

EURAMERICA Vol. 42, No. 1 (March 2012), 45-82  
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## **“Between Nature and Art”–The Alchemical Underpinnings of Margaret Cavendish’s *Observations upon Experimental Philosophy* and *The Blazing World*\***

Tien-yi Chao

Department of Foreign Languages and Literatures, National Taiwan University  
No. 1, Sec. 4, Roosevelt Road, Taipei 10617, Taiwan  
E-mail: [tychao@ntu.edu.tw](mailto:tychao@ntu.edu.tw)

### **Abstract**

This paper examines the discourses on nature and art in Margaret Cavendish’s *Observations upon Experimental Philosophy* and *The Blazing World*. Despite profound differences in content, style, and structure, both texts address the intricate relationship between nature and art: a popular topic in contemporary alchemical treatises. The art-nature debate was frequently pursued by Renaissance and seventeenth-century alchemists, whose writings and drawings presented diverse views on the extent to which alchemy was capable of improving on, or even re-creating,

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Received November 16, 2010; accepted October 6, 2011; last revised October 15, 2011  
Proofreaders: Jeffrey Cuvilier, Hsueh-mei Chen, Chih-wei Wu, Ying-bei Wang

\* This study was funded by a two-year research grant offered by the National Science Council in Taiwan (NSC 97-2410-H-002-204-MY2). An earlier version of this paper was presented at the Eighth International Margaret Cavendish Society Biennial Meeting (University of Oregon, USA) in June 2009. I am grateful to the delegates for their helpful comments and suggestions. My heart-felt thanks are also to the anonymous reviewers and editor Jeffrey of *EurAmerica* for their invaluable comments on earlier versions of this paper.

natural entities through human artifice. My study reveals that *Observations* and *The Blazing World* should be read together and alongside the works of specific alchemical authors. In addition, the philosophical and fictional musings on nature and art in the two texts participate in highly provocative discourses that present the author's insights into literature and natural philosophy. Despite her dismissal of alchemical practices, Cavendish was influenced by some medieval and contemporary alchemical theories that celebrated the idea of "nature before art."

**Key Words:** Margaret Cavendish, seventeenth-century literature, alchemy, natural philosophy

## I. Introduction

Margaret Cavendish published an impressive list of works in multiple genres and on diverse topics, but devoted most of her time and energy to natural philosophy, with five of the fourteen books she wrote being entirely concerned with science and philosophy. Her interest in various perceptions of nature can be traced back as early as her first two books, *Philosophical Fancies* (1653a) and *Poems, and Fancies* (1653b), both of which showcased numerous compelling observations and ideas. Later, she applied herself more industriously to philosophical studies, publishing several books on similar topics, such as *Philosophical Letters* (1664b) and *The Philosophical and Physical Opinions* (1655). In “To the Two Universities,” a dedication to the universities of Oxford and Cambridge, the Duchess clearly expresses a wish to exchange ideas with contemporary scholars, as well as her ambition to trespass the “masculine” field of scientific study:

I Here present the sum of my works, not that I think wise School-men, and industrious, laborious students should value my book for any worth, but to receive it without a scorn, for the good encouragement of our sex, lest in time we should grow irrational as idiots, by the dejectednesse of our spirits, through the carelesse neglects, and despisements of the masculine sex to the effeminate, thinking it impossible we should have either learning or understanding, wit or judgement, as if we had not rational souls as well as men. (Cavendish, 1655: no pagination)

Later, in 1666, Cavendish demonstrated progress in her studies by publishing another work on natural philosophy, albeit an extraordinary book, in terms of both content and genre. This volume combined a scientific treatise entitled *Observations upon Experimental Philosophy* and a literary work, *The Blazing World*,<sup>1</sup>

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<sup>1</sup> All references are to this edition, and will be cited parenthetically in the text. All

with the former presenting the author's recently developed philosophical thought, particularly that pertaining to art and nature; the latter offering a gripping and highly allegorical story of a young lady's adventure to a utopian world. In the prefatory "To the Reader," the Duchess explains that the reason for writing such a book was "to divert [her] studious thoughts" and "to delight [her reader with variety]" (Cavendish, 1666: sig.B1f). Such a statement is typical of her pretextual discourse style, which is full of paradoxes and light-hearted self-deprecating humor. However, the statement should not be taken at face value. As this paper will demonstrate, the quotation conveys an important message concerning Cavendish's approach to the art-nature debate being pursued in alchemical discourses of the day.

*The Blazing World* is perhaps the most thoroughly researched text in Cavendish's *oeuvre*, though both the foci and perspectives of its study have shifted drastically.<sup>2</sup> In the past ten years, studies have gradually focused on the broader context in an effort to explore the connections between this text and the contemporary politics, culture, and, in particular, the intellectual environment. Paired with seventeenth-century political writings, Susan James argues potently that *The Blazing World* is intended to serve as an illustration of an "imaginary polity" (Cavendish, 2003: xx). Jacqueline Broad (2007) traces the religious, scientific, and political philosophies underpinning the Duchess's imaginative work; Oddvar Holmesland (1999) and Bronwen Price (2002) suggest that the Empress's adventure is indicative of Cavendish's

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the original spelling, wording, and punctuation have been retained in the quotations.

<sup>2</sup> Early scholars tended to attribute the text to the author's psyche, referring to it as a piece of "feminine" writing full of "naivety" and "ingenious fancy" (Grant, 1957: 208; Jones, 1988: 167-168; Perry, 1918: 257). Such views were soon challenged by studies in the 1980s and 1990s that emphasised the feminist or "proto-feminist" elements in *The Blazing World* (Rees, 2003; Trubowitz, 1992). It is still widely accepted in the Cavendish scholarship, as shown in studies by Earla A. Wilputte (1995), Rosemary Kegl (1996), and Catherine Gallagher (1988), that there is a strong link between the Empress and Cavendish's self-dramatisation.

interest in the scientific and philosophical pursuit of rationality, while Lisa Walters (2010) traces the references to magic and alchemy in Cavendish’s philosophical writings and poems.

