

An Ecocritical Exploration of the Unique Nature of Oceans in
The Blazing World

Marykate Earnest

Abstract: Early modern perceptions of oceanic space diverged from standard perceptions of nature on land (or land-nature) because oceans presented a different type of wilderness. Because oceans defied early modern definitions of nature, they refused to support the developing mechanistic approach in the way that land-nature did. I examine Margaret Cavendish's *The Blazing World* to illustrate how the liminal position of oceans within the humankind-nature paradigm necessitated a hybrid mechanistic-organic relationship and representation. This exploration demonstrates how oceans, as an extraterrestrial space distanced from traditional, terrestrial nature, constituted a different kind of natural phenomenon and contributed to a global mentality. Experimenting with humankind's perceptions of, and approaches to, nature suggests that the organic/mechanistic dichotomy is an overly-simplified paradigm, and that the human/nature partition is equally simplistic due to differing "natures" of terrestrial verses oceanic space. Oceans do not fit neatly under the paradigm of "nature," they deviate through resistance and idiosyncrasy. Charting oceans proves an effective step in diversifying definitions, representations, and perceptions of nature.



The contemporary image of our planet is a green and blue globe suspended in the dark, sweeping, and mysterious mass of outer space.¹ Trying to imagine a time before such an image existed in cultural rhetoric raises the question of how earlier cultures constructed an image of the globe in its entirety. One answer rests in the exploration of another dark, expansive, and mysterious environment – the ocean. Seventeenth-century oceanic exploration aided the development of a global perspective, and texts such as Margaret Cavendish's *The Blazing World* demonstrate how this perspective intersects with changing perceptions of nature upon the ocean and within oceanic discourse. Cavendish ends *The Blazing World* with a powerful, representative image: “[the empress] being entered into her own ship, the whole fleet sunk immediately into the bottom of the seas, and left all the spectators in a deep amazement; neither would she suffer any of her ships to come above the waters until she arrived into the Blazing World.”² This image combines the globalizing and mobilizing functions of oceans with a supernatural representation of an organic relationship with nature. By blending conventions of utopian fiction and scientific discourse, Cavendish reexamines the relationship between nature and humankind. Particularly, this relationship reveals the unique position of oceans within natural phenomena in a period of shifting scientific philosophies and methods.

I argue that early modern perceptions of oceanic space diverged from standard perceptions of nature on land (or land-nature) because oceans presented a different type of wilderness. This environment was uninhabitable and untamable, deviated from traditional definitions of nature, and made possible a connected, global perspective that conventional conceptions of land-nature as apportionable did not support. Deviations of ocean-nature from land-nature – the inability to support human steps, the hidden and diverse ecosystem, and the spatial and temporal expanse that overwhelms the field of vision – facilitated textual representations combining utopian fantasy, science fiction, and travel narrative. Because oceans defied early modern definitions of nature, they refused to support the developing mechanistic approach in the same way that land-nature did. Instead, oceanic space required that travelers and

writers retain aspects of an organic paradigm to integrate with those of the scientific revolution in order to understand and represent the vast and seemingly supernatural nature of oceans.

The early modern period was a time of expansion, as scientific philosophy developed through pursuit of new knowledge and understanding; great thinkers such as Isaac Newton, Robert Hooke, and Francis Bacon laid the foundations of the scientific revolution. This movement and its scientific achievements brought a new worldview, a mechanistic approach, which Robert Hooke describes in his *Micrographia*: “we may perhaps be inabled to discern all the secret workings of Nature, almost in the same manner as we do those that are the productions of Art, and are manag’d by Wheels, and Engines, and Springs, that we devised by human Wit.”³ This desire to know the “secret workings of Nature” inspired a new conceptualization of the world and a new relationship between humankind and natural phenomena. Carolyn Merchant describes negative aspects of this new relationship: “As the sixteenth century organic cosmos was transformed into the seventeenth century mechanistic universe, its life and vitality were sacrificed for a world filled with dead and passive matter.”⁴ Slowly, the world seemed more machine than organism; therefore, with the advancement of science came a loss of intimacy with nature, a loss of interconnection between and humans and their surroundings. At first glance, oceans dwell within this broad concept of “nature”; however, I suggest further investigation reveals that oceans resist such classification.

To explore shifting paradigms of nature requires an understanding of past and present environmentalism. Humans are part of nature and, therefore, interrelated with their object of study. Subjectivity is inevitable, and necessitates an awareness of definitions of ecology as well as humankind’s role in constructioning those definitions. Neil Evernden contends that inter-relatedness is the crux of ecology and a commonly misunderstood or over-simplified concept. The inter-related essence of ecology is not merely a matrix of causal connections, but rather “a genuine *intermingling* of parts of the ecosystem. There are no discrete entities.”⁵ Subsequently, there exists no single, dominant, correct perceived model of

nature. Throughout history, different ways to interact with and understand the environment emerge from scientific advancement, technological innovation, and climate change. Describing the changing trends of today, Howarth contends, "Science is evolving beyond Cartesian dualism toward quantum mechanics and chaos theory, where volatile, ceaseless exchange is the norm. While some forms of postmodern criticism are following this lead, many humanists still cling to a rationale bias that ignores recent science."⁶ One sees evidence of the more recent argument in modern social networking technology and Internet discourse. Organicism, particularly its notions of interconnection and causation, will soon be essential to the survival of our planet. Investigating this paradigm shift away from organicism within early modern discourse can illuminate new approaches and solutions to contemporary environmental issues.

The Duchess and Her Blazing World

Similar to shifting theoretical concepts of the natural world, Margaret Cavendish, Duchess of Newcastle, evades clear and direct classification. After feminism revived critical interest in the history of women's writing, the resurgence of Cavendish scholarship revealed the unique perspective in her writing.⁷ She wrote from the liminal position of a woman denied membership to Royal Society, participation in man's pursuit of knowledge, and a formal education. Line Cottegnies and Nancy Weitz describe how this position affects literary scholarship: "Cavendish's works, more than any others', it seems, require a hybrid perspective, and it bears evidence to their complexity and modernity that they still challenge their readers' responses and reading practices three-and-a-half centuries after they were first written."⁸ In a time when it was difficult for women to seek and find publication, Cavendish succeeded and even refused to use a masculine pen name.⁹

Throughout her life, Margaret Cavendish inhabited a marginal position that was near, yet denied, power and prestige. She was handmaid to a queen, exiled during the interregnum, and a visitor of the royal society who was denied membership. Describing how Cavendish's scientific

treatises, plays, and poems found audiences in the seventeenth and twenty-first centuries, Keller suggests: "Ideally, Cavendish wanted her ideas to be included in the process of debate; denied that, she offered an analysis that is insightful precisely because it is spoken from outside the discursive and institutional forums it explores."¹⁰ Exemplifying this exterior position are her utopian fiction *The Description of a New World, Called The Blazing World* and its non-fiction companion *Observations on Experimental Philosophy*, which explore natural philosophy and critique experimental method. Keller writes: "Cavendish's critique of the new science was unique on at least two grounds: first, in that it charged that the mechanist model and the experimental method were more potent as social than as epistemological constructions; and second, in that it recognized the functioning of gender in that construction."¹¹ By pointing out the constructed nature of such systems, Cavendish critiques the so-called objectivity of scientific method.

