

THE RIPLEY SCROLLS: ALCHEMICAL PATRONAGE  
IN EARLY MODERN ENGLAND

By

CANDACE GILSTRAP

Bachelor of Fine Arts in Graphic Design

The University of Tulsa

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THE RIPLEY SCROLLS: ALCHEMICAL  
PATRONAGE IN EARLY MODERN ENGLAND

Thesis Approved:

Dr. Jennifer Borland

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Thesis Adviser

Dr. Emily Graham

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Dr. Louise Siddons

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Abstract: The British Library Series (Add MS 5025 fol. 1-4) is a group of four alchemical scrolls that depict the process of creating a Philosopher's Stone, a mythical gem fabled to transform base metals to gold. The British Library Series is part of a larger group of twenty-one similar scrolls collectively called The Ripley Scrolls. All of the Ripley Scrolls are richly ornamented but possess no definitive clues as to who their patrons may have been or why they were created. The Ripley Scrolls are dated to the sixteenth century, raising questions about their scroll format, which was not a common mode of written communication at this time due to the prevalence of the manuscript and printed book.

In the past twenty years, the Ripley Scrolls as a group has provoked scholarly interest due to their enigmatic features and the substantial number of manuscripts in the group. However, the British Library Series has been only briefly mentioned within larger studies of the history of science that primarily consider the scientific and alchemical ideas contained therein. This study takes a different approach, singling out The British Library Series and examining these scrolls through the lenses of art and social history. The British Library Series, as this study will argue, contains overlooked evidence for English courtly patronage, specifically a Tudor Rose found on Add MS 5025 folio 3 of the British Library Series. This connection to the English court gives context for the often-questioned format of the Ripley Scrolls and shows the movement of alchemy from a secretive practice into a more public sphere during the sixteenth-century. By placing emphasis on format, patronage, and the artistic heritage of the objects, this study expands on the current understanding of the British Library Series' origin and appearance.

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## CHAPTER I

### INTRODUCTION

This project considers four alchemical scrolls that visually and textually explain how to craft a Philosopher's Stone, a mythical gem capable of transmuting metals (Fig. 5-8). These four folios are a part of larger group of almost identical scrolls that are collectively referred to as the Ripley Scrolls, named for the alchemist George Ripley (c. 1415-1490).<sup>1</sup> Ripley wrote numerous treatises on alchemy during his lifetime and became somewhat of an alchemical celebrity after his death; his works circulating widely in England and on the continent. Naming the group of scrolls after Ripley is misleading, however, because he did not create any of the Ripley Scrolls. Instead, the Ripley Scrolls bear his name because they include selected text from Ripley's most famous treatise, *The Compound of Alchemy* (or *The Twelve Gates of Alchemy*) and they have no other identifiable author or maker.

This thesis is a continuation of my research on the Ripley Scrolls and poses two primary arguments about them: they were made for English patrons and that their scroll format is linked to that patronage.<sup>2</sup> This larger project while coming from an art historical perspective on the scrolls

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<sup>1</sup> "Digitised Manuscripts," accessed September 29, 2016, [http://www.bl.uk/manuscripts/FullDisplay.aspx?ref=Add\\_MS\\_5025&index=0](http://www.bl.uk/manuscripts/FullDisplay.aspx?ref=Add_MS_5025&index=0).

<sup>2</sup> The earlier paper was titled "Tradition or Novelty? Format and Patronage of the Ripley Scrolls" and was written for the seminar class "Medieval Science and Medicine" at Oklahoma State University in fall of

as objects of material culture also considers the effects of international trade, Renaissance ideas, and scientific curiosity on the creation of the Ripley Scrolls. Overall, it is a social history concerned with understanding how artists, alchemists, and courtiers mingled in society resulting in the proliferation of complexly illustrated alchemical manuscripts and why it was important to them to do so.

#### A NOTE ABOUT NOMENCLATURE

Between the large number of Ripley Scrolls, twenty-one to be exact, that exist in various libraries around the world, discussing the Ripley Scrolls can be difficult for both reader and writer to follow (see Table 1, p. 13).<sup>3</sup> In this thesis, the focus is directed towards four of the Ripley Scrolls that are at the British Library in London, but I occasionally make reference to the larger group as a whole for comparison or to discuss the phenomenon of their proliferation.<sup>4</sup> For the purposes of this thesis, I have simplified the way that I refer to the larger group of twenty-one as a whole, the group of four at the British Library, and the specific scrolls within that group. In referring to the larger group of twenty-one, I will use the “Ripley Scrolls”. The four scrolls that are central to my thesis will be the “British Library Series”. The individual scrolls in the British Library Series, whose shelfmarks are Sloane Add MS 5025 folio 1, 2, 3, and 4 respectively, will be shortened to Folios 1, 2, 3, and 4.