Although less known to modern readers than *The Blazing World*, *Observations* has also attracted a deal of scholarly attention since 2000. Recent studies of Cavendish’s scientific writings address two main issues: the gender politics of her writing style, and the extent to which her texts correspond to the established scholarship of seventeenth-century natural philosophy (Sarasohn, 1984, 2010; Walters, 2004).<sup>3</sup> It should also be noted that a number of recent studies have confirmed the impact of politics on *Observations* (Battigelli, 1998; Hill, 1991; Mendelson, 1992; Rogers, 1996).<sup>4</sup> In that context, Cavendish’s verbal attacks on contemporary thinkers in *Observations* are not only of a philosophical, but also a political nature. They are indicative of her stance as a royalist who stood against the radical proposals for redressing the political status quo inspired by alchemical discourses or mechanical science. She affirmed that just as human beings eventually have to surrender to Nature, so should they submit to

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<sup>3</sup> Concerning the first issue, Lisa T. Sarasohn discusses the symbolism of feminine nature and masculine “art” in early modern natural philosophy (2010: 3-4, 15-33). Concerning the second, most scholars are interested in Cavendish’s development of her natural philosophy, endeavouring to find the continuities and discontinuities between this text and her other philosophical books (Sarasohn, 2010: 150; Whitaker, 2002: 284). See also Eileen O’Neill’s edition of *Observations*, in which she argues for the Stoic and Epicurean influences on Cavendish’s natural philosophy (Cavendish, 2001: x, xiv-xvi, xx, xxxvi).

<sup>4</sup> As J. Andrew Mendelson (1992) observes, her philosophical and political thought overlapped between 1650 and 1670. In *The World Turned Upside Down*, Christopher Hill illustrates how alchemical imagery was manipulated to formulate a political radicalism (1991: 288-289, 295-296). John Rogers (1996) contends that Cavendish’s vitalism indicates a proto-liberal view of state and sovereignty despite her ambivalence about a thoroughly liberal political system. In addition, Anna Battigelli compares Cavendish and Thomas Hobbes in terms of their political views, concluding that both shared “reputations as isolated thinkers,” a strong ruling authority, and a vitalist and pessimistic perspective of human society (1998: 40-55).

the monarch to whom God gave the power to rule (Sarasohn, 2010: 102, 106, 124-125, 195).

Although the above studies are useful in piecing together Cavendish's diverse thought, I wish to complicate the understanding of that thought by exploring the influence of alchemy on *The Blazing World* and *Observations*. Very few studies have touched upon Cavendish's thoughts on, and debts to alchemy. These studies include a brief, contextual account by Sarasohn (2010) in her discussion of Cavendish's critique of Jan Baptista van Helmont, and Tien-yi Chao's journal article examining the issue of creation in *The Blazing World* with reference to alchemical treatises by Michael Sendivogius and Paracelsus (2009).

Historian Stanton J. Linden affirms the legacy of alchemy in early modern literature by saying that "whether it is used to promote humor and satire or as a richly suggestive basis for metaphor, alchemy's influence in English literature of the Middle Ages and sixteenth and seventeenth centuries was extensive and profound" (1996: 297). Inspired by his extensive study of alchemy and literature, I shall begin by situating my study of both these texts within the context of early modern alchemy, particularly the debate on art and nature, which was argued feverishly among the natural philosophers of the time. I then contrast Cavendish's discourses on the superiority of nature to art in *Observations* with the views of contemporary alchemists in order to identify her position within the art-nature debate. Next, I will study the selected passages invoking art and nature in *The Blazing World*, wherein she presents her assertions in satirical form. By examining the intertextuality of both texts, I hope to elaborate on the ways in which Cavendish intervened in the contemporary art-nature debate.

## II. Alchemy and the Early Modern Art-Nature Debate

The history of alchemy can be traced back to medical and

philosophical documents of Ancient Egypt and the Middle East, translated during the Middle Ages and spread throughout Europe. Alchemical practices consisted of two main aspects: the material and physical process of purifying and mixing the *prima material* (raw metals, usually sulphur and quick silver) into a purer substance, and the refinement of the alchemist’s mental and spiritual state in order to gain insight and assistance from the divine source of power. The desired result of such painstaking endeavours might be gold, Elixir, or the Philosopher’s Stone. Some alchemists pursued both the physical and material aspects of alchemy, though many of them tended to pay more attention to the material ends of their work.<sup>5</sup>

Alchemy was widely known of among laypeople in seventeenth-century Europe, where many alchemical treatises and illustrations were printed and circulated, though the general public might not have well understood the “Art” of it. Alchemical imagery was also common in the contemporary literature, for instance in the plays and masques of Ben Jonson and the poetry of John Donne (Abraham, 1990: 14-16, 27; Brooks-Davies, 1983; Linden, 1996: 155-190). Even John Milton’s *Paradise Lost* is believed to contain alchemical references (Abraham, 1998; Sadler, 1977). Alchemical lexicons and images were also deployed by radical thinkers during the English Civil War as propaganda in aid of bringing order to society, or perhaps establishing a new world (Hill, 1986: 274-296; Mendelson, 1992).

It is noteworthy that there was a burst of alchemical tracts

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<sup>5</sup> Seventeenth-century natural philosophers attempted to distinguish themselves from alchemists, even though the term “chemist” or “chymist” referred to both chemical scholars and alchemists. Scholars such as Robert Boyle wrote treatises to condemn alchemy as supernatural and fraudulent, though Boyle himself studied alchemy in private. This was followed by the decline of alchemy throughout Europe in the eighteenth century. Meanwhile, I have not found any alchemists commenting on natural philosophers or “scientists,” perhaps because many of them were natural philosophers, physicians, and chemists at the same time; they did not often call themselves “alchemists.”

published between 1650 and 1670, including the English translations of works by Paracelsus, Sendivogius, Van Helmont, and many other Continental alchemists. According to Mendelson's study of alchemy and politics in England between 1649 and 1665, many radical political activists adapted alchemical imagery to suit their own political doctrines, and Royalists were uneasy about the alchemical allegory of social mobility, even though many, including King Charles II, also studied alchemy (Allen, 2009: 5). In light of these facts, it can be presumed that a significant number of intellectuals of the English Interregnum and Restoration were familiar with alchemy, at least in a philosophical or political sense.

Under these circumstances, it is reasonable to assume that Cavendish might have known something of alchemy. Although no extant historical document proves her involvement in alchemical practices, the Duchess might well have heard about alchemy from her husband William, Duke of Newcastle, who was sufficiently enthusiastic to compile chemical recipes (Sarasohn, 2010: 149). She could have learned the basics of alchemy and studied the theories of contemporary alchemists through the mediation of scholars in her circle, especially Walter Charlton, the translator of Van Helmont's alchemical treatises. A textual indication that alchemy played a significant role in Cavendish's thought is the fact that thirteen of her fourteen books (first editions only) contain the keyword "chymistry" (or "chymist"), which refers to both chemistry and alchemy as the two fields had only just begun to diverge. More importantly, the texts of interest in this paper, *Observations* and *The Blazing World*, clearly include attempts by the Duchess to intervene in a recurring argument in natural philosophy and alchemy: the art-nature debate.

