becomes its zone of possibility and idealization, Sidney locates the ethical value of poetry.⁶⁶ Whereas "what is or is not" is limited to the truth-falsity binary that "captiv[es]" the historian, "what should or should not be" is potentially unbounded and opens up a space to deal not with "necessity" but with "conjectural likelihood."⁶⁷ Yet in this process, the poet's creative act becomes more prescriptive, as he tells of what "should or should not be."

How then, does the poet, already extending the realm of his "wit," and refusing to assign historical or referential truth-values to invented objects, shape the reader into action? Sidney suggests the poet teaches through acts of synthesis, appropriating from the historian the use of examples and combining them with precepts of philosophy, in order to provide concrete exemplars of possible and ideal entities. The modal claims "may" and "should" that define Sidney's poetic epistemology find actualization in individual fictional figures as well as in larger acts of worldmaking. The poet gives forms to abstract and difficult precepts of philosophy by acting as a "moderator" between philosophy and

⁶⁵ Sidney, 53.

⁶⁶ The relationship of hypothetical thinking and ethics has a long history, mostly arising from Plato and Aristotle. See Halliwell, 156-176.

⁶⁷ Sidney, 36.

history because he “coupleth the general notion with the particular example.”⁶⁸ Sidney’s exemplary poetic figure is a fictional Cyrus who embodies the coupling of the general and the particular.

This Cyrus is a transformative figure whose embodied perfection can be emulated by the reader: the poet aims to create a Cyrus through a process

not wholly imaginative, as we are wont to say by them that build castles in the air; but so far substantially it worketh, not only to make a Cyrus, which had been but a particular excellency as nature might have done, but to bestow a Cyrus upon the world to make many Cyruses, if they will learn aright why and how the maker made him.⁶⁹

The poet creates a perfected Cyrus by combining an idealized version of a historical figure—inevitably surpassing the “particular excellency as nature might have done”—with the abstract concepts from philosophy and models a replicable figure that will result in “many Cyruses.” He will be successful if his invention of “a Cyrus” transforms and produces replications in his readers. Since the act of imitation is transferred to the reader of poetry, Sidney’s poetic epistemology is implicitly futuristic. The poet’s creation does not require an actual empirical presence in the real world; Sidney’s Cyrus is a figure of “general mimesis,” a production rather than a re-production. He represents a cluster of ideas or values that have intensional meaning but no extensional reference, and he provides a specific form to the poet’s capacity to appropriate the historian’s use of examples. Sidney’s project is simultaneously an ethical and intellectual exercise: the poet’s imaginative and creative faculties are implicitly futuristic and predictive, through which the reader learns the process (“how”) and cause (“why”) for making Cyruses.

⁶⁸ Ibid., 31, 32.

⁶⁹ Ibid., 24.

The figure of Cyrus, however, also embodies the contradiction inherent in Sidney's modal claims of "may be and should be," which posit a close association, if not exact equation, between examples and truth, possibility and ideals: this disjunction challenges the notion that poetry "nothing affirms." As Sidney's Cyrus emerges as a fully realized poetic linkage between philosophy and history, the figure seems increasingly prescriptive. Cyrus draws attention to the conflicting definitions of truth—historical, logical and metaphysical—that are present in Sidney's modal claims, and that unfold in differing conceptual terrains. Exploring the place of possibility and affirmation in two systems that organize early modern thought—grammar and logic—can help clarify the varying notions of truth operating in the *Defence*.

Early modern grammarians classified the two modals that Sidney employs, "may" and "should," under the potential mood. Thomas Linacre, in his *English Latin Grammar* (c. 1525), separated the "potential mood" or the "mood of possibility" from the optative. Traditionally, "the wishing mood that covered wishes put to God and wishes dependent on the speaker's resources" were both classified as optative. But from Linacre onwards, the optative only represented "possibility resting in God's hands," while the potential mood signified "possibility resting in individual power."⁷⁰ The potential was known "bi these signes, maie, can, might, would, shoulde, or ought," and it was standardized in grammar books by the mid-late century.⁷¹ Under this rubric of thought, the two modals used by Sidney align perfectly as non-verifiable modes of expression, in which poetic

⁷⁰ Margreta DeGrazia "Lost Potential in Grammar and Nature: Sidney's *Astrophil and Stella*," *SEL: Studies in English Literature, 1500-1900* 21.1 (1981): 21-35, 22. For a recent exploration of early modern poetry and the potential mood, see Colleen Ruth Rosenfeld, "Poetry and the Potential Mood," forthcoming in *Modern Philology*.

⁷¹ William Lily and John Colet, *A Short Introduction of Grammar* (1549; facs. rpt. Menston, England: The Scholar P, 1970), sig. Biii; quoted in DeGrazia.

claims differ from the “Bare was” of history because they enable users to create worlds by not relying on historical reference. These worlds, in other words, cannot be affirmed empirically or historically but exist only because of the poet’s creation.⁷²

However, when looked through definitions in logical treatises, some modals can arguably affirm or deny in certain ways, if one considers they are expressing a “modall proposition,” which according to Thomas Blundeville, “affirmeth or denieth something, not absolutely, but in a certain respect, sort, or mood.”⁷³ Blundeville explains further how these propositions function: a “mood is a word determining and limiting the signification of some other word whereunto it is joined” and “of the moods making modall propositions, there are but these foure, that is Possible, Contingent, Impossible, and Necessarie.”⁷⁴ Modal propositions highlight how certain terms that are the “signes” of the potential mood—may, might—relate to possible but not absolute affirmation. Although Blundeville does not speak about the use of the signs of the potential mood, his formulation of modality, especially his formulation of possibility, as in “for a man to be just, it is possible,”⁷⁵ can be easily translated to “a man *may* be just.” On the other hand, terms such as “shoulde” are prescriptive and do not strictly fit into such a modal logic. The “may be” gestures to multiple possibilities that can be subsumed in a logical argument, while the “should be” prescribes normative concepts in its pointing towards ethical goals which are defined within normative systems of values. If poetry, in Sidney’s dual formulation, has to be simultaneously prescriptive and possible, one might question

⁷² Of course, this is complicated by the many contradictions one finds in Sidney’s work: on the one hand, the poet “borrows nothing of what is, has been, or will be” but on the other, he has “all [whatsoever the historian is bound to recite] under the authority of his pen” and “may, if he list, with his imitation, make his own” (37).

⁷³ Thomas Blundeville, *The Arte of Logicke* (London, 1599), 66. Accessed April 21, 2013. <http://eebo.chadwyck.com/>.

⁷⁴ Ibid., 66.

⁷⁵ Ibid., 69.

what kind of truth it does or does not affirm: while poetry does not affirm or deny historically, it does produce “true” definitions of virtues and can provide logically true or false statements.

The purely imaginary status of the poetic world, integral to the arguments about its ability to teach, changes when we think about possibility as a modal proposition that conveys particular kinds of truth. Instead of maintaining the separation of both possibility and idealization from historical fact, modal logic suggests some verbs in the potential mood can be employed to affirm and deny possibly; they can signify certain kinds of truth without being empirically or historically true.⁷⁶ While things cannot be historically true, they can be meaningful and therefore affirmed as possibilities or as contingent events. This confusion also asks us to consider conceptual or metaphysical notions of truth operational in Sidney’s definition: for instance, could a virtue prescribe a “true” representation? The varying domains within which truth can operate suggests that while both verbs might function similarly in opposition to historical facts, they make different kinds of claims as intellectual tools of reasoning and argument, and thus serve different goals in a poetic epistemology that aims to affect readers into action. Thus, although Sidney does not separate, or even make a clear distinction between *prescriptive* and *possible* poetic worlds, the tension in his definitions suggests that the two *might* be separable. While the former is directed towards perfected, finished, closed, normative ethical goals, the latter is more open, and it is endlessly descriptive in a maximally

⁷⁶ For the specific problem of distinguishing fact from fiction in Sidney’s formulation, see Jacqueline T. Miller, *Poetic License: Authority and Authorship in Medieval and Renaissance Contexts* (Oxford: Oxford UP, 1986). Miller argues “[w]hen the poet’s picture of what should be is joined to what could be, there must be some correspondence between the fiction and man’s world; and when this correspondence occurs, it is no longer possible to detach completely the fiction from that world, to claim the unaffirmed nature of that fiction, to declare that ‘things not true’ are recounted and that they are recounted ‘not for true’—in short, it is no longer possible to create so great a discrepancy that the fiction cannot be confused with fact” (77-78).

predicated way.

Chapter Breakdown

To produce a genealogy of possible knowledge with a particular emphasis on its literary roots, I begin with Spenser's "continued allegory," *The Faerie Queene*.⁷⁷ Drawing on narrative romance, travel literature, and speculative knowledge, Spenser revises Sidney's modal claims: he rejects precepts ("what should be") to theorize how poetry uniquely conceptualizes a best possible world (what "might best be").⁷⁸ Spenser's work provides a crucial example of how Elizabethan poetry models ethical action using theories of possibility. Faerie Land serves as a reminder that in an ever-expanding world that is never fully knowable, the epistemic status of fictional worlds may be as significant as the "real" ones recently discovered by travelers. Spenser's allegorical figures transport readers into this imagined world through their imperfectible quests. Merlin's genealogical prophecies lead readers, with Britomart, towards a narrative future that produces Elizabeth's reign, only to reveal the absolute contingency of the future. Repeatedly encountering such moments of uncertainty, readers imaginatively fashion themselves in relation to the possible worlds of the epic-romance.

From Merlin's revelations, I turn to the enigmatic prophecies that animate William Shakespeare's *Macbeth* and that forecast James's reign. Drawing on treatises about divination and on popular recipe books, I trace how *Macbeth* engages with the major epistemic shift from *gnosis* to *praxis* that was occurring at the turn of the seventeenth century. An examination of the epistemology of prophecy, I argue, highlights its speculative and performative nature. This focus also reveals how the theater was, at its

⁷⁷ Edmund Spenser, "Letter to Raleigh," *The Faerie Queene*. Ed. A.C. Hamilton and txt ed. Hiroshi Yamashita and Toshiyuki Suzuki (Harlow: Longman, 2001), 714.

⁷⁸ *Ibid.*, 716.

core, prophetic, in the sense that the theater actualized potential events within a delimited temporality. Macbeth interprets the predictions about his future rule as conclusive recipes, and his urge to act on these prescriptions fixes him as a dramatic character in the fictional present. Banquo, in contrast, marks the suspension and possibility underlying prophetic utterances and emerges as a figure for future history. His verbal and visual projections direct audiences to a theatrical future—the historical moment of James’s rule—presaging *their* imaginative participation in the theatricality of prophecy. Mobilizing the prophetic nature of the theater, *Macbeth* stages a theory of political futurity: sovereign authority requires the temporality of performance—its capacity to reveal the “future in the instant,” to borrow Lady Macbeth’s expression—in order to project the times to come and to legitimize itself.⁷⁹

The poetic technologies that make up Spenser’s and Shakespeare’s imaginative realms of “words” unexpectedly pervade natural philosophy, or the domain of “things,” to cite a distinction that Bacon has made famous. In Chapter Three, I argue that Bacon’s inductive method, as explicated in *The Novum Organum*, presents a futuristic, initiative epistemology based on the very entities it aims to eradicate: digression, dilation, and error. Baconian method enacts an “endlesse worke,” to adopt a phrase from Spenser;⁸⁰ what the poet would term romance, Bacon calls “method,” investing these techniques of possibility and uncertainty with an epistemic value that crucially refigured the disciplines of knowledge. Even Bacon’s counterfactual narrative of his great instauration of learning, the utopian *New Atlantis*, remains “not perfected.”⁸¹ To mark the processual endlessness

⁷⁹ William Shakespeare, *Macbeth*, in *The Norton Shakespeare* Eds. Stephen Greenblatt et al. (New York: W.W. Norton, 2008), 1.5.56.

⁸⁰ Spenser, 4.12.1.

⁸¹ Bacon, *The New Atlantis*, 488.

of Baconian method, I end this chapter by gesturing to the complex semiotic field of Baconianism in the mid-seventeenth century, from the Royalist continuation of *New Atlantis*, to the Hartlibian reforms, to the most tangible legacy of Bacon's thought: the Royal Society's probabilistic experimental philosophy.

At the very moment when the Royal Society had begun to privilege probabilistic knowledge over metaphysical truth, literary works expand the epistemic scope of the imagination. In Chapter Four, I explore how Milton employs epic conventions in *Paradise Lost* to challenge the premises of contemporary scientific method. The poem promises universal knowledge and separates a true prophetic poetics from the probable knowledge produced through local experiments. I turn to Eve's Fall, the epic's pivotal scene of transformation, in which Milton stages an unrepeatable event to expose the failings of the Royal Society's notion of experiment. By showing how experiment, a postlapsarian epistemology, cannot take one back to Eden, Milton dismantles the redemptive promise of contemporary philosophy. While in *Areopagitica*, a revolutionary Milton imagined how England might become a land of prophets through the collective experiences of its engaged readers and writers, in *Paradise Lost*, the politically disillusioned poet argues that only a select few, like the prophet-poet, can translate unfallen and divine language for fallen readers and make intelligible a world one can never, in theory, fully grasp.

From Eve's "evental" epistemology, I move to Margaret Cavendish's literary thought-experiments. In *Poems and Fancies* and in *The Blazing World*, Cavendish redefines the relation between fiction and science by generating a form of poetic physics, creating possible worlds out of her theories of matter. Scholars read Cavendish as

responding to contemporary science, philosophy, and politics, but her works are not merely reactive. In her early poems, Cavendish creates worlds out of atomist physics. When she renounces her belief in atomism to propose a vitalist materialism, this physics finds a “fanciful” or “poetical” enactment in her utopian fiction, *The Blazing World*. She translates the “self-moving” internalism of matter into a principle of generation that emerges “within” the mind of the “authoress.”⁸² Taking as my touchstones the changes instituted by the Empress and the characters’ worldmaking ventures in the *Blazing World*, I demonstrate how Cavendish’s vitalist realms form her natural philosophy and make impossible the mechanist ontology of thinkers like Hobbes and Descartes. Imitating not objects, but the *motion* of nature, her poetic physics captures the radical promise of mimesis.

My dissertation traces how early modern literature, across genres and over a broad historical span, shared strategies and techniques with writings about nature. All the writers I study encounter the limits of the traditional resources—formal training, generic boundaries, objects deemed worthy of study—that had shaped their attitudes and approaches to learning. To overcome these epistemic limitations, they are compelled to forego their predefined notions and definitions and embrace indeterminate and yet-unclassified intellectual modes, which I call possible knowledge. My work follows these writers in order to uncover the convergences that invigorated their writing and thinking, as they formulated new methods to redefine the contours of physical and immaterial worlds. It also invites us to situate both new objects (such as poetry and prose romance)

⁸² Margaret Cavendish, *The Blazing World and Other Writings*. Ed. Kate Lilley (Penguin, 1992), 123-124, 186, 224.

and distinct modes (such as prophecy and probability) within an intellectual history of the formation of modern disciplines.

In addition to tracing how Renaissance literature was engaged in a continual conversation with writings about nature, the concept of possible knowledge provides new insight into central features of the early modern literary imagination: the problems of truth, of representation, of fictional reference, and of ethical instruction. It reveals the creative potential of Renaissance poetics—or the poet’s ability to actualize what Shakespeare terms the “airy nothing”—from Spenser to Cavendish.⁸³ And my work reveals how literary writing was continually raising intellectual and philosophical questions, from the nature of being to the nature of reality. Most broadly, my dissertation foregrounds questions of form, action, and being in order to rethink the purview of the literary: since literary works operate (and theorize) through plots, examples, and narratives, and not by abstracting concepts, we cannot define the ontology of literature—what literature *is*—without uncovering the ways of knowing and thinking that govern poetic production.

⁸³ William Shakespeare, *A Midsummer Night’s Dream*, in *The Riverside Shakespeare*. Eds. Blakemore Evans, with the assistance of J.J. M. Tobin. 2nd ed. (Boston: Houghton Mifflin, 1997), 5.1.16.

Poetics of Possibility: *The Faerie Queene*, 1590

Elizabethan poets who, like Sidney, espouse the Renaissance commonplace that poetry aims to teach and delight attempt to disentangle the relations between fact and fiction, meaning and historical reference, possibility and prescription implicit in Sidney's poetic epistemology. In this chapter, I argue that Edmund Spenser creates a "poetics of possibility" that rejects precepts and prescription in order to theorize how poetry examines relations among the known, the unknown, and the potentially knowable. Although Spenser's aim is similar to Sidney's, his method is different. He revises the modal claims that define the scope of Sidney's poetry and articulates his own poetic process. *The Faerie Queene*, whose "general end" is "to fashion a gentleman or noble person in vertuous and gentle discipline," theorizes and performs a poetic epistemology by focusing on the generative processes inherent in the concept of possibility.⁸⁴

I call these generative practices and modes operating in *The Faerie Queene* "possible knowledge," which serves a practical ethics that demands the reader's active intervention in processes of learning and transformation. By underscoring the maximal scope of potentiality, Spenser shows *how* poetry can generate possible knowledge through the conceptualization of a best possible world that rejects perfection-as-completion and does not rely on idealized notions of truth. Spenser's poetics demonstrate that lack or absence can itself serve as a basis for knowing, when the reader's ethical practice is directed not towards the attainment of a predefined end-product or model of selfhood but to the continuation of new processes based on partial learning. Possible

⁸⁴ Spenser, "Letter to Raleigh," 713-718, 713. Although I will draw some comparative examples from the 1596 edition, my primary argument is limited to the 1590 edition of *The Faerie Queene*.

knowledge emerges in the poem through multiple ways of anticipation and projection: through the unaffirmed mode of Spenserian allegory; through a possible world revealed in narrative progression; through the potentiality performed and embodied by partially created figures; through the interrogation of predictive epistemic modes such as prophecy.

I will argue, furthermore, that these varied ways of approaching the topic of possible knowledge enable us to situate Spenser's work as key to understanding the changing relationships between literary and scientific epistemologies in early modern England. Unlike Sidney, whose works have become central to understanding and theorizing these intersections, Spenser remains at the margins of debates about the literary and the scientific.⁸⁵ At best, his work provides *examples* of a particular instance of this intersection.⁸⁶ Spenser's poetry has not been theorized as central to discussions of ideas, concepts, and practices of early modern knowledge about the natural world. More generally, without suggesting that Spenser was a "scientific" thinker, I aim to position Spenserian poetry in relation to epistemologies that examined the status of truth in scientific terms, specifically in relation to empirical knowledge, experience, verification, symbolic representation, and reference.

Since Stephen Greenblatt's claim that Spenser was "our originating and preeminent poet of empire," new historicist criticism has focused primarily on topics that demonstrate the various domains of power operational in *The Faerie Queene*.⁸⁷ The focus on the propagandist or ideological aspects of *The Faerie Queene* has made scholars

⁸⁵ For the centrality of Sidney's poetics in these relationships, see Spiller, 24-59, and Turner, 82-113.

⁸⁶ See Spiller, 59-100, and Wolfe, 203-235. Spiller looks at ideas of generation in the poem, while Wolfe focuses on military techniques and machines.

⁸⁷ Stephen Greenblatt, *Renaissance Self-Fashioning: From More to Shakespeare* (Chicago: U of Chicago P, 1980), 174.

subsume even Spenser's poetic worldmaking into structures that propagate and maintain political power. For example, Roland Greene introduces two models of worldmaking in the early modern period, the "ambassadorial" and the "immanentist,"⁸⁸ and claims that the

ambassadorial position holds that worlds are multiple, are largely independent of and parallel to each other, and that we move from one to another as ambassadors travel between societies in the geopolitical worlds, namely by recognizing their differences and adopting a 'wordly'—or 'transworldly' outlook. The immanentist view, on the other hand, maintains that worlds are situated within each other, and that to travel between them is to move inward along a thread of identity rather than difference... One position recognizes alterity where the other emphasizes envelopment; one puts worlds along a horizontal axis while the other describes a vertical relation."⁸⁹

Spenser's worldmaking is of the second kind because, according to Greene, it shuts down rather than opens up possibility. Spenser, suggests Greene, creates alternate worlds only to reintegrate them into a singular worldview. Greene's argument serves as an acute example of how the predominance of political and ideological scholarship has obscured the fact that Spenserian poetics, and especially *The Faerie Queene* grapples with and creates a poetic world through metaphysical topics and theories of knowledge. A more concentrated focus on the epistemic structures in *The Faerie Queene* as a whole is necessary because it demonstrates that, for Spenser, fiction was an instrument of creation and cognition as well as a vehicle for furthering political aspiration, and this reorientation

⁸⁸ Roland Greene, "A Primer of Spenser's Worldmaking: Alterity in the Bower of Bliss," in *Worldmaking Spenser: Explorations in the Early Modern Age*. Eds. Patrick Cheney and Lauren Silberman. (Lexington: UP of Kentucky, 2000), 9. Of course, in Greene's model, both types of worldmaking are explicitly political.

⁸⁹ *Ibid.*, 11.

allows us to situate Spenser's work within an intellectual history of the refiguration of disciplines and ways of learning.⁹⁰

Theorizing Possibility and Creating Possible Worlds

Spenser, the poet "whose main concern," according to Gordon Teskey, "was to think," conceived a complex polychronous temporality in which narrative generates possible knowledge by mobilizing allegorical figures and stressing the necessity of moving towards the future instead of remaining static in the present.⁹¹ While early modern poets and dramatists ruminated and grappled with the ethical purpose of their works, *The Faerie Queene* demonstrates how this ethics is actualized in the poem in acts of narration and reading. The experience of reading Spenser's poem transports readers into multiple temporalities. Although allegorical figures such as Red Crosse or Guyon or Britomart might themselves represent atemporal notions, or concepts that exist out of time, readers can only understand and know these concepts (Holiness, Temperance, and Chastity respectively) through reading processes unfolding in narrative time. The question of how the narrative unfolds in time ultimately becomes inseparable from allegorical figuration. As Spenser's epic-romance comments on truth, reference, and historical knowledge, it suggests the poet must layer the present with multiple possible

⁹⁰ As such, I see myself contributing to the field of scholarship that recognizes the complex intertwining of imagination, knowledge, and discourses of power and exploitation; this scholarship, without ignoring the last, argues that one cannot collapse knowledge and power or even claim that incentives to know and imagine were all negative. Campbell (1999) articulates such a position in her examination of the complexity of "wonder" in the period. Campbell argues:

Though 'Eden' came to obscure terrible exploitations of people, nations, land, and resources, and came to it soon, that does not give us leave, as curious historians of culture, to dismiss the element of true desire in the false consciousness of colonial empire. The pressure of that same desire produced many kinds of other worlds, less usable, less phenomenal, and although they were all stained with the original sin of the conquests, they represent efforts of the imagination to see and yearn past the bounds of the known and approved, past the spiritual oppression of the 'dark existing ground.'

Wonder and Science joins that effort. Without closing its ears to the din of the real, the book wants to render an account of wishes, pleasures, excitements, sublimities, and above all, possibilities. (1-2)

⁹¹ Gordon Teskey, *Allegory and Violence* (Ithaca: Cornell UP, 1996), 174.

futures in order to dramatize anticipatory modes of knowing. And he realizes this in the poem primarily through fictional figures who enact the generative processes of self-fashioning.

The centrality of temporality in Spenser's work is at its clearest when he distinguishes poetry from history: unlike historical knowledge, which deals temporally with the past and ontologically with extant objects and events, poetic knowledge—produced through speculations and conjectural worldmaking—becomes possible and futuristic. In the “Letter to Raleigh,” written as a retrospective prospectus to the 1590 edition of *The Faerie Queene*, Spenser argues

the methode of a Poet historical is not such, as of an Historiographer. For an Historiographer discourseth of affayres orderly as they were donne, accounting as well as the times as the actions, but a Poet thrusteth into the middest, even where it most concerneth him, and there recouring to the thinges forepaste, and diuining of things to come, maketh a pleasing Analysis of it all.⁹²

For the “poet historical,” history remains central to poetry, but Spenser attempts to draw various distinctions between the two through an appeal to time. Although Spenser, like Sidney, differentiates the poet's work from the historian's and the philosopher's, he does so by privileging the anticipatory and unknowable endings of the poet's work in addition to his appeal to “thinges forepaste.”⁹³ Moreover, like Sidney, Spenser contrasts the method of the “Poet historical” with that of the “Historiographer,” but instead of questioning the truth-value of each practitioner's works, he argues that the poet's method is formally different because of *how* he deploys temporality: the poet subverts the linear

⁹² Spenser, “Letter,” 716-717.

⁹³ Spenser's own poem was interpreted as prophetic. For example, see the Royalist treatise, *The Faerie Leveller* (1648), which excerpts the argument between the Giant and Artegall in Book V and reads it as a prophecy.

chronological order of historical narrative.⁹⁴ The poet's freedom lies not in a lack of affirmation or distance from the "bare Was," as Sidney argues, but in his ability to enter "into the midst, even where it most concerneth him." Instead of coupling the precept and the example in the process of synthesis that Sidney advocates, the poet does the opposite as he "maketh a pleasing Analysis of it all," to provide an examination or exploration that breaks things into their component elements.⁹⁵ In *The Faerie Queene*, this cognitive process evolves through a distinct examination of how figures, and readers, are situated in time. As we will see, the bounds between fact and fiction break in various instances in which the narration stops, or when the past, present, and future collapse into a singular narrative moment. These moments take figures, and readers, beyond the narrative present and enact how possible knowledge is produced within a narrative framework.

Spenser's poetic project unfolds by making individual figures model different aspects of selfhood as well as imperfected ways of acting and learning in time. Spenser's allegory opens up multiple worlds that the narrative may or may not complete; it is the technique of possible knowledge that facilitates the ethical project of fashioning readers. Allegory creates a fictional ontology that invites readers into the poetic world. By continuation in narrative, it posits that closure, precepts, and completion are antithetical

⁹⁴ On Spenser's use of "method" as the foundation for "discipline," see Spiller, 63. The term "method" has its own history, especially employed in dialectic and rhetoric. See Walter J. Ong, *Ramus: Method, and the Decay of Dialogue; From the Art of Discourse to the Art of Reason* (Cambridge, MA: Harvard UP, 1958) and Lisa Jardine, *Francis Bacon: Discovery and the Art of Discourse* (Cambridge: Cambridge UP, 1974).

⁹⁵ I draw on both these definitions of the term "analysis" that were used in the late sixteenth century: "A detailed examination or study of something so as to determine its nature, structure, or essential features. Also: the result of this process; a detailed examination or report; a particular interpretation or formulation of the essential features of something" (1a) and "The resolution or breaking up of a complex whole into its basic elements or constituent parts; (in early use often) *spec.* the resolution of an argument, discourse, etc., into the particular topics it deals with, arranged as an ordered, logical structure" (2a). OED Online. March 2011. Oxford University Press. (accessed September 30, 2011).

to possibility and are opposed to the “incomplete” or “possible” metaphorical relays of narrative. These relays work as long as the temporalized processes of narration continue or as long as a reader is willing to follow the allegory from the present moment into the future. The examples that populate Spenser’s possible worlds are allegorical figures whose embodied virtues individually and collectively model imperfect aspects of a self as they enact their own processes of learning. They are not assembled, perfected Sidnean Cyruses. While precepts or perfected figures represent predetermined goals realized within the poem, end-points that bind poetry to its “scope,” Spenserian figures direct attention towards the processes of reading, acting, and learning involved in creating worlds and imitable figures.

The first two books provide the clearest instances of how revisionary processes provide opportunities for the partially complete figures, as well as readers, to learn from the processes of movement and change that occur in the poem. Among other things, Red Crosse must constantly fight against errors of misreading or reading referentially in order to fulfill his quest. Although he kills the embodied Error—an explicit figuration of his primary problem—he continues to wander and err in his quests because he believes he has conquered error itself, and not only its physical figuration. He is repeatedly convinced by dissembling figures, such as Archimago and Duessa, and only by continually erring and misreading can he overcome his failings. One of the things that Guyon strives towards is the rejection of pity and sorrow. In the beginning of Book II, hearing Amavia’s story, he “could vneath / From teares abstayne” (2.1.56). By the time he destroys the Bower of Bliss “with rigour pittillesse” (2.12.83), his transformation, among other things, has included an education to reject pity. While it is debatable how

much Guyon and Red Crosse become completed “figures” and learn all they are supposed to—in fact their inability to completely embody the virtues of Temperance or Holiness respectively makes explicit the possible and open-ended nature of Spenser’s poetry—the events that constitute their acts of self-fashioning draw attention away from the allegorical figures themselves to the larger project of poetic worldmaking, within which these figures wander, learn, and unlearn as they attempt to fulfill their quests.⁹⁶

The endless narrative and the movement of allegorical figures within it maximize the scope of Spenser’s created worlds. The narrative seems to bring these worlds into being by propelling these figures in different directions. In the “Letter,” Spenser suggests that since readers prefer what is “delightfull and pleasing” over “good design deliuered plainly in way of precepts,” it follows that “Xenophon [is] preferred before Plato. For that the one in the exquisite depth of his judgment, formed a Commune welth such as it should be, but the other in the person of Cyrus and the Persons fashioned a gouernment such as might best be: So much more profitable and gracious is doctrine by ensample, then by rule.”⁹⁷ The “might best be” signifies the maximal scope of thinking through the logic of possibility, as well as the best possible world that the poet “may” produce without prescribing what “should be.” Spenserian poetry thus enacts a poetics of the “may be.” It deprivileges ideals and grounds the work in the more modest claims about how one realizes best possible worlds, a world that “might best be” rather than an idealized goal, what “should be.” His poetics is based on the recognition that although

⁹⁶ While fashioning has usually been understood as a term of change and learning in Spenser, in *Scenes of Instruction in Renaissance Romance* (Chicago: U of Chicago P, 2007), Jeffrey A. Dolven separates learning from teaching and questions whether the former occurs through transformation in Spenser’s work. In his distinction between “school” and “story” as two opposing spectrums within which learning is possible, Dolven separates learning from repetition in case of Spenserian figures like Red Crosse and Guyon. See esp. chapter on “Example.”

⁹⁷ Spenser, “Letter,” 716. Dolven reads example as a positive middle ground between experience and maxim (see 137).

allegorical narratives might tend toward the precept, they never reach it. This unreachability is itself productive. The unfolding, incomplete quality of narrative itself dramatizes the impossibility of attaining ideals; this also implicitly distances Spenser's poetics from Sidney's argument that relies on the coupling of the particular and the general. For Spenser, such a poetic theory approaches too close to or even ends in the precept, where the desire for ideals results in the stasis of narratives and limits the essential processes of learning that produce possible knowledge.⁹⁸

Spenser's Faerie Land, which does not direct readers to one prescribed goal, is a pluralized version of this "might best be" world. This formulation decouples the golden worlds coupled together in Sidney's "may be and should be" and introduces a disjunction between them.⁹⁹ Spenser's created "might best be" world condenses multiple possible worlds into a single modal claim. The "might be" in other words, is comparable to the logical operator of possibility "or," and it gestures to the infinitude of possibilities. The "should be," prescribed within a system of values, focuses on the product rather than how this fashioning might occur. Spenser's possible worlds are populated with various virtues and the reader can fashion himself or herself from these "ensamples." The name Spenser

⁹⁸ Of course, as scholars always point out, there are various discrepancies between the "Letter" and the poem of *The Faerie Queene*. For examples of the paradoxes and discrepancies between the two, see Joanne Craig, "The Image of Mortality: Myth and History in the *Faerie Queene*," *ELH* 39.4 (1972): 520-544, esp. 521; Thomas P. Roche, *The Kindly Flame; A Study of the Third and Fourth Books of Spenser's Faerie Queene* (Princeton: Princeton UP, 1964), 198. In *The Language of Allegory: Defining the Genre* (Ithaca: Cornell UP, 1979), Maureen Quilligan plays down the importance of the "Letter." However, one must take it seriously as an articulation of Spenser's poetic theory and method, and not in its exact match with the content and narrative outline of the poem.

⁹⁹ "And" usually functions as the logical connector that proves the truth or falsehood of connective propositions, and is most clearly seen today in digital logic systems, like Boolean logic. Blundeville calls propositions connected by the "and" as "copulative propositions," which is "said to be true, when both the parts be true" (71). In "Imagery and Logic: Ramus and Metaphysical Poetics," in *Renaissance Essays from the Journal of the History of Ideas*, Eds. Paul Oskar Kristeller and Philip Wiener (New York: Harper and Row, 1968), 267-302, Rosamund Tuve argues that logic was the governing system of thought in Renaissance poetry. Also see *Elizabethan and Metaphysical Imagery: Renaissance Poetic and Twentieth-Century Critics* (Chicago: Chicago UP, 1947), esp. Chs. X, XI, XII, XIII, for the importance of logic, especially Ramist Logic, to Renaissance poetry.

chooses for his example of an “ensample” is also “Cyrus,” but he effectively reworks the meaning of the Sidnean Cyrus, through the separation rather than the coupling of the “ensample” and the “rule.”

Spenser creates a domain for a “poetics of possibility” within which this temporal experience is actualized. He calls it Faerie Land. I argue that this created world performs two functions: it provides a venue within which figures execute particular modes and techniques of possible knowledge, and it models at the macro level the generative capacity of knowing worlds through the logic of possibility. The possible existence and knowledge of Faerie Land enables the narrator to propose analogous associations from the known to the unknown, as well as from the real to the fabricated. Faerie Land, which exists potentially but might not be historically discovered, or even empirically discoverable, provides possible knowledge by translating discovery into a temporal mode of futuristic revelation. This worldbuilding finds its clearest exposition in the Proem to Book II, where the narrator imagines Faerie Land as one of many “possible, nonactualized worlds” that are not yet but can be known.¹⁰⁰ Spenser locates generative and creative powers in potentiality rather than actuality; thinking of Faerie Land as a

¹⁰⁰ Dolezel, 13. Spenser’s formulation takes us close to the arguments of possible world theorists, perhaps because he is interested in exploring the relations between truth and fiction, reality and fabrication, which are some of the main questions addressed by modern scholars. Spiller suggests that “possible world theory does not provide a satisfying independent model for understanding the historical appearance and function of various types of early modern worldmaking”(31). The concept of worldmaking, unlike the theory of possible worlds, has received a broader attention from early modern scholars. For examples, see Spiller, Campbell (1999), as well as the influential work of Harry Berger, Jr., *Second World and Green World: Studies in Renaissance Fiction-Making*. Intro. John Patrick Lynch (Berkeley: U of California P, 1988). Berger draws attention to the “*counterfactual* nature of fiction” (8) but reads it primarily as a mental escape. For a critique of the ideology behind Berger’s formulation, see Spiller, 30-31. In *The Poetry of the Faerie Queene* (Princeton: Princeton UP, 1967), Paul J. Alpers draws on Sidney’s *Defence* to suggest that Spenser’s poem must be understood as “a continual address to the reader than as a fictional world” (21); Alpers defines “world” in the following terms: the narrative poem can be “thought to be a world because its constituent elements (characters, actions, and settings) imitate or are analogous to those of the real world; because it is a self-contained, coherent, and intelligible structure; and because the poet is like God”(19).

“potential” world suggests that possibility might be the ontological condition of fiction, where fictional worlds asymptotically approach but never converge with the actual worlds of history.¹⁰¹ In this asymptotic state, Spenser’s possible world ontologically models the capacity to both be and not-be at the same time, and its actual existence only *might* be historically realized in the future. In an ever-expanding world that might never be fully knowable, the epistemic status of fictional worlds may be as significant as the real worlds that lie over the horizon, and Faerie Land’s existence cannot be apprehended through epistemologies that privilege historical reference or empirical verification.¹⁰²

The Proem’s arguments about the existence and (unknown) location of Faerie Land engage with forms of contemporary writing that often combined factual and fabricated accounts of newly discovered worlds. Contemporary “discovery literature” was increasingly attempting to distance itself from fictional worldmaking through narrative modes that privileged information, cataloguing, systematization, and personal experience.¹⁰³ As Mary C. Fuller argues, these works aimed “to establish certain realities—the possibility of discovery, the lands discovered, the experiences or intentions of oneself or fellow travelers.”¹⁰⁴ These narratives often had to recuperate the failures of actual voyages, and they transformed the lack of discovery into an instance of coming to

¹⁰¹ In my use of the term “potentiality,” I am influenced by Giorgio Agamben, “On Potentiality,” in *Potentialities: Collected Essays in Philosophy*, Ed. And Trans. Daniel Heller-Roazen (Stanford: Stanford UP, 1999), 177-184, 181.

¹⁰² Maria R. Rohr Philmus, “*The Faerie Queene* and Renaissance Poetics: Another Look at Book VI as ‘Conclusion’ to the Poem,” *English Studies: A Journal of English Language and Literature* 76.6 (1995): 497-519, reads Spenser as writing a poem not about the ideal but about this world, complicating the distance between the real and the fictional.

¹⁰³ Fuller, 45. Also see Campbell (1988), esp. 165-266, for changes in experiential travel writing in the early sixteenth century, especially their simultaneous reliance on and attempts to distance themselves from fictional works.

¹⁰⁴ Fuller, 11. She analyzes works such as Humphrey Gilbert’s *A discourse of a discoverie for a new passage to Cataia*, Thomas Harriot’s *A Briefe and True Report of the New Found Land of Virginia*, Richard Hakluyt’s *Divers Voyages Touching the Discoverie of America* and Walter Raleigh’s *The Discovery of Guiana*.

complete self-knowledge; the “possibility of discovery” of lands was always rhetorically translatable into complete self-discovery. In almost all cases, authors such as Humphrey Gilbert and Richard Hakluyt claimed, in the words of Fuller, “that the trajectory of the intended action would arrive at a place that existed in fact.”¹⁰⁵ The travel narrative, then, promised to take the writer, and consequently the reader—these were experiences to be replicated, after all—to real places that would be cartographically representable.

Yet contemporary writers were also acutely aware of the degree to which travel narratives might be fictional rather than historical. To suppress the hypothetical and conjectural nature of their texts, which relied on conventions of fiction, travel writers generally attempted to distance their writings from fictional works.¹⁰⁶ Sir Thomas More’s *Utopia* became the signal example of such a fabricated world that must be repudiated to account for the historical existence of explored or explorable lands. Gilbert distinguishes his experience, and his writing, from utopia:

SIR, YOV might iustly haue charged mee with an vnsetled head if I had at any time taken in hand, to discouer *Vtopia*, or any countrey fained by imagination: But *Cataia* is none such, it is a countrey, well knowen to be described and set foorth by all moderne *Geographers*, whose authoritie in this art (contrarie to all other) beareth most credit.¹⁰⁷

While Utopia is “fained by imagination,” Cataia is “well knowen,” and the credibility of “modern *Geographers*” assures readers that their descriptions point to real places. Mary Baine Campbell argues that although *Utopia* was “the first piece of travel literature produced in England’s Age of Discovery” and “appears to have worked some changes...in the rhetorical situation of the travel writer,” by the middle of the sixteenth

¹⁰⁵ Fuller, 33.

¹⁰⁶ One example of their “fictionality”: Harriot’s work “inserts hypothetical goods and actions into its catalogues of American abundance” (Fuller, 13).

¹⁰⁷ Humphrey Gilbert, *Discourse of a Discoverie for a New Passage to Cataia* (London, 1576).

century, “the *fictionality* of Utopia (Noplace) had been established as an opposite pole to the geographical reality of the lands they hoped to discover and exploit,” something we can observe in Gilbert’s work.¹⁰⁸ *Utopia*, whose unknowability is written into its name, exists as a hypothetical and comments on the real world by contrast or direct comparison.¹⁰⁹ Campbell (1999) seems to overturn the very basis of distancing that seemed necessary to Gilbert when she suggests that in spite of its hypothetical nature, utopian fiction is inherently referential: its “pedagogical moralism” prevents utopia from becoming a version of “Other worlds,” since the “[n]ormative examples of utopia exert a pressure on readers to alter their own worlds in its direction...Its potential or intended otherness, difference, alternativity, novelty, and capacity for invoking wonder are seriously compromised by its ethical density and conventionality.”¹¹⁰ Although the fictional status of utopia separates it from the real, utopian fiction hypothetically references the real world and operates on the same implicit or explicit promise as discovery literature: yet-unknown lands *will* be accessible and completely knowable in the future.¹¹¹ While discovery literature directs readers to those lands, utopia shows them how to remake the very world they occupy into the utopian model.

Spenser’s possible world, however, is governed by a logic of potentiality rather than reference. It suggests that fictional ontology, when predicated on the condition of

¹⁰⁸ Campbell (1988) goes on to argue that *Utopia* becomes the dominant influence for travel fiction in the period. See esp. 212-214. Utopia also remained central to early modern poetic theories. Sidney explicitly invokes *Utopia* as an example of his “golden” world, one that fails in its execution but not in its idea. In *Areopagitica* Milton will separate the utopian realm from the reality of England.

¹⁰⁹ Marina Leslie, in *Renaissance Utopias and the Problem of History* (Ithaca: Cornell UP, 1998), sees utopia as a generative mode which is not as other-to-history as it is usually set up, but as complex interpretive practice (14). Also see Jeffrey Knapp, *An Empire Nowhere: England, America, and Literature from Utopia to The Tempest* (Berkeley: U of California P, 1992) for the relationship of literary fiction to empire and nation, mediated through understandings of the “nowhere” of utopia. For utopian traditions in *The Faerie Queene*, see Judith E. Boss, “The Golden Age, Cockaigne, and Utopia in *The Faerie Queene* and *The Tempest*,” *Georgia Review* 26 (1972): 145-155.

¹¹⁰ Campbell (1999), 14-15.

¹¹¹ See Fuller 21, 63.

possibility, can establish a symbiotic relationship between the real and the fictional without an exact reliance on historical reference. With these generic complexities in mind, we can see more clearly how Spenser uses the Proem to reorient the analogical model employed by travel writings, real and fictional, and to transfer the focus from objects (discoverable lands) to method (speculation as a privileged mode of discovery).

Addressing the “most mighty Soueraine,” the narrator worries

That all this famous antique history,
Of some th’abundance of an ydle braine
Will judged be, and painted forgery,
Rather then matter of iust memory,
Sith none, that breatheth liuing aire, does know,
Where is that happy land of Faery,
Which I so much doe vaunt, yet know no where show,
But vouch antiquities, which no body can know.

But let that man with better sence aduize,
That of the world least part to vs is red:
And dayly how through hardy enterprize
Many great Regions were discoouered,
Which to late age were neuer mentioned.
Who euer heard of th’Indian *Peru*?
Or who in venturous vessel measured
The *Amazons* huge riuer now found trew?
Or fruitfullest Virginia who did euer vew?

Yet all these were, when no man did them know,
Yet haue from wisest ages hidden beene
And later times things more vnknowne shall show.
Why then should witlesse man so much misweene
That nothing is but that which he hath seene?
What if within the Moone’s fayre shining spheare,
What if in euery other starre vnseene
Of other worldes he happily should heare?
He wonder would much more: yet such to some appeare. (Proem 1-3) ¹¹²

¹¹² These three stanzas of the proem are framed by explicit references to Queen Elizabeth, an actual presence in the known world, as though she helps anchor both “thy owne realms” and “lond of Faery” (Proem 4). She is presented both as a reader of the poem as well as its subject.

Spenser deliberately invokes travel narrative in order to contrast the process and promise of discovery to its actualized ending. He employs the trope of travel to transform Faerie Land from a discoverable entity unmapped by European travelers into one that might be revealed, a “nonactualized” world whose knowledge is not exhausted by empirical epistemologies. This indeterminate state enables the narrator to comment on historical memory, futurity, and spatial expansion. This worldmaking operates on two levels: it produces “wonder” in the reader and it promises to recover a forgotten “antique history.” The narrator promises various things: the possibility of future discovery, historical recovery, and finally a revelation through narrative. He presents the revelation of something new—the created world—as the recovery of forgotten history as well as a discovery of the unknown.

As a poet who wishes to affect the actual world and readers in it, Spenser uses the trope of discovery to mask the purely imaginative status of his project without committing to an exact association or reference in the known world. Employing culturally resonant language, he transfers the lack of immediate knowledge onto readers’ limited faculties and their explicit trust of their senses.¹¹³ This revelation of new worlds is possible not only through travel or cartographic mapping, but also when readers speculate and explore the limits of their own imaginations. The narrator is concerned about the possibility of establishing Faerie Land’s ontological existence—its potentiality—but not its location, while stressing that complete knowledge of the “happy land of Faery” can be

¹¹³ Of course, “discovered” has connotations of empirical verifiability as well as knowledge. The *OED* defines it as making known as well as bringing into view and revealing things. Witmore draws attention to the use of discovery as a common trope to comment on its relevance to esoteric knowledge. He suggests that discoveries always gesture to something hidden. Knowledge was something that was hidden, to be discovered. See esp. 9-10.

obtained by learning “Where” it is. Thus, he dissociates the capacity to “know” Faerie Land fully, or to know where it exists, from establishing its status as a world.

To counter the misconception of Faerie Land’s nonexistence—and the associated claims that it cannot be known—the narrator constructs a rhetoric of regaining lost knowledge, translating the lack of present evidence into a potential of future learning: the entity that remains unknown in the present is knowable in the future through spatial expansion and travel. In the absence of historical proof, the ambiguous status of Faerie Land can be resolved only to a certain extent, and it can be made partially knowable by the narrator’s analogical revelations between what is known at present and what might be known in the future. Knowledge of Faerie Land is possible because it is an object of “just memory” rather than “painted forgery.” The rhetoric of discovery conflates the poet’s fictional creation with the historical world. It also engenders a project of recovery that is actually one of fictional worldmaking and readerly remaking. This worldbuilding promises to reveal and to potentially make present what was never historically in existence. Discoveries, real and imagined, become part of projected historical chronologies that might be actualized in the future.

The narrator suggests the lack of empirical knowledge in the present does not preclude the possibility of its discovery (presented also as an act of recovery) in the future. Citing examples of many recent discoveries in the actual world, from “Indian *Peru*” to “fruitfullest *Virginia*,” he imagines a constantly expandable world in which potential existence is privileged over ontological and epistemic presence. These recent discoveries of “all these” lands that “have from wisest ages hidden been,” promise that one can know beyond what one sees or discovers immediately. Although empirical

verifiability is sufficient to prove existence (“later times things more vnknowne shall show”), it is not a necessary condition for it. The belief that these lands did not exist, or that Faerie Land does not, arises from a limited cognitive capacity, one that trusts only what is “seene.”¹¹⁴ Unlike the newly discovered lands such as Virginia, Faerie Land cannot be discovered by epistemologies that rely on the “heard,” the “measured,” or the “vew[ed].” The Proem rejects a sensory, primarily visual, epistemology that limits one only to verifiable empirical facts in favor of discovery through imaginative acts of projection. While Gilbert’s quest will end with the discovery of Cataia, Spenser suggests that Faerie Land’s potentiality ensures continual discovery as it allows for the generation of possible knowledge.¹¹⁵ Gilbert explicitly opposes experiential discovery literature to fiction because he focuses on the “worlds” themselves as objects. In contrast, Spenser highlights their similarities by turning worlds into instruments and methods of generating knowledge.

¹¹⁴ The trust in a visual epistemology is critiqued throughout the poem. Red Crosse mistakes what “seems” for what “is.” Mutabilitie, and the Giant (in Book V), are both criticized for relying only on the senses. While Mutability trusts only seen things, the Giant misinterprets things he does not see. Artegall criticizes the Giant for misinterpreting the cause of “things vnseene” as he “misdeem’st so much of things in sight” (5.2.39). Mutabilitie displays her trust in things that are seen:

things

Which we see not how they are mov’d and swayd,

Ye may attribute to your selues as Kings,

And say they by your secret powre are made:

But what we see not, who shall vs perswade? (7.7.49)

¹¹⁵ Shannon Miller suggests that Spenser (in the Proem) and Gilbert (in his invocation of *Utopia*) are doing similar things, but I disagree with her claim by shifting the focus from object (land) to process (speculation). See Shannon Miller, *Invested with Meaning: The Raleigh Circle in the New World* (Philadelphia: U of Pennsylvania P, 1998), 34-39. Miller’s larger argument interrogates the centrality of “patronage circles” to New world travels and colonialist ventures. In *Temperate Conquests: Spenser and the Spanish New World* (Detroit: Wayne State UP, 2000), David Read complicates new historicist criticism of Spenser scholarship, which build on Greenblatt’s arguments and have more recently focused primarily on Ireland. Read argues that Spenser’s “most dedicated thinking about the general problem of English colonialism” occurs in Book II in his focus on “the Spanish New World” (13). Moreover, “Spenser’s continuing association with individuals involved in English colonial projects in the New World” (15) enabled him to treat the project of colonization as a projection: “Colonization in this account becomes an aesthetic endeavor in which artists naturally perform better than laymen” (24). In the Proem to Book II, Spenser “is writing the history of the future itself” (22); the Proem deals with an inevitable “prediscovery” (22).

Instead of stopping at the “discovery” of Faerie Land, he asks readers to speculate again, privileging the process rather than the actual discovery of a possible world. This invitation maximizes the scope of speculative processes, by transferring learning from the domain of cartography to that of cosmology. The narrator echoes debates in natural philosophy and astronomy and makes readers imagine the limits of knowing through potentiality: “What if within the Moone’s fayre shining spheare / What if in euery other starre vnseene / Of other worldes he happily should heare?” The “What if” functions as a methodological tool of generating knowledge, as it invites readers to make new demands of their cognitive faculties. The interrogatory conjecture extends the bounds of possibility through speculations that generate, rather than end, further inquiry. It formalizes the speculative methodology that we “*may* it fynd” (Proem 4, my emphasis) if we “more inqyre” (Proem 4). Moving from the assertion that “later times” will be revelatory, the narrator replaces actual or possible discovery with speculations about an ever-expanding and unmappable cosmos. He shifts to questions of habitability on the moon to “other worlds” in “euery other Starre,” to what cannot be visually or empirically captured.¹¹⁶

This argument for an infinite cosmos represents not only the tropes common in imaginative fiction such as the trip to the moon in Ariosto’s *Orlando Furioso*, but it also engages with contemporary philosophical speculations on the nature of the world. Spenser’s imagined cosmology engages directly with theories on the “plurality of worlds,” recently represented in the “hyperbolic possibility” of unbounded worlds in Giordano Bruno’s *De l’infinito*.¹¹⁷ Spenser might have been influenced by Bruno’s

¹¹⁶ The idea that the entire cosmos is inhabitable is important here and corresponds to Campbell’s definition of world as a “social concept of the habitable or inhabited” (10).

¹¹⁷ Campbell (1999), 120. On Spenser and Bruno, see Ronald B. Levinson, “Spenser and Bruno,” *PMLA* 43.3 (1928): 675-681. More specifically, on the influence of Bruno on Spenser’s imagination of

writings, but he also had a long philosophical tradition to draw from, including Lucretius' *De rerum natura*.¹¹⁸ The narrator of *The Faerie Queene* suggests that fictional worlds, and the speculative spaces engendered by their examination, produce philosophical arguments and knowledge from absence. As he uses a potentially infinite cosmos to imagine worlds that have no empirical verifiability or historical basis, he irrevocably associates knowing with claims to imaginative freedom.

Narrative and Allegorical Mobility

We have seen how the analogies between the discoverable and the potential—in the narrator's movements from mapped spaces to unmapped ones to a seemingly unmappable cosmos—reveal the generative nature of possible knowledge, where invocations of known entities and ideas direct readers towards possible future discoveries. The speculative methodology of worldmaking theorized in the Proem enables the poet to create possible worlds and argue for futuristic knowledge without relying on verisimilitude; he transports these generative endless processes of knowing into the poetic world by fashioning individuals in allegorical narratives, who in turn can fashion readers for action in the real world. Thus, the generative speculations that create worlds are formalized *in* the narrative through a specific technique that mobilizes reference: allegory. While the Proem models the existence of possible worlds, the allegorical narrative populates these worlds and extends this generative potentiality into

plurality of worlds, see Steven J. Dick, *Plurality of Worlds: The Origins of the Extraterrestrial Life Debate from Democritus to Kant* (Cambridge: Cambridge University Press, 1982), 84. On Bruno and the new science, see Hilary Gatti, *Giordano Bruno and Renaissance Science* (Ithaca: Cornell UP, 1999).

¹¹⁸ In "Spenser and Lucretius," *Studies in Philology* 17 (1920): 455-484, Edwin Greenlaw made the suggestion that in addition to Platonism, Spenser was influenced by Lucretius' work, an argument that was questioned by other critics (see note 150). However, at least one of Spenser's seventeenth-century readers marked some Lucretian influence. In a 1611 copy of *The Faerie Queene* at the Folger library (STC 23084 copy 1), the reader writes "Lucretius beginning of his first book" near IV.10.44. For recent studies of Lucretius' influence on Spenser, see Passannante, 154-197; Goldberg (2009), 63-121.

the narrative process itself. The narrative enables the mobilization and change of allegorical figures and suggests that as long as they move towards possible futures and undergo transformations, the poem can continue to generate ways of knowing through their ontology and action. Allegory is a crucial technology of possible knowledge; the incomplete figures in the allegorical narrative actualize potential ways of being and knowing as they always anticipate, but never achieve, completion. For example, Red Crosse does not become Holiness within the events related in Book I. By focusing on three examples that grapple with the relation between allegorical figuration and narrative—Malbecco's complete knowability, Gryll's unknowability, and Fradubio's self-knowledge and control over his own signification—I will show how the anticipatory and endless processes of narrative produce a variety of possible knowledge. These examples of figures in states of transformation demonstrate how the project of poetic worldmaking extends into the narrative and demand that one wrestle with ways of knowing the ontological and epistemic states of the figures that inhabit and populate these worlds.

As is well known, Spenser's allegorical narrative displays deep suspicion of endings and completion. Scholars have documented this suspicion primarily by turning to the narrative structure of Spenser's "endlesse worke" (4.12.1).¹¹⁹ In his study of Book IV

¹¹⁹ Usually, scholars focus on the conclusions of Books III and VI, as well as the unfulfilled union of Gloriana and Arthur, to talk about closure (or its lack) in *The Faerie Queene*. For example, see Richard Neuse, "Book VI as Conclusion to *The Faerie Queene*," *ELH* 35.3 (1968): 329-353; Stanley Stewart, "Sir Calidore and Closure," *SEL* 24 (1984): 69-86; Philmus; Donald Cheney, "Spenser's Hermaphrodite and the 1590 *Faerie Queene*," *PMLA* 87.2 (1972): 192-200; A. R. Cirillo, "The Fair Hermaphrodite: Love-Union in the Poetry of Donne and Spenser," *Studies in English Literature, 1500-1900* 9.1 (1969): 81-95; Kimberly Anne Coles "'Perfect Hole': Elizabeth I, Spenser, and Chaste Productions," *English Literary Renaissance* 32.1 (2002): 31-61; David Lee Miller, "Spenser's Poetics: The Poem's Two Bodies," *PMLA* 101.2 (1986): 170-185; David L. Miller, "Abandoning the Quest," *ELH* 46.2 (1979): 173-192.

as a “writerly text,”¹²⁰ for example, Jonathan Goldberg examines “the narrative principles [of the book] that induce frustration, that deny closure, but that also produce the disturbed and disturbing procedures of Spenser’s text.”¹²¹ Narration works through frustration and loss, and the “very endless quality [of the poem] denies hermeneutic closure.”¹²² Patricia Parker examines this endless narrative through the rubric of romance, “a form which simultaneously quests for and postpones a particular end.”¹²³ Spenser, claims Parker, continues and transforms Ariosto’s “continual narrative deferral” and “romance proliferation of different story lines” into a “version of *dilatio*.”¹²⁴ Parker underscores that wandering and error lead figures astray but are central to the educative and inventive practices of *The Faerie Queene*, which strives for endings but “is all middle.”¹²⁵

I argue that Spenser’s use of allegory enables this deferral and endlessness because it provides a “temporal passage” of thought toward multiplying meanings.¹²⁶ In

¹²⁰ Jonathan Goldberg, *Endlesse Worke: Spenser and the Structures of Discourse* (Baltimore: Johns Hopkins UP, 1981), 10-12.

¹²¹ *Ibid.*, xii. For a more general argument about how narrative is the product of the “accidental” or the “unexpected,” see Witmore, 5. According to Witmore, accidents produce narratives because they change the plot and in some cases create plots, eg: “the example [“the building block of accident narratives is the example, a compact descriptive sequence with a beginning, middle and end in which something happens to an intention, real or implied”] starts to become a story at the instant when an intention...becomes subject to alteration”(10); accidents must possess “certain narrative qualities if they are to be recognized as such” (11).

¹²² Goldberg, n. 1, 76.

¹²³ Patricia Parker, *Inescapable Romance: Studies in the Poetics of a Mode* (Princeton: Princeton UP, 1979), 4. For the relation of early modern romance to epic, see David Quint, *Epic and Empire: Politics and Generic Form from Virgil to Milton* (Princeton: Princeton UP, 1993) and Colin Burrow, *Epic Romance: Homer to Milton* (Oxford: Clarendon, 1993).

¹²⁴ Parker (1979), 7-8. Parker’s formulation of dilation as temporal distancing strongly influences my argument. However, I disagree with her claim that delay and deferral are “moral categories” which are “almost universally bad” (62). I also draw on the meaning of “dilate” as a spatial notion of expansion, as defined in the OED: “To spread abroad; to extend, diffuse, or disperse through a wide space or region” (2, v.2). OED Online. September 2011. Oxford University Press. (accessed October 03, 2011). For a gendered reading of dilation as amplification, which is generative for narrative, see Patricia Parker, *Literary Fat Ladies: Rhetoric, Gender, Property* (London: Methuen, 1987).

¹²⁵ Parker (1979), 76.

¹²⁶ I borrow the terms “temporal passage” from James J. Paxson, “The Allegory of Temporality and the Early Modern Calculus,” *Configurations* 4.1 (1996) 39-66, 54. However, Paxson argues that sixteenth-century allegory, including Spenser’s, was only governed by “medieval-pedigreed ‘allegory’ powered up by prosopopeia, microcosmic analogy, or the representation of ineffability” (47-48) and in his formulation,

the *Defence*, Sidney highlights the indeterminate referentiality of all allegorical writing: “the poet’s persons and doings are but pictures what should be, and not stories what have been, they will never give the lie to things not affirmatively but allegorically and figuratively written.”¹²⁷ Allegory, as the “mode of the unaffirmed,”¹²⁸ operates in the relays that separate historical narratives (“stories what have been”) from poetic inventions of a prescriptive nature (“pictures what should be”), which makes it the ideal technique for constructing possible knowledge. Angus Fletcher draws attention to the “arbitrary nature of allegorical action” and its “tendency to infinite extension,” claiming that “by definition there is no such thing as the whole of an analogy; all analogies are incomplete, and incompletion, and allegory simply records this analogical relation in a dramatic or narrative form.”¹²⁹ This “incompletion” analogical relationship creates metaphorical relays between the known and the unknown: the narration produces analogies but continues beyond them because of incompletion and the shifting of reference in allegorical figuration. As soon as the reader—or a figure who acts as a surrogate reader in the fiction—arrives at an idea, the text asks him or her to move on to a

Spenser’s poem would not have any temporal passage; allegory as a discourse of temporality only comes in later, according to Paxson (and it seems primarily through early modern “science” esp. Newton).

¹²⁷ Sidney, 53. In his influential formulation of allegory in “Pascal’s Allegory of Persuasion,” in *Allegory and Representation*, Ed. Stephen Greenblatt (Baltimore: Johns Hopkins UP, 1981), Paul De Man highlights the problems associated with this lack of reference: as a “referentially indirect mode” which attempts to deal with “furthest reaching truths,” allegory cannot deal with representation of truth (11). De Man suggests that since the target to which allegorical signs point (which is what he seems to mean by reference) remains ultimately unknown, “it remains endlessly caught in the impossibility of making this knowledge applicable to the real world” (10). Early modern writers, however, do argue that allegorical poetry will lead readers to “well-knowing” or will “fashion” them, thus making it indirectly “applicable to the real world.”

¹²⁸ J. Miller, 80. One way of mobilizing reference through allegory would be to displace it to a different topical domain. In his section on “pastoral poesy, called eclogue,” George Puttenham highlights how the poet uses allegory to comment on society without having to worry about the dangers of reference and representation: “the poet devised the eclogue long after the other dramatic poems, not of purpose to counterfeit or represent the rustical manner of loves and communication, but under the veil of homely persons and in rude speeches to insinuate and glance at greater matters, and such as perchance had not been safe to have been disclosed in any other sort” (127-128). See George Puttenham, *The Art of English Poesy*. Eds. Frank Whigham and Wayne A. Rebhorn (Ithaca: Cornell UP, 2007).

¹²⁹ Angus Fletcher, *Allegory, the Theory of a Symbolic Mode* (Ithaca: Cornell UP, 1964), 176, 177.

new formulation of this idea. Red Crosse's defeat of Error does not stop him from erring, for example, but leads him to the wandering space of Faerie Land.

Allegory is the perfect technique to generate forms of suspended and futuristic knowledge because notions of movement, incompleteness, and deferral are written into its definition. Spenserian epic-romance, or the "continued Allegory," exploits the epistemic possibilities of this unaffirmed mode.¹³⁰ Like George Puttenham, who defines allegory as "a long and perpetual *metaphor*,"¹³¹ Spenser draws on Quintilian's definition of allegory as a "continued" or "extended" metaphor.¹³² Puttenham suggests that allegory distances thought from speech, cognition from articulation. It is a figure of dissembling, "when we speak one thing and think another, and that our words and our meanings meet not."¹³³ This dissembling occurs through the perpetual displacement of thought in expression: "we do speak in sense translativ and wrested from the own signification, neuertheless applied to another not altogether contrary, but having much conveniency with it as before we said of the *metaphor*"; he defines the metaphor's "translative" capacity as the "wresting of a single word from his own right signification, to another not so natural, but yet of some affinity or conveniency with it."¹³⁴ The "translative" sense is produced through signifiers "not altogether contrary" but through those that transport signification to words of "some affinity or conveniency." This "conveniency" suggests that allegory's point of reference is always mobile and continuously being displaced in expression: through chains of translations of affinitive associations, a thought, concept, or idea can be carried over or conveyed from signifier to signifier. As a "sensable" figure which

¹³⁰ Spenser, "Letter," 714.

¹³¹ Puttenham, 271.

¹³² See Quintilian, *Institutes of oratory*. Ed. John Selby Watson (London: G. Bell and sons, 1875).

¹³³ Puttenham, 270.

¹³⁴ *Ibid.*, 271, 262-263.

“alter[s] and affect[s] the mind by alteration of sense” and “abuses, or rather trespasses, in speech,”¹³⁵ Spenserian allegory creates two degrees of transference: it displaces language from direct correspondence to things and it does not provide transparent access to thought. The perpetual disjunction of expression from thought can only be fully realized through analogies within narrative, understood as a dynamic process that provides temporal passage for events, characters, and actions.

Understanding allegory as mobile and incomplete, and as a technique that works through the metaphorical relays of narrative allows us to explain Spenser’s poetic epistemology by drawing on the two primary ways in which scholars have theorized and explained allegory. At one end of the spectrum, allegory is read as an abstraction—often a personified image—that promises to reveal hidden truths and operates in opposition to narrative process. At the other, it is understood as a gap between material and formal units, or in Teskey’s influential formulation, as a “rift.”¹³⁶ While the first understanding of allegory promises a hierarchical movement of expression towards transcendental truth, or “instrumental meaning,” the latter suggests a location of allegorical meaning within a gap between form and matter.¹³⁷ Teskey’s two figures, “the figure of personification” and the “figure of capture,” represent these two ways of classifying allegory.¹³⁸ Susanne

¹³⁵ Ibid., 262, 238.

¹³⁶ Allegory always appeals to an inner truth that is veiled and “elicits a continual interpretation as its primary aesthetic effect” (Teskey, 4). It makes the reader believe that he or she is progressing “toward the transcendental ‘other’” (Teskey, 4). While for Teskey allegorical interpretation speaks not to knowledge, but to the imposition of power and force, Maureen Quilligan underscores the “generic centrality” (21) of readers involved in a cognitive act. Allegory is defined by polysemy and “names the fact that language can signify many things at once” (26). Goldberg suggests that Quilligan’s understanding of allegory and culture implicitly leads her to associate allegory with transcendental truth, even though she does not mention that explicitly.

¹³⁷ Teskey, 5.

¹³⁸ Ibid., 29. The “figure of personification” represents the zone of “absolute meaning, on which a cosmos depends” while that of capture “directs our attention to the region of struggle and growth, the forest of life, which the cosmos is always attempting to enclose” (29-30). According to Teskey, “[t]he very word *allegory* evokes a schism in consciousness—between a life and a mystery, between the real and the

Wofford, too, argues that the reader of allegory oscillates between two contrasting positions: that of the narrator who imposes a hierarchical meaning in opposition to narrative, and that of fictional characters who remain oblivious of their allegorical statuses and signify within systems of value internal to the text.¹³⁹ The narrator, claims Wofford, performs the task of converting experience to allegorical meaning while characters themselves remain ignorant and remain separate from the allegory. These models capture the complex nature of allegory in Spenser's poem, as they inevitably situate a hierarchizing figuration against a generative narrative. However, as they raise the questions, "to what extent is allegory antithetical to narrative (embodiment as stasis) or productive to it?" and "how does this relate to the endless attempt to collapse the gap between what is said and what is meant?," they implicitly point to the symbiotic relationship between generation and incomplete embodiment that enables Spenser to employ allegorical figures to produce possible knowledge.¹⁴⁰

Spenserian allegory, I argue, asks readers to follow the "translative" processes that shift references in narrative; narrative temporality becomes necessary to apprehend

ideal, between a literal tale and its moral—which is repaired, or at least concealed, by imagining a hierarchy on which we ascend toward truth. The opening of a schism, or, as I shall call it, a rift, and the subsequent effort to repair it by imaginative means lie behind many of our commonest uses of the term. On the whole, when we speak of *allegory* we refer to an enlightening or witty analogy between two things, both of some complexity, but one of less importance than the other" (2).

¹³⁹ Susanne Wofford, *The Choice of Achilles: The Ideology of Figure in the Epic* (Stanford: Stanford UP, 1992). In her essay "Gendering Allegory: Spenser's Bold Reader and the Emergence of Character in The Faerie Queene III," *Criticism: A Quarterly for Literature and the Arts* 30.1 (1988): 1-21, Wofford again draws the distinction between narrative progression and allegorical figuration through the gendered difference between character and figure. In her essay, "Britomart's Petrarchan Lament: Allegory and Narrative in The Faerie Queene III, iv," *Comparative Literature* 39.1 (1987): 28-57, Wofford posits a dynamic relationship between the two but finally maintains the distance between allegory and narrative.

¹⁴⁰ For other examples of the opposition of narrative to allegory, see Dolven, who draws on both Wofford and Teskey. He shows how a simplistic use of allegory, as "a mimesis of thinking" (139) is opposed to narrative, which exists in time.

allegory in the poem.¹⁴¹ When meaning and thought collapse into a perfectly readable fictional figure, the narrative trajectory reaches an irreversible ending. Spenserian allegory *requires* translation and transformation to continue to signify, and this is embodied by its “incomplete” figures, who strive to but do not quite attain a fully transparent abstract meaning. When these figures become fully abstracted from narrative in *The Faerie Queene*, they embody singular meanings and halt narrative process, acts of interpretation, and by extension acts of fashioning; this marks the end of allegory. Allegory thus emerges in the epic-romance as the poetic figure that enables deferral and endlessness. It functions as a process of interpretive learning, and not as a structure or code of meaning. These translative allegorical processes can be repeatedly observed in the text: for example, Red Crosse does not become Holiness, but only sees his future in a vision; he kills the embodied Error but must continue to learn by erring and wandering in Faerie Land. Spenser rejects closure, depicted by “completion” of figuration or the imposition of a singular meaning that leads to stasis. Such stasis engenders forgetting—often self-forgetting—and a loss of self-knowledge as well as concepts of selfhood. The end of Spenserian fiction—I want to suggest that allegory has *no* ending—is not an abstract allegorical figuration, but comes closer to Puttenham’s “*Prosopopeia*” which “attribute[s] any humane quality, as reason or speech to dumb creatures or other insensible things.”¹⁴²

Three instances capture with particular clarity the point where the allegorical

¹⁴¹ Of course, there are specific figures who correspond to what they seem. But as the example of the Giant “*Disdayne*” Guyon meets in Mammon’s cave suggests, even the most “allegorical” figures can exceed their imposed meanings: “A sturdy villein, striding stiffe and bold, And he himselfe was all of yron mould, / Yet had both life and sence, and well could weld / That cursed weapon, when his cruell foes he queld” (2.7.40, my emphasis). I want to argue that these excesses mark these figures as allegorical.

¹⁴² Puttenham, 324.

narrative, developing in time and predicated on incompleteness and absence, wrestles with the possibility and signification of ending. Malbecco, Gryll and Fradubio, figures at the margins of the text, underscore the association of figuration, forgetting, and narrative closure. While narrative closure seems to make Malbecco completely knowable as an abstraction and renders Gryll, in contrast, a figure who remains completely unknowable, Fradubio's refusal to embody expected meanings enables him to partially control how he is known and holds out the promise of future narratives. Malbecco and Gryll demonstrate in different ways how personification signifies the end of possible knowledge, whereas Fradubio relies on remembering and narrating to show how deferral itself marks him as an allegorization of possibility. As long as each figure operates within the changing narrative time and postpones his complete self-expressibility, these figures remain in states signifying possible (allegorical) knowledge. Once extracted from it, they are rendered "complete" and disappear from the narrative process.

Malbecco's transformation into an abstract concept "Gelosy" formalizes the progression towards instrumental meaning from allegorical possibilities.¹⁴³ His metamorphosis, which involves the complete disintegration of mind and body, begins when he loses his wife Hellenore as well as his wealth and property. This process, which begins as an attempt to escape from things ("ran away, ran with him self away" (3.10.54)), ends in a scene of complete disassociation from his human state. The repetition of the "ran" formally stresses its rapidity of action, and the allegorical narrative

¹⁴³ Parker (1979) draws attention to the absolute coincidence of "allegorical abstraction" and "meaning" in Malbecco's transformation. "Malbecco is left behind because he does not participate in the poem's process: his transformation is, in Paul Alpers' brilliant remark, 'not a change in him, but a terrible remaining what he is.' He becomes, as it were a Lunatic of One Idea." She then suggests that this instance "reveals by contrast the more devious ways of signification in Spenser's poem. Meaning too has a meantime, a gap which provides a fertile field of 'error.'" (99). I want to suggest that this is not the allegorical as Spenser imagines it.