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2015. While the thesis has expanded to address many threads left unquestioned by the original paper, many of the ideas are retained and second chapter of this thesis, “Format and Influence,” largely follows it in its method of visual analysis and comparison with other artistic traditions.

<sup>3</sup> R. I. McCallum, “Alchemical Scrolls Associated with George Ripley,” in *Mystical Metal of Gold: Essays on Alchemy and Renaissance Culture*, ed. Stanton J. Linden (New York: AMS Press, 2007), 161–88.

<sup>4</sup> In addition to the British Library Series (Add MS 5025 fol. 1-4), The British Library owns an additional three Ripley Scrolls: Add MS 32621, Sloane MS 2523B, and Sloane MS 2524A. These three are not yet a part of the digital collection and are only accessible in person at the library.

## THE BRITISH LIBRARY SERIES

My study is limited to the four scrolls of the British Library Series because they are digitized in their entirety and are available for remote study. This series is an excellent sample group because it contains one of each known design type of the Ripley Scrolls, including Folio 3, which is the only Ripley Scroll of its kind, possessing a unique rose motif (Fig. 7). The British Library Series is a part of the vast Sloane collection purchased by the British Museum in 1753.<sup>5</sup> The British Library website refers to the series as a single scroll because they were kept together in a box and rolled together when they came into the British Library's collection from that of Hans Sloane (1160-1753).<sup>6</sup> However, the size, style, script, and language variations make it clear that, in my opinion, each is a particular iteration of a Ripley Scroll, not a single dismembered scroll. This view is shared by numerous scholars of the scrolls, and most thoroughly argued by R.I. McCallum.<sup>7</sup>

The British Library Series merits closer study for a few reasons: as part of the Ripley Scrolls, they are included in the only known alchemical manuscripts from the early modern period that take scroll format; they also have no concrete patronage, land of origin, or dating for being such a large group of manuscripts.<sup>8</sup> Only three of the twenty-one Ripley Scrolls have

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<sup>5</sup> "Sir Hans Sloane," *The British Museum*, n.d., <http://www.britishmuseum.org/>; "Digitised Manuscripts." Sir Hans Sloane was a wealthy baronet and physician who lived in the seventeenth century. He amassed an enormous collection of objects over his lifetime (mostly books, prints, and manuscripts). Upon his death, the collection was purchased by the government and provided the foundation for the British Museum. Some of the book collection ended up at the British Library, including the British Library Series. Sloane acquired his collection by wholesale purchase of other collections, buying individual artifacts, and as gifts from friends. Due to the variety of sources for his objects, the scholars at the British Library are unsure about the provenance of the British Library Series before entering into Sloane's collection.

<sup>6</sup> "Digitised Manuscripts."

<sup>7</sup> R. I. McCallum, "Alchemical Scrolls Associated with George Ripley"; Rampling, Jennifer M., "A Secret Language: The Ripley Scrolls," in *Art and Alchemy: The Mystery of Transformation*, ed. Sven Dupré, Dedo Von Kerksenbrock-Krosigk, and Beat Wismer (Munich: Hirmer, 2014); Stanton J. Linden, "Reading the Ripley Scrolls: Iconographic Patterns in Renaissance Alchemy," in *European Iconography East and West*, ed. Szonyi, György Endre, *Symbola et Emblemata 7* (Leiden: Brill 1996), 236–49.

<sup>8</sup> There are twenty-one known Ripley Scrolls, which share common themes and imagery concerning the production of the Philosopher's Stone. They are not all in the same place; most are in various collections

inscriptions: these claim they were made in made in Lubeck, Germany in 1588, but do not specify for whom.<sup>9</sup>

The British Library Series is dated to the mid-sixteenth century, mainly based on paleographical evidence found by Jacques van Lennep in his study of alchemy.<sup>10</sup> Supporting Van Lennep's dating is the timeline of Ripley's *Compound of Alchemy*. The *Compound* was not written until the 1470s, and there is no evidence tying Ripley himself to any artistic production, this indicates that the Ripley Scrolls were made after he wrote his alchemical treatise.<sup>11</sup> However, it was not until the 1520s and 1530s that *The Compound of Alchemy* increased in popularity, resulting in the copying of the manuscript and many commentaries on it. The even later phenomenon of the vernacularization and mass circulation of the *Compound of Alchemy* in print throughout Europe did not occur until 1591.<sup>12</sup> Therefore it seems likely, that Van Lennep's dating of the majority of the Ripley Scrolls, and all four British Library Series Scrolls, to the mid- and late-sixteenth century is viable. Further, the use of mainly visual language and little text in British Library Series implies that the ideas contained within them were available for study in greater detail in Ripley's *Compound*. The rise in alchemical interest in the second half of the sixteenth century by a growing middle class and elites increase demand for luxury manuscripts like this