This exploration of the constructed status of nature precipitates an ecocritical interrogation of issues such as the way nature is represented, the purposes served by particular natural phenomena, and the influence of scientific theories upon nature.¹² Examining evidence of the human-nature relationship to understand how it manifests within our historical narrative illuminates the influences on the construction of that narrative. Merchant contends that nature, like gender, is a construction rather than a constant, and lacks "unchanging 'essential' characteristics."¹³ This means that "individuals form concepts about nature and their own relationships to it that draw on the ideas and norms of the society into which they are born, socialized, and educated."¹⁴ Cavendish begins *The Blazing World* with an exegesis to the reader:

fictions are an issue of man's fancy, framed in his own mind, according as he pleases, without regard, whether the thing he fancies, be really existent without his mind or not; so that reason searches the depth of nature, and enquires after the true causes of natural effects; but fancy creates of its own accord whatsoever it pleases, and delights in its own work.¹⁵

With this explanation, Cavendish gives herself the freedom of original creation, laying the foundation for a self-aware, critical text rooted in, but

not constrained by, cultural and scientific discourse.

The beginning of *The Blazing World*, Bronwen asserts, “presents two types of narrative which change direction and alter shape through crossing boundaries with each other... This ‘many-in-one’ feature is echoed throughout the text, resulting in a dialogue between one way of shaping understanding and another which serves to challenge emerging concepts of knowledge, subjectivity and sexuality.”¹⁶ Cavendish blends the social dreaming and technological conjecture of utopian fiction with the discourse of natural philosophy.¹⁷ She plays with the creation and boundaries of worlds and her fictional and authorial self, and “with such a proliferation of worlds and selves, then, Cavendish clearly uses her utopian tale to continue – rather than to retreat from – her assault on experimental, mechanical science, based as it is in the assumption of a discrete self and a stable object.”¹⁸ Cavendish’s elevated societal status afforded her an informal education and the financial backing for career in writing, which she used to make her voice heard. In turn, she gave a voice to voiceless nature in the form of “creature-men,” unique human-animal hybrid characters.

Through my investigation of *The Blazing World*, I argue that the oceanic environment deviated from early modern perceptions of nature and facilitated a literary representation of blurred genre boundaries and supernatural, speculative, and utopian tendencies. Cavendish depicts oceans, travel, innovation, and islands because they provide distance from conventional, day-to-day nature (forests, fields, hills, and agriculture). This distance allows her to manipulate natural laws and social norms, experiment with possibility and reality, and deviate from traditional approaches to nature. Cavendish represents expansion and global exploration with a synthesis of drama, travel narrative, utopian fiction, and scientific contemplation. This synthesis reveals that the scientific method is misconstrued as subjective; that humans are not separate from, but rather part of, nature; that nature is diverse and defies one definition or generalization; and that humans should embrace different ways of seeing, alternate approaches, and new perceptions and interpretations.

In order to understand definitions, representations, and functions of

nature in Cavendish, it is important to understand how this concept was linguistically conveyed. Nature, or more appropriately natural phenomena, had multiple, overlapping definitions referencing both humans and the material world. With respect to humans, nature was “the properties, inherent characters, and vital powers of persons, animals, or things, or more generally to human nature. It also meant an inherent impulse to act and to sustain action; conversely, to ‘go against nature’ was to disregard this innate impulse.”¹⁹ Additionally, referring to the material world, nature was “a dynamic creative and regulatory principle that caused phenomena and their change and development. A distinction was commonly made between *natura naturans*, or nature creating, and *natura naturata*, the natural creation.”²⁰ By employing ocean travel, islands, and technological advancement and speculation, Cavendish represents oceans as nature to be utilized and studied but also as more than nature, a super-nature resisting dominance and partitioning. In doing so, she creates a text that questions a uniformly mechanistic approach to all natural phenomena.

Mechanism distanced civilization from nature. Merchant asserts, “The removal of animistic, organic assumptions about the cosmos constituted the death of nature... Because nature was now viewed as a system of dead, inert particles moved by external, rather than inherent forces, the mechanical framework itself could legitimate the manipulation of nature.”²¹ While land-nature was slowly dominated, dissected, studied, and exploited, oceans defied such acts and therefore complicated definitions of nature. Nautical travel, exploration, and trade flourished in early modern England, and the rising merchant economy and prevalence of travel narratives established a growing interest in oceans. Oceans evolved from boundaries separating regional, local environments to roadways facilitating international travel, connecting a previously divided planet, enhancing global awareness, and encouraging explorers, merchants, and writers to conquer the wilderness of the ocean.²²

However, the size and unconventional nature of oceans defied partitioning and domination. In a passage from *The Arte of Navigation*, published in Spain in 1551 and brought to England in 1561 through Richard Eden’s translation, Martin Cortes describes the importance of

ocean travel's universal, unifying force:

And thus shall they that nowe live, and lyke wise they than shal succede us, see and perceave, howe much more the worlde oweth and is beholding to your Majestie, then were the auncient Egiptians to their Isis. She gave them letters to reade, but your Majestie hath geven rules and orders to sayle on the seas. The profite of Isis, was onely for one province. But the commoditie that ensueth of your doynge, is universall for all provinces and nations, and for all seas, as well to go to places discovered, as also to discover landes and regions yet unknowen.²³

By comparing the gifts of Isis to the commands of "the most mightie and victorious monarch Charles the Emperor," to sail the seas, Cortes demonstrates the period's perception of the momentous nature of ocean travel and discovery. This suggests a globalizing functionality of oceans, as developments in navigation and technology have "universal" effects for all regions, and assumes that information from one area can reach all areas because water connects them. However, Cortes knew the ocean would resist domination:

What can be more difficulte then to guyde a shyppe engoulfed, where only water and heaven may be seene. One of the foure most difficult thynges wherof Salomon maketh mention in his Proverbes, is the viage of a shyppe by the sea. The which Galfrede expounding, faith that in humayne thynges, none is more fearefull or more daungerous, then to aventure lyfe in a weake and thinne piece of wood, or for a man to commit himselfe to the rage of furious wyndes amonge the tempests of the sea, and there to hasarde that he loveth so well.²⁴

By characterizing ocean travel as the most dangerous endeavor humans can undertake, Cortes composes a disclaimer. Although his guide was the most advanced of his day, in the face of the unpredictable and tempestuous ocean, he asserts that no seaman could control or manipulate oceans, but could merely employ techniques and technologies to work with or upon oceanic space.