“transports” him from one formal state to another and finally takes him beyond narrative movement into abstraction: “His nimble feet, as treading still on thorne: / Griefe, and despight, and gealousy, and scorne / Did all the way him follow hard behind / And he himselfe himselfe loath’d so forlorne” (3.10.55). He progresses towards abstractions that chase him even as he attempts to escape from them: they are located in the narrative but also gesture beyond it to the possibility of being subsumed into personification.

Malbecco’s self-inflicted metamorphosis, stressed by the repetition of “him selfe” and “he himselfe himselfe,” leads to his increasing self-alienation. He is caught in a state of suspension, mirrored by his surroundings:

Still fled he forward, looking backward still,
 Ne stayed his flight, nor fearefull agony,
 Till that he came vnto a rocky hill,
 Ouer the sea, suspended dreadfully,
 That liuing creature it would terrify,
 To looke adowne, or vpward to the hight:
 From thence he threw him selfe dispiteously,
 All desperate of his fore-damned spright,
 That seemed no helpe for him was left in liuing sight. (3.10.56)

The hill, “suspended dreadfully,” corresponds to his state of mental suspension, indeterminacy and indecisiveness. It mirrors the temporary nature of Malbecco’s being, which is still subject to change. The series of oppositions, forward / backward, adowne / upward, offer antitheses that promise further movement in either direction and capture this state of suspension. This possibility is destroyed in the next stage when he physically disappears. His primary thoughts are self-destructive: “through long anguish, and selfe-murdring thought / He was so wasted and forpined quight, / That all his substance was consum’d to nought. / And nothing left, but light an aery Spright” (3.10.57). As his “substance was consum’d to nought” and he is reduced to “nothing,” Malbecco

physically disappears and is translated from his human state, or to echo Puttenham, he is “wrested from [his] own signification.” His mind becomes limited to “self-murdring thought” and this transformative process entails a rapid physical eradication. The mind's desire and capacity to self-annihilate accompanies the material destruction of the body as he acts to facilitate his own destruction (“he threw him selfe despiteously”).

The “aery Spright” ceases to exist as Malbecco, as he crosses over from a state of suspension to permanence, from bundled meanings to one representable by a single abstraction:

Yet can he neuer dye, but dying liues,
And doth himselfe with sorrow new sustaine,
That death and life attonce vnto him giues.
And painefull pleasure turnes to pleasing paine.
There dwels he ever, miserable swaine,
Hatefull both to him selfe, and euery wight;
Where he through priuy grieffe, and horror vaine,
Is woxen so deform'd, that he has quight
Forgot he was a man, and *Gelosy* is hight. (3.10.60)

Malbecco's metamorphosis culminates in a loss of humanity and conversion into an abstract concept, “*Gelosy*,” which is neither an emotion nor a figure chasing him: he is jealousy now. The passage underscores the constantly renewing paradox of suspended animation that disables states of being previously accessible through forward or backward movements, and Malbecco finally seems to embrace this permanent state of abstraction. The stanza attempts to recreate the temporary state of suspension through chiasmic inversions (“And painefull pleasure turnes to pleasing paine”) but the narrator finally suggests that one cannot return from a state of abstraction without a memory of what one was before. Phrases like “Yet can he neuer die, but dying liues” and “dwells he euer” locate Malbecco in a suspended state of permanence.

The language too shifts from a narration of a past that documents Malbecco's activities through his mobility—shown by verbs signifying movement, such as “ran” “fled” “threw”—to this eternal present where he “lives” and “dwells” in a state of permanent stasis. His literal confinement in a “caue” (3.10.57) replaces the mobile transformation, and the circulation of signification ends in a state of permanent entrapment. This stasis seems to emblemize Teskey's “figure of personification” as it collapses thoughts into a readable abstraction. Moreover, the term “deform'd” defines his new state of being at multiple levels: as much a term for physical formlessness as for changed form, it refers both to his degenerated state and his lack of human form.¹⁴⁴ The last line irreversibly locates him epistemologically and ontologically as a site of personified abstraction: he “Forgot he was a man, and *Gelosy* is hight.” The narration ends with the literal ending of Malbecco's story and his humanity: he forgets past actions and history, and his inability to remember destroys the possibility of further metamorphosis, reversal, or reconstruction.

This process of transformation is as close to a narrative ending—an end of a personal history and of a transformative process—as we will get in *The Faerie Queene*, and it is a product of self-disintegration, both physical and mental.¹⁴⁵ This is also the end of the allegorical process as Spenser imagines it, since it halts fashioning and renders

¹⁴⁴ I am primarily drawing on this definition: “Of irregular form; shapeless, formless” (*OED*, 3). This helps us to understand the complete disintegration of his material form in the previous quote. The other use of the word, with the meaning “Marred in shape, misshapen, distorted; unshapely, of an ill form. Now chiefly of persons: Misshapen in body or limbs” (*OED*, 2) also fits Malbecco's final state. *OED Online*. March 2011. Oxford University Press. (accessed September 12, 2011).

¹⁴⁵ On his transformation into an abstraction see Harold Skulsky, *Metamorphosis: The Mind in Exile* (Cambridge, MA: Harvard UP, 1981), esp. 131-134 and Louis Gilbert Freeman, “The Metamorphosis of Malbecco: Allegorical Violence and Ovidian Change,” *Studies in Philology* 97 (2000): 308-330. See esp. 319-326. Also see Linda Gregorson, “Protestant Erotics: Idolatry and Interpretation in Spenser's *Faerie Queene*,” *ELH* 58.1 (1991): 1-34, who reads Malbecco as a figure of two kinds of representation, “exemplary and catalytic,” in which “allegorical figure directly bodies forth the psychic or material condition for which it is named” and “an allegorical figure functions as the precipitating cause or occasion of the condition for which it is named” (6, 5) respectively.

Malbecco fully knowable as a personification. As an abstract concept, “Gelosy” carries no cognitive traces of his past that can be retraced backwards, and he is reduced and trapped in a conceptual form forever. Wofford suggests that the “instance of forgetting marks the moment in which the figure takes control; the character’s submission to it is now glossed as having a story behind it” and the “stanza intimates that behind the allegorical text lies the possibility of an infinite expansion in which every personification would receive its due prior narrative. The forgetting also designates the moment of ignorance on the part of the character, the moment of transfer from one figurative level to another.”¹⁴⁶ By forgetting, Malbecco relinquishes his past allegorical narrative that is temporally translatable and moves from allegory to personification. Wofford asks us to look back for this “infinite expansion,” and she takes us to the domain of the past, or history. I am more interested in the stoppage because it shuts down the future: viewed in this way, Malbecco becomes anti-allegorical, moves away from the *continued* Spenserian allegory in translation, and comes closer to Puttenham’s *Prosopopeia*. Instead of a figure of “transport,” conveying signification from one place to another, he is completely transformed; this paradoxical state of existence offers meaning that becomes static. It is left to the reader to recollect this past, and even analyze whether Malbecco’s past as a physically decrepit and jealous man predicted or prefigured his future fate. Readers can also analyze the concept of “Gelosy,” but this analysis is dissociated from the perpetual developments that define narratives.

The association of narration and memory, one that seems to render Gelosy more fully and abstractly knowable than Malbecco, also has cultural significance. Malbecco’s transformation is spontaneous and his act of forgetting is both the product and cause of

¹⁴⁶ Wofford (1992), 299.

his permanent stasis, but forgetting can be culturally invoked to impose meaning and shut down stories that challenge normative developmental processes. After Guyon destroys Acrasia's bower and captures her, the Palmer retransforms the "men" she had "transformed" into "beasts," "figures hideous / According to their mindes like monstrous" (2.12.85). One of them, Gryll, resists to "returned be vnto [his] former state" from his "hoggish forme" (2.12. 85, 86). Guyon interprets this refusal as the associated degeneration of mind and body:

Saide *Guyon*, See the mind of beastly man,
That hath so soone forgot the excellence
Of his creation, when he life began,
That now he chooseth, with vile difference,
To be a beast, and lacke intelligence.
To whom the Palmer thus, The donghill kind
Delightes in filth, and fowle incontinence:
Let Gryll be Gryll, and haue his hoggish mind,
But let vs hence depart, whilst wether serues and winde. (2.12.87)

For Guyon, Gryll exists as a site of intemperance. His perceived resistance might serve as an example of Teskey's "figure of capture" since he signifies the irreconcilable gap between thought and expression. Guyon reads this difference as the conflict between mobility and stasis and interprets Gryll's refusal as an anomaly within a narrative of normative human development; Gryll can neither remember his beginning ("his creation") nor the time when life processes start ("when his life began"). Only the "hoggish mind" or the "mind of beastly man" that "forgot" his human past refuses to be retransformed into this former state; the absence of memory is visible in the intemperate body. Guyon interprets Gryll's desire for remaining in his "hoggish" state as a longing for permanent stasis, a wish to forget not only his individual history, but also the temporal progression of a collective, shared human history that is always in the process

of change.¹⁴⁷ Such desires to forget can potentially eradicate all prior narratives by removing them from memory, and forgetting past excellence can erase examples that make future fashioning possible. Instead of subscribing to a shared past, Gryll's choice of a life of "vile difference" subverts narratives of self-fashioning and stands in contrast to the revisionary processes modeled by knights like Red Crosse and Guyon.¹⁴⁸

Gryll's individual rebellion threatens all potential fashioning, and as a "beastly man," he carries traces of his human past although he does not wish to remember it. This ambiguous state, suggests the Palmer (ever ready to provide morals), must have a singular meaning imposed on it. Gryll's unknowability produces in the Palmer the desire to methodize allegorical narrative. He does so by turning Gryll into an emblem of intemperance: "Let Gryll *be* Gryll, and haue his hoggish mind." While the allegorical narrative of *The Faerie Queene* makes figures strive towards but also resist abstraction, the Palmer shuts down any possibility of reading Gryll in multiple ways by turning the particular into an abstraction and ontologically fixing his meaning. Gryll will only "be" what he seems. The Palmer makes the proper name that stands for a cluster of ideas and properties corresponding to an individual into an abstract concept of a "hoggish mind." Tautology replaces, and ultimately erases, possibility. The formulation, let Gryll "be" Gryll, promises to make transparent the Gryll-ness, whatever that might be, as an abstract concept. The Palmer attempts to reconcile the anomalies between Gryll's "naturall" form (3.12.86) and his "hoggish minde" by ignoring the former. Those who forget, he

¹⁴⁷ Guyon's destruction of the bower is another act of deliberate memory erasure or culturally imposed forgetting: "*Guyon* broke downe, with rigour pittillesse," the Garden that was "the fayrest late, now made the fowlest place" (2.12.83).

¹⁴⁸ Ever since Greenblatt's argument about the bower of bliss, it is commonplace to read Gryll as a figure of excess, an Other who refuses to be assimilated into the fold. Associating figures like Gryll with the New World and Ireland, Greenblatt claims "creatures" like Gryll "give a local habitation and a name to those vague feelings of longing and complicity that permeate accounts of a sensual life that must be rejected and destroyed" (184).

suggests, must be shut out of narratives and those, like the Palmer and Guyon (who can remember the past) must ensure that they are removed from all future stories. He separates Guyon and himself from Gryll by turning the latter into a personification of what they perceive him to *be*; his state is permanent and static, which brings into relief Guyon's and the Palmer's forward trajectory ("But let vs depart").

The final two lines of the stanza, in which the Palmer reiterates a futuristic version of Guyon's developmental narrative, employs the "But" to completely oppose their continuous mobility to Gryll's permanence. However, Gryll's fixed meaning remains as ambiguous as his state: What does it *mean* to "be" Gryll? He exists at the limits of or even beyond the bounds of the knowable and in a sense *must* be forgotten by the Palmer and Guyon to allow them to "depart" and continue their journey.¹⁴⁹ The Palmer attempts to eradicate connotations by turning the particular noun to stand in for a universal meaning instead of particularizing the universal as in personification allegory. But Gryll ultimately remains an unknowable entity. At best, he stands as a warning that one cannot uncover meanings completely: Book II, which begins with the Proem that gestures to the possibilities of movement and speculation, ends with an acknowledgement of cognitive limits. Gryll exists as an unexplainable concept, and the Palmer's tautological collapsing of sense and reference is an unsuccessful attempt to denote what can only be connotatively expressed. The Palmer and Guyon, in this process, stand in for those readers who cannot experience the translative nature of allegory, but who must dissociate their own actions and experiences from the possible knowledge Gryll's ambiguity could provide.

¹⁴⁹ In *Odyssey*, Gryll is the "companion of Ulysses who was transformed by Circe into a hog....and refused to be changed back to human shape" (n. 2.12.86).

In spite of their differences, both Gryll and Malbecco are shut out of further transformations because the act of forgetting the past becomes antithetical to the normative processes of fashioning that can be realized through narrative. Forgetting stands in for (in Malbecco), or can be made to represent (in Gryll), ignorance or lack of knowledge. Fradubio, once human but existing in the form of a tree when Red Crosse encounters him, uses narrative and strategic remembering to prophesize his own future metamorphosis and reiterate his role as an allegorical figure in transition. Duessa has violently imposed an external form on Fradubio that dissociates him from his human state. Red Crosse reminds Fradubio that storytelling has healing effects: “He oft finds med’cine, who his grieffe imparts / But double griefs afflict concealing harts” (1.2.34). Fradubio’s story, told as a response to this advice, becomes a vehicle through which he reminds himself and others of his selfhood while controlling the structure and content of his narration. He interprets his present state (which can be read, like Gryll’s, as one of “vile difference”) as temporary and echoes the commonplace that the mind was a prison of the body: he is “now enclosed in wooden wals full faste,” just as Frilessa is “turnd to treen mould” (1.2. 42, 39). Red Crosse does not know how to interpret Fradubio’s state (“Say on Fradubio then, or man, or tree” (1.2.34)) but Fradubio reiterates his human identity to naturalize and make less anomalous his violent change brought about by Duessa.

In a scene of remembering that stands in direct contrast to Malbecco’s end, Fradubio underscores the displacement between what he is (a man) and what he seems (a tree) by stressing the superficial, formal nature of his metamorphosis; he still retains his memory, he locates himself in a human past as well as in the present, and he also

imagines his future. Fradubio underscores the temporary nature of his suspended state to prevent hasty action on the part of Red Crosse:

But how long time, said then the Elfin knight,
 Are you in this misinformed hous to dwell?
 We may not chaunge (quoth he) this euill plight,
 Till we be bathed in a liuing well;
 That is the terme prescribed by the spell.
 O how, said he, mote I that well out find,
 That may restore you to your wonted well?
 Time and suffised fates to former kynd
 Shall vs restore, none else from hence may vs unbynd. (1.2.43)

Fradubio naturalizes his present state and his potential metamorphosis by presenting it as another instantiation of the theory of spontaneous transformation that shapes the materialist philosophy of *The Faerie Queene*. He suggests he has changed only in external form, reflecting the theory of material alteration depicted in the Garden of Adonis: “The substaunce is not chaunged, nor altered, / But th’only forme and outward fashion; / For euery substaunce is conditioned / To change her hew, and sundry formes to don” (3.4.38).¹⁵⁰ Things undergo change, grow, and perfect themselves only in external

¹⁵⁰ The source of this materialism, not surprisingly, has been the site of critical contention. Edwin Greenlaw argues for Lucretian influences which demonstrate that Spenser was displaying his skepticism and intellectual curiosity. Evelyn M. Albright rejects this interpretation because she believes that such influences would violate Spenser’s theological beliefs. Ronald Levinson questions Greenlaw because Lucretian influences counter the unity of Spenser’s neo-platonism. Levinson suggests that Spenser is influenced by Giordano Bruno’s vitalism: “It was Bruno’s continual attempt to combine the Lucretian account of a changeless material substance with the Platonic doctrine of the changelessness of spiritual substance. According to Bruno’s maturest insight, matter and form are alike eternal aspects of a unity transcending both” (679). More recently, Elizabeth Spiller demonstrates that the Garden highlights the influence of Neoplatonic metaphysics and Aristotelian biology on Spenser. See Greenlaw; Evelyn May Albright, “Spenser’s Cosmic Philosophy and His Religion,” *PMLA* 44.3 (1929): 715-759. On the Epicureanism as well as the materialism of Spenser’s Gardens, see D.C. Allen, “The Rehabilitation of Epicurus and His Theory of Pleasure in the Early Renaissance,” *Studies in Philology* 41.1 (1944): 1-15; Anthony Esolen, “Spenser’s ‘Alma Venus’: Energy and Economics in The Bower of Bliss,” *English Literary Renaissance* 23.2 (Spring 1993): 267-286; Wendy Beth Hyman, “Seizing Flowers in Spenser’s Bower and Garden,” *English Literary Renaissance* 37.2 (2007): 193-214. For Spenser’s interest in other philosophies, esp. Neoplatonism, see Elizabeth Bieman, *Plato Baptized: Towards the Interpretation of Spenser’s Mimetic Fictions* (Toronto: U of Toronto P, 1988); Jon A. Quitslund, *Spenser’s Supreme Fiction: Platonic Natural Philosophy and the Faerie Queene* (Toronto: U of Toronto P, 2001); Elizabeth J. Bellamy, “Colin and Orphic Interpretation: Reading Neoplatonically on Spenser’s Acidale,” *Comparative Literature Studies* 27.3 (1990) 172-192; and Carol V. Kaske, “Neoplatonism in Spenser Once

form. Without intervention, they return to a perfected version of the original self in due time.¹⁵¹ Fradubio claims that his future metamorphosis exists as a possibility. He is able to recognize the importance of fate and locate his own story within the larger materialist philosophy of transformation that dominates change in Faerie Land, and in the process he prevents knights such as Red Crosse from acting before their time. He coopts the “terme prescribed by the spell” to prevent intervention by others. Fradubio suggests that his own ability to remember and narrate is *sufficient* to “restore” him to his former form because it stops external intervention. His story, which seems an invitation for knights to act, actually warns them not to disrupt the anticipatory promise of change: he strategically controls Red Crosse’s desires to act while his narrative seemingly invites the latter to intervene. As Fradubio privileges his formal metamorphosis, he prevents others from reading him as a personification allegory. He recognizes himself as a figure wrested from his natural signification but relies on fate and the promise of futuristic transformation. This reliance doubly marks him as a figure of possible knowledge, one who is potentially knowable and who learns from his state of temporary suspension.

Fradubio produces possible knowledge by an appeal to the future, and in the process exemplifies the theory of allegory, and ultimately of poetry, that Spenser espouses. Poetry teaches and delights by making theories of possibility indispensable to the experience of multiple versions of approaching time. Gryll, Malbecco, and Fradubio all point to the tenuous separations between actual and fictional worlds as they invite readers (both external, and their interlocutors in the fictional world) in to experience their

More,” *Religion and Literature* 32.2 (2000): 157-169. Robert Ellrodt, *Neoplatonism in the Poetry of Spenser* (Geneva: Droz, 1960) remains the classic work on this topic.

¹⁵¹ We see this philosophy most clearly in three instances: In Nature’s verdict to Mutabilitie; in the Garden of Adonis and in Artegall’s argument with the Giant. The futuristic element of this materialist philosophy connects it to possible knowledge.

allegorical figuration and apply this to their own self-fashioning and action. Malbecco's lack of self-knowledge separates him from readers, and Gryll shows the limits of achieving transparency in reading, as the Palmer and Guyon refuse to read him allegorically and attempt to make him completely legible. Fradubio controls his signification, but he also invites Red Crosse to apply this possible knowledge to his experiences, which the latter fails to do. Red Crosse heeds the caution not to intervene, but he fails to allow Fradubio to intervene in *his* own story. Fradubio cannot make him recall his own past—his rejection of Una and choice of Duessa, for example—and see the connection to Fradubio's story. While Fradubio learns from his state of temporary suspension, Red Crosse, the surrogate reader, doesn't. The Palmer and Guyon deliberately refuse the reader's position offered by the allegorical narrative. Their refusal, and Red Crosse's failure, shows how Spenser's poetic epistemology is always ethical: for possible knowledge to function as an ethical practice, the learning provided by narration must be translatable and mobilizable to the reader.

Polychronous Experiences: Locating Arthur in *The Faerie Queene*

Arthur's entry into the narrative underscores how the reader's experience is central to the continuation of Spenser's epic-romance. Readers generate and remake the allegorical narrative through their experience of temporality by following Arthur. While figures in translation such as Malbecco and Fradubio abound in the fiction, the figure of Arthur best exemplifies how temporality governs the "poetics of possibility" and produces knowledge for both internal and external readers. The poem defers Arthur's perfection—both his complete figuration and his quest—to dramatize the polychronicity of moments that generate and control possible knowledge; such a moment "[b]y resisting

absorption into a homogenous present, ... brings with it the difference that produces the possibility of a new future even as it evokes the past.”¹⁵² Arthur’s polychronous existence shifts the focus from the narrative action to the kinds of knowledge this existence provides: instead of merely being a figure for emulation, he becomes a locus of prediction, prophecy, conditional knowledge, and constructed memories.

While narrative temporality and memory govern the potential knowability of figures, and figures such as Fradubio remain in translation as long as they can project themselves to the future, Arthur best exemplifies the figure in suspension who inhabits multiple temporalities and challenges readers to locate themselves in relation to the poem’s plural times. He constantly gestures to the futuristic promise of possible knowledge articulated by Fradubio but never becomes a perfect Cyrus-like figure. His polychronous presence maps out the potential experience of the reader. Through Arthur, the poem explicitly invites readers into the fictional worlds and asks them to interrogate their own position as external interlocutors of the text: the temporal disjunctions that erupt in polychronous moments destroy the promise of a linear movement from the present to the future. Moreover, by destabilizing the allegorical figure’s location in the fictional world, these moments dislocate the reader from his or her secure holding in the present and in the real world.

Through Arthur, the poem registers skepticism—implicit in the previous instances—about the possibility, or even the desirability, of perfectly constructed figures

¹⁵² I borrow the term “polychronous” from Harris, 11. Although Harris talks about the “untimeliness” of matter, or how “[i]n its polychronicity, an object can prompt many different understandings and experiences of temporality—that is, of the relations between now and then, old and new, before and after” (3-4), the idea of untimeliness “that which is anachronistic or out-of-time” (13) is useful to think not only about “matter” but about the anachronistic moments in Spenser’s allegory which collapse or employ multiple temporalities.

who fully embody abstract meanings.¹⁵³ As Spenser retroactively imagines in his “Letter,” “I labour to pourtraict in Arthure, before he was king, the image of a braue knight, perfected in the twelue priuate morall vertues, as Aristotle is deuised, the which is the purpose of these first twelue bookes.”¹⁵⁴ *The Faerie Queene* promises to deliver in Arthur a perfected and complete figure: an assemblage of Aristotelian “priuate morall vertues.” Arthur, however, does not embody one or more abstract precepts, and is at best a complex amalgamation—in-process—of multiple virtues in the “image of a braue knight.” As an “ensample” that is “clowdily enwrapped in allegoricall devises,” he is *the* figure of possibility who embodies the *processes* of perfection coming into being and gestures to the reader’s role in applying possible knowledge.¹⁵⁵ Unlike the Sidnean Cyrus, whose perfection seems to be realized in the poem and bestowed to the reader as an idealization of certain normative systems, Arthur exists as an unrealizable promise—always a “future-oriented structure” which “attempts to control and secure a particular, predictable future”¹⁵⁶—of conglomerated virtues. Arthur’s status and existence show how the reader’s knowledge becomes crucial to determining the position and status of allegorical figures.

Although the figure of Arthur holds out the promise of perfection and revelation of fully realized meanings, his status in relation to the other virtues is complicated by

¹⁵³ Also see Parker (1979) and Spiller for Arthur as still a “knight in the making” and not perfected. I want to focus on how this incompleteness is written into the text at the moment when it tries to imagine completion.

¹⁵⁴ Spenser, “Letter,” 715. I use the terms “perfection” and “completion” almost interchangeably. This is because I see “perfection” as the goal or end-point of the process of “fashioning” the reader. The *OED* entry for “Perfected” is “Made perfect or complete; faultless.” *OED* Online. September 2011. Oxford University Press. (accessed October 02, 2011).

¹⁵⁵ Spenser, “Letter,” 716.

¹⁵⁶ J.K. Barret, “‘My Promise Sent Onto Myself’: Futurity and the Language of Obligation in Sidney’s *Old Arcadia*,” in *The Uses of the Future in Early Modern Europe*. Eds. Andrea Brady and Emily Butterworth, Fwd. Peter Burke (New York: Routledge, 2010), 54-72, 55.

Spenser's claim that "in the person of Prince Arthure I sette forth magnificence in particular, which vertue for that (according to Aristotle and the rest) is the perfection of all the rest, and conteineth in it them all, therefore in the whole course I mention the deedes of Arthure applyable to that vertue, which I write of in that booke."¹⁵⁷ As a figure for magnificence, Arthur should contain within him all virtues, and each book will realize a particular facet of this completion. However, the term "magnificence" was used to describe both the perfection of all virtues as well as an individual cardinal virtue.¹⁵⁸ For Spenser, the virtue is attractive primarily because it is oriented to processes and activities that could lead to a virtuous product. "Perfection," for Spenser, is part of an ongoing process, a doing or implementation of ideas rather than their idealization. Arthur is in a state of suspended performativity, "being brought into action" within the temporal frame of the narrative.¹⁵⁹ Completion involves an active actualization of concepts rather than their abstract definition. Arthur is not "bestowed" like Sidney's Cyrus and his figuration as an image that "should be" is at best an unrealizable consequence, not a given product, of the poetic world.

¹⁵⁷ Spenser, "Letter," 716.

¹⁵⁸ Magnificence, presented by Spenser as a "perfection of all the rest," however, has a complicated history. For early criticisms that suggest "magnificence" as a thirteenth virtue, see William Fenn DeMoss "Spenser's Twelve Moral Virtues 'According to Aristotle' (Continued)," *Modern Philology: A Journal Devoted to Research in Medieval and Modern Literature*, 16.1 (1918): 23-38 and William Fenn DeMoss, "Spenser's Twelve Moral Virtues 'According to Aristotle' II," *Modern Philology: A Journal Devoted to Research in Medieval and Modern Literature* 16.5 (1918): 245-270. Spenser's source, Aristotle, defines "magnanimity" and not "magnificence" as a perfection of all virtues and Spenser's idea of magnificence also derives from Aristotle filtered through the tradition of Scholastic ethics, in which both magnificence and magnanimity occupy complex positions. Defined both as the perfection of virtues and as an individual cardinal virtue,

Spenser had available to him an extended tradition of the virtues in which magnificence was frequently defined as the doing of great deeds for the sake of glory, and he may have seen magnificence as the extension of Aristotelian magnanimity. Thus when he says that magnificence is the 'perfection' of the other virtues, he could mean that it is their 'completion,' their being brought into action—action of the highest order available to man—for the sake of honor or glory. (Hugh MacLachlan and Philip B. Rollinson, Entry on "magnanimity, magnificence," *The Spenser Encyclopedia*, Gen Ed. A.C. Hamilton ...[et. Al](Toronto: U of Toronto P 1990), 448.

¹⁵⁹ *The Spenser Encyclopedia*, 448.

Moreover, Arthur's perfection as an abstract ideal—if achievable within the framework proposed by the "Letter"—is ultimately a temporary idea, since any anticipated perfection functions only within the particular context defined by the poet. Spenser projects a future work after writing about these "priuate morall vertues": "[the first twelve books] if I finde to be well accepted, I may be perhaps encouraged, to frame the other part of polliticke vertues in his person, after that hee came to be king."¹⁶⁰ Spenser establishes continuity in the figure of Arthur as he associates the present text with a possible projection, suggesting the model presented in *The Faerie Queene* is inevitably incomplete. The Arthur of the projected work is the same as that of the present one, the name functioning as a "rigid designator" which associates this figure across worlds and works—not only Spenser's fictional worlds but also of other texts and legend.¹⁶¹ The "polliticke vertues" will realize the fictional figure more perfectly.

Spenser highlights the contingencies implicit in such an act of completion and the near-impossibility of realizing the perfect Arthur, as this projected work is twice removed from certain actualization. This lack of realization leads to the zone of possible futures, since it does not convert Arthur into a fully realized embodiment of all virtues. The second work "may be perhaps" produced only "if" the first twelve books—most of which still exist within a realm of possibility at the time of writing the "Letter," but promised nevertheless—find satisfactory reception. *The Faerie Queene* and its possible successor stand as much for anticipated failures as anticipated successes when the poet cannot promise their completion: his act of writing is contingent on the collective reception of

¹⁶⁰ Spenser, "Letter," 715. For a reading that these lines indicate Spenser's plan about the second set of books, see A. Kent Hieatt, "The Passing of Arthur in Malory, Spenser, and Shakespeare: The Avoidance of Closure," in *The Passing of Arthur: New Essays in Arthurian Tradition*. Eds. Christopher Baswell and William Sharpe (New York: Garland, 1988), 173-192.

¹⁶¹ For names as "rigid designators" that function across worlds, see Dolezel, 18.

readers. Dependent on the conjectures and conditional claims which the poet might not be able to realize, Arthur's development into a perfected Cyrus-like figure, imaginable at the start of the "Letter," rapidly fades from view. As the specter of such an Arthur disappears, so does the possibility of a normative ethics or a poetics of "should be." Instead, we are left with evolving processes of self-formation and fashioning. Arthur's existence, and his position in the text, establishes possible knowledge as a method for ethics, since it models action and interpretation as transferable to readers. Using the figure of Arthur, the poet asks: how do readers react to the existence of allegorical figures? How do they relate to these fictional existences?

Arthur's centrality as a locus of readerly interpretation and action is established from the moment in the narrative that introduces him to readers:

Ne le it seeme, that credence this exceedes,
 For he that made the same, was knowne right well
 To haue done much more admirable deedes.
 It *Merlin* was, which whylome did excel
 All liuing wightes in might of magicke spell:
 Both shield, and sword, and armour all he wrought
 For this young Prince, when first to armes he fell;
 But when he dyde, the Faerie Queene it brought
 To Faerie lond, where yet it may be seene, if sought. (1.7.36)

At this moment, the reader experiences the temporal collapse of the past, present, and future into a moment that conflates the boundaries between real and fictional worlds and that makes the reader question the ontological and epistemic status of both. Arthur's entry in the poem produces a polychronous moment, or a temporal disruption in which the fictional future arrives before the past and disrupts the present narrative moment. Here he occupies a zone of anticipation and retrospection simultaneously, of remembering and forgetting, presence and absence. The narrator prefaces Arthur's exploits within the plot

by inserting the ending of his individual story into it.¹⁶² It erupts within the present fictional moment to disrupt the linear progression of the plot. The future, in which Arthur dies, is not-yet but already-is, and any future plot of the poem carries traces of this futuristic past with it. In a sense, it is Arthur's existence that renders the narrative polychronous. His presence in multiple temporalities creates an epistemic schism between the fictional world created by the poet and the real world occupied by the reader. This polychronous moment locates Arthur in various narrative and historical times, and it pulls him out of the purely created poetic world. His polychronous existence dislocates him from his fictional narrative world, and one can know him only through his varied epistemic and ontological positions.

This moment that points to Arthur's death, however, does not provide an ending in the narrative. The "But" in line 8 interrupts the possibility of a linear plot and projects the reader onto a future beyond Arthur's death. It disrupts any smooth transition from the description of his formative moments and creates an oppositional break between life and death. It subverts death, which can function as a terminal point and disallow further narration, and the plot continues in defiance of it. Arthur's exploits are simultaneously distanced and made immediate: the Faerie Queene's role in bringing his arms back to Faerie Land at best serves as an implicit acknowledgment of the completion of Arthur's present quest. This polychronous moment, in fact, transfers readers beyond Arthur's quest, and the union of Arthur and Gloriana seems unrealizable within the poem that

¹⁶² In his reading of Book III, Burrow uses the differences between plot ("the order in which events are related") and story ("the actual order in which events occur") to show how narrative can use structures of feeling to move beyond events like the destruction of the Bower of Bliss (110). There are many such moments in which as the "plot moves forward, so the story moves backwards" (109), but the moments I look at completely disrupt chronological changes and collapse various temporal units into one specific moment.

already locates him outside its limits. The future arrives ahead of the historical past and the fictional present, and it prevents one from gaining complete knowledge about Arthur's quest and its (seemingly permanent) deferred conclusion. Instead, the narrator leaves readers with other possible questions and their own quests, as the polychronous moment created by Arthur's death propels them onto the fictional world, translating *their* actions into possible states.

Arthur's death does not "plainly" lead the reader to a known world called Faerie Land where his arms are kept, but only to the Faerie Land of romance, where viewing his arms remains contingent on one's capacity to discover them. The reader is invited to enter the wandering space of romance, and his or her status in this scene intensifies the experiential readerly action called for in the Proem. Displaced in time and space, the reader's experience shifts and he or she is at the threshold of a quest that is predicated on the impossibility of fixing Arthur's location, being, or meaning. The removal of these arms to Faerie Land also removes them from the realm of historical truth and empirical verifiability to that of possibility and fiction. The possible knowledge of their existence produces a fictional ontology that invites readers to translate their actual existence into possible states in order to discover Faerie Land. Its knowability is conditional and this yet-unknown space can be found, "if sought" by readers.

The poem splits the promised ending into one that seems completely known (Arthur's death) and one that might only be possibly accessed (the display of arms). While the former exceeds the temporal domain of the poem, the latter translates Arthur's present quest in the poem into the reader's possible future quest and converts the reader's actual existence into a possible one. By equating an *anticipated* past with a possible

futuristic narrative moment, the narrator reveals that events lodged in fictional memory might be “seene” if one can navigate the unstable boundaries among fictional present, actual past, and fictional future. Readers must reorient their cognitive frames as they attempt to separate actual and fictional worlds, and they can possibly know the past-future if they suspend their state of actuality and establish an experiential relationship with poetic quests.

These polychronous moments propel readers into possible past-futures and suggest that the past as an independent set of events is unrecoverable or not completely knowable. However, the hope of recovering the past resonates throughout the poem, especially in the discontinuous “historical” narratives read by Arthur, prophesized by Merlin, and narrated by Paridell. These histories are not unified chronological narrations, but they contain events that associate actual and possible worlds *through* polychronous moments. Arthur and Guyon read “their countrey’s auncestry” confined within memory’s chamber, the “hindmost roome” (2.9.60, 54) in Alma’s castle. The room of memory, simultaneously atemporal and the source of historical knowledge, is supposed to hold complete information of the past. A storehouse of past events, it is a space of writing and reading, and especially of personal reading: the “chamber all was hangd about with rolls, And old records from auncient times deriud, / Some made in books, some in long parchment scrolls, / That were all worm-eaten, and full of canker holes” (2.9.57). The “man of infinite remembraunce,” *Eumnestes*, directs the young boy, *Anamestes* to fetch lost histories into memory. Their “endlesse exercise” (2.9.56, 59) of fetching and restoring the past produces wonder in Guyon and Arthur. Although the young boy looks endlessly for “thinges [that] were lost, or laid amiss” (2.9.58), his very actions as well as

the “canker holes” represent the gaps in memory that might be irrecoverable. Even this space of comprehensive knowledge is ultimately composed of lacunae in material and memory. The roles of the inhabitants in memory’s room and the state of the documents both suggest that forgetting is inevitably a part of memory, and the attempt to fully reconstruct the past is always an impossible task.¹⁶³

Arthur’s reading of his own “auncestry” (2.9.60) dramatizes this gap. It stops abruptly when the historical past intersects with the fictional present, the “now” (3.3.52) of the poem:

After him Vther, which Pendragon hight
Succeeding There abruptly it did end,
Without full point, or other Cesure right,
As if the rest some wicked hand did rent,
Or th’ Authour selfe could not at least attend
The Prince him selfe halfe seemeth to offend,
Yet secret pleasure did offence empeach,
And wonder of antiquitie long stopt his speech. (2.10.68)

The abrupt ending, “Without full point, or other Cesure right,” intercepts the temporal and ontological crossings that occur at a polychronous moment. The implicit violence—“abruptly,” “wicked hand did rent”—points to an untimely breach in the narrative chronology, as Arthur is, in the words of Harris, both “inhabiting a moment but also alien to and out of step with it.”¹⁶⁴ The various possible explanations—represented by the “Or” that signifies alternate truth-values—function as placeholders for an absent historical narrative that can bridge the past to the reader’s present. The narrator seems unwilling to forego a linear chronological narrative documented by historical chronicles, or to translate it into a form that can narrate a known past as fictional future; he almost

¹⁶³ For a reading of the room of memory, in relation to forgetting, see Jennifer Summit, “Monuments and Ruins: Spenser and the Problem of the English Library,” *ELH* 70.1 (2003): 1-34.

¹⁶⁴ Harris, 11.

functions as the historiographer Spenser describes in the “Letter,” who narrates of “affayres orderly as they were donne, accountung as well as the times as the actions.”

Arthur has no access to a vision like Red Crosse, but readers know his future, which is unrepresentable within the framework of reading history: the external audience reading with Arthur knows the future of these histories, since they have access to other texts, both chronicles and romances, and the narrator’s “end” invites readers, again, to cross over and fill in the epistemic gap in and with which Arthur is left.

These polychronous moments simultaneously dissociate and invite the readers as possible entities into the poetic world. In Arthur’s retrospective-anticipated death, the possible knowledge of his future converts a seemingly known past into an event that might occur and invites readers to experience the full fictionality of the world Spenser has created. Through Arthur’s death, the narrator projects a historical futuristic narrative as a possible readerly experience. In the history-reading episode, the historical past (and fictional future) collapses into the fictional present. Both polychronous moments exist not only within the fiction but also without, since the “now” of the fictional world does not correspond with the reader’s temporal experience of this fictional present. These moments displace readers, propelling them from their cognitive frame outside Faerie Land into possible futures related to it and often within it. Since all narrative futures gesture towards the reader’s present, his or her understanding of complex past-possibilities changes. The reader is repeatedly asked to conceptualize time from the point of Arthur’s polychronous existence and therefore perceive his or her own actual present state as a possible, future state. The reader’s real world becomes a possible, future world projected *from* the narrative, an association cemented by the narrator’s invitation to the

reader to constantly cross over into a potentially knowable Faerie Land.

These narratives, which acknowledge the completed pastness of events even as they attempt to rethink the reader's role in the future, produce ruptures that halt narratives, collapse historical time with fictional temporality, and break the bounds between actual and possible worlds. Instead of generating knowledge within the fictional work, they transfer the burden of knowing to readers, who must read themselves into a fictional temporal frame from the point of view of a past that no longer exists in the fiction. Since possible futures—and readers' roles in these times to come—are contingent, unknowable, and dependent on action and decisions in the present, one cannot know the future with certainty as a stable entity. The promise of a certain future itself demands interpretation and action. However, alternate futures *can* come into existence if one knows how to exploit these contingencies. The unknowability of the future can itself serve as a principle of learning. One can also claim prospective authority through assertions of futuristic knowledge and guarantees to control and shape the times to come. To overcome these abrupt collapses of the real and fictional, and address the contingency of the future, Spenser does experiment with the logic of learning through certainty, rather than through possibility. Imagining the historical past as a possible future, he poeticizes an intellectual mode that promises to make the future completely knowable: prophecy.

Prophecy: Uncertain Futures and the Possibility of Action

In his invocation of prophecy, Spenser is both responding to Sidney's definition in the *Defence* of the two different types of poet—the “vates” (“a diviner, foreseer, or

prophet”) and the “maker”¹⁶⁵—and enacting his own theory of possible knowledge by combining these two roles into one figure. Poetry, according to Spenser, always prophesies because of the poet’s complex work with temporality (he deals with “thinges forepaste, and [diuines] of things to come”). He most explicitly poeticizes prophetic knowledge in the figure of Merlin to suggest that the poet can uniquely oscillate between the two roles since he has access to both the vatic and the operational traditions of poetic production: he can divine the times to come and he can employ his knowledge to direct readers towards future (ethical) action. Merlin’s power with words makes evident his status as the surrogate poet, but his ability to enact material changes in the world *through* words exemplify both the promise and the threat of poetry in general: “he by wordes could call out of the sky / Both Sunne and Moone, and make them him obay: ... And hostes of men of meanest things could frame, / When so him list his enimies to fray” (3.3.12).¹⁶⁶ Merlin is both the “maker” whose creations are dispersed and distributed across Faerie Land (he fashions Arthur’s arms and King Ryence’s “mirror playne” (3.2.17)), and the “diviner” who can look into the future (when Britomart and Glauce visit him, “He nought was moued at their entrance bold: / For of their comming well he wist afore” (3.3.15)). His brief appearance in Book III serves as a reflection on the status of memory, history, and futurity, as well as a case study for the constructive process of

¹⁶⁵ Sidney, 21, 23.

¹⁶⁶ *The Spenser Encyclopedia* highlights how Merlin is a product of two different traditions: Merlin has an “involved and changing history from British chronicles through medieval romances to the Renaissance. His Britishness, dynastic prophecies, and traditional role as Arthur’s adviser and helper made him attractive to propagandists for the Tudor monarchy.” While Spenser took dynastic prophecies from romances and chronicles, magic mirror, attempt to wall, and manufacture of magical weapons for Arthur are not in them. This is from Roger Bacon’s work. See the entries on “Merlin” (470-471) and “Magic” (445-447). Also see Lorena Henry, “Guiding the Heavenly Causes: Faithfulness, Fate and Prophecy in *The Faerie Queene*,” in *Centered on the Word: Literature, Scripture, and the Tudor-Stuart Middle Way*. Eds. Daniel W. Doerksen and Christopher Hodgkins (Newark, DE: U of Delaware P, 2004), 50-72 for providential reading of Spenser’s use of prophecy.

possible knowledge. More specifically, he enacts how prophetic poetics uniquely combines the anticipatory, incomplete, and readerly aspects of possible knowledge by making revelation inseparable from invitations to action.

Spenser's Merlin, embodying the characteristics and powers of the "*vates*" and the "maker," dramatizes the limits of divining knowledge and the impossibility of anticipating the future perfectly, but he also models the possibility of action that arises *because* of these limitations.¹⁶⁷ His actions also raise the questions: if prophecy would only be fulfilled by history, did its predictions hold within them the capacity to shape history? Or, did its predictive nature—which highlighted the contingency of the future—implicitly undermine the promise of a singular, certain knowledge that was to be revealed in the future? Merlin, who "did excel / All liuing wightes in might of magicke spell" and "wrought" Arthur's arms, makes a brief appearance in Book III and transforms prophecy from a revelatory mode to one that is contingent, suspended, and at best only rhetorically revelatory. His presence in the text highlights how knowledge of and in time is always conditional.

Merlin's "mirror playne" presents a "prophetic" model of worldmaking that propels King Ryence's daughter Britomart in her quest for Artegall. A world in itself, this "wonderous worke" (3.2.20) has predictive powers and can shape worlds within the poem. The narrator repeatedly compares the mirror to the world in miniature ("Like to the world it selfe, and seemed a world of glas" and "the glassy globe that *Merlin* made")

¹⁶⁷ The two roles are intertwined in the moment when Britomart and Glauce visit him, and the narrator breaks from the plot to present Merlin's location, history and abilities as hearsay, situating him in the realm of history and legend. An examination of this episode would also provide examples of crossing of boundaries between past and present and future, as well as the crossings between the actual and fictional worlds. The narrator also introduces hearsay in this projection—something he does not do in other polychronous moments—distancing himself and readers by another level from the fictional action even as he invites them to cross the boundaries.

(3.2.19, 21)); it is a “world” in itself, whose specific purpose is to reveal the actual “world” to the viewer:

The great Magicien *Merlin* had deuiz’d,
By his deep science, and hell-dreaded might,
A looking glasse, right wondrously aguiz’d,
Whose vertues through the wyde world soone were solemniz’d.

It vertue had, to shew in perfect sight,
What euer thing was in the world contaynd,
Betwixt the lowest earth and heuens hight,
So that it to the looker appertaynd;
What euer foe had wrought, or frend had faynd,
Therein discouered was, ne ought mote pas,
Ne ought in secret from the same remaynd;
For thy it round and hollow shaped was,
Like to the world it selfe, and seem’d a world of glas

...

Such was the glassy globe that *Merlin* made,
And gave vnto king *Ryence* for his gard,
That neuer foes his kingdome might inuade,
But he it knew at home before he hard
Tydings thereof, and so them still debar’d.
It was a famous Present for a Prince,
And worthy worke of infinite reward,
That treasons could bewray, and foes conuince;
Happie this Realme, had it remayned euer since. (3.2.18 –21)

The “glassie globe” shapes the world outside by simulating a representation of possible futures or pasts, which the viewer acts on according to his or her desires and needs. An example of Renaissance “small worlds,” the mirror does not automatically transform the future but is suggestive of things that might happen if no action is taken.¹⁶⁸ At first glance, it seems to provide accurate representation of the actual world (“to shew in *perfect sight* / What euer thing was in the world contaynd,” (my emphasis)) but it actually reveals only a version of how things were, or will be. Its status as an imitative model of

¹⁶⁸ See Spiller, 24-59 for “small worlds” as constructed representations and material models of actual world.

the actual world is illusory, since the mirror is associated with the actual world by similitude and not through identity; it only looks “Like” the world and “seem’d” a world “of glass.”

The instrument’s functional ambiguity mirrors its ontological one. Instead of showing “in perfect sight” what Britomart wishes to see, it only reveals “the shadow of a warlike knight” (3.2.45). The promise of imitation or complete revelation (it promises that nothing remains “secret” from it) is disrupted by the shadowy images it actually offers: Britomart sees “Not man it is, nor other liuing wight...But th’only shade and semblant of a knight” (3.2.38). Similarly, her father, who uses the mirror see what “foes his kingdom might inuade” has access to a possible future that he can alter because of this vision; the mirror thus functions to show one possible future as the “real” one. It is an apparatus that propels others to act as they interpret and uncover the references to which it points. It invites viewers to actualize scenarios through quests, but it does not refer directly to an entity, event, or action. It only contains virtual projections. By asking the viewer to choose a course of action, the mirror serves as an image to Spenser’s own narrative project of learning through a deferred and wandering romance. In order to bring events shown in the glass to fruition, or to change them, the viewer, like the reader of the epic-romance, must act and make choices. In spite of its seeming promise of certainty, the future the mirror reveals is provisional. It contains within it all potential futures, showing its viewer how the future is or might be.

Merlin’s predictive device leads Britomart and her nurse Glauce to the zone of prophecy, as they believe he can divine and interpret the shadows seen in the mirror. Desiring interpretation of what her vision of “th’only shade and semblant of a knight”

might mean, they look for Merlin. His prophecy initially promises to convert the possible knowledge offered by the mirror into certainty. As a prophet-poet-maker, he reveals to her that her vision was not an accident, as she claims (“By strange occasion she did him behold” (3.2.18)), but an act of fate:

It was not, *Britomart*, thy wandring eye,
 Glauncing vnwares in charmed looking glas,
 But the streight course of heuenly destiny,
 Led with eternall prouidence, that has
 Guided thy glaunce, to bring his will to pas:
 Ne is thy fate, ne is thy fortune ill,
 To loue the prowest knight, that euer was.
 Therefore submit thy wayes vnto his will,
 And do by all dew meanes thy destiny fulfill. (3.3.24)

Merlin effectively converts Britomart’s interpretation of her vision as a contingent and unique event into a prophetic and destined one. When Glauce questions his claim that “dew meanes” are necessary to “fulfill” this destiny (“what needs her to toyle, sith fates can make / Way for themselues, their purpose to partake” (3.3.25)), he espouses a philosophy of predestination dependent on action and introduces doubt in the certainty of his own prognosis: “Indeede the fates are firme / And may not shrinck, though all the world do shake: / Yet ought men’s good endeouours them confirme, / And guide the heauenly causes to their constant terme” (3.3.25).¹⁶⁹ Individual actions “confirme” and “guide” the fates instead of the other way round. In order to persuade Britomart of her destined place in the future, Merlin launches into a genealogical prophecy. He situates her within a past history and a definitive future, removing her from the “wandring” of romance into the “streight course” of “destiny.” In this way, he makes her essential and

¹⁶⁹ See Witmore, 32 for the providential underpinnings of accidental events. Accidental events have some kind of explanations but not metaphysical ones.

not accidental to the plot and purpose of *The Faerie Queene*.¹⁷⁰

Spenser ultimately examines when prophecy can be analogous to his own poetics of possibility and when it fails. Merlin presents chronicle history masked as prophecy—or a futuristic history—that takes Britomart beyond the fictional world of the poem to the real world, not as a mirror to Queen Elizabeth or as a shadow of how Elizabeth “should be,” but as an embodiment of Elizabeth’s reign as an era of missed opportunities, what she could-have-been but cannot be.¹⁷¹ In a sense, Britomart is like the external reader who sees her self being projected into possible futures. Spenser prophesizes Britomart’s role in a narration that crosses the boundaries of fact and fiction in terms of the events described, and that again hinges on a polychronous moment. Merlin’s prophecy is a continuation of the history that Arthur reads in Alma’s castle. While Arthur’s reading ends when he reaches the fictional present, the “now” (3.3.52) of the plot, Merlin’s prophecy begins with a promise of certainty, i.e. it assumes the epistemic mode claimed by all prophecies. Merlin begins in this “now” with a displacement of characters—Artegall instead of Arthur—as he reveals to Britomart her destined future.

This prophetic narration becomes a performative event, in which Merlin seems to be constantly learning the future as he divines to Britomart. His reactions to the events seem spontaneous and unmediated, as if these visions are discoveries for him too. His passionate declaration of the “woe, and woe, and euerlasting woe” (3.3.42) that awaits the Britons invokes similar passions in Britomart: “The Damzell was full deepe

¹⁷⁰ This seems to contradict her status and her actions as “accidental” to the project of the poem, as Spenser suggests in the “Letter.”

¹⁷¹ Burrow on the other hand proposes a direct association between the Britomart-Merlin episodes and Elizabeth’s reign: he suggests that Spenser uses mythical, timeless moments “that dwell on reproduction and change” to comment on topical things in order to persuade the Queen that there are times to act, to fight for peace, and “times to breed” (102).

empassioned, / Both for his grieve and for her peoples sake / Whose future woes so plaine he fashioned” (3.3.43). Merlin’s performance elicits Britomart’s empathetic response, and his own immediate “grieve” demands her response towards the future of her progeny. His various displays of surprise and grief during his revelation shows that prophecy, as an ongoing performative process that exists simultaneously in the acts of revelation and narration, can be part of a poetics of possibility when it is open to surprise, suspension of judgment, and revelation of the unknown. Performed prophecy, like poetry, moves the viewer or reader, and produces a metaphorical relay of associations for all interlocutors.

By contrast, when prophecy attempts to drive to a certain future—the historical present—its narrative structure collapses and the poet-prophet is left with a failed predictive art. Merlin’s prophecy reveals to Britomart her role as knight and warrior but finally fixes her as a mother. It breaks from the fictional future world and moves in the realm of history, and it merges the prophetic future with a historical past.

Thenceforth eternall vnion shall be made
 Between the nations different afore
 And sacred Peace shall louingly persuade
 The warlike minds, to learne her goodly lore,
 And ciuile armes to exercise no more:
 Then shall a royal Virgin raine, which shall
 Stretch her white rod ouer the *Belgicke* shore,
 And the great Castle smite so sore with all,
 That it shall make him shake, and shortly learne to fall.

But yet the end is not. There Merlin stayd,
 As ouercomen of the spirites powre,
 Or other ghastly spectacle dismayd,
 That secretly he saw, yet note discoure:
 Which suddein fitt, and halfe extaticke stoure
 When the two fearfulle wemen saw, they grew
 Greatly confused in behaueoure;
 At last the fury past, to former hew
 Hee turnd againe, and chearfulle looks as earst did shew. (3.3.49-50)

Merlin stops in the midst of his revelation and the caesura marks this interruption in thought and its articulation. The collision of historical present with the prophetic future, the fictional world of Britomart with the actual one of Elizabeth, creates another polychronous moment that disrupts the promise that the prophecy will reveal the future fully and will be resolved in history.¹⁷² Prophecy fails to perform its revelatory function and finally comes to stand in opposition to poetry, which can produce possible knowledge through narrative speculations.

Of course, at this moment Spenser acknowledges the limits of his own poetic art that cannot predict the actual future. However, he does so by turning prophecy into uncertain prediction, an unresolvable promise that cannot be completed outside historical time. Although Merlin promises to reveal the truth and situate Britomart in *one* future history, he ends up dissociating her from all narrations. He does not merely create a gap between thought and articulation, between the spoken and the known; he ends the possibility of expressing knowledge in language. The actually unknown “real” future serves as the perfect vehicle for dramatizing the collapse of a prophetic one that might be representable in narrative. Although he might be witnessing a “ghastly spectacle,” he cannot “discourse” of it. In fact, Spenser does not clarify or provide one explanation of what it is that Merlin sees, establishing yet another gap between prophetic and poetic endings. Merlin’s behavior is indirectly mirrored in the “confused” reactions of the two women. This moment effectively displaces Merlin’s speculation from its stable status as futuristic knowledge and pushes it towards the unnarratable. The abrupt ending of the scene also mirrors the sudden ending of Arthur’s act of reading his own history,

¹⁷² This section also demonstrates how “prophecy” is implicitly or explicitly political, as it reveals the propagandistic and overtly ideological dimensions of the poetic project.

suggesting that the future, whether real or fictional, is always potentially unknowable.

While Arthur's polychronous existence invites readers to experience possible and fictional worlds, Merlin's engagement with a moment of apocalyptic future does not admit any such point of entry and underscores the impossibility of gaining certain kinds of knowledge.¹⁷³ Merlin's final vision thus takes us beyond expression and experience to the boundaries of prophecy. Instead of establishing prophecy as the mode of an affirmative futuristic knowledge that can be narrated, Merlin's failure translates prophetic certainty into impossible knowledge. When prophecy attempts to reveal apocalyptic truth, it becomes unnaratable and leads to the end of possible knowledge. Merlin's prophecy is analogous to Spenser's poetic project only when it allows for suspension of truth and gestures to a complex, genuinely open act of creation and narration. As an epistemic mode that divines the future or interprets the past, prophecy can provide only "possible knowledge" when it is poetic and finally "nothing affirms."¹⁷⁴

However, the performative aspect of prophecy—its poetic part—when experienced by Britomart, is sufficient to propel her into action. Merlin's curtailed revelation presents to her how the future could be, but only if she participates in it. In his implicit advocacy for action or "good endeouours"—"well-doing" in Sidney's terminology—to secure a particular future through possible knowledge, Merlin reflects the position of Spenser the poet. For Merlin, like Spenser, sees his audience as part of the world that can be influenced but who should be left free to fashion the self in his or her own time. Merlin's performance and the mirror are similar to Spenser's poem and

¹⁷³ Wofford (1987) suggests that Spenser's poetics, especially Books III and IV "depends on a consistently anti-apocalyptic poetics" (54), which prevents closure, facilitates delay and deferral, and distances story from its allegorical interpretation. This also relates to Parker's theorization of romance as the mode of deferral and delay.

¹⁷⁴ Sidney, 53.

demonstrate the proper role of makers who hope to influence but not act for or on their audience. Just as the poet associates different virtues with different figures and expects more engagement from the reader in order to fashion the self, the proper artificer should produce artifacts that shape subjects into action without directly intervening. Merlin's actions do not directly transform things, but like *The Faerie Queene*, show how a work can potentially transform its audience, including the knight of Chastity, into action.¹⁷⁵

Finally, the mirror and the speculative predictions, and not the apocalyptic prophecy, move the audience and serve as instruments of possibility. As such, they are corollaries to Spenserian allegory. They display that even the most "divining" poet can offer only conditional knowledge dependent on future possible action. What readers—and fictional actors like Britomart—require, is implicative narration and not conclusive precepts.¹⁷⁶ The narrative development creates the possibility of self-formation through partial knowledge. It drives actors to perfect themselves as well as generate knowledge for themselves and others. The ideal prophet-maker need only produce objects and dramatize the "methode" which will allow observers to fashion themselves through the

¹⁷⁵ In "Spenser's Merlin," *Renaissance and Reformation/Renaissance et Reforme* 4 (1980): 179-198, William Blackburn reads Merlin as a "figure for the poet" whom Spenser refigures from romances for his own purposes; Merlin is a positive figure because his art shows things as they exist. In "Spenser's Merlin Reconsidered," *Spenser Studies: A Renaissance Poetry Annual* 13 (1999): 89-99, Matthew A. Fike questions this equation of Merlin and the poet. According to Fike, Merlin "remains passively focused on his own art" and does not "affect [the human world] in immediate and concrete ways." Fike criticizes his passive role in helping Britomart achieve her goal of finding Artegall; Britomart achieves more than Merlin. Fike's interpretation is correct, but his conclusion is wrong. As one who deals with possible futures, Merlin's passivity reflects Spenser's belief about the poet's role with respect to his creations.

¹⁷⁶ I borrow the term "implicative" from Andrew H. Miller, *The Burdens of Perfection: On Ethics and Reading in Nineteenth-Century British Literature* (Ithaca: Cornell UP, 2008). Miller distinguishes "implicative" and "conclusive" criticism: in contrast to the latter which works to "establish facts, convey information, and make judgments, ...[and] ask for no continuation from its readers," implicative criticism is "generative," "thinking" (30), asks readers to "elaborate" (30) on writers' processes of thinking and is "marked first of all by the display of thinking, writers unfold the implications of their ideas rather than convey their conclusions" (221-222). I want to suggest that the term "implicative" can be used to characterize literary reference, as well as literary criticism, because of its generative, multiplying and process-oriented connotations, and since it does not gesture towards definitive solutions or truth-values.

“shadowy” images or future possibilities they can almost perceive. Since possible knowledge in *The Faerie Queene* serves an ethical function, the logical end of narration is the reader’s “good endeouours.” This epistemology and ethics *require* action on the part of readers: they must imagine themselves as possible entities with indeterminate futures in order to actualize and realize the multiple possibilities created by the poet.

Prophetic Epistemology and Theatrical Form in *Macbeth*

Macbeth repeatedly turns to questions of time as it imports on stage the sections of Holinshed's *Chronicles* that were particularly relevant to the new English monarch, James, who traced his lineage to Banquo.¹⁷⁷ *Macbeth* scholarship, too, has frequently returned to issues of temporality, history, and genealogy to explore the play's ruminations on time.¹⁷⁸ From the witches' opening query, "When shall we three meet again?" (1.1.1), to Lady Macbeth's claim that she "feel[s] now / The future in the instant" (1.5.55-56), to Macbeth's musings on time's passage ("To-morrow, and to-morrow, and to-morrow / Creeps in this petty pace from day to day"),¹⁷⁹ *Macbeth* enacts what David

¹⁷⁷ Scholars trace the topicality of the play primarily by focusing on politics, sovereignty, and witchcraft. For the exploration of sovereignty, see David Scott Kastan, *Shakespeare After Theory* (New York: Routledge, 1999), 165-182. In "Shakespeare Bewitched," in *New Historical Literary Study: Essays on Reproducing Texts, Representing History*. Ed. Jeffrey N. Cox and Larry J. Reynolds. (Princeton: Princeton UP, 1993), 108-35, Stephen Greenblatt explores the ambiguity surrounding witchcraft by drawing on James' sanction of the topic (James had written about witchcraft in *Daemonologie* (1597)) and Reginald Scot's sceptical *The Discoverie of Witchcraft* (1584). In "Macbeth and Witchcraft," in *Focus on Macbeth*. Ed. John Russell (Boston: Routledge, 1982), 189-209, Peter Stallybrass argues that "[w]itchcraft in *Macbeth* ... is a particular working upon, and legitimization of, the hegemony of patriarchy" (190). In *Faultlines: Cultural Materialism and the Politics of Dissident Reading* (Berkeley: U of California P, 1992), Alan Sinfield uses George Buchanan's work as a "virtual antithesis" (101) to James' "absolutism (100).

¹⁷⁸ For representative works, see Harris, 119-139; David Scott Kastan, *Shakespeare and the Shapes of Time* (Hanover: UP of New England, 1982), 91-101; Garrett A. Sullivan, Jr., "Coda: 'Wrought with things forgotten,'" in *Memory and Forgetting in English Renaissance Drama* (Cambridge: Cambridge UP, 2005), 132-136; Janet Adelman, "Born of Woman, Fantasies of Maternal Power in *Macbeth*," in *Cannibals, Witches, and Divorce: Estranging the Renaissance*. Ed. Marjorie Garber (Baltimore: Johns Hopkins UP, 1987), 90-121; Donald W. Foster, "Macbeth's War on Time," *English Literary Renaissance* 16.2 (1986): 319-342; Luisa Guj, "Macbeth and the Seeds of Time," *Shakespeare Studies* 18 (1986): 175-188; Jonathan Goldberg, "Speculations: Macbeth and Source," in *Shakespeare Reproduced: The Text in History and Ideology*. Eds. Jean E. Howard and Marion F. O'Connor (New York: Methuen, 1987), 242-264, 242. Julia MacDonald "Demonic Time in Macbeth," *Ben Jonson Journal: Literary Contexts in the Age of Elizabeth, James and Charles* 17.1 (2010): 76-96. For broader problems of source and historiography, see David Norbrook, "Macbeth and the Politics of Historiography," in *Politics of Discourse: The Literature and History of Seventeenth-Century England*. Eds. Kevin Sharpe and Steven Zwicker (Berkeley: U of California P, 1987), 78-116.

¹⁷⁹ All quotations from the play are from *The Norton Shakespeare*, and cited by act, scene and line number.

Scott Kastan has identified as the “play’s very insistence upon its future” and its refusal to “stop.”¹⁸⁰ As political events such as Duncan’s naming Malcolm “The Prince of Cumberland” (1.4.39) and Macbeth’s worries about his “barren sceptre” (3.1.61) become inseparable from questions about future rule, Macbeth acutely feels the necessity of *knowing* the future, repeatedly asking how potential events—contingent and unknowable—might be understood and manipulated to authorize kingship. To demonstrate how this very unknowability of the future might serve as its authorizing principle and resolve these eruptions of contingency, *Macbeth* turns to the form of esoteric knowledge that promised certainty about approaching times: prophecy becomes the thematic and formal vehicle that reveals the “future in the instant.”

The topicality and transgressiveness of the prophetic mode, its popularity in contemporary writing, and its associations with political genealogy, make prophecy an ideal instrument for examining concerns about sovereignty (especially knowing the future of kingship) that lie at the heart of *Macbeth*. Unsurprisingly, scholars have noticed the role that prophecy plays in *Macbeth*, but they usually mark the political content of the prophecies rather than the processes of knowing that govern the visionary mode.¹⁸¹ An examination of the epistemology of prophecy—the theories of knowledge underlying such predictive utterances—reveals how vatic discourse uses contemporary ideas of action and prescription in order to shape the audiences’ understanding of political futurity in the play. As such, *Macbeth*’s prophecies are not merely instances of “hindsight

¹⁸⁰ Kastan (1982), 100, 87. Unlike most other scholarship, which focuses on the relationships of the past and the present in *Macbeth*, Kastan (1982) focuses on the future. He argues that *Macbeth* is an “exception” to the “shape of Shakespeare’s tragedies” (100), because it does not “close” (91); the “end of *Macbeth* allows us to look confidently beyond Macbeth’s death” (91).

¹⁸¹ For example, see Sharon L. Jansen Jaech, “Political Prophecy and Macbeth’s ‘Sweet Bodements,’” *Shakespeare Quarterly* 34.3 (1983): 290-297.

masquerading as foresight,” which Marjorie Garber identifies as the condition of all dramatic prophecies, units of certainty of a completed pastness:¹⁸²

from the point of view of the audience, there is a double reversal in the semiotics of theater; even without knowledge of the chronicle account, we are conditioned as spectators and auditors by the dramatic convention of historical prophecy. The audience knows that these ‘impossible’ things will prove true, and it can do nothing with that knowledge but wait for the fulfillment of the future anterior—the future that is already inscribed.¹⁸³

Such a reading forecloses the possibility that the interpretation of prophecy *is* action, in which the futuristic promise of prophetic epistemology shapes theatrical action and invites spectators to imaginatively project from what they see on stage. To adopt but also to adapt Garber’s terms, *Macbeth*, I argue, is about “foresight” rather than “hindsight”: its open-ended prophecies stage their states of contingency and invite interpretations from characters, demanding that the play’s intended audiences—characters and the external spectators—react experientially to them. Prophecy in *Macbeth* produces neither fact nor a predestined future before the fact but augurs forms of interpretation that shape our understanding of how characters simultaneously earn places in history and on the stage, in the future and in the present.

Prophecy itself had a complex status in Elizabethan and Jacobean England, where the prophet was defined in two different ways, “either for a shewer, or foreteller of things

¹⁸² Marjorie Garber, “‘What’s Past is Prologue’: Temporality and Prophecy in Shakespeare’s History Plays,” in *Renaissance Genres: Essays on Theory, History, and Interpretation*. Ed. Barbara Kiefer Lewalski (Cambridge: Harvard UP, 1986) 301-331, 308.

¹⁸³ *Ibid.*, 318. Garber marks the audience’s powerlessness, which “is paradoxically a function of our very belief in the truth of history” (305). Various aspects of her analysis of prophecies do apply to *Macbeth*: “‘The history play as such is thus lodged in the paradoxical temporality of what the French call the *futur antérieur*, the prior future, the tense of what ‘will have occurred’” (306-7). This relationship to history, and the emphasis on the past, seems to shut down the “audience-response” (306) that she wishes to privilege: “Hearing these anachronistic prophecies, we know their truth and are powerless to alter the course of a history that has already taken place. Only Shakespeare can do that, and he does, modifying his sources as he sees fit” (330-331). Another complex relationship of the past to the present is offered by Harris, who explores the question of how the past returns in various forms by examining the “referential and temporal slipperiness of smell” (123).

to come,” in the words of John Harvey, the Elizabethan astrologer, or “for a preacher, or interpreter of the scripture.”¹⁸⁴ Prophecy signified not a single concept or action but ranged from practices in astrology to mathematics to church activities.¹⁸⁵ At its simplest, prophecy was an art of prediction, but the contingent ending associated with predictive arts was countered by claims that prophets had divine inspiration and could thus foretell the truth. At its most threatening, prophecy could subvert established hierarchies and practices: since prophets claimed unmediated or immediate access to a privileged, esoteric source of knowledge, their practices were always seen as potentially subversive and threatening. Prophecies were also sources of anxiety and fear because they disseminated elite knowledge to commoners, and practices of divining the future were also associated with utilitarian ends and social reform.¹⁸⁶ The utilitarian end was not always perceived as desirable, because it carried with it the potential for tremendous social and political upheavals.

Prophecy, even when it aims only at interpretation, implicitly gestures towards a futuristic event that can potentially disrupt established social orders. It was often

¹⁸⁴ John Harvey, *A Discoursiue Probleme concerning Prophecies...* (London, 1588), 37. For his other writings on astrology and divination, see “Harvey, John (*bap.* 1564, *d.* 1592),” Bernard Capp in *Oxford Dictionary of National Biography*, eee online ed., ed. Lawrence Goldman, Oxford: Oxford UP, <http://www.oxforddnb.com/view/article/12523> (accessed May 1, 2013). Also see Henry Howard, *A Defensatiue against the poyson of supposed prophecies* (London, 1583).

¹⁸⁵ For the relationship between astrology and prophecy, see Patrick Curry, *Prophecy and Power: Astrology in Early Modern England* (Cambridge: Polity P, 1989). Curry focuses primarily on the seventeenth century. For the relationship between prophecy and preaching, see Howard Dobin, *Merlin's Disciples: Prophecy, Poetry, and Power in Renaissance England* (Stanford: Stanford UP, 1990). More specifically, for Sidney's poetry as prophetic, and the relationship of prophetic poetry to preaching and religious practices, see Roger E. Moore, “Sir Philip Sidney's Defense of Prophesying,” *SEL Studies in English Literature 1500-1900* 50.1 (2010): 35-62. In *Religion and the Decline of Magic* (New York: Scribner, 1971), Keith Thomas puts forward the influential thesis that diminishing faith in prophecy led to the decline of magic. This modernizing narrative has been more recently challenged by works like Tim Thornton's *Prophecy, Politics and the People in Early Modern England* (Rochester: Boydell, 2006) which looks at that “non-biblical prophetic traditions in England” including Merlin (1).

¹⁸⁶ See Moore, 54-57 for the perception that prophecy was supposed to be edifying and useful. Moore connects this to the vatic poet who can claim access to divine truth to bring about moral and social reformation.

employed as a tool for maintaining political power, but it could also undermine current power structures by pointing to the future, often a reformed future. Worries about the accuracies as well as the effects of prophecies had led Elizabeth to issue various proclamations against prophesying throughout her reign. Prophecies “touched on the highly sensitive matters of ecclesiastical and political authority and thus were followed by those...who had a stake in maintaining England’s stability.”¹⁸⁷ Roger Moore suggests that prophecy was primarily linked to religious belief and practice: “whether oracular or interpretive in nature, [prophecy] was dangerous because it implied that the Holy Spirit still spoke immediately to individuals, even though most Protestants maintained that the age of miracles and inspiration had ceased and that the Holy Spirit only spoke to men *mediately* through the holy scriptures.”¹⁸⁸ However, this theological underpinning cannot be isolated from other discourses of power. Prophecy was seen as a powerful and threatening instrument in both politics and religion—either as a means to subvert or to consolidate positions and ideas—to a large extent because of its futuristic orientation and its implicit promise of certainty, to be fulfilled in history. In “Of Prophecies,” even a skeptical Francis Bacon acknowledges that people give prophecies “grace, and some credit” because some have *proved* true: “men mark when they hit, and never mark when they miss.”¹⁸⁹

Macbeth interrogates the boundaries between natural and occult knowledge by coupling the predictive surety, which is promised by its prophecies, with the absolute unknowability of the future that its characters encounter repeatedly. By exploring the role

¹⁸⁷ Ibid., 38.