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across Europe and the United States. Given the large number of Ripley Scrolls still in existence it seems odd that so little is known about their proliferation and origins. It is not incredibly uncommon for manuscripts to be unsigned and undated, but a large number are. If the Ripley Scrolls were as popular as their surviving numbers indicate, it is reasonable to assume that more would have information linking them to particular patrons. McCallum indicated in his study "Alchemical Scrolls Associated with George Ripley" that part of this lack of information is probably due to the scrolls being copied.

<sup>9</sup> R. I. McCallum, "Alchemical Scrolls Associated with George Ripley," 167. Folio 2 of the British Library Series bears one such inscription, while the other two, MS 692 and MS 693, are at the Wellcome Institute in London. The similarity of the inscription on these three scrolls has generated some hesitancy to accept this dating because it indicates direct copying of earlier manuscripts.

<sup>10</sup> Jacques Van Lennep, *Alchimie : Contribution à l'histoire de l'art alchimique* (Bruxelles: Dervy, 1990), 91. I do not have the paleographical expertise necessary to counter van Lennep's argument, however R.I. McCallum notes that paleographical styles could easily be replicated at a later date and therefore is not the most accurate evidence as a basis for dating.

<sup>11</sup> Jennifer M. Rampling, "Establishing the Canon: George Ripley and His Alchemical Sources," *Ambix* 55, no. 3 (November 2008): 191.

<sup>12</sup> Jennifer M. Rampling, "The Catalogue of the Ripley Corpus: Alchemical Writings Attributed to George Ripley (d. Ca. 1490)," *Ambix* 57, no. 2 (July 2010): 125.

series. These manuscripts allowed for a visual mode of engagement and possession of the ideas already circulating in the more practical alchemical treatises.<sup>13</sup> It is unlikely that the British Library Series was produced until after the *Compound* became popular in the 1520s and 1530s and was readily available for reference. Finally, the presence of text in both Latin and English coincides with the dating of the British Library Series to the mid-sixteenth century, when vernacularisation was becoming more common, but Latin was still a largely universal language of scholarship in Europe.<sup>14</sup>

Each of the four scrolls in the British Library Series is on linen rag paper of varying sizes; the dimensions of the smallest of are 5.5 inches wide and 49 inches long and the largest is about 6 inches wide and 60 inches long. Therefore the imagery on each is of relatively small scale, which is impressive for the level of detail found in the British Library Series (Fig. 5-19). The length of each scroll was not predetermined, but instead, accomplished by adhering sheets of paper together.<sup>15</sup> Though they vary in composition and size, the content of each scroll is similar: the Ripley Scrolls describe visually the alchemical process for making a Philosopher's Stone through an interconnected series of images portraying fantastical beasts, cosmic motifs, human figures, scientific instruments, and biblical allusion.

Alchemical imagery is notoriously complex and intentionally designed to keep the ignorant from being able to practice alchemy. These visual safeguards, which mimic the complexity found in alchemical writing, stem from the alchemist's belief that Philosopher's Stone

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<sup>13</sup> Ibid., 126–29; Mary A. Rouse and Richard H. Rouse, *Authentic Witnesses: Approaches to Medieval Texts and Manuscripts* (Notre Dame: University of Notre Dame Press, 1993), 26–27.

<sup>14</sup> Rampling, "The Catalogue of the Ripley Corpus," 129–30.

<sup>15</sup> The back side of Folio 2 shows evidence of reworking: one can see the main shapes of the wizard figure and his flask found on the opposite side of this Type A scroll, but it is obvious that for some reason the artist chose to restart the scroll's layout on the opposite side of the paper. This may be because the length of the scroll was altered.

was a precious secret.<sup>16</sup> The imagery guarding this secret is mostly metaphorical, derived from the poetic verses in Ripley's *Compound of Alchemy*. They also contain religious references, astronomical charts, and scientific illustrations. The instruments that can repeatedly be seen in the British Library Series (Fig. 13-14) such as the flasks, furnaces, and alembics (interconnected flasks used for distilling liquids) are scientific illustrations. They function as a sort of supply list for the equipment needed to create the Philosopher's Stone and can be considered more literal than most of the other symbolic imagery found in the Ripley Scrolls.