Travel narratives and logs documented climate, location, and interactions with new cultures and foreign lands, and fostered significant interest in travel and exploration. With the help of print innovations, the travels of Christopher Columbus, Amerigo Vespucci, Ferdinand Magellan, Martin Frobisher, and Francis Drake; the translations of Richard Eden; and the narratives of Thomas Nash and John Mandeville reached a large audience and encouraged interest and wonder in ocean-crossing travel. Mancall suggests that these writers not only presented physical descriptions of voyages but also revealed their anxieties:

would a storm blow up and capsize their vessel? Would some unknown wild animal attack? Would the people they met decide to kill them? Such fears were reasonable. Yet the dominant tone of these accounts was not trepidation, but wonder at the marvels being witnessed and glee at the possibility of making a profit from new discoveries.²⁵

Representing the unsettling and unfamiliar expanse of the ocean encouraged experimental discourse. The boundaries between fact and fiction blurred when the conventions of travel writing were appropriated, parodied, and embellished. Concerning this blurring in printed travel narratives, Mancall writes:

To modern eyes, the claims made on some pages of sixteenth-century printed books seem far-fetched. Rather than dismiss these texts, we must understand them within their own contexts. Sir John Mandeville's fourteenth-century tales of the East, for example, prompted one reader to note that "Mandeville's longest journey was to the nearest library." Yet there are hundreds of surviving accounts of Mandeville's journey, and among those who possessed copies were Leonardo da Vinci and Christopher Columbus.²⁶

This embellishment is not merely for entertainment, as the strange and new experiences of exploration often lacked context and challenged representation. When Sir Walter Raleigh writes of seeing "in those passages of very rare colours & forms, not elsewhere to be found, for as much as I have either seen or read them," he is struggling to describe the possessions and rituals of the people of Orinoco.²⁷ He continues, "On that

branch which is called *Caora*, are a nation of people, whose heades appear not above their shoulders, which though it may be thought a meere fable, yet for mine owne part I am resolved it is true."²⁸ Outlandish descriptions do not wound Raleigh's credibility, as he is venturing into new, exotic territory. By contriving a mixture of factual account and exaggeration, he recreates the unknown and exotic voyage for his readers.

Blurred genre boundaries encouraged fiction writers to appropriate travel narrative convention, as Margaret Cavendish does in *Blazing World*. Because in travel and utopian fiction, cartographic illustrations and geographic descriptions added verisimilitude, Miles Ogborn and Charles Withers argue that "there is a negotiation of the boundaries of fact and fiction which lay at the heart of the relationship between geographical knowledge and the world that it depicted."²⁹ Discourse creates and influences perceptions of nature, essentially giving a voice to the voiceless, and while discourse is influenced by those with power, it is also shaded with subtle deviations from the dominant voices of history. In discerning the place of oceans within the shifting human-nature relationship of the early modern period, primary nonfiction sources – travel narratives, logs, nautical law, sailing manuals, and maps—paint only a partial picture of how early modern culture perceived and visualized oceans. Fictional texts like *Blazing World*, however, offer additional evidence of an historical era, revealing the representational nuance required by non-terrestrial nature within certain early modern discourse. In Cavendish's text, the protagonist is captured and transported to a utopian world. She travels through this diverse and innovative world to eventually become its Empress, creating societies and engaging in scientific, political, and philosophical discourse. This textual appropriation of travel narrative convention blurs boundaries between possibility and reality, nature and supernatural, to present alternative approaches and perceptions of nature.

A Synthesized Mechanistic-Organic Approach

Oceans necessitate that technology travel across and by means of water and encourage humankind to explore and progress. Early modern

expansion exemplified a desire to harness nature, which resulted in positive discovery, connection, and adventure, but also perpetuated and sometimes initiated negative colonization, exploitation, and misrepresentation. In *The Blazing World*, nautical travel allows a greedy merchant to commodify the tale's heroine: the merchant, "travelling into a foreign country, fell extremely in love with a young Lady; but being a stranger in that nation, and beneath her both in birth and wealth, he could have but little hopes of obtaining his desire... he resolved to steal her away; which he had the better opportunity to do, because her father's house was not far from sea."³⁰ Cavendish uses the Lady's close proximity to the sea to demonstrate the opportunity oceans provide, as water allows the merchant to seize the object of his desire despite his inferior social standing. Ocean travel results in both positive and negative opportunity, as the merchant obtains his greatest desire against odds and societal convention, while the Lady is torn from her home and unwillingly taken on this sea voyage.

The ocean's function as a social equalizer, evident in other seventeenth-century works such as the opening scene of Shakespeare's *The Tempest*, is mirrored by a supernatural defiance of other conventions of land-nature. *The Tempest* begins with a storm that endangers all crew and passengers, regardless of class or title. In response to Gonzalo's demand for patience, the Boatswain replies, "When the sea is. Hence! What cares these roarers/ for the name of the King?"³¹ The unknown and dangerous elements of ocean travel create possibility and opportunity; they provide distance from convention, land-nature, and society by allowing characters to become lost on the expanse of the ocean. The tempest finally shatters the boat, dispersing the passengers about the island, where magic and isolation present a setting for these separated groups to experience altered societal and natural laws. In *The Tempest* and other travel fiction, storms blur boundaries of earth and sky, suggesting a supernatural experience, and if a ship is carried away by such a storm, exotic realities of magic, new creatures, and different natural and social conventions may be revealed. Similarly, in *The Blazing World*, the dangers of the ocean are identical for all levels of social hierarchy, and the merchant, "fanc[ying] himself the happiest man of the world," is interrupted by a violent storm that takes the

lives of his crew and carries their ship off course.³² Here Cavendish establishes the real and terrific dangers of ocean travel. In this case, the merchant has utilized nature for commodification and exploitation, but is punished quickly. Price suggests, "While the merchant seems initially to set the terms of the story, the tempest results in the male crew not knowing 'what to do or whither to steer their course.' This signals the abductor's imminent loss of possession of the woman and control over her story"³³ Because the Lady is the only inexperienced sailor aboard, the unlikelihood of her survival insinuates an agency in nature, an intentional super-natural intervention. This storm, sent by heaven, punishes the merchant and his crew for their wicked deed, but spares the Lady. The fate of those upon ships rests in the power of the ocean, a power outside and surrounding their vessel where conventional social and natural laws do not apply.

Cavendish's heroine begins a captive and becomes explorer, approaching her oceanic expedition without designs of exploitation or colonization. Because she lacks negative intentions, she is not only saved from the storm but also embraced and elevated in her new setting. The Lady stumbles upon a utopian world, Blazing World, and "being withal of a generous spirit, and ready wit, considering what dangers she had past, and finding these sorts of men civil and diligent attendants to her, took courage, and endeavoured to learn their language."³⁴ She begins her oceanic travels with no malicious intent and therefore develops an organic relationship with her discovered world. Unlike a colonizer, she is willing to learn and cooperate with the creature-men of Blazing World. The Lady "was so far from being afraid of them, that she thought her self not only safe, but very happy in their company: by which we may see, that novelty discomposes the mind, but acquaintance settles it in peace and tranquility."³⁵ Because of this cooperative approach, and due to her great spirit and beauty, she marries the world's emperor, and thus becomes a leader without being a colonizer.