¹⁸⁸ Ibid., 42.

¹⁸⁹ Francis Bacon, *Essays or Counsels, Civil and Moral* in *Francis Bacon: The Major Works*. Ed. Brian Vickers (Oxford World’s Classics, 2008), 414.

of prophetic prediction in revealing or even directing the future, the play grapples with a major epistemic shift occurring in the early seventeenth century, which scholars such as William Eamon and Elizabeth Spiller mark as the movement from knowing to doing, or from *gnosis* to *praxis*. A crucial aspect of this shift is that various forms of occult knowledge become associated with natural philosophy and this association transforms the practical value of predictive epistemologies.¹⁹⁰ Moreover, influential works on poetics such as Sidney's *Defence of Poetry* claim that even poetry, which "nothing affirms," aims towards *praxis* or "well-doing" over *gnosis* or "well-knowing."¹⁹¹ In this moment, then, action and uncertainty intersect in a variety of discourses about imaginary and natural worlds. Keeping these contexts in mind, we can see how *Macbeth*'s ambiguous sources of esoteric knowledge and the play's exploration of the complexity of prophecies serve as crucial examples of the changing concerns over access to, use, and scope of the "occult forces" of "nature."¹⁹² In this chapter, I focus on the role of the "Weird Sisters" (2.1.20) as "instruments" (1.3.124) of occult knowledge; their futuristic predictions animate characters to perform interpretive projections and serve as the signal examples of how prophetic utterances work and influence theatrical action.¹⁹³

In a period when the study of the anomalous, the irregular, and the wondrous was gaining in popularity, and marvels were increasingly marked as objects of natural inquiry, the witches could be perceived as much as objects of scrutiny and interrogation as

¹⁹⁰ See Eamon, 267-360.

¹⁹¹ Sidney, 53, 29. Of course, *Macbeth*'s use of equivocal language also refers to Henry Garnet's *A Treatise of Equivocation*, most explicitly dramatized in the porter's claim "Here's an equivocator" (2.3.8). See Kastan (1999) for the doubling, especially of the figures of the king and the tyrant, which hinders unequivocal understanding of events or complete restoration of order.

¹⁹² Eamon, 4.

¹⁹³ For various understandings of witchcraft in the period, see Stallybrass, Greenblatt, Adelman. For a detailed exposition of the dominant practices and beliefs about witchcraft in England, and their differences from witchcraft in the Continent, see Thomas, 435-586. For the relationship between witchcraft and probability, see Shapiro.

knowledge producers.¹⁹⁴ Francis Bacon underscores the importance of studying “marvels” or anomalies of nature in *The Advancement of Learning* (1605); his inclusion of the marvelous into objects of philosophical inquiry deviates from Aristotelian category of *scientia*.¹⁹⁵ In *Macbeth*, Shakespeare privileges the agential status of the sisters and their roles as knowers over their status as wonders by making them repositories of occult and singular knowledge. Although individual characters such as Macbeth and Banquo raise questions about their being, the play does not explicitly define them. Their interactions with other characters challenge what the latter know, and their utterances also test the limits of what constitutes knowledge, and to what ends it can be used. *Macbeth* turns to their vatic revelations—which promise certainty—in order to overcome the contingency of the future. But this tension between certainty and contingency also raises the question of *how* the witches’ enigmatic prophecies come true, and more specifically, how they are actualized within a theatrical form. *Macbeth*’s prophecies forcefully reveal gaps between the dramatic present and the historical future. By inviting characters to interpret, understand, and act on the witches’ equivocal prophecies, the play transforms prophetic revelations into transgressive recipes for political, and theatrical, action. Possible knowledge, in *Macbeth*, takes various forms and significations. It emerges in the prophetic utterances and their interpretations as characters mediate between the certainty promised by prophecy and the suspension of this very surety through appeals to theatrical action.

¹⁹⁴ For changing objects of study in the period, especially of wonders and marvels, see Daston and Park. Also see Campbell (1999) for the specific relation of wonders to literary production.

¹⁹⁵ For the divisions in Aristotelian categories, see Turner, 43-52.

Prophetic Epistemology

Prophecies represented an amalgamation of occult, practical, and poetical epistemologies, and realizing prophecy in history entailed reconciling theories of *praxis* or “doing” with the productive aspects of *poiesis* or “making.” *Praxis* signified “practical knowledge” in which “action contains its end in itself” while *poiesis* was “productive knowledge” where “making finds its ends in its object.”¹⁹⁶ Since a prediction *became* a prophecy only in moments of historical fulfillment, the end-oriented activity of *poiesis* was inextricable from the act of vatic utterance: prophecy then, served as both action and product. Prophetic expressions were also poetic in the sense that poetry “nothing affirms,” as Sidney famously put it, purports to direct readers towards future action, and invites audiences to interpret figurative modes of representation. Naturalists often classified prophecies under the category of *secreta*. Unlike *scientia*, where only regularities or unchanging elements of nature were worthy of philosophical inquiry, “*secreta*” encapsulated diverse phenomena from the “manifestation of occult qualities” to “events that occur unexpectedly or idiosyncratically” to events for which one “can observe effects, but not causes, because they are particulars; phenomena; not demonstrable.”¹⁹⁷ *Secreta* manifest themselves in the form of wonders, marvels, and accidents, and they find expression in diverse practices and media, including natural magic, practical arts, alchemical experiments, recipe books, and prophetic utterances.

¹⁹⁶ Turner, 46-7. For an example of the breakdown between *praxis* and *poiesis* in Shakespearean drama, see Richard Halpern, “Eclipse of Action: Hamlet and the Political Economy of Playing,” *Shakespeare Quarterly* 59.4 (2008): 450-482. According to Halpern, drama itself crosses the categories between doing and making because it “is a product of work, but one that imitates, in order to preserve, the realm of action” (458).

¹⁹⁷ Eamon, 54. *Praxis* and *poiesis* dealt with variable or changing entities (Turner, 46). For distinctions between certain and probable knowledge, see Dear, (2001), esp. 1-48; Shapiro, esp. 3-14.

Prophecy's promises of certain knowledge, achievable in the future, inevitably led to the scrutiny of its epistemic claims. Works such as Henry Howard's *A Defensatiue Against the Poyson of Supposed Prophetes* (1583) and John Harvey's *A Discoursiue Probleme Concerning Prophetes* (1588) underline the contingency involved in the mode. Prophecy, Harvey argues, had become an "vncertaine collection of mans inuention, without any further diuine instinct, angelicall illumination, or propheticall gift of foreknowledge, either mediate, or immediate, either sensible, or intellectuall."¹⁹⁸ Howard too stresses the uncertain underpinnings of the vatic voice: "We know that men are images of God, but no Gods indeed; that our wits may deeme, but not diuine, forcast vpon occasion, but not prefigure without certainty."¹⁹⁹ Both writers stress the uncertainty of the human understanding and argue that divine intervention might not be accessible to all people. There might be some "true" prophets, but the majority of prophecies were false. Claims of access to, and the desire for certain knowledge, could lead to folly since men and women seek "deeper knowledge, after future causes" and are stung by "Curiosity" when "God pleaseth to make [these things] knowne by ordinarie meanes."²⁰⁰ Trying to exceed the limits imposed by God, human beings appropriate God's unique knowledge: "[o]f declaring future things before they come to passé, it belongeth only to the wisdomed diuine."²⁰¹ What false prophets claim as divine calling is actually learning gained by "the light of long experience" and "signes of observation."²⁰²

Howard and Harvey underscore how grandiose claims of prophetic knowledge lead to multiplying predictions, which run counter to the promise of the mode that history

¹⁹⁸ Harvey, 16.

¹⁹⁹ Howard, 32.

²⁰⁰ Ibid., 191.

²⁰¹ Ibid., 271.

²⁰² Ibid., 27.

would fulfill one true prophecy. As prophecies multiply, or in Keith Thomas' terms, with the increase in the "counter-prophecy," possible *true* futures also multiply.²⁰³ The proliferation of prophecies and diverse interpretations of individual predictions undermine the promise of singular, certain knowledge, but they also suggest that one potential future could be *made* to come true. Revelations held within them the capacity to shape historical ends. As esoteric knowledge was being popularized through the dissemination of practical "how to" books, audiences could read futuristic promises, including prophecies, as recipes for action.²⁰⁴ The term "recipe" refers most specifically to a technical category—a "list of ingredients" and a "set of instructions describing how they were to be employed"—in which the "accumulated experiences of practitioners [was] boiled down to a rule."²⁰⁵ More broadly, however, recipe signifies "a prescription for an experiment, a 'trying out.'"²⁰⁶ Derived from the Latin imperative "'take,'" it "prescribes an action" where "the recipe's 'completion' is the trial itself."²⁰⁷ Until they are actualized through a trial, recipes are incomplete and imperfect. As such, they instantiate the *active fulfillment* of futuristic knowledge only when they are tried out.

Given these fluctuating boundaries between secret and practical knowledge, an audience might perceive visible signs in the play as material effects of *Macbeth's* translation of occult forces into recipes for action. Simon Forman's reactions on seeing *Macbeth* in 1611 highlight that at least one contemporary audience member, who was himself particularly interested in practical and occult sciences, privileged the visible and physical signs in the play over its moral undertones. Re-examining the oft-quoted

²⁰³ Thomas, 139.

²⁰⁴ Eamon, 10.

²⁰⁵ Ibid., 131, 7.

²⁰⁶ Ibid., 131.

²⁰⁷ Ibid., 131.

passages from Forman's *The Booke of Plaies and Notes*, Charles Whitney suggests that Forman's precepts are "practical or prudential injunctions about getting along in the world."²⁰⁸ He associates Forman's interpretations of *Macbeth* with his interest in occult knowledge: "for Forman, whose self-fashionings justify himself and glorify his innate or God-given occult skills, the power of the Macbeths' soliloquies is reflected only in the repeated, visible actions of their being confronted by feeling signs of their own criminality."²⁰⁹ Forman's reactions provide an example of how audiences interpret. They also highlight how spectators might view the theater as a locale that actualizes the implicit and the invisible, reading occult events as practical prescriptions rather than seeking underlying causes. Forman's writings foreground one such interpretation of the practical, prescriptive, and operative nature of the occult signs that are continually being produced in the play.

As Forman's reactions intimate, *Macbeth* variously invites its audience to examine the ambiguities underlying seemingly immediate, practical modes of knowledge production. The witches' trials with "ingredience" (4.1.34) provide one of the clearest examples of the promise, and the ultimate limitations, of the technical recipe:²¹⁰

Scale of dragon, tooth of wolf,
Witches' mummy, maw and gulf
Of the ravin'd salt-sea shark,
Root of hemlock digg'd i' the dark,
Liver of blaspheming Jew,
Gall of goat, and slips of yew
Silver'd in the moon's eclipse,
Nose of Turk and Tartar's lips,

²⁰⁸ Charles Whitney, *Early Responses to Renaissance Drama* (Cambridge: Cambridge UP, 2006), 149-150.

²⁰⁹ *Ibid.*, 152.

²¹⁰ For textual history, and the possible spuriousness of 4.1, see William Shakespeare, *The Arden Shakespeare Complete Works*. Eds. Richard Proudfoot, Ann Thompson, and David Scott Kastan (London: Methuen Drama, 2011), 773. Also see *The Norton Shakespeare*, 2563 and *The Riverside Shakespeare*, 1388.

Finger of birth-strangled babe
 Ditch-deliver'd by a drab,
 Make the gruel thick and slab:
 Add thereto a tiger's chaudron,
 For the ingredients of our cauldron. (4.1.22-34)

The witches list the “ingredients,” but neither the instructions nor the ends of their actions, as they echo the contents of actual recipes that promise to serve practical aims in their immediate moments of trial.²¹¹ In form, these ingredients together serve as an example of a technical recipe, but the emphasis on the moment rather than goals negates their potential for creation or transformation. These trials become *suspended* performances rather than prescriptions for specific action. In these trials, the witches act not to realize goals, but to enact a process without a direction. Without revealing the “gains,” Hecate too draws attention to the “pains” of performing recipes:

O well done! I commend your pains;
 And every one shall share i' the gains;
 And now about the cauldron sing,
 Live elves and fairies in a ring,
 Enchanting all that you put in. (4.1.39-43)

Hecate's entrance, although a possible later addition to the play, again directs attention to the suspended nature of the scene, the “Enchanting” that dissociates instructions and goals from the processes of enactment. This event obscures the future and indefinitely delays it. Such performative events, in their lack of prescription and prediction, and in

²¹¹ Eamon studies “Alessio's ‘secrets,’” a third of which were medical recipes that claimed to provide an alternative to the “official drugs” composed “according to the principles of classical pharmacology,” whose “ingredients [were] authorized by Theophrastus, Galen, and Dioscorides.” One of Alessio's unconventional recipes calls for “wild boar's teeth, skin of a dog, ‘dung of a blacke Asse, if you can get it; if not, let it be of a white Asse.’” He claims to draw on a practical medical tradition, “the tried-and-true secrets of surgeons, empirics, gentlemen, housewives, monks, and ordinary peasants” (144). The witches' practices echo the use of Alessio's ingredients, but their obscure aims and unexplained practices transgress the boundaries between practical and occult arts. Recipes were often associated with women and healing in the period. See Introduction in Elizabeth Spiller, *Seventeenth-Century English Recipe Books: Cooking, Physic and Chirurgery in the Works of Elizabeth Grey and Aletheia Talbot* (Burlington: Ashgate, 2008).

their focus on the present rather than the future, become antithetical to dramatic—and historical—change.

In order to direct attention from the present to the future, *Macbeth* downplays the prescriptive value of these suspended recipes and dramatizes the pervasive effects of disseminating secret knowledge. Encountering the witches trying out recipes, Macbeth asks “How now, you secret, black, and midnight hags! / What is’t you do?” The witches only reveal they perform “A deed without a name” (4.1.48-9).²¹² Instead of divulging the meanings or purpose of this “Enchanting,” they point to the impossibility of explicating their task, of boiling it down to a “rule,” of even giving it a “name.” The technical recipe remains insufficient to capture the actualization of occult forces because it cannot fully account for or transform the contingency of the future. Instead, the play transfers the logic of the prescription—a performative and futuristic way of knowing—onto the unactualized prophecies that exist as future *possibilities*. It is the witches’ prophecies that emerge as recipes—they implicitly “[prescribe] an action”—and invite characters to fulfill the predictions. They intimate that the potential political futures they reveal will become *true* when characters employ contingent means—here theatrical action—to realize them. In the process, *Macbeth* asks what constitutes proper *praxis* in the play’s created world.

²¹² This is in contrast to the other kinds of expert knowledge we witness in the play. The doctor relates deeds—and the natures of such deeds—to their ends, when he observes Lady Macbeth: “unnatural deeds / Do breed unnatural troubles; infected minds / To their deaf pillows will discharge their secrets” (5.1.61-62). But the question of giving form or a specificity to what seems impossible to categorize also comes up at other moments in the play. For instance, when Macbeth sees Banquo’s ghost, he tries to make sense of this vision by relating it to other natural impossibilities that have come into being:

Stones have been known to move and trees to speak;
 Augurs and understood relations have
 By magot-pies and choughs and rooks brought forth
 The secret’st man of blood. (3.4.122-125)

Possibility or Conclusion: Interpreting Prophecy

Prophetic knowledge is anticipatory in its aims, if not in enactment, within the play's complex temporality. The very first scene underscores the centrality of the future to the political imaginary of the play:

FIRST WITCH When shall we three meet again?
 In thunder, lightning, or in rain?
 SECOND WITCH When the hurly-burly's done,
 When the battle's lost and won.
 THIRD WITCH That will be ere the set of sun. (1.1.1-5)

The witches suggest that the future cannot be unraveled by appealing to calendrical and seasonal units, or to linear and cyclical changes. They de-privilege chronological markers of time that cannot demonstrate *why* knowing the future is necessary to authorizing and sustaining political power. Since the future remains obscure except through prediction and interpretation, one must forego chronology and instead construct time through events that reflect change, and that invite and influence future transformations.

The repeated "When" holds the promise of a fixed meeting time and does point to seasonal markers—"thunder, lightning, or in rain"—and daily changes—"ere the set of sun"—but it also refers to political events. The measurement of time through irreconcilable results and events, the "battle's lost and won," disrupts the promise of a certain future *time* of meeting. The witches continue to speak, to borrow Sidney's terms, "not affirmatively"²¹³ and the chiasmic inversions in their departing statement, "Fair is foul, and foul is fair" (1.1.10), obscure their immediate meaning and direct attention to an approaching event in the play. Macbeth enters and echoes these antitheses: "So foul and

²¹³ Sidney, 53.

fair a day I have not seen” (1.3.37).²¹⁴ His description of the “foul and fair” day also associates event and environment: the foulness of the natural world counters the fairness of events, or victory in battle. In echoing their language, he makes explicit the relationship between the witches’ anticipatory utterances and their natural surroundings. His language, then, serves both as reminder and fulfillment of the meeting time that the witches promise, and the theatrical future transforms riddling language into prophecy.

The play more broadly reflects the witches’ stance and transfers explanatory promises onto environmental signs by associating both supernatural forces and prophecy with the weather. The future emerges in micro-events that exist independent of their orderly occurrence in time, and prophetic events manifest themselves in these environmental signs. Lennox underscores the foreboding potentiality of prophecies through the association of nature, language, and environment. He describes the weather’s naturalized prophetic force at the time of Duncan’s murder: “Our chimneys were blown down, and, as they say, / Lamentings heard i’ the air, strange screams of death, / And prophesying with accents terrible / Of dire combustion and confused events” (2.3.51-54). When he collapses the natural and political worlds through the language of prophecy, Lennox extends the witches’ association of environment and event: nature mimics and reveals failings in the human sphere. The environment “prophes[ies] with accents terrible” about human events through natural anomalies, and these “accents terrible” prophesy the “combustion” and “confused event,” which gesture to but do not reveal the impending tragedy.

²¹⁴ See Kastan (1999) for the various doublings among characters and events in the play. See Laura Kolb, “Playing with Demons: Interrogating the Supernatural in Jacobean Drama,” *Forum for Modern Language Studies* 43.4 (2007): 337-350 for the close association between Macbeth and the witches. For an example of how the witches serve as signifiers of ethnography and environment, see Mary Floyd-Wilson, “English Epicures and Scottish Witches,” *Shakespeare Quarterly* 57.2 (2006): 131-161.

Uncertainty exists not only in environmental signs, but also in the language that attempts to explain these events. The witches' speech, their subsequent prophecies, and the play's rumination on prophecies are uttered in figurative language. The witches repeatedly employ the "Enigma" or "riddle" to simultaneously obfuscate meaning and invite interpretation. The *Enigma*, according to George Puttenham, is the figure through which "We dissemble again under covert and dark speeches when we speak by way of riddle (*enigma*), of which the sense can hardly be picked out but by the party's own assoil."²¹⁵ As such, this ambiguity demands the constant act of interpretation. Puttenham underscores the difficulty of uncovering the "sense" of *enigmas*: "The riddle is pretty but that it holds too much of the *cachemphaton*, or foul speech and may be drawn to a reprobate sense."²¹⁶ The *enigma* might approach "foul speech" but by dissembling, makes it "pretty"—or "fair," to borrow a term from the witches—and muddies the affirmative quality that would enable us to pick out the "sense." Although they make the "foul" seem "fair," the underlying danger of being "drawn to a reprobate sense" persists and prevents them from providing direct evidence. Lennox suggests that nature dissembles through "Lamenting" and "strange screams." Like the witches, the natural world prophesies by dissembling, which can only be unraveled "by the party's own assoil."

²¹⁵ Puttenham, 272. Also see Steven Mullaney, "Lying Like Truth: Riddle, Representation and Treason in Renaissance England," *ELH* 47.1 (1980): 32-47, for the use of the poetic figure "ambiguity" in *Macbeth*. In *Genre* (New York: Routledge, 2006), John Frow claims that "The prophetic riddles in *Macbeth* have an intertextual force: that is, they refer to the genres of prophecy and riddle, and actualize something of the semantic potential of each. From prophecy they take the sense of inevitable fate; from the riddle, the structure of an apparent paradox which is resolved in an unexpected way... By welding these two forms together, the play fuses the 'non-time' of the riddle (Dorst 1983: 423) with the prophecy's drive towards the future" (40).

²¹⁶ Puttenham, 273.

While Lennox's words draw attention to masked signs in the natural world, his focus on their prophetic nature also directs audiences to a particular event in the plot: the discovery of Duncan's murder. Prophetic utterances, then, not only promise a historical future but also lay out the trajectory of the theatrical action. This linkage between the political future and the dramatic present is most apparent in the moments in which Macbeth and Banquo learn their futures from the witches' dissembling verbal prophecies: Macbeth, as well as Banquo's descendents, will be kings. The witches enigmatically reveal possible futures that will only retroactively be "prophecies" if they are fulfilled in historical time; they make *promises*, which, in the words of J.K. Barret, "[attempt] to control and secure a particular, predictable future."²¹⁷ They "hail" Macbeth as "thane of Glamis!" (1.3.46), "thane of Cawdor" (1.3.47) and declare "thou shalt be king hereafter" (1.3.48), revealing his present status and predicting his future rule. Only Banquo's demand that they reveal his future makes them offer more predictions.

Their initial predictions for Banquo are *enigmas*, "Lesser than Macbeth, and greater" (1.3.63), "Not so happy, yet much happier" (1.3.64). Their final promise "Thou shalt get kings, though thou be none" (1.3.65), augurs future possibilities and transports him into a distant future through the revelation of his descendants' fates even as the phrase "though thou be none" shuts *him* out. The prediction also directs audiences to a future beyond Macbeth's individual one, towards a *specific* future external to the play and into the historical present, where they can imagine themselves as participants in these projections as implied fulfillments of the prophecy. The revelations about Banquo's futurity invite the play's audience to link their own temporality to the dramatized one, since James claims that this future promise has been actualized in him. In the process,

²¹⁷ Barret, 55.

this prophecy also separates Macbeth's limited period of kingship from Banquo's projected history.

The different temporal and genealogical concentrations of the two prophecies create the tensions between multiple possibilities and singular certainty. These differences in turn shape Macbeth's and Banquo's responses. The prophecies directed to Banquo are futuristic, while the witches' predictions for Macbeth are limited to and realized in moments of presentness. During this first encounter, the two characters also model opposing ways of interpreting prophecies, and their acts of interpretation lead audiences to different structures of dramatic action and character. While Macbeth repeatedly turns to denotative language and reads prophecies conclusively, and subsequently as prescriptions, Banquo's implicative or poetic reading, in which he marks ambiguities and gaps among seeming, being, and knowing, positions him as the character most clearly able to decipher the possibilities of dissembling language.²¹⁸ The play formalizes these responses in temporal terms: Banquo's character must disappear from stage in order to emerge as the figure of futurity and history, while Macbeth's actions forcefully embed him as a tragic character in the performative present.

Macbeth's initial question, "Speak, if you can:—what are you" (1.3.47) attempts to designate unsuccessfully what the witches *are*, an effort he variously repeats in this scene. He seeks literal answers to the question "what are you" and posits zero-sum conclusions. He oscillates between declaring the prognostications as completely true or false, beyond "prospect of belief" (1.3.74). Macbeth tries to define the ontological status of the witches and uncover the meaning of their riddles but separates the two issues. In his desire to establish the truthfulness of their prophecies, he does not consider whether

²¹⁸ Again, I use the terms "implicative" and "conclusive" as Andrew H. Miller has defined them.

what they *are* might serve as evidence of their credibility. Macbeth's increasing curiosity manifests in his wish for more information: "Stay, you imperfect speakers, tell me more / ... Say from whence / You owe this strange intelligence? or why / Upon this blasted heath you stop our way / With such prophetic greeting?" (1.3.70-78). He demands specific answers—"from whence," "tell me more," "why"—in order to literalize their riddling language and insist they perfect their "imperfect" predictions. Their imperfection, suggests Macbeth, lies in their inability to reveal all, but the adjective implicitly answers his question of what they "are" and serves as a warning. Yet he subverts his desire to explain their meaning and piles up interrogatives and imperatives to fully divine the "prophetic greeting." Macbeth's separation of knowledge and being—his distinction of what the witches know from what they *are*—leads him to focus on his own existence, and subsequently on *how* he must actualize their prophecies. The insistence on what the witches know ultimately directs him away from what they *are* and leads him to focus on his own state of being. The revelations produce imperfection in him and splits *his* unified self: "Shakes so my single state of man that function / Is smother'd in surmise, and nothing is / But what is not" (1.3.139-141).

Banquo, by contrast, elaborates on their ambiguous ontology from the beginning:

What are these,
So wither'd, and so wild in their attire,
That look not like th'inhabitants o'th'earth,
And yet are on't? Live you? or are you aught
That man may question? You seem to understand me,
By each at once her choppy finger laying
Upon her skinny lips: you should be women,
And yet your beards forbid me to interpret
That you are so. (1.3.39-47)

Although Banquo's initial question ("What are these") is designative, he immediately recognizes the inadequacy of this query. The "yet[s]" and "or" capture the proliferating possibilities that arise from attempts to name them or to identify their meaning; as linguistic and logical operators of possibility, these terms underscore the impossibility of singular signification. Interlocutors cannot conclusively "interpret" what they *are*, because of the absence of classifying markers: Banquo wonders whether they are terrestrial or living, men or women? The multiple, contradictory markers of identity establish their ambiguous ontology. Their complex forms, like their riddled language, "forbid" us from "understand[ing]" them and concluding "what" they "are" and remain irreconcilable with the multiple things they "seem."

Banquo associates the witches' capacity to produce veiled knowledge—their ability to "dissemble again under covert and dark speeches"—with their states of being. Unlike Macbeth, he intimately links epistemology to ontology. Banquo couples their unique cognitive capacity to prognosticate from multiple possibilities—"If you can look into the seeds of time, / And say which grain will grow and which will not, / Speak then to me" (1.3.58-60)—to speculations about the potential significations of their marvelous states of being: "Are ye fantastical, or that indeed / Which outwardly ye show" (1.3.53-54). Banquo's conditional appeal to the witches that they "Speak" to him is predicated on the belief that their ambiguous ontology signals their unique ability to interact differently with time, look into its "seeds" and divulge one secret from various possibilities. Their revealed secrets to Macbeth of "present grace, and great prediction / Of noble having, and of royal hope" (1.3.55-56) mark potentialities that can divulge the future from various options ("which grain will grow and which will not"). His use of the "or" and

conditionals such as “If” indicate his refusal to draw conclusions from the riddling evidence produced by their states of being and by their occult knowledge. This terminology is crucial to the generation of the multiple options that are available for interpretation. Banquo thus lays out the various possibilities that are presented to him for interpretation, as he sees the witches. As fitting responses to his recognition of their ontological and linguistic ambiguities, and to his refusal to draw conclusions from the riddling evidence produced by their esoteric pronouncements, the witches present Banquo with *enigmas*.

Even after the prophecies are partially fulfilled, Banquo keeps reiterating that one should not dissociate what the witches know from what they are. He cautions Macbeth that since “oftentimes, to win us to our harm, / The instruments of Darkness tell us truths” (1.3.123-124), one must not accept the predictions as already fulfilled knowledge; they are not yet actualized events. He sees what Macbeth cannot, that even *true* prophecies might have “reprobate sense” hidden in their “pretty” language; the witches are “imperfect,” to transport Macbeth’s word, *because* their being cannot serve as evidence of the truth. Their ontology and predictions invite suspicion and skepticism, rather than an impulse to act out the predicted futures. Banquo sees these prophecies as verbal promises that “might yet” (1.3.121) come to fruition.²¹⁹ Although the “instruments of Darkness” use words to incite exigent means, Banquo suggests that interpretation is a sufficient form of action. As the two characters gain access to secret knowledge, the play

²¹⁹ Banquo’s speech after Duncan’s death seems to pronounce such a warning, but the speech also undergoes an odd reversal when he seeks causes:

let us meet
And question this most bloody piece of work,
To know it further. Fears and scruples shake us.
In the great hand of God I stand, and thence
Against the undivulged pretence I fight
Of treasonous malice. (2.3.123-127).

uses their opposing responses to dramatize the conflicting possibilities of action and inaction available to the characters. Unlike Macbeth, Banquo remains wary of venturing beyond the act of interpretation.

The play uses their contrasting responses to dramatize a gap between historical time and dramatic plot, or between the chronology that makes up history and the sequence of events that make up the play. The witches' revelatory greetings and their awareness of Macbeth's present and future titles initially contrast with his incomplete knowledge that "the thane of Cawdor lives" (1.3.70) and his yet-unshaken conviction that "to be king / Stands not within the prospect of belief" (1.3.71-72). Macbeth's unawareness of the multiple roles he *presently* occupies converts epistemic lack into ontological doubt, as he explicates his ignorance of events as a lack of self-knowledge. His understanding of his current titles remains dissociated from the past events that have altered them and his future role, and he primarily concerns himself with what he knows at this moment. These predictions also propel him to wonder. Banquo comments on his affective and cognitive condition: "why do you start; and seem to fear / Things that sound so fair" (1.3. 49-50). Marking the disjunction between tidings that "sound so fair" and their expected effect on Macbeth, "fear," Banquo underscores the negative force of these revelations. Macbeth's conflicting reactions demonstrate that he perceives markers of identity as relatively stable in this moment. The titles of Thane and King are transferable, but he reads both and the former in particular as stabilized and attached to an individual. This perceived stability initially leads him to dismiss the prophecies as unequivocally false.

But Macbeth accepts the true status of their revelations as soon as he learns of their partial fulfillment. When Angus informs Macbeth that the Thane of Cawdor has been “overthrown” (1.3.113), he uses a linear analogous logic to confirm the witches’ unaffirmed and equivocal language. Ross enacts Macbeth’s acquisition of the new title as an act of *becoming* the Thane of Cawdor by drawing on the King’s power to bestow power through speech: “for an earnest of a greater honour, / [Duncan] bade me, from him, call thee thane of Cawdor” (1.3.101-102).²²⁰ In the temporal logic of the story, Macbeth already *was* the Thane before he was “call[ed]” so by Ross and before he knew it. The witches might not have prophesied but only reported something that was already established. However, from Macbeth’s viewpoint, he assumes this role or becomes the Thane only when he is so declared by the words of the king (although by proxy) in this later scene. Macbeth’s cognition—and the distinction between unfulfilled prediction and certain prophecy—is based on the separation of plot—“the order in which events are related” and story—“the actual order in which events occur.”²²¹

Ross’ speech act, however, produces an instance where the plot and the story converge, and this collapse of truth into knowledge situates the dramatic character in a polychronous moment.²²² This performative nature of bestowing titles retroactively, *after* it has been really transferred, escapes Macbeth’s notice, as he marks this specific moment and begins to consider how prophecies are fulfilled in history. Because of the dissociation of the event from the moment of learning about it, Macbeth finds himself in a polychronous instant when he sees an inaccessible and unknown past—the Thane of

²²⁰ On the king’s power to “confer new names that transform the public identity of the individual” (418), see David Lucking, “Imperfect speakers: Macbeth and the name of king,” *English Studies* 87.4 (2006): 415-425.

²²¹ Burrow, 110.

²²² Again I use the term “polychronous” as Harris has defined it.

Cawdor's displacement—actualizing itself in Ross' speech. When the pronouncement actualizes one future possibility, it also promises that all the prophecies will be fulfilled in the future and that turning possibilities into reality can close the epistemic—and by extension ontological—gaps opened by the contingency of the future.

This polychronous moment “[o’erleaps]” (1.4.49) Macbeth’s epistemic conundrum by translating the past event into a speech-act in the theatrical present. It also leads Macbeth to adopt an analogical strategy, and to know unknown things through the known.²²³ His acceptance that the “prophetic greeting” has been partially fulfilled entails a change in attitude towards the witches and a shift in belief. Because “Two truths are told, / As happy prologues to the swelling act / Of the imperial theme,” this “supernatural soliciting” has “given [him] earnest of success” (1.3.126-131). Therefore, he wonders how prophecy is or can be translated into historical fact. He constructs an analogous relationship between what has happened (“two truths”) and what *should* happen (“earnest of success”), by extrapolating what he knows to what cannot yet be known, and he imposes a linear chronology upon the play’s polychronous temporality.

Macbeth’s current titles, “Glamis, and Thane of Cawdor,” serve as precursors of future rule when he accepts “the greatest is behind” (1.3.114-115). However, within his unequivocal acceptance of the approaching future lies an undercurrent of uncertainty and even the impossibility of ever knowing it, except as a performed act. Macbeth’s actions are driven by this compulsion to know a future moment that is impossible to know. And his solution, to act out the unknowable “future in the instant,” produces the terrible

²²³ For the study of how analogy works in producing knowledge of the physical world, see Mary B. Hesse, *Models and Analogies in Science* (Notre Dame: U of Notre Dame P, 1966). For an example of early modern natural philosophy and analogy, see Katharine Park, “Bacon’s ‘Enchanted Glass,’” *Isis* 75 (1984): 290-302.

violence of the play and ultimately seals its tragic status. Macbeth projects this partial knowledge towards what he now sees as a fully predicted future and asks Banquo a question that will haunt him for the rest of the play: “Do you not hope your children shall be kings, / When those that gave the thane of Cawdor to me / Promised no less to them?” (1.3.116-118). He performs another analogical process of reasoning: since they “gave” the “thane of Cawdor” to him, they will keep their “Promise” to Banquo. The speculation on roles bestowed leads Macbeth to consider if he might *take* them through *some performed action*. He does consider the various ways in which he might become king, but his reasoning always resolves into a binary logic: to act or not to act. He ultimately relies on the logic of prescription—a performative and anticipatory mode of action that enables one to learn by enacting what is prescribed—to interpret the import of the predictions. For Macbeth, the witches’ prophecies become prescriptions, or recipes, when the partial fulfillment of one prophecy makes him wonder if all vatic discourse is prescriptive and demands action.

Theatrical Action: Realizing Possibility

After Macbeth and Banquo’s encounter with the witches, the play explores how theatrical action, understood as the undertaking of decisive events, fulfills or gives meaning to the unaffirmed occult speeches. The political future becomes a product of prescription and conclusive interpretation. From the time he learns that he is the Thane of Cawdor, Macbeth believes he has certain knowledge of the future, and with Lady Macbeth’s encouragement, increasingly rationalizes the necessity of “deed” (1.7.24) to actualize the prophecies. In the time leading up to Duncan’s murder, his mind is filled with images of potential action, “suggestion” (1.3.133) of “horrid image” and thoughts of

“murder” (1.3.134,138).²²⁴ He oscillates between the position of not acting (“If chance will have me king, why, chance may crown me, / Without my stir” (1.3.142-143)) and the necessity of doing so, especially when Duncan chooses his son Malcolm as his heir. Macbeth reads Malcolm’s title of “Prince of Cumberland” as an obstacle on which he must “fall down, or else o’erleap” (1.4.49) to fulfill the revelations. Although he continues to equivocate about “trying” to actualize the prophecies, by the time Duncan and his party visit Inverness, Macbeth is no more focused on “interpretation” but on the end he must realize. Through Lady Macbeth’s constant insistence on “deeds,” and her urging that Macbeth privilege his “own act and valour” (1.7.40) over mere “desire” (1.7.41), he comes to see *acting* as the only way to eliminate other possible futures:

If it were done when ‘tis done, then ‘twere well
It were done quickly. If the assassination
Could trammel up the consequence, and catch
With his surcease success: that but this blow
Might be the be-all and the end-all. (1.7.1-5)

In spite of the conditional “If” with which he begins this soliloquy, Macbeth primarily concerns himself with questions of action and performance: the “assassination” must be “done” as a “blow” to his desired end (the “end-all”). Instead of waiting for the prophecies to resolve themselves in the future, he believes their immediate fulfillment, their being “done quickly” will provide an ideal resolution (“‘twere well”), and he again associates time—here immediacy—with action. Rejecting his faith in “chance” and focusing solely on the promised ending, Macbeth seeks *means*, or a course of action in a prophecy that does not prescribe one. His attempt to realize the end propels him to

²²⁴ In 1.2, Duncan and the Captain repeatedly praise Macbeth’s deeds in battle. Even at that early moment, the play gestures to Macbeth as a man of action.

regicide. He comes to believe that acting on predictive knowledge is necessary to reintegrate his split self and ensure his rule.

It is Lady Macbeth who underscores the centrality of means, which can translate possible knowledge of the future into reality. Her persistent focus on particular moments of action facilitates the conversion of prophecies into prescribed deeds and transforms potentialities into actuality. She enters the world of the play reading Macbeth's letter. After learning of the prophecies, she echoes his analogical language—"Glamis thou art. And Cawdor, and shalt be / What thou art promised" (1.5.13-14)—but translates the future possibility into future-certainty: you "shalt be" what you are "promised." This is a logical realization of the present state: what "thou art." She claims that "Thy letters have transported me beyond / This ignorant present, and I feel now / The future in the instant" (1.5.54-56). The knowledge she gains has "transported" her from the realm of possibility to certainty, from language to action, as she locates herself beyond the "ignorant present" in the "future." Yet what Lady Macbeth presents as a certain "instant" is ultimately an imaginative projection in which she erases the contingency of the future. Lady Macbeth's "beyond," then, serves as a forward-looking corollary to Macbeth's imagined future that lies "behind" him. Macbeth's earlier imagination that the future is "behind" had produced a visual epistemology of time: unknown futures cannot be deciphered because they remain visually obstructed or "behind." Lady Macbeth's act of anticipation overcomes this notion of obstruction by placing the future as ahead or "beyond" rather than "behind."

By condensing numerous moments—acts of reading, visualizations, and imagined future events—this "instant" also gestures to the theatrical form that allows the

approaching time to realize itself on stage. Lady Macbeth's transgressive extension of Macbeth's analogical reasoning inevitably leads to questions of action: only by acting in this "ignorant present" can the "future" be changed and made "present" in an "instant." When she stresses that the prophecies must be executed, she implicitly argues that the prophecy-as-prescription is always antithetical to maintaining multiple possibilities. She collapses any potential gaps between prescription and immediate action, and in the process brings the political future into the immediacy of the theatrical present. Lady Macbeth also suggests that Macbeth's "nature" lacks that which will make him act. It is "too full o' the milk of human kindness / To catch the nearest way" (1.5.14-16). Of course, Macbeth too has identified the "nearest way" to the throne: the "murder" of the king. While this realization leads him to envision self-division, in her imagined directives to him, Lady Macbeth identifies the "nearest" way as the *only* way to remake the future and convert what you might be into what you "shalt" be. To find the most expedient means to the throne, she must revise the signification of prophecy: instead of asking *what* a prophecy means, one must strategize *how* it can be actualized. Seeking the "nearest way" becomes the sole means that can resolve the contradictions she perceives in Macbeth's state: "thou wouldst be great; / Art not without ambition, but without / The illness should attend it" (1.5.16-18). She, like him, recognizes the opposition in his nature that "Shakes" his "single state of man" and prevents him from exercising the means necessary to achieve his promised ends, but the double negative in her statement marks an element of flexibility that will enable her to convince him. Erasing the wandering thoughts that simultaneously direct and prevent him from regicide, she will guide him towards sure results.

As she meditates on the contrariness of their desires and capacity to act directly, Lady Macbeth suggests that her active role and “spirit” will catalyze him from passivity into action:

what thou wouldst highly,
That wouldst thou holily; wouldst not play false,
And yet wouldst wrongly win: thou’ldst have, great Glamis,
That which cries ‘Thus thou must do, if thou have it;
And that which rather thou dost fear to do
Than wishest should be undone.’ Hie thee hither,
That I may pour my spirits in thine ear;
And chastise with the valour of my tongue
All that impedes thee from the golden round,
Which fate and metaphysical aid doth seem
To have thee crown’d withal. (1.5.18-29)²²⁵

She shifts the focus from what Macbeth would do to what she will do; her actions will motivate him to renounce his fear and circumspection and move from what he “wouldst” do to what he “must.” By shifting the emphasis of action from the realm of the possible to that of necessity, she simplifies the prophecies into a series of steps that can be performed without understanding their causes. Her language of doing and undoing leads her to conclude that she must remove all impediments towards which “fate and metaphysical aid” both “seem” to lead him; seeming becomes a *reason* for acting, and not a deterrent as it was for Banquo. She applies the active verbs—“pour,” “chastise”—to define *her* actions that will propel him towards the “golden round” and actualize possibility. Macbeth is the passive conduit that realizes these directives. She prescribes actions as she “[boils] down to a rule” what he must do and catalyzes the future from the predictive into

²²⁵ She repeatedly links action with masculinity. Mary Thomas Crane provides a “cognitive reading of *Macbeth*” (108) to explore the “role of binaries in constituting gender differences in the play” (107). See “*Macbeth* and Binary Logic,” in *The Work of Fiction*. Ed. Ellen Spolsky and Alan Richardson (Aldershot: Ashgate, 2004): 107-126.

the prescriptive.²²⁶ Lady Macbeth's translation of prophecies into prescriptions invites Macbeth to do the same, leading him to murder, the throne, and finally to further speculations.

“The greatest is behind”: Making the Future Visible

After Macbeth follows the “nearest way” and becomes King, he returns to the predicament of the original prophecies and his own role in history. Having accepted and ensured that the prophecies are partially true, he cannot discount the witches' revelations to Banquo. He begins to grapple with his temporary role in history: his story ends, whereas the “happier” Banquo's future is potentially endless. Macbeth contrasts his limited reign with Banquo's projected endless futurity and meditates on the latter's transgressive role:

under him,
My genius is rebuked; as, it is said,
Mark Antony's was by Caesar. He chid the sisters
When first they put the name of king upon me,
And bade them speak to him; then prophet-like
They hailed him father to a line of kings.
Upon my head they placed a fruitless crown,
And put a barren sceptre in my grip,
Thence to be wrenched with an unlineal hand,
No son of mine succeeding. If 't be so,
For Banquo's issue have I filed my mind;
For them the gracious Duncan have I murdered,
Put rancours in the vessel of my peace
Only for them. (3.1.56-69)

Macbeth identifies Banquo as an oppositional figure (“under him / My genius is rebuked”) and realizes his deeds, including regicide, serve Banquo's descendents.

Banquo himself emerges as a “prophet-like” actualizing force. Because he “chid” the sisters and “bade them speak,” they produced the prophecies about his future, suggests

²²⁶ Eamon, 7.

Macbeth.²²⁷ Banquo generates, perhaps *creates*, his own prophecies. Unlike Macbeth's "fruitless crown" and "barren sceptre" which temporally limit his reign to the present, Banquo's "issue" continues because *he* "bade them speak." Macbeth's knowledge "filed [his] mind" and led him to "[murder]" to secure another's political future. While the play initially separates Macbeth and Banquo through their different interpretations, Macbeth's rumination exposes the formal and temporal effects of these interpretive differences. Macbeth's conclusive stance permanently delimits him in the present and shuts him out of futures, while Banquo's interpretations facilitate his emergence as a figure of history.

This distinction between Macbeth as a figure with an end and the projected endlessness of Banquo's line is formalized in the primarily visual revelations produced in Macbeth's second meeting with the witches. Macbeth's speculations about his own place in future histories lead him back to the original sources of esoteric knowledge. At the end of a ritualistic scene in which the witches try out technical recipes, they reiterate their status as dissimulators of the occult by refusing to affirm what they know. When he fails to extract answers about their current actions, Macbeth returns to the earlier unaffirmed predictions and appeals to the process and source of their knowledge: "I conjure you by that which you profess / Howe'er you come to know it, answer me" (4.1.66-67).

²²⁷ After Duncan's murder, Banquo too projects from the actualized to possible futures:
 Thou hast it now: king, Cawdor, Glamis, all,
 As the weird women promised, and, I fear
 Thou playd'st most foully for't. Yet it was said
 It should not stand in thy posterity,
 But that myself should be the root and father
 Of many kings. If there come truth from them—
 As upon thee, Macbeth, their speeches shine—
 Why, by the verities on thee made good,
 May they not be my oracles as well,
 And set me up in hope? (3.1.1-10)

This is a rare moment in which Banquo engages in analogous reasoning like Macbeth. There is still a difference between the two, because Banquo uses conditionals, engages in speculation and "hope" rather than full acceptance.

Macbeth's speech act of conjuring collapses the distinctions between utterance and action, since his words influence the witches to bring forth the answers he desires to know.²²⁸ His words, in a sense, enact a mode of prediction which will be realized in action.

This command results in a series of visual and aural cues from three apparitions: "*an armed head*," "*a bloody child*," and "*a child crowned, with a tree in his hand*." The first warns directly: "beware Macduff; / Beware the Thane of Fife" (4.1.71-72). The others speak in riddles. The second prescribes limited inaction but also advises him to occupy various states of mind—"Be bloody, bold, and resolute: laugh to scorn / The power of man, for none of woman born / Shall harm Macbeth" (4.1.79-81)—and the third warns him to refrain for a certain time from active intervention: "Be lion-mettled, proud, and take no care...Macbeth shall never vanquish'd be, until / Great Birnam Wood to high Dunsinane hill / Shall come against him" (4.1.90-94). In response to Macbeth, the apparitions *prescribe* attitudes, virtues, and mental states of being.

Macbeth heeds the first warning but responds ambiguously to the second: "live, Macduff: what need I fear of thee? / But yet I'll make assurance double sure, / And take a bond of Fate: thou shalt not live" (4.1.82-84). His diminishing worry coincides with his failure yet again to mark the figurative nature of prophecies. Focusing on "paraphrases,"²²⁹ he discounts both equivocal and direct warnings and rejects the final prediction as an impossibility: "That will never be" (4.1.94). Before he mistook prophecies for prescription. Here, he misinterprets prescribed states of being as

²²⁸ I draw on the following meaning: "To affect by invocation or incantation; to charm, bewitch. (By the Protestant Reformers applied opprobriously to consecration.)" "conjure, v." OED Online. March 2013. Oxford University Press. (accessed May 01, 2013).

²²⁹ Emma Smith, *The Cambridge Introduction to Shakespeare* (Cambridge: Cambridge UP, 2007), 71.

unequivocal truths and immediately proposes action: “The very firstlings of my heart shall be / The firstlings of my hand” (4.1.147-148). Earlier he had equivocated on the relation of prophetic utterance to action. Now the “hand” works simultaneously with the “heart,” collapsing gaps between cognition and action: Macbeth will immediately “crown [his] thoughts with acts” (4.1.149).

The witches reciprocate Macbeth’s conclusive stance with their most transparent prophecy. As he seeks resolution to the one question that cannot be completely answered within the play’s compressed temporality (“shall Banquo’s issue ever / Reign in this kingdom?” (4.1.102-103)), they “Show” (4.1.108) the approaching times. In a scene that Peter Stallybrass identifies as *Macbeth*’s “emblematic centre,”²³⁰ the play enacts the “future in the instant.” The visual spectacle makes present the ambiguous verbal prophecies and shuts Macbeth out of anticipated futures, instead of reinserting him into history:

A show of eight kings, the last with a glass in his hand; BANQUO following.

MACBETH

Thou art too like the spirit of Banquo: down!
 Thy crown does sear mine eye-balls: – and thy hair,
 Thou other gold-bound brow, is like the first:—
 A third is like the former:—filthy hags!
 Why do you show me this?—A fourth?—Start, eyes!
 What! will the line stretch out to th’ crack of doom?
 Another yet?—A seventh?—I’ll see no more—
 And yet the eighth appears, who bears a glass
 Which shows me many more; and some I see
 That two-fold balls and treble sceptres carry.
 Horrible sight! (4.1.112-122)

²³⁰ Stallybrass, 200. For the “problematics of vision” (191) in *Macbeth*, see Huston Diehl, “Horrid Image, Sorry Sight, Fatal Vision: The Visual Rhetoric of *Macbeth*,” *Shakespeare Studies* 16 (1983): 191-203. This scene also echoes some of the concerns and tropes of the masque tradition that would become so important to the Jacobean court. In *Ben Jonson and Possessive Authorship* (Cambridge: Cambridge UP, 2002), Joseph Loewenstein suggests that Jonson uses the masque form for political propaganda; this scene might provide one example of how Shakespeare’s plays use visual spectacles for political purposes.

The glass functions as a perspective device that takes Macbeth into a theatrical future in which he witnesses the culmination of the line in James, alerting him of a time from which his lineage has been erased.²³¹ By marking his lack of descendents, this “Show” visually and symbolically shuts Macbeth out of continuing narratives of futurity. Macbeth’s earlier rumination that the future is “behind” had produced a visual epistemology of time in which unknown futures remained inaccessible because they could not be seen. This scene makes visible such a future by transforming what was “behind” into an immediately observable theatrical scene.

The procession, moreover, completes a process of abstraction that fixes Macbeth’s roles within the dramatic framework. As a ruler who is oriented towards the present and who focuses on the immediacy of his own rule, he stands as a contrast not only to Duncan but also to the English king, who himself is a source of futuristic knowledge (he “hath the heavenly gift of prophecy” (4.3.158)). Macbeth’s encounters with the complex temporality of prophecy spur his obsession with his own future but also paradoxically transform him into an emblem—or evidence—of anomalous misrule. This scene visually culminates the verbal process of emblematic erasure that began when characters such as Macduff and Malcolm refused to acknowledge Macbeth’s particular identity; instead of using his name, they employ general terms including “tyrant” (4.3.178) or “usurper” (5.9.21) to define him.²³² His position shifts from the particular

²³¹ For multiple connotations of the “two-fold balls” and “treble sceptres” in relation to James’ rule, see E.B. Lyle, “The ‘Twofold Balls And Treble Scepters’ in *Macbeth*,” *Shakespeare Quarterly* 28.4 (1977): 516-519.

²³² Some other instances where this is used: “tyrant” (5.2.11, 5.4.8, 4.3.46, 4.3.12); “tyranny” (4.3.33); “black Macbeth” (4.3.53); “confident tyrant” (5.7.11); “untitled tyrant...bloody sceptered” (4.3.105); “usurper” (5.11.16). See Marjorie Garber, *Shakespeare’s Ghost Writers: Literature as Uncanny Causality* (New York: Methuen, 1987) for Macbeth’s transformation into “an object lesson, a spectacle, a warning against tyranny, a figure for theater and for art” (114).

“brave Macbeth (well he deserves that name)” (1.2.16) to the titular figure of “Thane” and “King,” to the general category of “tyrant.” Malcolm’s refusal to name Macbeth (“This tyrant, whose sole name blisters our tongues” (4.3.12)) suggests how the act of naming indexes an individual. Macbeth’s individuality, encapsulated in his “name,” disappears with its gradual erasure. The spectacle does not merely “split” Macbeth’s “single state”; it underscores his emblematic political status as a type of ruler and ensures his disappearance from future history.

Yet *Macbeth*’s prophetic interpretations and Macbeth’s focus on the present in particular also enact how a character earns himself or herself a place on the stage and in the present. Banquo’s emergence as a figure who augurs the future begins only when his character disappears from the theatrical present. In contrast to Banquo’s potential endless futurity, Macbeth’s rule is transformed into a singular event where the titular character interprets and acts out the conditions for his current existence. Macbeth’s exigency, the product of his conclusive interpretations and misinterpretations, negates the continuation of his line, but it also inaugurates an occasion for *experiencing* how a notion of theatrical presentness emerges. Macbeth’s current actions on stage repeatedly unsettle the play’s dramatization of the past as future, as well as its aim to prescribe, in the line of kings, the audiences’ political present. As Macbeth turns interpretive strategies on their head, his execution of prophetic utterances produces the action in which “thoughts” repeatedly become “acts.” Through Macbeth’s staged immediacy, then, the play offers one model of actualizing prophecy: the theatrical action that makes present different temporalities as well as fabricated states of being.

But the play also suggests that the act of interpretation might itself actualize prophecies and take audiences beyond this staged action. As Macbeth's place in a continuing future gives way to the procession seen through the glass, the audience implicitly gains entry into this polychronous moment when the theatrical future intersects with the historical present. The visual clarity of this emblematic scene, ending in the representation of James, overcompensates for the enigmatic language and propels audiences to recognize their own moment as an actualized future projected from the play. In this instance, the theatrical future translates into the historical present and serves to perpetuate sovereign lineage. *Macbeth* continually privileges possibility—enacted by Banquo—as *the* way of knowing uncertain futures. The play's promise of continuity transports audiences, with Banquo, to their futures beyond the spectacle of an "instant." The visual prophecy offers a prescription, but not the one Macbeth grasps: audiences must perform a simultaneously reassuring and unnerving prospective *act*. The spectacle provides them both "ingredients" and "instructions," in the shape of the figures and in the form of the projected line. Instead of ending on conclusive evidence, *Macbeth* demands its audiences project implicatively from what they witness on stage—Macbeth's head on a stand, the spectacle of Banquo's lineage, the image of James—to the implicit promise of their own futures extending beyond the boundaries of the dramatic form. They must adopt the play's implicative and poetic interpretive strategies, which will lead them to the certainty of the historical present and subsequently towards the imagination of *their* possible futures. Such a projection, which is a strategy of legitimizing political rule and lineage, will enable them to extend this vision towards the real future that might come into being after James' reign itself expires. *Macbeth*, then, prophesies to its audiences that

their imaginative acts of projection, when “tried” out, will exceed the exigencies of the fictional present and go even beyond their singular, historical moment of interpretation; it teaches them *how* one imagines a future “in the instant.”

Political Futurity and Theatrical Form

The spectacle that transforms Macbeth into an audience, then, also invites the external spectators to experience and extend this moment. It also makes audiences think about the ways in which characters are differently situated in relation to historical and theatrical temporality: their presence can be predictive (as we see in the figure of Banquo, whose reappearance points to his future lineage) as well as emblematic (which we witness in the erasure of Macbeth’s individuality). The procession of kings provides evidence of Macbeth’s worst nightmare, crystallizing a visual response to his queries and compressing poetic prophecies into a theatrical moment. Brian Walsh has argued that the “visual in the theater primarily involves not static images but the breathing, ‘lively’ bodies of the actors on stage.”²³³ In *Macbeth*, these living bodies of the performers in the line of kings concretize the difference between the historical past of Macbeth’s moment and the present time of James’ reign, by directing the audience’s attention to an elaborately staged fictional future. This scene suggests that the story will not stop even when the plot reaches its moment of ending: it provides an acute visualization of the play’s futuristic orientation, and especially of the argument that political authority can legitimize itself by envisioning the continuation and perpetuity of sovereign power.²³⁴

²³³ Brian Walsh, *Shakespeare, the Queen’s Men, and the Elizabethan Performance of History* (Cambridge: Cambridge UP, 2009), 22. Walsh is examining history plays, but this applies to more general ideas on performing history.

²³⁴ For a recent exploration of reproductive futurity in Shakespeare, see Lee Edelman “Against Survival: Queerness in a Time That’s Out of Joint,” *Shakespeare Quarterly* 62.2 (2011): 148-169. More broadly on politics and reproductive futurity, see Lee Edelman, *No Future: Queer Theory and the Death Drive* (Durham: Duke UP, 2004).

Macbeth's temporal focus invites audiences to *anticipate*, translating their actual existence into possible states and asking them to contemplate the continuation of James' line.²³⁵ The emphasis on futurity, and the projection from Banquo to James, repeatedly blurs the distinctions between reality and fiction. Like Macbeth's interpretations and character give way to Banquo's questions and his descendents' line in the play, his audience-position gives way to an external spectatorship that can glimpse the future beyond the one permitted by the dramatic temporality. As this imagination exceeds the temporal domain of the play, it converts the audience's actual existence into a fictional one, in the sense that they occupy the same positions as Macbeth and Banquo and establish an experiential relationship to the play: their being-present and future existence become dependent on their interpretation and understanding, and on their acceptance of the play's construction of political futures.

Macbeth's presentness and Banquo's projected endlessness function as formal effects of the epistemological stance each takes. Macbeth's conclusive interpretations concern only him and lead him to act in the confines of dramatic time. Banquo's implicative interrogations extract futuristic revelations, and his death does not signify the end of the prophecies. It generates new processes of projection that in their gestures to a future emerging from the plot, lead to the historical present and subsequently to future histories. The play suggests that Banquo as an interpreting character must disappear from the present before his reappearance can symbolize the start of a new line of kings. Walsh

²³⁵ Drawing on Peter Brooks' argument that the distinction between plot and story breaks down from the perspective of the reader, Turner argues that "a successful narrative arguably produces not simply a memory of events but also the anticipation of events to come – and the operation of both in tandem results in the reader's total apprehension of the narrative 'form'"(24).

suggests that history “is defined by its inalienable absence,”²³⁶ and early modern plays are operating within dialectics of presence (of characters, living bodies on stage) and absence (of actual historical figures). Thus, to be formally delineated a figure who continues and persists in history, Banquo’s erasure from the dramatic present seems necessary. This dialectic of presence and absence dramatizes the witches’ initial opposition between Banquo and his descendents: “Thou shalt get kings, though thou be none.”

Macbeth then, imagines political continuity through its theatrical form. Unlike performances that disappear and in their disappearance repeatedly mark the absence of a historical past, Banquo’s line appears to continue *from* the play *into* the historical present. In other words, the play reimagines a historical past recorded in the *Chronicles*, Macbeth’s present, as the originary moment of the audience’s present, or the projected future of the play. *Macbeth* invites audiences to understand fictionalized narratives as part of their own history. The historical present becomes something that can only emerge because of the actions and events arising within the constraints of the theatrical form. The play, then, engages its audiences in acts of projection by imagining reality as a possible future of the theatrical form, just as it forces characters to project themselves and construct their individual and genealogical futures. *Macbeth*’s prophecies are not culminations of an evolving past, but originary moments that reveal how the future might unfold if one is willing to imagine time through this sovereign lineage.

Of course, this projection is ultimately a political act: the audience can only imagine its future through an extension of the line of kings, and specifically the lineage of their present king. Although audiences witness the end of the line in James’ image, the

²³⁶ Ibid., 1.

play's insistence on the future automatically invites them to continue beyond the staged moment, since James' children will extend this dramatized projection into reality. This spectacle propels audiences into possible past-futures that need not end with the play, and the continuation of the Stuart line can realize the historical possibility implied in the plot. This capacity of combining imaginative projection and historical reality would be experienced differently by Jacobean and Elizabethan audiences, since the former partially knows what the future holds, after all, while the question of succession was a fraught one during Elizabeth's reign. The play capitalizes on a possibility created by its current historical moment and exploits James' own propensity to equate the king with the father. I am not suggesting that a Jacobean audience *would* imagine such a continuation, but the play's interpretive strategies, its continual juxtaposition of reality and fiction, and its scrambling of the past and the future strategically set the stage for such a projection in a manner that Spenser's Merlin could not achieve by blurring the lines between history and poetry. While in 1590, Spenser's prophet-figure suddenly halts his prophecy and marks the absolute impossibility of knowing the sovereign lineage, the political prophecy that Banquo "shalt get kings" need *not* stop with James because historical fact creates the conditions for this possibility.

Macbeth's prophetic epistemology imposes limits on interpretation and action, asking us to think of two things simultaneously: political futurity and theatrical action. The play uses the notion of future certainty to show how political authority justifies and sustains itself. It locates political authority under the rubric of sovereignty and in the perpetuity of dynastic rule. But it also demonstrates that the genealogical legitimacy of sovereign power, exemplified by characters such as Duncan, exists in tension with forms

of rule such as Macbeth's that must legitimize themselves through current action. As it attempts to parse this difference between pasts and immediacy, *Macbeth* underscores that time is an essential aspect of political power. One cannot legitimize political authority, and especially kingship, which depends on succession, without projecting this lineage into the future. Since reliance on the actualized past (which, at least theoretically, has already occurred and cannot be changed) or the momentary present cannot adequately facilitate the perpetuation of dynastic politics, the definitive governing force behind *Macbeth's* political structure must necessarily be anticipatory or futuristic. Kingship derives its governing force by promising continuation of lineage, made visible through the play's prophetic stagings.

Although the visual spectacle seeks to impose the specter of certainty in the minds of audiences, the play as a whole continually stresses that the future only exists as a potentiality. As such, any exploration of the future raises epistemic issues. Since it is contingent, unknowable, and dependent on action and decisions in the present, one cannot *know* the future with certainty as a stable entity. The promise of a certain future itself demands interpretation, action, and stabilization. At best, one can access the future *as* an epistemic concept; it cannot come into existence independent of the epistemic modes that allow one to tend towards it. Since one cannot fully grasp the future, and appeals to a historical past remain inadequate to produce an experiential understanding of it, one must necessarily draw on predictive epistemologies and alternate ways of conceiving temporality. In other words, the question of futurity—especially political futurity—cannot be separated from the modes one uses to know it. As we see in *Macbeth*, the unknowability of the future can itself serve as an authorizing principle, since

characters can claim prospective authority through assertions of access to futuristic knowledge and guarantees to control and shape the times to come. As such, prophecy becomes the perfect vehicle through which the play attempts to resolve and counter the threats to contingency and unknowability.

But the promised prophetic certainty also enables us to think more particularly about the futuristic orientation of theatrical form. Since a play is essentially a temporal form, measured by a variety of events, it provides an alternative to history and chronology to work out problems of temporality and political futures. As Brian Walsh argues, it is “the ‘eventness’ of theater” that “underlines the unique temporality of drama.”²³⁷ Drama compresses historical events within a temporal frame, but it also *creates* events and allows the past to extend to and shape envisioned futures. Any actualized moment in a plot is polychronous, since a particular scene refers not only to the immediate action but also progresses from and tends towards other events. Theatrical time, in its constant evolution of events, counters the sense of ending to which the historical past has already led. The uncertainty enacted on stage highlights the contingency of action, but a plot, of course, does not unravel by chance. The temporally delimited events in a play such as *Macbeth* gesture to occurrence and endings, immediate moments and impending futures.²³⁸ Because it need not appeal to or rely on fixed

²³⁷ Walsh (2009), 25. According to Walsh, “[the] temporality of drama ... was then considered a defining element of its ontology” (27). In “‘Deep Prescience’: Succession and the Politics of Prophecy in *Friar Bacon and Friar Bungay*,” *Medieval and Renaissance Drama in England* 23 (2010): 63-85, Walsh develops on the present tense of such eventness: theater “continually alters playgoers to the fact of the *present tense* they occupy and in which they are witnessing, and participating in, a real-time event of theater” (75).

²³⁸ I draw on Jacques Lezra’s explication of the duality of events: “Deleuze refers lucidly to the ‘double structure of the event,’ split always between ‘the present moment of its actualization’ and ‘the future and the past of the event considered in itself, sidestepping each present, being free of the limitations of a particular state of affairs, impersonal and pre-individual, neutral, neither general nor particular.’” See

definitions of the past, theatrical form can uniquely explicate unknown and possible times to come. It can project the future as actualizing itself in moments of staged action.

While the beginning of a play might carry the kernel of its ending within it, this fact is revealed only once the plot (or strands of it) has run its course.²³⁹ Theatrical temporality is at each moment reminiscent and anticipatory. An event *performs*, in the sense that Mary Thomas Crane defines early modern understanding of the term: “to carry through to completion; to complete, finish, perfect.”²⁴⁰ Theatrical events, then, lead audiences to an idea of completion in their moments of occurrence. Events in *Macbeth* are potentially transformative performances whose present occurrence is inseparable from its possibility of “completion,” as they continually direct the plot onward. Since knowing contingencies require prediction or interpretation, theatrical enactments such as the ones we see in *Macbeth* can serve as hypotheses for the emergence of possible futures. It is this promise of completion or perfection that translates theatrical form from the merely predictive to the prophetic: dramatic endings remain obscure till they justify past events; beginnings and endings of a play are connected by promise and revelation; dramatic actions anticipate and invite interpretation; the seemingly contingent resolves itself within a play’s unfolding temporality. This focus on the prophetic epistemology demonstrates that not only are the prophecies in *Macbeth* theatrical, but they reveal how the theatrical form, which relies on prediction, contingency, and ambiguity, is ultimately prophetic.

Jacques Lezra, *Unspeakable Subjects: The Genealogy of the Event in Early Modern Europe* (Stanford: Stanford UP, 1997), 39.

²³⁹ For the premeditated nature of accidents, and the relation of chance and ends in theater, see Witmore.

²⁴⁰ Mary Thomas Crane, “What Was Performance?,” *Criticism* 43.2 (2001): 169-187, 172.

“Endlesse worke”: Methodizing Possibility and Baconian Natural Philosophy

In *The New Organon* (1620), Francis Bacon outlines the premises of “invention, of knowledge” that will “establish progressive stages of certainty” (Preface, 36, 33) through an inductive method.²⁴¹ In the process, he also generates a metaphor of the perfect philosopher: “the bee” that “takes a middle course. It gathers its material from the flowers of the garden and of the field but transforms and digests it by a power of its own” (1.95). Unlike “men of experiment,” who, like the ant, “only collect and use,” and unlike the “reasoners” who “resemble spiders” because they “make cobwebs out of their own substance,” the bee captures “the true business of philosophy” because “it neither relies solely or chiefly on the powers of the mind, nor does it take the matter which it gathers from natural history and mechanical experiments and lays it up in the memory whole, as it finds it, but lays it up in the understanding altered and digested” (1.95). Bacon summarizes his “argument of hope,” on which he predicates his expectations and desires about method, with the assertion that “from a closer and purer league between these two faculties, the experimental and the rational (such as has never been made), much may be hoped” (1.94, 95).

In the example of the bee, Baconian method emerges as an intertwined “league” between theoretical and practical modes of knowing. The description also touches on various issues that Bacon does not articulate explicitly: relationships between the particular and the general, tensions between the material and the abstract, the

²⁴¹ Francis Bacon, *The New Organon and Related Writings*, Ed. Fulton H. Anderson (Prentice Hall, 1960). All quotations from *Great Instauration* and *Preparative Toward Natural and Experimental History* are also from this edition.

interdependence of cognitive and physical capacities and of bodily and artifactual powers, the role of creation and change in a transformational and translational project, and issues of power associated with the processes of knowing.²⁴² Bacon's "inductive" method of natural inquiry gestures to a bodily, active way of knowing the natural world, one that changes the product as well as the knowledge producer. As the philosopher "gathers," "experiments," and relies on the "powers of the mind" to act on nature, his understanding is itself "altered and digested." In his search for a "pure and unmixed" (1.96) natural philosophy and in his march to "certainty" and "Truth," the Baconian philosopher must ultimately rely on mixed methods.

This metaphor also implicitly signals the main tenets of Baconian method: his search for "true induction" (1.114),²⁴³ his insistence on the importance of collecting natural history, his reliance on experiment and practice,²⁴⁴ a deep engagement with the natural world, repeated emphasis on particulars, the production of true axioms directed towards the ultimate aim of generating forms.²⁴⁵ Since man is "the servant and interpreter

²⁴² I borrow the concept of "translation" from Latour (1999). According to Latour, in science studies, the term breaks down the opposition between "words and worlds": "In its linguistic and material connotations, it refers to all the displacements through other actors whose mediation is indispensable for any action to occur. In place of a rigid opposition between context and content, chains of translation refer to the work through which actors modify, displace, and translate their various and contradictory interests" (311).

²⁴³ For a comprehensive examination of induction as an operative principle in Bacon's works, as well as the relation between deduction and induction in Baconian method, see Antonio Pérez -Ramos, *Francis Bacon's Idea of Science and the Maker's Knowledge Tradition* (New York: Oxford UP, 1988).

²⁴⁴ For explorations of the centrality of *praxis* in Bacon's works, see Pérez -Ramos and Eamon. For a recent critique of the originality of Baconian experiment, see Deborah E. Harkness, *The Jewel House: Elizabethan London and the Scientific Revolution* (New Haven: Yale UP, 2007).

²⁴⁵ The definition of form is complicated in Bacon's works. In 2.4, he states, "the form of a nature is such, that given the form, the nature infallibly follows." At other points, however, he describes form as "law," as the "thing itself," as "true specific difference." For the classic study of Baconian forms, see M.B. Hesse, "Francis Bacon's Philosophy of Science," in *A Critical History of Western Philosophy*. Ed. D. J. O'Connor (New York: Free Press of Glencoe, 1964), 141-152. For the operative nature of form, and the argument that Baconian form is an intermediary between the Aristotelian substantial form and the corpuscular form of later seventeenth century, see Pérez-Ramos. For a summary of ways in which form is understood in Bacon, see Witmore, 116-117. For a summary of Bacon's use of forms, among other

of Nature” (1.1), argues Bacon, he must rely on the signs and signatures nature provides. He must employ “instruments” (1.2) of hand and mind to overcome deficiencies in human understanding. Only a direct engagement with the “particulars” of nature will enable one’s “searching into and discovering truth” (1.19). Bacon’s argument is based on the premise that an organized and gradual method of working with particulars and examples in nature will lead to a fuller account of the actual world and to the discovery of forms.

Bacon distinguishes his proposed method of “true induction” from the one “now in fashion,” which is insufficient because it “flies from the senses and particulars to the most general axioms, and from these principles, the truth of which takes for settled and immovable, proceeds to judgment and to the discovery of middle axioms” (1.19). It is “childish” because it “proceeds by simple enumeration” and “its conclusions are precarious and exposed to peril from a contradictory instance; and it generally decides on too small a number of facts, and on those only which are at hand” (1.105). Moreover, it “does not, as it ought, employ exclusions and solutions” (1.69). Rejecting this method, he proposes “the true way” which is “yet untried” (1.19). It “derives axioms from the senses and particulars, rising by a gradual and unbroken ascent, so that it arrives at the most general axioms last of all” (1.19). It consists of a complex array, as it “must analyze nature by proper rejections and exclusions; and then, after a sufficient number of negatives, come to a conclusion on the affirmative instances” (1.105).