Both "art" and "nature" had multiple meanings in the seventeenth century. A quick survey of these texts reveals that the word "art" appears at least 176 times. According to the *OED*, in the 1630s, especially in the discipline of natural philosophy, "art" usually refers to "science" or "professional, artistic, or technical skill, . . . artificial methods, human ingenuity" (Art, n.d.). But it

could also mean “magic art,” “sorcery,” or “alchemy,” though the term “chymistry [*sic*]” was more commonly used in texts of that time. “Nature” signifies an extremely complex set of ideas, ranging from “Senses relating to physical or bodily power, strength, or substance,” to “mental or physical impulses and requirements,” and even to “semen,” “sexual fluids of women,” and “female genitals” (Nature, n.d.), but in seventeenth-century philosophies, “Nature” usually referred to “senses relating to the material world.” Nature was personified as “Dame Nature” or “Mother Nature,” an image Cavendish frequently explored in her philosophical writings, as, for instance, in *Observations*, where she observes: “Nature is a very sad and melancholy Lady” (1666: 70). Adding a further layer of complication and meaning, intellectuals during and after the Civil War endeavoured not only to conceptualise nature through a new scientific approach but also to apply a set of political and cultural attributions to nature through various discourses, especially those relating to the art-nature debate.<sup>6</sup>

Given the plethora of meanings ascribed to the terms art and

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<sup>6</sup> As William R. Newman points out, the origin of such a debate can be traced back to Aristotle’s *Physics*, which “distinguishes between a natural and artificial product” (2.1, 192b28-33; cited in Newman, 1999: 323). Over the next few centuries, numerous philosophers and alchemists would argue for and against the power of Art over Nature. Persian philosopher Avicenna (c. 980-1037), for instance, rejected the possibility of artificial transmutation in his treatise in *De Congelatione et Conglutinatione Lapidum*, by arguing that “Nature is decidedly superior to Art” (Linden, 2003: 98). Medieval alchemist Roger Bacon once argued that art does surpass nature: “although Nature be mightie and maruailous, yet Art vsing Nature for an instrument, is more powerfull then naturall vertue, as it is to bee seene in many thinges” (1597: 54). Paracelsus, a prominent figure in the history of alchemy, was even more enthusiastic about the power of art that he attempted to prove the unlimited potential of artificial creation by experimenting on the homunculus (Newman, 1999: 323). Other alchemists, such as Jābir ibn Hayyān (Pseudo-Geber), seem to have had a humbler view, emphasising that art cannot succeed without knowledge of the rules of nature: “But you must also know, that he [artificer; alchemist], who in himself knows not Natural *Principles*, is very remote from our *Art*; because he hath not a true *Root*, whereon to found his intention” (Jābir ibn Hayyān, 1678: 23).

nature, it might be difficult to chart the exact development of discourses concerning the relationship between art and nature in the seventeenth century. John French, a contemporary English physician and translator of alchemical texts, comments on the diversity of ideas about art and nature in his book *The Art of Distillation*: “Nature and Art affords variety of spagyricall preparations, but they are as yet partly undiscovered, partly dispersed in many books and those of diverse Languages, and partly reserved in private mens hands” (1653: sig.A4r).

Indeed, views on art and nature at this time were by no means unidirectional: The Paracelsian approach apparently inspired many alchemists, “experimenters,” and “mechanical philosophers” in the seventeenth century, who sought to “perfect” nature through human effort. They generally agreed that art not only imitates nature, but may also accelerate its motion. To quote from Elias Ashmole:

As *Nature* in her work below used two hot *Workmen*, so will I; and because we cannot tarry her leisure, and long time she taketh to that purpose, we will match and countervail her little *Heats* with proportions answerable and meet for our time, that we may do that in fourty dayes which she doth in as many years. (1658: 134)

Not all alchemists were optimistic about the power of “Art.” Two fine examples of a less optimistic attitude are found in the works of German alchemist Michael Maier (1568-1622). One is an illustration (Emblem 42) from his famous alchemical treatise *Atalanta Fugiens*, entitled “For him versed in Chemistry, let Nature, Reason, Experience, and Reading be his Guide, staff, spectacles and lamp” (Maier, 1989: 189). The emblem portrays an elderly alchemist (symbolizing philosophy or art) following in the footsteps of a young lady (symbolizing nature). The emblem is didactic, reminding alchemists that their arts should take nature as its basis. The other is an illustration from Maier’s *Symbola aurea Mensae*: “Just as nature, art makes metals out of sulphur and

mercury” (Linden, 2003: 15). In this particular emblem, the alchemist first observes nature’s rules of generation, then applies them to his own work.

Polish alchemist Sendivogius proposed a still more modest attitude towards nature in *A New Light of Alchymie*: “We have treated of things, which Nature makes, and which God hath mad; that the Searchers of Art might the more easily understand the possibility of Nature” (1650: 28); and he continues, “if at any time Nature be sweetly, and wittily helped, then Art may perfect that, which Nature could not” (29). Although Sendivogius affirms the power of art to improve nature, he nonetheless regards art as nature’s assistant rather than its master, and asserts that it is crucial for those who pursue *chrysopeia* (a gold-making technique) to recognize the impossibility of achieving the desired transmutation without the participation of natural forces:

Gold may yeeld fruit, and seed, in which it multiplies it self by the industry of the skilfull Artificer, who knows how to exalt Nature, but if he will attempt to do it without Nature, he will be mistaken. For not only in this art, but also in every thing else, we can doe nothing but help Nature. (29)

Cavendish approached the issues of art and nature from a fresh perspective within this cultural milieu. As Sarasohn suggests, Cavendish’s discourses on nature are gendered and politicised: “The multiplicity of genres in her [Cavendish’s] writings reflected experimentation with different forms of political organization” (2010: 106). The Duchess subverts the conventional rhetoric of nature (which was usually depicted as feminine in contemporary natural philosophy) by celebrating women as nature’s advocates, whose “natural wit” surpasses the intellectual capacity of male philosophers (Sarasohn, 2010: 124-125). Cavendish’s animist and atomist views on nature, which she viewed as a self-moving body composed of various interconnected elements, may also support her political stance: she espoused a unified kingdom ruled by a

strong and wise monarch (107-108). Sarasohn's study has contributed to the understanding of the complex politics involved in Cavendish's discourses on nature; my study departs from the political and examines the intellectual background of the art-nature debate. In the following pages, I shall place *Observations* side by side with the alchemical texts previously cited to demonstrate that, despite her opposition to and ridicule of "chymists," the Duchess shared some ideas with those alchemists who bowed humbly before Dame Nature.