This outcome, in addition to demonstrating Cavendish's own desire for fame and power, suggests that she imagines both positive and negative approaches to oceanic travel and to interaction with new cultures. Science, trade, and travel were dominated by men, and Cavendish's drive for

wealth and status revealed to her the restrictions and exclusivity of these fields. Fletcher contends that Cavendish attempted to “translate Nature’s qualities onto a mortal woman” and that “throughout Cavendish’s philosophical writings, Nature is personified as a female sovereign.”³⁶ Fletcher’s position that Cavendish’s protagonist actually personifies nature is more extreme than my own, as he suggests this organic relationship has an almost allegorical function. I suggest instead that Cavendish uses her protagonist to explore and develop an alternative to the standard and partitioning mechanistic approach to nature, synthesizing it with an organic approach.

Utopian and supernatural conventions, including punishing and rewarding travels through exceptional means, allow for the presentation of oceans as unconventional nature. Spiller suggests that Cavendish “uses the utopian romance – a genre whose central concern is that which could be but is not true – to comment on the inadequacies of experimental and observational science.”³⁷ By emphasizing the local-global relationship fostered by early modern oceans, she creates a world of idiosyncratic communities of bear-men, fox-men, grass-men, and others, joined by one language and government, connected by waterways, and enriched by cultural variety. In allowing the Lady to experience such a utopian world, Cavendish rewards her wholly positive approach to exploration. Modifying scientific method, the Lady (now the Empress) cooperates with nature embodied in these men-animal creatures to learn about the world with connection, inquiry, and conversation. The Empress assigns groups different areas of study “most proper for the nature of their species,” and privileges those studying the sciences, “for they were as ingenious and witty in the invention of profitable and useful arts, as we are in our world, nay, more; and to that end she erected schools, and founded several societies.”³⁸ These assignments lead to conversations informing the Empress of the work and discoveries of these creature-men. Each society reports to the Empress for a series of inquiries as she attempts to learn about this new natural world.

Through these conversations, both the Empress and creature-men revise their existing body of knowledge, effectively creating knowledge

together through cooperation and open-minded dialogue. This openness to other perspectives is Cavendish's critique of the scientific method and its attempts to remove opinion, emotion, and the innate subjectivity of humans. Spiller suggests Cavendish's approach indicates an assertion that "philosophy should lead to a pleasant, speculative, and sometimes fanciful 'conversation' between rational souls."³⁹ Although this is an accurate characterization of the text, Cavendish's critique goes beyond suggesting the pleasantness of philosophical conversation. Price suggests:

Their inquiries question what kind of things can be known and the premises upon which identities are shaped. One way of forming understanding is made contingent through its contiguity with another. Nature is thus transformed from a domain which we think we know – experienced through our deficient senses; as, for example, air and wind – into a world beyond the frontiers of our comprehension.⁴⁰

These conversations and technologies ennoble the knowledge and invention in *Blazing World* and thereby imply the superiority of a hybrid organic/mechanistic process of discovery. Because the Empress is a beloved, intelligent, and fearless leader, Cavendish suggests the conversational method of discovery is an advantageous alternative to the scientific method.

In addition to defying the rigidity of scientific method, the Empress rejects certain representative, partitioning tools – such as the microscope – in order to elevate her own organic-mechanistic approach. When discoursing with bear-men on the motions of stars, the Empress criticizes their telescopes, "your glasses are false informers, and instead of discovering the truth, delude your senses... let the bird-men trust only to their natural eyes, and examine celestial objects by the motions of their own sense and reason."⁴¹ After more questions concerning the practical use of the microscope, the Empress similarly deems it insufficient. These dialogues critique the impracticality of science by suggesting that practical possibilities and solutions are admonished as base or ignoble and therefore overlooked. Spiller contends, "Expressing a conservative resistance to the dissociation of seeing from knowing, Cavendish attempts to close the space

that opens up between the scientist's assured sight of truth and the reader's less direct apprehension of it in the text."⁴² In addition to resistance, Cavendish also creates an inclusive approach to science, suggesting the connection between the natural world and humans should lead to cooperation, not distance. Her reaction to these technologies suggests the selective, enhanced vision of microscopes and telescopes do not lead to absolute truth and that scientific exploration should move beyond abstraction and petty debate toward practical application.

Cavendish fashions an alternative approach to nature that will later permeate and ultimately define her oceanic representation. Cavendish further critiques scientific method when her Empress inquires into the nature of blood circulation, to which her society replies, "that it was impossible to give her Majesty an exact account thereof... as soon as they had directed an animal create to find out the truth thereof, the interior corporeal motions proper to that particular figure or creature were altered."⁴³ This answer unearths a core issue of scientific exploration: objectivity. Cavendish was aware that, although scientific discourse presented progressively more sophisticated and advanced methods of division and study, humankind could not (and cannot) study nature without altering, interfering, and changing the object of study. Therefore, by adding an organic approach to the mechanistic scientific method, the explorer is aware of the effects of self and study upon and within the environment. The organic approach is not inferior due to its emphases on connection and lack of objectivity, but rather superior because of its awareness of the impossibility of objectivity as well as its promotion of cooperation between humans and their surroundings in order to achieve positive results for all of nature – humankind included. This cooperation is crucial to oceanic travel in *Blazing World*, where inhabitants understand and mimic oceans in order to survive and eventually harness the power of nature.

By combining human-made and natural technology and by representing the cooperation of humans and nature through the Empress's conversations with animal-men, Cavendish reinforces the importance of self-awareness and the need to modify the mechanistic approach with

organicism. The Empress demonstrates awareness of her effect on the environment by noticing cultural disharmony; because her societies have caused “such contentions and divisions,” she fears they will rebel and dissolve the government. Despite the idiosyncratic nature of this world, a preoccupation with connection remains. Although fearing disgrace, the Empress, “so wise, as to perceive her own errors, and so good, as not to persist in them,” overcomes vanity and abolishes the societies.⁴⁴ Self-awareness is an essential factor lacking in a mechanistic, divided approach to science and society. Cavendish suggests that science is a social construction and therefore fallible and that remaining connected to community and environment is essential to positive, sustainable progress. This mechanistic-organic approach is applied to oceans through *Blazing World’s* geography and nautical innovation, suggesting that ocean space facilitates an unconventional approach to nature and the blurring of generic boundaries.

The Supernatural Oceanic Space

The mechanistic/organic paradigm in *The Blazing World* parallels a supernatural current throughout text, with oceans represented as chaotic, exotic, and sometimes vindictive, and oceanic technology transcending early modern scientific boundaries into the speculative. For early modern sailors, the sheer size of the ocean, both in visual expanse and physical distance, creates a mysterious, uncontrollable atmosphere surrounding oceanic travel that Cavendish echoes in her oceanic depictions. Unable to calculate accurately longitude and subsequently location, travelers were forced to create meaning by mapping oceanic space. In travel discourse, sailors documented people, places, events, weather, direction, and time to create textual maps. According to Ogborn and Withers, “The only practical way for those on board ship to know where they were with any tolerable degree of accuracy was to know where they had been and the direction in which they were moving. This produced a series of sequential observations, each one dependent on the last.”⁴⁵ This application of meaning contributed to an unnatural or supernatural oceanic space.