Bacon stresses the novelty of this inductive method (“yet untried”) to suggest it will act as a corrective to existing errors in natural philosophy, logic, and natural

concepts (such as induction) in relation to current critical trends in Bacon scholarship, see Brian Vickers, “Francis Bacon and the Progress of Knowledge,” *Journal of the History of Ideas* 53.3 (1992): 495-518.

history.²⁴⁶ This formulation is partially governed by the ambition of Bacon's great instauration, which is supposed to be exhaustive in scope as well as in content, and which aims to revise numerous disciplines of learning.²⁴⁷ To learn about the natural world, Bacon aims "to seek, not pretty and probable conjectures, but certain and demonstrable knowledge"; this method is directed to those who are "not content to rest in and use the knowledge which has already been discovered" and desire to "find a way into [nature's] inner chambers" (Preface, 36). This rhetoric of entering nature's "inner chambers"—which highlights Bacon's interventionist strategy in relation to nature—recurs variously in the work (from the author's claim that one must "dissect her into parts" (1.51), to the belief that "Nature to be commanded must be obeyed" (1.3), to the command to "go deep into nature" (1.66)). Bacon authorizes this active epistemology because "the secrets of nature reveal themselves more readily under the vexations of art than when they go their

²⁴⁶ For examinations of Bacon's methods in relation to the disciplines of logic, dialectic, and rhetoric, see Jardine; Ong. For similarities and differences between Baconian and Ramist method, see Craig Walton, "Ramus and Bacon on Method," *Journal of the History of Philosophy* 9.3 (1971): 289-302. For a fuller examination of Baconian method in theory and application, its implications for "communicative situations" (243), how method becomes a "habit" for Bacon the "communicator" (271), as well as the relation of Baconian and Ramist understandings of method, see Karl R. Wallace, "Francis Bacon and Method: Theory and Practice," *Speech Monographs* 40.4 (1973): 243-272. For an exploration of Bacon as a "modern" whose novel approaches explicitly oppose the ancients, see Richard Foster Jones, *Ancients and Moderns: A Study of the Rise of the Scientific Movement in Seventeenth-Century England*, 2nd Ed. (St. Louis: Washington UP, 1961). Also see Paolo Rossi, *Francis Bacon: From Magic to Science* (Chicago: U Chicago P, 1968). Like Jardine, Rossi argues that Bacon must be situated in his own time and not be read as the first modern philosopher or father of empiricism. Rossi traces the influence of mechanical arts, alchemy, as well as logic and rhetoric on Bacon's works, and his comments and revisions of various disciplines and ways of knowing.

²⁴⁷ *The New Organon* is the second part of a 6-part work, *The Instauration Magna* (*The Great Instauration*), which remained unfinished. It says something about the ambitious scope of Bacon's work, which like Spenser's, seems impossible to finish from the moment it is conceived. Although Bacon lays out the steps of this method in 2.21, the *New Organon* only explicates the first few steps and abruptly stops. The title itself suggests a desire to restore and reform a past. For an exploration of origins in Bacon's works, and one that situates Baconian method within a discourse that "invoke[s] myths of a normative primacy and attempt[s] to ground subjectivity in transcendent realities that link to the origin," see Alvin Snider, *Origin and Authority in Seventeenth-Century England: Bacon, Milton, Butler* (Toronto: U of Toronto P, 1994), esp. 3-17, 21-68, 14. See Charles Webster, *The Great Instauration: Science, Medicine, and Reform, 1626-1660* 2nd ed. (New York: Peter Lang, 2002), for an argument that marks Baconianism as an originary point for later seventeenth-century thought, especially for Puritan reformers in various disciplines. Bacon attaches the short *Preparative Toward Natural and Experimental History*, which was supposed to be the third part of the *The Instauration Magna*, to the *Novum Organum*.

own way”(1.98).²⁴⁸ This “deep” study of nature, which he terms “*Interpretation of Nature*,” is “a just and methodological process” that stands opposed to the “*Anticipations of Nature* (as a thing rash or premature)” (1.26).²⁴⁹ But in the “Preface” he makes explicit how the latter arises from a fallacy of the human understanding, terming these faulty processes “*Anticipation of the Mind*.” While “Anticipation” prematurely forecloses investigation by proposing answers, “Interpretation” methodologically leads to future possibilities because of its refusal of closure. True induction aims not only to reveal nature’s workings, but also to translate nature for further inquiry and use. This translation ostensibly takes the knowledge producer closer to nature’s “inner chambers.” Because of its multiple aims, this comprehensive “history and experiment” must deal not only with objects already deemed worthy of study but also with “things which are trivial and commonly known; many which are mean and low, many, lastly, which are too subtle and merely speculative, and that seem to be of no use,” and even with things which are

²⁴⁸ The interrogation of the rhetoric of active intervention in Nature has dominated feminist historiography of early modern science and especially accounts of Baconian methods. For the classic study, see Carolyn Merchant, *The Death of Nature: Women, Ecology, and the Scientific Revolution* (San Francisco: Harper & Row, 1980). For a recent debate on the state and implications of this line of argument, see Brian Vickers, “Francis Bacon, Feminist Historiography, and the Dominion of Nature,” *Journal of the History of Ideas* 69.1 (2008): 117-141 and Katharine Park, “Response to Brian Vickers, ‘Francis Bacon, Feminist Historiography, and the Dominion of Nature’,” *Journal of the History of Ideas* 69.1 (2008): 143-146. For an argument that Bacon did not advocate the “torture” of nature, and his heroic vision was adopted by other writers in the seventeenth century, see Peter Pesic, “Proteus Unbound: Francis Bacon’s Successors and the Defense of Experiment,” *Studies in Philology* 98.4 (2001): 428-456.

²⁴⁹ I draw on the idea of interpretation as a form of translation. To “interpret” is to “To expound the meaning of (something abstruse or mysterious); to render (words, writings, an author, etc.) clear or explicit; to elucidate; to explain. Formerly, also, To translate (now only contextually, as included in the general sense).” The Latin “interpretārī” from which we get “Interpretation” means “to translate.” OED Online. March 2011. Oxford University Press. (accessed May 11, 2011). See Michael C. Clody, “Deciphering the Language of Nature: Cryptography, Secrecy, and Alterity in Francis Bacon,” *Configurations* 19 (2011): 117-142, for a recent formulation of how the interpretation of nature’s alphabet occurs in Bacon’s works. Snider (1994) argues “Bacon regarded the natural world (‘things themselves’) as a pre-semiotic order of experience that only awaited correct interpretation” (24).

“filthy” (1.119, 120).²⁵⁰ Bacon’s desire to transform natural philosophy makes an implicit promise to better *all* learning from its foundations.

Although Bacon uses the language of certainty, his natural philosophy remains distinct from the Aristotelian category of *scientia* or certain knowledge. While *scientia* dealt with necessary and unchanging things, promised certain and demonstrative knowledge and metaphysical explanations, Bacon aims to study a changing and vibrant nature that participates and shapes its own intelligibility.²⁵¹ This ambitious work necessitates a detailed critique of established modes and theories, the transportability of “untried” methods, as well as an explication of the techniques that will ensure the portability of such methods. This understanding of nature also introduces the fundamental contradictions between the *aim* and *process* of Baconian method: while the former strives towards certainty, the latter defers this certitude and exposes how obeying nature’s ways can disrupt the possibility of any stable endpoint. The particulars of nature are themselves actors and mediators that direct the knowledge producer in unexpected directions.²⁵² The exhaustive scope of his project—to explain forms of things in nature and to apply the

²⁵⁰ For the notion that “filthy” objects were worthy of study, see Daston and Park. Also see Pamela H. Smith, who situates Baconian “science” in relation to the “embodied philosophy” of artisans in the continent, arguing that Bacon primarily appropriated and codified the bottom-up revolution, “a new *scientia* based on nature” (239).

²⁵¹ For the claim that Bacon was concerned with probabilities, though not Pascalian probability, see L. Jonathan Cohen, “Some Historical Remarks on the Baconian Conception of Probability,” *Journal of the History of Ideas* 41.2 (1980): 219-231.

²⁵² I am drawing on Latour’s definitions of human and non-human actors, and on his definition of mediators. He defines mediators in opposition to intermediaries: while an “intermediary” “simply transports, transfers, transmits energy” and “is void in itself and can only be less faithful or more or less opaque,” a mediator “is an original event and creates what it translates as well as the entities between which it plays the mediating role” (77-78). See Bruno Latour, *We Have Never Been Modern*. Tr. Catherine Porter (Cambridge, MA: Harvard UP, 1993). These ideas of non-human actors have become central to rethinking what constitutes the “political,” both in Latour’s own works (see Bruno Latour, “Can We Get Our Materialism Back, Please?” *Isis* 98 (2007): 138-142; “Why Has Critique Run out of Steam? From Matters of Fact to Matters of Concern,” *Critical Inquiry* 30 (2004): 225-248; “From Realpolitik to Dingpolitik—or How to Make Things Public,” “Introduction” to the catalogue of *Making Things Public—Atmospheres of Democracy*, (Cambridge, MA: MIT P, 2005)) and in works such as Jane Bennett’s, *Vibrant Matter: A Political Ecology of Things* (Durham: Duke UP, 2010).

knowledge of forms—relies on an implicit assumption that the natural world can be gradually and methodically accessed. Bacon’s natural philosophy aspires to deliver a unified narrative that enacts progression towards truth. However, the complex issues—of particulars, of delivery, of action—pulling at this method in the example of the bee expose that engagement with nature’s “things” will inevitably disrupt the possibility of any unmediated progression towards certainty. Method—in particular the reliance on “true induction” and on natural history—generates, or creates its own interminability. Each specific encounter with nature produces new particulars, forms, and operations. The surety promised by method has to be adapted each time the naturalist encounters the material world, which in the process changes the instruments of inquiry themselves, leaving us with a method that is always in flux.

Bacon’s “true induction,” then, can only desire to be gradual and cumulative, and as we will see, it is neither “unbroken” (as Bacon himself intimates) nor is it “yet untried” in the period; we only know it under different names: romance, narrative, poesy. In this chapter, I examine several features of this “true induction” and the strategies of collecting natural history to argue that in spite of Bacon’s explicit “hope” of discovering forms and producing “certain and demonstrable knowledge,” his method itself undermines this process of “gradual and unbroken ascent.” While scholars have explicated the exact steps of Bacon’s method—one only needs to look at introductory essays in any edition of *New Organon*—these explanations often replicate the aspiration, rather than the narrative and process of induction as Bacon attempts to make intelligible an ever-expanding and uncontrollable project. Baconian method emerges as a complex, constantly changing process that facilitates its own continuation; Bacon invents the steps of his method as he

writes them, never fully acknowledging how the contradictions in this suggestive, evolving system derail method's progression towards its stated aims.

I argue that Bacon's "true induction" enacts a futuristic, possible epistemology based on the very things it aims to eradicate: uncertainty, digression, dilation, endlessness, and error characterize Baconian method.²⁵³ His "argument of hope" is expectant and expansive, not enclosed and contained: an "endlesse worke" (4.12.1), to borrow a phrase from Spenser, that defers fulfillment, and in which digression, delay, and error formalize change in narrative. What Spenser—poeticizing endless quests, error, and futuristic possibilities into an allegorical narrative—would have termed romance, Bacon calls "method," in the process investing these techniques of possibility and uncertainty with an epistemic value that would have a forceful impact in shaping the disciplines, and values, of knowledge in the seventeenth century. Baconian method and Spenserian romance, therefore, occupy two ends in the spectrum of "possible knowledge" as the writers grapple with similar narratological and epistemic tools to make intelligible different modes of knowing and being. By methodizing what we understand as typically romance's instruments of narration, Bacon powerfully reiterates the boundaries between the "literary" and the "scientific."²⁵⁴

²⁵³ The term "possibility" also captures, in part, the "spirit of hopeful expectation" (xxxix) and the "optimistic attitude" (7) that, according to Webster, Puritan reformers located in Baconian philosophy, as they brought together "millenarian eschatology" and "revival of learning" (1). This counters the doubt and skepticism that pervaded various kinds of thought in the period; the techniques I examine mark *how* Baconian method sets itself up for such expectancy. For influential works on skepticism, see Richard H. Popkin, *The History of Skepticism from Erasmus to Spinoza*, Rev. and expanded ed. (Berkeley: U of California P, 1979); Brendan Dooley, *The Social History of Skepticism: Experience and Doubt in Early Modern Culture* (Baltimore: Johns Hopkins UP, 1999).

²⁵⁴ The works that I employ to excavate the "possible knowledge" in Sidney, Spenser, and Bacon also share another similarity: they are "idle" works that misdirect or deviate from the author's acute political involvement and public role; as such, they invite us to consider what the political stakes of these works might be in relation to their epistemic claims.

The bee, choosing the “middle course” between the cognitive and the material, also reminds us of a very different early modern thinker: the Sidnean poet, who acts as a “moderator” between the philosopher and the historian. Both Bacon and Sidney are attempting to articulate the relationship between “well-doing” and “well-knowing,” or *praxis* and *gnosis* in their works. While for Bacon well-doing is the process that should lead to well-knowing, for the Sidnean poet, well-knowing will ideally lead to well-doing. Yet there is a poetic—by which I mean a creative, predictive, and operative—strain in Bacon’s method that produces a disjunction between the end of certainty and the endless method that is supposed to lead to it. These echoes of poetic thinking raise an even more fundamental question that threatens to undermine not only Baconian method but also its ends. If the natural philosopher, like the poet, operates by coupling the general and the particular, the abstract and the tangible, and by promising to realize the aims in the future, can he produce “certain and demonstrable knowledge”? Or does he, like the poet, only produce knowledge that “nothing affirms”?²⁵⁵

The Method of Romance

The pluralist, endless, and delaying tendencies of Baconian method enable us to mark homologies between the “true induction” and the early modern genre of romance; these tendencies are typical of Spenser’s poetics. According to Patricia Parker, romance is “a form which simultaneously quests for and postpones a particular end.”²⁵⁶ As David Quint traces the political significance of the trajectories of epics and romances, his account highlights the different narrative strategies of the genres: “[t]o the victors belongs epic, with its linear teleology; to the losers belongs romance, with its random or circular

²⁵⁵ See Ronald Levao, “Francis Bacon and the Mobility of Science,” *Representations* Special Issue (1992): 1-32, for a comparison of how Bacon and Sidney deal with ideals and ideas.

²⁵⁶ Parker, 4.

wandering”; he goes on to suggest the “loser’s epic,” whose “narrative structures approximate and may explicitly be identified with romance,” tend to “valorize contingency and openendedness that the victor’s epic disparages.”²⁵⁷ As we saw in Spenser’s *Faerie Queene*, the romance narrative self-reflexively theorizes its own instruments of inquiry: plurality, wandering, error, and endlessness. Classified as genre, mode, strategy, or sets of “memes,” the early modern romance deviates from the established genres of epic, tragedy, or comedy, and it remains distinct from its successor narrative, the realist, character-centric novel.²⁵⁸ Romance has been understood by early modern and modern critics as “popular” fiction, read primarily as a source of readerly pleasure and personal affect, interpreted as a failed novel, and described as lacking a unified structure; readers, claims Barbara Fuchs, “know it when they see it.”²⁵⁹ Yet Fuchs’ formulation of romance as “strategy” also gestures to the methodizing possibility of the form.²⁶⁰ As such, the vivid correspondences between the epistemic technologies of Spenserian romance and Baconian method allow us to see how the narrative strategies of the romance—a genre ostensibly intended for popular consumption, pleasure, and idleness—characterized some of the defining epistemic shifts in this period.

The sixteenth century epic-romance debates in Italy underscore some of the issues at stake in writing a romance, and they also highlight how romance conventions fit

²⁵⁷ Quint, 9.

²⁵⁸ For a summary of these different definitions and classifications, see Amelia Zurcher, “Serious Extravagance: Romance Writing in Seventeenth-Century England,” *Literature Compass* 8/6 (2011): 376-389, esp. 376-379.

²⁵⁹ Barbara Fuchs, *Romance* (Routledge New Critical Idiom, 2004). By looking at the complexity of plot in popular English romances that were produced in the late-sixteenth and seventeenth centuries, Steve Mentz argues that they should not be read as failed-novels. See Steve Mentz, *Romance for Sale in Early Modern England: The Rise of Prose Fiction* (Burlington: Ashgate, 2006).

²⁶⁰ By “methodizing,” I refer to the act of isolating and abstracting a set of procedures and techniques in order to create a regular, ordered way of knowing within a specific discourse. I draw on definitions of the term from OED Online. March 2012. Oxford University Press. (accessed June 15, 2012).

with or challenged central premises of poetic writing.²⁶¹ These debates, which centered on Ariosto's *Orlando Furioso* (1516) and Tasso's *Gerusalemme Liberata* (1581), initially defined romance primarily as a genre in opposition to the epic. The romance challenged epic conventions through its formal features, as well as in its political, ethical, and epistemic aims. Criticism of the romance focused on its deviation from Aristotle's definitions of poetry in particular, and its refusal to adhere to rules in general. Also at stake in these debates about plot, character, rules of poetic writing, and subject matter, was the nationalist aim of certain kinds of poetry, as well as the value of ancient and modern poetic theories, the place of pleasure in instruction, and understandings of tradition and modernity. While the epic inevitably followed rules and precepts, the romance relied on multiple models and exemplars. Thus, while "Aristotle had demanded a single action of one man, Ariosto has treated various actions of multiple knights."²⁶² Moreover, "Ariosto's poem was full of improbable, marvelous and supernatural elements."²⁶³ Thus, romances undermined the epic's main features: its focus on the single action of a single hero, its unidirectional and comparatively rigid form, its exclusion of materials of "low" sort which enabled the poet to observe the decorum of the noble style.²⁶⁴ The romance form was characterized by its episodic nature, its multiple plots, by the absence of a single hero and the unity of action. In 1554, Battista Pigna raised an objection that would haunt the genre's claims to seriousness: "*Digressions* are too numerous."²⁶⁵

²⁶¹ I draw the debates from Bernard Weinberg, *A History of Literary Criticism in the Italian Renaissance* (Chicago: U of Chicago P, 1961). Early modern critics are noted by name. I give the year of publication when possible.

²⁶² Weinberg, 955.

²⁶³ *Ibid.*, 956.

²⁶⁴ *Ibid.*, 958.

²⁶⁵ *Ibid.*, 958.

These criticisms paradoxically underscore how the romance undercuts the fundamental premise of the epic by formalizing the necessity of deviation from a unified and central plot. Defenders of the romance relied on these very characteristics to valorize the genre. They defend romance by embracing it as a new national genre (*Orlando Furioso*, “as a narrative poem, is the Italian equivalent of the ancient epic,” states Giraldi Cintio (1554)²⁶⁶) or by arguing that the criteria of one form could not be applied to the other (Francesco Caburacci (1580)). Explicitly or implicitly, these writers challenged the hierarchy of genres. Giosepe Malatesta (1589) defends Ariosto, and by extension romance, through his theory of “new poetry”: poetry “changes with the times, that authoritarian principles tending to render them immutable and eternal are not acceptable, that rules should follow upon the forms rather than forms upon rules.”²⁶⁷ Ariosto was successful because he “disdained the precedent of the great epic poets” and “espoused a genre better suited to his own language and his own times, and to have written a perfect poem in this new genre.”²⁶⁸ Thus, romance’s novelty enabled it to address limitations in the epic narrative because it was uniquely suited to its “own times” and it could break from rules of tradition. Romance was modern, in a sense, because it could *generate* its own rules through its formal features and therefore it could dispense with ancient rubrics.²⁶⁹

²⁶⁶ Ibid., 968.

²⁶⁷ Ibid., 1044.

²⁶⁸ Ibid., 1044.

²⁶⁹ Romance also theorizes its own potential for generating other romances through tropes of incompleteness and interminability. Endlessness and expansions were typical formal features of romances that ended abruptly and implicitly or explicitly invited readers to complete the works: they turn readers into writers, often by eliciting frustration and a desire for endings. We have various examples of such extensions: Mary Wroth’s *The First Part of The Countess of Montgomery’s Urania* (1620s) revises both Spenser’s and Sidney’s romances, ending with an invitational “And” that explicitly theorizes its unending; Anne Weamys’ *A Continuation of Sir Philip Sydney’s Arcadia* (1651) “completes” the Erona story that is repeatedly deferred in Sidney’s work; Ralph Kenvet’s *A Supplement of the Faery Queene* (1635). Even

The epic-romance debates also engaged with questions of what the aim of poetic writing was supposed to be. The Horatian argument that poetry should both teach and instruct was a commonplace in poetic theories by this time, and it was integral to the projects of English poets including Spenser and Sidney. Romance's capacity to produce pleasure was paradoxically its primary problem and its chief value. Its proponents argued that since poetic writing should provide pleasure, the romance, with its variety and its appeals to the senses, could provide the greatest pleasure. While some writers claimed that pleasure in itself was enough as an end of poetic writing—thus undermining the dual purpose of poetry—others, who did not wish to create a hierarchy between the epic and romance, argued that Ariosto's romance teaches as well as delights. They turn the hierarchy on its head to show how romance is more effective in both ways. Francesco Caburacci (1580), a "learned" Aristotelian, himself suggests that since Ariosto was not writing epic "it is clear he wished to produce a different effect from that of the epic" and that "he was aiming at variety in the feelings of the audience."²⁷⁰ There is also an implicit egalitarian argument buried in these defenses: since the genre did not appeal to strict rules that could only be acquired by formal training, it was accessible to all. In time, the popularity of the romance itself becomes a justification for writing it. Orazio Ariosto, Ariosto's grand nephew, defends *Orlando Furioso* in 1585 by arguing that the work both instructs and pleases; he suggests that the multiple action in the work—supposedly one of the main "problems" of romance—successfully produces the dual effect:

who will bring the greater pleasure, he who with a single action will not have many new things in his poem and in consequence little pleasure and little wonder, or rather he who with varied and ever new inventions will always delight and

Bacon's utopia, *The New Atlantis* was "perfected" as a monarchical utopia by the author R.H (1660), possibly Robert Hooke.

²⁷⁰Weinberg, 981-982.

always arouse new marvel in the reader? If we wish then to consider it with respect to profit... there is no doubt that he will profit more who, by representing various cases and many happenings, will put before the eyes of the reader many mirrors of human life, in which, as we look, we can learn to know through the examples of others what is to be pursued and what avoided.²⁷¹

By the end of the sixteenth century, these debates had solidified the divisions of the two genres, and the formal elements of Ariosto's romance—the multiple plots involving multiple characters, digressions, the non-teleological trajectory, and the incompleteable quests—were typical of English romances such as *The Faerie Queene* and *The Arcadia*, and they governed the methods through which poetic writing could simultaneously “teach and delight.” This theorized endlessness and the conditions of possibility are, from this point on, repeatedly enacted as an ongoing narrative strategy in later romances.

Of course, Bacon is not writing a romance in a strict generic sense in *New Organon*. Yet the digression, error, and deferral that pervade his method bring its speculative and futuristic modes closer to poetic epistemologies. These romance technologies of Baconian method, still understood by scholars as one of the central ways of methodizing inquiry in the so-called “scientific revolution,” also suggest that we take seriously the epistemology of the “unmethodical” early modern romance, a genre that masks its epistemic value; romance, both early moderns and modern critics repeatedly suggest, was primarily an instrument of popular consumption, pleasure, and sensationalism. Yet by exploring the techniques of Baconian method, we can observe how Bacon was *methodizing* aspects of the romance that we can trace back to *The Faerie Queene*, which generates its own instruments of inquiry and tools of learning through its narrative strategies. Bacon's “induction” seems more methodical because the author is

²⁷¹ Weinberg, 1002.

able to abstract these techniques *as* means of knowing from their association with the affective and pleasurable qualities associated with the romance. When Bacon privileges *praxis* over theorization, ways of knowing over its ends, his variety of “possible knowledge” engages indirectly with the promise and the threat of the romance narrative. Scholars have marked the impossibility of the method to become completely methodical: Mary B. Hesse has argued Bacon’s works expose how the “conditions of [his] method can never be fulfilled”; Levao shows how “Bacon hopes for an objective certainty that will eventually overtake and complete his method, but it is method itself that makes the objective ideal possible, even as it eludes its requirements”; Alvin Snider draws attention to the “avoidance of closure” that distinguishes Baconian method from Aristotelian rules of knowledge.²⁷² Thus, my larger argument is twofold: a closer examination of the techniques of induction reveals the imaginative, futuristic, and possibilistic underpinnings of the method, but the homologies between induction and romance suggest that the narrative of romance was, in some sense, *methodical*.

Contextualizing Baconian Natural Philosophy

Scholars have approached the topic of Baconian method in numerous ways, often by situating it within various epistemic traditions. While Lisa Jardine locates Bacon’s use of method in a history of dialectic, arguing that his theory of invention is best understood in relation to methods of reform in dialectic that were popular in the late-sixteenth century, Antonio Perez-Ramos positions Bacon’s methods within the “makers’

²⁷² Hesse (1964), 141; Levao (1992), 14; Snider (1994), 25. In his study of Bacon’s understanding and application of method, Wallace (1973) generalizes, “for the period of the English renaissance generally and for Bacon specifically, method meant a plan of organizing an activity governed by its end; it was the decisive guide for including and excluding materials; it fell short of specifying details of procedure, though it determined and informed procedures; it was a sort of sketch, not a blueprint, a strategy not a tactic” (249-250).

knowledge tradition,” claiming that Bacon’s idea of science is an extreme version of the tradition in which “making is knowing.” Eamon explores one particular form of such a practical epistemology by tracing the history of “book of secrets” and showing that Bacon’s method enacts the Hunt of Pan. Thomas Kuhn differentiates experimental Baconian sciences from classical, mathematical sciences.²⁷³ Katharine Park traces the role of the imagination and marks the centrality of analogy and resemblance in Baconian method and Christopher Hill, among others, has shown the influence of mechanical arts in Baconian science.²⁷⁴ Scholars have also noted the influence of legal theories and practices in Bacon’s formulation of axioms from induction.²⁷⁵ While Jardine situates Bacon in his time by looking backwards to a history of dialectic, Eamon reads Baconian method as a precursor to the Royal Society’s “popular” experimental philosophy. Lorraine Daston and Park, in their historical epistemology of “wonders” and “monsters,” locate Baconian natural philosophy in its moment through the objects of study it deems worthy of philosophical inquiry.

Recently, Deborah Harkness has opposed a chaotic and practical Elizabethan science to Baconian organization and centralization: Baconian science is “hierarchical and bureaucratic” as opposed to the “messy, decentralized world of Elizabethan London

²⁷³ Kuhn (1977), 31-65.

²⁷⁴ Park (1984). Christopher Hill, *Intellectual Origins of the English Revolution* (Oxford: Clarendon P, 1965). Also see Jardine for Bacon’s use of analogy. See Eamon’s articulation of “learned experience,” which proceeds “by analogy from experiments that produce known results to unknown situations in which similar experiments might prove equally fruitful” (286), to observe how analogy plays out in one particular—and oft-studied—portion of *New Organon*. For another exploration of artisanal knowledge and Baconian philosophy, see Pamela H. Smith. Recently, scholars have examined how Baconian science was not only influenced by different disciplines of knowledge, but by diverse modes of thought. For example, see Passannante, who argues that Bacon’s materialism is intimately tied to and organized by past sources, and his philosophy is connected to conservation of matter: “It was, after all, from the letters and syllables of other men that Bacon had generated the matter for his own philosophical opinions” (150).

²⁷⁵ See, for example Julian Martin, *Francis Bacon, the State, and the Reform of Natural Philosophy* (Cambridge: Cambridge UP, 1992); Harvey Wheeler, “The Semiosis of Francis Bacon’s scientific empiricism,” *Semiotica: Journal of the International Association for Semiotic Studies* 133:1-4 (2001): 45-67.

science.”²⁷⁶ By focusing on Bacon’s utopian fiction, *New Atlantis*, she argues that his conception of natural knowledge was primarily about issues of “power” and that according to Bacon, the “philosopher’s role would be managerial and supervisory rather than experimental and messy, thus avoiding all the ungentlemanly sweat of the body.”²⁷⁷ Harkness concludes that Bacon “cannot be credited as an original thinker when he argued for the utility of science to the state, and the need for government support.”²⁷⁸ Of course, the public and political scope of Bacon’s works cannot be denied: he repeatedly claims that he is performing a “royal work.” And the criticism of Bacon’s style is not a modern discovery. For instance, his contemporary William Harvey famously remarked that Bacon wrote of natural philosophy “like a Lord Chancellor.”²⁷⁹ Moreover, the influence of other disciplines (such as practical arts and rhetorical works) is evident in Bacon’s

²⁷⁶ Harkness, 13.

²⁷⁷ Ibid., 246.

²⁷⁸ Ibid., 246.

²⁷⁹ Harkness’ argument is part of a critical tradition that understands Bacon as an administrator and reads Baconian philosophy *only* in relation to hierarchy, order, and politics. See for example, Michael Hattaway, “‘Knowledge Broken,’ Limits for Scientific Method,” *Journal of the History of Ideas* 39.2 (1978): 183-197, who sees Bacon as the “first great scientific administrator, a planner of research, an advocate of specialization, a modern” (185). Also see Mary Poovey, *A History of the Modern Fact: Problems of Knowledge in the Sciences of Wealth and Society* (Chicago: U of Chicago P, 1998), esp. 96-98. For an argument that situates Baconian “royal science” both in “terms of court culture” as well as “notions and practices that derived from non-courtly arena – commercial, vocational, and mechanical,” see Julie Robin Solomon, *Objectivity in the Making* (Baltimore: Johns Hopkins UP, 1998), xiv. Perhaps Jennifer Summit’s claim, that Bacon failed to recognize the potential and actual organizational capacity of libraries, provides an implicit, if only a very particular, challenge to this idea that Bacon was a skilled organizer of knowledge. See *Memory’s Library: Medieval Books in Early Modern England* (Chicago: U of Chicago P, 2008). For some works that complicate this automatic collapse of knowledge into politics, see John Guillory, “The Bachelor State: Philosophy and Sovereignty in Bacon’s *New Atlantis*,” in *Politics and the Passions*. Ed. Victoria Kahn and Neil Saccamano (Princeton: Princeton UP, 2006), 49-74, and more recently, Vera Keller “Mining Tacitus: secrets of empire, nature and art in the reason of state,” *The British Journal for the History of Science* 45.2 (2012): 1-24. Also see Clody (2011) for the argument on how alterity and secrecy in the interpretation of nature ensures the shutting down of the “common voice” (142). For a summary of the issues of “politics” and “science,” see Markku Peltonen, “Introduction,” in *Cambridge Companion to Bacon*, Ed. Markku Peltonen (Cambridge: Cambridge UP, 1996), 1-25. Peltonen argues: “this [‘the fact that all these writings occurred in a political rather than in a philosophical context’] was inevitable, since Bacon needed patrons, and patronage could only be attracted via the court. In other words, this political context should not prompt us to belittle the historical and philosophical importance of Bacon’s plans” (6).

writing. However, these points do not add up to the basic dichotomy between “messy” and “hierarchical” that Harkness’ argument reinforces.

I do not see any direct relation or opposition between being an “original thinker” and wishing to create a “science of the state.”²⁸⁰ Harkness’ opposition unravels as soon as we turn to the chaotic form of Baconian method. More importantly, I do not take Bacon’s aspirations, and his goals for natural inquiry, as self-evident. Nor do I want to collapse the desired end with the method. As the bee’s embodied role as a *philosopher* demonstrates, the naturalist does not just manage: he shapes nature even as he is shaped by it. Thus is it important to uncover the creative actions of the Baconian philosopher even while acknowledging that he might ultimately desire to escape experiential knowledge practices. By focusing on the organizational and institutional end of Bacon’s natural inquiry, scholars have missed the errant and digressive—and by extension the imaginative and creative—*form* of induction. Finally, my focus on the techniques of induction also asks us to question the line of argument that primarily locates Baconian science in *New Atlantis*: it is Bacon’s fictional work, I contend, that most explicitly, though not completely, evacuates the digressive and dilating motions pervading his conception of possible knowledge.

As such, I see my argument more aligned with the works of scholars including Ronald Levao and Michael Witmore who mark the multifarious, hypothetical, and contingent nature of the Baconian project. Witmore, in his study of “accidents,” argues

²⁸⁰ Related to this, is of course, the question of whether Bacon is an ancient or a modern. For discussions, see Jardine, Hattaway, Mary Horton, “Bacon and ‘Knowledge Broken’: An answer to Michael Hattaway,” *Journal of the History of Ideas* 43.3 (1982): 487-504. For the classic study, see Jones. See Charles Whitney, *Francis Bacon and Modernity* (New Haven: Yale UP, 1986), for an examination of the predictive and revolutionary character of Bacon’s thoughts, and for an argument that situates Bacon as torn between traditions of reform and a revolutionary desire.

that by ignoring the centrality of chance and accident in Bacon's contrived experiments, "we overlook a more subtle dependence on contingency in his philosophical program. One that is rarely avowed in the confident rhetoric of advancement which pervaded Bacon's work."²⁸¹ Witmore acknowledges, "Bacon thought of these [accident and experiment] as different versions of the same process" where "both are a result of an unusual disposition of circumstances, and both are understood to be a more 'artificial' version of what nature does when left to its own habits."²⁸² However, it is not only the specific relationship between "accident" and "experiment" that exposes the contingency and provisional nature of Bacon's method. The method of inquiry, as Bacon imagines it, must *necessarily be* accidental, provisional, and reliant on contingency, even if these aspects threaten to destroy his avowed aim of "certain and demonstrable knowledge." Levao argues the "intellectual shuttling between affirmation and hypothesis" is produced by "the stimulus of unresolved contradiction, the sustaining of opposed intellectual motions."²⁸³ He also marks the "work of human *poesis* that arise from a lateral as well as a progressive movement."²⁸⁴ I extend these arguments to suggest that the techniques of Baconian method dramatize these "intellectual motions" when they theorize destabilizations *into* the instruments that are essential to induction and to collecting natural history. It seems almost commonplace to make the observation that for Bacon, the mind is a kind of literary organ. I want to also suggest it is the mind's cognitive fallacies and its imaginative aspects that instrumentalize and make possible this interminable, predictive, and unaffirmed method of "true induction." The mind's generative capacity,

²⁸¹ Witmore, 129. See Jardine, esp. 76-77 for an argument that Bacon takes the goal of science to be truths.

²⁸² Witmore, 126.

²⁸³ Levao (1992), 19.

²⁸⁴ *Ibid.*, 3.

in conjunction with a simultaneously corrective and constructive method, generates the “endlesse worke” that is natural philosophy.

“expanded and opened”: The Accommodation of Understanding

The very possibility that the human mind can *generate* processes of natural inquiry, as well as Bacon’s claims that the philosopher must study “filthy” things, implicitly produces an equalizing principle: everyone might become a natural philosopher. This in turn foregrounds the central tension of natural inquiry, as Bacon formulates it, between the desire to curb imaginative acts and the need to encompass new—and therefore unpredictable—knowledge.²⁸⁵ To rectify existing ways of knowing, to overcome the fallacies of the human understanding, and to add to natural philosophy, the naturalist must repeatedly push against established theories and practices. Bacon identifies errors and wanderings under rubrics such as “imagination” and “common notions” (1.65), “mist of tradition,” “whirl and eddy of argument,”²⁸⁶ “fluctuations and mazes of chance,” “vague and ill-digested experience” (1.81), “admiration of antiquity, authority, and consent” (1.85), “the dullness, incompetency, and deceptions of the senses” that creates the “greatest hindrance and aberration of the human understandings” (1.50), the “endless entanglement” of the “meditations and glosses of wit” that makes them have only a “short stay with experience” (1.112). These errors inevitably persist in

²⁸⁵ The call for starting anew occurs throughout the work. For examples, see: “It is idle to expect any great advancement in science from the superinducing and engrafting of new things upon old. We must begin anew from the very foundations, unless we would revolve forever in a circle with mean and contemptible progress” (1.31); “Even to deliver and explain what I bring forward is no easy matter, for things in themselves new will yet be apprehended with reference to what is old” (1.34). For a comprehensive account of the tensions between origins and novelty in Bacon’s works, and their situation within a discourse of the “desire to recuperate origins,” see Snider (1994), 3.

²⁸⁶ Bacon also marks problematic disciplines: “logic now in use serves rather to fix and give stability to the errors which have their foundation in commonly received notions than to help the search after truth” (1.12). He is writing a “logic, not philosophy” but one that “aims to teach and instruct the understanding, not that it may with the slender tendrils of the mind snatch at and lay hold of abstract notions (as the common logic does), but that it may in very truth dissect nature, and discover the virtues and actions of bodies, with their laws as determined in nature” (2.52).

the understanding, which is prone to premature generalizations. Often, the “mind longs to spring up to positions of higher generality” and “so after a little while wearies of experiment” (1.20). Moreover, “the understanding, unless directed and assisted, is a thing unequal, and quite unfit to contend with the obscurity of things” (1.21). Both “rash and premature,” it is “prone to abstractions, and gives substance and reality to things which are fleeting” (1.51). Since the understanding is easily susceptible to the faulty teachings of present studies and methods, it needs active guidance.

In its capacity to “[give] substance and reality” to “fleeting” things, the understanding performs a dangerous and essentially *poetic* act: as we saw, the Sidneian poet often “bringeth forth... forms such as never were in nature,” and Theseus in *A Midsummer Night's Dream* reminds how the poet “gives to airy nothing/A local habitation and a name” (5.1.16-17).²⁸⁷ One of the worrisome consequences of the uncontrollable understanding, according to Bacon, is that words are privileged over things. In addition to the worry of fabrication and fiction that circulates in Bacon's works, he is anxious about a more fundamental problem: the philosophical and epistemic role of language. In *The Advancement of Learning* (1605), Bacon defines the first distemper of learning (“delicate learning”) that occurs “when men study words and not matter” (Book 1, IV.3). Here, as he criticizes the inordinate amount of emphasis on Ciceronian style over content, Bacon employs an analogy from art to make explicit the insubstantial knowledge that words provide: since “words are but the images of matter,” to “fall in love with them is all one as to fall in love with a picture” (Book 1.IV.3). Bacon invokes a

²⁸⁷ Bacon is not unique among naturalists in worrying about the referentiality of language. While William Gilbert, in *De Magnete* (1600) acknowledges the necessity—and even the pleasure—of creating and adopting new names to explain things, Galileo in “Letters on Sunspots,” is more suspicious of the value of naming as a form of explanation.

commonplace understanding that poetry produces images: Sidney argues that “the poet’s persons and doings are but pictures what should be” and Ben Jonson suggests that poetry produces a “mirror of man’s life.”²⁸⁸

More specifically, he strips words of any cognitive importance and devalues their “study” through the affective appeal to “fall[ing] in love.” In his articulation of the second distemper (“contentious learning”) he reiterates the relative value of words and things by an inverse strategy: “as substance of matter is better than beauty of words, so contrariwise vain matter is worse than vain words” (Book 1, IV.5). As he criticizes the scholastic tradition of disputation, where endless debate is privileged over new learning, he uncovers a “worse” error: since matter is more valuable than words as an epistemic object, ignoring it has more serious implications for learning. Words, suggests Bacon, inevitably haunt, distort, and ultimately change matter.

In the *New Organon* Bacon elaborates how these problems with words specifically affect the study of the natural world. Although they are merely “symbols of notions” (notions themselves are “the root of the matter” (1.14)), words seem to have a potency dissociated from matter and notions.²⁸⁹ Bacon wishes to control the flow of words and curb their capacity to escape reference. By exceeding their designative status, words disrupt two forms of learning, that of ideas (or notions) and of the physical world

²⁸⁸ Sidney, 53; Stephen Orgel, “The Poetics of Spectacle,” *New Literary History* 2.3 (1971): 367-389, 369.

²⁸⁹ A related problem is that notions are often vulgar and wandering: see 1.16-19. The body of scholarship on the value of words and writing in Bacon’s works is enormous. They relate to topics of rhetoric, figurative and allegorical language, universal language, poetry and fiction, etc. For example, see Levao (1992); Julie Robin Solomon, “‘To Know, To Fly, To Conjure’: Situating Baconian Science at the Juncture of Early Modern Modes of Reading,” *Renaissance Quarterly* 44.3 (1991): 513-558. For a small sample of such scholarship which does not directly relate to poetic writing, see Rhodri Lewis, “Francis Bacon, Allegory and the Uses of Myth,” *Review of English Studies* 61 (2010): 360-389; James Stephens, “Bacon’s new English rhetoric and the debt to Aristotle,” *Speech Monographs* 39.4 (1972): 248-259; Marc Cogan, “Rhetoric and Action in Francis Bacon,” *Philosophy and Rhetoric* 14.4 (1981): 212-233; Jeffrey Gore, “Francis Bacon and the ‘Desserts of Poetry’: Rhetorical education and *The Advancement of Learning*,” *Prose Studies: History, Theory, Criticism* 29.3 (2007): 359-377.

(or matter). Limiting words to their “symbolic” status would ensure that one represents both with clarity. This potency of words has specific implications for the methods and organization of *natural* knowledge. Classifying the problems with “words” under “*Idols of the Market Place*,” or “idols which have crept into the understanding through the alliances of words and names,” in *New Organon* Bacon demonstrates the circular logic of knowing through words: “men believe that their reason governs words; but it is also true that words react on the understanding” (1.59). This ungovernable power has “rendered philosophy and the sciences sophistical and inactive” (1.59).

Because words exceed the mind and distort the world they describe, they misrepresent the categories to which they refer. Bacon wants words to only referentially point to the natural world, but they, to borrow a phrase from Latour, end up “circulating reference.” Even more threateningly, they might erase reference altogether. Since linguistic classifications primarily cater to the least informed—“words, being commonly framed and applied according to the capacity of the vulgar, follow those lines of division which are most obvious to the vulgar understanding” (1.59)—they compromise any egalitarian impulse latent in induction. The natural philosopher who excavates a filthy nature and welcomes being transformed by this interaction, must remain wary of “vulgar” words, and by extension, of metamorphosing into the vulgar.

Words, by their very operation, seem to propagate errors about the natural world because they complicate or elide reference to actuality: they are “either names of things which do not exist” and are “fantastic suppositions” to which “nothing in reality corresponds,” or “they are names of things which exist, but yet confused and ill-defined, and hastily and irregularly derived from realities” (1.60). Yet one cannot convey

knowledge of “natural and material things” without words, since their “definitions themselves consist of words, and those words beget words” (1.59). The realization that words control not only the form but also the content of knowledge accentuates the anxiety of correctly referencing the physical world; words have the disturbing capacity to obfuscate the materialist basis of all natural knowledge by extending chains of reference away from things. This anxiety is reinforced by the fact that words remain necessary for the recording, propagation, and dissemination of learning. Although they might be referencing “fantastic suppositions” or generating fables, definitions are made of words. At best, one can control the “begetting” of more words that have no reference to matter. Even an author like Bacon, who wishes to eradicate old ways of learning and to define knowledge by making intelligible the “subtlety of nature” (1.10. 1.13, 1.24, etc.), finds himself in a paradoxical position of arguing “no course of invention can be satisfactory unless it be carried on in writing” (1.101).

Because of the inadequacy of current forms of representation and reference, Bacon’s natural inquiry demands not only new theories or new philosophers, but also new words. Yet unless one can generate a new language—which Bacon seems to attempt to do in the *Prerogative Instances*, but which he cannot fully adopt because he must work with old words such as “form” to make his new concepts comprehensible to readers—one must be limited to the categories and techniques that are representable by existing language. Perhaps this is why Bacon not only repeatedly turns to figurative language, but ends up writing *The New Atlantis*, a utopian fiction, to propagate the “royal” nature of his philosophy. Bacon’s own writing serves as an example of a form of mobile technology as it moves between parts and whole, between intermediate and general axioms, and

between things and notions. Writing is also a crucial part of Bacon's "true induction," and as Stephen Clucas argues, Bacon aims to initiate (particularly through the aphorism), a "*vocabulary of the real* which functions rhetorically as a spur to engage in a natural philosophy which is more properly engaged with the material world."²⁹⁰ Although they do not automatically define the goals of learning, the written techniques Bacon relies on—the aphorism, the "Table of Discovery" (1.102), the lists at the end of the *New Organon* and *The New Atlantis*—are integral to his research. These instruments of writing and Bacon's own reliance on words mark the gap between method and ends, process and product, in the *New Organon*. By demonstrating how ways of knowing cannot be disentangled from techniques of presentation, they also introduce *poiesis* in Baconian science.

Bacon's appeals to worldmaking, a trope central to early modern poetic discourse, enact the tension between discovery and creation in his work. He argues, "I am not raising a capitol or pyramid to the pride of man, but laying a foundation in the human understanding for a holy temple after the model of the world" (1.120). Bacon promises to present a "model of the world" but this model of the *natural* world only comes into being in the aphorisms, tables, and particulars he catalogs. The world Bacon models is "fleeting" until these particulars are collected, studied, and synthesized. This claim of worldmaking becomes more explicit as he elaborates on the aims and processes of his method: "I am building in the human understanding a true model of the world, such as it is in fact, not such as a man's own reason would have it to be; a thing which cannot be

²⁹⁰ Stephen Clucas, "A knowledge broken: Francis Bacon's aphoristic style and the crisis of scholastic and humanistic knowledge systems," in *English Renaissance Prose: History, Language and Politics*. Ed. Neil Rhodes (Tempe: Medieval & Renaissance Texts & Studies, 1997), 147–172, 167. For an exploration of the centrality of writing to Bacon's project, see Andrew Barnaby and Lisa J. Schnell, *Literate Experience: The Work of Knowing in Seventeenth-Century English Writing* (New York: Palgrave, 2002).

done without a very diligent dissection and anatomy of the world” (1.124).²⁹¹ The language of modeling introduces creativity and imagination into a process that is supposed to be governed by the materials of the physical world; as Michael Clody has recently argued, “the new science arises to be forever entangled with modes of human *poiesis* and *mimesis*, with the essential distinction that what is now to be ‘represented’ ... is a process rather than an artistically rendered image.”²⁹² Moreover, as Levao argues in his examination of Bacon’s “speculative and operative” practice, the “science [Bacon] imagines not only offers progress but enforces its necessity, inaugurating a quest for Being to be satisfied only by a potentially endless calling of absent worlds into being.”²⁹³ Baconian inquiry does not merely explain the world. In modeling the world, the naturalist rebuilds and re-presents it, by recording particulars, through its various technologies and by directing how the mind apprehends any world. In his modeling, Bacon captures a physics—a theory of nature in motion and change—of possibility that recognizes the radical contingency of the world.

More transgressively, Bacon asks the understanding to let go of what it can perceive immediately, what it thinks is “real,” in order to get to the underlying “truth” about the world. Even in *Preparative Toward Natural and Experimental History*—the third part of the *Instauratio Magna*—Bacon argues, “the world is not to be narrowed till it will go into the understanding (which has been done hitherto), but the understanding to be expanded and opened till it can take in the image of the world as it is in fact” (276).²⁹⁴

²⁹¹ Also see “The Plan of The Great Instauration,” in which Bacon writes that his work is directed to those “who propose not to devise mimic and fabulous worlds of their own, but to examine and dissect the nature of this very world itself” (23).

²⁹² Clody (2011), 130.

²⁹³ Levao (1992), 12, 20.

²⁹⁴ This was appended to the *New Organon* and served as a directive on how to collect natural history (on which the philosophical project will be based).

Although he frames this act as a discovery of the “world as it is in fact,” Bacon is making an argument for imaginative projection: expand the understanding to see a world you have not yet perceived, and thereby witness a *new* modeled world. Instead of “narrowing” the world, one’s mind must be “expanded and opened.” Since the understanding isn’t stable and must be expanded, it deals with an “image” of the world and destroys the *world’s* stable status as a “fact.” The “world,” as a completely knowable, or even extant, entity seems to disappear from view at the very moment one links it to the expandable imagination. While Bacon is usually wary of the unrestrained capacity of the understanding—his typical argument is that the “understanding must not therefore be supplied with wings, but rather hung with weights, to keep it from leaping and flying” (1.104)—here he suggests that one can only know the world because of the mind’s capacity to expand. Thus, although he “reject[s] all forms of fiction and imposture” (1.122), his notions of the expansive world and the expandable imagination rely on technologies of modeling, building, and creating. Bacon’s world, till it is fully modeled by true induction, in some ways remains as fabricated as Sidney’s “golden world” and as incomplete as Spenser’s “endlesse” narrative. Yet, because such modeling is possible only *through* the process of true induction, it might remain unrealized forever: the endless method may never fully build and dissect the world, and as such, never bring it into being “as it is in fact.”

This simultaneous “dissection” and “building” captures and imaginative aspect of Bacon’s work, but the process also introduces an element of uncertainty into his aim of producing “certain and demonstrable knowledge.” The immense scope of his work leads Bacon to consider the inability of any individual complete it: “Neither can I hope to live

to complete the sixth part of the Instauration... but hold it enough if in the intermediate business I bear myself soberly and profitably, sowing in the meantime for future ages the seeds of a purer truth” (1.116); he also mentions in the *Preparative* that the collection of histories is “so manifold and laborious” that “my own strength (if I should have no one to help me) is hardly equal to the province” (271). Bacon acknowledges that he, and by extension any natural philosopher, can only complete the “intermediate business.” When he admits his temporary role in it, he also implicitly defines the collective nature of his enterprise.

Perhaps this recognition of the ambitious nature of his project as well as the limited reach of individual actors makes him define himself “merely as a guide to point out the road” (Preface, 35). Of course, the guide here functions as a prophetic figure who knows the end, but like other naturalists, must himself undergo the “intermediate business” to transform knowing into reality.²⁹⁵ This mixture of hubris and frailty is most apparent in the *Preparative*, where Bacon registers both the undesirability and the seeming impossibility of composing the natural history. On the one hand, Bacon dislikes the physicality of the task because “one must employ factors and merchants to go everywhere in search of [the materials on which the intellect has to work] and bring them in. Besides, I hold it to be somewhat beneath the dignity of an undertaking like mine that I should spend my own time in a matter which is open to almost every man’s industry” (272). Yet at the same time, he recognizes the great labor demanded by self and others: “a history of this kind, such as I conceive and shall presently describe, is a thing of very great size and cannot be executed without great labor and expense, requiring as it does

²⁹⁵ For Bacon as a prophet, see Charles Whitney, “Bacon’s Antithetical Prophecy,” *MOSAIC* 15.2 (1982): 63-78.

many people to help, and being...a kind of royal work” (271). Although these words establish a hierarchical division of labor between the “merchant” and the philosopher, they also reveal an anxiety about the immense scope of the work that cannot, in all likelihood, be completed unless multiple actors participate in it. The very imagination of this task carries with it a trace of deferral to an indefinite future.

When Bacon, like Spenser, acknowledges the near-impossibility of perfecting his project, he reveals how his “royal work” is a multifarious, endless enterprise. Yet it is even more contingent and uncertain in its ending because of its dependence on other actors: while in the “Letter to Raleigh” Spenser imagines receptive readers who “may” encourage authorial completion of the epic-romance, Bacon’s natural philosophy requires mobile and active agents who are willing to participate in the collection of natural history.²⁹⁶ They can only “build” the world if they “go everywhere” and “bring [materials] in.” “True induction” remains unperfected and its goal infinitely postponed because the collection of histories is contingent on others performing the roles defined for them; these roles are so varied and enormous that they might never be completed.

Since his method is circumscribed by the collection of histories, an immense venture in itself, Bacon suggests that practice need not immediately translate into theory. He defers theorizing, which is sometimes counterproductive to the generative ways of knowing he advocates.²⁹⁷ He acknowledges that he has “no entire or universal theory to propound” because “it does not seem that the time has come for such an attempt” (1.116).

²⁹⁶ For a comprehensive study of how natural history collections contributed and shaped natural philosophy in the period, see Findlen, who sees Bacon as a crucial figure in this linkage.

²⁹⁷ In “Baconian Facts, Academic Civility, and the Prehistory of Objectivity,” *Annals of Scholarship* 8(1991): 337-363, Lorraine Daston provides a prehistory of objectivity and demonstrates Bacon’s seminal role in ensuring that “facts came to be detached from the context of theory” (338). Daston argues that natural philosophers came to rely on such separation to study anomalies in nature and to ensure a civil discourse in natural inquiry. *New Organon* seems to be arguing for a postponement, not a complete rejection, of theory.

The naturalist must be able to look at the current state of knowing and admit, “[I] am frequently forced to use the words ‘Let trial be made,’ or ‘Let it be further inquired’” (2.14). These phrases, as well as the recurrence of the term “intermediate,” mark how the natural philosopher is always engaged in a process, rather than accepting or expecting ends. They capture the frustration but also the promise—or “hope” to co-opt Bacon’s term—that his directives will produce certitude in the future. The terms of supposition and expectancy better capture the essential claims that Bacon wishes to make about ways of knowing than words such as “order,” “progress,” “certainty,” and “increase.”

Techniques of Induction: An “endlesse” Method

The imperfect and projective method, which, to transport Parker’s phrase, “simultaneously quests for and postpones a particular end,” is clearest in the various formal and methodological elements of his writing: the axiom, the aphorism, the experiment of light, the initiatory or probative style, the concept of “error,” the prerogative instances, and the “not perfected” lists of natural history. These techniques of possible knowledge formalize errancy and endlessness *as* integral to the Baconian method; they also capture how Bacon’s method, despite his repeated attempts to govern it, remains a slippery and “messy” enterprise, to borrow the term Harkness reserves for Elizabethan science. This inevitable interminability is written into the style, form, and content of the method. Moreover, these techniques make up the narrative of Bacon’s induction and demonstrate *how* his writing performs the mediational (between generals and particulars) function of poesy through its projective (narrative-like) structure. The method of true induction, must, I argue, remain *unmethodical* to a certain extent, in order to fulfill the conditions of Bacon’s “endlesse worke.”

The “yet untried” true induction aims to produce general axioms. Ideally, the method will move from “the senses and particulars,” by “gradual and unbroken ascent,” to the “most general axioms last of all.” This process however, is facilitated not only by ascent, but also by descent and lateral movements in various directions that lead one to intermediate axioms:

after this store of particulars has been set out duly and in order before our eyes, we are not to pass at once to the investigation and discovery of new particulars or works; or at any rate if we do so we must not stop there. ...the mere transferring of the experiments of one art to others may lead, by means of that experience which I term *literate*, to the discovery of many new things of service to the life and state of man, yet it is no great matter that can be hoped from that; but from the new light of axioms, which having been educed from these particulars by a certain method and rule, shall in their turn point out the way again to new particulars, greater things may be looked for. For our road does not lie on a level, but ascends and descends; first ascending to axioms, then descending to works. (1.103)

This description captures the dynamic form of the inductive method, characterized by the rise and fall, by the tension between generalization and the search for particulars, and by the striving towards works. While the discovery of more “general” axioms is predicated on a linear or “ascending” trajectory, the descent into works disrupts this movement at every stage by inviting the naturalist towards new particulars and to a diverse range of applications. Although Bacon establishes a hierarchy of knowledge (the “mere transferring of the experiments of one art to others” is less important than the “axioms” that point to “new particulars”), he does acknowledge that each result has its unique benefits. The recurring inductive-deductive process interrupts and slows down the promise of “unbroken” ascent.²⁹⁸ It synthesizes knowledge, but at the same time defers the goal towards which the naturalist strives.

²⁹⁸ Perez-Ramos terms Bacon’s *inductio* as “inductive,” “deductive,” and “intuitive” (241), which together generate “hypothetico-analogical processes” (269).

The generalizing fallacy of the understanding necessitates this complex process:

The understanding must not, however, be allowed to jump and fly from particulars to axioms remote and of almost the highest generality ... and taking stand upon them as truths that cannot be shaken, proceed to prove and frame the middle axioms by reference to them... But then, and then only, may we hope well of the sciences when in a just scale of ascent, and by successive steps not interrupted or broken, we rise from particulars to lesser axioms; and then to middle axioms, one above the other; and last of all to the most general. For the lowest axioms differ but slightly from bare experience, while the highest and most general (which we now have) are notional and abstract and without solidity. But the middle are the *true and solid and living axioms*, on which depend the affairs and fortunes of men; and above them again, last of all, those which are indeed the most general; such, I mean, as are not abstract, but of which those intermediate axioms are really limitations. (1.104, my emphasis)

Bacon reiterates that the “not interrupted or broken” rise negates the overreaching (“jump and fly”) tendency of the understanding. Of course, in the idealized version of this process one moves from the “lowest” to the “middle” to the “highest and most general” axioms. Yet the intermediate level, which is the zone of the “true and solid and living axioms,” makes this gradual ascent impossible because it simultaneously invites a different kind of action. Their vibrant (“living”) quality generates new particulars and works, in the process distancing the learner from the original roadmap of “successive steps.” One of the primary aims of these middle axioms, suggests Bacon, is to “render sciences active,” since they point to the great “subtlety of nature” and enable the “discovery of new works” (1.24). He claims “axioms orderly formed from particulars easily discover the way to new particulars” (1.24). At one level, Bacon suggests that the “orderly” process betters something that is already in place. At a more transgressive level, the value placed on these middle axioms undermines the possibility of the order that Bacon seeks, exposing the contradictions in his imagination of the method and what

it actually does.²⁹⁹ The only manner in which the naturalist can “render sciences active” is by repeatedly tracking the unfamiliar, the “subtlety,” and the “new.”

By pursuing the trajectory of the vibrant middle axiom a little more closely, we might expand on Eamon’s analogy—that the seventeenth-century natural philosopher was like the hunter³⁰⁰—and partially revise it to show that each intermediate axiom generates a new hunt or a new quest. The process stages an epistemology of digressing that directs the naturalist away from his original aim. The “highest and most general” axiom is indeterminately deferred at *each* step, and it remains part of an original quest that must wait for the intermediary one to be completed. But of course, if one follows the logic of the method through, each new thread produces its own unknown wandering quests, leading the naturalist to the new and inevitably distancing him from every new “living” axiom. Moreover, the multiplicity of actors required to fulfill these hunts introduces yet another contingency: each naturalist holds the potential to frustrate a previous trajectory, to disperse the quest into more digressive routes, and to postpone knowing to the future. Each new search explodes the scope of knowledge outwards, spreading out and pluralizing an initial singular line of exploration. The “intermediate” axioms, by their expectant and invitational roles, indefinitely delay the original goal, and in the process produce the “endless worke” that is natural philosophy.

The aphorism is the technique that formally captures these intermediacies in the method. They are “short and scattered sentences, not linked together by an artificial

²⁹⁹ Witmore suggests the contingency in Bacon’s method establishes a difference in *degree* between natural and human processes: while nature, through chance and accident, produces knowledge, the order of method will do so more quickly and frequently. I argue that the wandering and digression show how contingency is necessary for inductive method and is not merely a byproduct.

³⁰⁰ Eamon argues the “new scientific epistemology advanced...was in reality one of the most ancient epistemologies of all: that of the hunter” who “looks for traces, signs and clues that will lead to the discovery of nature’s hidden causes” (269).

method” (1.86). They generate incomplete knowledge, in the process enabling the naturalist to “not pretend or profess to embrace the entire art” (1.86). Through its condensed form, the aphorism makes legible this incomplete, and potentially endless natural philosophy. At the same time it shows how Bacon’s writing itself replicates the central tenets of his method and highlights the expanding and plural nature of his work. Scholars have often noted the incomplete and intermediate nature of the aphorism: Alvin Snider argues that the aphorism is “anti-canonical” while James Stephens identifies it as an instrument of “[e]xpectant inquiry” that serves as “a building block in the structure of man’s knowledge” and “functions primarily as a vehicle for the discovery of truth or possibility in its barest form.”³⁰¹ Stephen Clucas has shown how Bacon’s “scientific” aphorism, which looked ahead to examine things and not words, differed from the “humanist” aphorism, which was a closed form that privileged ancient knowledge.³⁰² Because it cannot by definition fully capture things in nature, Bacon’s aphorism ensures the continuation of the inductive process while at the same time postponing the theorization that might undermine the great instauration of learning.

While in *New Organon* Bacon accepts the aphorism as the formal written technique of the inductive method for *natural* inquiry—Stephens argues this facilitates the “fusion of style and content in a method which approximates the true induction”³⁰³—he had identified the aphorism as a fundamental element of *all* knowledge production much earlier in *The Advancement of Learning* (1605). Bacon’s claims about method, although developed for different contexts, span his various works. Marking the “errors”

³⁰¹ Alvin Snider, “Francis Bacon and the Authority of the Aphorism,” *Prose Studies* 11.2 (1988): 60-71, 64; James Stephens, “Science and the Aphorism: Bacon’s Theory of the Philosophical Style,” *Speech Monographs* 37.3 (1970): 157-170, 160, 161, 157.

³⁰² Clucas, 147-172.

³⁰³ Stephens (1970), 157.

that arise from the “over-early and peremptory reduction of knowledge into arts and methods, from which time commonly sciences receive small or no augmentation,” he places his faith in aphorisms in *Advancement*: “knowledge, while it is in aphorisms and observations, it is in growth; but when it once is comprehended in exact methods, it may perchance be further polished and illustrate and accommodated for use and practice; but it increaseth no more in bulk and substance” (Book I, V.4). Opposing “aphorisms” to “method,” Bacon suggests that the former enables “growth” in knowledge because of its lack of totality, and because it is neither directed merely to application (“for use and practice”) based on “exact methods” nor to the “over-early and peremptory reduction” of knowledge.³⁰⁴ While aphorisms invite inquiry, methods privilege operation and expedite generalization. When he writes about the ways in which the “delivery of knowledge” occurs, Bacon elaborates on the “many excellent virtues” of “writing in aphorisms” (Book 2, XVII.6). He argues, “aphorisms, representing a knowledge broken, do invite men to inquire further; whereas methods, carrying the show of a total, do secure *men*, as if they were at furthest” (Book 2, VII.7). The inductive method depends crucially on the aphoristic rather than a *methodical* style of knowing, because it comes into being by rejecting the “show of a total.”

The divisions in *Advancement* between method and aphorism—furthest / further, total / broken, exact / growth, polished and accommodated / bulk and substance—also gesture to the temporality of learning represented by the aphoristic style: one needs to avoid “over-early” generalization in the present in order to “invite men to inquire further,” in the process transferring the realization of current action into the

³⁰⁴ While Jardine locates “method” of invention in *Advancement* within a tradition of dialectic, in the *New Organon*, Bacon seems to be using the word in a more non-technical manner, to refer to the ways of knowing.

future. The aphorism's expectant quality adheres closely to Bacon's argument of deferred theorization. Through its very form, the aphorism avoids the "show of a total" because it postpones endings in even the most ordered inquiry. Yet the aphorism also typifies the impossibility of methodizing natural inquiry in *New Organon*: in his desire to produce an "unbroken" ascent to certainty, Bacon must rely on the technique that represents a "knowledge broken."

This rift between the promise of an unbroken induction and the broken aphoristic style distorts the nature of the aphorisms in *New Organon*. While Bacon repeatedly spells out what the aphorism *is*, the aphorisms in *New Organon* enact the disruption of perfectible inquiry; they sever Bacon's stated aims from the actuality dramatized by the method. By definition, aphorisms are brief and concise:

for aphorisms, except they should be ridiculous, cannot be made but of the pith and heart of science; for discourse of illustration is cut off; recitals of examples are cut off; discourse of connexion and order is cut off; descriptions of practice are cut off. So there remaineth nothing to fill the aphorisms but some good quantity of observation: and therefore no man can suffice, nor in reason will attempt, to write aphorisms, but he that is sound and grounded. (*Advancement*, Book 2, VII.7)

The aphorism's formal capacity to eradicate extraneous details facilitates the orderly progression towards certainty. Although Bacon identifies aphorisms with the "delivery" of knowledge, he repeatedly marks the importance of delivery to ways of knowing. Theoretically, the aphorism enacts the possibility of new discovery by withholding unnecessary information. As a technique, it also captures one possible way of overcoming the problems associated with the potency of words; if one cannot learn without words, one attempts to control their unpredictable significations through brevity, by focusing on the "pith and heart of science." However, as Snider, among others, has

argued “[b]revity and self-containment are perhaps the two most obvious characteristics of aphorism, but very few of *Novum Organum*’s aphorisms are either self-contained or pithy: they tend to grow in length as the book develops, and take their place within interlocking groups.”³⁰⁵ Like the processes of induction in general and the middle axiom in particular, the aphorism in *New Organon* functions as a “living” entity, extending beyond mere summary, full of “discourse of illustration” and “recitals of examples”: one need only follow some of the examples of the *Prerogative Instances* and the Tables of Presentation to witness how the aphorism is composed of examples, potential experiments, and multiple routes of inquiry.

The Baconian aphorism expands to accommodate the very particulars and experiments it aims to erase from visibility. Since in these sections (especially in the Tables of Presentation) Bacon demonstrates that these tables work and simultaneously shows *how* they work, the exhaustive list of examples—many of which are inconclusive—becomes necessary even if the proliferation of particulars makes impossible the brevity of a conventional aphoristic style. His writing cross-references examples across aphorisms to dramatize how natural knowledge is always “in growth,” how it “increaseth” in “bulk and substance”; the “things” he describes control the content and form of his aphorisms more than he seems to realize. It seems fitting, that like the inductive method, which deviates from its aims of certainty because of the proliferation of matter, his aphoristic style expands to accommodate these multiplying particulars of nature.

This adaptive style and the expansion of the aphorism become necessary to sustain an inductive method that is averse to immediate theorizing, and that rejects the

³⁰⁵ Snider (1988), 60.

“show of a total.” Bacon does gesture towards the possible negative aspects of this futuristic and projective method (“this long and anxious dwelling with experience and matter and the fluctuations of individual things” (1.124)) that distances it from its sure footing as perfected knowledge. Yet the potential benefits of these deferrals outweigh this “long and anxious dwelling,” because they enable the naturalist to overcome the “over-early” generalizing tendency of the understanding (the “human understanding is of its own nature prone to suppose the existence of more order and regularity in the world than it finds” (1.45), and “when it has once adopted an opinion...draws all things else to support and agree with it” (1.46)).³⁰⁶ The delay of theory and rule ensures that one does not avoid the processual steps of the inductive method: “my course and method, ...[is] not to extract works from works or experiments from experiments (as an empiric), but from works and experiments to extract causes and axioms, and *again from those causes and axioms new works and experiments, as a legitimate interpreter of nature*” (1.117, my emphasis). This process extrapolates and continues ways of knowing at the *very* moment when the naturalist reaches a stable endpoint of “causes and axioms.” Stabilization, then, does not signify completion but only promises to deliver an intermediate portion of an essentially postponed, and potentially unreachable, ending. Since the natural history he has “collected from books or from [his] own investigations is neither sufficiently copious nor verified with sufficient accuracy” (1.117), he must justify ways of applying it while simultaneously extending its scope beyond current utility.

Thus the method of true induction suggests that it is not sufficient to suspend judgment now; one must promise that certainty is merely deferred to the future. Bacon

³⁰⁶ His main complaint with William Gilbert’s method in *De Magnete* is that Gilbert theorizes too soon and tries to encompass all observations under the one theory of magnetism.

privileges provisional knowledge and expectancy over immediate gain through a futuristic form of experimental practice (experiments of light) as well as an invitational style of presentation (initiatory or probative).³⁰⁷ These techniques extend the premise formalized by the aphoristic style and show how the ideas of endlessness and futurity pervade Baconian philosophy in practice and presentation. The “experiments of light,” Bacon claims, are “useless indeed for the present, but promising infinite utility hereafter” (1.121). Preempting the claim that he merely asks for “suspension of the judgment,” he argues his method entails “not denial of the capacity to understand, but provision for understanding truly,” because “better surely it is that we should know all we need to know, and yet think our knowledge imperfect, than that we should think our knowledge perfect, and yet not know anything we need to know” (1.126). The “imperfect” knowledge—made possible by refusing to accept that one has attained “knowledge perfect”—is valuable because it enables Bacon to repeatedly demand that further inquiry be made. This imperfection by definition carries the notion of infinite extension within itself. Moreover, his acknowledgement that the “promise” of “infinite utility” in the future is preferable over present use (provided by the “Experiments of fruit”) severs the end of knowing (certainty) from its actualization in moments of performance. This promise of *future* completion comes to govern the inductive method. It also reorients the temporality of knowing: while in *Advancement* Bacon espouses the commonplace that “all knowledge is but remembrance” (“To the King,” 3), the inductive method replaces this focus on the past with practices directed to the future.³⁰⁸

³⁰⁷ For an early reflection on the value of deferral, see Bacon’s *Essays*, “Of Delays.”

³⁰⁸ Of course, memory and remembering are not totally abandoned. In relation to the process of “exclusion” on which the inductive method is based, he states that the mind must be “so prepared and disposed that while it rests and finds footing in due stages and degrees of certainty, it may remember

Bacon translates this practice to outline *how* provisional and “imperfect” knowledge should be presented. In various works, he attempts to integrate an inconclusive style with the larger aim of producing comprehensive knowledge. In the *Advancement*, Bacon identifies two different methods: the “magistral” method, which is the “method referred to use,” and the method of “probation,” which is “referred to progression” (Book 2, XVII.2).³⁰⁹ While in the former, one stops inquiry and moves towards use, the latter by definition carries the potential for generating inquiry. In *De Augmentis* (1623), he renames the latter as “initiative” and accentuates the projective quality that was only implied by the “probative.”³¹⁰ Bacon says,

The magistral method teaches; the initiative intimates. The magistral requires that what is told should be believed; the initiative that it should be examined. The one transmits knowledge to the crowd of learners, the other to the sons, as it were, of science. The end of the one is the use of knowledges, as they are now; of the other the continuation and further progression of them. (449)³¹¹

As Brian Vickers notes, the differences between the magistral method, whose “dogmatic or doctrinal exposition of information [is] to be believed and not questioned” and the initiative, which is to be “tested, examined,” lie in their final aims and in intended audiences.³¹² The latter creates hierarchies of knowers since it is designed not for the

withal (especially at the beginning) that what it has before it depends in great measure upon what remains behind” (2.19).

³⁰⁹ For how these modes relate to the ethical problems raised in the *Essays*, see Eugene Garver, “Saying What Goes without Saying: The Rhetoric of Bacon’s *Essays*,” in *Rhetoric and Pluralism: Legacies of Wayne Booth*. Ed. Frederick J. Antczak (Columbus: Ohio State UP, 1995), 211-236, esp. 220-221.

³¹⁰ In her study of Bacon’s use of “method” in *Advancement* alongside popular handbooks of dialectic, Jardine argues that for Bacon discourse is separate from discovery. My point is less technical and more directly relevant to Bacon’s formulation of method for natural inquiry, which relies on ways of proper delivery. Here, presentation or discourse is always part of the method.

³¹¹ Francis Bacon, *De Augmentis*, in *The Works of Francis Bacon*, 15 vols. Ed. James Spedding, Robert Leslie Ellis, and Douglas Denon Heath (London, 1857-64), Vol. IV.