### III. Nature and Art in *Observations*

Any attempt to pin down Cavendish to a single school of thought would inevitably fail as since she constantly incorporated various intellectual currents, as "wise Nature taking delight in variety, her parts, which are her Creatures, must of necessity do so too" (1666: 13). Simply stated, the Duchess supported the power of Nature over Art and opposed mechanical or experimental approaches to Nature, such as those employed by philosophers and alchemists. She had long criticised "experimenters" and "chymists" as "imitating apes" before the publication of *Observations*. For example, in *Philosophical Letters* (1664b), she condemned a group of thinkers well known in the field of natural philosophy—dismissing Hobbes's mechanical views of nature, Descartes's idea of *animal automata*, Henry More's theory of immaterial spirits and Spirit of Nature, as well as Van Helmont's mixture of spirit and matter (Sarasohn, 2010: 127).<sup>7</sup>

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<sup>7</sup> Among the attacked philosophers, Henry More seems to be the only one formally responding to the Duchess. After receiving her gift of *Poems, and Fancies* and *Philosophical Letters* in 1665, he "thanked her with a letter carefully crafted apology for his unpolished manner of writing" (Hutton, 2004: 114). Although Cavendish was acquainted with Descartes and Hobbes, I was unable to find documentation of their responses to her attacks. In addition, it is uncertain whether or not Van Helmont knew Cavendish in person, though he was a well known figure in the intellectual circle of the Duchess's husband William Cavendish.

In *Observations*, the Duchess verbally attacks Robert Hooke, an esteemed member of the Royal Society, who had published *Micrographia* the year before. According to studies by Katie Whitaker and Sarasohn, *Observations* was intended to attack the use of microscopes and the experimental philosophy promoted by Hooke and other members of the Royal Society (Sarasohn, 2010: 150; Whitaker, 2002: 284). Although Cavendish does not mention Hooke by name, she makes the subject of her criticism quite explicit, writing:

The like, I doubt, will prove amongst our Natural Philosophers, who by their extracted, or rather distracted arguments, confound both Divinity and Natural Philosophy, Sense and Reason, Nature and Art, so much as in time we shall have rather a Chaos, then a well-order'd Universe by their doctrine. (1666: sig.c2r)

Peter Dear points out that drawing on the advantage of her status, Cavendish participated in this verbal “duel” in a manner that “engaged [her] with the art/nature distinction, using overtly gendered language in a way that tended to negate any impression that she regarded her own gender as anything other than a disqualification from speaking philosophically” (2007: 125). Certainly, it is not unusual to see the Duchess fashioning herself as outside of an academic community dominated by men, but one may wonder if this is anything more than a lengthy and bitter complaint from an aristocratic lady thinker. More questions follow: Why did she alienate herself from the mainstream mechanical approaches promoted by the Royal Society, and how did she perceive of art and nature?

In *Observations*, Cavendish proposes three main ideas on nature. First, that nature is an infinite and “self-moving body, and that all her parts and Creatures were so too” (1666: sig.h1v); second, the composing aspects of nature cannot be separated from each other; the third theme concerns the relationship between art and nature. As indicated in the Introduction, the first two ideas

have been explored by scholars from political and gender perspectives. Hence, this study focuses on the third, a substantial theme within the alchemical debate on art and nature.

Cavendish touches upon art and nature in several chapters of *Observations* (2001: 199-203), in ways which testify to her awareness of the art-nature debate. At the beginning of the book, nature as the perfect manifestation of divine providence, because its operation and composition are orderly, perfect, and indivisible. Nature is also an organism with an independent will, but a purely material one, as immaterial objects do not exist in nature. On the other hand, art comprehends all the technology and craftsmanship created by mankind, especially through the observational and mechanical sciences, as these two fields of study are closely related to the human-centred exploration, analysis, and imitation of nature: “though Art, like an Emulating Ape, strives to imitate Nature, yet it is so far from producing natural” (Cavendish, 1666: sig.2X1v). It should be noted that most of Cavendish’s comments on art in *Observations* are negative; here, art is regarded as a trick that confuses human beings with illusions, preventing them from seeing nature’s true face. She even uses the term “hermaphroditical” to describe the grotesque and unnatural things generated by art: “if Art imitates Nature in producing of Artificial Figures, they are most commonly such as are of mixt Natures, which I call Hermaphroditical” (1666: sig.f1r).

As mentioned earlier, both early modern natural philosophers and alchemists were eager to discover whether human intelligence could surpass nature by perfecting it or creating something that does not exist in it. For natural philosophers, the answer seemed to be positive. During the Restoration, members of the Royal Society of Science believed that science and technology could help mankind better understand nature, and thus were enthusiastic about the research and development of mechanical and optical instruments, particularly telescopes and microscopes. Through such explorations, they endeavoured to prove God’s existence in the cosmos. Although they might have had reservations about the

creation of life—such as a homunculus—for theological reasons (Schummer, 2009), their interest in exploring and exploiting nature was a historical constant. Although there were some ambitious supporters of artificial creation, such as Paracelsus, who celebrated human beings as “mini-gods” in his treatises on the homunculus (Newman, 1999: 338-339), the idea was, apparently, a source of fear for intellectuals in early modern Europe, including for Cavendish, being viewed as an arrogation of divine power.

In *Observation*, Cavendish’s perspective is far less optimistic, and she dismisses the enthusiasm of experimental philosophers as the false and irrational result of a mistaken understanding of the true agent of natural phenomena:

I observe, that most of the great and famous, especially our modern Authors, endeavour to deduce the knowledg of causes from their effects, and not effects from their causes, and think to find out Nature by Art, not Art by Nature. . . . But some are so much in love with Art, as they endeavour to prove not onely Nature, but also Divinity, which is the knowledg of God, by Art, thus preferring Art before Nature, when as Art is but Natures foolish changeling Child. (Cavendish, 1666: 25-26)

Elsewhere, she criticises experiments as mere tricks of ignorant human beings, observing that ignorance is usually unproductive:

Wherefore those that imploy their time in Artificial Experiments, consider onely Natures sporting or playing actions; but those that view her wise Government, in ordering all her parts, and consider her changes, alterations and tempers in particulars, and their causes, spend their time more usefully and profitably; and truly to what purpose should a man beat his brains, and weary his body with labours about that wherein he shall lose more time, then gain knowledg? (101)

[T]hough Art, the emulating Ape of Nature, makes often vain and useless things, yet I cannot perceive that Nature her self doth so. (23)

She also cautions that the scope of art is too limited, compared with the vastness of nature:

for Art is so far from altering Infinite Nature, that it is no more in comparison to it, then a little Flie to an Elephant, no not so much, for there is no comparison between finite and Infinite. (13)

Cavendish warns that such artificial pursuits, if taken to an extreme, may mislead us, resulting in a complete misunderstanding of nature:

Art, for the most part, makes hermaphroditical, that is, mixt figures, as partly Artificial, and partly Natural. . . . In the like manner may Artificial Glasses present objects, partly Natural, and partly Artificial; nay, put the case they can present the natural figure of an object, yet that natural figure may be presented in as monstrous a shape, as it may appear mis-shapen rather then natural. (8)