Although oceans proved useable with technology and discourse, control was illusory, perpetually shattered by violent, unpredictable climates manipulating the vessels and travels of humans. Cavendish draws on early modern oceanic discourse to reinforce the need for mechanistic/organic approach to nature.

In the beginning of *The Blazing World*, a storm carries the merchant's ship northward and the crew freezes to death, in a manifestation of the chaotic danger of nature. The Lady is kept alive "by the light of her beauty, the heat of her youth, and protection of the gods."⁴⁶ Cavendish suggests the storm was not entirely random, but punishment for the merchant, who was "most unfortunate; for Heaven frowning at his theft, raised such a tempest... so that the vessel, both by its own lightness, and the violent motion of the wind, was carried as swift as an arrow out of a bow, towards the North Pole, and in a short time they reached the Icy Sea."⁴⁷ This stormy and icy ocean transports the Lady to an entirely new globe, one that is connected to her home world at the North Pole. The calculating forces of the environment punish the wicked. Consistently, storms and weather transport vessels to Edenic, paradisiacal, or exotic locations, seemingly random and chaotic, but with controlled calculation that suggests a supernatural higher conscious or agenda on the part of nature. Nature's resistance to the domination of a mechanistic paradigm is illustrated frequently in literature when storms command men, wreck ships, and splinter the illusion of human control.

Cavendish's arctic setting for interplanetary travel also emphasizes the supernatural conceptualization of the north and its frozen, almost oceanic landscape. Peter Davidson discusses the historical perceptions of the north as alternatively or simultaneously dangerous wilderness, exotic land of treasure, and innocent paradise.⁴⁸ Using the North Pole to connect worlds is significant, as it synthesizes an unknown exoticism – the juxtaposed states of solid and liquid water and the substantial danger of freezing oceans – with the social dreaming of utopia. In his description of Martin Frobisher's journey north, Thomas Ellis wrote: "And as we thus lay off and on, we came by a marvelous huge mountaine of yce, which surpassed all the rest that ever we sawe: for we judged him to be neere a

four score fadams above water... Therefore being but one Island of yce, and as we came neere unto it, and departed from it, in so many shapes it appeared."⁴⁹ The size and composition of this "island of ice" make it incomprehensible, as the sailors attempt to estimate its size above and below water, and the light and angle of vision change its apparent shape. Ice is the solidified state of water, a seemingly supernatural embodiment of a concentrated oceanic space. In *The Blazing World*, the north is a localized representation of nautical travel and water, and particularly their danger, mystery, and supernatural undertones. Spiller contends, "This 'northern passage' critically transforms both the geographic and generic boundaries of Cavendish's fictional worlds."⁵⁰ Cavendish's north symbolizes a global, oceanic highway by connecting one world to another.⁵¹ Employing the North Pole for this connection suggests the globalizing function of oceans in the early modern period and emphasizes oceans and the north as supernatural spaces of mystery.

To conquer a nature-supernatural hybrid space, Cavendish fashions nautical technology with forward-reaching conventions of speculative fiction. Cavendish demonstrates an awareness of navigational deficiencies and speculates on improvement, not only in technological development, but also with advancement of human skill. The creature-men of *Blazing World* are "very good navigators... and though they had no knowledge of the lodestone, or needle, or pendulous watches, yet (which was as serviceable to them) they had subtle observations, and great practice,... they were excellent augurers, which skill they counted more necessary and beneficial than the use of compasses, cards, watches, and the like."⁵² Cavendish's choice of "augurers" is significant, as it brings to mind fortune-telling and divination. This choice of specialization for *Blazing World* inhabitants resonates with the supernatural and suggests the need to match oceanic space with supernatural ability. The use of divination implies the value of an ability to predict climate and other conditions for successful navigation on unpredictable, chaotic oceans. In a synthesized organic-mechanistic approach to nature, these navigators develop technology and skill to cooperate with and utilize nature. These navigators match the supernatural aspect of the ocean with their own divination

abilities, defying the laws of nature along with and in defense of the chaotic ocean. Oceans cannot be dominated by traditional means, and only through unconventional skills and technology that embrace cooperation and connection with nature and the supernatural can humans and the creature-men harness the full potential and power of oceans.

In a surprisingly accurate speculative creation, Cavendish presents another organic-mechanistic approach in the form of wind-energy engines powering her ships. Her creature-men fashion a “certain engine, which could draw in a great quantity of air, and shoot forth wind with a great force” to harness the wind.⁵³ In this case, current sail technology is appropriated and improved upon via speculation. Cavendish describes these engines:

They place behind their ships, and in a storm, before; for it served against the raging waves, like canons against an hostile army, or besieged town. It would batter and beat waves in pieces, where they as high as steeples; and as soon as a breach was made, they forced their passage through, in spite of even the most furious wind...; for [this artificial wind] had a great advantage of the waves than the natural of the ships; the natural being above the face of the water, could not without a down-right motion enter or press into ships, whereas the artificial with a sideward motion did pierce into the bowels of the waves.⁵⁴

This wind-powered engine embodies the synthesis of organic-mechanistic views presented by *The Blazing World* because the invention is man-made and technologically advanced yet mimics the natural element of wind and its effect on water. The creature-men appropriate and modify nature to move in cooperation with the ocean. Yet, the language is significant, as ships force passage by “battering” and “beating” water. Cavendish uses the violent vocabulary of war to suggest an unpredictable, chaotic atmosphere upon the ocean. Oceanic travel was dangerous, fraught with storms and wrecks. The text’s presentation of the need to mimic and improve upon nature in order to cooperate with, and when needed battle, natural space, suggests the dominance of the ocean and the revised approach necessary to exist in oceanic space.

This combination of mimicry and improvement exemplifies Cavendish's mechanistic-organic complication of the human relationship with nature, implying that coexistence does not require distance, but rather cooperation and the awareness necessary for mimicry. For example, "they joined as many together as the compass or advantage of the places of the liquid elements would give them leave; for their ships were so ingeniously contrived, that they could fasten them together as close as a honey-comb without waste of place; and being thus united, no wind nor waves were able to separate them."⁵⁵ This honeycomb arrangement is an essential addition to Blazing World's mechanistic-organic use of oceans. Strong winds and waves establish the danger of oceanic travel and prompt technological advancement. This advancement mimics the natural shape of honeycombs, but with man-made materials and improvements appropriating land-nature for oceanic space. However, only "places of the liquid elements" can allow these ships to create such a formation; therefore, creature-seamen must work both with and against natural phenomena. Finally, because the arrangement avoids wasting space, Cavendish assimilates the efficiency of scientific method and advancement in a conscientious use of natural space. Efficiency becomes an organic matter, relying upon and in reaction to unpredictable nature, and conveying an approach of cooperation with environmental elements.