³¹² Vickers, *Advancement of Learning in Francis Bacon: The Major Works*, 642.

“crowd” but for the “sons” of science, and it “intimates” rather than “teaches.”³¹³ When teaching is merely geared towards exposition, it stifles creative inquiry. The initiative method, however, through its implicative and suggestive strategies, reinforces the aim of the experiments of light that postpone perfect knowledge to the future in order to invite inquiry in the present. The “magistral,” centered on use, corresponds (perhaps inexactly) to the immediate gains and utility of “experiments of fruit.”

The term “initiative” underscores an idealized notion of futuristic knowledge that pervades all of Bacon’s writing: true and complete knowledge is a thing towards which one strives, and it exists as a possibility rather than as something one actualizes in the present through theory or application.³¹⁴ Since the *New Organon* is an integral part of the larger project of great instauration, the inductive method of natural inquiry must necessarily reflect and adhere to the tenets of intimation and suggestion articulated in Bacon’s other works, even if they destabilize the possibility of “certain and demonstrable knowledge.” In his typical dual-tone of self-valorization and humility, Bacon admits he himself applies this mode of learning but suggests that the method necessitates the implicative process: “I, therefore, well knowing and nowise forgetting how great a work I

³¹³ I also draw on these two definitions of “initiative”: “To make known or communicate by any means however indirect; hence, to signify, indicate; to imply, to suggest, to hint at” and “To mention indirectly or in passing.” OED Online. September 2011. Oxford University Press. (accessed November 09, 2011). For the educational aspects of these two methods, see Dana Jalobeanu, “Bacon’s Brotherhood and its classical sources,” in *Philosophies of Technology: Francis Bacon and His Contemporaries*. Eds. Claus Zittel (Leiden, Netherlands: Brill, 2008), 197-231.

³¹⁴ This transference, or “transplant” is implicit in the method of “probation” as it is elaborated in the *Advancement* (“knowledge that is delivered as a thread to be spun on ought to be delivered and intimated, if it were possible, in the same method wherein it was invented: and so is it possible of knowledge induced. But in this same anticipated and prevented knowledge, no man knoweth how he came to the knowledge which he hath obtained. But yet, nevertheless, *secundum majus et minus*, a man may revisit and descend unto the foundations of his knowledge and consent; and so transplant it into another, as it grew in his own mind” (Book I.XVII.4)). Bacon makes this transplant explicit in the definition in *De Augmentis*. The positive implications of “thread to be spun on ought to be delivered and intimated” are opposed to the negative aspects of spider’s endless web (when the “spider worketh his web, then it is endless, and brings forth indeed cobwebs of learning, admirable for the fineness of thread and work, but of no substance or profit” (Book I, IV.5)).

am about (viz., that of rendering the human understanding a match for things and nature), do not rest satisfied with the precepts I have laid down, but proceed further to devise and supply more powerful aids for the use of the understanding” (2.19). The “initiative” method is creative and generative, explicitly pushing the knowledge producer to “proceed further.” By refusing to prescribe rules, it opens up the scope for repeated trial and error. As such, the true induction of natural inquiry is at a fundamental level, an *initiative* form of knowing, one that masks its theory in its inconclusive practices.

Because of their implicative natures, the initiatory method and the experiment of light prevent one from knowing what is correct immediately, and these provisional processes come to depend crucially on the generative potentiality of error. Despite his wariness of “wandering,” “error,” and the capacious understanding throughout the *New Organon*, Bacon admits that error might serve as a legitimate way to learning:

There will be found, no doubt, when my history and tables of discovery are read, some things in the experiments themselves that are not quite certain, or perhaps that are quite false, which may make a man think that the foundations and principles upon which my discoveries rest are false and doubtful. But this is of no consequence, for such things must needs happen at first. It is only like the occurrence in a written or printed page of a letter or two mistaken or misplaced, which does not much hinder the reader, because such errors are easily corrected by the sense. So likewise may there occur in my natural history many experiments which are mistaken and falsely set down, and yet they will presently, by the discovery of causes and axioms, be easily expunged and rejected. (1.118)

Bacon’s method promises to self-correct in the future, when all the things “not quite certain” and even “quite false” have been addressed. He separates “foundations and principles” from “discoveries” and acknowledges that there is the chance of an easy collapse between the two. The errors are partially products of recording, when experiments are “mistakenly and falsely set down.” Relegating all possible mistakes to things that “must needs happen at first,” he defers the correction and suppresses its

impact, *because* the forward-looking trajectory of induction will ensure their eradication. The naturalist cannot avoid such mistakes and errors as he attempts to supplement and perfect a “poor” history (2.14). The endlessly deferring quality of the method, however, raises the question of when this self-correction will occur. If the stages of induction primarily lead us away from initial steps and do not necessarily lead us to previous errors, this revision might never occur. “Error” and “mistake” become central characteristics of possible knowledge and inevitably come to perform a “romancical” way of knowing: naturalists learn from them *because* of their digressive qualities.

Error, both conceptually and in use, points to a contradiction in the implicative and predictive aspect of Bacon’s work and in its aim of “arri[ving] at an affirmative” (2.19). While Bacon repeatedly stresses that one needs to delay theorizing, the error *allows* and *demand*s intermediate theorization. One must rely on these “errors” since it is “expedient” that the “understanding” be able to “make an essay of the Interpretation of Nature in the affirmative way.” This “First Vintage” (2.20) is necessary to expedite the inductive process, but it also undermines the caution Bacon wishes naturalists to exercise. Theoretically, this flawed First Vintage—constructed out of the Tables of Essence and Presence, Tables of Deviation or of Absence in Proximity, and Tables of Degrees or of Comparison—will be corrected in the future, but as he simultaneously imagines and models induction, Bacon does not fully explain *how* this corrective is woven into his protean method. His language undercuts the premises of caution and weighing that underlie his project.

As he repeatedly argues, “if the mind attempt this affirmatively from the first, as when left to itself it is always wont to do, the result will be fancies and guesses and

notions ill defined, and axioms that must be mended every day, unless like the schoolmen we have a mind to fight for what is false” (2.15). Connecting this problem to the fallacy of the human mind (it is only “To God, truly, the Giver and Architect of Forms, and it may be to the angels and higher intelligences, it belongs to have an affirmative knowledge of forms immediately” (2.15)), Bacon argues the human mind can only proceed “first by negatives, and at least to end in affirmatives after exclusion has been exhausted” (2.15). Bacon suggests there is a degree of difference in how human and divine minds work, and especially in how they apprehend forms. Man cannot affirm immediately and can only proceed by steps. Unlike Sidney’s poesy, which “nothing affirms,” Bacon’s inductive method nothing affirms “immediately.” It is through the use of examples, and especially through negative examples and errors that one gets “affirmative knowledge of forms” in the future. As Bacon’s method unravels in the aphorisms, the purely negative status of the error decreases; it comes to signify a uniquely human mode of learning.

What is more striking, of course, is the necessity of error in this narrative of Great Instauration, which is “in fact the true end and termination of infinite error” (“Preface,” *Great Instauration* (1620), 16). Bacon slowly, and perhaps unknowingly, starts proposing a *theory* of error as a form of narrative in his implicit acknowledgement that it structures and directs ways of knowing; “infinite error” shapes rather than distorts the process of true induction. Induction emerges as a motion or continuation of method, rather than merely a specific series of steps. The termination of error would end the method itself. By the time one reaches the *Prerogative Instances* in *New Organon*—the twenty-seven instances, trials, and examples that provide shortcuts from the “common instances” to

expedite the gradual and unbroken ascent of true induction—the example of error has become a concept, or “notion,” to borrow Bacon’s term, that facilitates the continuation of method: “since truth will sooner come out from error than from confusion... after the three Tables of First Presentation (such as I have exhibited) have been made and weighed, [it is expedient that we] make an essay of the Interpretation of Nature in the affirmative way, on the strength of the instances given in the tables, and of any others it may meet with elsewhere” (2.20).³¹⁵ Unlike “confusion,” which erases the possibility of any control over the processes of learning, “error” leads to truth since it expedites the process in a manner analogous to the prerogative instances.

The *Prerogative Instances* perfectly model “erroneous” ways of curtailing the march towards certainty. They provide diverse shortcuts to axioms but in the process, they collectively stage a notion of digression. They “excel common instances” either “in the informative part or in the operative part, or in both”; in the former “they assist either the senses or the understanding” and in the latter “they either point out, or measure, or facilitate practice” (2.52). Bacon spends the majority of the second book laying out these instances that are supposed to shorten and make more efficient the process of induction: when they should be performed, in what order (sometimes), what the subdivisions are, what examples to use, which particulars he has gathered from experience, which ones still need to be tried, which prerogative instances are essential, which are immediate, etc. As Bacon notes, different instances must be tried out at different points (of some “we must make a collection at once, ...without waiting for the particular investigation of

³¹⁵ Witmore argues: “Provisional ‘axioms’ about the linkage between this simple nature and that Form have to be asserted in a ‘First Vintage,’ or *Vindemiatio prima*, an initial interpretation that is to be refined later by trials according to certain codified principles. At times this ‘First Vintage’ will be flawed, but Bacon feels it is more important to make such an interpretation than to give up at this point” (118). For Bacon’s use of the term “notion” see Snider (1994), esp. 45-53.

natures. Of these sort are instances comformable, singular, deviating, bordering...” (2.52)), and the rest can be delayed until one inquires about a particular nature. As they disperse the method into diverse categories and examples, each instance propels the naturalist in multiplying directions; the multiplicity of interpreters only accelerates this expansion. By their very presence, then, they collectively *theorize* digressive ways of approaching certainty and in their specificity, they repeatedly *exemplify* the notion, to borrow Bacon’s term, of error.

The text begins theorizing digression into the *Prerogative Instances* collectively when Bacon lays out the rest of the steps of Induction: Supports of Induction, Rectification of Induction, Varying the Investigation according to the nature of the Subject, Prerogative Natures with respect to Investigation, Limits of Investigation, Application to Practice, Preparations for Investigation, Ascending and Descending Scale of Axioms (2.21). However, he abruptly ends *New Organon* with the elaboration of these twenty-seven prerogative instances, and although he suggests in the very last aphorism, “now I must proceed to the supports and rectifications of induction, and then to concretes, and Latent Processes, and Latent Configurations,” Bacon’s work does not extend these sections so that he “may hand over to men their fortunes” (2.52). The plurality of the Prerogative Instances, I suggest, procedurally delay and deviate from the gradual end of induction. They also derail the enumeration of the entire project. It would be more accurate to say that as each instance is introduced, it redefines the pluralist scope and digressing form of Induction in practice and in presentation, even as Bacon’s categorization of all the instances together attempts to privilege the method’s forward-looking nature. On the one hand, the instances foreclose various possibilities by

proposing very specific routes of inquiry. On the other, they prevent rule-making and effectively introduce series of deviations that lead away from a particular theoretical end. The *Prerogative Instances* embody the contradiction of the method: the techniques that most forcefully promise certitude derail one's movement towards it.

One instance particularly captures the concept of error. It also suggests that Bacon might be trying, via specific instances, to control the contradictions in his method and in its techniques that seem to forever escape his careful construction:³¹⁶

Among *Prerogative Instances* I will put in the eighth place *Deviating Instances*, that is, errors, vagaries, and prodigies of nature, wherein nature deviates and turns aside from her ordinary course. Errors of nature differ from singular instances in this, that the latter are prodigies of species, the former of individuals. Their use is pretty nearly the same, for they correct the erroneous impressions suggested to the understanding by ordinary phenomena, and reveal common forms. For in these also we are not to desist from inquiry until the cause of the deviation is discovered...For he that knows the ways of nature will more easily observe her deviations; and on the other hand he that knows her deviations will more accurately describe her ways. (2.29)

These instances enact a *process* of divergence from what nature was supposed to be. But as examples in nature, their status as deviations “correct the erroneous impressions suggested to the understanding by ordinary phenomena”; errors, because of their disruptive quality, control the over-generalizing tendency of the understanding. By exposing the reciprocal relationship between “ways of nature” and “her deviations,” they debunk any myths about regularity in the natural world. Knowing vagaries and errors produces a fuller understanding of the world and reiterates the creativity of method: since deviating instances do *not* adhere to any orderly concept of the natural world, they repeatedly prevent any singular understanding of the actual world and destabilize claims

³¹⁶ This is one of the categories of wonder, art, and marvels that Daston and Park identify in Bacon's work.

about what the “ways of nature” might or should be. The method introduces new epistemic objects and repeatedly remaps the contours of the *natural* world.

By leading the naturalist away from the “ways of nature,” this instance also generates new operations. These instances

give much more help to practice and the operative part. For to produce new species would be very difficult, but to vary known species and thereby produce many rare and unusual results is less difficult. Now it is an easy passage from miracles of nature to miracles of art. For if nature be once detected in her deviation, and the reason thereof made evident, there will be little difficulty in leading her back by art to the point whither she strayed by accident; and that not only in one case, but also in others. For errors on one side point out and open the way to errors and deflections on all sides. (2.29)

The errors are self-propagating, but they also multiply knowledge about other deviations (“errors on one side point out and open the way to errors and deflections on all side”) and by their singularity and uniqueness, they facilitate new technologies. The operation and knowledge of works—of art and of nature—crucially depend on these errors. As the objects of error translate and shape the process of induction, they seem to suggest that error is a *notion* of the method itself; in other words, the practice of error produces a theory of induction. Even though Bacon repeatedly evades theorization, this translation demonstrates how entities defined and created within the method theorize, or produce notions of, induction’s instruments of inquiry.

As Bacon explicates the various levels along which error operates, his writing cannot help but transform it into a “notion” that uniquely maps the contours of the inductive method. Error, as a way of learning, serves as an indirect corollary to the digressive routes generated by the middle axioms. Despite Bacon’s attempts to control the multiple strands of his inquiry, there is no guarantee that existing errors will self-correct unless one makes an active effort to do so and trace backwards from what one

learns at each stage; the concept of error in induction performs its definitional role—the “action of roaming or wandering; hence a devious or winding course, a roving, winding”³¹⁷—that had made it an important conceptual instrument of romance narratives. The “endlesse error” (1.3.23) with which Una is cursed in *Faerie Queene* is a typical formal element of the genre. By the time Bacon writes the *Preparative*, the term primarily refers to a category of nature that should be studied by natural historians as “pretergenerations”: “errors” of nature, or “monsters,” occur when nature is “forced out of her proper state by the perverseness and insubordination of matter and the violence of impediments” (273). As Bacon inadvertently integrates the concept of “error” into various processes and stages of induction, and as error comes to represent entities in the world, the very presence of the term dramatizes his worry about how words generate notions and things. The examples of error transform into a notion of errancy and the postponement of generalizing gives way to the endlessness of the enterprise. Baconian induction formalizes its epistemology of possibility through its practice: it suggests that it is in techniques and examples, and in the particulars and things of nature, that one can locate *notions*.

Bacon recognizes that the excavation and application of *Deviating Instances* require a preliminary step, the “collection or particular natural history of all prodigies and monstrous births of nature” (2.29). Natural history is the other crucial, expansive part of the great instauration, and Bacon “concludes” the *Preparative* by employing a form that simultaneously extends the work into the world and controls such exfoliation: the list. The catalogue of histories concluding *New Organon* is theoretically concrete—they are

³¹⁷ OED Online. September 2011. Oxford University Press. (accessed November 09, 2011). Of course, the etymological connection is explicit: “*errāre* means “to wander.”

limited in categories to generations, pretergenerations, and arts—but the form of the catalogue invites projections into the actual world and into the future, converting the simple query list of objects that are to be discovered—or “optatives” of operative knowledge, as Bacon describes in *Advancement* (Book 2, VIII.3)³¹⁸—into *desiderata*: wish-lists that desire not extant things but a system of knowledge itself that might exist and may be discoverable through inquiry.³¹⁹ Induction and natural history, as systemized “missing pieces of learning,” to borrow Vera Keller’s terminology, become *desiderata* in their unending, projective nature.³²⁰ The list, then, controls digression and error, only to highlight another element typical of possible knowledge: endlessness.

³¹⁸ Bacon writes: “The first is, that there be made a calendar, resembling an inventory of the estate of man, containing all the inventions (being the works or fruits of Nature or art) which are now extant, and whereof man is already possessed; out of which doth naturally result a note what things are yet held impossible, or not invented, which calendar will be the more artificial and serviceable if to every reputed impossibility you add what thing is extant which cometh the nearest in degree to that impossibility; to the end that by these optatives and potentials man’s inquiry may be the more awake in deducing direction of works from the speculation of causes. And secondly, that these experiments be not only esteemed which have an immediate and present use, but those principally which are of most universal consequence for invention of other experiments, and those which give most light to the invention of causes” (Book 2, VIII.3).

³¹⁹ As Vera Keller points out in “Accounting for Invention: Guido Pancirolli’s Lost and Found Things and the Development of *Desiderata*,” *Journal of the History of Ideas* 73.2 (2012): 223–245, “The *optativa* were clearly operative. However, if properly directed, *optativa* might lead man’s enquiry upwards towards speculative knowledge” (237); she argues “Bacon’s *desiderata* were epistemic, not material objects” or *optativa* (238). Keller also marks the addition of lost or “perisht” things in the 1623 edition of *Advancement* and argues that wish-lists or epistemic *desiderata* further “collaborative research agenda” (237, 223). For the genre of the query list, that was used to direct investigation and provide methodical instruction for travelers in particular, see Justin Stagl, *A History of Curiosity: The Theory of Travel, 1500–1800* (Chur, Switzerland: Harwood Academic Publishers, 1995); Joan-Pau Rubiés, “Instructions for Travellers: Teaching the Eye to See,” *History and Anthropology* 9 (1996), 139–190. For particular examples, see Daniel Carey, “Inquiries, Heads, and Directions: Orienting Early Modern Travel,” in *Travel Narratives, the New Science, and Literary Discourse, 1569–1750*. Ed. Judy Hayden (Burlington: Ashgate, 2012), 25–52; see 40–41 for Bacon’s use of questions and queries, and see 42–51 for Bacon’s influence on Hartlib and the Royal Society; Daniel Carey, “Hakluyt’s Instructions: The Principal Navigations and Sixteenth-Century Travel Advice,” *Studies in Travel Writing* 13.2 (2009): 167–185. Stagl notes how Bacon’s questions or *interrogatoria* structure natural inquiry. While Keller, “Accounting for Invention” separates *desiderata* of “universal language, immortality, and longitude” (223) based on the “idea” of this kind of list from queries of things, Stagl classifies them together under *interrogatoria*.

³²⁰ Keller, “Accounting for Invention,” 237.

The list exceeds its promise to organize, catalogue, and contain; Robert E. Belknap points out how “[l]ists enumerate, account, remind, memorialize, order.”³²¹ James Delbourgo and Staffan Müller-Wille have recently characterized this tension in the multivariied functions of the list as the “attempt to give finite expression to potentially limitless series of things.”³²² In his study of literary lists, which he distinguishes from utilitarian ones, Belknap marks the “generative capacity” of all lists: “because it can be considered shapeless it has the capacity to spark endless connections and inclusions in a multiplicity of forms.”³²³ Umberto Eco, in his study of European art, argues that the list enacts a “poetics of the ‘etcetera,’” an infinite “enumeration” that “may never stop.”³²⁴ For Eco, the artistic list is a purely endless entity—he repeatedly opposes the list to the closed “form”—because the artist cannot *know* the end.³²⁵ This—what Eco terms “etcetera” and what Belknap characterizes as an “expandability”³²⁶—I argue, is the condition of the Baconian lists, which expand not only into other texts including the experiments and recipes in *Sylva Sylvarum* and in the fictional world of *New Atlantis*, but also into nature. As such, although the Baconian list might conform to the “spatial”³²⁷

³²¹ Robert E. Belknap, *The List: The Uses and Pleasures of Cataloguing* (New Haven: Yale UP, 2004), 6.

³²² James Delbourgo and Staffan Müller-Wille, “Introduction to Isis Focus Section, for December 2012: ‘Listmania’,” *Isis* 2012. (Thanks to James Delbourgo for sharing a draft of the Introduction with me).

³²³ Belknap, 1-2.

³²⁴ Umberto Eco, *The Infinity of Lists*, Tr. Alastair McEwan (New York: Rizzoli, 2009), 15. For Eco, the infinity of the list is a peculiarly artistic or poetic condition, produced by the action of “inventing” (118). Eco distinguishes the list from the form: “The infinity of aesthetics is a sensation that follows from the finite and perfect completeness of the thing we admire, while the other form of representation suggests infinity almost *physically*, because in fact *it does not end*, nor does it conclude in form. We shall call this representative mode the *list*, or *catalogue*” (17).

³²⁵ Eco’s distinction of “form” and “list” differs from Belknap’s, who argues lists are “frameworks” and “structures” (2), but both draw attention to the endless quality of the list.

³²⁶ Belknap, 31.

³²⁷ Delbourgo and Müller-Wille, 2. They go on to argue, the “list draws words together (often, but not always, referring to physical things), abstracting, enumerating and linking them” (2). This spatial versus temporal logic of the list is also central to arguments about the epic catalogue, which captures both the deferral of narrative and an extension beyond its narrated world. In *Epic: Britain’s Heroic Muse 1790-*

logic of the catalogue in organization, it *suggests* the “etceterata” that is the natural world itself. The Baconian list gestures to the projective scope of a condensed structure: “Lists not only inventoried the accumulated world; like other paper technologies, they ordered, and eventually re-ordered it,” claim Delbourgo and Müller-Wille.³²⁸ Bacon’s lists, I argue, also generate a world by recording its particulars.³²⁹ These lists articulate, through the tropes of collecting and natural history, the possibility of composing a “world as it is in fact” from the individuals and species in nature; as such they emerge as the technique that facilitates the making of the natural world.

In *Preparative*, the list represents the culmination of the process of recording natural history, which begins with the aid of “factors and merchants [who] go everywhere in search of [the materials on which the intellect has to work] and bring them in.” The catalogue intimates of actual and imagined travels around the world. Through its implicit extension and condensed presence, it also represents the inadequacy of the aphoristic style to capture the complex details of a method that must necessarily extend into the “everywhere.” Bacon titles his list as “Catalogue of Particular Histories by Titles” and then lays out 130 experiments and observations to be performed. They range from histories of the cosmos, of planets and astronomical bodies to histories of gems, stones, and living beings, to study of bodies and motions, the “History of Life and Death,” to

1910 (Oxford: Oxford UP, 2008), Herbert F. Tucker argues that since the epic’s “essential way of knowing is narrative,” the “synchronic extension of reference that the simile and catalogue offer are ultimately supplements to the diachronic, diegetic carriage that makes an epic go” (29).

³²⁸ Delbourgo and Müller-Wille, 6.

³²⁹ One of the essays in this forthcoming *Isis* volume seems to particularly illuminate this: “Vera Keller pursues the career of more formalized printed and circulated wish-lists, not only of specimens, but of a variety of goals for knowledge in general. Instead of drawing things together from the past and across space, these lists projected forwards in time and outwards geographically. Aiming to define scientific agendas for entire communities, they involved self-conscious exhortation, keyed to Baconian rhetoric of the ‘advancement’ of knowledge, often couched in military metaphors of territorial conquest” (Delbourgo and Müller-Wille, 7).

histories of mechanical arts, and those of “*Pure Mathematics*.” As these examples suggest, these particulars in the catalogue are already beyond the capacities of the “factors and merchants” he identifies; they capture the conditions of possibility of what the naturalist project hopes to accomplish. Of course, they direct attention to what must be performed in the future, and as such, they suggest that the “facts” in the real world can be recorded by a collective of diligent laborers; the list, in short, immediately suggests a query list of what *is* to be found in the world if one travels and methodically follows instructions of inquiry. Such a list focuses on objects that one needs to go out and discover. Yet the form of the list gestures to the vibrancy of the world in which the naturalist operates. The particulars recorded and examined will only contain—or try to limit—what is limitless. The list extends the scope of natural inquiry beyond the page onto the stage of the world itself, but it also complicates categories. What does it mean to provide a history of “Life and Death”? Or an “observation” of mathematics? Are these discoverable in the same way as a gem, or a new star?

The existence of the catalogue, rather than its limiting structure, encapsulates the condition of endlessness that characterizes Baconian method. A list attempts to extract and abstract what is controllable in an uncatalogued world, to eradicate the sense of radical contingency that underlines the naturalist’s embodied and very particular encounters with a vibrant nature. If the form of the list suggests a principle of demarcation, separating that which exists in the list from what is not, the presence of a list always gestures to what exceeds this grasp: Bacon’s two examples of mathematical observations, the “Power of Numbers” and “Power of Figures” is a poor “catalogue” of the complex signification of mathematics in this period. What this example shows is

that the list chooses, and marks what it wishes to discover. In a way, the list raises a question: is an entity classifiable, within a pre-defined, qualified, category? Lists *project* what is discoverable within a system of value, but they cannot translate potential discovery into fact. They make intelligible the realm of possibility as they expose a desire for what does not, and perhaps may not, exist. In trying to give form to the uncontainable, the list also gestures to the infinite world beyond and to the great instauration required to capture it, and in the process it transforms queries into *desiderata*; the difference that Keller marks in Bacon's writing between "*desiderata* as missing pieces of learning and *optativa* as wished-for-things"³³⁰ becomes unstable as soon as we mark how the individual elements of the list inevitably gesture to the wish to fulfill, and give a closure to, the endless method.

These lists, then, only provide a limited sense of control over a capacious method as Bacon transfers the responsibility of perfection onto others: others must travel and collect, but they must also desire to complete and perfect the method. The list, like the project of the Great Instauration itself, invites readers to act in, to revise, and rewrite a vibrant nature. The Baconian method, through its various techniques, enacts a mode of knowing that is typical to possible knowledge, and that had invited readers into Spenser's poetic worlds to experience the polychronous temporality of *The Faerie Queene*: it turns its readers into naturalists. By inviting the extension, expansion, and completion of the very procedures it refuses to perfect, then, Baconian method makes explicit its epistemology—in which practice *is* theory—that situates it alongside romancical ways of knowing.

³³⁰ Keller, "Accounting for Invention," 237.

“The rest was not perfected”: Furthering Knowledge in *The New Atlantis*

The posthumously published utopian fiction, *The New Atlantis* (1627), provides an unexpected example of what the end of the *New Organon* might look like. The centrality of the proto-scientific institution, Salomon’s House, in the fictional world of Bensalem, has long invited scholars to read Bacon’s utopia as an explanatory, and perfected, instantiation of his enterprise of natural inquiry. This technocracy “describes the social promise of what will become the ‘new science,’” and it acutely captures the condition towards which Baconian natural philosophy aspires;³³¹ *New Atlantis* suggests it might be the *desiderata* of Baconian inquiry itself. Yet Bacon, I argue, employs fictional worldmaking to curb the possibilities of the future articulated in the techniques of induction. In stressing an idealized and institutionalized model of the technocratic state, *New Atlantis* naturalizes the erasure of error, digression, and excess in narrative.³³² It replaces the praxis, endlessness, and encounter that shape induction in *New Organon*—its imagination of “nature in action” (Preface, 36)—with a philosophy of estrangement and secrecy. Bacon’s fiction most successfully, but not entirely, evacuates the romancical elements that dominate the *New Organon*, and his utopian narrative presents a counterfactual image of what the scientific society could be, or, to borrow the Sidnean phrase of idealized modes of knowing, what it “should be.” This turn paradoxically suggests the project of natural inquiry might find an ending in the imagination, in forms that inevitably “[give] substance and reality to things which are fleeting.” The only way

³³¹ Clody (2011), 117.

³³² For Bacon’s technocratic view of science, see Perez-Ramos. For the argument that “*The New Atlantis*, in its unprecedented intention a technological utopia, fails as such, but succeeds in unadvertised ways, featuring both more and less social engineering than is at first apparent,” see Christopher Kendrick, *Utopia, Carnival, and Commonwealth in Renaissance England* (Toronto: U of Toronto P, 2004), 330.

the understanding “can take in the image of the world as it is in fact,” is to create a fictional world.

The *New Atlantis* raises an obvious question: in spite of his repeated worries about the non-referential capacity of language and his suspicion of the imaginative understanding, why does Bacon write a utopian *fiction*? I argue that in order to contain the scope of imagination, Bacon aims to bring forth a referential fiction for natural inquiry. In other words, fiction attempts to direct readers towards extant objects and actions, in this case the construction of a statist institution of natural inquiry in contemporary England. Fictional worlds, suggests Bacon, might act as correctives when the “possible knowledge” of natural philosophy approaches romance-like endlessness: they can point to the real world, control representation, and idealize the actual. Bacon’s worldmaking in *New Organon*, after all, aims to erase the distance between existence and knowing: “whatever deserves to exist deserves also to be known, for knowledge is the image of existence; and things mean and splendid exist alike” (1.120). Through the *New Atlantis*, he attempts to contain the scope of the imagination by making narration referential, suggesting *how* the idealized world of Bensalem as it “should be” *might* approach the “bare Was” of history.³³³ Yet, much as the techniques of induction escape the materialist basis of narration in *New Organon*, the futuristic, imperfect mode haunts the seemingly-perfect world of *New Atlantis*.

New Atlantis’s promise of a perfected world endorses a kind of worldmaking that does not authorize the purely imaginative forms of thinking that, to quote Bacon, are “fleeting,” and that, to borrow Sidney’s phrase, represent “forms such as never were in nature.” The relationship between utopian and real worlds has been at the center of

³³³ Sidney, 36.

critical discussions of the genre. In his influential study, Frederic Jameson looks at Thomas More's *Utopia* to mark the "geopolitical secession of the Utopian space itself from the world of empirical or historical reality"; *Utopia* ultimately presents us with "a representation which has become a closure, as far as possible (and it is of course impossible) autonomous and self-referential: at some outside limit, purely formal and without content, or rather, whose content has been sublimated by itself becoming self-referential."³³⁴ William Poole too, underscores the hypothetical nature of utopian fiction: "Utopianism renders hypothetical those things that cannot be admitted as positive theses, and grants some respite for harsher discursive modes, where something either is or is not the case."³³⁵ Denise Albanese presents an account that vividly captures the oscillating referentiality of the genre: "Utopia maintains a difficult balance between revolutionary ideality and practical impossibility, simultaneously affirming and denying its radical agenda."³³⁶

Yet as we saw before, scholars including Campbell have argued that utopia's "potential or intended otherness, difference, alternativity, novelty, and capacity for invoking wonder are seriously compromised by its ethical density and conventionality."³³⁷ Campbell's account dismantles the purely hypothetical or self-referential status of utopia; it also demands the separation of the three modes of utopianism Poole identifies: "the philosophical account of the ideal state, the fantastic voyage, and the travel narrative. Indeed, utopianism thrives by obscuring or mixing its

³³⁴ Frederic Jameson, *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions* (New York: Verso, 2005), 39-40.

³³⁵ William Poole, *Francis Lodwick A country not named (MS. Sloane 913, Fols. 1r-33r): An Edition With an Annotated Primary Bibliography and an Introductory Essay on Lodwick and his Intellectual Context*. (Tempe: Arizona Center for Medieval and Renaissance Studies, 2007), 23.

³³⁶ Denise Albanese, "The New Atlantis and the Uses of Utopia," *ELH* 57.3 (1990): 503-528, 504.

³³⁷ Campbell (1999), 14-15.

lineage: each of these three subject genres has a different truth status: one describes what is not, but should be; the next what never was; and the final, what is.”³³⁸ Clearly, Bacon’s account draws on these three modes, and yet the “pedagogical moralism” that Campbell identifies in the genre, as well as Bacon’s presentation of a technocratic state, directs readers of *New Atlantis* towards the normative.

Instead of considering utopia as a genre, it might be more useful to ask how “utopia” is an idealizing and ideological way of thinking that pervades Bacon’s narration? Tobin Siebers offers a formulation that might have appealed to the author of *New Atlantis*:

[u]topianism demonstrates both a relentless dissatisfaction with the here and now as well as a bewilderment about the possibility of thinking beyond the here and now. Utopianism is not about being ‘no where’; it is about the desiring to be elsewhere. ... Utopian desire is the desire to desire differently, which includes the desire to abandon such desire.³³⁹

New Atlantis mediates between the “no where” and “elsewhere,” but the text is also governed by the pragmatic desire of transforming the elsewhere into the *here*. *New Atlantis* imagines utopia as “social practice, the mechanism for change from the present imperfect to the future perfect.”³⁴⁰ As such, it temporalizes the “discursive stasis” Albanese identifies in More’s *Utopia*; *New Atlantis* enacts both “nostalgia” and “a call to

³³⁸ Poole (2007), 25. For an examination of the tensions between utopia, ideal commonwealth, and romance through issues of labor – domestic, social, and international – in *New Atlantis*, see Christopher Kendrick, “The Imperial Laboratory: Discovering Forms in ‘The New Atlantis’,” *ELH* 70.4 (2003): 1021-1042. Also see Albanese for the imperial politics of the work. This is one of the central areas of study on *New Atlantis*, and it is often linked to the hierarchy and organization dominating the narration. Kendrick (2004) argues that in Bacon’s work, “the ideal commonwealth is utopianized” (297), where Bacon presents in Salomon’s House a “corporate institution” (289). Bacon’s method, “to be realized, requires a new social class” (308).

³³⁹ Tobin Siebers, “Introduction,” in *Heterotopia: Postmodern Utopia and the Body Politic*. Ed Tobin Siebers (Ann Arbor: U of Michigan P, 1995), 2-3.

³⁴⁰ Albanese, 505.

arms—or at least to research.”³⁴¹ What interests me here is the deferral that Albanese identifies in *New Atlantis*, the promise of the “future perfect” that implicitly unsettles the notion of perfection in Bacon’s utopian world, Bensalem. The futuristic elements in *New Atlantis*, produced by the pragmatic desire to foster and perfect natural inquiry, also push the narrative towards the endlessness of romance: Baconian utopia transfers its desire to the as-yet unrealized future.

By masking the processes of inquiry that were laid bare in *New Organon*, Bacon’s referential worldmaking attempts to foreclose the possibility of excess, but the wish for *transformation* that pushes the nowhere—or perhaps elsewhere—of utopia into the future and towards the here destabilizes the ideal of perfection implicit in the descriptions of Bensalem. *New Atlantis* constantly fluctuates between perfection and incompleteness, between convention and transgressiveness: the utopian conventions Bacon employs are repeatedly subsumed within romancical habits of thought. By appealing to tropes of secrecy and estrangement, Bacon attempts to make explicit that fiction cannot represent “nature in action,” but he ends up naturalizing the centrality of the imagination in bringing forth a technocratic state: only in a fabricated world is his scientific enterprise actualized to such an extent that it can be normalized and dissociated from practice, that it can find *any* form of closure from “endlesse worke.”

New Atlantis masks its knowledge-making practices by making “secret” and estranging the processes the Baconian philosopher aims to reveal in *New Organon*.³⁴²

³⁴¹ Ibid., 505.

³⁴² The uncovering of secrets is of course at the center of Baconian method. By looking at the Hunt of Pan, Eamon argues “this is the methodology at the core of science” (278). Clody (2011) examines the relation between secrecy and alterity. Keller in “Mining Tacitus” demonstrates how Bacon provides a “collaborative and secretive view of research” (11) in *New Atlantis*. Since “Bacon’s ultimate end was not the state, but knowledge,...he imagined an arena for research free from both the public and the state” (Keller, 11). In “The Ark and Immediate Revelation in Francis Bacon’s *New Atlantis*,” *Studies in*

The narrative begins with an account of travel into the unknown that stresses complete estrangement from the familiar. The unnamed narrator enumerates their travails at sea “in the midst of the greatest wilderness of waters in the world” and in the “utterly unknown” (457). In their “beseeching [God] of his mercy” the travelers hope “that as in the beginning he discovered the face of the deep, and brought forth dry land, so he would now discover land to us, that we might not perish” (457). The narrator collapses the distinctions among discovery, *poiesis*, and travel, when he juxtaposes the unknown with the non-existent. He erases the individual and collective agency of his fellow travelers, translating any potential discovery of land into another instantiation of divine creation. Although he makes creativity central to the act of “discovery,” the narrator obscures the efficacy of poetic power to enact transformation when he substitutes divine creation for human imagination and collective *praxis*.

The agency of the travelers remains intimately tied to their capacity to perceive and act in the unknown worlds they inhabit. From the moment they witness “thick clouds, which did put us in some hope of land; knowing how that part of the South Sea was utterly unknown; and might have islands or continents, that hitherto were not come to light,” the narrator shifts control back to the travelers: “we bent our course thither, where we saw the appearance of land...we might plainly discern that it was a land flat, to your sight” (457). The repeated “we” reveals their active intervention once land is within sight. The travelers are able to act in a world that is perceivable or actualized; as long as the

Philology 105.1 (2008): 103-122, Travis DeCook argues that while in Bensalem natural philosophy operates in a culture of secrecy and esotericism, revelation of Christianity is open and immediate. For a counterargument that highlights the “cooperative” and “collaborative” aspects of Baconian science as articulated in *The New Atlantis* and its relation to government reform, see Rose-Mary Sargent, “Bacon as an advocate for cooperative scientific research,” in *Cambridge Companion to Bacon* (Cambridge: Cambridge UP, 1996), 146-171.

discovery is potential, they must rely on the intervention of a divine power. This suppression of their own creative potential—they can only discover what exists, not invent or create—privileges the content, rather than the form of discovery: travelers seeking lands can only operate once that object *becomes* real and perceptible.

The travelers' status as strangers, as well as their lack of control, is heightened when they land in Bensalem; their stay is immediately governed by rules of containment and prohibition. One of the inhabitants of Bensalem greets the travelers and hands them a scroll of the laws of entry: “Land ye not, none of you; and provide to be gone from this coast within sixteen days, except you have further time given you” (458). This command to depart almost immediately circumscribes their perceived deliverance. Their space of lodging—“Strangers House”—and their sense of being under constant surveillance make them acutely aware of their status as outsiders. The narrator announces his fear that “these men [attendants] that they [the inhabitants of Bensalem] have given us for attendance may withal have an eye upon us” (461). He contrasts their “deliverance past” with the “danger present and to come” (461) to make sense of the possibility that they are safe in their current situation. Initially, even gestures of hospitality—the abundant feast, the excellent lodgings, the attendants—garner suspicion, forcing them to wonder “who knoweth whether it be not to take some taste of our manners and conditions” (461). Their complete estrangement in this land fosters wariness.

The narrator soon foregoes suspicion of the unfamiliar: a lord's “reverend” (458) look and excellent apparel establish his trustworthiness. Yet in authorizing the lord's state through familiar signifiers of status and wealth, the narrator effectively cements their own estrangement and liminality: “we are but between death and life; for we are beyond both

the old world and the new” (461). He posits a causal relation: the inaccessibility of the “old world” has destabilized their status among the living. He transfers stability, credibility, and authority to their hosts; what began as identification with the lord now produces a more permanent separation. Instead of maintaining wariness of the Bensalemites, the narrator suggests to his fellow travelers “let us so behave ourselves, as we may be at peace with God, and may find grace in the eyes of this people” (461-462). He naturalizes their lack of agency and subordinates their collective independence by linking their hosts with divinity. As the governor of the house of strangers addresses them, their sense of security is accompanied by a solidification of hierarchies: “we had before us a picture of our salvation in heaven”; now instead of the “jaws of death” they have “consolations” (462-463). As they accept rules and hierarchies in Bensalem, the travelers accept their self-estrangement, quickly identifying themselves as “strangers” and “servants.”

Yet the *structure* of the laws in Bensalem destabilizes the strict hierarchy reinforced by human interactions. The subordinate clause in the scroll that allows them to enter for sixteen days—“except you have further time given you”—captures the oscillation between containment and extension that accommodates strangers in Bensalem. This inability to escape the “further,” what lies beyond the immediate prescription, undermines the complete estrangement that the travelers experience in their encounters with their hosts. The “further” also gestures to another series of unknowns: readers, like the travelers, are not immediately aware of the source of authority in Bensalem. Only various signs of familiarity and references to the “old world” provide points of stabilization. For example, Bacon supplies only limited signatory information about the

law of entry: the “scroll was signed with a stamp of cherubins’ wings, not spread but hanging downward, and by them a cross” (458). The iconography obscures its actual authority or meaning, creating a gap between the receiver and the received and leaving the former “much perplexed” (458) with the entire situation. Only the cross provides “a certain presage of good” (458). The travelers grasp at the most familiar signs—the cross, the Spanish language spoken by the Bensalemites, the lord’s attire—to make sense of this new world; the mind’s analogizing tendency makes them accept familiar signs of authority, and this acceptance subsequently cements their estrangement and subordination. By associating entities and practices in Bensalem to events in the “old world,” they fail to perceive how the “except” and the “further” function as potential signs of disruption in this orderly realm.

This logic of the “further,” then, submits seemingly inflexible laws to revision; to borrow a Baconian phrase, it escapes and exceeds the “show of a total.” As the governor of the house of strangers later informs them: “[t]he state hath given you license to stay on land for the space of six weeks: and let it not trouble you if your occasions ask further time, for the law in this point is not precise; and I do not doubt but myself shall be able to obtain for you such further time as may be convenient” (462). The governor’s words “expose” the contingency and provisionality of laws; the travelers can dispel their initial worry of being cast out because the law is “not precise.” This flexibility introduces the possibility that the travelers can further the quest of the unknown, and it suggests how control might be dispersed onto individual bodies and authorities. The governor’s pronouncement reveals the important status of strangers: the state has not had outsiders arriving for thirty-seven years. They are necessary for making the unknown familiar, or

for accommodating strangeness into a narrative that aims to produce knowledge. The hierarchy of relations that Bensalem enforces requires the continued presence of strangers for the *furthering* of narrative; in short, storytelling requires estrangement.

Bensalem's own unknowability crucially depends on reiterating this particular hierarchy of relations with the outside world, which its inhabitants maintain by a one-way exchange of information and knowledge. As the governor explains, "by means of our solitary situation, and of the laws of secrecy, which we have for our travelers, and our rare admission of strangers, we know well most part of the habitable world, and are ourselves unknown" (463). The "solitary situation" of Bensalemites enables them to know while remaining "unknown." This formulation posits an absolute difference that cannot be surpassed, since the laws he deems flexible prescribe limitations on interactions with outsiders. The travelers too struggle to escape this singular network of exchange which is "wonderful strange; for that all nations have inter-knowledge of one another either by voyage into foreign parts, or by strangers that come to them" (466). While "inter-knowledge" facilitates "mutual knowledge" (466) and implicitly defines a more equal world, the governor situates Bensalem outside this network of exchange. This formulation complicates the status of natural inquiry in the "old" and "new" worlds: the "inter-knowledge" in the former gestures to the possibility imagined in *New Organon*, whereas the isolation in Bensalem—supposedly *the* model of Baconian natural philosophy—provides an impossible model of mutual collective inquiry. Yet the governor claims their unknowability enables them to know more. His exposition propels the narrator to adopt, yet again, the language of absolute difference: "for that it seemed to

us a condition and propriety of divine powers and beings, to be hidden and unseen to others, and yet to have others open and as in a light to them” (466).

The governor’s narrative privileges secrecy and exclusivity as appropriate conditions for knowledge-making, and he transforms this epistemic inequity into a *form* of knowing: ““because he that knoweth least is fittest to ask questions, it is more reason, for the entertainment of the time, that ye ask me questions, than that I ask you”” (463). The question provides a concrete form to the epistemology, since it invites a theory of knowledge predicated on lack and absence. It also demands participation from those who “knoweth least.” The governor reiterates this claim, that “the questions are on your part” (465),” inviting further inquiry from his interlocutors. The interrogative structure complicates the tactics of estrangement and absolute difference on which the hierarchy of knowledge-making is predicated in Bensalem: the narrator’s group is forever distanced from the inhabitants of Bensalem and yet they come to occupy the position of the naturalist in *New Organon* who thrives on the maxim, “Let it be further inquired.” The question functions as a form of *furthering knowledge* as it both invites and structures inquiry from strangers. It does not promise “inter-knowledge.” It only intimates a future response and supposes the existence of an answer, even if it cannot reveal one. It also challenges, by its qualities of suggestion and incompleteness, the stabilized relations that maintain Bensalem’s uniqueness. The *question*, then, is the form that the initiative method takes in *New Atlantis*.

The question’s capacity to further inquiry has formal effects on the laws that structure ways of being in Bensalem. The flexibility and revisionary status of laws regarding strangers complicate the notion that Bensalem is self-sufficient in its isolation;

the “furthering” tendency breaks down any absolute dichotomy between the circumscribed law and the open-ended natural inquiry. As the narrator’s group negotiates the fact that “this land had laws of secrecy touching strangers” (466), their questions disrupt the orderly ways in which knowledge is shared by their hosts. To *answer* the travelers’ question of how the Bensalemites have escaped detection “notwithstanding all the remote discoveries and navigations of this last age” (466), the governor transports them from the present to the past. In a digressive account that takes them away from their original query, he provides a history of the “Great Atlantis” or America. Only after the historical narration does he return to tell “why we should sit at home,” by revealing yet another history: of Solamona, the king who lived “about 1,900 years ago,” the “lawgiver of our nation” (469). He suggests that Bensalem’s perfectness in the present and its self-sufficiency are products of understanding these various pasts. There is no unmediated narration of progression that makes their current state intelligible to strangers; only through the logic of recursive excursions into the pasts can the present be made intelligible. The questions emerge as *necessary* facilitators of such revelations.

Moreover, the governor admits gaps and incompleteness in what seems perfect. Since Solamona’s laws combine “humanity and policy,” they prohibit Bensalemites from “detain[ing] strangers here against their wills” although policy requires such detention: “that they should return and discover their knowledge of this estate” (470). The “humanity” necessarily extends the law beyond its prescribed containment and prohibition; the “except” and the “further” erupt repeatedly, propelling the nowhere of utopia towards the actual world by accommodating strangers from the known world. The governor explains their successful concealment by appealing to the qualities of the land

itself: only thirteen people have returned in all these years, and he claims their accounts “could be taken where they came but for a dream” (470). The narrator implicitly suggests that the way to control, confine, and avoid discovery is to transform Bensalem into a “dream”: an idealized world that cannot be actualized in description.

Yet this transformation is also a defensive move; the governor devalues outsiders *because* they might not be able to invite them in. The governor, who controls the flow of information by stating at various points that he may not reveal more, acknowledges that Bensalemites must travel in order to acquire new knowledge; their self-sufficiency is only a mask, and it unravels when he admits that their scientific enterprise is governed by collecting and appropriation. This admission necessitates yet another flexibility in the laws:

When the king had forbidden all his people navigation into any part that was not under his crown, he made nevertheless, this ordinance; That every twelve years there should be set forth out of this kingdom two ships, appointed to several voyages; That in either of these ships there should be a mission of three of the Fellows or Brethren of Salomon’s House, whose errand was only to give us knowledge of the affairs and state of those countries to which they were designed, and especially of the sciences, arts, manufactures, and inventions of all the world; and withal to bring unto us books, instruments, and patterns in every kind; That the ships, after they had landed the brethren, should return; and that the brethren should stay abroad till the new mission. These ships are not otherwise fraught than with store of victuals, and good quantity of treasure to remain with the brethren. (471-472)

The governor’s narration, like his explanation of contingency in the laws, oscillates between the contained and the excess: the “forbidden” and the “nevertheless.” The utopian ideal of nowhere repeatedly translates into the elsewhere, as the Bensalemites approach and appropriate epistemic practices and entities from the known world. It also initiates an oscillation between the wondrous and the mundane: “we were all astonished to hear so strange things so probably told” (472), claims the narrator. Complete isolation

remains an unsustainable desire as the initiative techniques facilitate “continuation and further progression” and override the prohibitive laws.

This exposition also underscores the centrality of Salomon’s House to the state: the scientific society structures knowledge in Bensalem and enables expansion and travel into the wider world. It serves as a metonym for the land itself, which vacillates between containment and escape from its bounds; Justin Stagl terms it “a compendium of the world.”³⁴³ The strangers learn about Salomon’s House in a digression in the governor’s account of travel and history: “here I shall seem a little to digress, but you will by and by find it pertinent.” (471). This instance actually captures the telos of the narration, the end towards which *New Atlantis*, and perhaps Baconian method as a whole strives; it gives form to what fiction as a “deviating instance” might look like. The “Society of Salomon’s House” or the “College of the Six Days’ Works” is the “eye of this kingdom” (464); the governor also describes it as the “lanthorn of this kingdom” (471). Its self-avowed task is “to know [God’s] works of creation, and the secrets of them; and to discern (as far appertaineth to the generations of men) between divine miracles, works of nature, works of art, and impostures and illusions of all sorts” (464). Itself cloaked in secrecy—Joabin informs the narrator “we have seen none of them this dozen years”; although one of its principal members announces that he is coming to the city, “the cause of his coming is secret” (478)—Salomon’s House maintains trade for “God’s first creature, which was *Light*” (472). Scholars note how the aims of Salomon’s House correspond to Bacon’s aims in *New Organon*, a claim that inevitably leads them to study it as an *example* of Bacon’s natural philosophy. Yet the fictional narrative repeatedly elides the exact

³⁴³ Stagl, 134.

practices in Salomon's House, suppressing the promise of openness and expansion—and the implicit egalitarianism—that governs *New Organon*.

The *New Atlantis* “ends” with a reversal of these structures of secrecy and estrangement, suggesting that there is a possibility of disseminating knowledge without enacting its exact techniques in print. The father of Salomon's House enters into “conference” with the narrator and promises to disclose their activities and their ends: “I will impart unto thee, for the love of God and men, a relation of the true state of Salomon's House”; he will narrate the “end of [their] foundation,” the “preparations and instruments [they] have for [their] works,” the “several employments and functions whereto [their] fellows are assigned,” and “the ordinances and rites which [they] observe” (480). Echoing the language of the Baconian philosopher who will reveal nature's “inner chambers,” he also projects that most ambitious end to their actions: “knowledge of Causes, and secret motions of things, and the enlarging of the bounds of Human Empire, to the effecting of all things possible” (480). His narration will “impart” the “true state” of their society and present the complete knowledge that has remained inaccessible up to this point.

His narration touches on numerous practices and lists laid out at the end of *New Organon* and *Preparative* from the “History of Fiery Meteors” to “History of perfect Metals, Gold, Silver; and of the Mines, Veins, Marcasites of the same; also of the Working in the Mines;” to “histories on health and medicine,” “history of animals and birds,” “History of Baking, and the Making of Bread, and the arts thereto belonging, as of the Miller,” to mention only a few. On the one hand, instead of the potential discoveries and histories that “end” the narrative of *New Organon*, this narration in *New Atlantis*

stresses knowledge that has been achieved and actualized: the father's refrain is "We have" and not "we will."³⁴⁴ On the other hand, he also stresses "I will not hold you long with recounting of our brew-houses, bake-houses, and kitchens" (483), suggesting there is something that always escapes narration, that lies beyond the fullness promised in his "relation." In spite of the correspondences between the works on method and the utopian fiction, the father in *New Atlantis* narrates achievements; he does not enact processes or employ techniques of natural inquiry. He dissociates presentation from praxis, modes of inquiry from their reporting, the two elements that remain inseparable in *New Organon*. While the incomplete, and ultimately incompleteable nature of natural inquiry in *New Organon* demands the association of action and presentation, in *New Atlantis*, the narrative of actualization distances practice from reporting. He replaces lack and questioning, or doing, by an inferior mode of knowing, "relation." What is potential in *New Organon*, the father makes extant here, in the process actualizing a utopian desire: the evacuation of the desire to "inquire further." *New Atlantis* abstracts narration from the exact process of knowing. The fiction, then, makes present what remains an interminable absence for the naturalist and brings forth a world that only seems perfected.

Yet this one-way dissemination of knowledge ends with the text's most transparent appeal to openness and expansion rather than to secrecy: "God bless thee, my son, and God bless this relation which I have made. I give thee leave to publish it, for the good of other nations; for we here are in God's bosom, a land unknown" (488). As the father places the "land unknown" into conversation with "other nations," he complicates the absolute estrangement the narrator's party expects and comes to accept; he also opens the possibility of "inter-knowledge." The appeal to "publish"—the term seems to refer to

³⁴⁴ For the argument that Bacon aspires to a "possessive corporatism," see Kendrick (2004), 302.

various things: to the popularity and increasing influence of print; to a kind of “making public”; to the legality of announcement and communication—is both an order and a request. It represents an implicit acknowledgment of their isolation as well as the desire to transcend it. In hoping to share their knowledge, the father breaks the codes of secrecy that govern the narrative in *New Atlantis*, and he explicitly accepts the necessity of the stranger. The narrator as outsider becomes a crucial and necessary instrument of knowledge who can translate utopian containment into a romancical expansion.

The *New Atlantis* formalizes this pronouncement of publicity and “furthering” through a move that was typical of and repeatedly dramatized by early modern romances: the narrative stops without ending. *New Atlantis* pronounces its own endlessness: “The rest was not perfected.” But Bacon’s work takes Spenser’s romance project of intertextuality into an inter-worldly space that exceeds the capacities of fictional romances: he ends *New Atlantis* with yet another list of desired discoveries, gesturing backwards to the incomplete ending of *New Organon* while also looking forward to the potential discoveries contained in the definitions within the list. As these lists collapse the gap between the real and fictional worlds by invoking the lists of *Novum Organum*, the text echoes the very imaginative and literary enterprises Bacon wishes to reject. Baconian method erupts in *New Atlantis* and emerges as a vibrant process that lives in the techniques he employs, and it also extends into the actual world through these new initiatory lists. The project of natural inquiry escapes from the secret world of Bensalem into the “not perfected” world of the author, initiating the recipes in *Sylva Sylvarum*, and projects such as Samuel Hartlib’s network of reformers (who juxtaposed Bacon’s operative knowledge with millenarian ideas in order to formalize improvements in

pedagogy, medicine, and agriculture), and the Royal Society's probabilistic experimental philosophy. Bacon's natural philosophy, then, stages an endless work only to generate *infinite* works. Channeling Bacon the "guide," we could argue that the *New Atlantis* enacts his worry about the expandability of language and of the human understanding. Or, as interpreters being invited to inquire, we could mark the contradictions that erupt and subvert the progression towards certainty, and we can suggest that *New Atlantis* dramatizes the radical promise of the strategy of "furthering" that is Bacon's "true induction."

“Sad Experiment” in *Paradise Lost*: Epic Knowledge and Evental Poetics

Satan’s temptation of Eve marks the turning point in *Paradise Lost*, condensing into an unrepeatable event the epic’s governing argument: “Of man’s first disobedience, and the fruit / Of that forbidden tree, whose mortal taste / Brought death into the world, and all our woe / With loss of Eden” (I.1-4).³⁴⁵ The event serves as the fulcrum of the poem, instantly disrupting the continuum of experience in prelapsarian Eden and propelling readers, with Eve, into the narrative’s fallen world. Eve retrospectively describes it as her “sad experiment” (X.967): in addition to underscoring Milton’s theological beliefs and his commitments to reason, this tragic incident provides an acute example of the epistemology that shapes *Paradise Lost*. Eve’s fall models the simultaneously instructive and destructive potential of unique events. During her moment of “disobedience,” Eve apprehends with certainty the absolute difference of the future, but this instance also creates a profound instability in her knowledge of self and of world. Eve becomes keenly aware that she must disavow the very modes of experiential learning that have enabled her to know about the future in an instant. Her “sad experiment” has proved fatal to her.

Eve’s irreproducible transgression stages with particular clarity the epistemology that animates *Paradise Lost*, what I will call an *evental poetics* that foregrounds how

³⁴⁵ All quotations from Milton’s works are from John Milton, *The Complete Poetry and Essential Prose of John Milton*. Eds. William Kerrigan, John Rumrich, and Stephen M. Fallon (New York: Modern Library, 2007). The poetry is cited by book and line number, and the prose is cited by page numbers. See William Poole, *Milton and the Idea of the Fall* (Cambridge: Cambridge UP, 2005) for a study that historicizes various versions of the fall in the mid-seventeenth century and situates Milton’s epic alongside these accounts. See Peter Harrison, *The Fall of Man and Foundations of Science* (Cambridge: Cambridge UP, 2008), for an account of how diverse versions of the fall were deployed to produce natural knowledge.

unique incidents shape our understanding of prelapsarian states of being. The narrator promises certainty with his pledge to reveal “all” (I.3).³⁴⁶ Yet the varied events—the distinct and delimited occurrences that shape the logic of action in the poem—that dramatize ways of knowing in prelapsarian Eden formalize the impossibility of such surety. Events stage moments of singularity and unrepeatability in *Paradise Lost*; as such they remain necessary to accommodate a prelapsarian world for a fallen audience. Despite its echoes of contemporary natural history and philosophy, and unlike forms of naturalistic experiential knowledge, Milton’s *evental poetics* is not primarily concerned with knowing the natural world.³⁴⁷ Instead, the poem situates characters in events to enact *how* one makes intelligible with any degree of certainty a world one does not, and can never in theory, fully grasp. As such, the questions about ways of knowing that drive the epic narrative are not only epistemic: they reveal the ontology of Miltonic poetics. The question of *what* the prelapsarian world *is* remains inseparable from *how* one knows it. Miltonic events, including Eve’s “sad experiment,” therefore function as narratological units that bring forth and frame the contours of the poetic world as well as compose the epic’s plot of “loss of Eden.”

In the process, Milton’s examination of the epistemic status of experiential events inadvertently exposes limitations in institutions that championed such methods to know

³⁴⁶ For the centrality of the word “all” in the epic, see Albert C. Labriola, “‘All in All’ and ‘All in One’: Obedience and Disobedience in *Paradise Lost*,” in *All in all: Unity, Diversity, and the Miltonic perspective*. Eds. Charles W. Durham and Kristin A. Pruitt (London: Associated UP, 1999), 39-47. For an account that questions the “certitude” pervading Milton scholarship, see Peter C. Herman, *Destabilizing Milton: “Paradise lost” and the Poetics of Incertitude* (New York: Palgrave Macmillan, 2005). Herman argues that in their attempts to prove “*Paradise Lost* coheres,” Miltonists have inevitably claimed “Milton is a poet of absolute, unqualified certainty” (7). Although Herman notes the increasing trend away from these conclusions, he challenges the still-dominant thread of “certitude” through a Kuhnian argument of “paradigm shift” to propose only a very specific solution, “that Milton is, in fact, a poet of deep incertitude, and this condition... results in large part from the failure of the English Revolution” (21).

³⁴⁷ For an influential account of how the natural world pervades the epic, see Karen L. Edwards, *Milton and the Natural World: Science and Poetry in *Paradise Lost** (Cambridge: Cambridge UP, 1999).

the actual world. In what follows, I focus on an event-centered enterprise that was becoming increasingly influential in Milton's moment, one that is suggested by Eve's own phrasing and that has subsequently attracted sustained attention from modern scholars: experimentation in the early Royal Society. Founded in the 1660s, the Royal Society was a loosely-affiliated Royalist enterprise that championed a method of knowing in which the repetition of an experience within controlled conditions would produce stability, convergence, and matters of fact. The Royal Society redefines "experiment": it becomes a *repeatable* and *generalizable* procedure that couples singular *events*, which are delimited in time and space, with habitual *experiences*. As Milton poeticizes ways of knowing in the *unrepeatable* actions of Eve, he decouples this linkage of the experience and the event and his epic poetry provides an alternate, *evental* epistemology that calls into question the authoritative claims of the Royal Society.

It is almost a commonplace in Milton scholarship to call Eve or Satan an experimenter. Stanley Fish's claim that "Satan proceeds to initiate Eve into the mysteries of empirical science" has long invited scholars to historicize this scene as one of scientific experimentation.³⁴⁸ Critiquing Fish's argument, Karen Edwards dismisses Eve as a naïve experimenter: "Eve ought to have been more, not less, of an empiricist."³⁴⁹ This account exemplifies a scholarly trend that automatically (though often implicitly) associates Eve's fall with her failure to experiment like a member of the Royal Society. While Fish condemns Eve for succumbing to reason—"Eve need not be won by reasons,

³⁴⁸ Stanley Fish, *Surprised by Sin: The Reader in Paradise Lost*. 2nd ed. (Cambridge: Harvard UP, 1998), 250.

³⁴⁹ Edwards, 33. The study of Eve as an experimenter often leads scholars to an inevitable fall and an always-already fallen Eve, a premise that has been revised by critics including John Leonard, *Naming in Paradise: Milton and the Language of Adam and Eve* (Oxford: Clarendon P, 1990) and Diane Kelsey McColley, *Milton's Eve* (Urbana: U of Illinois P, 1983).

merely won to reason”—Edwards suggests Eve falls because she does not experiment enough: “holding fast to her own reading of nature’s ordered ways would have enabled Eve to see the talking snake...for the monstrosity it is.”³⁵⁰ Eve’s position is in fact in alignment with seventeenth-century natural philosophers, who were increasingly studying anomalies instead of “holding fast” to “nature’s ordered ways.”³⁵¹ But Eve cannot be a seventeenth-century *experimenter*: the principles of corroboration and replication associated with the position remain unavailable to her. Eve’s *singularity*, the *unrepeatability* of her act of transgression, and Eden’s ontological distance belie the possibility of an actual experiment, if experiment is understood through the Royal Society’s codes of repetition, aggregation, and collectivity. Yet Edwards’ account of Eve’s failures is a powerful one. Only Shannon Miller—who reads Eve as a perfect Royal Society experimenter, but who perceives her fall as a social rather than an epistemic problem—has explicitly questioned Edwards’ claims.³⁵²

Joanna Picciotto has recently provided the most comprehensive account of Milton as an “experimentalist” author. Drawing on Edwards’ argument, Picciotto dismisses Eve as a “zealous but incompetent natural philosopher,” ultimately equating Adamic productivity with experimentalism while reducing Eve to an embodiment of Adam’s “sensitive body and private fancy.”³⁵³ According to Picciotto, experimentalist authors, including Milton, demonstrate a “commitment to collaborative empiricism,” “replicate the crucially prosthetic, collective, and processual character of experimentalist insight,”

³⁵⁰ Fish (1998); Edwards, 18.

³⁵¹ Bacon provides one clear example of the call to study anomalies in his example of “*Deviating Instances*.”

³⁵² Shannon Miller, *Engendering the Fall: John Milton and Seventeenth-Century Women Writers* (Philadelphia: U of Pennsylvania P, 2008), 136-168.

³⁵³ Picciotto (2010), 475. For a fuller exposition of this difference between Adam and Eve, see esp. 474-476.

and turn their readers into “virtual witnesses.”³⁵⁴ This experimentalist Milton is methodologically aligned with the Royal Society experimenter who accepted cumulative inquiry and virtual witnesses—readers whose acts of reading served as instances of replication—as sufficient techniques of knowledge production.³⁵⁵ *Paradise Lost* enacts “a formal manifestation of experimentalist *progress*, combining the *copious accumulation* of experimental results with a modest deferral of certainty about their meaning,” and Milton’s epic emerges in Picciotto’s study as “a literary counterpart to experimentalist observation.”³⁵⁶ My claim that Milton’s poetics is motivated by an *evental* epistemology differs both in its focus and in its method from this definition of “experimentalist literature” which persuasively espouses an “Adamic epistemology” to link “innocence to experience,” but which fails to accommodate an equally innocent Eve.³⁵⁷ The category of experimentalism, I argue, cannot account for unrepeatable and distinct scenes such as Satan’s temptation of Eve, because the ideal notion of experiment on which Picciotto’s argument is founded was contrived to study the fallen natural world through techniques of continuous and processual repetition. The unique and exceptional Miltonic events I explore reveal the impossibility of cumulative experiential methods including experiments to serve as instruments of certainty in *Paradise Lost*.

Instead of equating Eve’s fall with a Royal Society experiment, as scholars as diverse as Fish, Edwards, Miller, and Picciotto propose, I intend to read this scene as a crucial example of the larger epistemic problem of singularity and unrepeatability that Milton examines in the epic. Events in *Paradise Lost* are both educative and transgressive

³⁵⁴ Ibid., 26, 16, 14.

³⁵⁵ For the seminal study of the technology of “virtual witnessing,” see Shapin and Schaffer, 60-61.

³⁵⁶ Picciotto (2010), 439, my emphasis.

³⁵⁷ Picciotto (2010), 4.

because they enact what is disruptive and unparalleled in prelapsarian Eden. Eve's *evental* fall stages how the epic rejects a cumulative relationship in which common experiences aggregate into universal knowledge. This central scene reveals how the future remains contingent as Satan and Eve repeatedly fluctuate between positions of subjects and objects; their roles are not as static and transparently opposable as scholars suggest. In order to demonstrate that Milton's poetry employs varied ways of knowing to make intelligible states of being in prelapsarian Eden, I stress the *differences* among the categories of experience, experiment, and event. While experimental method joins habitual experiences and singular events in a fallen world, Milton disentangles them, rejecting experiments as a mode of knowing unsuited to a theological epic. Instead of the repeatable principle of knowing championed by experimenters, the poet posits an alternate epistemology predicated on interpreting the singular, unrepeatable, and ultimately inaccessible event in prelapsarian Eden, a form of interpretation familiar to us from another Miltonic model: the mode of poetic prophecy.

Miltonic events enact, predict, and surprise audiences into an unexpected future *in* their moments of actualization.³⁵⁸ I understand event both as occurrence—"[a]nything that happens, or is contemplated as happening; an incident"—as well as result: "[t]hat which follows upon a course of proceedings; the outcome, issue; that which proceeds from the operation of a cause; a consequence, result" or "[u]ndesigned or incidental result."³⁵⁹ Events mark an eruption in previous trajectories of temporal progression,

³⁵⁸ My understanding of Miltonic events is strongly influenced by scholarship on Miltonic moments, especially Parker (1979) and J. Martin Evans, *The Miltonic Moment* (Lexington: UP of Kentucky, 1998). Parker marks the transformational moments in the epic through notions of betweenness and pendency, the "threshold of choice" that lies at the heart of the poem (6). Evans, in his examination of Milton's early poems, defines the Miltonic moment as a "betweenness" that "resides in a temporal interstice between two events, or two sequences of events, on a chronological continuum" (6).

³⁵⁹ OED Online. March 2012. Oxford University Press. (accessed May 11, 2012).

changing what was *supposed to* occur. They do not necessarily require external agents and instead direct attention to the phenomena of change. According to Witmore, events “simply happen of themselves” while actions “are directed from without.”³⁶⁰ The event underscores the fact that while repeated experiences invite generalization, it is often the singular and anomalous incident that, when it creates moments of rupture, informs the reader and the character about what is true. This logic of eventness governs various incidents of absolute change in *Paradise Lost*, in which only God’s omniscience remains stable and eternal: the battle in heaven, the creation of “new worlds,” the fall of Adam and Eve, all follow an *evental* structure (I.650). While characters such as Eve and Satan might perceive themselves as masters of their immediate actions, they are unable to completely direct how things unfold in time. Confronted with the unprecedented, they come to recognize the contingency of incidents that propel them to act, or react, in unexpected ways.³⁶¹

The unique events that shape ways of knowing in *Paradise Lost* also compel us to rethink how we can reorient scholarship on Milton and science, without positing that Milton is “experimenting” or intentionally critiquing contemporary experimental philosophy. Partially in order to establish that Milton was a forward-looking poet, this scholarship has predominantly focused on uncovering connections and exploring *objects* of knowledge—the natural world, the structure of the universe, the materialist

³⁶⁰ Witmore, 8.

³⁶¹ Witmore highlights the contingent nature of events by demonstrating how accidents are “a species of event” (5); he continues, “[i]n the rhetorical-legal tradition, accidents become a real class of events with a distinctly narrative pedigree: to the extent that narrative description can detach such occurrences from a particular intention or person (usually by focusing on intervening circumstances), certain actions become events and so acquire special status under the law” (27).

philosophy—in Milton’s corpus.³⁶² We might avoid some of the most stringent critiques leveled against this line of argument by turning our attention to *methods*, or ways of knowing, and not to objects that appear to connect or separate Milton and contemporary naturalists.³⁶³ Such a reorientation enables us to perceive that Milton is raising a philosophical and theological, rather than a scientific, problem with his poem: what is the state of being before the Fall? Although the poem is concerned with prelapsarian ontology, the prophet-poet can only appeal to postlapsarian epistemologies to make intelligible its questions about states of being. Miltonic events serve as narratological bridges that explicate the ontology before the Fall and make known, by appealing to singular occurrences, what the conditions of possibility are for accessing the absolute unknown from the perspective of the fallen world. Only through such unprecedented,

³⁶² For seminal works in the field, see Marjorie Hope Nicolson, “Milton and the Telescope,” *ELH* 2.1 (1935): 1-32; Grant McColley, “The Astronomy of Paradise Lost,” *Studies in Philology* 34 (1937): 209-247. The surge in “Milton and Science” scholarship in the last two decades is partially in response to Milton’s perceived backwardness to contemporary developments in natural history and philosophy, as argued in works like Kester Svendsen, *Milton and Science* (Cambridge, MA: Harvard UP, 1956). For various strands of this scholarship, see Edwards; Stephen M. Fallon, *Milton Among the Philosophers: Poetry and Materialism in Seventeenth-Century England* (Ithaca: Cornell UP, 1991); Harinder Singh Marjara, *Contemplation of Created Things: Science in Paradise Lost* (Toronto: U of Toronto P, 1992); Nicholas Von Maltzahn, “Naming the Author: Some Seventeenth-Century Milton Allusions,” *Milton Quarterly* 27 (1993): 1-19; John Rogers (1996); Catherine Gimelli Martin, “‘What if the Sun be the Center of the World’: Milton’s Epistemology, Cosmology, and Paradise of Fools Reconsidered,” *Modern Philology* 99 (2001): 231-265; Lara Dodds, “Milton’s Other Worlds,” in *Uncircumscribed Minds: Reading Milton Deeply*. Ed. Charles Durham and Kris Pruitt (Selinsgrove: Susquehanna UP, 2008), 164-182. A lot of this scholarship is concerned with Milton’s references to Galileo. See, for example, Annabel Patterson, “Imagining New Worlds: Milton, Galileo, and the ‘Good Old Cause,’” in *The Witness of Times: Manifestations of Ideology in Seventeenth Century England*. Eds. Katherine Z. Keller, Gerald J. Schiffhorst (Pittsburgh: Duquesne UP, 1993), 238-260; John C. Ulreich, “Two Great World Systems: Galileo, Milton, and the Problem of Truth,” *Cithara: Essays in the Judaeo-Christian Tradition* 43 (2003): 25-36; Shannon Miller, 136-168. For a broader argument that examines Milton’s unique position as a poet who both looks backwards and forwards, see Gordon Teskey, *Delirious Milton: The Fate of the Poet in Modernity* (Cambridge, MA: Harvard UP, 2006).