Despite her blunt critique of art, Cavendish states that she is not against art itself, but rather the idea of exploiting art to change nature, and the misconception that human efforts can substitute for the power of nature:

I will not say, but Art may help to mend some defects, errors or irregularities in Nature, but not make better that which Nature has made perfect already. . . . [F]or that Creature is perfect in its kind, that has all the motions which are naturally requisite to the figure of such a kind: But Man is apt to run into extreams, and spoils Nature with doting too much upon Art. (32)

In the above quotation, the contradiction between the achievements and the limitations of art presents the key idea of Cavendish's critique of alchemy and experimental philosophy—although art might possibly improve the world, it is unlikely to better nature. She pushes her argument further, suggesting that the ultimate

problem of art is the men who misuse and abuse it on the basis of their false belief that artificial power is superior to natural forces:

[S]ince Art is found out and practised by Man, Man conceits himself to be above Nature; But as neither Art, nor any particular Creature can be the cause or principle of all the rest, so neither can heat and cold be the prime cause of all natural productions. (84)

There can be no doubt that her attitude towards alchemy and alchemists is basically negative: she criticises the obscurity of “Dr. Dee’s numbers” and Edward Kelly’s “holy stone” (72-73), the chemical medicine developed by Paracelsus (sig.c1r-c1v, 79-80), and Van Helmont’s theory of nature and the elements (4, 58). Interestingly, despite her criticisms, Cavendish appears to share the pro-nature opinions of some of the alchemists, though she does not acknowledge those views in *Observations*. Her celebration of the view that “nature surpasses art,” for example, is resonant with the points made by Sendivogius in the first treatise of *A New Light of Alchymie*:

Therefore I say Nature is but one, true, plaine, perfect, and entire in its owne being, which God made from the beginning, . . . [a]ll things proceed from this very nature alone; neither is there any thing in the world without Nature. . . .

The searchers of nature ought to be such as nature her selfe is, true, plaine, patient, constant, &c. and that which is chiefest of all, religious, fearing God, not injurious to their neighbour. . . . [*If thou wilt doe any thing plainly, as nature her selfe doth doe it, follow nature; but if thou wilt attempt to doe a thing better then nature hath done it, consider well in what, and by what it is bettered, and let it alwaies be done in its owne like.* (1650: 3-5, my emphasis)

The above passage conveys a number of key messages. First of all, nature is not only a holistic, perfect, and self-contained entity, but also the source of all things. Additionally, those who study nature should be modest, faithful, and true. Lastly and most

importantly, those who pursue art should be prudent and let nature take the lead. These ideas profoundly differ from claims made by experimental philosophers and physical alchemists, whose stances approximated Cavendish's stance in the art-nature debate. Notably, both Sendivogius and the Duchess verbalised their distrust of the infinite power of "art," which seems to correspond with the principle of "alchemy follows nature" in *Atalanta Fugiens*, as articulated earlier in this paper.

Sendivogius also points to a problem with "Artificer" by saying, "The Art of Alchymie in its kind is true, Nature also is true, but the Artificer is seldome true: there is one Nature, one Art, but many Artificers" (37). Art itself is innocent, as he puts it, but it is the "Artificers" who tend to ignore the fact that "[w]ithout the light, and knowledge of Nature, it is impossible to attain to this Art" (41). Similar lamentations can be heard in the words of Arthur Dee ("The Art of Chymistry . . . is so much defamed, disparaged, and brought into disgrace, by the fraudulent dealings of Imposters, as that whosoever professes it, shall still be stigmatized with Publike Reproach"),<sup>8</sup> Elias Ashmole ("[T]he dignity of this infallible *Mystery* lies open to many hard *Censures*, and profane *Scandals*"),<sup>9</sup> and John French ("There is a glut of Chymicall books, but a scarcity of chymicall truthes").<sup>10</sup>

With Van Helmont, we again find an often unrecognised or unappreciated connection to Cavendish. According to Eileen O'Neill, the influence of Van Helmont is pervasive in Cavendish's philosophical works, particularly in *Observations* and *Philosophical Letters* (Cavendish, 2001: x, xiv-xv). Despite the Duchess's dismissal of many of his ideas, it cannot be denied that her views on nature were affected by this alchemist, especially his vitalist view of nature. For example, though interested in experiments on Nature, Van Helmont objected to Aristotle's mechanical approach

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<sup>8</sup> Dee, 1650: sig.a[1]v.

<sup>9</sup> Dee, 1650: sig.\*\*4v.

<sup>10</sup> French, 1653: sig.A4r.

to physics, regarding nature as within the “command of God whereby a thing is that which it is and doth that which it is commanded to do or act” (Pagel, 1982: 39); “Aristotle hath declared four constitutive causes of things,” he argues, “which have made also their own Authour ignorant of Nature” (Van Helmont, 1664: 28). A similar attack was found in his letter to P. Marin Mersenne: “Aristotle was ignorant of this [the *archeus*], and erroneously pointed to external efficient causes in a way that showed only the understanding of a country fellow or simple mechanic” (Newman & Principe, 2002: 62). In other writings, he goes on asserting that “this whole structure [of Aristotle’s framework of nature] had to be rejected as patently materialistic, based as it was on the ‘love and hatred’ of material elements and qualities” (Pagel, 1982: 43). Thus, he was opposed to a dualistic approach to nature—a method frequently applied by early scientists to make sense of their discoveries.<sup>11</sup>

These points seem to echo Cavendish’s attacks on art. In her chapter “Of Art, and Experimental Philosophy,” the Duchess states bluntly that art can never outshine nature: “But the all-powerful God, and his servant Nature, know, that Art, which is but a particular Creature, cannot inform us of the Truth of the Infinite parts of Nature, being but finite it self” (1666: 5). Newman’s study suggests that Cavendish opposes alchemy because of its claims of artificial creation, which grant human beings godly power (1999: 336-337). According to her, objects created by art are fake (“illusionary”) and impure (she refers to them as “hermaphrodite”). She argues that they are far from nature-made creatures, which are perfect, holistic, and self-contained.

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<sup>11</sup> According to *OED*, the earliest occurrence of the word “scientist” was in 1834, while “science” appeared much earlier in around 1340, meaning “the state or fact of knowing.” The “science” appears in the 1664 English translation of Van Helmont’s collection of works, but the closest seventeenth-century equivalent to “scientist” was probably “(natural) philosopher,” a term referring to scholars of nature. “Chemist (chymist)” and “physician” were terms referring to those who study or practice “chymistry” and medicine respectively.