The conscientious use of oceanic space extends to Cavendish's synthesis of natural and urban geography, as islands comprise a majority of the utopian world and waterways serve both as roads and as geographical outlines defining the map of the world. The imperial city, Paradise, "was divided by a great number of vast and large rivers, all ebbing and flowing, into several islands of unequal distance from each other, which in most parts were as pleasant, healthful, rich, and fruitful, as nature could make them...[and] rivers did run betwixt every street."⁵⁶ Because islands are defined by the natural boundaries of oceans, hybrid natural-supernatural definitions percolate onto island space, resulting in fluid laws of nature and society. Roland Greene writes, "Celebrated in productions such as utopias, romances and *isolarii*, islands are held at a premium in the sixteenth century not merely out of geographical curiosity

but because they afford a perspective that can have only an oblique relation to the accumulating and totalizing worldview of the imperial and economic centres."⁵⁷ This unique perspective allows island space to embody the mechanistic-organic approach because the water's natural currents provide a means of travel in cooperation with nature. Humans manipulate nature to construct streets and pull carriages; roads signify the domination of nature by covering ground with elements mined from the earth and modified or by changing the natural geography or landscape of the environment; horses are saddled, bridled, and whipped to pull humans. In contrast, river travel indicates an organic relationship with nature, as the natural current carries boats that do not harm the environment.

The creature-men respond to a nautically-connected world with idiosyncratic innovation that does not harm the environment, that mimics forms of nature, and that suggests their approach combines technological ingenuity and organic cooperation with nature. Bird-men develop boats resembling nests; fox-men's are comparable to fox-traps, and grass-green men have honeycomb-like ships.⁵⁸ This variety demonstrates cultural uniqueness in service of global interconnectedness, and because all means are either natural or nature mimicry, they further demonstrate ecological integration. Additionally, each region presents climatic and geographical distinction. The bear-men reside in the cold climate of underground caves, the fox-men on a warmer island, and the satyrs enjoy "a pleasant and mild temper" on a different, wooded island.⁵⁹ Cavendish uses geographical and climatic detail to demonstrate the presence and power of nature and the importance of remaining aware of its influence. The inhabitants of Blazing World respond to their planet's abundant waterways in different fashions, suggesting they cannot standardize oceanic travel because climatic and regional differences necessitate a fluid, modifiable, organic approach.

In addition to idiosyncratic nautical innovation, Cavendish creates ships not for combat, trade, or colonization, but for travel, and enforces the organic-mechanistic mentality by informing and reflecting societal structure. The golden ships of the Emperor "were neatly made, and required not such thickness, neither were they troubled with pitch, tar,

pumps, guns, and the like, which make our wooden ships very heavy; for although they were not all of a piece, yet they were so well soddered, that there was no fear of leaks, chinks, or clefts; and as for guns, there was no use of them.”⁶⁰ These ships reinforce the prominence of nautical travel. The government and innovations of Blazing World foster human progress and connection, while trade partitions society, albeit less violently than combat or war. Merchant ships of Blazing World, made of leather, are inferior to the Emperor’s golden ships in composition and function.⁶¹ This detail reinforces social hierarchy and the organic-mechanistic hierarchical occupations facilitated by oceanic travel. Violence and colonization are not condoned or even plausible with these weaponless ships. Additionally, the Empress’s ships are designed by “shipwrights, and all her architects, which were giants.”⁶² Creatures of great size have the noble occupation of shipbuilding, reflecting the great size of oceans and the need for magnificent, capable ships to explore them. Cavendish clearly elevates nautical technology and ocean travel, but only of a certain type – of adventure and exploration – that disparages domination or colonization.

In her final, most prominent representation of oceans, Cavendish’s allegiance to social hierarchy and power structure prompts her to employ Blazing World’s technological and nautical innovations to reinforce the power of the monarchy. Upon hearing news of conflict at home, the Empress sails to her planet to assist a monarch in establishing a totalitarian government to rule the entire world. In this final episode, the Empress uses speculative technology and the supernatural to establish an organic relationship with oceanic space and eventually to embody the awesome, terrible power of oceans. Fletcher examines this representation of nature’s power: “Cavendish invests in nature with a terrible grandeur, reminding her readers that they are subject to a force whose guiding principle is not their well-being... insisting that the power to kill is not just a theoretical right but one that is continually exercised.”⁶³ This investment demonstrates the misfortunes of an oppressive totalitarianism and hierarchical societal structure inherent in both a completely organic worldview and entirely globalized mentality.

The Empress’s synthesis with the ocean leads to a sensational and

oppressive power and begins when she orders creature men to build ships able to sail underwater.⁶⁴ The Duchess advises the Empress to “command a great number of your fish-men to wait on your ships; for you know that your ships are not made for cannons, and therefore are no ways serviceable in war; for though by the help of your engines they can drive on, and your fish-men may by the help of chains or ropes, draw them which way they will.”⁶⁵ Lacking the aid of airtight compartments, the Empress sails underwater and effectively enters the uninhabitable, underwater oceanic space. Her ships are no longer powered by engines but by fish-men who penetrate the mysterious space beneath the ocean’s surface. They use firestone, an element that sets ablaze when wet, to light the way above and below the surface. In addition to relying upon nature for the quintessentially human tool of fire, this element brings fire to water, synthesizing opposing elements in a supernatural demonstration of the power of organicism. This supernatural element emphasizes the amazing possibilities intrinsic to an organic relationship with nature.

Upon reaching her world, the Empress cooperates with natural elements to obtain and exert power, appearing “with garments made of the star-stone, and was born or supported above the water, upon the fish-men’s heads and backs, so that she seemed to walk upon the face of the water.”⁶⁶ Recreating Christ’s walking on water seems to transform the Empress into a deity; yet, rather than doing so with an innate miraculous power faculty nature, she cooperates with nature in an organic, supernatural fashion. This approach gives her immense power, and she destroys ships and hinders trade until all enemies are forced into submission: “Thus the Empress did not only save her native country, but made it the absolute monarchy of all that world.”⁶⁷ This endeavor reflects the Ovidian notion of a Golden Age of complete cooperation and harmony. In *The Tempest*, Gonzalo describes a similar dream for the island his party is stranded upon:

I’ th’ commonwealth I would by contraries
 Execute all things; for no kind of traffic
 Would I admit; no name of magistrate;
 Letters should not be known; riches, poverty,

And use of service, none; contract, succession,
Bourn, bound of land, tilth, vineyard, none;
No use of metal, corn, or wine, or oil;
No occupation; all men idle, all;⁶⁸

Additionally, Gonzalo describes his ideal relationship with nature:

All things in common Nature should produce
Without sweat or endeavour: treason, felony,
Sword, pike, knife, gun, or need of any engine,
Would I not have; but Nature should bring forth,
Of it own kind, all foison, all abundance,
To feed my innocent people⁶⁹

Islands provide staging grounds for experimentation with societal norms, conventions, and social dreaming. The ideal result of an organic relationship with nature is an Eden of no trade, toil, or conflict, an entirely harmonious and natural existence. However, Gonzalo remains the author and therefore absolute ruler of his imaginary utopia. This position is comparable to Cavendish and her Lady, and suggests that Edenic musings or longings for a Golden Age require a single, controlling voice to direct societal and natural laws towards harmony.