³⁶³ See William Poole, “Milton and Science: A Caveat,” *Milton Quarterly* 38.1 (2004): 18-34. Poole warns readers against linking Milton to the new science “at the level of methodology” and positing “connections” that do not exist (19). Poole is responding to connections proposed in works such as Nicholas Von Maltzahn, “The Royal Society and the Provenance of Milton’s History of Britain (1670),” *Milton Quarterly* 32.3 (1998): 90-95. Yet it is precisely at the level of methodology that we can posit connections, without attempting to establish Milton’s “modern” outlook or labeling Milton as “for” or “against” a predominantly Royalist scientific enterprise that the equation of Eve with an experimenter inevitably seems to produce in current scholarship.

exceptional, and always-disappearing moments, suggests Milton, can fallen readers even begin to apprehend “that happy state” of “our grand parents” (I.29).

Experimental Philosophy: Joining Experiences to Events

Experiential ways of knowing had long governed how one understood the natural world, and in the beginning of the seventeenth century, the terms “experience” and “experiment” signified similar practices.³⁶⁴ Both designated generalizable processes in which the accumulation of many instances could lead to facts. The meanings associated with the terms began to shift in the mid-seventeenth century, and “experiment” came to define controlled and contrived events produced within the confines of formal or informal laboratories; experiments linked the common experience to the temporally, and often spatially, delimited event in order to standardize repeatability.³⁶⁵ Thus, experiments particularized the habitual experience and simultaneously generalized events by promising perfect replication. Experimental practice also redefined the aims of knowing: as Peter Dear argues, an experiment claimed to show “how something had happened on a particular occasion” whereas the term “experience” was still primarily used in the Aristotelian sense of “*how things happen* in nature.”³⁶⁶ The distinction was not yet absolute; when Milton’s nephew, Edward Phillips, writes *The New World of English Words* (1658), he defines both terms under one entry: “*Experience* or *Experiment*, (lat.) proof, trial, or practise.”

The term “experience” was central to an academic tradition that had been inherited from Aristotle; in this tradition, as Dear argues, “an ‘experience’ was a

³⁶⁴ OED Online. March 2012. Oxford University Press. (accessed May 11, 2012).

³⁶⁵ See Shapin (1988) for an account of the private spaces in which experiments were performed.

³⁶⁶ Dear (1995), 4.

universal statement of how things are, or how they behave.”³⁶⁷ Predicated on habit and on the expectation of regular behavior, experience did not account for, or even consider, the unique and the anomalous as suitable objects of investigation. One gained an Aristotelian experience through the repeated perception of regularities and by holding them in memory. An experience was meant to explain things that were already, in Dear’s terminology, “common knowledge.”³⁶⁸ Based on *explaining* how things exist in their natural state, the Aristotelian experience was probabilistic and depended on the authority of knowers, where “the nature of experience depended on its embeddedness in the community; the world was construed through communal eyes.”³⁶⁹

Aristotle states that we understand through “perception,” and “although we perceive particulars, perception is of universals.”³⁷⁰ Ultimately privileging the knowledge of the universal, he states that experience emerges “from pre-existing knowledge”:

from perception there comes memory, as we call it, and from memory (when it occurs often in connection with the same item) experience; for memories which are many in number form a single experience. And from experience, or from all the universal which has come to rest in the soul (the one apart from the many, i.e. whatever is one and the same in all these items), there comes a principle of skill or of understanding—of skill if it deals with how things come about, of understanding if it deals with how things are.³⁷¹

Experience in this formulation represents a many-to-one function. Perceiving many “particulars” enables one to constitute an “experience” from various “memories” of “the same item.” An experience is gained with the aid of “pre-existing knowledge,” if one can

³⁶⁷ Ibid., 22.

³⁶⁸ Dear (2001), 6.

³⁶⁹ Dear (1995), 23.

³⁷⁰ Aristotle, *Posterior Analytics*. Trans. Jonathan Barnes, 2nd ed. (New York: Oxford UP, 1994), II.19.74. Also see N.K. Sugimura, *Matter of Glorious Trial: Spiritual and Material Substance in Paradise Lost* (New Haven: Yale UP, 2009), 58-59. Sugimura points out that the relationship between the singular and the universal was not simple, and the aim was towards universals, something that might have already been known.

³⁷¹ Aristotle, *Posterior Analytics*, II.19, 73.

perceive this “same item” “often.” The process provides “[u]nderstanding of “how things are,” and depends on regularity. As culmination of acts of perception, experiences are built on the premise that “there is nothing in the mind that was not first in the senses.”³⁷²

The new experimental philosophy in Restoration England shifted attention from explanation to “successful prediction and control.”³⁷³ As Steven Shapin and Simon Schaffer have shown, this philosophy was institutionalized through interconnected conventions: collective witnessing, prediction, repetition, and standardization.³⁷⁴ Experiments were composed of singular events that were meant to represent universal facts. As Dear argues, the “singular experience could not be *evident*, but it could provide *evidence*.”³⁷⁵ As the Royal Society modified Baconian method, the term “experiment” became associated with “the notion that what nature can be made to do, rather than what it usually does by itself, will be especially revealing of its ways.”³⁷⁶ Experimenters promised these localized events could be repeatedly experienced and generalized. The early Royal Society experiment was a communal form of knowledge production, but it distanced itself from the “common knowledge” of the habitual Aristotelian experience. Experiments depended on agreement within a disinterested body of sincere witnesses who collectively worked to reveal nature’s secrets.³⁷⁷

³⁷² Dear (2001), 131.

³⁷³ Ibid., 3.

³⁷⁴ See Shapin and Schaffer. For a recent revision that focuses on the ideals of representation in the Royal Society rather than on social history, see Picciotto (2010), esp. 129-187.

³⁷⁵ Dear (1995), 25.

³⁷⁶ Dear (2001), 7.

³⁷⁷ On the dissociation of “disinterestedness” from “male gentility,” see Michael McKeon, *The Secret History of Domesticity: Public, Private, and the Division of Knowledge* (Baltimore: Johns Hopkins UP, 2005), 347; Peter Dear, “From Truth to Disinterestedness in the Seventeenth Century,” *Social Studies of Science* 22.4 (1992): 619-631. See Stephen Shapin, *A Social History of Truth: Civility and Science in Seventeenth-Century England* (Chicago: U of Chicago P, 1994), on how social conventions of trust were crucial to the experimental community. For an example of the construction of disinterestedness in the seventeenth century, see Robert Boyle, “A Letter of the Honorable Robert Boyle Concerning the

Apologies for the experimental method, including Thomas Sprat's *The History of the Royal Society* (1667), outline its main protocols. Sprat defines disinterestedness through the dialectic of inclusivity and expertise. He argues that witnesses need not have specialized knowledge as long as they display sincerity and bring their labors to the enterprise: "we find many Noble Rarities to be every day given not onely by the hands of Learned and profess'd Philosophers; but from the Shops of *Mechanicks*; from the Voyages of *Merchants*; from the Ploughs of *Husbandmen*; from the Sports, the Fishponds, the Parks, the Gardens of *Gentlemen*."³⁷⁸ The disinterested witness is defined in opposition to "perfect Philosophers." Sprat accepts "plain, diligent, and laborious observers" who might not bring "knowledg" but "their hands, and their eyes uncorrupted" to the task.³⁷⁹ Sprat does not acknowledge, however, what Robert Hooke, the Society's "commoner assistant" recognized: the importance placed on disinterestedness ensured that experiments had, as Michael McKeon argues, "socially leveling" implications.³⁸⁰ Sprat's discomfort with the "equal Balance of all Professions" becomes apparent when he stresses the indispensability of certain social groups: "though the Society entertains very many men of *particular Professions*; yet the farr greater Number are *Gentlemen*, free, and unconfin'd."³⁸¹ By marking extant hierarchies (he

Vegetable Nature of Amber Greece, according to an Extract Taken Out of a Dutch East Indian Journal," *Philosophical Transactions* 8 (1673): 6113-6115.

³⁷⁸ Thomas Sprat, *History of the Royal Society* (St. Louis: Washington U, 1958), 71-72. The apologies were partially defenses against satire and ridicule. Thomas Shadwell's *The Virtuoso* (1676) is a famous example of the kind of ridicule the early Royal Society had to face. See Thomas Shadwell, *The Virtuoso*. Eds. Marjorie Hope Nicolson and David Stuart Rodes (Lincoln: U of Nebraska P, 1966). Also see Peter Anstey, "Literary Responses to Robert Boyle's Natural Philosophy," in *Science, Literature, and Rhetoric in Early Modern England*. Eds. Juliet Cummins and David Burchell (Aldershot: Ashgate, 2007), 144-162. Anstey shows how the virtuosi were open to ridicule in this period and Boyle was the "paradigm virtuoso" (146).

³⁷⁹ Sprat, 72-73.

³⁸⁰ McKeon (2005), 347.

³⁸¹ Sprat, 66, 67.

privileges “*Gentlemen*, free and unconfin’d”), Sprat implies that the disinterested witnesses could counterfeit for their own interested purposes.

While ostensibly rejecting the regular and habitual scholastic experience in favor of a collective and event-based experimental philosophy, the Royal Society implicitly translates the *repeated* perception of the Aristotelian experience into a different *cumulative* epistemology: a diverse body of witnesses that observes the same “experiment” replaces multiple acts of perception. Witnessing could consist of repeated acts of perception, but in actuality some would just read about the event, and even this act of “virtual witnessing” was considered a reliable form of replication.³⁸² Sprat’s attempts to define the meaning of collective witnessing through contrived, repeatable experiences underscore a paradox in the aspirations of the Royal Society: “experiment” needs multiple witnesses but presumes their diversity will create a process of automatic cancellation of individuated interests. The Society aims to translate multiple particulars into a unified whole by suggesting that experimental method authorizes the effacing of plurality, difference, and interests, of individual witnesses. In the very practices in which Hooke sees the potential for social leveling, Sprat locates the erasure of particularity. Yet in his redefinition of experiment as a series of repeatable and replicable instances, Sprat also couples the experience—habitual and common—with the event—singular, delimited, and disruptive.

Eve’s “Sad Experiment”: Staging Unrepeatability in Paradise

Although the terms “experience” and “experiment” remain partially interchangeable in the mid-seventeenth century, in what follows I will employ “experience” to speak about regularities, habits, and common modes of perception that

³⁸² Shapin and Schaffer, 61.

made things *evident*, and I will use “experiment” to refer to an enterprise that combines event and experience, that aims at repeatability and prediction, and that seeks to provide *evidence*. In the epic, Milton singles out the *evental* structure of experiments—their historically specific, localized, and singular nature—and decouples it from the common experience in order to poeticize modes of being in Paradise. As the poet demarcates these different ways of knowing, and as he stages how *unrepeatable* events disrupt regularity and in the process come to function as instruments of certainty, *Paradise Lost* questions the epistemic scope of habitual and repeatable experiences. Milton demonstrates that while generalizable experiments are sufficient to explain conditions in the fallen world, only singular events can approach with any degree of surety the unique states of being in prelapsarian Eden.

Eve’s trial dramatizes the *eventness* of the Fall in the epic’s narrative logic, as she aims to address an ontological problem through an empirical epistemology: whereas the repeatable structure of experimental knowledge is suited to the sociable world of the Royal Society as a way of understanding the natural world, it remains unsuitable for Eve, who can only draw on and modify her individual knowledge, and whose current state of existence can be altered by a single act of transgression. In his temptation, Satan initially employs an *experiential* strategy, but he soon reverts to an *experimental* process, while Eve repeatedly appeals to an *evental* epistemology before she succumbs to the lure of replication. As they enact these diverse ways of knowing, Satan’s temptation of Eve most clearly captures the entire “loss of Eden” into a singular event that irreversibly separates the innocent Adam and Eve from their fallen state.

Satan first models an *experiential* mode of knowing in his encounter with Eve.³⁸³

His tactic is to make apparent the habitual craving of “[a]ll other beasts” for the fruit and produce in Eve a “like desire” for it (IX. 592). All animals, whom he resembles (“I was at first as other beasts that graze / The trodden herb, of abject thoughts and low, / As was my food, nor aught but food discerned / Or sex, and apprehended nothing high” (IX.571-574)), could undergo the same transformation. Satan does not mark an intrinsic difference between the serpent and other beasts, since they are connected by their “like desire.” While his experience is personal, it is not necessarily a unique event, he implies. He hopes to tempt Eve not with the evidence of singular transformation but by appealing to sensory perceptions, similitude, and the narration of a common, unplanned experience. His inner change in being is incidental to this act of consumption: “Sated at length, ere long I might perceive / Strange alteration in me, to degree / Of reason in my inward powers, and speech / Wanted not long, though to this shape retained” (IX.598-601). Even when he speaks about this “Strange alteration” he “perceive[s]” in himself “ere long,” he does not present himself or the tree as proof. This change in “inward powers and speech” leads him to “speculations high or deep” and culminates in this scene (IX.602): “to come / And gaze, and worship thee of right declared / Sov’ reign of creatures, universal dame” (IX.610-612). Satan presents this enhanced cognitive faculty as a by-product of desire and suggests to Eve that a similar experience is possible for all. Although Edwards argues that he is “falsifying experimental data,” Satan is not providing *evidence* here.³⁸⁴ He is

³⁸³ The narrator associates Satan with the experiential early on: he describes the fallen angel’s “reiterated crimes” and marks how Satan “Darts his experienced eye, and soon traverse / The whole battalion views” (I.214, 568-569).

³⁸⁴ Edwards, 17.

only trying to make “evident,” to borrow a term from Dear, that he speaks as a result of eating the fruit.

Satan is primarily interested in articulating the possibility that all creatures can undergo this common experience. To do so, he stresses its unpremeditated nature: “on a day roving in the field, I chanced / A goodly tree far distant to behold / Loaded with fruit of fairest colors mixed, / Ruddy and gold” (IX.575-578). His use of indefinite articles and appeal to contingency—he only “chanced” upon the tree—prevent the reader, and Eve, from detecting particular examples or locations. His words negate the supposition of a preplanned trial. Unlike experiments that, according to Dear, necessitate the explication of “singular events, explicitly or implicitly in a specific time or place,” Satan’s experience could occur anywhere, anytime.³⁸⁵

Moreover, if an experience is an occurrence in which “there is nothing in the mind that was not first in the senses,” Satan’s recounting of his supposed transformation is experiential in its saturation with sensory details:³⁸⁶

I nearer drew to gaze;
When from the boughs a savory odor blown,
Grateful to appetite, more pleased my sense
Then smell of sweetest fennel or the teats
Of ewe or goat dropping with milk at ev’n,
Unsuck’d of lamb or kid, that tend their play.
To satisfy the sharp desire I had
Of tasting those fair apples, I resolved
Not to defer; hunger and thirst at once,
Powerful persuaders, quickened at the scent
Of that alluring fruit, urged me so keen. (IX.578-588)

The tree “pleased [his] sense”; its “savory odor” drew him to “smell” it and “gaze”; it produced an “appetite” and finally propelled him to “tasting” it. The wish “Not to defer,”

³⁸⁵ Dear (1995), 25.

³⁸⁶ Dear (2001), 131.

is a product of “sharp desire.” He repeatedly ate till he had his “fill,” and “spared not” (IX. 595-596). The tree habitually creates “[p]owerful persuaders” in all animals who approach it, and who look on “longing and envying” when the serpent emerges as the only animal that could “reach” it (IX.593). Satan’s description, which mostly lacks particulars (he does label the fruits as “fair apples” once (IX.585)), is about the habitual, common, and partially equalizable force of sensory perception and it does not explicate any particular knowledge claims.

Eve, however, displays a cautious curiosity from the moment she witnesses the talking serpent.³⁸⁷ She interrogates this natural anomaly, or “monstrosity,” to borrow Edwards’ term:

Not unamazed she thus in answer spake.
 “What may this mean? Language of Man pronounced
 By tongue of brute, and human sense expressed?
 The first at least of these I thought denied
 To beasts, whom God on their creation-day
 Created mute to all articulate sound;
 The latter I demur, for in their looks
 Much reason, and in their actions oft appears.” (IX.552-559)

Since the “language of man pronounced” and “human sense expressed” by the serpent falsifies Eve’s past experience of creatures “mute to all articulate sound,” she stands “Not unamazed.” Although she initially draws on her memory, Eve almost immediately turns to her unique cognitive skills and focuses on what *she* believes: “The latter I demur.” She separates what she “thought,” or her past knowledge, from what exceeds perception: that beasts might have reason.

Eve dissociates this specific instance from a form of common knowledge that equates seeming with being. She is not so “overwhelmed with wonder,” as Fish suggests,

³⁸⁷ On innocent curiosity in *Paradise Lost*, and more generally its function as an instrument of knowledge, see Picciotto (2010), esp. Introduction.

that she cannot question the deviations from nature.³⁸⁸ The double negative captures her suspension between wonder and epistemic curiosity. In answering the “articulate” serpent, a perfect example of Baconian “deviating instances,” she responds to something unique that demands explanation. Her seeking the cause, “What may this mean?” sounds like a query about signification but it is as much a question of ontology. Her focus on causes prompts a series of questions about process and being: “say, / How cam’st thou speakable of mute, and how / To me so friendly grown above the rest / Of brutal kind, that daily are in sight?” (IX.562-565). As she weighs what she knows against unexplored possibilities, Eve models both curiosity and skepticism through only a partial identification with the anomalous serpent.

Instead of making Satan “initiat[e]” an experiment that Eve immediately duplicates, as Fish claims, Milton makes Eve inaugurate an *evental* mode of knowing.³⁸⁹ Eve does not succumb to tasting the fruit and repeating the experience, partially because she thinks the unique ontological status of the serpent is a worthy object of inquiry. She focuses on the unique *event* that enabled his transformation; to satisfy her epistemic curiosity, she seeks the specific site of consumption, where she can unravel the truth of the serpent’s claims and locate both cause and meaning of his transformation. Adam and Eve are defined, from creation, as beings who rely on local details to understand the world.³⁹⁰ Eve’s waking moment provides a perfect example of her association with local

³⁸⁸ Fish (1998), 248.

³⁸⁹ *Ibid.*, 250.

³⁹⁰ See McColley (1983) and Ken Hiltner, *Milton and Ecology* (Cambridge: Cambridge UP, 2003), for Eve’s particular affinity to the place of Eden. For the value of place, in addition to Hiltner, see John Gillies, “Space and Place in *Paradise Lost*,” *ELH* 74.1 (2007): 27-28; Maura Brady, “Space and the Persistence of Place in *Paradise Lost*,” *Milton Quarterly* 41.3 (2007): 167-182; Andrew Mattison, *Milton’s Uncertain Eden: Understanding Place in Paradise Lost* (New York: Routledge, 2007).

place and displays how she defines and understands herself in relation to her surroundings:

That day I oft remember, when from sleep
I first awaked, and found my self reposed
Under a shade of flow'rs, much wond'ring where
And what I was, whence thither brought, and how.
Not distant far from thence a murmuring sound
Of waters issued from a cave and spread
Into a liquid plain, then stood unmoved
Pure as th' expanse of heav'n; I thither went
With unexperienced thought, and laid me down
On the green bank, to look into the clear
Smooth lake, that to me seemed another sky. (IV. 449-459)

Eve's detailed exposition draws on the particulars and immediacy of her surroundings. While referential markers such as "That day" and "I first awaked" enable her to locate the self in a particular temporal moment, descriptions like "Under a shade of flow'rs," "the green bank," and the "clear / Smooth lake" associate this temporal immediacy with a specific place. Moreover, Eve's interrogations, of "where," "what," and "how" demand specific responses, much like Adam's initial interrogations about his identity: "*who* I was, or *where*, or *from what* cause" (VIII.270, my emphasis). Scholars have long marked Eve's particular association with the garden, but both Adam and Eve define and know themselves and the world by associating their singular identities with local entities and bounded markers. Eve repeats this process of localization in her interaction with the serpent.

On hearing the serpent's detailed experiential exposition, Eve, "more amazed unwary" reiterates her cautious curiosity: "Serpent, thy overpraising leaves in doubt / The virtue of that fruit, in thee first proved: / But say, where grows the tree, from hence how far?" (IX. 614-617). Eve demands specific answers from the serpent and asks "where"

the tree is and “how far” it is from their current location. She does not dismiss the efficacy of the tree, “[f]or many are the trees of God that grow / In Paradise, and various, yet unknown” (IX. 619-620), but the serpent’s “overpraising” heightens, rather than lessens skepticism. It is Eve who sees the serpent as an anomalous object of inquiry. She, and not Satan, seeks *evidence* for the “virtue of that fruit” which she acknowledges has been “proved” by the latter. Yet she refuses to accept that this anomalous event and this singular evidence automatically necessitate replication.

Since Eve’s initial cautious response suggests to Satan that she might not succumb to a purely sensory experience or even repeat his dissimulated act, he transforms his narration of consumption into an *experiment*: a historically singular incident that is repeatable and can therefore provide generalizable *evidence* of change. Satan immediately deploys localized particularities to present himself as a disinterested *witness*: “if thou accept / My conduct, I can bring thee thither soon” (IX.629-630). Satan’s embrace of the role of the witness marks his first foray towards the experimental epistemology. While he counters Eve’s wariness about his “overpraising” by asking her to “accept” his “conduct,” he tones down his eagerness through the conditional “if.” The suppression of desire and personal investment introduces disinterestedness in his claims and transfers the burden of action onto Eve. While she defines her interlocutor as an anomaly she must investigate, Satan transforms the animal into an agent of knowledge who will lead Eve to the imagined laboratory where the tree will be subject to investigation. By directing her to one particular tree, “the way is ready, and not long, / Beyond a row of myrtles, on a flat, / Fast by a fountain, one small thicket past / Of blowing myrrh and balm,” Satan translates an act of consumption into a dissimulated

experimental event (IX.626-629). Refusing to objectify the serpent into a piece of evidence, he slowly subjects the tree, and Eve, to trials.

When Satan points her to the particular place where the tree is located, Eve foregoes the possibility of conducting a trial herself. She now accepts the serpent's status as a disinterested witness. In short, she refuses his experimental strategy that would enable her to *replicate* his act. Instead, she continues to foreground the unique *eventness* in his narration:

“Serpent, we might have spared our coming hither,
Fruitless to me, though fruit be here to excess,
The credit of whose virtue rest with thee,
Wondrous indeed, if cause of such effects.
But of this Tree we may not taste nor touch;
God so commanded, and left that command
Sole daughter of his voice; the rest, we live
Law to ourselves, our reason is our law.” (IX.647-654)

Stressing her inability to “taste” or “touch,” the fruit, Eve discounts a repeatable trial. God's command forces her to credit the serpent's testimony, even as this endows “credit” on the tree. Consumption is a transgression and a violation of divine law. Yet as the serpent's credit and virtue become evidence of the tree's qualities, this transference of credit disrupts the dichotomy between knower and known, subject and object that both characters are attempting to enforce.

Although Eve still employs conditional reasoning, inquiring “if” the tree were the “cause of such effects,” and even though she echoes a distinctly Miltonic argument, that “reason is our law,” her increasing trust in the serpent's words obscures her initial focus on his anomalous ontology. She now reads the serpent as a witness whose unique act provides new understanding. Eve stabilizes her original object of inquiry—cause of “language of man pronounced”—into a fact when she describes it as an “effect” and

accepts the tree as the “cause” of this effect. By identifying the serpent as a credible witness, she foregoes his status as an *object* of interrogation and replaces one anomaly with another singularity: the tree for the serpent.

It is Eve who educates Satan about the value of local knowledge when she directs him away from a purely sensory experience towards its epistemic stakes. An epistemology evolves, she suggests, out of the eventness of a specific occurrence: Where does it occur? When does it occur? Which particulars are worth investigating? In underscoring Eve’s initiating role in this way, I wish to reverse the strain of argument that suggests, in Edwards’ formulation, that “[r]ather than to ‘make experiment’ of the serpent’s claims, [Eve] chooses to accept the experience he offers.”³⁹¹ This line of thinking inevitably defines Eve as a passive recipient of the serpent’s claims, whereas it is Eve who, through her caution and her demands for specific answers, repeatedly makes Satan revise his strategies. Eve does not “abandon *openmindedness*” when she lets credibility “rest” with the serpent as Edwards suggests, but she does relinquish her focused object of inquiry.³⁹² how and why does the serpent speak? The constant revisions of objects, experiments, and aims enable Satan to “[abuse] the potential of the new experimental philosophy,” as Edwards argues.³⁹³

Yet Satan only recasts roles that are unstable from the start. Eve initiates an evental epistemology and accepts the serpent’s word only because she perceives it as evidence of an unrepeatable incident. In her acceptance of his status as a reliable witness, she also defines his anomaly as an established fact. But since Satan’s aim is to make Eve eat from the tree, he must force replication: he realizes that he must serve as both *witness*

³⁹¹ Edwards, 21.

³⁹² Ibid., 36.

³⁹³ Ibid., 18.

and *evidence* of a generalizable, and not a unique, transformation. He now redirects Eve's attention back to the anomalous ontology of the serpent, which, he suggests, speaks reliably *because* of his change in being. Satan couples Eve's concept of the singular event with the notion of repeatable experience: his *experimental* strategy, he promises, will transform *Eve* herself, since his change only represents a unique instantiation of the generalizable process of change in being.

When Eve shifts the focus away from the serpent to the tree and accepts her interlocutor as a reliable witness, Satan refines his tactic and depersonalizes his fabricated, unplanned experience into an experiment that provides a particular example of ontological change. While he had earlier stressed *his* perceptions through the repeated use of personal and possessive pronouns ("I," "me," "my" (IX.575, 588, 580)), he now primarily directs attention away from the self. He employs analogy not to liken himself to other beings, but to describe a singular event that might after all provide *evidence*, in the figure of the serpent, of universal change in being:

[God] knows that in the day
Ye eat thereof, your eyes that seem so clear,
Yet are but dim, shall perfectly be then
Opened and cleared, and ye shall be as gods,
Knowing both good and evil as they know.
That ye should be as gods, since I as man,
Internal man, is but proportion meet,
I of brute human, ye of human gods. (IX.705-712)

Satan employs similitude to enunciate the promised transition of tending nearer to God. He argues, that "since" he is able to become "as man / Internal man," by analogy Eve too can rise to be "as gods." His new state of being is a proven instance that serves as *evidence* of what *she* will be. Satan's heretical pronouncement of plural "gods" is masked by his promise that proportionate rise always maintains a gap between the subject

undergoing change and that towards which he or she tends. The repetition of the term “as” reiterates this disparity and suggests that one is always engaged in a process of ontological change; what one “should be” is meted out in “proportion meet,” and one only rises appropriate to one’s ontological being and no more.

Satan’s tactic points to the larger questions of singularity and generalization that govern the poem’s strategy of accommodation: how does one know and interpret the state of being one occupies in Paradise? By redirecting attention to the serpent’s anomalous status, Milton asks: is one’s state of being in the epic unique and irreproducible, or is it part of repeatable and interchangeable processes? Accommodating knowledge of the complete unknown remains dependent on explicating modes of being using epic events: if one accepts states of being are unique, anomalous, and irreproducible, as Eve interprets at *this* stage in the scene, one can potentially avoid transgressive replications. But if one accepts Satan’s appeal to repeatability and generalization, one moves closer to contemporary philosophers who promised to standardize knowledge by studying the *natural* world and in the narrated world of the epic, one also moves closer to the Fall. Satan succeeds, the poem suggests, because he combines two distinct modes of thinking in his temptation—on being and on experiment—and he converts Eve’s initial question of the serpent’s anomalous singularity into a generalizable process she immediately recognizes.

Satan’s argument would be of particular interest to Eve because of her earlier dream, in which she is visited by an interlocutor “shaped and winged like one of those from Heav’n”; this figure promises that she can “Ascend to Heav’n, by merit thine” (V.55, 80). More importantly, it echoes the epic’s most forceful assertions on

prelapsarian being. In his tutorial to Adam, Raphael promises ontological leveling as the end of individual progression.³⁹⁴ All things are made of “one first matter” (V.472). They are

Endued with various forms, various degrees
Of substance, and in things that live, of life;
But more refined, more spirituous, and pure,
As nearer to him placed or nearer tending
Each in their several active spheres assigned,
Till body up to spirit work, in bounds
Proportioned to each kind. (V.473-479)

Being, suggests Raphael, is always in states of becoming, forever “nearer tending” to something. Raphael frames being as a *process*, and in this way Milton presents readers with an *ontology of tendency*. This tendency to change creates “active” rather than static understanding of states of being in prelapsarian Eden. In her juxtapositions of the “what” and the “how” when she questions the serpent, Eve implicitly relates being to process. The narrator too terms the serpent “spirited” (IX.613), suggesting that there occurs a change in his substantial proportions. These repeated appeals to a graduated

³⁹⁴ Scholars read this exposition of proportional rise as sufficient proof of Milton’s monist materialism. The “monist materialist” view was most comprehensively established by Fallon (1991) and has since been taken as critical orthodoxy. For influential monist studies, see William Walker, “Milton’s Dualistic Theory of Religious Toleration in a ‘Treatise of Civil Power,’ ‘Of Christian Doctrine,’ and ‘Paradise Lost,’” *Modern Philology* 99.2 (2001): 201-230. In recent years, some scholars have challenged this position. See, in particular, Rachel J. Trubowitz, “Body Politics in *Paradise Lost*,” *PMLA* 121.2 (2006): 388-404, and Sugimura, who offers a full-scale revision of materialism in Milton’s works throughout his poetic career. However, Milton’s monism is so taken for granted that it functions as a self-explanatory instrument in as diverse works as Stephen B. Dobranski, “Clustering and Curling Locks: The Matter of Hair in *Paradise Lost*,” *PMLA* 125. 2 (2010): 337-353 and Diane Kelsey McColley, *Poetry and Ecology in the Age of Milton and Marvell* (Aldershot: Ashgate, 2007). Dobranski claims that a study of hair in *Paradise Lost* “illustrates the value of exploring how Milton’s animist materialism affects his depiction of material objects and physical gestures” (349) while McColley argues that belief in “monism” and “vitalism” enabled poets to provide a solution to environmental problems and create poetics that did not distinguish between humans and non-humans (Introduction and 68-71). For a more general exploration of the place of “matter” in relation to creation and Chaos, see John Rumrich, “Milton’s God and the Matter of Chaos,” *PMLA* 110.5 (1995) 1035-1046. Harris provides one way of understanding how matter is related to time in the Renaissance.

understanding of individual change reveal how knowing in the epic remains dependent on apprehending states of being which are always in process.

Satan perfectly echoes the narrator's and Raphael's promises of attaining "perfection" (V.472) when he describes his proportional rise in degree to "internal man." He undercuts Eve's initial emphasis on the serpent's *unique* ontology by arguing that this anomaly is actually an indirect route to becoming part of "nature's ordered ways," in which it tends nearer to godhead by achieving human speech and sense. Satan, then, successfully converts this ontology into an epistemology of repeatable instances: his *experiment*, he proposes, will contrive this process of change in being. Observing Eve's vacillation about action and ends, Satan foregrounds the tree—the "Mother of science" (IX.680)—as the object under investigation and subordinates his own experience and supposed transformation: "now I feel thy power / Within me clear, not only to discern / Things in their causes, but to trace the ways / Of highest agents" (IX.680-3). By introducing the tree as a mediator that actualizes the possibility of a habitual process, Satan suggests the tree *produces* experiments.³⁹⁵ He translates himself from a "deviating instance" to an exemplar of the systematic processes that constitute the natural order of things, by stressing the tree's gifts. *It* uniquely allowed him to see the inherent "cause" and "trace the ways" to understanding. The tree is an instrument that transforms how one knows, and the experience of eating becomes secondary to the knowledge this consumption provides. By tending or directing a subject towards godhead, it methodizes into a repeatable procedure the inevitable process of change.

³⁹⁵ I understand "mediator" as "an original event and creates what it translates as well as the entities between which it plays the mediating role" (Latour, 1993), 73.

Satan revises his earlier claims about similitude, in which he suggests that all other beasts were *as* the serpent, from a leveling argument into a hierarchal one. Instead of physical markers of difference, he now stresses “Internal” similarities with human beings. Satan perfectly captures the process of becoming that Raphael enunciates. He now refers Eve to the instruments that can actualize his argument and prove its universality. Downplaying his individualized narrative to outline a universalizing and analogical process, he reports an experiment that can be replicated because he knows the effects in his being. This experiment, according to Satan, proves the following: eating the fruit from the tree of knowledge enables you to *tend* in “proportion” towards a new state of being. Just as the serpent has internally risen from bestiality to manhood by achieving the faculties of “reason” and “speech,” so too humans can tend towards Godhead. The implicit claim is, of course, about a universal fact: not only serpents or humans, the two examples he chooses, but *all* living creatures might attain “perfection.”

The serpent’s existence makes visible, or more precisely audible, Raphael’s and the narrator’s speeches on tendency. He now draws attention not to his craving but to his agency and to the possibility of knowledge he embodies: “Look on me, / Me who have touched and tasted, yet both live, / and life more perfect have attained then fate / Meant me” (IX.687-690). His stress on “life more perfect” and exceeding what “fate / Meant” for him introduces elements of premeditation and design into what was before a spontaneous, unplanned act. Positioning himself as experimenter, witness, and example, Satan combines *Eve*’s initial focus on the singular event with his general experience to propose a perfectly replicable experiment. Moreover, by making ontological progression

central to his experiment, Satan convinces Eve that events are replicable *because* they are connected to the “nearer tending” process of prelapsarian becoming.³⁹⁶

Eve accepts his argument about actualizing ontological change because it is predicated on the very structures of being she need not question; the serpent perfectly echoes Raphael’s speech. Satan’s conversion of the ontology of tendency into an experimentally repeatable act also seems plausible because he makes explicit the hierarchy that remains latent in Raphael’s tutorial: there is similitude but never identity between two orders of being. In order to maintain her expected distance from the serpent—they can only be “as” each other and not identical in their states of being—Eve has to cast herself into the role that she had initially assigned to it: an entity undergoing change. She makes the error of supposing her particular action can initiate the universal promise of proportional ascent; she now foregoes her eventual epistemology to adopt Satan’s promise of the repeatable experiment. Perceiving the serpent’s words are “impregn’d / With reason,” Eve, Milton’s creation, must explore the possibility this presents. She breaks the prohibition by giving “too easy entrance” (IX. 737-738, 734) to the very words she had been resisting a little while ago. Substituting the tree for the serpent, she transfers all her attention to the possibilities promised by the former:

³⁹⁶ Satan’s argument here also gestures to what many in the seventeenth century termed an ideal experiment: that on a human being. On the ethics of animal experimentation, and the “ideal” nature of human experiments, see Anita Guerrini, “The Ethics of Animal Experimentation in Seventeenth-Century England,” *Journal of the History of Ideas* 50.3 (1989): 391-407. Although Milton is not directly participating in nascent discussions about the ethics of vivisection and animal experimentation that were emerging in seventeenth-century Britain, the unstable positions of knowing subjects and objects of interrogation does suggest some ambivalence towards modes of knowledge that completely differentiated the knower from the known, the human from the non-human. Scholars such as Hiltner and Diane McColley (*Poetry and Ecology in the Age of Milton and Marvell*), in their “green” readings of Milton’s works, have underlined the “deep ecology” (Hiltner, 4) that connects humans and animals to their surroundings in Milton’s prelapsarian Eden. Eve relinquishes this connection in her position as an experimenter, when she ignores the unity of the serpent’s being except as an object of scrutiny. She worries about the serpent’s death (“How dies the serpent? He hath eat’n and lives” (IX.764)) only when she muses about her own fate: the query about the serpent’s death immediately follows the phrase “we shall die” (IX.763).

Pausing a while, thus to her self she mused.
 “Great are thy virtues, doubtless, best of fruits,
 Though kept from man, and worthy to be admired,
 Whose taste, too long forborne, at first assay
 Gave elocution to the mute, and taught
 The tongue not made for speech to speak thy praise. (IX.744-749)

Earlier Eve had marveled at the serpent’s ability to speak and decided “such wonder claims attention due” (IX.566). However, after Satan shifts the focus from the experience of the serpent to the virtues of the tree, she too concentrates on it and accepts it as the “Mother of science.” Instead of examining the *specific* object she identified earlier, the “best of fruits” now “claims attention due.” The act of “elocution” is now a byproduct of the virtues to be investigated. Eve can still “[pause] awhile” and “muse,” but the action of eating becomes secondary to the universal knowledge and change the replication promises: the tree will now produce *effects* in her. Her belief that the act will provide ontological progression makes Eve replicate the very event she had earlier deemed unrepeatable.

If Eve’s position corresponded to that of Royal Society experimenters, she could follow their footsteps and seek corroboration whether this “first assay” ever occurred, which might have, as Edwards suggests, “exposed Satan as a charlatan.”³⁹⁷ Yet, her condition is very different from the sociable world of seventeenth-century experimental science, since no other corroboration is possible in Eden. Eve, like others in the epic such as Uriel, is deceived by a dissembling Satan, but she ventures beyond the laws set for her and practices on herself. Her encounter, instead of instantiating her ontological progression, completely disrupts it. It reverts back into a singular act of consumption, a sensory event marked by the narrator’s words “she plucked, she ate” (IX.781). This

³⁹⁷ Edwards, 37.

moment produces a very different universal experience than what she expects: “Earth felt the wound, and Nature from her seat / Sighing through all her works gave signs of woe, / That all was lost” (IX.782-784). Through the lure of replication, Satan’s dissembling experience transforms Eve’s eventual epistemology into her “sad experiment.”

Yet Eve’s retrospective terminology, “experiment,” unique in Milton’s poetic corpus, raises a question that haunts the scene as well as consequent scholarship: is Eve experimenting? Her fall stages the absolute *impossibility* of experiment in Paradise as it irreversibly fractures her prelapsarian existence and pivots her to the unknown future. Eve’s belated terminology captures her recognition of her error; in a fallen state, she can label her capitulation to the lure of replicability as an “experiment.” Her fall, she recognizes, remains contingent in the narrative until she believes the serpent’s experience is generalizable. In the moment she acts, she mistakes an event—singular, disruptive, and irreversible—for an experiment and attempts an impossible replication. Eve’s fall, then, acutely stages its own “eventness.” Experiment, predicated on analogy and repetition, emerges as a mode of knowing suited to interpreting the actual world that the fallen human mind cannot immediately grasp; as such it is a perfect vehicle for the rebellious Satan, who appropriates the promise of continuity of being into his formulation of repeatability. But by staging how the Fall irrevocably disrupts ontological progression, and by revealing how it forever distances Eve from the tendency to Godhead, Milton suggests that the two must remain separate: *experiments*, as postlapsarian ways of understanding, cannot fully accommodate prelapsarian ontologies. Forever severed from her own unfallen existence, Eve retroactively understands that experiment cannot take her back to prelapsarian Eden.

From Experience to Analogy: The Failures of Repetition in *Paradise Lost*

In this way, Eve's trial is also a crucial dramatization of Milton's *poetic* method, in which he explores the epistemic potential of unrepeatability and by extension the shortcomings of repeatable experiences. It underscores, through an inverse logic, the limited scope of *cumulative* knowledge: when singular events provide certainty, repeatable experiences might at best provide probable knowledge. However, since characters like Eve cannot dissociate their self-knowledge from a multiplicity of experiences until their very existence is overturned by a singular event, the poet must constantly grapple with the fallacy of experiential learning. To demonstrate that characters' knowledge-making practices remain dependent on their understanding of states of being in the "transient world," *Paradise Lost* foregrounds how analogical reasoning structures regular experiences in the epic (XII. 554).

The creation of earth provides the clearest example of how what one perceives as a singularity might actually be part of a larger recurring yet changing pattern. Creation becomes an event when the *newness* of the created world defines how entities come to exist in time. The Argument to Book I mentions "a new world and new kind of creature to be created, according to an ancient prophecy or report in Heaven," which gestures to Satan's speech in Book I about novelty and creation ("Space may produce new worlds; whereof so rife / There went a fame in Heav'n that he ere long / Intended to create, and therein plant / A generation" (I.650-653)) and also refers to the creation of earth and the living beings that inhabit it.³⁹⁸ The earth is "built / With second thoughts, reforming what

³⁹⁸ The "new worlds" of the poem also implicitly or explicitly refer to colonial enterprises, travel, and scientific speculations on cosmology. For the relation of Milton's epic to American expansion and imperialism, see J. Martin Evans, *Milton's Imperial Epic: Paradise Lost and the Discourse of Colonialism* (Ithaca: Cornell UP, 1996). For an exploration of empire in relationship to genres of epic and romance, see

was old!” (IX.100-101). It is “second” in time and cognition, and it perfects the “old.”

Although Raphael suspends the reader between Ptolemaic and Copernican world systems, and the narrator invokes new methods of seeing other worlds through references to Galileo’s telescope and espouses a prelapsarian cosmology, the epic’s *vision* of creation is singular in spite of its suggestion that the “second” will perfect the first.³⁹⁹ The realization of the new is predicated on the complete replacement—a form of erasure—of the old, and the repetition of the concept of the “new created world” (III.89) in various forms translates the repeated and repeatable structure into a unique epic event of creation.⁴⁰⁰ In the epic, creation unfolds within a delimited time and within one specific Book. This perfectible structure of creation also opens up, at the level of worldmaking, an interrogation of how and if experiences can be reproduced and subsequently asks what kind of epistemology do repeated experiences produce.⁴⁰¹ Although the specific act of

Quint. For an exploration of how cosmic order is related to political order, see Rogers. The scholarship on Milton’s cosmology and the discovery of “new worlds” in early modern science is extensive. For representative works, see Nicolson (1935); Patterson (1993); Martin (2001); Dodds, “Milton’s Other Worlds.”

³⁹⁹ Milton’s relationship to Galilean discoveries and astronomy has always drawn critical attention. See Nicolson, Patterson, John C. Ulreich, “Two Great World Systems: Galileo, Milton, and the Problem of Truth,” *Cithara: Essays in the Judaeo-Christian Tradition* 43 (2003): 25-36; Marjara, esp.38-162; Miller, 155-159; Amy Boesky, “Milton, Galileo and Sunspots: Optics and Certainty in *Paradise Lost*,” *Milton Studies* 34 (1997): 23-42.

⁴⁰⁰ See Regina M. Schwartz, *Remembering and Repeating: Biblical Creation in *Paradise Lost** (Cambridge: Cambridge UP, 1988), for the iterative and ritually repetitive nature of Milton’s exploration of origins. This phrase, “new created world,” echoes in various forms throughout the epic. For example, it shows up in Satan’s imagined “Amongst innumerable stars, that shone / Stars distant, but nigh hand seemed other worlds, / [...] but who dwelt happy there / He stayed not to inquire” (III.565-571); in Raphael’s narration of creation: “Witness this new-made world [...] / with stars / Numerous, and every star perhaps a world / Of destined habitation” (VII.617-622); when Raphael warns Adam not to seek to know too much: “heav’n is for thee too high / To know what passes there; be lowly wise: [...] / Dream not of other worlds, what creatures there / Live, in what state, condition, or degree” (VIII.172-177). For the fictive astronomy that existed before the Fall, in which the ecliptic and equatorial planes coincide, see III.555-561; IV.209-216; V.18-25. In spite of his own warnings, Raphael himself imagines various possible worlds in his conversation with Adam.

⁴⁰¹ It also gestures to the importance of temporality in Miltonic worldmaking. Creation is both evental and predictive. The actualization of one prophecy allows us to envision nonexistent entities coming into being in the future. For example, Adam speaks of “nations yet unborn” as something that will eventually come into existence (IV.663). Michael’s promise to Adam “thou hast seen one world begin and end; / And man as from a second stock proceed” also references a deferred but inevitable future (XII.6-7).

worldmaking seems perfectible, such replication is forever out of reach and the particular instance remains unrepeatable from the reader's perspective.

Paradise Lost often defines its characters' forms of existence by resisting direct analogies between particulars and universals. Eve identifies herself both as individual and as type; after eating the fruit, she contemplates her imminent death "Then I shall be no more, / And Adam wedded to another Eve, / Shall live with her enjoying, I extinct" (IX.827-829). While Eve's name lends itself to this interplay between the particular and the type or between exemplarity and universality, her imagination of "another Eve" raises the question not only of nomenclature but of ontology: what does it mean to *be* Eve? ⁴⁰² The threat of being replaced by "another Eve" exposes her inability to know herself completely as individual or as type. The proper name signifies a unique poetic character but it also refers to all individuals who might replace her. Eve's singularity, then, serves as an index of universality. Moreover, when Eve imagines the "extinct" "I" being replaced, she cannot predict the future without indexing her self in time: "Then I shall be no more." Yet her understanding of states of being does not accommodate disappearance; after all, she will be replaced by another *Eve*. As Eve's reading of the self as type is predicated on the erasure of an original individual, her dilemma exposes how knowing, and especially experiential routes to self-knowledge, are inseparable from states of being.

Satan, the universalizer *par excellence* in the poetic world, transforms such interpretations of individual being into an analogical mode of knowing. We see a forceful

⁴⁰² For naming and the relationship between individuality and generalization, see Leonard (1990). For Eve's name in particular, see 33-51. See Sugimura, 40-80, for the relationship between naming and concepts. A different version of this tendency is seen in the narrator's desire to simultaneously universalize through particular figures; he repeatedly describes Eve as the "general Mother" (IV.492) and Adam as the "general ancestor" (IV.659). For Adam as a general category and as an idealized prior version of individual and collective selfhood, see Picciotto (2010).

manifestation of this conjunction when he appropriates Raphael's language to tempt Eve. Satan employs analogy and resemblance to convince her (he addresses Eve as "Fairest resemblance of thy Maker fair" (IX.538)) and calls on tropes of universality (Eve is, according to him, "universally admired" (IX.542)). Specifically, he circumvents the complexity that Eve faces in her paradoxical understanding of selfhood by drawing direct analogies from past experiences to future possibilities in order to link individual experiences to universal knowledge.⁴⁰³ Satan's tendency to generalize inevitably leads to the prediction of the future by appeals to angelic being:

since by fate the strength of gods
And this empyreal substance cannot fail,
Since experience of this great event,
In arms not worse, in foresight much advanced,
We may with more successful hope resolve
To wage by force or guile eternal war
Irreconcilable, to our grand foe. (I.116-122)

Satan attempts to predict a future "since" he has marked the stability and relative immutability of angelic being. The modal verb "may" gestures to the "hope" or to the possibility of future success. He uses his past knowledge of material being, his "substance," and their recent "experience" as sufficient proof against unexpected effects. This analogical reasoning relies largely on the regularity of surroundings and on the predictability of the past. Satan disregards contingency, ignoring how the war in heaven has ruptured the continuum of being and action.

Raphael's ontology of tendency serves as a useful corrective to Satan's misreading: the "empyreal substance" is not immutable. Satan's surety of the past cannot

⁴⁰³ On analogy in *Paradise Lost*, see Marjara; Lara Dodds, "'Great things to small may be compared': Rhetorical Microscopy in *Paradise Lost*," *Milton Studies* 47 (2008): 96-117. For a recent work on the main issues in analogy, see Joshua P. Hochschild, *The Semantics of Analogy: Rereading Cajetan's De Nominum Analogia* (Notre Dame: U of Notre Dame P, 2010).

function as a precise indicator of future knowledge, since the fall of the angels does bring change in material form. Zephon, who spots a disguised Satan whispering in Eve's ear, marks this ontological change: "Think not, revolted Spirit, thy shape the same, / Or undiminished brightness, to be known / As when thou stood'st in Heav'n upright and pure" (IV.835-837).⁴⁰⁴ Yet Satan continues his generalizing tendency and relies on analogy and resemblance to compare the Fall of the angels with the impending fate of Adam and Eve, as he imagines this "great event" has given him "foresight" and he hopes to war with their "grand foe" by "force or guile." This form of analogical prediction, of course, becomes integral to his temptation of Eve.

Under Satan's influence, Beelzebub also elaborates on the comparable states of humans and angels ("some new Race called Man, about this time / To be created like to us, though less / In power and excellence, but favoured more" (II.348-350)). This likeness enables them to imagine an analogous transformation in the future, the fall of Adam and Eve. As God informs his audience in heaven, however, there is a crucial difference between the angels' fall and that of man: "The first sort by their own suggestion fell, / Self-tempted, self-depraved: man falls deceived / By the other first" (III.129-131). One cannot assume that all events have predecessors, serve as harbingers of future changes, and are replicable. While Satan supposes that singular events do not create radically new modes of being, Zephon's observation, like God's claims, points to the insufficiency of this form of *predictive* analogy that is based on extrapolating the future by appealing to the predictability of past experience and of immutable being.

⁴⁰⁴ For the change in materiality of the fallen angels in relation to Milton's monism, see Fallon (1991), esp. 194-222. For Milton's angelology, especially in relation to intellect and intelligibility of substance, see Sugimura, 158-195.

Such analogical processes are not unique to Satan. The unfallen angels unquestioningly follow Satan when he rebels:

all obeyed
The wonted signal, and superior voice
Of their great potentate; for great indeed
His name, and high was his degree in Heav'n;
His count'nance, as the morning star that guides
The starry flock, allured them, and with lies
Drew after him the third part of Heav'n's host. (V.704-710)

Because of their past experiences and inclination to obey, they do not doubt the word of their “great potentate” as he invites them to perform the most transgressive act imaginable. Their previous allegiance, as well as Satan’s reputation, is sufficient to draw a “third part of Heav’n’s host.” Only Abdiel, “than whom none with more zeal adored / The deity, and divine commands obeyed” (V.805-806) marks the disjunction between their proposed action and “divine commands.” He alone can discard the codes of regularity, that they follow hierarchy in heaven, to reject the angelic error of analogy and expose the rebellion as an unprecedented rupture. Only Abdiel, then, comes to *know* from the unprecedented eventness of the proposed rebellion.

Knowledge in heaven remains predicated on analogy even after the war, and the unfallen angels continue to predict the unknown through past experiences. Uriel, the “sharpest sighted spirit of all in Heav’n,” fails to recognize Satan, who, disguised as a “stripling Cherub,” persuades Uriel of his sincerity (III.691, 636). Satan claims that an “Unspeakable desire to see, and know / All these his wondrous works, but chiefly man...Hath brought me from the quires of Cherubim / Alone thus wand’ring” (III.662-667). Appealing to an inexpressible curiosity, he desires to know more (“Brightest Seraph tell / In which of all these shining orbs hath man / His fixèd seat” (III.667-669)) and

tempers this zeal by expressing the appropriate end, “as is meet / The Universal Maker we may praise” (III.675-676). Because he draws on recent history and prior knowledge and performs the signs that Uriel’s experience has trained him to expect and accept, the latter cannot detect his dissembling act. Sincerity is the default mode of being in Heaven and appearances *usually* correspond to the inner truth (“goodness thinks no ill / Where no ill seems”(III.688-689)); Uriel need not expect the unexpected and continues to trust the repeatable structure of habitual experience. Only God can perceive what lies beyond: “neither man nor angel can discern / Hypocrisy, the only evil that walks / Invisible” (III.682-684). Uriel allows the “false dissembler” to pass by “unperceived” and even praises the cherub’s false claims (III.691): “thy desire which tends to know / The works of God, thereby to glorify / The great Work-Master, leads to no excess / That reaches blame, but rather merits praise” (III.694-697). Unlike Eve, who in her initial response dissociates what the serpent seems from what he *is*, Uriel assumes that appearances are precise indicators of inner virtue.

Uriel does discern the imposter, however, when Satan’s external expressions reveal his inner state of mind. Uriel, like Eve and Abdiel, learns from an anomalous event. Satan encounters the “Hell within him” on witnessing earth as well as “heav’n and the full-blazing sun” (IV. 20, 29). His “conscience” “wakes the bitter memory / Of what he was, what is, and what must be / Worse; of worse deeds worse sufferings must ensue” (IV.23-26). His facial expressions reflect this descent into “worse” fate: “while he spake, each passion dimmed his face...and betrayed / Him counterfeit, if any eye beheld / For Heav’nly minds from such distempers foul / Are very clear” (IV.114-119). While Uriel’s habitual experience initially misdirects him, the anomalous nature of Satan’s reaction—

itself brought about by Satan's increasing grasp of his changed state of being—arouses suspicion. Because Satan "Yet not enough had practiced to deceive / Uriel once warned...Saw him disfigured, more than could befall / Spirit of happy sort" (IV.124-128). Uriel admits to Gabriel that while Satan "seemed" zealous, he "soon discerned his looks / Alien from Heav'n, with passions foul obscured" (IV.565, 570-571). Taught by experience to trust what *seems* to be true, Uriel's sole perception of the anomalous—"once warned"—exposes that repeated experiences can be performed to deceive. The regularity of past experiences misdirect instead of revealing the "counterfeit."

Uriel's mistake and his subsequent realization of the truth from a singular and anomalous observation suggest that, at most, repeatable experiences provide probabilistic knowledge about what was *likely* to occur in any anticipated moment. Yet every actualized event, such as Eve's trial and Uriel's correct reading of Satan, can potentially disrupt this regularity in an instant. Uriel and Eve immediately before her fall are closely aligned in their approaches to learning: Uriel guides readers to pay attention to anomalies and Eve initially shows us how to respond to them. Both characters are deceived when they adopt forms of analogical *prediction*, in which past experiences substitute and misdirect from the "counterfeit," leading them to expect the complete alignment of past, present, and future, and of seeming and being. The predictive analogy proposed by Satan and adopted by the angels falsely suggests to its practitioners that likelihood *is* certainty, until a singular event unmask the gap between the two: these singular events are units of epistemic surety in the prophetic epic. By stressing the irreproducibility of events, Milton rejects the possibility that singular instances will progressively lead to universal knowledge. *Paradise Lost*, then, enacts its ways of thinking by centering its poetics

around unique, unrepeatable events; states of being in Eden are not translatable through the repeatable structure of experience that governs ways of knowing in the fallen world.

The poem does seem to posit a different, and perhaps more appropriate mode of analogical learning, when Raphael employs an analogy of likelihood (rather than prediction) in order to explain heaven to Adam. Since Adam remains unable to grasp events in heaven, Raphael undertakes a strategy of accommodation: “[W]hat surmounts the reach / of human sense, I shall delineate so,” he explains, “[b]y likening spiritual to corporeal forms, / As may express them best” (V.571-574). Although the earth is “the shadow of heaven, things therein / Each to other like, more than on earth is thought” (V.575-576). Raphael cannot narrate the war in heaven in plain terms and wonders “what things / Liken on Earth conspicuous,” can “lift / Human imagination to such height / Of godlike power” (VI. 298-301). His solution is “to set forth / Great things by small” (VI. 310-311). The analogy of “likening” serves as a corollary to the ontology of tendency he espouses: the “like” retains an incommensurable gap between the two entities being compared and it only allows an imperfect accommodation. Raphael models the impossibility of fully grasping the unknown because experience is, at best, “like” the unexperientiable. Analogy, suggests Raphael, cannot serve as the unit of certainty like the unique event, since the former offers only a *cumulative* way of knowing.

Prophetic Poetry: Certainty in a Fallen World

By reinforcing the unbridgeable gap between experience and certainty, Milton’s epic suggests that only the prophet-poet can make intelligible the prelapsarian world. It forcefully reverses the inspiring ideas of human possibility and collective prophesying he had imagined in earlier writing. In *Areopagitica* (1644), Milton privileges a form of

predictive analogy that joins freedom and prophetic action to collective experience.⁴⁰⁵

Milton argues that actors learn through a continual process of analogy: they “[search] what [they] know not, by what [they] know, still closing up truth to truth as [they] find it” (956). The search for the universal knowledge requires a communal and nationalistic “slow-moving reformation” (963), a “brotherly search after truth” (958). Milton envisions a “noble and puissant nation rousing herself like a strong man after sleep and shaking her invisible locks” (959). This transformation is made possible by the “wise and faithful labourers” who bring their individual labors and collectively “make a knowing people a nation of prophets, of sages, and of worthies” (957). These labors promise restoration of what is lost and fragmented, “to unite the dissevered pieces which are yet wanting to the body of Truth” (956).

Truth in *Areopagitica* represents the *sum* of all knowledge and promises a form of certainty that haunts the narrative of *Paradise Lost*. Milton argues that Truth

came once into the world with her divine Master and was a perfect shape most glorious to look on. But when he ascended and his apostles after him were laid asleep, then straight arose a wicked race of deceivers, who as that story goes of the Egyptian Typhon with his conspirators, how they dealt with the good Osiris, took the virgin Truth, hewed her lovely form into a thousand pieces, and scattered them to the four winds. From that time ever since, the sad friends of Truth, such as durst appear, imitating the careful search that Isis made for the mangled body of Osiris, went up and down gathering up limb by limb still as they could find them. We have not yet found them all, Lords and Commons, nor ever shall do, till her Masters second coming. (955-956)

⁴⁰⁵ For recent studies on freedom of expression in *Areopagitica*, see John Leonard, “*Areopagitica* and Free Speech,” in *Approaches to Teaching Milton’s Shorter Poetry and Prose*. Ed. Peter C. Herman (New York: Modern Language Association of America, 2007); James Rovira, “Gathering the Scattered Body of Milton’s *Areopagitica*,” *Renascence: Essays on Values in Literature* 57.2 (2005): 87-102. For an influential study on indeterminacy, see Stanley Fish, “Driving from the Letter: Truth and Indeterminacy in *Areopagitica*,” in *Re-membling Milton: Essays on the Texts and Traditions*. Eds. Mary Nyquist and Margaret W. Ferguson (New York: Methuen, 1988), 235.

This allegorized depiction of restoring Truth enables Milton to establish a direct relation between parts and whole, past and future. Because Truth existed in “perfect shape” in a distant past, it will be possible to reconfigure this perfection by “imitating” the familiar path of Isis. The “sad friends of Truth” perform the endless or at least endlessly-deferred but necessary task of reconstructing her severed body. Milton turns to the concept and the process of analogy to outline an experiential process—collecting, gathering—of striving towards the universal. The story of Isis provides a form of nationalist reconstruction using a narrative on which to model and replicate the unknown process. At the same time, the repeatable experiences that “continue seeking” methodize analogy, promising to restore an absent whole. Experiential and prophetic roles combine in the cumulative and collective action.

Milton imagines the path from particulars to universals as a collective, cumulative, and analogical restoration in *Areopagitica*, where multiple figures assimilate parts and lead themselves and others to a unified sum of knowledge. This march holds the promise of fulfillment, without the necessity of a gap that can never be bridged. In the 1640s, the revolutionary Milton predicts that England would become a land of prophets through its engaged collective of readers and writers even in a fallen world and defines the public role of the individual in contemporary England; he argues, “[t]o sequester out of the world into Atlantic and Utopian polities which never can be drawn into use will not mend our condition, but to ordain wisely as in this land of evil, in the midst whereof God hath placed us unavoidably”(943).⁴⁰⁶ By the time he published *Paradise Lost*, “this world” had changed significantly with limited or no public role left for him, and in the

⁴⁰⁶ For a representative work on Milton and Utopia, see Amy Boesky, “Milton’s Heaven and the Model of the English Utopia,” *SEL: Studies in English Literature, 1500-1900* 36.1 (1995): 91-110.

epic he reverts to his belief that only a select few, and primarily the prophetic poet, can access divine truth. Their very labors prophesy future restoration.

By the time he published *Paradise Lost* in Restoration England, “this world” had changed significantly with limited or no public role left for him, and in the epic he reverts to his belief that only a select few, and primarily the prophetic poet, can access divine truth. In his “Autobiographical Digression” in *The Reason of Church-Government Urg’d Against Prelaty* (1642) he had argued that only the select few can serve both God and nation through their writing, and he identifies himself as one of the “selected heralds of peace and dispensers of treasure inestimable” (836). After outlining his ambitions to compose a national epic, he argues that he must write this present tract because he is one of this “selected” few: “These abilities, wheresover they be found, are the inspired gift of God rarely bestowed, but yet to some (though most abuse) in every nation” (841). Since he has been bestowed these gifts by God, argues Milton, it is morally necessary that he act in the current moment. *Areopagitica* offers a potential method of fulfilling this self-representation as one of the “dispensers of treasure inestimable” by translating the logic of individual “abilities” into a cumulative and collective search for Truth.⁴⁰⁷ *Paradise Lost*, however, supplants *Areopagitica*’s collective prophetic experiences with individual voices, including the narrator and Michael, only who can translate the complete unknown of unfallen and divine language into one that can be understood by fallen readers. In this changed environment of “evil days” and “evil tongues” (VII.26), suggests the narrator, a collective, experiential, and repeatable search is insufficient to reassemble “Truth.” A “nation of prophets, of sages, and of worthies” will not materialize in the historical

⁴⁰⁷ For a recent exploration of how Milton’s authoritative self-representation influences his argument in *Areopagitica*, see Stephen M. Fallon, *Milton’s Peculiar Grace: Self-Representation and Authority* (Ithaca: Cornell UP, 2007), esp. 136-145.

present through the unison of “wise and faithful labourers.” How then, does one learn in the fallen world of *Paradise Lost*?

In the last two books of the epic, the archangel Michael, who “future things canst represent / As present” stands at the “top / Of speculation” and uses examples from approaching times that fully “show” Adam “what shall come in future days” (XI.870-871, XII.588-589, XI.357).⁴⁰⁸ The latter with “joy / Surcharged” inquires, “say where and when / Their [the son and serpent’s] fight, what stroke shall bruise the victor’s heel” ((XII.372-373, 384-385). To Adam’s demand for specifics, the “where” and “when,” Michael responds: “Dream not of their fight, / As of a duel, or the local wounds / Of head or heel” (XII.386-388). Adam must “learn, that to obey is best” by “fulfilling that which [he] didst want / Obedience to the law of God” (XII. 561, 396-397). Michael’s “prediction” of the approaching future must rely on particulars because the “seer blest” can only “[measure] this transient world” (XII.553-554).⁴⁰⁹ Yet the archangel warns Adam to adhere to a universal law of obedience and reject the “local,” the “where and when.”

Michael’s correction foregrounds that one learns through an exposure to multiplying, diverse examples in historical time only if one refuses to accept these “local” instances will progressively aggregate into universal truth. Adam adopts an immediate

⁴⁰⁸ The scholarship on Michael as a teacher is extensive; for representative works, see Michael Allen, “Divine Instruction: Of Education and the Pedagogy of Raphael, Michael, and the Father,” *Milton Quarterly* 26.4 (1992): 113-121; Ann Baynes Coiro, “‘To repair the ruins of our first parents’: Of Education and Fallen Adam,” *SEL: Studies in English Literature* 28.1 (1988): 133-147; Angelica Duran, *The Age of Milton and the Scientific Revolution* (Pittsburgh: Duquesne UP, 2007). For a recent exploration of the last two books that focuses on the genealogical and reproductive aspects of the tutorial in relation to politics, patriarchy, and monarchy, see Erin Murphy, *Familial Forms: Politics and Genealogy in Seventeenth-Century English Literature* (Newark: U of Delaware P, 2011), 116-139.

⁴⁰⁹ For visual and aural revelations in the epic, see Joseph Anthony Wittreich, Jr., *Visionary Poetics: Milton’s Tradition and his Legacy* (San Marino: Huntington Library, 1979). Also see *Visionary Milton: Essays on Prophecy and Violence*. Eds. Peter E. Medine, John T. Shawcross, & David V. Urban (Pittsburgh: Duquesne UP, 2010). For the argument that “Milton believed himself a prophet,” see William Kerrigan, *The Prophetic Milton* (Charlottesville: UP of Virginia, 1974), 11.

mode of learning from his visions that relates history to individual being, enabling him to situate himself within an evolving temporality. Towards the end of his instruction, when Adam acknowledges that he has learnt by “example,” Michael, the “prophet of glad tidings” corrects him (XII. 572, 375):

thou hast attained the sum
Of wisdom; hope no higher, though all the stars
Thou knew'st by name, and all th'ethereal powers,
All secrets of the deep, all nature's works,
Or works of God in heav'n, air, earth, or sea,
And all the riches of this World enjoyedst,
And all the rule. (XII.575-581)

Although Michael accepts that the “example” leads to the “sum / Of wisdom” and knowledge of “all nature's works,” he argues that its accumulation is not the end of learning. What lies beyond is “higher” and cannot be summed up through an experiential revelation and enjoyment of the “works of God.” The necessity of doing follows wisdom: “only add / Deeds to thy knowledge answerable, add faith / Add virtue, patience, temperance, add love” (XII.581-583).⁴¹⁰ One only attains the “sum” of “wisdom” to move away from it, to learn to enact one's knowledge through one's virtuous state of being. He argues that accumulation and experience—the fabric that shapes knowing in *Areopagitica*—are not the *ends* of learning. Adam's particular responses are sufficient to grasp the distinct nature of each revelation, and to apprehend the physical world, but Michael exposes his “local” experiences of the future are secondary. The general ends of “obedience” and “Deeds” cannot be achieved through a cumulative, experiential logic.

Embedded in this theological exchange on obedience, law, and action, we find the duality that governs the epistemology after the fall in *Paradise Lost*, an absolute

⁴¹⁰ Picciotto (2010) on the other hand locates “all Nature's works” as the end of learning. See 492.

disjunction between experiential instruments of instruction—the “local wounds”—and its universal goals—to “learn” that “to obey is best.”⁴¹¹ Michael’s tutorial shows that even when filtered through futuristic visions, experiential knowledge and prophetic prediction must part ways. While his typological exegesis directs attention from the present *towards* a future in which one gains complete knowledge at the end of history, the fallen Adam can only articulate an experiential mode to know the future *in* singular examples.⁴¹²

⁴¹¹ Adam’s education is composed of such moments of disjunctions, what Alastair Fowler marks as “Adam’s newfangled, postlapsarian tendency to local devotions” (614). See John Milton, *Paradise Lost*. Ed. Alastair Fowler. 2nd ed. (Harlow, Longmans, 1998). Adam learns through a series of erroneous assumptions about the local and immediate situation he witnesses or hears about. Michael repeatedly revises or corrects his interpretations. For example, when Adam laments about their upcoming “Departure from this happy place, our sweet / Recess, and only consolation left / Familiar to our eyes, all places else / Inhospitable appear and desolate / Nor knowing us nor known” (XI.303-308) and associates this “departing hence” with “from [God’s] face I shall be hid, deprived / His blessed count’nance” (XI. 315-317), Michael corrects this explicit association of connection to God with the place of Eden:

Adam, thou know’st Heav’n his, and all the Earth,
Not this Rock only; his omnipresence fills
Land, sea, and air, and every kind that lives,
Fomented by his virtual power and warmth:
All th’Earth he gave thee to possess and rule,
No despicable gift; surmise not then
His presence to these narrow bounds confin’d
Of Paradise or Eden. (XI. 335-342)

Michael ends this instruction with the command to Adam that he learn “True patience, and to temper joy with fear / And pious sorrow” (XI.361-362). Other examples of Adam’s attachment to the local and of his affective responses to the immediate instances revealed to him include the encounter between Cain and Abel (Adam asks: “have I now seen death? Is this the way / I must return to native dust? O sight / Of terror, foul and ugly to behold, / Horrid to think, how horrible to feel!” (XI. 462-465) to which Michael responds with a directive to look beyond this immediate form: “Death thou hast seen / In his first shape on man; but many shapes / Of Death, and many are the ways that lead / To his grim cave, all dismal” (XI. 466-469)); when he asks if there are other specific ways to “come / to death” (XI. 528-529); when he seeks quicker death in response to Michael’s first answer and then seeks slower death to his second explanation (XI. 530-595). Because of these disjunctions, I disagree with Picciotto’s argument that Michael’s instruction is an example of Adam’s processual experimentalist learning.

⁴¹² For the classic study of typology in Milton’s works, see William G. Madsen, *From Shadowy Types to Truth; Studies in Milton’s Symbolism* (New Haven: Yale UP, 1968), 6. Also see William Walker, “Typology and *Paradise Lost*, Books XI and XII,” *Milton Studies* 25 (1989): 245-264. See Regina Schwartz, “From Shadowy Types to Shadowy Types: The Unendings of *Paradise Lost*,” *Milton Studies* 24 (1988): 123-141 for a reading of how typology defers meanings in the last books. For the relationship between history, typology, and change in form in the last two books, see David Loewenstein, *Milton and the Drama of History: Historical Vision, Iconoclasm, and the Literary Imagination* (Cambridge: Cambridge UP, 1990), 92-125. For a recent study that argues that in Milton’s final books, the typology is predicated on the “parallels between people” and thus “the relationship between type and antitype is not only one of divine pattern, it is one of genealogical pattern,” see Murphy, 138. For the varied ways in which typology was understood in the seventeenth century, see Barbara Kiefer Lewalski, *Protestant Poetics and the Seventeenth-Century Religious Lyric* (Princeton: Princeton UP, 1979), 111-144 and

Michael suggests that Adam's acceptance of the local is at best fragmented, and at worst, a complete misrecognition of what constitutes understanding; he keeps interpreting, to borrow Regina Schwartz's phrase, "the shadow for the truth."⁴¹³

Michael repeatedly revises the focus of Adam's responses, which are based on his understanding that he is foreseeing "nature...fulfilled in all her ends" (XI. 602). This tutorial, suggests Michael is not intended to reveal the "bent of nature" and "delight" in it but to provide an understanding of self (XI. 597, 596): "Judge not what is best / By pleasure, though to nature seeming meet, / Created, as thou art, to nobler end / Holy and pure, conformity divine" (XI. 603-606). As earlier, he suggests that knowing "all nature's work" is insufficient to gain understanding of one's roles in the world and to follow divine commands. Thus, Michael repeatedly directs Adam's attention from the specific examples in the world to his own existence and purpose. His separation of prophetic and experiential knowledge forcefully negates the possibility of direct relationships between the singular instances and certain ends that was imagined in *Areopagitica*, that generates probable knowledge in the epic, and that remains the promise of the repeatable experiment.⁴¹⁴

Moreover, complete learning cannot be gained from the example since it is always deferred until prophecies are realized. Michael informs Adam that Eve experiences revelations differently in her dreams, where she learns "The great

Michael McKeon, *The Origins of the English Novel, 1600-1740* (Baltimore: Johns Hopkins UP, 1987), esp. 34-35, 76, 217.