Based on the above discussions, it might still be too early, perhaps even impossible, to precisely articulate Cavendish's views on art and nature. As Sarasohn points out, her writings "reflect the disc[u]rsive practices of earlier natural philosophers, like the Italian naturalists and alchemists who presented their ideas in many different forms" (2010: 2). From this study, two issues have emerged from this perplexing maze of ideas: first, despite her critique of alchemists (who are very often targets of her ridicule), Cavendish owes them a substantial debt (though unacknowledged in *Observations*), particularly regarding the idea that "alchemy follows nature." Secondly, her attacks on art and the mechanical or experimental approaches to nature are indicative an attempt to challenge scholarly authorities' ignorance and misconceptions of the truth of nature, as she states in the preface of *Observations*:

It may be the World will judg it a fault in me, that I oppose so many eminent and ingenious Writers, but I do it not out of a contradicting or wrangling nature, but out of an endeavour to find out truth, or at least the probability of truth, according to that proportion of sense and reason Nature has bestowed upon me; for as I have heard my Noble Lord say, that in the Art of Riding and Fencing, there is but one Truth, but many Falshoods and Fallacies: So it may be said of Natural Philosophy and Divinity. (1666: sig.d1r)

Her argument for nature's superiority constitutes not only the core of *Observations*, but also provides the fundamental framework of *The Blazing World*, wherein the art-nature debate is continued and expanded, establishing a paradigm for both the physical and imaginative worlds.

#### IV. Nature and Art in *The Blazing World*

Originally appearing as a supplement to *Observations*, *The Blazing World* has become one of Cavendish's most famous works.

In the preface, she stresses that the story is consistent with her scholarly discourses in *Observations*: “If you wonder, that I join a work of fancy to my serious Philosophical Contemplations; think not that it is out of a disparagement to Philosophy” (1666: sig.B1r). Such a statement clearly embodies the intertextuality between the two texts: if *Observations* serves as the main text, featuring the rational and philosophical discourses, we may then see *The Blazing World* as an imaginative, romantic, and “fantastical” presentation of the author’s ideas about art and nature during her course of study. As the author makes clear in her preface, the two texts target different groups of readers: *Observations* was written for philosophers while *The Blazing World* was for female readers. With these differences in mind, I read the two texts together, in order to explore the continuity of Cavendish’s intellectual involvement in the art-nature debate. I focus on three aspects of *The Blazing World*: the narratives on Paradise and its local inhabitants, the Empress as a representative and an advocate of nature, and the dialogues between the Emperor and the Duchess of Newcastle on art vs. nature in literature.

At the beginning of the story, the heroine (later the Empress of the Blazing World) survives a shipwreck and arrives in Paradise, the capital of the Blazing World. The narrative of the city’s layout illustrates a man-made metropolis:

On each side all along this narrow and winding River, there were several Cities, some of Marble, some of Alabaster, some of Agat, some of Amber, some of Coral, and some of other precious materials not known in our world; all which after the Lady had passed, she came to the Imperial City, named *Paradise*, which appeared in form like several Islands; for Rivers did run betwixt every street, which together with the Bridges, whereof there was a great number, were all paved; the City it self was built of Gold; and their Architectures were noble, stately, and magnificent, not like our Modern, but like those in the *Romans* time; for our Modern Buildings are like those houses which Children use to make of Cards, one story

above another, fitter for Birds, then Men; but theirs were more large, and broad, then high; the highest of them did not exceed two stories, besides those rooms that were under-ground, as Cellars, and other offices. (part 1, 10-11)

Despite the advanced technology and craftsmanship apparent in the city's architecture and operation, the people in the Blazing World appear to be some "wonderful kind of Creatures" (4). Most of the citizens are "beast men," hybrids of human and beasts, or people with unusual physical features:

they [the beast men] came into an Island where there were Men which had heads, beaks, and feathers, like Wild-geese, onely they went in an upright shape, like the Bear-men and Fox-men; their rumps they carried between their legs, their wings were of the same length with their bodies, and their tails of an indifferent size, trailing after them like a Ladies Garment. (6)

Given their peculiar skin and colour of teeth, one may wonder if these hybrid creatures had been generated through artificial means. In the above quotation, the heroine's astonishment and fear echoes Cavendish's bleak views on the artificial effects generated by chemical experiments in *Observations*. But the Emperor of the Blazing World and his family are distinct from all other inhabitants: they look human but are forever young. The absolute ruling power of the royals again suggests the superiority of nature to art, a pervasive idea in *Observations*, expressed thus: "Nature, being a wise and provident Lady, governs her parts very wisely, methodically and orderly" (100).

The heroine herself appears to be a personification of nature and its power. She is the only survivor of the disaster "by the light of her Beauty, the heat of her Youth, and Protection of the Gods" (2), after all of the men on board freeze to death. This suggests the failure of art, as exemplified by the men's attempts to abduct and take sexual advantage of her. As Londa Schiebinger observes, "Baconians championed a masculine symbol—virile, ready to act

and command” (1988: 663). Such an intention to exploit a young woman may refer to the figurative speech of the relationship between masculine art and feminine nature, which was often applied by natural philosophers, such as Francis Bacon and Robert Boyle.

Meanwhile, the young lady, with her natural human shape reminiscent of the royals, is soon worshipped as a goddess and is later elevated to the throne of the Blazing World. Rachel Trubowitz has interpreted this as Cavendish’s celebration of “the absolutist authority of imperial sovereignty, . . . or, more specifically, Christological pretenses of the restored Stuart monarchy, as exemplified in *Astraea Redux* where Dryden welcomes Charles II as Christ” (1992: 236). Apart from these political implications, though, I would like to suggest that the lady’s gender is decisive in shaping her identity, which manifests natural power and divine providence. According to Dear’s study, the Duchess refers to nature and art as feminine and masculine respectively in her philosophical discourses (2007: 134). This is pushed further by Sarasohn’s study, which suggests that, in Cavendish’s theory, nature is empowered by God to rule, as the Empress of the Blazing World has sovereign power granted her by the Emperor (2010: 107-108, 124-125). Within this framework, the lady in *The Blazing World* can be seen as symbolic of nature’s creative power, which so obviously surpasses that of technological artifice.

The issue of art versus nature is pervasive in the passages depicting the Empress’s learning the “Arts” from her beast-men virtuosos:

[T]he Empress encouraged them [the beast men] in, especially those that had applied themselves to the study of several Arts and 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. The Bear-men were to be her Experimental Philosophers, the Bird-men

her Astronomers, the Fly- Worm- and Fish-men her Natural Philosophers, the Ape-men her Chymists, the Satyrs her Galenick Physicians, the Fox-men her Politicians, the Spider- and Lice-men her Mathematicians, the Jackdaw- Magpie- and Parrot-men her Orators and Logicians, the Gyants her Architects, & c. (1666: part 1, 15-16)

In *The Blazing World*, the Empress engages in extensive discussions with the beast men on nature and science, such as natural phenomena, the elements, the possibility of making gold, the meanings of the Philosopher's Stone, and the probability of the artificial transmutation of substances. As I will demonstrate shortly, these narratives make it obvious that the Empress, Cavendish's avatar, elevates nature while accordingly belittling art.