The Lady's global domination suggests not only the awesome and terrible power of a completely organic relationship with oceans but also the globalizing, colonizing potential of oceans, nautical travel, and technology. Twice the Empress convenes with commanders and her native country's monarch, and

having no other place of reception for them, she desired that they should be pleased to come into open seas with their ships, and make a circle of a pretty large compass, and then her own ships should meet them, and close up that circle... and being all met in the form and manner aforesaid, the Empress appeared upon the face of the water in her imperial robes.⁷⁰

By bringing politics onto oceanic space and under its power and supernatural laws, the Empress harnesses the globalizing potential of oceans to control and connect ships. This formation alludes to earlier honeycomb formations but has evolved from an efficient matrix reflecting

nature to a natural entity itself, allowing the Empress to exert natural and political power. Such an evolution is complete when “her own fleet came into the circle, without any visible assistance of sails or tide; and herself being entered into her own ship, the whole fleet sunk immediately into the bottom of the seas.”⁷¹ This disappearance solidifies the Empress’s organic relationship with the ocean because it resembles the violent act of drowning, while the Empress remains completely safe, both supernatural and part of nature. The word “immediately” eliminates a transition from the ship’s existence in a natural, open-air state, to plunging into the depths of the unknown, depicting her organic relationship with nature as a supernatural and fearsome design.

The Blazing World moves among genres of travel narrative, utopian exploration, scientific discourse, and adventure novel to establish an incredible hybridity of definitions and emphasize the dangers, and the potential power, of oceans. The Empress transforms from inadvertent and frightened explorer, to inquisitive leader, and finally to absolute monarch. Representing the final state of this transformation is the image of her leaving her world for the second time and returning to Blazing World:

Air and seas appear of a bright shining flame... Bird-men carried her upon their backs into the air, and there she appeared as glorious as the sun. Then she was set down upon the seas again, and presently there was heard the most melodious and sweetest consort of voices... so that it seemed as if sea and air had spoke and answered each other by way of singing dialogues.⁷²

This powerful transformation illustrates a complete conversion to an organic relationship with nature because the Empress has embraced oceanic space by plunging to its depths. She can now exist within a space of impossibility and therefore harbors supernatural ability. This ability mimics nature – the ability of a fish to breath underwater – and physically unifies the Empress and the ocean in a representation of the ultimate organic relationship with nature. This event combines the three natural elements of fire, air, and water, and excludes earth, to suggest that although land-nature can be partitioned and dominated, ocean-nature

remains mysterious, supernatural, unbreakable, and organic. Oceans resist the dominance and partitioning of mechanism, yet serve the expansion of humankind by connecting local regions and forming the globe. Cavendish suggests this space requires a mechanistic-organic approach combining the technological ingenuity of humans and a cooperation with and mimicry of nature, while still harboring dangers and perilous potential in its tempestuous and unpredictable power.

Marykathryn Earnest received her Bachelor of Arts in English from the University of Texas at Arlington in December 2007 and her Master of Arts in English at the University of Texas at Arlington in December 2010. She works as a graduate teaching assistant in the English Department and is interested in early modern travel fiction, ecocriticism, utopian and magical realist fiction, and intersections of composition and literature pedagogy. In the fall of 2011, she plans to begin work on her juris doctorate degree at the University of Texas School of Law.

¹ For a discussion of the “Blue Planet” image, see Ursula K. Heise, *Sense of Place and Sense of Planet: The Environmental Imagination of the Global*, (New York: Oxford University Press, 2008). Heise describes how the Blue Planet instigated a non-scientific rhetoric and global mentality, later reversed by “fears of corporate conspiracy,” “possibility of catastrophic collapse,” and the realization of the need for ecological awareness and action (26). This fostered a local mentality emphasizing community and regional environmentalism.

² Margaret Cavendish, *Margaret Cavendish: The Blazing World and Other Writing*, ed. Kate Lilley (London: Penguin Classics, 1992), 216.

³ Robert Hooke, *Micrographia: Or some physiological descriptions of minute bodies made by magnifying glasses*, London, 1665. *Early English Books Online*, November 26, 2009, 4.

⁴ Carolyn Merchant, *The Death of Nature: Women, Ecology, and the Scientific Revolution* (New York: HarperCollins, 1989) 105. Merchant explores organic and mechanistic views, emphasizing gender and the roles and perceptions of women to explore

different reactions to shifting worldviews. The exact definitions provided by Merchant: “*Mechanical* referred to the machine and tool trades; the manual operations of the handicrafts; inanimate machines that lacked spontaneity, volition, and thought; and the mechanical sciences,” and “*organic* usually referred to the bodily organs, structures, and organization of living beings, while *organicism* was the doctrine that organic structure was the result of an inherent, adaptive property in matter” (xxiii-iv).

⁵ Neil Evernden, “Beyond Ecology: Self, Place, and the Pathetic Fallacy,” in *The Ecocritical Reader: Landmarks in Literary Ecology*, ed. Cheryll Glotfelty and Harold Fromm (Athens: University of Georgia Press, 1996), 93.

⁶ William Howarth, “Some Principles of Ecocriticism,” in *The Ecocritical Reader: Landmarks in Literary Ecology*, ed. Cheryll Glotfelty and Harold Fromm (Athens: University of Georgia Press, 1996), 78.

⁷ Kate Lilley, introduction to *Cavendish: The Blazing World and Other Writing*, ed. Kate Lilley (London: Penguin Classics, 1992), xii.

⁸ Line Cottegnies and Nancy Weitz, *Authorial Conquests: Essays on Genre in the Writings of Margaret Cavendish*. (Cranbury: Rosemont Publishing & Printing, 2003), 8.

⁹ Lilley, introduction to *Blazing World*, x.

¹⁰ Eve Keller, "Producing Petty Gods: Margaret Cavendish's Critique of Experimental Science," *ELH* 64.2 (1997): 450.

¹¹ *Ibid.*, 451.

¹² For more questions and essays defining ecocritical theory, see Cheryll Glotfelty and Harold Fromm, eds. *The Ecocritical Reader: Landmarks in Literary Ecology* (Athens: University of Georgia Press, 1996).

¹³ Merchant, *The Death of Nature: Women, Ecology, and the Scientific Revolution*, xvi.

¹⁴ *Ibid.*

¹⁵ Cavendish, *Blazing World*, 123.

¹⁶ 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 (Surrey, UK: Ashgate, 2002), 129.

¹⁷ For more on the unique writing of Cavendish, see Karen Lawrence, *Penelope Voyages: Women and Travel in the British Literary Tradition: Reading Women Writing* (Ithaca: Cornell UP, 1994). Lawrence writes: "For Cavendish, the romance geography of the imaginary voyage provided an opportunity for a baroque reinvention of women's agency in the social world. In the topos of exilic wandering, Cavendish discovered a lexicon of impulsion, motion, and reaction with which to explore ambiguities of agency. If the imaginary voyage enabled her to try out the pleasures of various social hypotheses, she used the genre to circumscribe action in a nexus of power relations" (72-3).