⁴¹³ Schwartz, "From Shadowy Types to Shadowy Types: The Unendings of *Paradise Lost*," 125.

⁴¹⁴ See Loewenstein for a comprehensive treatment of the differences between Milton's polemical prose and his later poems. In comparing Michael's tutorial with the *Areopagitica*, he writes "Michael's final account has become a long series of successive falls and repetitions ensuing from that original fall when the world first groaned under her own weight; as a process, it lacks the emphasis on energetic social confrontation and conflict that so distinctly characterized Milton's dynamic sense of historical renovation in a text like *Areopagitica*" (118-119). For the similarities between the two works, and their deferral of ends, see Schwartz "From Shadowy Types to Shadowy Types," 125.

deliverance by her seed to come / (For by woman's seed) on all mankind" (XII.601-602). Eve's dream of "Portending good," unlike her earlier worry about death, remains dissociated from her individual experience and her understanding of the self in the present (XII.596). It functions as a portent or a potentiality, as it shows her how the future might possibly unfold if she fulfills her individual part. The existences of Adam and Eve become vital parts of a narrative that will lead to the prophesied future. Their individual identities are subsumed into the potential future events unraveled in the divinely ordained "deliverance." Their existence in the fictional present is situated within a history that can be actualized in the future only when Adam and Eve move beyond their roles as individual characters to types and general categories. Their knowledge of their temporal roles, and how they mediate from the parts to the "sum" are defined by, but also necessarily extend beyond their individual experiences.

Michael's exposition provides a particular instantiation of Milton's alignment of prophetic insight and poetic knowledge; he had long associated "universal insight into things" (978) with poetry and temporality, and his poems and poetic theories are incessantly concerned with synchronizing one's career to the proper time of poetic production. In addition to marking time thematically, his work formalizes the poet's relationship to his transient career through appeals to prophecy. In *Of Education* (1644), he argued that there is a correct *time* to teach poetic theories: in order that "glorious and magnificent use might be made of poetry in both divine and humane things," he proposes that "poetry would be made subsequent, or indeed rather precedent [to logic], as being

less subtle and fine, but more simple, sensuous and passionate” (977).⁴¹⁵ There is a suitable time for learning about poetry, a time for integrating this knowledge with other disciplinary learning, and a suitable time for writing different kinds of poetry.⁴¹⁶ The correctness of time of composing prophetic poetry, which might provide this “universal insight,” is thus a specific extension of his beliefs on the process of poetic composition and career. Prophetic poetry, in providing insight and foresight, enacts a specific relationship of poetic knowledge to temporality, and it is uniquely suited to meditate on the past and reveal the unknown future. In *Paradise Lost*, the prophetic narrator’s admission of “beginning late” captures an anxiety that his work is disjointed from a planned poetic career (IX.26).⁴¹⁷

⁴¹⁵ For the relationship between education and the figure of the teacher, see Julian Koslow, “‘Not a Bow for Every Man to Shoot’: Milton’s Of Education, between Hartlib and Humanism,” *Milton Studies* 47 (2008): 24-53.

⁴¹⁶ Of course, all this meditation on poetic temporality is related to Milton’s anxieties and ambitions to model himself on the Virgilian career, and his inability to do so during the times he must devote himself to the “cool element of prose” instead of “soaring in the high region of his fancies” as a poet (*Reason of Church Government*, 839).

⁴¹⁷ In various early poems, Milton’s anxiety of the disjunction between time of writing and poetic production manifests itself through tropes of delay or haste. In “Lycidas” (1638), the poetic persona laments the premature exposure of his art under a pastoral guise and captures the poet’s uncertainties about poetic haste. Speakers of various sonnets struggle with an opposite problem of belated and deferred productivity. In Sonnet 7, composed around Milton’s twenty-third birthday (1631), the speaker presents this belatedness as a form of self-division. The disjunction between age and achievement emerges in the tropes of seeming and being, of “semblance” and “inward ripeness.” (5,7). While the former signifies that he to “manhood” is “arrived so near,” his accomplishments are out of sync with his appearance (6). He remains unable to bridge the gap between promise and realization that “more timely-happy spirits” can (8). This untimeliness also haunts the speaker of Sonnet 19, who provides a more urgent mediation on the problem of belatedness:

When I consider how my light is spent,
Ere half my days, in this dark world and wide,
And that one talent which is death to hide,
Lodged with me useless, though my soul more bent. (1-4)

Written at a later time in Milton’s life, the speaker worries about the prospect of permanent failure to realize one’s “talent.” The possibility that his “light is spent” anticipates the dark side of permanence that repeatedly haunts the narrator of *Paradise Lost*. As he negotiates the meanings of complete blindness as one who is yet to fulfill his potential, the speaker of Sonnet 19 grapples with the possibility that this condition of belatedness will become permanent and define his failure to realize his prospects. When the temporary belatedness of Sonnet 7 transforms into a perpetual *untimeliness* in the later sonnet, its speaker must resolve the problem differently. The promise of a product of action—poetry—becomes secondary to a reconceptualized notion of action itself: “patience” (8) enters to inform the speaker that service to God can take a variety of forms (“They also serve who only stand and wait” (14)).

But this vatic figuration situates the narrator both within and outside the world of the epic, and his persona embodies atemporal and experiential versions of selfhood. While he attempts to dissociate himself from events unfolding in the poem, his reactions to them often belie this self-identification as an outsider; he is surprised by the unexpectedness of the very events he narrates. His dual perspective then, provides another example of how prophetic poesy functions as a necessary and sufficient mode of learning and education in the postlapsarian world. *Paradise Lost* represents an inaccessible past as well as a promised future, and symbolizes both origins and endings.⁴¹⁸ While the narrator's prophetic claims (which I examine below) rely on his situating himself outside this complex poetic world, his reactions to specific moments of transformation implicate him in its developments; as such the narrator, unlike Michael, remains trapped in a world in which he must negotiate between event and experience.

His moments of identification with readers are few but they erupt to break the illusion of complete separation from characters and readers; these instances destabilize the singular authoritative and distancing role he projects. When he shifts the focus of the poem from "man's first disobedience" to "all our woe" in his first invocation, he acknowledges his immersive position in the poem (I.1, 3).⁴¹⁹ When Sin shows Satan the way to "that new world of light and bliss," the narrator again identifies himself with this

⁴¹⁸ For a series of explorations of Milton's engagement with "eschatological ideas" (1), see *Milton and the Ends of Time*. Ed. Juliet Cummins (Cambridge: Cambridge UP, 2003). The idea that the fall can be reversed and mankind restored through knowledge is common in the period. For a recent exploration, see Picciotto (2010). Also see Joanna Picciotto, "Reforming the Garden: The Experimentalist Eden and *Paradise Lost*," *ELH* 72.1 (2005): 23-78. For a detailed exploration of how the present is legitimized "through the recovery and representation of origins" (3) in Milton's works, see Snider (1994), esp. Introduction and Part Two. Also see Schwartz, *Remembering and Repeating*, for the iterative and ritually repetitive nature of Milton's exploration of origins.

⁴¹⁹ Loewenstein situates this duality within what he terms as "the drama of history": "What is so striking about this passage [IV.1-8] is the narrator's highly personal response—his difficulty in disengaging himself from the drama of human history he writes about" (2,102).

loss, terming the event as the “Sad instrument of all *our* woe” (II. 867, 872, emphasis mine). As Ann Baynes Coiro reminds us, in *Paradise Lost* we see the narrator performing a “role as dramatic narrator.”⁴²⁰ Ultimately a “character” like all others in the poem, his attempts to demonstrate his certainty and omniscience are undercut by the *labor* of having to privilege the prophetic voice over the immersive one.⁴²¹ This labor to separate himself from the experiential narrative primarily manifests in the instances where he constructs an almost atemporal presence and interrogates how sight and insight serve as instruments of singularity, community, and creativity. In this process of distancing, he translates his repeated experiences of poetic insight into a partially evental epistemology that is unexpected and unpredictable.

The narrator performs this act of distancing by stressing the role of the muse and claiming that her repeated visitations provide him prophetic insight that uniquely enable him to articulate a “higher argument” (IX.42). This insight is crucial to the act of poetic production. In his dedicatory poem, “On Mr. Milton’s *Paradise Lost*,” Andrew Marvell proposes that prophetic vision is a deserved reward for the loss of sight, when he compares Milton to Tiresias, the blind seer of Thebes: “Just heaven thee, like Tiresias, to requite / Rewards with prophesy thy loss of sight”(43-44).⁴²² Prophecy compensates for the loss of external vision by providing access to inner truth. The narrator of *Paradise Lost* echoes this division by juxtaposing inner illumination with darkness in his first

⁴²⁰ Ann Baynes Coiro, “Drama in the Epic Style: Narrator, Muse, and Audience in *Paradise Lost*,” *Milton Studies* 51 (2010): 63-100, 71.

⁴²¹ Ibid., 71. See Kerrigan for the prophetic voice.

⁴²² For some discussions of Marvell’s poem see G. F. Parker, “Marvell on Milton: Why the Poem Rhymes Not,” *Cambridge Quarterly* 20.3 (1991): 183-210; Judith Scherer Herz, “Milton and Marvell: The Poet as Fit Reader,” *Modern Language Quarterly* 39 (1978): 229-263; Joseph A. Wittreich, “Perplexing the Explanation: Marvell’s ‘On Mr Milton’s *Paradise Lost*,’” in *Approaches to Marvell*. Eds. C.A. Patrides (London: Routledge and Kegan Paul, 1978); Kenneth Gross, “‘Pardon Me, Mighty Poet’: Visions of the Bard in Marvell’s ‘On Mr. Milton’s *Paradise Lost*,’” *Milton Studies* 16 (1982): 77-96.

invocation: "What in me is dark / Illumine, what is low raise and support" (I.23-24).⁴²³

This interplay between darkness and light continues not only in the narrator's elaboration on his blindness but also in the increasing association of illumination with prophetic poetry. After all, Adam's prophetic tutorial after the Fall is initiated when "Michael from Adam's eyes the film removed / Which that false fruit that promised clearer sight / Had bred" (XI.412-414). In Book III, the narrator walks a precarious line of lamenting his blindness and praising this loss as a fortuitous gift from God. He misses the "holy light," who "Revisit'st not these eyes, that roll in vain / To find thy piercing ray," but he interprets the loss of sight as an opportunity to associate himself with other seers (III.1, 23-24): "Yet not the more / Cease I to wander where the Muses haunt... Nightly I visit: nor sometimes forget / Those other two equaled with me in fate, / So were I equaled with them in renown, / Blind Thamyras and blind Maeonides, / And Tiresias and Phineus Prophets old" (III.26-36). The potential alteration of lack to "renown" provides a momentary scene of consolation.

Attempting to convert correlation into causation through an appeal to "Fate," the narrator wanders back to his concerns of permanent lack: "with the year / Seasons return, but not to me returns / Day, or the sweet approach of ev'n or morn... But cloud instead, and ever-during dark / Surrounds me, from the cheerful ways of men / Cut off, and for the book of knowledge fair / Presented with a universal blank / Of Nature's works to me expunged and razed / And wisdom at one entrance quite shut out" (III.40-47). The hope

⁴²³ The narrator also relates prophecy to fame, rumor, and report. For example, see Book I Argument: Satan "tells them lastly of a new world and new kind of creature to be created, according to an ancient prophecy or report in Heaven." Book II argument: "Satan: to search the truth of that prophecy or tradition in Heaven concerning another world, and another kind of creature equal or not much inferior to themselves, about this time to be created"; "There is a place / (If ancient and prophetic fame in Heav'n / Err not) another world, the happy seat" (II.345-347).

of future compensation or fame seems inadequate to suppress permanently the recurrent sense of despair that accompanies the narrator's sense of his unending isolation, of being "Cut off" both from the "ways of men" and from "knowledge fair." The narrator finally extricates himself from this recurring closed loop of hope and lament by turning this lack into a form of profit and by replacing loss with internal gain: "celestial light / Shine inward, and the mind through all her powers / Irradiate, there plant eyes, all mist from thence / Purge and disperse, that I may see and tell / Of things invisible to mortal sight" (III. 51-55). Through an appeal to "inward" faculties, he finally channels his sense of loss and converts the permanent stasis that hinders "returns" into a motivation for creativity; prophetic poetry in the form of a theological epic emerges as the specific, "unattempted yet" answer to the questions of belatedness and untimeliness raised by Milton in Sonnets 7 and 19 (I.16). The language of purging underlines the necessity of eradicating the limits imposed by "mortal sight" so that one can "see" the "invisible." By "plant[ing] eyes" inward and by creating an inner illumination (it gestures both to inspiration and creativity), the prophet can "see and tell" what cannot be seen by all. The lack that originally signified isolation slowly emerges as a marker of unique talent since the loss of sensory visual experiences provides inner sight.

The interplay between light and dark that characterizes the earlier invocations also differentiates the inspirational from the political or worldly in Book VII. The narrator's imagined experiences as a prophet reflect the external environment that he cannot see:

Up led by thee
 Into the Heav'n of Heav'ns I have presumed,
 An earthly guest, and drawn empyreal air,
 Thy temp'ring; with like safetie guided down
 Return me to my native element:

...

Standing on earth, not rapt above the pole,
 More safe I Sing with mortal voice, unchanged
 To hoarse or mute, though fall'n on evil days,
 On evil days though fall'n, and evil tongues;
 In darkness, and with dangers compassed round,
 And solitude. (VII.12-28)

Darkness and descent represent not only the failings of the human body but also the collapse of a robust political body. Again, when solitude signifies “evil days” and “dangers” and threatens to overwhelm the narrator, he finds solace in the Muse’s approach: “yet not alone, while thou / Visit’st my slumbers nightly, or when morn / Purples the east: still govern thou my song / Urania, and fit audience find, though few” (VII.28-31).⁴²⁴ Maintaining the opposition between sense and insight, light and dark, he reverses the values associated with solitude by identifying it as a signifier of singularity. Only the select few can reveal divine truth; while he once lamented being “Cut off” from “men,” this “solitude” now engenders creativity. His unique talent is predicated on his singularity since *only* he can see the invisible and define a “fit audience.” It is also a product of the muse’s nightly visits, which allows him to repeatedly experience and fulfill his vatic potential. The narrator’s emerging sense of uniqueness and certitude makes him contemplate that only the fit “few” are worthy of deciphering his poetry.

This admittance of a “fit audience, though few” does suggest that prophetic poetry can be a readerly as well as a writerly experience. Hence the narrator must reiterate his uniqueness and separate himself from even his “fit audience.” To do so, he appeals to the source of prophetic knowledge and divine inspiration and to notions of temporality that are inscribed in prophetic discourse. In Book IX, when the narrator realizes that he “must

⁴²⁴ On the uncertain position and role of Milton’s muse, see Coiro, “Drama in the Epic Style: Narrator, Muse, and Audience in *Paradise Lost*,” esp. 85-93. The narrator’s claim that “[t]he meaning, not the name I call” (VII.5) also marks the gaps between naming and signification, particularity and generalization, specifically in relation to the muse.

change / Those notes to tragic” (IX.5-6), he articulates a clear relationship of his “higher argument” (IX.42) to divine inspiration and his prophetic poetics:

If answerable style I can obtain
 Of my celestial patroness, who deigns
 Her nightly visitation unimplored,
 And dictates to me slumb’ring, or inspires
 Easy my unpremeditated verse:
 Since first this Subject for heroic song
 Pleased me long choosing, and beginning late;
 Not sedulous by Nature to indite
 Wars, hitherto the only argument
 Heroic deemed...
 The skill of artifice or office mean,
 Not that which justly gives heroic name
 To person or to poem. Me of these
 Nor skilled nor studious, higher argument
 Remains, sufficient of itself to raise
 That name, unless an age too late, or cold
 Climate, or years damp my intended wing
 Depressed, and much they may, if all be mine,
 Not hers who brings it nightly to my ear. (IX.20-47)

In this instance, he again acknowledges the role of inspiration, but he also defines the prophetic poet as one who stands apart from his subjects as an interpreter, or perhaps as a translator who accommodates what the “celestial patroness” reveals. Both inspiring and dictating, the muse makes possible the process as well as the product of poetic creation.⁴²⁵ This invocation marks the culmination of the earlier ones that attempt to map out but oscillate on the exact relationship between vision and insight. Ultimately, the narrator recuperates hope as fate, making the act of poetic creation seem inevitable. Although “beginning late,” in these lines he enacts the realization of his potential to compose the “only argument / Heroic deemed.” He replaces the uncertainty about poetic and creative potential by ascertaining that he was *meant* to construct this “Argument.”

⁴²⁵ It is also an explicitly aural form of inspiration: she “brings it nightly to my ear” (IX.47). Wittreich argues that the movement from Book 11 to Book 12 is predicated on the shift from visual to aural prophecy.

Only the self's failure to act in a timely manner prevents him from fulfilling his vatic potential when he was supposed to do so.

What emerges in these lines, also, is the narrator's emphasis on the impossibility of categorizing and predicting these "nightly visitation[s]." His stress on the unexpected and uncategorizable—"unimplored," "dictates...or inspires," "unpremeditated," "Unless,"—nature of these visits as well as his inability to direct how his poetry will be composed—the muse "dictates," "inspires," she "brings" the "Higher Argument" to him—introduces a certain level of contingency into the most repeatable, and seemingly stable aspect of his composition. As the narrator translates to notes "Tragic," he can only hope to "obtain" an "answerable style" to his heroic content. Poetic inspiration is not the active, collective prophesying imagined in *Areopagitica*; rather, it is the product of "unimplored" visits of the "celestial patroness, who deigns" to reveal to the narrator the subject of his poetry. As such, the narrator questions his own capacity to act as anything more than a receptacle of both the content and style of his prophetic inspiration; his composition becomes an act of translation, and he emerges as an active mediator who makes accessible to fit readers the condition of possibility for apprehending prelapsarian Eden through a postlapsarian poetics. Each nightly visitation, in other words, becomes a unique, and potentially unrepeatable, event: out of the character's control, containing within it only a possibility of future poetic revelations, and always carrying with it the potentiality of disappearance and inaccessibility. The narrator's attempts to distance himself from readers and to highlight a unique vatic role, ultimately, brings him closest to a performative, evental mode of knowing.

In the figures of Michael and the narrator, therefore, *Paradise Lost* provides two very different examples of how the prophet-poet, himself trapped in “evil days” must necessarily appeal to experiences in order to educate the fallen audience. Yet the complete inaccessibility of prelapsarian states of being necessitates that Michael and the narrator, like the poet, expose the impossibility of individual or collective experiences to restore the “perfect shape” of certainty. Explicating the failures in understanding that arise when one exactly replicates the lessons of past experiences, Michael directs Adam as well as readers away from the “collective, and processual character of experimentalist insight” that Picciotto has defined as the cornerstone of Miltonic poetics. While Picciotto’s category of “experimentalist literature” intimately links Milton’s poetic corpus to contemporary experimental methodologies, I have shown how *Paradise Lost* severs certainty from experiential practices by appealing to the singularity of events and by dissociating unique prophetic insights from the “Adamic epistemology” of cumulative experimentation. Although experiential modes of learning are both necessary and sufficient to grasp the nature of the fallen world—as exemplified by the Royal Society’s experiments as well as the prophetic laborers in *Areopagitica*—they remain untenable with a poetic project that wishes to reveal “all” about a world that inevitably escapes translation. The unknown, unknowable, and singular ontology of prelapsarian Eden requires a narrative that adequately recognizes the incommensurability of experiential and prophetic routes of knowing: it demands events “unattempted yet in prose or rhyme” (I.16).

Margaret Cavendish's Poetic Physics

Margaret Cavendish was one of the most prolific women writers in the seventeenth century. From 1653 to 1668, she published poetry, treatises, essays, prose fiction, orations, and plays, on the topics of politics, literature, natural philosophy, and moral philosophy. She begins her writing career with the publication of *Poems and Fancies* and *Philosophical Fancies* in 1653. Some of her final publications also juxtapose works on philosophy and fiction: for instance, the prose utopia, *The Blazing World*, is published with *Observations upon Experimental Philosophy* in 1666. Her final printed work, *Grounds of Natural Philosophy* (1668) provides a fuller exposition of several ideas presented in the 1666 writings. In the course of her career, her philosophies of nature undergo various shifts: while in 1653 Cavendish espoused an unconventional atomism, by the 1660s, she fully embraces a vitalist philosophy of matter. She developed her interests in natural philosophy in a large part by learning from her husband William Cavendish and his brother Charles, who were known for their patronage and interactions with thinkers such as Descartes, Gassendi and Hobbes. After the Restoration, and on returning to England from exile, she took a deep interest—and expressed deep suspicions—about the experimental methods of the Royal Society. Cavendish's writing throughout her career explicitly engages or bears traces of these interactions (direct or indirect) and encounters, as she thinks about her position as a woman writer, as a Royalist subject, and as a thinker deeply interested in exploring the forms and contents of natural and imaginary worlds.

Early twentieth-century writings on Cavendish tend to classify, and often judge, her works within the decorum—of style, of form, and of content—appropriate to fiction, science, or science fiction. On the one hand, Virginia Woolf's influential characterization of Cavendish's "higgledy-piggledy" style of composition, which "poured itself out" in "torrents of rhyme and prose, poetry and philosophy which stand congealed in quartos and folios that nobody ever reads," inaugurates a nexus of criticism of her writing style.⁴²⁶ On the other hand, in her seminal works on the early modern scientific imagination, Margaret Hope Nicolson would dismiss Cavendish's fictions of science: "If you wish to journey to the celestial worlds of Margaret of Newcastle, you must go alone with her in the pages of her ponderous tome."⁴²⁷ Recent scholarship has moved well beyond these accounts of Cavendish's "higgledy-piggledy" style and accepted the challenge to venture into her "ponderous tome."⁴²⁸ But readings of Cavendish's works are still structured within various dichotomies, of politics and science, of authority and

⁴²⁶ Virginia Woolf, *A Room of One's Own* in *The Norton Anthology of English Literature*. Eds. M.H. Abrams et al., 7th Ed (New York: W.W.Norton, 2000), 2186.

⁴²⁷ Marjorie Hope Nicolson, *Voyages to the Moon* (New York: Macmillan, 1948), 224. For another early characterization of Cavendish's "eccentric" and "erratic" writing, see Jean Gagen, "Honor and Fame in the Works of the Duchess of Newcastle," *Studies in Philology* 56 (1959): 519-538. Gagen calls *The Blazing World* "the most tiresome of all of Margaret Cavendish's narratives" (536).

⁴²⁸ See Lisa T. Sarasohn, *The Natural Philosophy of Margaret Cavendish: Reason and Fancy During the Scientific Revolution* (Baltimore: Johns Hopkins UP, 2010) for a study of how Cavendish increasingly relies on "endless repetition" as her chances of entering a knowledge community decreases (6). Instead of pointing out the unmethodical nature of Cavendish's works, as this line of criticism often does, Sarasohn claims that through her writings, Cavendish emerges as a "woman with a plan—to establish her own philosophy and subvert her rivals" (172). For a recent account that recuperates Cavendish's "mingle-mangle" style within a rhetorical framework (and one that explains Cavendish's opposition to the Royal Society's 'plain' style through this difference), see Jenny Mann, *Outlaw Rhetoric: Figuring Vernacular Eloquence in Shakespeare's England* (Ithaca: Cornell UP, 2012), 171-200. Also see Richard Nate, "'Plain and Vulgarly Express'd': Margaret Cavendish and the Discourse of the New Science," *Rhetorica: A Journal of the History of Rhetoric* 19.4 (2001): 403-417 for a study of Cavendish's language and style in relation the Royal Society's plain style. See Ryan John Stark, "Margaret Cavendish and Composition Style," *Rhetoric Review* 17.2 (1999): 264-281, who argues that style is a way of dissent against science for Cavendish, and that she develops a philosophy of style. See Lisa Anscomb, "'A Close, Naked, Natural Way of Speaking': Gendered Metaphor in the Texts of Margaret Cavendish and the Royal Society," *In-between: Essays and Studies in Literary Criticism* 9.1-2 (2000): 161-177 for the argument that Cavendish deployed "organic" metaphors—often gendered—to challenge the Royal Society's rhetoric.

subjectivity, of gender and royalism, and of fiction and fact.⁴²⁹ For instance, Sylvia Bowerbank's argument that "Cavendish's response to her failure as a natural philosopher was to retreat into fantasy" is a paradigmatic example of criticism that separates the two aspects of Cavendish's thinking that she is interested in bringing together.⁴³⁰ At the same time, this account presents Cavendish as a failed respondent to contemporary science and philosophy (and implicitly to politics).⁴³¹

⁴²⁹ See for instance, Peter Dear, "A Philosophical Duchess: Understanding Margaret Cavendish and the Royal Society," in *Science, Literature and Rhetoric in Early Modern England*, Eds. Juliet Cummins and David Burchell (Aldershot: Ashgate, 2007), who argues that Cavendish constructs a philosophical persona in her writing by privileging her aristocratic self-fashioning at the expense of her role as a woman writer. Also see Rogers, who links Cavendish's feminism with her politics through her vitalist theory of matter. For a study of authority and subjectivity, see Sandra Sherman, "Trembling Texts: Margaret Cavendish and the Dialectic of Authorship," *English Literary Renaissance* 24.1 (1994): 184-210. For a work that explores her constructions of rank and racial difference in relation to her authorial persona, see Sujata Iyengar, "Royalist, Romancist, Racialist: Rank, Gender, and Race in the Science and Fiction of Margaret Cavendish," *ELH* 69.3 (2002): 649-672.

⁴³⁰ Sylvia Bowerbank, "The Spider's Delight: Margaret Cavendish and the 'Female' Imagination," *English Literary Renaissance* 14.3 (1984): 392-408, 402.

⁴³¹ One of the most common strategies of integrating Cavendish's writing into early modern scholarship has been to present her as a respondent to contemporary philosophy and politics. For representative works, see Nadine Allerman and Marguérite Corporaal, "Mad Science Beyond Flattery: The Correspondence of Margaret Cavendish and Constantijn Huygens," *Early Modern Literary Studies* Special Issue 14 (2004): 2.1-21. In "In Dialogue with Thomas Hobbes: Margaret Cavendish's Natural Philosophy," *Women's Writing* 4.3 (1997): 421-432, Sarah Hutton argues that Cavendish's work is not derivative but suggests that one needs to place her writings alongside those of contemporary philosophers to excavate "the context in which she produced her philosophy" (429). See Susan James, "The Philosophical Innovations of Margaret Cavendish," *British Journal for the History of Philosophy* 7.2. (1999): 219-244, for an early overview of the influence of thinkers like Descartes and Hobbes on Cavendish's works, and the alignment of her views with Spinoza and Leibniz. For how we might read Cavendish's poetry to understand the "problem of reading Donne," see Lara Dodds, "'Poore Donne Was Out': Reading and Writing Donne in the Works of Margaret Cavendish," *John Donne Journal: Studies in the Age of Donne* 29 (2010): 133-174, 134. Most biographies of Cavendish also gesture to the various lines of influence, from Plato to Hobbes, as well as personal influences like Charles Cavendish. See esp. Emma L.E. Rees, *Margaret Cavendish: Gender, Genre, Exile* (New York: Manchester UP: Distributed by Palgrave, 2003), esp. 80, 104-105, 134; Anna Battigelli, *Margaret Cavendish and the Exiles of the Mind* (Kentucky: U of Kentucky P, 1998), 1-10, 46. For the influences, as well as her response to natural philosophers, see Sarasohn (2010), esp. 2, 19, 115, 126. Also see Rogers, 260 and Stephen Clucas, "Margaret Cavendish's Materialist Critique of Van Helmontian Chymistry," *Ambix: Journal of the Society for the History of Alchemy and Chemistry* 58.1 (2011): 1-12, for Cavendish's interactions with Van Helmont's philosophy. For an exploration of Cavendish's works alongside Henry More's writings, see Sarah Hutton, "Margaret Cavendish and Henry More," in *A Princely Brave Woman: Essays on Margaret Cavendish, Duchess of Newcastle*, Ed. Stephen Clucas (Burlington: Ashgate, 2003), 185-198. For a general overview of Cavendish's responses to Descartes, Hobbes, and Henry More, see Jacqueline Broad, "Margaret Cavendish," in *Women Philosophers of the Seventeenth Century* (Cambridge: Cambridge UP), 35-64. For the place of Cavendish's philosophical writings alongside other female thinkers of the period, see Sarah Hutton, "Anne Conway, Margaret Cavendish and Seventeenth-Century Scientific Thought," in *Women*,

Cavendish's works, however, are not merely reactive: she locates in poetry, romance, and utopia epistemological models that show how fiction can generate the kinds of knowledge that reason or "rational probabilities," as she terms it in *The Blazing World* (1666), cannot produce (123).⁴³² In her writings, Cavendish continually explores why reason cannot adequately accommodate supposition and creativity, and how it remains insufficient to explicate nature's creative potential. Nature is both creative and material for Cavendish. As she defines in her final philosophical work, *Grounds of Natural Philosophy* (1668), nature, "being a Body, and therefore divisible and compoundable" has both "Self-motion" and the capacity to "divide and compound her Infinite Parts" (24).⁴³³ In this chapter, I show how Cavendish's materialist philosophy, which she locates in nature, is crucial to understanding her theories of authorship and creativity. We can obtain a more comprehensive account of Cavendish's worldmaking, which I term her "poetic physics," by conjoining her theories of matter to her understanding of cognition, perception, and creation. Her work is driven not by "higgledy-piggledy" and disorderly—and by extension ignorant—processes of composition. In contrast, it is shaped by the incessantly ordered, compositional, and divisional aspects of nature's materialism. Cavendish develops a multiple, pluralized notion of fictional worldmaking by appealing to different cosmologies of change and variety. In the process, she, like many other

Science and Medicine 1500-1700: Mothers and Sisters of the Royal Society, Eds. Lynette Hunter & Sarah Hutton (Gloucestershire: Sutton Pub., 1997), 218-234, for comparisons with Anne Conway; David Norbrook, "Women, the Republic of Letters, and the Public Sphere in the Mid-Seventeenth Century," *Criticism: A Quarterly for Literature and the Arts* 46.2 (2004): 223-240 for study of her alongside women philosophers in the Continent; David Norbrook, "Margaret Cavendish and Lucy Hutchinson: Identity, Ideology and Politics," *In-between: Essays and Studies in Literary Criticism* 9.1-2 (2000): 179-203. For a recent criticism of Norbrook's approach, and a reappraisal of the link between Cavendish and Hutchinson at the level of their atomist ideas, see Goldberg (2009). For an account that grapples with Cavendish's multiple roles as author, reader, and philosopher, or "a reader who became an author," see Spiller, 140.

⁴³² Cavendish's prose is cited by page numbers, and her poetry is cited by line numbers.

⁴³³ Margaret Cavendish, *Grounds of Natural Philosophy* (London: Printed by A. Maxwell, 1668). Accessed August 1, 2012. <http://eebo.chadwyck.com/>.

contemporary philosophers, replaces the form-matter dyad of traditional physical sciences with matter and motion—the defining elements of seventeenth-century physics—as her governing principles. The juxtaposition of form and matter define not only her understanding of the world, but also enable her to materialize her poetic physics in a diverse range of literary modes.

An exploration of Cavendish's poetic physics also reveals how probable knowledge functions as a distinct *epistemic* goal for Cavendish. Unlike the Baconian philosopher who does not seek “probable conjectures” but “certain” knowledge, Cavendish accepts that probability produces sufficient knowledge because it is grounded in reason. In an early work, the 1655 edition of *The Philosophical and Physical Opinions*, she argues that “next to the finding out of truthes, the greatest pleasure in Study, is, to finde out probabilities,” and she grants probability a legitimate place in natural inquiry: “though in natural Philosophy there may be many touches found out by experiences, and experiments, yet the Study is onely conjecturally, and built upon probabilities, and until probabilities be condemned by absolute and known truth, let them have a place *amongst the rest of probabilities*”(26).⁴³⁴ Her final work, *Grounds of Natural Philosophy*, punctuates the importance of probability by linking it to the activity of the mind: “if those Motions [of the mind] be so subtile, that the Sensitive cannot imitate them, Man names

⁴³⁴ Margaret Cavendish, *The Philosophical and Physical Opinions* (London: printed for J. Martin and J. Allestrye at the Bell in St. Pauls Church-Yard, 1655), 29-30. Accessed August 1, 2012. <http://eebo.chadwyck.com/>. See Stephen Clucas, “Variation, Irregularity, and Probabilism: Margaret Cavendish and Natural Philosophy as Rhetoric,” in *A Princely Brave Woman: Essays on Margaret Cavendish, Duchess of Newcastle*, Ed. Stephen Clucas (Burlington: Ashgate, 2003), 199-209, for the argument that situates Cavendish's writings in relation to contemporary philosophical turns to probabilism and provisionality (especially the works of Robert Boyle, Walter Charleton, and Joseph Glanville). Clucas also shows how Cavendish is unique in developing these ideas from her physical theories. In *Women, Science and Medicine*, Hutton conjectures, “perhaps” it was the “hypothetical character of much seventeenth-century science that attracted her” (223). Cavendish also explores the relation between truth and probability in *The Blazing World*. We see this most clearly in the Empress' discussions with her logicians.

them, *Fancies*: but when those Rational Parts move promiscuously, as partly after their own inventions, and partly after the manner of Forrein or outward Objects; Man names them, *Conjectures*, or *Probabilities*” (70). The activities of the mind, or its “Motions,” direct one to different endpoints—fancy and probability—but the perceptible external world primarily shapes one’s conjectures and probabilities. In the absence of an absolute truth, especially truth about the natural world, Cavendish suggests that probable knowledge is both necessary and sufficient.

As the description in *Grounds of Natural Philosophy* intimates, Cavendish’s theories of knowledge also explore the relationship of reason or “rational probabilities” to fancy and imagination. In “To the Reader” in *The Blazing World*, she anatomizes the divisions between rationality and the powers of creation. But she ends up highlighting the links between the volitional quality of rational thoughts and fancy: “*fictions* are an issue of man’s fancy, framed in his own mind, according as he pleases, whether the thing he fancies, be really existent without his mind or not” (123). Fancy and reason both originate in the “rational parts of matter” but diverge in their methods and aims: reason aims at “truth” by “search[ing] the depth of nature” and by revealing “causes of natural effects,” whereas fancy is the faculty of “voluntary” creation (123).⁴³⁵ Truth and fiction, the parallel pursuits of these labors, differ because “fancy creates of its own accord whatsoever it pleases, and delights in its own work” (123). While Cavendish’s propensity to classify might suggest a desire for complete division between fact and imagination, her explanations mark their similar points of origin and stress their different methods and

⁴³⁵ Another version of this argument is present in *Natures pictures drawn by fancies pencil to the life* (London: printed for J. Martin, and J. Allestrye, at the Bell in Saint Paul’s Church-yard, 1656): “for fancy is not an imitation of nature, but a naturall Creation, which I take to be the true Poetry: so that there is as much difference between fancy, and imitation, as between a Creature, and a Creator” (“To the Reader”). Accessed August 2, 2012. <http://eebo.chadwyck.com/>.

aims. I use these conjunctions of fancy and reason to show how Cavendish's worldmaking perfectly captures her understanding of possible knowledge. She shapes fictional worlds by drawing on the materiality of nature, and in the process theorizes the transgressive reaches of *poiesis*: the mind overcomes the lack of absolute knowledge in the natural world by translating nature's materiality into an instrument of creation.

In this chapter, I examine how Cavendish stages and restages the interactions among a cluster of problems—the working of the rational mind, the nature of matter and motion, the importance of imagination to natural philosophy—in order to trace the inseparability of her poetics and her epistemology. I argue that throughout her career, Cavendish's writing enacts the symbiotic relationship between her understandings of poetic making and theories of matter. I focus in particular on her earliest and latest non-dramatic fiction, *Poems and Fancies* (1653) and *The Blazing World* (1666), in which she most forcefully explores these relations and their implications. In the *Atomic Poems*, the cluster of poems that inaugurate *Poems and Fancies*, Cavendish creates worlds out of atomist physics. When she renounces her belief in an atomist universe to espouse a vitalist philosophy of matter in her later works, this physics finds a “fanciful” or “poetical” enactment in her utopian fiction, *The Blazing World*. She translates the “self-moving” internalism of matter into an internalist, creative principle of generation that emerges “within” the mind of the “authoress” or the “creatoress” (123-124, 186, 224).

Scholars have typically approached the topic of Cavendish's role as an author and her principles of worldmaking through rubrics of selfhood, subjectivity, feminist politics, and historiography: Lisa Sarasohn employs the *topos* of “the world upside down” to

explore Cavendish's feminist natural philosophy.⁴³⁶ Catherine Gallagher's infinitely regressing mental worlds theorize female subjectivity as both absolutely sovereign and fully private.⁴³⁷ Mary Baine Campbell's completely othered worlds demonstrate how "infinite privacy" works "*along with* the Empress' sublime specularly"; she argues that Cavendish has to make a "boundary" between "interior and exterior, 'own' and all other."⁴³⁸ Aït-Touati has recently argued that Cavendish designs "a territory proper to fiction, both closed and yet in interaction with reality."⁴³⁹ Bowerbank locates Cavendish within a feminized writing sphere, explicitly separating this fiction from that of male writers: "What is mad for Swift is feminine for Cavendish."⁴⁴⁰ Spiller argues that Cavendish "adapt[s] the traditional cosmological theory of the correspondences between macro- and microcosm into a new kind of poetic theory," in which "correspondences between scientific knowledge,...rational expression,...and poetic creation ...are part of self-realization."⁴⁴¹ While this criticism has provided varied ways of approaching the problem of Cavendish's worldmaking, especially by extricating elements of her imaginations and representations of selfhood, it has rarely explored how nature's materiality itself serves as the source and basis of the author's creativity.

These broader ruminations on worldmaking have also found a particular scholarly focus: how Cavendish's writings expand our understandings of utopian discourse. While

⁴³⁶ Lisa T. Sarasohn, "A Science Turned Upside Down: Feminism and the Natural Philosophy of Margaret Cavendish," *Huntington Library Quarterly: A Journal for the History and Interpretation of English and American Civilization* 47.4 (1984): 289-307.

⁴³⁷ See Catherine Gallagher, "Embracing the Absolute: The Politics of the Female Subject in Seventeenth-Century England," *Genders* 1 (1988): 24-39. Gallagher proposes the model of infinitely regressive mental worlds as encapsulating the "image of the self as a microcosm" and leading "to a multiplicity of subjectivities" (31). This "multiplication of worlds belonging to the self, each of which circumscribes yet another self" underscores the "self is a world, and the proof of this self-sufficiency is that it can make a world in fiction" (31).

⁴³⁸ Campbell (1999), 210, 206.

⁴³⁹ Aït-Touati, 188.

⁴⁴⁰ Bowerbank, 394.

⁴⁴¹ Spiller, 174.

Eve Keller terms *The Blazing World* a “utopian fantasy,” Anna Battigelli reads the work as the author’s “most extended examination of her interest in retreating to the worlds of her texts, and by extension, into the worlds of the mind.”⁴⁴² By contrast, Campbell suggests that Cavendish’s alternate “fanciful” worlds exceed the bounds of “pedagogical moralism” that characterizes utopian fiction.⁴⁴³ Rachel Trubowitz suggests *The Blazing World* is “a canny revision of the utopian social paradigm, driven by the competing demands of the Duchess’ radical feminism and social conservatism.”⁴⁴⁴ It is both “culturally subversive and politically nostalgic and, as such, uniquely accommodates her construction of female subjectivity in imperial terms.”⁴⁴⁵ Cavendish, suggests Trubowitz, reinvents Utopia through the “anarchic properties” of Nature.⁴⁴⁶ Marina Leslie warns readers against seeing Cavendish’s work as merely appropriating a specific utopian tradition: “although Cavendish clearly challenges and revises generic boundaries, she also seeks inclusion in male literary and philosophical canons, and in order to gain recognition she must also be to some degree recognizable within such canons.”⁴⁴⁷ Kate Lilley places Cavendish’s work within a tradition of utopian writing which “has become

⁴⁴² Eve Keller, “Producing Petty Gods: Margaret Cavendish’s Critique of Experimental Science,” *ELH* 1997 64.2 (1997): 447-471, 459; Battigelli, 102. Ait-Touati makes the broader point that Cavendish uses “retreat of the authorial figure in the world of fiction” as a form of “appropriation” of experimentalist techniques (183).

⁴⁴³ Campbell (1999), 15.

⁴⁴⁴ Rachel Trubowitz, “The Reenchantment of Utopia and the Female Monarchical Self: Margaret Cavendish’s *Blazing World*,” *Tulsa Studies in Women’s Literature* 11.2 (1992): 229-246, 229.

⁴⁴⁵ *Ibid.*, 230.

⁴⁴⁶ *Ibid.*, 232.

⁴⁴⁷ Marina Leslie, “Gender, Genre and the Utopian Body in Margaret Cavendish’s *Blazing World*,” *Utopian Studies: Journal of the Society for Utopian Studies* 7.1 (1996): 6-24, 7. She associates Cavendish’s work with romance and natural philosophy. For the tensions between romance and utopia in Cavendish’s fiction, see Geraldine Wagner, “Romancing Multiplicity: Female Subjectivity and the Body Divisible in Margaret Cavendish’s *Blazing World*,” *Early Modern Literary Studies: A Journal of Sixteenth- and Seventeenth-Century English Literature* 9.1 (2003): 59 paragraphs. <<http://extra.shu.ac.uk/emls/09-1/wagnblaz.htm>>. For its hybrid genre, including romance and science fiction, see Nicole Pohl, “‘Of Mixt Natures’: Questions of Genre in Margaret Cavendish’s *The Blazing World*,” in *A Princely Brave Woman: Essays on Margaret Cavendish, Duchess of Newcastle*. Ed. Stephen Clucas (Burlington: Ashgate, 2003), 51-68. Also see Ait-Touati, esp. 186-190, for the changes in genres within *The Blazing World*.

a privileged formal and theoretical domain for feminist women” in order to correct this tradition’s “invisibility as an object of critical inquiry.”⁴⁴⁸ Carrie Hintz focuses on the more particular relations of knowledge and power in this utopian realm, showing how the “Empress insists that scientific experimentation is not purely a poetic, but also a political, endeavour”; for the Empress the aims of natural philosophers are secondary to the “concerns of the state.”⁴⁴⁹ John Rogers concludes that Cavendish’s philosophy was dominated by resignation and a recognition that “a utopia of female volition...might never materialize.”⁴⁵⁰ These examples demonstrate the ways in which Cavendish revises utopian conventions to put forward her ideas of creativity, power, and knowledge. They also suggest why it is hard to extricate Cavendish’s writing self—as a woman writer, as a Royalist author, as a female natural philosopher—from her strategies of fictional worldmaking and her crossing of generic boundaries.

In this chapter, I show that Cavendish’s *poiesis* cannot be separated from her understanding of the self and of the world *because* both are circumscribed by the plurality and materiality of nature. She incorporates the multiplicity of nature into her mechanics of worldmaking but also suggests that the creative self is inextricably linked to this materiality. The pluralized understanding of nature makes the trope of multiple worlds central to Cavendish’s writing, as she attempts to relate cognition to imagination, and “join” her material poetics, to borrow Jonathan Gil Harris’ term, to her natural

⁴⁴⁸ Kate Lilley, “Blazing Worlds: Seventeenth-Century Women’s Utopian Writing,” in *Women, Texts and Histories 1575-1760*. Ed. Clare Brant and Diane Purkiss (New York: Routledge, 1992), 102-133, 102. For a study that looks back to the influence of Bacon’s *New Atlantis*, see Line Cottegnies, “Utopia, Millenarianism, and the Baconian Programme of Margaret Cavendish’s *The Blazing World* (1666),” in *New Worlds Reflected: Travel and Utopia in the Early Modern Period*, Ed. Chloel Houston (Burlington: Ashgate, 2010), 71-94.

⁴⁴⁹ Carrie Hintz, “‘But One Opinion’: Fear of Dissent in Cavendish’s *New Blazing World*,” *Utopian Studies: Journal of the Society for Utopian Studies* 7.1 (1996): 25-37, 30. Hintz argues in the utopian fiction, “the pleasures of diversity must give way to the exigencies of unity” (25).

⁴⁵⁰ Rogers, 211.

philosophy.⁴⁵¹ The “authoress,” like Sidney’s poet, does rely on the figure of the poet-maker, but she acutely revises crucial elements of earlier fictional worldmaking.

Cavendish’s poetic physics reveals that the matter of fiction is not predicated on entities “as never were in nature” as Sidney had imagined; it emerges from the productive, creative potential that “frame[s] and compose[s]” the natural world.

Nature’s Materialism: From Atoms to Volition

Cavendish’s materialism, and especially her conceptualization of Nature, deeply informs her creation of fictional worlds throughout her career. Thus, before we turn to the inextricability of imagination and matter in her writing, it is useful to dwell on the ways in which she presents nature and draws on the generative power of natural wit. These elements are inseparable from the notions of invention that inform her projects of “fancy.” Cavendish’s precise definition of nature changes as her philosophy of the physical world evolves from atomism to vitalism.⁴⁵² However, certain features such as the materiality, creativity, variety, and freedom of nature continue to govern these materialisms. Moreover, Cavendish-the-writer also perceives naturalness to be an empowering and liberating, and ultimately an egalitarian, principle that enables her to participate in philosophical debates from which she might be excluded otherwise.⁴⁵³

⁴⁵¹ In his study of “plural” matter, Harris uses the trope of “joining” to trace the “networks of dialogic tactility” in the relations of self and other in order to argue that Cavendish “propounds a principle of active femininity” (151, 161). He argues, “Cavendish’s *writing* of matter thematizes her *theory* of matter: both entail a compounding of self and other, a production of figures that seem to possess singular integrity yet are palimpsested—or ‘nested’—mixtures” (164).

⁴⁵² See, for example, Sarasohn (1984); Sarasohn (2010) provides a fuller account of the evolution of her materialism across her writings.

⁴⁵³ For her exclusion from and opposition to the communities that were pursuing new methods of natural inquiry, see Rogers and Bowerbank. Also see Eve Keller, who argues that Cavendish opposes the Royal Society in particular and empiricist practices in general. Spiller provides another account of Cavendish’s outsider position by identifying her as “a reader of the *New Science*,” who “transformed her critique of the reading practices she associated with contemporary science into her own theory of visual perception as a form of cognitive apprehension” (140). Aït-Touati has argued that “[s]ince it was not within her power to eliminate the society that she disliked so much, Cavendish opted instead for

It is typically accepted that Cavendish replaces her early atomistic understanding of the cosmos with a vitalist philosophy composed of “sensible and rational” matter. The exact details of this shift, however, are still under debate.⁴⁵⁴ Although Cavendish had renounced her early atomism in “A Condemning Treatise of Atomes” in *Philosophical and Physical Opinions*, the language and principles of atomism persist even in later works, as scholars including Steven Clucas and Jay Stevenson have demonstrated.⁴⁵⁵ Cavendish presents in the 1653 *Poems and Fancies* a radical understanding of atomism, where she identifies variously shaped atoms—square, round, sharp, and long—as formative cosmological and conceptual matters.⁴⁵⁶ In her later vitalist philosophy, which she starts developing from as early as 1655, she describes a cosmos consisting of sensible, inanimate, and rational degrees of matter which are “so inseparably commixt in the body of nature, that none could be without the other in any part or creature of nature, could it be divided to an atom” (*Observations*, 24). This vitalism is sentient and

meticulous deconstruction by building a rival and little-known monument, her *Observations upon Experimental Philosophy: to which is added, The Description of a New Blazing World*” (174). Hutton, *Women, Science and Medicine* suggests that both Anne Conway and Cavendish might have been drawn to natural philosophy because it was “new” and not yet part of institutionalized learning (231).

⁴⁵⁴ Rogers identifies it with her 1663 works, but in Margaret Cavendish, *Observations upon Experimental Philosophy*, Ed. Eileen O’Neill (Cambridge: Cambridge UP, 2001), O’Neill makes the case for this shift as early as 1665. Spiller also argues that Cavendish advocated “a strong and hierarchical form of materialism” from *Philosophical and Physical Opinions* onward (161). In “Margaret Cavendish’s Nonfeminist Natural Philosophy,” *Configurations: A Journal of Literature, Science, and Technology* 12.2 (2004): 195-227, Deborah Boyle locates a vitalist materialism throughout her corpus.

⁴⁵⁵ Stephen Clucas, “The Atomism of the Cavendish Circle: A Reappraisal,” *Seventeenth Century* 9.2 (1994): 247-273 and Jay Stevenson, “The Mechanist-Vitalist Soul of Margaret Cavendish,” *SEL: Studies in English Literature, 1500-1900* 36.3 (1996): 527-543. By contrast, in “Atomism, Monism, and Causation in the Natural Philosophy of Margaret Cavendish,” *Oxford Studies in Early Modern Philosophy* 3 (2006): 199-240, Karen Detlefsen has argued for Cavendish’s absolute rejection of atomism. Boyle (2004) offers a plausible middle ground, arguing that Cavendish’s atomism might itself be perceived as “nonmechanical, vitalist” (199), suggesting that the author only rejects the mechanist versions of atomism in her later works.

⁴⁵⁶ For explorations of her atomism, including Lucretian undertones, see Battigelli 45-61. For how Lucretian traces shape her understanding of author and character, see Goldberg (2009). For how she deploys this atomism poetically, see Sarasohn (2010), 34-53. Also see Robert Hugh Kargon, *Atomism in England from Hariot to Newton* (Oxford: Clarendon P, 1966), 63-76, who situates Cavendish’s atomism within discussions of the Newcastle circle.

knowledgeable, because “nature is a perpetually self-moving body, dividing, composing, changing, forming and transforming her parts by self-corporeal figurative motions.” As a result, “she has an infinite wisdom to order and govern her infinite parts; for she has infinite sense and reason, which is the cause that no part of hers, is ignorant, but has some knowledge or other; and this infinite variety of knowledge makes a general infinite wisdom in nature” (*Observations*, 85). In this vitalist cosmos, parts and whole mutually reinforce each other’s life and knowledge, unlike the distinct actions of individual atoms in her early writings.

Nature is also a source of poetic creativity, serving as the primary connecting thread between Cavendish’s early and mature works. *Poems and Fancies* provides one of the first examples of how Cavendish turns to nature’s variety and changeability as sources of imaginative creation. Beginning with the reminder that Nature “first this World she did create” (“Nature calls a Councell, which was Motion, Figure, matter, and Life....,” 1), Cavendish associates the “*Free*” and “*uncurb’d*” style of writing with the freedom of nature. But she also reminds readers that Nature lacks complete knowledge (“For Nature, thou mad’st Man betwixt *Extreames* / Wants *perfect Knowledge*” (“A Dialogue betwixt Man, and Nature,” 45-6)).⁴⁵⁷ In *Philosophical Fancies* (1653), she notes the perpetuity of Nature, which “is *Infinite*, and *eternall*” (5); she elaborates: “There can be no *Annihilation* in *Nature*: not *particular Motions*, and *Figures*, because the *Matter*, remains that was the *Cause* of those *Motions* and *Figures*” (14-15).⁴⁵⁸

⁴⁵⁷ Battigelli argues that this poem is one instantiation of a larger theme in *Poems and Fancies*, “[Cavendish’s] own strange personal combination of intellectual restlessness and epistemological despair” (59).

⁴⁵⁸ Margaret Cavendish, *Philosophical Fancies* (London: printed by Tho: Roycroft, for J. Martin, and J. Allestrye, at the Bell in St. Pauls Church-yard, 1653). Accessed August 1, 2012. <http://eebo.chadwyck.com/>.

Nature, Cavendish argues throughout her early works, cannot produce new matter but exists as an organizing and operative principle. Nature works to compose and shape extant matter after God has created it.⁴⁵⁹

In spite of this initial limitation, nature's endlessness generates new associations and it serves as the source of all change and variety in the world. Nature's unifying tendency must continually negotiate with the variety of its parts:

Nature tends to Unity, being but of a kinde of Matter: but the degrees of this Matter being thinner, and thicker, softer, and harder, weightier, and lighter, makes it, as it were, of different kinde, when tis but different degrees: Like severall extractions, as it were out of one and the same thing; and when it comes to such an Extract, it turnes to Spirits, that is, to have an Innate motion. (9-10)

Even as she marks the unity towards which "*Nature tends*," Cavendish points out the different "degrees" that provide variety. Nature's "*Innate motion*" is visible even in this early account. These claims about Nature's indestructibility, internal variety, and motion remain relatively unchanged in the 1655 edition of *The Philosophical and Physical Opinions*. Although in these early writings Cavendish is less conversant with technical language than in her works in the 1660s, her concept of an infinite, free, and indestructible nature remains integral to her early imaginations of the cosmos.

In her later works, Cavendish explicates more fully the perception that Nature, and all "sensitive and rational" matter, is volitional, vital, self-moving, productive, and changeable from within; these characteristics lie at the core of Cavendish's mature materialist philosophy. By embracing this understanding of an animate nature, Cavendish

⁴⁵⁹ She echoes versions of this argument even in her late works. For example, in *Observations*, she writes "nature is neither absolutely necessitated, nor has an absolute free will: for, she is so much necessitated, that she depends upon the all-powerful God, and cannot work beyond herself, or beyond her own nature; and yet hath so much liberty, that in her particulars she works as she pleaseth, and as God has given her power; but she being wise, acts according to her infinite natural wisdom, which is the cause of her orderly government in all particular productions, changes and dissolutions" (109).

situates herself at the center of debates about the composition and form of the universe. Sarah Hutton points out that Cavendish's vitalist materialism, like Hobbes' mechanism, "purported to account for the natural world in terms of motion, rest, and position of corporeal particles in various structural combinations."⁴⁶⁰ Yet while mechanist philosophers locate the source of motion as external to inanimate matter, Cavendish argues that motion arises from within and is internal to rational and sensitive matter.⁴⁶¹ In addition to questioning the externalist sources of motion proposed by mechanist philosophers such as Hobbes and Descartes, her philosophy challenges the methods associated with mechanism by criticizing passive and externalist practices of experimental philosophers in the Royal Society. In particular, Cavendish's response to Robert Hooke has been a persistent topic of scholarly inquiry. Campbell contrasts Cavendish's making of the "interior an articulated world" with Hooke's revelations of "further surfaces" through the microscope, and Spiller differentiates Hooke's passive, mechanist philosophy of reading from Cavendish's "vitalist theory of reading that allows for a more active reader who is able to destroy as well as create knowledge."⁴⁶² Aït-Touati has recently argued that Cavendish criticizes both Hooke's "microscopical and

⁴⁶⁰ Hutton, "In Dialogue with Thomas Hobbes," 423. Hutton continues: "she does not subscribe to the view held by mechanists that matter was inert, lifeless, and passive" (424). Also see Rogers, who explicitly opposes a masculinist mechanism to Cavendish's vitalist feminism. Boyle (2004) questions—partially by looking at Rogers' argument—the premise that Cavendish's philosophy is feminist. Also see James for the argument about Cavendish's understanding of motion as something that occurs not between, but within bodies.

⁴⁶¹ In particular, Cavendish criticizes Hobbes's theory that external forces and reactions move matter. See Hutton, "In Dialogue with Thomas Hobbes" and Rogers.

⁴⁶² Campbell (1999), 182; Spiller, 23. Also see Eve Keller and Mann for other points of entry into Cavendish's opposition to the Royal Society. Shannon Miller genders this division, arguing that in *The Blazing World*, "specific textual engagements with Hooke and his metaphors become expanded into a satirical representation of the Royal Society, at the core of which is a rewriting of their narrative of a Paradise regained, or 'restor'd,' through male experimental scientists" (145). In "'The World I Have Made': Margaret Cavendish, Feminism, and the Blazing World," in *Feminist Readings of Early Modern Culture: Emerging Subjects*, Eds. Valerie Traub, Lindsay M. Kaplan, Dymphna Callaghan (Cambridge: Cambridge UP, 1996), 119-141, Rosemary Kegl points out the practical limits of experimental philosophy and its deceiving "Glasses" (126).

telescopical endeavors.”⁴⁶³ In this chapter, I build on these accounts to show how Cavendish’s internalist and volitional materialism creates an epistemic practice out of Nature, the active source of change. Unlike in earlier works, Cavendish explicitly links the variety of nature—with its principles of sense and reason—to her theories of matter.

In *The Blazing World*, too, Cavendish stresses the internalism of Nature’s movements: “by virtue of its self-motion, [Nature] is divided into infinite parts”; these “sensitive and rational” parts, “being restless, undergo perpetual changes and transmutations by their infinite compositions and divisions” (154). Explicitly connecting nature and matter, she argues there is “but one universal principle of nature, to wit, self-moving matter, which is the only cause of all natural effects” (154). Nature in this explanation emerges as material and method, both substantial and changing. This definition echoes her description of Nature in the *Observations*, “a self-moving, and consequently a self-living and self-knowing infinite body” (125).⁴⁶⁴ Cavendish now uses the cognitive and affective capacity of variety (“wise nature taking delight in variety, her parts, which are her creatures, must of necessity do so too” (53)) not in opposition to unity, but to highlight how multiplicity self-regulates and produces an internal limit-case for control and order: “nature being in a perpetual motion, is always dissolving and composing, changing and ordering her self-moving parts as she pleases” (*Observations*, 55). The defining characteristics of Cavendish’s volitional nature—“ordering” and

⁴⁶³ Aït-Touati, 175. Aït-Touati argues that Cavendish opposes, in particular “one specific aspect of the new science: the ‘dioptrical inspections’ by means of a prosthetic use of instruments that Hooke championed” (176). Cavendish draws on her aristocratic status—and on her experience of chaos during exile—to question the “reformative spirit” explicit in Hooke’s works, and to advocate for a return to an “old order” (178, 182).

⁴⁶⁴ She also distinguishes these from atoms: “Although I am of opinion, that nature is a self-moving, and consequently a self-living and self-knowing infinite body, divisible into infinite parts; yet I do not mean that these parts are atoms; for there can be no atom, that is, an indivisible body in nature; because whatsoever has body, or is material, has quantity; and what has quantity, is divisible” (125).

“composing”—also demarcate its authorial role: just as Nature orders and composes from its material elements, so can the author, since she is part of this infinite Nature and can imitate its internalist motions and changes.

As Cavendish links Nature’s freedom with volition, sense, and the materiality of the universe in *Observations* and in *The Blazing World*, she reveals something that had remained latent in her early works. But she had variously connected Nature to her principles of composition even in her early writings. For example, in *Philosophical Fancies* (1653), published in the same year as *Poems and Fancies*, she observes, “there is not a Confusion in Nature, but an orderly Course therein,” because

the Eternall Matter is allwayes One, and the same: for though there are Infinite degrees, yet the Nature of that Matter never alters. But all Variety is made according to the severall Degrees, & the severall Degrees do palliate, and in some sense make an Equality in Infinite; so as it is not the severall degrees of Matter, that strive against each other, but severall Motions drive them against one another. (10-11)

Cavendish reconciles the tensions between the “One” and the “Infinite degrees” by suggesting that variety and multiplicity strive towards unity even as distinct parts disrupt this tendency; motions do not necessarily aid matter as they will in Cavendish’s later philosophy. Yet this overarching sense of unity and order overcomes the seeming “Confusion” that one might perceive in individual parts.

Nature’s internalism, as well as its relative freedom to order and compose, serves as the foundation for her invention and poetic production. She begins *Philosophicall Fancies* in a similar manner, associating Nature’s freedom with the capacity to exceed the limits imposed by a physical world:

For *Nature’s* unconfin’d, and gives about
Her severall *Fancies*, without leave, no doubt.
Shee’s infinite, and can no *limits* take,

But by her *Art*, as good a *Brain* may make. (“A Dedication to Fame,” 7-10)

Art, an instrument of nature, remains circumscribed by the capacity of the material brain. In *Observations* Cavendish will mark artificial experiments as a version of art, which are “nature’s sporting or playing actions” (105) and in *Blazing World* she calls art “nature’s changeling” (157). Throughout her career, then, Cavendish reiterates nature’s superiority as a creative power by tying its productivity to its “unconfi’n’d” status.⁴⁶⁵

Channeling nature’s freedom and infinity, Cavendish begins making a case for her own originality. As scholars have noted, Cavendish repeatedly draws attention to her lack of formal training in order to construct an authorial persona of the natural writer.⁴⁶⁶ Implicit in this self-fashioning is the argument that all thinkers who employ their natural faculties can become authors and creators, a case that Cavendish makes from early in her career. She writes in *The Philosophical and Physical Opinions* (1655), “natural reason is a better tutor then education” and elaborates on this distinction between self-knowledge and acquired learning: “a scholer is to be learned in other mens opinions, inventions and actions, and a philosopher is to teach other men his opinions of nature, and to demonstrate the works of nature, so that a scholer is to learn a Philosopher to teach.” Both the scholar and philosopher rely on training, external opinions and demonstrations,

⁴⁶⁵ For how this distinction between nature and art influences her response in *Observations* to Hooke’s *Micrographia*, see Spiller 155.

⁴⁶⁶ For instance, see Spiller, 143. See Battigelli, 41, who points out that Cavendish did not know or learn French. Also see Sarasohn (2010), esp 39, 156-157, 180, for instances of Cavendish’s self-presentation as an uneducated author, whose ideas were continually evolving. Other instances of this privileging of naturalness can be seen in what Brandie R. Siegfried identifies as Cavendish’s emphasis of the “ways in which ontology precedes epistemology” (61). “Anecdotal and Cabalistic Forms in *Observations upon Experimental Philosophy*,” in *Authorial Conquests: Essays on Genre in the Writings of Margaret Cavendish*, Ed. Line Cottegnies (Madison: Fairleigh Dickinson UP, 2003), 59-79. See for example, Sarasohn (2010), who argues that Cavendish’s writerly self is constructed by the motto “I am, therefore I think.” Jay Stevenson also explicitly links cognition to writing: “her brain thinks and her thoughts can be written down. *Cogito ergo scribo*.” See “Imagining the Mind: Cavendish’s Hobbesian Allegories,” in *A Princely Brave Woman: Essays on Margaret Cavendish, Duchess of Newcastle*, Ed. Stephen Clucas (Burlington: Ashgate, 2003), 143-155, 146.

while she operates in the realm of “natural reason”: “my head was so full of my own natural phancies, as it had not roome for strangers to board therein” (“To the Reader”).⁴⁶⁷ Like nature, her natural capacities enable her to imagine, create, and invent in ways that are not belabored or the products of external opinion: her creations are as internalized and spontaneous as nature’s. She uses this internalized notion of nature’s creativity and its untutored motions to propose a philosophy of making and invention.

Cavendish accommodates her process of creation within her description of a natural world that aims towards composition and ordering: methods of “conception, imagination, remembrance, experience, observation, and the like,” she reminds readers, “are all made by corporeal, self-knowing, perceptive self-motion, and not by insensible, irrational, dull, and moveless matter” (*Observations*, 149). Nature, “being in perpetual motion, is always dissolving and composing, changing and ordering her self-moving parts as she pleases” (*Observations*, 55). This description of nature finds an echo in the volitional mind of the author who relies on her internal faculties. Nature’s processes, it would seem, are goal-oriented, and they offer models for composition: perpetually in motion, they internally shape worlds into being. As such, “perception” emerges as “an action of figuring or patterning, whenas the rational and sensitive motions do figure or pattern out something” (*Observations*, 55). Variety does not dissolve into chaos. Instead, nature generates new orders of existence by manipulating the particulars of an extant world. “[B]eing a wise and provident lady,” she “governs her parts very wisely,

⁴⁶⁷ This conceit is replicated by others too. For instance, E. Toppe’s letter in *Poems & Fancies* transfers originality onto the author: “You are not onely the first English Poet of your Sex, but the first that ever wrote this way: therefore whosoever that writes afterwards, must own you for their Pattern, from whence they take their Sample; and a Line by which they measure their Conceits and Fancies. For whatsoever is written afterwards, it will be but a Copy of your Originall...” For a study of how Cavendish’s “pursuit of singularity is not confined to the self but extends to a free, self-ordering course in nature,” see Oddvar Holmesland, “Margaret Cavendish’s *The Blazing World*: Natural Art and the Body Politic,” *Studies in Philology* 96.4 (1999): 457-479, 458.

methodically, and orderly” (*Observations*, 105). Rather than presenting a “higgledy-piggledy” natural world, the terms that define Cavendish’s Nature—and her authorial process, which imitates these natural motions—are “governing,” “composing,” “dissolving,” and “ordering.”

Reason, Thought, and Writing

Cavendish’s writing, then, perfectly captures the *perpetual activity* of nature, as she establishes correspondences with the natural mind of the author. As Bowerbank remarks, “her method, or rather her defiance of method, is deliberate.”⁴⁶⁸ Cavendish’s constructive process aims to create new entities, like the “nature [that] is wiser than we or any creature is able to conceive: and surely she works not to no purpose, or in vain; but there appears as much wisdom in the fabric and structure of her works, as there is variety in them” (*Observations*, 60). It is “art, the emulating ape of nature, [that] makes often vain and useless things” (*Observations*, 59). As such, Cavendish’s nature, like her mind, thrives on this extensive interplay between ordering and disorderliness, between singularity and variety, and between matter and motion.

Using art and artificiality as foils to natural creation, Cavendish theorizes her notions of invention. In *Worlds Olio* (1655), she links her ideas of creation with her ambitions as a writer:

HE is more praise-worthy that invents something new, be it but rude and unpolished, then he that is learned, although he should do it more curious, and neater; an imitator can never be so perfect, as the inventor, if there can be nothing added to the thing invented; for an inventor is a kinde of a creatour; but most commonly the first invention is imperfect; . . . an imitator adds nothing to the substance or invention, only strives to resemble it, yet surely invention is easier then imitation: because invention comes from nature, and imitation from painful, and troublesome inquirie; and if he goeth not just the path that hath been trod before him; he is out of the way, which is a double pain at first to know the path,

⁴⁶⁸ Bowerbank, 393.

and then to tread it out; but invention takes his own wayes, besides, invention is easie because it is born in the brain. Where imitation is wrought and put into the brain by force. (26, "Of Invention")⁴⁶⁹

Drawing on the language of novelty, originality, and natural capacity, Cavendish privileges the unknowability and the indeterminate ends of invention over the "neater" imitation. Creation supplants resemblance, and Cavendish suggests that even a "rude and unpolished" original product is superior to mere copy. She associates innovation with ease and pleasure to reinforce her arguments for unmediated composition: because she is not trained or educated as a philosopher, she cannot appeal to established disciplines as her sources of knowledge or inspiration. She translates invention into an egalitarian principle that is "born in the brain" and as such might be available to all writers. She reverses the values associated with labor and art; ease, rather than training, informs proper writing. In the process, she also turns the notion of perfection on its head: it resides not so much in the finished or polished form but on the intention of the author who is able to undertake the task of venturing into the unknown.

The two modes of production are distinct in origin as well as in content. Only invention, arising from "nature," adds "substance." The imitator, through "painful inquirie," at best generates resemblances. Implicit in this argument is the role of nature, the source of creation's "substance"; in a way, the natural substantiality transforms into and informs a creative world. Cavendish channels nature's "unconfined," unlimited status into a principle of originality and invention. It also echoes back to her distinctions between her own "natural phancies" and the educated philosophers and scholars who rely

⁴⁶⁹ Margaret Cavendish, *The Worlds Olio* (London: printed for J. Martin and J. Allestrye at the Bell in St. Pauls Church-Yard, 1655). Accessed August 2, 2012. <http://eebo.chadwyck.com/>. For scholarly explorations of the primacy of creation over imitation in Cavendish's writing, see Battigelli, 68, Campbell (1999), 203.

and work with others' opinions and knowledge. Cavendish's language registers this difference by highlighting the agency of the two modes of writing. The active "invention takes his own ways" while imitation becomes a passive recipient, "wrought and put into the brain by force." She associates the initiative and inquiring inventor with freedom, relegating the imitator to perpetual pain.

In *Worlds Olio*, Cavendish also explicates more fully the particular relation between nature's variety and the irregular human mind (a relation she refers to in *Nature's Fancies* and *Poems and Fancies*):

Nature hath not onely made Bodies changeable, but Minds; so to have a Constant Mind, is to be Unnatural; for our Body changeth from the first beginning to the last end, every Minute adds or takes away: so by Nature, we should change every Minute, since Nature hath made nothing to stand at a stay, but to alter as fast as Time runs; wherefore it is Natural to be in one Mind one minute, and in another in the next; and yet Man think the Mind Immortal. (162)

The changeable mind, a product of nature's dialectic of divergence and unity, defines the human condition. The phrase "by Nature" provides the crucial connection between the interior mind and exterior worlds. Cavendish's natural and variable mind, then, operates in harmony with "Time," matching its alterations from "one minute" to "another." She questions the desire for constancy by highlighting its tendency to stifle creativity.⁴⁷⁰ It hinders variations, and an invariant mind cannot engage in the processes of composition and reordering that seem to be essential to Cavendish's creative nature. To possess a "Constant Mind," claims Cavendish, is "Unnatural." She undercuts the mind-body duality and argues that instead of imagining an incorporeal, static, and "Immortal" mind,

⁴⁷⁰ In their "Introduction" to *Authorial Conquests*, Cottagnies and Weitz argue that "a consistent poetics emerges from each work [by Cavendish]" but this "might escape the casual reader, for this poetics is not based on humanistic ideals of order and symmetry: indeed, Cavendish evinces a predilection, both thematically and formally, for the fragmentary rather than the unified, incompleteness rather than definitiveness, proliferation rather than 'singleness of purpose,' paradox and juxtaposition rather than rational dialectic and transcendent meaning" (11).

one needs to embrace the possibilities engendered by the faculty of motion, which intimates that “nothing [will] stand at a stay.”