Once the Empress "ma[kes] a convocation of her Chymists, the Ape-men, and commanded them to give her an account of the several Transmutations which their Art was able to produce" (Cavendish, 1666: part 1, 46). She is soon bored and disappointed not only by their "long and tedious discourse concerning the Primitive Ingredients of Natural bodies, and how, by their Art, they had found out the principles out of which they consist" (46), but also by their contradictory theories. It is thus not surprising to see the Empress eventually stepping forward to quiet the dispute with a forceful statement of her own theory:

I am too sensible of the pains you have taken in the Art of Chymistry, to discover the principles of natural bodies, and wish they had been more profitably bestowed upon some other, then such experiments; for both by my own contemplation, and the observations which I have made by my rational and sensitive perception upon Nature, and her works, I find, that Nature is but one Infinite self-moving body, which by the vertue of its self-motion, is divided into infinite parts, which parts being restless, undergo perpetual changes and transmutations by their infinite compositions and divisions. (part 1, 47-48)

The Empress’ words are identical with Cavendish’s comments in *Observations*, which present the Duchess’ frustration with the art-nature debate and her attacks on experimental philosophy as an unhelpful and perplexing approach to Nature.

The Empress ends her lecture with a piece of dismissive advice and assertion that experimental philosophy is useless to understanding or exploring nature, but conceding that it might have some potential for improving human life:

Wherefore, I will not have you to take more pains, and waste your time in such fruitless attempts, but be wiser hereafter, and busie your selves with such Experiments as may be beneficial to the publick. (48)

Another illustration of the Empress’ skepticism may be read in her encounter with the Ape-men medical consultants, who mention that the members of the royal family take a special type of medication (an oil made of a gum flowing from the “Golden Sands”), which, upon ingestion, causes severe toxic reactions, such as vomiting and nasal bleeding, and then forms scabs (49). Over the subsequent four months, all bodily hair, teeth, and fingernails fall out. Afterwards, one must be wrapped with special dressings for nine months and consume “Eagles-eggs,” “Hinds-milk,” and other special foods (50). The renewed body that emerges at the end of this process is that of a twenty-year-old (50). This account greatly surprises the Empress, for she has heard of the alchemical Philosopher’s Stone, the “Chymera,” and the “Alkahest” (omnipotent solvent) but was unaware that the elixir of youth could be produced (51). The Empress again begins to compare the power of nature with that of artificial power:

Nor would she have so easily believed it, had it been a medicine prepared by Art; for she knew that Art, being Natures Changeling, was not able to produce such a powerful effect, but being that the Gum did grow naturally, she did not so much scruple at it; for she knew that Natures Works are so various and wonderful, that no

particular Creature is able to trace her ways. (51)

From this quotation it is apparent that the Empress still insists that human technology cannot surpass nature. Although the magical effects of the elixir of youth surprises her by demonstrating the astonishing technological development of the Blazing World, the Empress contends that such a medicine could never be fabricated were Nature's raw materials lacking and if one were solely dependent on artificial power.

In another scene, the Empress consults the Magpie- Parrot- and Jackdaw-men, "which were her professed Orators and Logicians" (56), on the speculative approach to natural philosophy (56-57). However, after listening to their explanations, she feels that this method of logic "consists onely contradicting each other, in making sophismes, and obscuring Truth, instead of clearing it" (59). The Magpie- Parrot- and Jackdaw-men defend themselves by stating that nature can be understood only through the system of dialectical logic: "the knowledg of Nature, that is, Natural Philosophy, would be imperfect without the Art of Logick, and that there was an improbable Truth which could no otherwise be found out then by the Art of disputing" (59). As the Empress is representative of an intuitive, non-human model of thought, she is unconvinced by this discourse, and quickly concludes that "'tis but a folly to think that Art should be able to regulate them, since Art it self is, for the most part, irregular" (59). Acknowledging the limitations of self-contradiction in human methodologies, she challenges her consultants by enquiring into how such methods could be used to reveal the truth of Nature.

The Empress also disparages the functions of mathematical logic and discursive skill. Puzzled by her mathematicians' discursive discourses, she complains:

[T]hey followed too much the Rules of Art, and confunded themselves with too nice formalities and distinctions; but since I know, said she, that you are a people who have naturally voluble tongues, and good

memories; I desire you to consider more the subject you speak of, then your artificial periods, connexions and parts of speech, and leave the rest to your natural Eloquence. (56-57)

Her view, apparently, is that the imposition of the limitations of artificial rules of speech must interrupt natural ways of speaking. The episode is probably offered as a satire on the conventional rhetorical strategy of Cavendish’s time, which sacrificed semantic transparency for ornamental expression (in order to best display one’s wit), and echoes Cavendish’s preface to *Poems, and Fancies*, wherein she describes her writing style as plain, but true: “It [this Worke] is not *Excellent*, nor *Rare*, but *plaine*; yet it is *harmlesse*, modest, and *honest*” (1653b: sig.A7v). Thus, the Empress’ attack on the falsity and unnaturalness of rhetoric and oration techniques can be seen as a tactical defense of her own writing style as natural and flowing.

The art-nature debate also appears in the second half of *The Blazing World*, though the focus shifts from the debate between science and philosophy to a literary one. Here the Duchess of Newcastle (a literary persona for Cavendish) mentions her dramatic works to the Emperor before returning to her homeland. She laments that, despite the superiority of her ideas, her plays suffered belittlement because they did not follow the artificial conventions of dramaturgy: “the Wits of these present times condemned them [her plays] as incapable of being represented or acted, because they were not made up according to the Rules of Art” (Cavendish, 1666: part 2, 29).

One may wonder whether the Duchess is voicing her opposition to dramaturgy as an artificial activity by referring to “the Rules of Art.” However, the art-nature discourse in the above passage is not based on the view that literature is necessarily artificial as, she holds, it is a way to express “natural Humours, Actions and Fortunes” (29). Rather, she condemns the artificial “rules,” the literary conventions established by writers and critics

in the seventeenth century, especially the resort to hyperbole, emphasis on form, and the use of flourishes. As an author of plain language, Cavendish frequently argues for the importance of true meaning over sophistication:

[A]s for the nicities of Rules, Forms, and Terms, I renounce, and profess, that if I did understand and know them strictly, as I do not, I would not follow them: and if any dislike my writings for want of those Rules, Forms, and Terms, let them not read them, for I had rather my writings should be unread than be read by such Pedantical Sholastical persons. (1662: sig.A5r)

In *The Blazing World*, the Duchess's celebration of nature in literary writing might be undertaken in self-defense, but it also takes a significant stand against the conventional contemporary perception of style.