¹⁸ *Ibid.*, 463.

¹⁹ Merchant, *The Death of Nature: Women, Ecology, and the Scientific Revolution*, xxiii

²⁰ *Ibid.*, xxiii.

-
- ²¹ Merchant, *The Death of Nature: Women, Ecology, and the Scientific Revolution*, 193.
- ²² Anna Battigelli, *Margaret Cavendish and the Exiles of the Mind* (Lexington: University of Kentucky Press, 1998). Concerning this development, Battigelli writes: "The defenders of the new science frequently used geographical tropes because they proved particularly useful in foregrounding the errors of Aristotle and other ancients and thus in outlining the progress already made and yet to be made by modern science. The relatively recent remapping of the world caused by the Copernican revolution, by Columbus's discovery of the new world, and by increased travel, had proved beyond a doubt that ancient cosmographers had partial or erroneous knowledge" (103).
- ²³ Martin Cortes *The Arte of Nauigation*, London, 1561, trans. Richard Eden, *Early English Books Online*, November 13, 2009, fol. 3.
- ²⁴ *Ibid.*, fol. 4.
- ²⁵ Peter C. Mancall, ed, *Travel Narratives from the Age of Discovery: An Anthology* (Oxford: Oxford University Press, 2006), 47
- ²⁶ *Ibid.*, 7.
- ²⁷ Walter Raleigh, *Discoverie of the Large, Rich, and Bewtiful Empire of Guiana*, London, 1596, *Early English Books Online*, February 10, 2010, 41.
- ²⁸ *Ibid.*, 69-70.
- ²⁹ Miles Ogborn and Charles W.J. Withers, "Travel, Trade, and Empire: Knowing other Places, 1660-1800," *A Concise Companion to the Restoration and Eighteenth Century*, ed. Cynthia Wall (Oxford: Blackwell, 2005), 32.
- ³⁰ Cavendish, *Blazing World*, 125.
- ³¹ Shakespeare, *The Tempest*, ed. Frank Kermode (New York: Routledge, 1994), 1.2.16-7.
- ³² Cavendish, *Blazing World*, 125.
- ³³ Price, "Journeys Beyond Frontiers: Knowledge, Subjectivity and Outer Space in Margaret Cavendish's *The Blazing World* (1666)," 128.
- ³⁴ *Ibid.*, 130.
- ³⁵ *Ibid.*
- ³⁶ Angus Fletcher, "The Irregular Aesthetic of *The Blazing-World*," *SEL* 47.1

(2007): 125.

³⁷ Elizabeth A. Spiller, "Reading through Galileo's Telescope: Margaret Cavendish and the Experience of Reading," *Renaissance Quarterly* 53.1 (2000): 196. Spiller focuses on Cavendish's use of the lens in telescopes and microscopes. She compares *The Blazing World* with Galileo's *Starry Messenger* and suggests both texts critique the telescope as creating "artifice, mediation, and a necessary distortion" (218). I argue that in addition to such a critique, Cavendish is experimenting with method and creating a hybrid organic/mechanistic approach to nature.

³⁸ Cavendish, *Blazing World*, 134.

³⁹ Spiller, "Reading through Galileo's Telescope: Margaret Cavendish and the Experience of Reading," 218.

⁴⁰ Price, "Journeys Beyond Frontiers: Knowledge, Subjectivity and Outer Space in Margaret Cavendish's *The Blazing World* (1666)," 132.

⁴¹ Cavendish, *Blazing World*, 141.

⁴² Spiller, "Reading through Galileo's Telescope: Margaret Cavendish and the Experience of Reading," 212.

⁴³ Cavendish, *Blazing World*, 146.

⁴⁴ *Ibid.*, 202.

⁴⁵ Ogborn and Withers, "Travel, Trade, and Empire: Knowing other Places, 1660-1800," 21. The authors discuss the reliance on recorded knowledge and how "commercial directories; merchants' guides to trades, commodities, and exchange rates; printed maps and gazettes; and instruction books... all sought to codify knowledge as a way of ordering this new world" (15).

⁴⁶ Cavendish, *Blazing World*, 126.

⁴⁷ *Ibid.*, 125.

⁴⁸ Peter Davidson, *The Idea of the North* (London: Reaktion Books, 2005).

⁴⁹ Thomas Ellis, *A True Report of the Third and Last Voyage into Metacognita: Achieved by the worthie Captaine M. Martine Frobisher*, London, 1578, *Early English Books Online*, February 1, 2010, 13

⁵⁰ Spiller, "Reading through Galileo's Telescope: Margaret Cavendish and the Experience of Reading," 213.

⁵¹ Evelyn Edson, *The World Map, 1300-1492* (Baltimore: The Johns Hopkins University Press, 2007). Edson describes how the transformation of maps coincided with changing perceptions of the globe. By the Renaissance, she explains, "No longer [was] the ocean a simple rim around the edge of the know world, but an open, explorable highway, sprinkled with friendly islands and others yet to be discovered. No place is marked uninhabitable, including the formerly forbidding polar and torrid zones; instead, the whole world is open to human adventuring and settlement" (224-25).

⁵² Cavendish, *Blazing World*, 128.

⁵³ *Ibid.*, 129.

⁵⁴ *Ibid.*

⁵⁵ *Ibid.*

⁵⁶ *Ibid.*, 130-1.

⁵⁷ Roland Greene, "Island Logic," *"The Tempest" and its Travels*, ed. Peter Hulme and William Sherman (Philadelphia: U of Penn, 2000). Greene describes how islands "make possible the observation of their own constructedness" and asserts that *The Tempest* "uses the vantages of encourages and islands to offer predictions about the magic of early modern worldmaking" (141). Worldmaking on the islands of Cavendish, Shakespeare, and utopian fictions, suggests oceans provide a malleable supernatural space for social experimentation.

⁵⁸ Cavendish, *Blazing World*, 127-29.

⁵⁹ *Ibid.*, 128.

⁶⁰ *Ibid.*, 129.

⁶¹ *Ibid.*

⁶² *Ibid.*, 205.

⁶³ Fletcher, "The Irregular Aesthetic of *The Blazing-World*," 125. While Fletcher suggests the Empress has personified nature throughout text, I suggest she has evolved with a synthesis of organic and mechanistic methods, becoming one with nature only at the end.

⁶⁴ Cavendish, *Blazing World*, 205.

⁶⁵ *Ibid.*, 206.

⁶⁶ *Ibid.*, 210.

⁶⁷ Ibid., 214.

⁶⁸ Shakespeare, *The Tempest*, 2.1.143-50.

⁶⁹ Ibid., 2.1.155-60.

⁷⁰ Cavendish, *Blazing World*, 215.

⁷¹ Ibid., 216.

⁷² Ibid., 215.