The restlessness and changeability of nature model creativity for a changeable mind, and Cavendish suggests in different works how and why her acts of worldmaking result from the motions of mind and matter. While in *Poems and Fancies* she poeticizes how “GReat *Nature* by *Variations* lives / For she no constant course to any gives” (“*Natures Exercise, and Pastime*,” 1-2), in *Natures Pictures* (1656) she transports this variety and change to herself. She acknowledges “my Ambition is restless, and not ordinary; because it would have an extraordinary fame” (“An Epistle to my Readers”). In this way, she aligns a “restless” mind to the variations in nature as well as to its immense capacity for imaginative production. Countering accusations that she did not compose her works, Cavendish attempts to produce a sense of harmony, arguing “my thoughts move regular in my Brain” (*Natures Pictures*, 367). But she almost immediately acknowledges the disjunction between mental faculties and corporeal elements: “for I have not spoke so much as I have writ, nor writ so much as I have thought” (*Natures Pictures*, 367). Thoughts inevitably run ahead of the writing and speaking body, and this disparity is accentuated by an exponential increase: the “more” thoughts signify an acceleration that continually increases the distance between cognition and articulation.⁴⁷¹

Cavendish’s ruminations on “thoughts” provide particular examples of *how* the mind’s alterations are understood, represented, and accommodated in writing. In *Poems and Fancies*, she introduces the trope of wandering—“My *Thoughts* did travel farre, and wander wide” (“The Motion of Thoughts,” 4)—to suggest these digressive and restless qualities might animate her composition as well as her proclaimed ambitions. In *The*

⁴⁷¹ Stevenson (2003) argues Cavendish “imagine[s] the mind as a central literary strategy” (143).

Blazing World, Cavendish literalizes the activity of the thoughts, in the figures of the “two female souls [who] travelled together as lightly as two thoughts into the Duchess her native world” (190).⁴⁷² But Cavendish also acknowledges that the one must overcome the schism between the mind and the world in order to facilitate understanding and knowledge: “thoughts are the natural language of souls, yet by reason souls cannot travel without vehicles, they use such language as the nature and propriety of their vehicles require” (193). An act of translation must occur for thoughts to become words. Especially in her mature writing Cavendish recognizes the tension of aligning thoughts to reason: unless “thoughts” move “regular in [her] Brain,” they escape direct translation. What complicates this easy alignment is free “Wit” (which is “wilde and fantastical, and therefore must have no set Rules; for Rules Curb, and Shackle it, and in that Bondage it dies” (*Worlds Olio*, “The Epistle,” 94)). Cavendish suggests that the wandering mind, composed of entities that are free from “Bondage,” facilitates—and is ultimately necessary for—new productions. This “wandering,” sometimes “wild and fantastical,” provides a mobility that makes one aim towards a vibrant poetics.

Thoughts, then, demonstrate a productive restlessness that enables them to exceed reason’s bounds. In *Philosophical Fancies*, Cavendish imagines a dialogue between “Reason, and the Thoughts.” Reason cautions thoughts to “run not in such strange phantastick waies,” reminding them that because they “are not taught in common *Schooles*” they must demonstrate more caution. Else “[t]he *World* will think you mad, because you run / Not the same *Track*, that former times have done.” Reason concludes

⁴⁷² For a study of how Cavendish deploys tropes of travel as a source of power and how she “transfer[s] this potency back into her own voice” see Anne M. Thell, “The Power of Transport, the Transport of Power: Margaret Cavendish’s *Blazing World*,” *Women’s Studies: An Interdisciplinary Journal* 37.5 (2008): 441-463, 442.

with the caution to “Turn” and “walke in a *Beaten Path*” (1-7). But thoughts rebel: “we do goe those waies that please us best. / Nature doth give us liberty to run / Without check, more swift far then the *Sun*.”⁴⁷³ They acknowledge they “sometimes disagree” and “run evenly” (9-14) but still disregard Reason’s warnings. In fact, the caution and imitative path Reason prescribes, suggest Thoughts, prohibit quickness of wit and pleasure. This slow pace negatively impacts poetic production. Reason is ultimately mistaken in its belief that a singular “Beaten Path” is sufficient; the ends of Reason and Thoughts are as different as those between reason and fancy that Cavendish will identify in *The Blazing World* thirteen years later. While the former wants to curb excess and irregularity (Reason wants to pursue an epistemological goal by following the schools), thoughts have a different aim: to discover the unknown and realize the “phantastick.” Instead of following the “*Track*, that former times have done” (6), Thoughts create their own paths; only such a visionary approach, suggests Cavendish, will distinguish the “extraordinary” writer from the “ordinary” multitude.

Cavendish explores the corporeal effects of this cognitive mobility in various writings. “The Claspe,” a poem that joins *The Atomic Poems* to the rest of *Poems & Fancies*, provides a detailed account of how restless thoughts produce bodily effects and a compulsion to write:

WHEN I did write this *Booke*, I took great paines,
 For I did walke, and thinke, and breake my Braines.
 My *Thoughts* run out of *Breath*, then downe would lye,
 And panting with short wind, like those that dye.
 When Time had given *Ease*, and lent them *strength*,
 Then up would get, and run another *length*.
 Sometimes I kept my *Thoughts* with a *strict dyet*,
 And made them *Faste* with *Ease*, and *Rest*, and *Quiet*,
 That *they* might run agen with swifter speed,

⁴⁷³ See Bowerbank, 393, for an analysis of this opposition in relation to Cavendish’s use of “wit.”

And by this course *new Fancies* they could breed.
 But I doe feare *they're* not so *Good* to please,
 But now *they're* out, my *Braine* is more at ease. (1-12)

Cavendish repeatedly emphasizes the physicality of this endeavor. Dissociating her thoughts from the “Braine” that holds them, she provides an account of internalized force. Thoughts, in their tendency towards irrecoverable excess, are potentially self-destructive. Cavendish begins with an assertion of authority, “For I did walke, and thinke, and breake my Braines.” Yet the sentence ends ambiguously, as there is a slight shift in the agency of the speaker: while “walke[ing]” and “thinke[ing]” seem completely voluntary, the event of “breake[ing]” disrupts this notion of command. Her thoughts seem to have taken over the motions of the mind. The poem follows this delicate balance between control and excess, between production and destruction. On the one hand, thoughts—which naturally tend to “run out of *Breath*”—must be kept on “*strict dye*” if they are to compose and order aimless wandering into “new Fancies.” Yet fancies cannot be produced merely by control and planning: disruptions are necessary to animate thoughts further, so that “*they* might run agen with swifter speed.” Cavendish imagines a process of composition that thrives on violent disjunctions between the writer and her brain, a material receptacle for thoughts that repeatedly exceeds its physical bounds. Unlike the “ease” and the pleasure that accompanies acts of invention, this continual struggle produces pain. Cavendish acknowledges the deep rift that exists between the writing subject and the matter of her mind. Although one’s natural faculties might serve as the source of “*new Fancies*,” their excessive bounds unsettle the notion that the mind is a harmonious place. In fact, only when thoughts are released from the mind to the

world—an event that gives further support to Cavendish's claim about the author's natural tendency to restlessness—can the author rest.

Yet this release of thoughts into the world is precisely what the writer desires: to produce and disseminate her “fancies.” From *The Atomic Poems* to *The Blazing World*, Cavendish grapples with a series of questions related to this issue of order and disorderliness: how do the motions of and in the mind generate new fancies? How can these fancies be productive for the writer? And how does an author harness nature's creative potential without succumbing to its destructive aspects? She will offer various answers to these questions through her years of writing. She inaugurates her printed career by arguing that “studying or writing *Poetry*, [...] is the *Spinning* with the *braine*” (“To Sir Charles Cavendish”) and in another dedication intimately links fancy and poetry to the proper provenance of the woman writer: “*Poetry*, which is built upon *Fancy*, *Women* may claime, as a *worke* belonging most properly to themselves: for I have observ'd, that their *Braines* work usually in a *Fantasticall motion*, as in their *severall*, and *various dresses* ...and thus their *Thoughts* are imployed perpetually with *Fancies*. For *Fancy* goeth not so much by *Rule*, or *Method*, as by *Choice*” (“To All Noble, and Worthy Ladies”). Associating the labors of fancy with the activities of the brain and to women's “worke,” Cavendish deploys individuated and collective notions of what is natural in order to transform the stereotypes of female changeability into a virtue. Because Fancy is predicated on “Choice,” she can perfectly align the “*Fantasticall motion*” of the brain and the woman writer, who seems best suited to take advantage of variety. And in *The Blazing World*, Cavendish makes explicit why this lack of “*Rule*, or *Method*” is productive: “*fictions* are an issue of man's fancy, framed in his own mind,

according as he pleases”(123). In her utopian fiction, she seizes on the circulating fancy as *the* way to actualize a “self-moving” materialist philosophy and produce “a world of [her] own creating” (124). As a woman writer who can associate the work of “spinning” with the spiraling wanderings of her thoughts, Cavendish seems uniquely suited to bring into being new worlds perpetually. In the next two sections, I trace the relations between fiction and nature in Cavendish’s early poetry and in her utopian prose narrative, in order to uncover the ways in which she builds worlds out of her theories of matter throughout her career, and why she ultimately argues that a vitalist—rather than an atomist—philosophy is more suited to the sustenance of these possible worlds.

Atomic Poetry and Worldmaking

In her early poems, Cavendish imagines how an atomistic understanding of the cosmos might become the source of poetic creation. *The Atomic Poems* in *Poems and Fancies* enact how an atomistic cosmology brings forth possible worlds when the poet composes and orders motions of the natural world in order to actualize her fancy. Lara Dodds describes this cluster of poems as “an important attempt to create a suitable poetic representation of a world reordered by mechanical speculation, astronomical observation, and microscopy.”⁴⁷⁴ But Cavendish is not merely creating a “poetic representation.” She atomizes an account of creation, beginning with a poem aptly titled “Nature calls a Councell, which was Motion, Figure, matter, and Life, to advise about making the World.” And she deploys her eccentric understanding of atoms to generate a comprehensive theory of possible worlds that emerges from her “natural phancies.” Her unconventional atomism grounds her poetry, as a variety of poems (like the one titled “A World made by *four* Atomes”) shape the possible worlds of her poetry. While the four

⁴⁷⁴ Dodds (2010), 155.

figures of atoms (sharp, long, round, and square) correspond in qualities to the four elements respectively—fire, air, water, and earth—and they in turn dominate the composition of different entities (for example “The *Atomes sharpe* hard *Mineralls* to make / The *Atomes* round soft *Vegetables* take” (“A World made by *foure Atomes*,” 5-6)), this multiplicity culminates in a singular act of worldmaking: “And thus *foure Atomes* the *Substance* is of *all*; / With their *foure Figures* make a *worldly Ball*” (9-10). Cavendish’s (atomic) poetry imitates nature’s tendency toward “Unity” in order to produce a (atomistic) “*wordly Ball*,” although this unity is always circumscribed by the variegated components.

Cavendish is cognizant of the tension between unity and multiplicity that pervades these atomic compositions. In a note appended to the above poem, she writes

the Fancy of my Atomes is, that the *foure Principall Figures*, as *Sharpe*, *Long*, *Round*, *Square*, make the *foure Elements*; not that they are of severall matters, but are all of one matter, onely their severall *Figures* do give them severall *Proprieties*; so likewise do the mixt *Figures* give them mixt *Proprieties*, & their several *composures* do give them other *Proprieties*, according to their *Formes* they put themselves into, by their severall *Motions*. (31)

Cavendish does not merely propose a theory of matter; she reminds readers of the “composures” that are predicated on, and that in turn generate new properties and forms by “their severall motions.” As Cavendish transforms an atomistic understanding of the universe into a theory of poetic worldmaking, she uses atoms to explain the origins or operations of a range of things, from sickness to death to the sun and stars. Atoms produce change and variety as they join and disjoin as a result of sympathies with other bodies. They also transform the fragmentary poems into a coherent world, in the process underscoring the cosmological scope of *The Atomic Poems*.

As the mention of “severall motions” suggests, Cavendish ties in the notion of

mobility—the basis of new formations and changes in nature—to her atomist worldview. In the poem titled “*Motion makes Atomes a Bawd for Figure*,” she argues that if “wild *Motion* with his subtle wit” did not “Make *Atomes* as his *Bawd*, new *Formes* to get. / They still would constant be in one *Figure*, / And as they place themselves, would last for ever” (1-4). As Cavendish bestows authority to motion, vitality and volition gain entry into her atomist cosmos. Since motion “perswades new *Formes* to make” and “doth in *Change* great pleasure take,” it “makes all *Atomes* run from place to place” (5-7). The sense of vitality becomes more explicit in another poem, which she titles “*Motion is the Life of all things*.” Drawing on the simile, “AS *Darknesse* a privation is of *Light*” she links presence, actuality, and life with motion: “So *Death* is even a *cessation* in / Those *Formes*, and *Bodies*, wherein *Motions* spin” (1-4). Oscillating between the particular function of light on the eyes and the broader question of mobility in the cosmos, she concludes “So *Life* doth only in a *Motion* lye” and “Thus *Life* is out, when *Motion* leaves to bee, / Like to an *Eye* that’s shut, no *Light* can see” (6-8). Motion, the principle of creation as well as of composition, introduces vitality into an atomistic realm.

Cavendish also links the motion of the atoms to the mobility of the human mind. In *The Worlds Olio* she conjectures the same atoms that mobilize the universe also compose the configurations of the human brain. At this moment in her writing, Cavendish’s materialist worldview is shifting from atomism to an early version of her later vitalism, but she still relies heavily on the vocabulary of atoms:

I think it is as likely that the Brains should be full of little Substances no bigger than Atomes, set on fire by Motion, and so the Fire should go out and in, according as the Motion is slackned or increased, either by outward Objects, or inward Vapours; and when things are lost in the Memory, it is when the Fire of those Atomes is gone out, and never kindled again. (“Memory is Atoms in the Brain set on Fire,” 138)

Cavendish makes explicit the link between the mind and the world as she emphasizes the materiality of both. Composed of unperceivable substances, the brain becomes a receptacle for the forces that facilitate the operations of memory. By the end of this supposition, the distinctions between the general “substance” and the particular “atom” have collapsed. Atoms—as individuated, multiple, and mobile entities—function as important *compositional* and *conceptual* instruments for an author who suggests the writing subject experiences and imitates nature’s vibrant mobility, who is attempting to articulate a poetical cosmology that connects mind to world, and who oscillates between the desire to be a “World, or nothing” (“To Natural Philosophers,” *Poems and Fancies*).

Perhaps because Cavendish’s primary aim is to produce a “*worldly Ball*,” her first poems conjecture about worldmaking rather than explicating the complex forms of the atoms themselves. Before defining individual components, she explores how atoms cohere and coalesce:

Small *Atomes* of themselves a *World* may make,
 As being subtle, and of every shape:
 And as they dance about, fit places finde,
 Such *Formes* as best agree, make every kinde.
 For when we build a house of Bricke, and Stone,
 We lay them even, every one by one:
 And when we finde a gap that’s big, or small,
 We seeke out Stones, to fit that place withall.
 For when not fit, too big, or little be,
 They fall away, and cannot stay we see.
 So *Atomes*, as they dance, finde places fit,
 They there remaine, lye close, and fast will sticke.
 Those that unfit, the rest that rove about,
 Do never leave, untill they thrust them out.
 Thus by their severall *Motions*, and their *Formes*,
 As severall work-men serve each others turnes.
 And thus, by chance, may a New *World* create:
 Or else predestinated to worke my *Fate*. (“*A World made by Atomes*,” 1-18)

Employing the trope of perfect architecture, Cavendish brings forth atomist worlds that are products of chance as well as of the imagination. She locates volition in atoms themselves (“Small *Atomes* of themselves a *World* may make”) and proposes a world that is composed and stabilized in her mind. The distinction between real and possible realms blurs when the modal verb “may” shifts the focus from the conditions of atomic creation to the description of Cavendish’s poem. She presents the poet’s act of creation as a possible composition of atoms: the latter “may a *New World* create.”

Initially the atoms represent comprehensiveness: “of every shape,” they “make every kind.” But by the time the chiasmic inversion (the phrase “finde places fit” replaces the earlier “fit places finde”) occurs, the poet is drawing an analogy of worldbuilding rather than speaking about the particular elements themselves. In the poem, the movements of the atoms seem to transfer the activity of making onto the human builder. Atomism instigates human creativity and might ultimately provide a blueprint for movement and organization. Yet, while initially the atomic motions are transferred to the architects, by the end of the poem the atoms imitate the processes of building that “we” perform. Although human action becomes an explanatory forum for what the atoms do, there is a distinction between the two kinds of activities: while the human architect appropriates the volition in nature’s compositional capacity, his or her endeavor can operate only within the confines of pre-planned structures.

Differences always exist between atomic conjunctions and fully planned architectural endeavors. As Cavendish intimates elsewhere, if bodies “sympathise, and do agree, / They joyne together, as one *Body* bee” (“*What Atomes make Change*,” 3-4). However, “if they joyne like to a *Rabble-rout*, / Without all order running in and out; /

Then *disproportionable* things they make, / Because they did not their right places take” (5-8). Unlike the human architect who must plot strategies for building, atoms naturally carry within themselves the capacity for construction and the potential for destruction. The relative sympathy or disharmony between bodies determines their ultimate figurations. There is no underlying principle of change that might explain how or why atoms combine or disunite. The “sympathy” to which Cavendish refers remains undertheorized; it also points to the impossibility of completely aligning the human mind with the world in which it operates. Bound together by an amorphous principle of limitation—sympathy—atoms give voice to Cavendish’s belief (what Sarasohn identifies as her intense skepticism) that complete harmony is impossible in the world if one can only produce analogies.⁴⁷⁵ Atomist motions cannot be fully circumscribed within the same system of rules that govern our own acts of composition, organization, and construction in the material world.

But these motions also enable Cavendish to translate an unconventional theory into an atomistic cosmology in order to generate a conjectural and pluralist strategy of worldbuilding. The triad of poems that concludes *The Atomic Poems* transports questions of imperceptibility and composition, of reality and possibility, to the created worlds themselves. Cavendish asks: can worlds themselves be beyond the reach of perception? The title of the first poem in this series, “*It is hard to believe, that there are other Worlds in this World,*” registers skepticism about the very possibility of plural worlds. But as the

⁴⁷⁵ Sarasohn (1984) identifies a “full-scale skepticism” and the “completely negative” theology in Cavendish’s works (292-293) but acknowledges that the “only option left to the duchess, since she could not be admitted into the male preserves of learning, was to develop her own speculative philosophy” (294). Boyle (2004) suggests that Cavendish “endorses a moderate skepticism” (203). Clucas (2003) argues that Cavendish “rejects outright skepticism” but she also “persistently rejected the possibility of absolute knowledge” (203).

poem unfolds, Cavendish associates epistemic limits with the constricted reach of the senses. She reminds readers that what “impossible to us appeare[s]” is a product of the “dull” and “grosse” senses:

For many things our *Senses dull* may scape,
 For *Sense* is *grosse*, not every thing can *Shape*.
 So in this *World* another *World* may bee,
 That we do neither *touch*, *tast*, *smell*, *heare*, *see*. (3, 7-10)

Cavendish bases her theory of plural worlds on structures of containment and ordering, and she suggests that imperceptible worlds might be concealed within one’s reach.

Employing a series of analogies to establish the possibility of such worlds (“What *Eye* so *cleere* is, yet did ever see / Those *little Hookes*, that in the *Load-stone* bee,...As for *Example*, *Atomes* in the *Aire*, / We nere perceive, although the *Light* be *faire*. / And whatsoever can a *Body* claime, / Though nere so *small*, *Life* may be in the same” (11-18)), Cavendish turns to atomism, the physicality of objects, and the human experience—or the human inability to experience—to populate this world. And she conjectures what life forms might exist within these realms (“Then probably may *Men*, and *Women* small, / Live in the *World* which *wee* know not at all” (21-22)) to underscore an aspect that Campbell has identified as central to the definition of a “world”: inhabitability.⁴⁷⁶

Cavendish’s language of probability blurs the lines between ontology and epistemology: if one accepts the possibility of other worlds, then their inhabitability is likely, she suggests. A realm comes into existence within the space of a few poetic lines, “all without our *hearing*, or our *sight*, / Nor yet in any of our *Senses* light” (29-30). A fuller exposition of this world entails: descriptions of houses, animals, and forms of governments.

⁴⁷⁶ Campbell (1999), 10.

As she ruminates on the existence and the knowability of this poetic world, Cavendish dismantles the idea that perception is central to the reader's knowledge of this realm, or even to proving its actuality. She uses the differences in scale to accentuate the distinctions between the physically detectable and the imperceptible. She ends the poem by reiterating the limits of the senses and stresses both the epistemic and imaginative failures that might result when one associates reality with what one is able to discern immediately:

And other *Stars*, and *Moones*, and *Suns* may be,
Which our *dull Eyes* shall never come to see.
But we are apt to laugh at *Tales* so told,
Thus *Senses* grosse do back our *Reason* hold.
Things against *Nature* we do thinke are true,
That *Spirits change*, and can take *Bodies* new;
That *Life* may be, yet in no *Body* live,
For which no *Sense*, nor *Reason*, we can give.
As *Incorporeall Spirits* this *Fancy* faines,
Yet *Fancy* cannot be without some *Braines*.
If *Fancy* without *Substance* cannot bee,
Then *Soules* are more, then *Reason* well can see. (31-42)

Cavendish's imagined world occupies a dual ontology: physically within grasp if one accepts the premise of nested worlds, but forever beyond sensory perception. This disjunction—which also points to a failure of the imagination—places complete astronomical systems out of reach. Her appeals to Reason, held back by “*Senses* grosse,” also intimate that one can overcome such fallacies by rejecting a purely sensory understanding of the environment. Senses do not merely mislead; they hinder a rational knowledge of a complex universe. Cavendish appeals to nature and to reason in order to stress the probability that these worlds do exist, as she dismisses beliefs about “*Spirits*.” “*Incorporeall*” life, she argues, is less plausible because it is insubstantial. Even “*Fancy*” is substantial and lodged in the material brain. Only a materialist understanding of nature

can sufficiently transform possible worlds originating in one's fancy to probable spaces of habitation. The very absence of evidence, then, paradoxically strengthens her argument that "other" realms "may be." Epistemic lack generates potential states of being, where the actual status of the fictional world becomes less important than articulating the conditions that suggest it might—or might not—exist.

The question of perception is central to Cavendish's poetry, which imagines worlds that might exist but cannot be verified empirically, or even perceived within the fictional frame. To uncover the relationships of perception to existence, Cavendish attempts to reconcile two opposing epistemic attitudes: her skepticism about knowing the perceptible world collides against her belief in the ability of the imagination to project and create. Atomism provides a perfect vehicle for testing the limits of such skepticism and possibility as her work weaves in and out between atomist theories and the worlds they generate (in poems such as "*A World made by foure Atomes*," "*What Atomes the Sun is made of*," "*A World made by Atomes*," and "*All things are govern'd by Atomes*"). As material entities that exist but might not be observed, atoms constantly test the cognitive limits of the human mind that aims to define the bounds between the real, the potential, and the non-existent. They compel a writer such as Cavendish, who is deeply invested in the relations between natural and imaginary worlds, to explore the boundaries between knowing and being, making her continually ask if atomic worlds are merely unknown or if they cannot exist because they are beyond perception.

To overcome the skepticism that the unknown cannot be discerned, Cavendish wonders if plural worlds might possibly exist but constitute different states of being from

the actual realm one occupies and perceives. She explores this question by deploying conjectural strategies to compose a physicalist realm:

If *Infinities* of *Worlds*, they must be plac'd
 At such a distance, as between lies waste.
 If they were joyned close, moving about,
 By justling they would push each other out.
 And if they swim in *Aire*, as *Fishes* do
 In *Water*, they would meet as they did go.
 But if the *Aire* each *World* doth inclose
 Them all about, then like to *Water* flowes;
 Keeping them *equall*, and in *order* right.
 That as they move, shall not each other strike.
 ("If Infinite Worlds, Infinite Centers," 1-10)

Beginning with an act of conjecture, Cavendish conditionally explicates the positions, actions, and interactions among multiple worlds. The repeated "If's" deauthorize the actuality of this world, and the "But" in line seven introduces yet another potential configuration. When she elaborates on the motions of the cosmos, however, the poem takes a declarative turn:

Or like to *water wheels* by *water* turn'd,
 So *Aire* round about those *Worlds* do run:
 And by that *Motion* they do turne about,
 No further then that *Motions* strength runs out.
 Like to a *Bowle*, which will no further go,
 But runs according as that strength do throw.
 Thus like as *Bowles*, the *Worlds* do turne, and run,
 But still the *Jacke*, and *Center* is the *Sun*. (11-18)

The similitudes gradually negate the purely hypothetical status of these worlds. The "Or," a logical operator of possibility, is subsumed within the actualization of this poetic world. The analogies to specific entities, such as "*water wheels*" and "*Bowle*," distance readers from the multiplying tendency of the "Infinities of worlds" that Cavendish initially imagined. The author replaces conditionality with a series of familiar metaphors that unfold the contours of a particular world and define its place in a cosmos. The reader

follows the poem to ultimately find herself in a recognizable heliocentric cosmology. Cavendish employs the conditional “If” to begin the process of staging a theory of possibility, as she explores the ways in which one generates an account of the unknown *from* a position of complete unknowability. While the initial conjectures enable her to appeal to entities and processes in the extant world, the metaphors and comparisons soon exfoliate and map out an absolutely new world: air, water, and mobility, the vehicles of exposition in the first half of the poem emerge as the referents that enable readers to perceive this realm as a plausible entity. By the time the reader reaches the word “Thus,” a world has been constructed.

The “if” serves as a worldmaking strategy that recurs in various works,⁴⁷⁷ and it translates conjecture into a principle of poetic production of new worlds. The link between unknowability and plurality is marked explicitly in poems like “Of *Stars*”:

But yet the more we search, the lesse we know,
Because we finde our *Worke* doth endlesse grow.
For who doth know, but *Stars* we see by *Night*,
Are *Suns* wich to some other *Worlds* give *Light*?
But could our outward *Senses* pace the *Skie*,
As well as can *Imaginations* high;
If we were there, as little may we know,
As those which stay, and never do up go. (5-12)

Triangulating discovery, writing, and knowledge, Cavendish privileges the reach of “Imaginations” in order to mark the impossibility of complete sensory perception. Instead of translating this lack into yet another theory of possible worlds—as Spenser does (although she invokes that typical feature of Spenserian poetry, the “endlesse” work, to link the worldmaking poems to the indeterminate extension of the cosmos)—she

⁴⁷⁷ For another example, see in the poem titled “The Sun doth set the Aire on a light, as Some Opinions hold,” which begins with the conjecture “If that the Sun so like a Candle is.” The poem “Of the Center” conjectures, “In infinites, no Center can be laid, / But if the World has Limits, Center’s made” (1-2).

redefines what constitutes an epistemic object. It is not merely that we cannot see the stars. We cannot fundamentally know what *they* are: what one terms “Stars” are possibly suns of other worlds, Cavendish speculates. This formulation reorients the approach to objects of knowledge, since it stresses the centrality of a particular viewpoint in understanding any world, real or imagined. The “If” that ends this poem emphasizes the importance of perspective. It simultaneously promises the existence of other worlds and limits the capacity to grasp them: supposition of a variegated cosmos primarily invites further speculations.

While in these poems the counterfactual “If” often leads to or reflects on stabilized fictional worlds, in *Philosophical Fancies* Cavendish identifies conjecture and possibility as *the* techniques that facilitate further imaginations. Stating that “I Could have enlarged my Booke with the Fancies of the severall Motions” (72), she provides the reader with a list of all the things that do not yet exist in the current published work—from movements and effects of the planets and the sun, to the “Motions [that] make *Civil Wars*,” to various questions on “*Physicke*,” to the sympathy between different creatures (72-77). Although she does not elaborate on these topics, the act of naming the objects and procedures she *might* have examined hints at the possibility of new accounts in the future. Exploiting the generative potential of the list, which initiates inquiry but does not allow a full exposition, Cavendish lays out a research agenda that reappears in different forms in her later works on natural inquiry and fiction. These topics, then, become a blueprint for future examination. The absence of these accounts in the current work in fact presupposes a writerly impulse to imagine and organize without transferring the burden of actual inquiry onto others (as Baconian lists tend to do). After all, Cavendish

“Could Have” written more, she informs readers. And she ends the work with an appeal to conjecture, stating she does not conclude her writing because “that which I have writ, will give my Readers so much Light, as to guesse what my Fancies would have beene at” (77). Conjecture—in the forms of the “If,” the “Could Have”—produces worlds within the mind and a community of readership that collectively participates in fulfilling current gaps in the authorial project.

Cavendish’s most sustained poetic imagination of how imperceptible worlds might be ordered and composed occurs in the last two poems of *The Atomic Poems*. In these works, she highlights that potentiality, rather than actuality, accurately captures the states of being of her created worlds. In “*Of many Worlds in this World*” (the penultimate poem in this series), she develops a nested theory of boxes that addresses questions of scale as well as of the material components and composition of these realms:

JUST like unto a *Nest* of *Boxes* round,
Degrees of sizes within each *Boxe* are found.
 So in this *World*, may many *Worlds* more be,
 Thinner, and lesse, and lesse still by degree;
 Although they are not subject to our Sense,
 A *World* may be no bigger then *two-pence*.
Nature is curious, and such *worke* may make,
 That our dull *Sense* can never finde, but seape.
 For Creatures, small as *Atomes*, may be there,
 If every *Atome* a *Creatures Figure* beare.
 If foure *Atomes* a *World* can make, then see,
 What severall *Worlds* might in an *Eare-ring* bee.
 For *Millions* of these *Atomes* may bee in
 The Head of one *small*, little, *single Pin*.
 And if thus *small*, then *Ladies* well may weare
 A *World* of *Worlds*, as *Pendants* in each *Eare*. (1-16)

Like before, Cavendish appeals to the modal term “may,” but she now uses it to delineate the potential state of these worlds. It is one of the many techniques she employs to mark the gaps between the actual and the potential. She also relies on resemblances to denote

the incommensurability between actuality and potentiality: the worlds within worlds seem “like” the nested boxes but are not identical with them. The “Although” marks yet another gap between sensed objects and imagined realms, and even the analogy of the “*two-pence*” points to an imperfect comparison: the coin, unlike “many *Worlds*,” is both visible and tactile.

But this container-theory of worlds adheres to Cavendish’s arguments about nature’s efficiency and creativity: “curious” nature is cognizant of how different entities might be structured so they fit together. The container model ensures there is not inordinate waste in nature. Cavendish appeals to the technique that is typical of her conjectural poetics—her shift from the “If” to the “Thus” seemingly proves a hypothesis—and draws on the composing power of nature to elaborate on this world: “degrees,” “thinner,” “less” all point to different ways of ordering. As Cavendish negotiates intertextual and interworldly entities, she also blurs the distinctions between container and contained.⁴⁷⁸ The constant shift between parts and whole—a “*two-pence*” comes to contain an entire world even as it represents the condition of minuteness from the authorial perspective; the distinction between “*Creatures*” and “*Atomes*” is both analogical and compositional—demands a continual shift in perception from the author as well as the reader, and the concept of “*World of Worlds*” explodes the seemingly contained structure.

This container form also invites further poetic speculation because it suggests that certain things only exist as possibilities. Thus, if “severall *Worlds* might in an *Eare-ring* bee,” as Cavendish conjectures in the above poem, she must poetically explore this

⁴⁷⁸ Sherman, in her reading of another poem, “The Motion of Thoughts,” argues it “stages an act of creation in which the creations are themselves creators of a perfect mental world” (187). This oscillation of roles seems to persist in various forms in Cavendish’s worldmaking poems.

world. The “Pendants” refer not only to objects; they also capture the process—or the motion, to use Cavendish’s term—of suspension which invites more conjectural poetry.⁴⁷⁹ This tension between pendant and pendency points to the inextricability of action and object, and the multiplicity of meanings culminates in Cavendish’s most anthologized poem, “*A World in an Eare-Ring*”:

AN *Eare-ring round* may well a *Zodiacke* bee,
Where in a *Sun* goeth round, and we not see.
And *Planets seven* about that *Sun* may move,
And *Hee* stand still, as *some wise men* would prove.
And *fixed Stars*, like *twinkling Diamonds*, plac’d
About this *Eare-ring*, which a *World* is vast.
That same which doth the *Eare-ring* hold, the *hole*,
Is that, which we do call the *Pole*. (1-8)⁴⁸⁰

Deploying the “may” to reiterate the distance between reality and possibility, Cavendish frames the contours of this minute world. She can only access the terminology of actual cosmology and is unable to escape the language of the “Zodiacke,” the “Sun” and “Planets,” and the “Pole.” But as she repeatedly shifts between the micro and the macro—the small “Eare-Ring round” becomes a “vast” world, one that encompasses an atomic universe “we not see”—she offers yet another, although a very particular, instantiation of the atomistic worldbuilding.

As this world unfolds Cavendish explores the implications of the complete epistemic disconnect between the actual and the potential. When talking about fictional creations, one must embrace the idea of possibility as an instrument of imagination and creation: it allows the author to adumbrate the status of that which remains beyond

⁴⁷⁹ I draw on this definition: “Hanging; suspended from or as from the point of attachment, with the point or end hanging downwards; dependent.” OED Online. September 2012. Oxford University Press. (accessed November 15, 2012).

⁴⁸⁰ Dodds (2010) reads this poem as a “response to or rewriting of Donne’s *The First Anniversary*” (157). But while Donne offers a model of “dissolution,” Cavendish offers a “celebration of the fundamental epistemological and ontological transformations of the new” (157).

perception and verification. The poem's tone increases in urgency as Cavendish continually gestures to the absolute disjunction between the content and frame of this world and the entities alongside which it exists:

There nipping Frosts may be, and Winter cold,
 Yet never on the Ladies Eare take hold.
 And Lightnings, Thunder, and great Winds may blow
 Within this Eare-ring, yet the Eare not know.
 There Seas may ebb, and flow, where Fishes swim,
 And Islands be, where Spices grow therein.
 There Christall Rocks hang dangling at each Eare,
 And Golden Mines as Jewels may they weare.
 There Earth-quakes be, which Mountaines vast downe sling,
 And yet nere stir the Ladies Eare, nor Ring.
 There Meadowes bee, and Pastures fresh, and greene,
 And Cattell feed, and yet be never seene:
 And Gardens fresh, and Birds which sweetly sing,
 Although we heare them not in an Eare-ring.
 There Night, and Day, and Heat, and Cold, and so
 May Life, and Death, and Young, and Old, still grow.
 Thus Youth may spring, and severall Ages dye,
 Great Plagues may be, and no Infections nigh.
 There Cityes bee, and stately Houses built,
 Their inside gaye, and finely may be gilt.
 There Churches bee, and Priests to teach therein,
 And Steeple too, yet heare the Bells not ring.
 From thence may Pious Teares to Heaven run,
 And yet the Eare not know which way they're gone.
 There Markets bee, and things both bought, and sold,
 Know not the price, nor how the Markets hold.
 There Governours do ruie, and Kings do Reigne,
 And Battels fought, where many may be slaine.
 And all within the Compasse of this Ring,
 And yet not tidings to the Wearer bring.
 Within the Ring wise Counsellors may sit,
 And yet the Eare not one wise word may get.
 There may be dancing all Night at a Ball,
 And yet the Eare be not disturb'd at all.
 There Rivals Duels sight, where some are slaine;
 There Lovers mourne, yet heare them not complaine.
 And Death may dig a Lovers Grave, thus were
 A Lover dead, in a faire Ladies Eare.
 But when the Ring is broke, the World is done,
 Then Lovers they in to Elysium run. (9-48)

Cavendish provides a thick description of the various ways in which the possible world remains out of reach: the “*Eare*” serves as a synecdoche for the self who fails to detect the presence of inhabitable realms in close proximity. Neither the lady (“yet not tidings to the *Wearer* bring”) nor interlocutors (“we heare them not in an *Eare-ring*”) can see, hear, or perceive the world in the earring. Dodds identifies this distance as “the most important structuring principle of this poem.”⁴⁸¹ The deficiency in sensory perception produces epistemic lack (“yet the *Eare* not know” recurs in various forms) and hinders affective responses (the events there “nere stir the Ladies *Eare*, nor *Ring*”). But as Cavendish continually opens her refrains with the “yet,” her opposition between existence and perception intimates not merely limitations in knowledge but loss. We cannot witness the rich details of the world in the earring. More importantly, perhaps, “we” miss the very processes that bring it into existence and that ultimately facilitate its complete disappearance. Cavendish suggests this disappearance is partially a product of the failure to empathize; readers, like the lady, cannot perceive or identify with the “*Lovers* [who] mourne” or even feel the loss of their “death.” Separation and unknowability mutually reinforce each other, as Cavendish highlights the inability to respond to an active world calling out to be known, to be translated from the “may” into an “is.” Its destruction marks the irresolvable relation between the mundane and the great: what the human senses can only perceive as the (possibly replaceable and replicable) breaking of the “*Ring*” is the annihilation of an entire realm of existence.

This eternal perceptual failure is partially responsible for the demolition of this domain. The poetic imagination brings this world into being as a potentiality—it “may”

⁴⁸¹ Dodds (2010), 160. Dodds reads this distance as a “comic exaggeration of the disdainful lady of the Petrarchan tradition” (163); I offer a different conclusion.

exist—by explicating its natural resources, weather, cycles of life, spaces of existence, religious, economic, and political institutions. But the Lady's, and readers', incapability to transcend this imaginative realm, coupled with the poet's inability to transfer her capacity of cognition to other minds, makes this world impossible to sustain. A particular mind—and specifically the poet's "fancy," as Cavendish would say—might create this world, but one creative mind cannot sufficiently overcome the ultimate fragility of this realm that demands continual engagement. As Cavendish reminds readers, even a single shake of the head might cause the ring to fall. Cavendish's world in the earring explores the radical implications of the notion of potentiality: as a possible world that might (or may not) exist, it can always disappear from existence and erase its potential to be perceived as an actual realm. Because the human mind does not, or cannot, acknowledge the actuality of this world, this realm retains the capacity to fulfill its distinct state of being. In its disappearance, it demonstrates how it will never be stabilized as an actual realm from the author's or reader's perspective. This destruction also enacts Cavendish's desired poetic ontology: the extreme oscillation between the wish to "either be a *World*, or nothing."

This complete, almost immediate, collapse of the possible world exposes the tenuousness of the links among mind, matter, and nature that she attempts to establish in these early poems through her unconventional atomistic philosophy of variety and composition. This complete disjunction between the mind and the material-cognitive worlds hovering around it suggests that Cavendish's atomist theory of particular entities—on which she bases her worldmaking—and her conception of nature as an ordering, governing, knowledgeable body are somehow at odds. An atomist principle

might be enough to create worlds, but the independence and distance between parts and whole, between micro- and macro-levels of existence, make this philosophy unsustainable as a creative principle. The lack of communication, perception, and empathy between parts and whole also challenges Cavendish's articulation of a harmonious nature tending towards unity. The poetic act becomes a zero-sum game, or to transport Cavendish's dyad, there is an absolute rift between the "World" and "nothing." As scholars including Rogers and Karen Detlefsen have shown, atomist theories are predicated on principles that privilege individual and autonomous entities over a sense of collectivity. "A World in an Eare-Ring" provides a radical instantiation of both the possibilities and the failures of this form of worldbuilding.

Utopian Worldmaking: Cavendish's Poetics of Possibility

Cavendish's exploration of the relationships among authorial fancy, materiality, and the actualization of possible worlds finds culmination in *The Blazing World*, her final prose fiction, published in 1666. The vitalist fictional worlds that come into being in *The Blazing World* respond not only to contemporary philosophy and politics, as scholars have noted, but also to the varied questions that govern Cavendish's literary production throughout her career: what are the material constituents of a created world? How do these entities correspond and respond to the structures of the mind? How might they create, explain, and sustain fictional worlds? And how can the "natural" author uniquely draw on the creative and volitional principles of this materialist cosmos?

The paratextual materials in *The Blazing World* draw attention to the tensions between truth and fabrication, as well as to the value—epistemic and aesthetic—of fancy. In his dedicatory poem William Cavendish privileges Cavendish's created worlds over

recent discoveries because they are “made” and not “found.” Opposing lands “discovered” to “[her] creating Fancy,” he praises her ability to “make [her] World of Nothing, but pure Wit.” In her own address “To the Reader,” Cavendish questions the divisions between philosophy and fiction:

as if this noble study were but a fiction of the mind; for though philosophers may err in searching and enquiring after the causes of natural effects, and many times embrace falsehoods for truths; yet this doth not prove, that the ground of philosophy is merely fiction, but the error proceeds from the different motions of reason, which cause different opinions in different parts, and in some are more regular than in others; for reason being dividable, because material, cannot move in all parts alike; and since there is but one truth in nature, all those that hit not this truth, do err, some more, some less; . . . all doe ground their opinions upon reason; that is, upon rational probabilities, at least, they think they do. (123)

In this passage she challenges the oppositions that dissociate fiction from intellectual pursuits; this exploration also modifies some of the dichotomies between reason and fancy she had set up in earlier works. Distinguishing error from fiction while marking their origins in the rational mind, Cavendish theorizes how the mind’s activities aim towards different ends. Identifying fiction, error, and probability as different forms of deviations from truth, Cavendish associates items that contemporary thinkers are explicitly separating.⁴⁸² Here, she uses fiction to signify fabrications of the mind, but she also dissociates it from a strict association with falsehood. Although “*fictions* are an issue of man’s fancy, framed in his own mind, according as he pleases,” they are not false. As we saw in *Grounds of Natural Philosophy*, fancy and reason (or “rational probabilities”) are the products of different “Motions [of the mind].” As a writer who is interested in discovering probabilities and who acknowledges the difficulty of arriving at a singular truth, Cavendish must emphasize that the source of knowing—reason—is not

⁴⁸² See Mann for a detailed analysis of how Cavendish’s writing opposes the rhetorical styles, as well as the relations between *res* and *verba*, that were being propagated by the Royal Society.

problematic, but at the same time acknowledge why its varied directions might lead one to accept this customary explanation. In fact, “error proceeds from the different motions of reason.” This claim also enables her to distance fiction from error. While reason “searches the depth of nature, and enquires after the true causes of natural effects,” fancy imitates nature’s “*uncurb’d*” actions.

These faculties also differ in their ends, and they come to define the poles of Cavendish’s thinking about imagination and fact: “The end of reason, is truth; the end of fancy, is fiction: but mistake me not, when I distinguish *fancy* from *reason*; I mean not as if fancy were not made by the rational parts of matter; but by *reason* I understand a rational search and enquiry into the causes of natural effects; and by *fancy* a voluntary creation or production of the mind, both being effects, or rather actions of the rational parts of matter...” Moreover, fancy will “recreate the mind, and withdraw it from its more serious contemplations” (124), which allows it to more easily introduce pleasure in learning. And of course, as she stresses her role as a “*creatoress*,” Cavendish extends fancy’s creative and re-creative powers to herself, making “a world of [her] own creating” (124).

The desire to reveal the distinctiveness of fancy recurs in other paratextual materials, in which Cavendish explicates the origins, scope, and products of the mind’s creative faculties. For instance, in a passage in *Grounds of Natural Philosophy*—one that has strong echoes of the theories on poetic production articulated in *The Blazing World*—Cavendish marks the irrecoverable gap between fancy and extant objects:

the Mind can enjoy that which is not subject to the Sense; as those things Man names, *Castles in the Air*, or *Poetical Fancies*; which is the reason Man can enjoy Worlds of its own making, without the assistance of the Sensitive Parts; and can

govern and command those Worlds; as also, dissolve and compose several Worlds, as he pleases.” (74-5)⁴⁸³

This passage—especially the ideas that the author can “govern and command,” “enjoy,” and “dissolve and compose” worlds “as he pleases”—reverberates through various works, including the utopian fiction. Fancy signifies not only a created product. It subtends the imagination. Removed from the intrusions of the sensory world, the mind freely shapes and reshapes the limits of the unverifiable (“that which is not subject to sense”) and the fabricated (worlds one can “dissolve and compose”).

In *The Blazing World*, Cavendish makes explicit the exact linkage between the mind that generates fiction, “the issue of man’s fancy,” and the multiple worlds which result from this act. The plural worlds in the fiction destabilize the singular reality of the authorial world and fragment the actual into hyperbolic possibilities, suggesting that Cavendish’s imagined worlds *re-present* the actual in different ways. There are two explicit levels of being in the text—the “numerous, nay, Infinite Worlds” (184) that exist alongside the Blazing World and are inhabited by characters, and the immaterial worlds created by the Duchess and the Empress. Cavendish attempts to distinguish between the inhabited and created worlds through appeals to materiality. Physical barriers separate the inhabitable worlds from each other and there is no “passage out of the Blazing World into [the Duchess’ world]” (216). By creating worlds, however, the Duchess and Empress can overcome the “gross material” (186) status of inhabited worlds that limit expansion and movement of goods and people. The purer material or even “immaterial” (186) status of

⁴⁸³ Cavendish repeatedly punned on the name “Newcastle” to talk about worldmaking. One of the Huntington Library copies of the 1663 edition of *Philosophical and Physical Fancies* has a note from the reader that picks up on this in order to present a more negative aspect of this wordplay: “New Castles on the air this Lady builds / While nonsense with Philosophy she guilds.” HEH 120156. Rogers identifies the writer as Edmund Waller (209-210).

the mental worlds allows fluidity. Narration seems to promise one way of transgressing these boundaries and reorienting absolute distinctions: towards the end of the second book, the Duchess entertains “some of her acquaintance” in her world with “discourse” (221-222) about the Empress and the Blazing World, translating an inhabited, material world into a purely-narrated one that functions as a source of pleasurable conversation. The concept of world as a “quantity or multitude of corporeal creatures” (174) underscores the identity between material conglomerations and the signification of an inhabited realm: “spirits being immaterial,” the immaterial spirits explain in their tutorial, “cannot properly make a world; for a world belongs to material, not to immaterial creatures” (177).

The three [“mentioned” (184)] inhabited worlds in the fiction become fragmentations or “gross” material realizations of political, social, and physical conditions in the authorial world. The Blazing World, ruled by the Empress, ostensibly presents the image of a “peaceful society, [with] united tranquility, and religious conformity” in its abundance of riches and “well ordered” government (189). The Duchess is the most explicit surrogate for the author in the fiction; her world, with its political “factions, divisions and wars” (189) and its “ruined and destroyed” (193) estates, is a manifestation of the material lack and political shortcomings in the author’s world. These two worlds serve as models for how the actual world could be and how it should not be respectively. For instance, the artificiality that Cavendish ascribes to the Duchess’ world channels the author’s contempt of unnatural forms: when the Duchess and Empress visit the theatre, they see scenes where “a sign-post” is preferred over a “natural face” and “artificial dance” over “natural humour” (192). They witness no natural art in this

world. Cavendish emphasizes the absolute physical distance between the two realms by marking the lack of *any* physical passage between them. The “world which [the Empress] came from” (184) is termed ESFI and nominally represents, in William Poole’s words, a “nationalist acronym” for England, Scotland, France and Ireland.⁴⁸⁴ This world is joined to the Poles of the Blazing World, and there is a clear demarcation between the two: “the Poles of the other world, joining to the Poles of this, do not allow any further passage to surround the world that way” such that “if any one arrives at either of these Poles, he is either forced to return, or to enter into another world” (126). In Part Two, it becomes the site for testing the possibilities for military control and absolute power that do not seem actualizable in the other worlds.

The Blazing World, which is the inhabited realm at the center of the fiction, becomes a site that naturalizes the actions particular groups of characters perform by relating their works to their states of being. The text explains the Empress’ sudden acquisition of “absolute power to rule and govern all that world as she pleased” (132) by associating this rise with her inner virtue and her external beauty.⁴⁸⁵ When she institutes numerous changes and establishes “schools” and “societies” to perfect learning and administration in the Blazing World, she assigns various beast-men work in areas such that “each followed such a profession as was most proper for the nature of their species”

⁴⁸⁴ William Poole, “Francis Godwin, Henry Neville, Margaret Cavendish, H. G. Wells: Some Utopian Debts,” *ANQ: A Quarterly Journal of Short Articles, Notes, and Reviews*, 16.3 (2003): 12-18, 17. Iyengar argues England is the “tacit parallel and counterexample” (661) but marks the absolute difference of fictional and real worlds (667-668).

⁴⁸⁵ The Empress’ signification as author, ruler, and goddess, has been studied in various ways. In addition to Campbell (1999), see Holmesland, 476-479, for a study of the “imperialist vision” that defines the Empress as a deity and that uses the “image if the expanded self” to mark “a widening artistic and epistemological space” (478).

(134).⁴⁸⁶ This identification of the beast-men with their particular areas of inquiry promises to explain, by appeals to their “nature,” the relationships between being and function. While all the species do not naturally refer to their fields of inquiry—there is no natural explanation why the bear-men are the Empress’ natural philosophers—the language of the text posits this identification between kind and profession. Although they are hybrid creatures, the beast-men can potentially embody and completely signify what they *are* through their “profession” and actions.

In one of the most-examined instances in *The Blazing World*, and one that also reveals Cavendish’s views on the value of contemporary experimental methods, the text dramatizes the superiority of natural faculties to artificial instrumentation: the Empress asks her philosophers to accept their telescopes are “false informers.” They should trust only “their natural eyes” and their “sense and reason” (141), since “nature has made [their] sense and reason more regular than art has [their] glasses” (141-2).⁴⁸⁷ The Empress repeatedly appeals to such tropes of natural superiority in order to structure and explain her decisions. In conversations with her logicians and orators, she asks them to follow their “natural wit” and “natural eloquence” respectively, rather than pursuing “formal argumentations” or “artificial periods, connexions and parts of speech” (161, 160). She continually emphasizes the limitations of artificiality and artifice:

⁴⁸⁶ In “Women/Utopia/Fetish: Disavowal and Satisfied Desire in Margaret Cavendish’s *New Blazing World* and Gloria Anzaldúa’s *Borderlands/La Frontera*,” in *Heterotopia: Postmodern Utopia and the Body Politic*, Ed Tobin Siebers (Ann Arbor: U of Michigan P; 1995) 58-95, Carol Thomas Neely reads the beast-men as “personified aspects of nature” (79). See Bronwen Price, “Journeys beyond Frontiers: Knowledge, Subjectivity and Outer Space in Margaret Cavendish’s *The Blazing World* (1666),” in *The Arts of 17th-Century Science: Representations of the Natural World in European and North American Culture*. Eds. Claire Jowitt and Diane Watt (Aldershot: Ashgate, 2002) 127-145. Price suggests they are beings “integral to their very areas of inquiry” (132). Hintz claims we meet the beast-men “*en route* to a discussion of the appropriateness of their physical shapes for their trades” (32).

⁴⁸⁷ The bear-men, who are often treated as object of ridicule, state they like artificiality: “we take more delight in artificial delusions, than in natural truths” (142).

Art does not make Reason, but Reason makes Art; and therefore as much as Reason is above Art, so much is a natural rational discourse to be preferred before an artificial: for Art is, for the most part irregular, and disorders Men's understandings more then it rectifies them, and leads them into a Labyrinth where they'll never get out, and makes them dull and unfit for useful employments. (161)

Reason is superior not only because it is innate, natural, and creative; it also orders and regularizes understanding.

In time, however, the Empress perceives the transformations she had instituted as a series of failed experiments, since "the world is not so quiet as it was at first." The Empress realizes these changes also led to "continual contentions and divisions between the worm-, bear- and fly-men, the ape-men, the satyrs, the spider-men, and all others of such sorts" (201). Fearing "they'll break out into an open rebellion, and cause a great disorder; and the ruin of the government" (201), she resolves to overturn the changes. She appeals to another naturalizing trope to rationalize her initial desire and subsequent reversals: "this [Blazing] World was very well and wisely ordered and governed at first, when I came to be Empress thereof; yet the nature of Women being much delighted with Change and Variety, after I had received an absolute Power from the Emperor, did somewhat alter the Form of Government from what I found it" (201).⁴⁸⁸ She explains her actions by appealing to the "nature of Women," which, like *Nature*, thrives on variety.

The Empress associates this "nature" of individuals to the theory of "Change and Variety" that exists in all matter in Nature and recuperates a perceived flaw of "Women,"

⁴⁸⁸ See Sarasohn (1984) for associations of the self with Nature and their implications for her natural philosophy. In "The Irregular Aesthetic of *The Blazing World*," *SEL: Studies in English Literature, 1500-1900* 47.1 (2007): 123-141, Angus Fletcher reads Cavendish's fiction as a response to "misogynist stereotypes" (129) and argues that "Cavendish's distinctive view of irregularity should be traced not to a desire to reject hierarchy but rather to her place in a feminist tradition that sought to redefine authority by associating it with women's inconstant dispositions" (125). Eve Keller too links Cavendish's adoption of an "organic materialism" with her "vision of the self: like the object of its study, the self for Cavendish is irregular, prone to contradiction, and non-discrete" (458).

their changeability, into her larger project about matter. The immaterial spirits had earlier appropriated this universal trait to praise the natural curiosity of the Empress as commensurate with her being: “Natural desire of knowledge, answered the spirits, is not blameable, so you do not go beyond what your natural reason can comprehend” (178-179). While the Empress’ reversals demonstrate the failure of actualized, perfectible models of worldmaking in the world she inhabits—perhaps the failure of utopian models, as Geraldine Wagner argues—they naturalize the connection between voluntary individual action and the self-moving internalist materialist philosophy. The changing nature of women, instead of a liability, becomes the ideal mode of actualizing and creating from a philosophy of “Change and Variety.”⁴⁸⁹

The immaterial spirits expose the skepticism implicit in the Empress’ reversals: one cannot absolutely control an inhabited world. As they question the Duchess’ “desire to be Empress of a material World” (186), the spirits privilege creation over actuality and suggest it is impossible to simultaneously inhabit and completely experience or know a world. The Empress initially presents an empirical solution: she will ask the spirits “whether there be not another world, whereof you [the Duchess] may be Empress as well as I am of this” (184). The spirits inform the Duchess, however: “you can enjoy no more of a material world than a particular Creature is able to enjoy, which is but a small part” (186). The Empress’s sovereign status acutely demonstrates this impossibility: “although she possesses a whole World, yet enjoys she but a part thereof, neither is she so much acquainted with it, that she knows all the places, countries and dominions she governs” (186). While “a sovereign Monarch has the general trouble; ... the Subjects enjoy all the

⁴⁸⁹ See Sarasohn (2010) for the argument that “Cavendish used her gender as both explanation and apologia for her writings” (6).

delights and pleasures in parts” (186). Fuller experience, knowledge, and pleasure arise not from conquest or dominion over an existing world but from the creation of new ones. In fact, physical limitations make such experiences impossible. Responding affirmatively to the Empress’ question “can any Mortal be a Creator?” they distinguish between “celestial” worlds “within” the mind from the “terrestrial” worlds “without,” and they suggest that creation of an “immaterial world fully inhabited by immaterial creatures, and populous of immaterial subjects...and all this within the compass of the head or scull” can uniquely fulfill the Duchess’ desire to be “Empress” (184-185).

Cavendish repeatedly theorizes strategies of fiction-making to explain her creative principles: in the *Epilogue*, she suggests that wit and fancy produce worlds through the mind’s self-moving matter. These worlds “are framed and composed of the most pure, that is, the Rational parts of Matter, which are the parts of my Mind” (224). In this formulation, Cavendish’s fictional worlds give form to the mutuality of her materialist philosophy and her poetics. They become “fantastical” (124) realizations of matter’s motions, and this process finds culmination in the actions of the Empress and Duchess who create worlds “within” their minds by employing their “sense and reason.”⁴⁹⁰ In the vitalist cosmos of Cavendish’s late fiction, the mind brings possible worlds into existence by imitating the creativity and changeability of Nature, “one infinite self-moving, living and self-knowing body consisting of the three degrees of inanimate, sensitive and rational Matter, so intermixt together, that no part of Nature, were it an Atom, can be without any of these three Degrees” (176). Cavendish now uses the term “Atom” as a conceptual entity, rather than the smallest element of her cosmology, but the creative potentiality and

⁴⁹⁰ This phrase is repeatedly used to describe the Duchess and the Empress. They use it, as does the narrator.

mobility of nature remains consistent in her fictional works from her early *Atomic Poems* to the later vitalist *Blazing World*: nature's "particulars are subject to infinite changes and transmutations by virtue of their own corporeal, figurative self-motions; so that there's nothing new in nature, nor properly a beginning of any thing" (152-153).⁴⁹¹ While Bowerbank claims that "[Cavendish] recreates pure nature" so as to associate Cavendish's position as a woman writer with her imitation of a feminized natural world, I argue that Cavendish bypasses the distance between creator and imitator by appropriating nature's *activities*.⁴⁹²

In *The Blazing World*, the spirits instruct, and the Duchess enacts, the forms of framing and composing that originate in the author's mind; these actions also gesture back to Cavendish's exposition of the natural ordering and composing of her early writings. In her utopian fiction, she suggests the mind's "pure" and "Rational parts of matter" correspond to and mimic the self-moving matter of the physical world. They also draw on Nature's variety. One "may" make any number of possible worlds, from those "full of Factions, Divisions and Warrs," to those of "peace and Tranquility," but Cavendish chooses to create the particular worlds in her fiction because "[she esteems] Peace before Warr, *Wit before Policy*, Honesty before Beauty" (224). The immaterial spirits echo Cavendish's beliefs, as they inform the Empress and Duchess that any "human creature" "may alter that World as often as he pleases, or change it from a Natural World, to an Artificial; he may make a World of Ideas, a World of Atoms, a World of Lights, or whatsoever his Fancy leads him to." They also underscore the internalized benefits of such creative acts: "since it is in your power to create such a

⁴⁹¹ This definition echoes her description of Nature in the *Observations upon Experimental Philosophy*, "a self-moving, and consequently a self-living and self-knowing infinite body" (125).

⁴⁹² Bowerbank, 396.

World, What need you to venture life, reputation and tranquility, to conquer a gross material World” (186).” Their words serve as instances of invitation—or initiation—as they direct the two fictional protagonists to their own acts of imagination, ordering, and composing.

Cavendish also underscores the importance of natural affiliation with the worlds one creates. While she acknowledges anyone may inhabit or make worlds through the faculty of fancy—harkening back to the atomistic worlds of her early poems—she recognizes that others might wish to create worlds most suited to their natures: “if any should like the World I have made, and be willing to be my Subjects, they may imagine themselves such, and they are such, I mean in their Minds, Fancies or Imaginations; but if they cannot endure to be Subjects, they may create Worlds of their own” (224-225). Through her act of *poiesis*—which William Cavendish identifies as “[the author’s] creating Fancy”—the Duchess can surpass the Empress’ “absolute” power over the world she inhabits, since (as the immaterial spirits instruct her) “by creating a World within your self, you may *enjoy* all both in whole and in parts, without *controle* or opposition; and may *make* what World you please, and *alter* it when you please, and *enjoy* as much pleasure and delight as a World can afford you” (186, my emphasis). The modal term “may” repeatedly joins possibility to ability, highlighting the promissory nature of possible knowledge.

The fictional Duchess enacts this authorial theory by imitating Nature’s rationality and its “Change and Variety” to imagine worlds into being. She continues creation till she “had brought [her] worlds to perfection” (186). First, she unsuccessfully tries to appropriate various ancient world systems. She rejects Thales’ cosmology because the

“demons” there “would not suffer her to take her own will” (187) and rejects Pythagoras’ world because “she was so puzzled with numbers, how to order and compose the several parts, that she having no skill in arithmetic” (187). She discards Platonic “Ideas, [which] having no other motion but what was derived from her mind, whence they did flow and issue out, made it a far harder business to her, to impart motion to them, then puppet-players have in giving motion to every several puppet” (187). The world of Epicurus she also rejects

she had no sooner begun [to build the Epicurean world] but the infinite Atoms made such a mist, that it quite blinded the perception of her mind; ... and of a good order and method, the confusion of those Atoms produced such strange and monstrous figures, as did more affright then delight her, and caused such a Chaos in her mind, as had almost dissolved it” (187).⁴⁹³

She finds Aristotle’s world impossible to conceptualize as a material entity: “but remembering that her mind, as most of the Learned hold it, was Immaterial, and that, according to Aristotle’s Principle, out of Nothing, Nothing could be made; she was forced also to desist from that work” (187). While in *The Atomic Poems* Cavendish had suggested that the failure of the senses led to the collapse of created worlds, in *The Blazing World* she refines this argument to explore further why certain characters cannot—or might not wish to—construct fictional realms that do not align with their conceptions of the matter of the cosmos.

She then successfully forms worlds based on modern mechanist philosophies, but their externalist and reactive theories of motion render them problematic; this scene stages the impossibility of creating worlds from the mechanistic systems she criticizes in her philosophical writings. Descartes’ cosmology of “Æthereal Globules,” makes the

⁴⁹³ See Goldberg (2009) for the implicit Lucretian influences in Cavendish’s writing, if not in her philosophy.

Duchess' mind "so dizzy with their extraordinary swift turning round, that it almost put her into a swoon; for her thoughts, but their constant tottering, did so stagger, as if they had all been drunk" (188). This process leads the Duchess away from the ordered composition she seeks. In fact, it creates an opposite, oscillating effect that continually destabilizes the mind. Terms like "dizzy" and "tottering" accentuate this lack of "control." The matter she deploys controls the Duchess, instead of the other way round. Hobbes' mechanist cosmology literalizes the extreme effects of adopting a philosophy of force and reaction. She makes a world according to "Hobbes' Opinion" but

when all the parts of this Imaginary World came to press and drive each other, they seemed like a company of Wolves that worry sheep, or like so many Dogs that hunt after Hares; and when she found a reaction equal to those pressures, her mind was so squeezed together, that her thoughts could neither move forward nor backward, which caused such an horrible pain in her head, that although she had dissolved that World, yet she could not, without much difficulty, settle her mind, and free it from that pain which those pressures and reactions had caused in it. (188)⁴⁹⁴

The violent impact of its "parts" as they "press and drive each other" makes this "Imaginary" world impossible to sustain; the hunting metaphors underscore the threat of destruction implicit in these motions. "[R]eaction," the basis of the external motions, affects not only the parts of the world, but also the "mind" which creates and alters it. These motions threaten to control and even destroy the creative force that generates them.

⁴⁹⁴ See Spiller and Rogers for Cavendish's opposition to Hobbes. See Hutton "In Dialogue with Thomas Hobbes" for correspondences between Cavendish's vitalism and Hobbes' mechanism. Cavendish's intellectual responses to Hobbes, as well as Hobbes' role and position within the Newcastle circle, have been a consistent focus of scholarship. For representative works, see Battigelli, who draws attention to Cavendish's examination of failures of Hobbesian absolutism (64-84); Sarasohn (2010) who also compares their politics of matter (71) and their possible atheistic writings on the material soul (86-87); Detlefsen shows how both Cavendish and Hobbes believed that true philosophy uncovered causes (130). Also see Neil Ankers, "Paradigms and Politics: Hobbes and Cavendish Contrasted," in *A Princely Brave Woman: Essays on Margaret Cavendish, Duchess of Newcastle*, Ed. Stephen Clucas (Burlington: Ashgate, 2003), 242-254, who argues that "Cavendish's ideas concerning matter and motion... can best be understood as a counter to the attempt by Hobbes to produce a unified theory of nature, man and society" (242).

Even after the Duchess dislodges the “pressures and reactions” from her mind, the “pain” of containing them lingers on. Pain replaces pleasure, one of the primary incentives of creation. The Duchess’ experience with the Cartesian and Hobbesian worlds suggest that while it is logically and materially possible to create worlds by appropriating foreign “patterns” (188), and while the mind can intellectually engage more fully with contemporary cosmological imaginings, the creator can pleasurably know and sustain the world that emerges from his or her natural kind. A creator should make his or her *own* world instead of inhabiting another’s.

The Duchess formalizes the naturalizing trope, that “each” act in a manner “most proper for the nature of their species,” when she gives imaginative form to her own ontological status and “make[s] a World of her own Invention” (134, 188). Introduced in *The Blazing World* as a scribe who is “a plain and rational writer, for the principle of her writings, is sense and reason,” who “writ Sense and Reason,” one whose particular elements can be interpreted “as you please” and one who prefers “poetical or romancical” (181, 183) cabbalas over philosophical, moral or scriptural ones, she is immediately associated with Nature’s “Corporeal, figurative self-motions” and with its “sensitive and rational” matter. Thus, her self-modeled world—her “own” world—is perfectly suited to give poetical form to Cavendish’s philosophy of matter. She creates a world “composed of sensitive and rational self-moving Matter; indeed, it was composed onely of the Rational, which is the subtilest and purest degree of Matter” (188). She gives form to Cavendish’s claim in the Prologue that “fancy” voluntarily creates from the mind’s rational matter; this world internally recreates the matter and motion on which it is built. The Duchess’ actualization of a “celestial” world becomes a poetical representation of the

self, but it also harmonizes the self with the real and the immaterial world through the vitalist theory of matter.

This world “appear’d so curious and full of variety, so well order’d and wisely govern’d, that it cannot possibly be expressed by words, nor the delight and pleasure which the Duchess took in making this World-of-her-own” (188). This world, uniquely “her-own” actualizes the author’s vitalist philosophy as well as its creator’s ontology. Full of “variety,” perfectly “order’d and wisely govern’d,” this world brings forth Cavendish’s *poiesis*: it “frame[s] and compose[s]” the best possible parts of the fragmented inhabited worlds. The orderliness, stability, and variety, produce “delight and pleasure” and make the Duchess wish for the proliferation of such self-modeled worlds: she now instructs the Empress to create a world in and of “her own mind” (189) rather than inhabiting the Duchess’, because “your Majesty’s mind id full of rational corporeal motions” (189). In this way, she settles the Empress’ confusions about the nature of the worlds that one might attempt to produce.⁴⁹⁵ Both characters, ultimately, choose worlds that correspond to their own selves, and this enables them to control, make, alter, and enjoy their creations.

By combining the worlds in her mind with her theories on the materiality of nature, Cavendish’s fictional worlds give form to her natural philosophy. Sharing the same concepts *and* the same matter, the uniqueness of one can only be explained by reference to the other. While an innumerable number of worlds are logically possible, the

⁴⁹⁵ The narrator documents the Empress’ attempts: “the Empress was also making and dissolving several worlds in her own mind, and was so puzzled, that she could not settle in any of them; wherefore she sent for the Duchess, who being ready to wait on the Empress, carried her beloved world along with her, and invited the Empress’s soul to observe the frame, order and government of it. Her Majesty was so ravished with the perception of it, that her Soul desired to live in the Duchess’s World: But the Duchess advised her to make such another world in her own mind; for, said she, your Majesty’s mind is full of rational corporeal motions; and the rational motions of my mind shall assist you by the help of sensitive expressions, with the best Instructions they are able to give you” (188-189).

creator's ability to control, know, and enjoy created worlds is predicated on his or her perception of matter and the creative ability to manipulate it. The form of the fictional world becomes inseparable from the matters out of which it arises, and Cavendish ultimately harmonizes the creator's state of mind to the world she occupies as well as to the realms she creates. This identity between the mind and the world offers an alternative to the unsustainable possible worlds in the ear-ring. In *The Blazing World*, then, Cavendish generates a theory of matter that can support, as well as sustain, not only real but fictional worlds.

In the process of theorizing her approaches to creation, Cavendish forcefully rethinks the referential capacity of fiction, by rejecting the notion that fictional worlds are non-referential or merely self-referential, in the sense that they do not point to the real world.⁴⁹⁶ They emerge from the productive, creative potential that “frame[s] and compose[s]” the natural world. Fictional worldmaking becomes a productive act, a form of Lacoue-Labarthe's “general mimesis” (“an imitation of *phusis* as a productive force, or as *poiesis*”). By conjoining her theories about a vibrant nature to her notions of fiction-making, Cavendish's writings throughout her career enact a particular form of *mimesis*: instead of imitating objects in nature to produce her fictional worlds, she imitates nature's continual material motions and changes.

But as she realizes her “ambition” “not only to be Empress, but Authoress of a whole world” and creates both “the Blazing and the other Philosophical World” (224), she fully realizes the necessity of perfect alignment between self and world. She writes in

⁴⁹⁶ The state of being of her fictional world differs from those proposed by possible worlds theorists, because she does not merely generate “possible, nonactualized worlds” (Dolezel, 13) that are ontologically isolated and fully distinct from the real world.

the “Epilogue” that all “may create worlds of their own, and govern themselves as they please”:

But yet let them have a care, not to prove unjust usurpers, and to rob me of mine: for, concerning the Philosophical World, I am Empress of it my self; and as for the Blazing-world, it having an Empress already, who rules it with great wisdom and conduct, which Empress is my dear Platonic friend; I shall never prove so unjust, treacherous and unworthy to her, as to disturb her government, much less to depose her from her Imperial Throne, for the sake of any other, but rather choose to create another world for another friend. (225)

The author who began her career with an ambition that pulled in extreme binaries—allowing her to conceive of herself only as a “world” or “nothing”—now imagines communities, both real and imagined, as she articulates the possibilities for the writing subject. She also fully realizes the virtue of self-realized worlds and associates it with the pleasure of original production. This naturalized relation between writer and the materialist world produces a space that accommodates other ambitions: anyone “may create worlds of their own.” Cavendish’s writing here overcomes the destructive potential of the world in the ear-ring. She can now translate the complete disjunction between object and subject to acknowledge a different kind of multiplicity: different authorial subjects access the world differently, in order to create, compose, and sustain the worlds they bring into existence.⁴⁹⁷ The Duchess’ self-realized world culminates a process of theorizing the relation between creation and pleasure that had begun as far back as *Worlds Olio*, where Cavendish had noted the “painful inquirie” accompanying the act of imitation. The Duchess’ dramatization of actualizing possibility reveals the intimate connections among pleasure, creation, and learning. Pleasure from original creation (itself a product of appropriating nature’s propensity for creative *motions*), rather than the

⁴⁹⁷ My reading is in alignment with arguments such as Spiller’s, who shows “how readers become an intrinsic part of such moments of multiplicity” (175), and it questions Aït-Touati’s recent formulation that Cavendish “affirm[s] the necessity of absolutism as the foundation of epistemological certitude” (184).

pain of imitation or the fear of oblivion, drives this pluralist authorial enterprise, converting Cavendish's individual ambition into a project that labels all as potential creators, so that they "may make what World [they] please."

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