The stylistic argument is articulated further in the Emperor's inquiry and response. After hearing the Duchess's discourses on drama, he wonders why "the natural Humours, Actions and Fortunes of Mankind, are not done by the Rules of Art" (1666: Part 2, 29). At this point, he is still uncertain as to whether good plays need be the product of deliberate and conscious effort, until the Duchess argues that most well-received plays in her day are reflections of the popular preferences of the times and do not suit those souls who possess insight and vision. Finally, the Emperor is convinced by the Duchess. He soon declares that theatrical productions should neither drift with the tide nor cater to secular preferences; he also expresses his wish for plays of a high standard: "[I] desire such a Theatre as may make wise Men; and will have such Descriptions as are Natural, not Artificial" (29).

In the above quotation, Cavendish, through the character of the Duchess of Newcastle, applies the dictum that "art follows nature" (previously advocated by the Empress) to her literary commentary. Such a perspective reinforces the author's subtle critique of the conventional plays of her day. In so doing, she

promotes a new model for literary works, a style that is both “plaine” and “honest” (1653b: sig.A7v), in opposition to the Baroque literature of the day.

In *The Blazing World*, the principle of “nature before art” is a fundamental principle to be implemented in both philosophical reasoning and literary writing. As Cavendish argues in the above quotations, writing ought to be a medium through which one transmits the truths of the universe, rather than trifling with words to create superficially clever works lacking in genuine substance. Whether in the creation of physical phenomena or literary works, one must adhere to nature, letting it “be his Guide, staff, spectacles and lamp” (Maier, 1989: 189). That message, reiterated in *The Blazing World* in the form of a poetic manifesto, is an extension of Cavendish’s views on the art-nature debate in *Observations*.

## V. Conclusion

In this paper, I have discussed the ways in which Cavendish participated in the art-nature debate in her works, *Observations* and *The Blazing World*. I have argued that there is substantial degree of intertextuality not only between the two texts, but also between Cavendish’s works and contemporary alchemical texts. Going beyond previous studies, I have also approached the two texts within the intellectual milieu of early modern alchemy, which helps in exploring the unconventional thinking that may also have affected the Duchess’s fundamental views on art and nature.

As my study has demonstrated, her views may be volatile and complicated, yet her stance is consistent throughout *Observations* and *The Blazing World*: art must surrender to, and be led by nature. In *The Blazing World*, she extends this argument further to literary criticism, suggesting that the use of “natural” language is better than artificial flourishes. Such a view, I contend, is intended to criticise literary styles that celebrated hyperbole and rhetorical dexterity. Hence Cavendish’s writing may be best viewed as an

imitation of Nature: dynamic and ever-changing, with all its various parts interlinked.

The dictum that “nature surpasses art” is crucial to, and pervasive in, Cavendish’s intervention in the art-nature debate. Both *Observations* and *The Blazing World* present her views of this thorny issue, albeit in differing ways. *Observations* is presented as a serious and scholarly treatise, in which the author positions herself as a rational philosopher attempting to convey an important message to knowledgeable readers: because art can never surpass nature, it should always follow nature. In *The Blazing World*, the two heroines act as advocates for Cavendish’s opinions on art and nature. The Empress’s attacks on art and her inquiries concerning alchemy challenge contemporary philosophical thought; the Duchess’s defense of plainness as a natural writing style suggests an alternative to extravagant literary devices. More importantly, both texts, though in different genres, are thorough presentations of the complexity of the art-nature debate. Such treatments coincides with Cavendish’s declaration of her writing strategy in the preface to *The Blazing World*—to present her thoughts in a variety of genres and forms, “the first part whereof is *Romancical*, the second *Philosophical*, and the third is merely *Fancy*, or (as I may call it) *Fantastical*” (1666: sig.B2r).

Cavendish once commented in “The Dedication” to her *Playes*: “My brain the Stage, my thoughts were acting there” (1662: sig.A2r). The combination of *Observations* and *The Blazing World* represents an experimental mode of expression, bringing together a diverse readership across fields of scholarly discourse on natural philosophy (targeting elite and academic readers) through a literary imagination (intended for the female readers of leisure writing, especially romances). Cavendish was apparently familiar with the rules of various genres, enabling her to innovate and hold up to ridicule mainstream literary practices. Well aware of the various expectations and reading habits of her readers, her manipulations of words and genres were intended to facilitate the intertextuality of her works. Thus *Observations* and *The Blazing World* are

complementary works, each contributing to the dissemination of the author’s philosophical discourse. If *Observations* serves as a symposium allowing her to establish her theories within the framework of sense and reason, then *The Blazing World* is a playground for their fantastic working out. The two texts together represent an important milestone in Cavendish’s writing career—an inspiring mixing of science and fiction—articulating her thoughts, and political convictions, with regards to the relationship “Between Nature and Art” (1666: 12). Most importantly, they articulate the Duchess’s vision of nature through the articulation of a self-moving “paper body” (1664a: 296) with all its various and volatile components united within.

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## 「自然與人為孰勝」：以鍊金思想解讀 《實驗科學之我見》與《炫麗異世界》

趙恬儀

國立台灣大學外國語文學系  
10617 台北市大安區羅斯福路四段一號  
E-mail: tychao@ntu.edu.tw

### 摘 要

本論文探討十七世紀女作家瑪格麗特·柯芬蒂詩著作《實驗科學之我見》與《炫麗異世界》，當中關於自然與人為兩者優劣之分的論述。儘管兩書在內容、寫作風格和架構等方面均不相同，卻都呈現作者的自然觀及相關哲學論辨，其中尤以自然與人為之辨，為當代鍊金論述的重要主題之一。文藝復興與十七世紀的鍊金術師時常思考爭辯自然與人為力量之間的關係，著作當中提出各種不同的見解，討論鍊金術的人為之力究竟能夠改善、甚至改造自然到何種程度。本論文揭示《實驗科學之我見》與《炫麗異世界》之間具有互文性，應視為整體的論述觀之；不僅如此，二書亦與當代鍊金論述具有互文性，分別以哲學和文學來處理自然與人為的課題，透過理性科哲思考與感性文學想像的雙重手法處理爭議性的論述，讓作者柯芬蒂詩對於上述議題的見解躍然紙上。儘管柯芬蒂詩批判鍊金術，但卻受到中世紀與早期現代某些鍊金思想的影響，而這些思想主張的即是自然之力勝過人為力量。

**關鍵詞：**瑪格麗特·柯芬蒂詩、十七世紀文學、鍊金術、自然科學