The Ripley Scrolls are categorized using three distinct design categories as defined by R.I. McCallum.<sup>17</sup> These three categories are the A, B, and C Types and refer three distinct pictorial schemes. The most common of the three is Type A (see Table 1). This design is defined by the large wizard figure found at the top of the scroll, usually holding or peering into a large flask (Fig. 11 & 22). Folios 2 and 4 in the British Library Series are Type A. Type B scrolls have a series of monks reclining on couches or cushions at the top instead of the wizard (Fig. 10). Folio 1 in the British Library Series represents the Type B design. Then there is the Type C scroll: Folio 3 in the British Library Series is the only known Type C Ripley Scroll, while Types A and B scrolls also appear in other library collections.<sup>18</sup> The Type C design is referred to as the Rose or Rosicrucian design because of the red and white rose that can be seen below the wizard on Folio 3 (Fig. 35).

It is important to note these design types because of the Ripley Scroll's artistic variations, which the Types help to differentiate between. The presence of multiple Type A (17) and B (3) scrolls also provide evidence of copying and innovation on an original scheme. While the large

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<sup>16</sup> Rampling, Jennifer M., "A Secret Language: The Ripley Scrolls," 2014; Gareth Roberts, *The Mirror of Alchemy: Alchemical Ideas and Images in Manuscripts and Books from Antiquity to the Seventeenth Century* (London: British Library Publishing Division, 1995); R. I. McCallum, "Alchemical Scrolls Associated with George Ripley."

<sup>17</sup> R. I. McCallum, "Alchemical Scrolls Associated with George Ripley," 168.

<sup>18</sup> Type A scrolls represent the majority, but there are several Type B scrolls.

number of Type A Ripley Scrolls suggests that this design was the most common, the Type B Ripley Scroll also became an established as a way of showing this alchemical process. The singularity of the Type C Ripley Scroll (Folio 3), in contrast to the multiple versions of the other two design types, represents another innovation with its addition of the rose motif a new text. These elements also show Folio 3 to have been specially commissioned, not as a direct copy of an earlier scroll, but including specific references to the recipient of the scrolls, the Tudor court.<sup>19</sup>

## THE STATE OF THE FIELD

The British Library Series, as far as my research has extended, has never been the subject of study of its own. While the Ripley Scrolls as a group have in the last thirty years gained a much more prominent place in the study of alchemy, the four scrolls in the British Library Series are only briefly mentioned.<sup>20</sup> The larger group of twenty-one, while now gaining serious interest from the scholarly community, is primarily studied by historians of science with a focus on the alchemical imagery and the relation to scientific practice. My approach to the British Library Series as objects of artistic and material culture, therefore, is a route that has not been taken. My

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<sup>19</sup> At the head of Folio 3 there is a wizard figure as on Type A Ripley Scrolls, which implies that a Type A scroll was referenced in its creation. This dates it later than at least some of the Type A scrolls. However, this wizard figure does not have the large flask with the “wheel of alchemy” inside it, which is typical of Type A scrolls. This may have been left out in order to make room for or to emphasize the red and white rose motif, which sets this scroll apart from the others. This rose is identical to the one used by the Tudors as their house sigil.

<sup>20</sup> Jonathan Hughes, “Politics and the Occult at the Court of Edward IV,” in *Princes and Princely Culture 1450-1650*, ed. Martin Gosman, Alasdair MacDonald, and Arjo Vanderjagt, vol. 2 (Leiden: BRILL, 2005), 97–129; Anke Timmermann, *Verse and Transmutation* (Leiden ; Boston: BRILL, 2013); Aaron Kitch, “The ‘Ingendred’ Stone,” *Huntington Library Quarterly* 78, no. 1 (2015): 87; Lennep, *Alchimie*; Lawrence M. Principe, “The End of Alchemy? The Repudiation and Persistence of Chrysopoeia at the Academie Royale Des Sciences in the Eighteenth Century,” *Osiris* 29, no. 1 (January 2014): 96–116; Betty Jo Teeter Dobbs, *Alchemical Death and Resurrection : The Significance of Alchemy in the Age of Newton : A Lecture Sponsored by the Smithsonian Institution Libraries in Conjunction with the Washington Collegium for the Humanities Lecture Series* (Washington D.C.: Smithsonian Institution Libraries, 1990); R. I. McCallum, “Alchemical Scrolls Associated with George Ripley”; Rampling, Jennifer M., “A Secret Language: The Ripley Scrolls,” 2014. Each of these authors use one or more of the British Library Series scrolls to illustrate different point in their respective studies, usually in conjunction with other Ripley Scrolls and alchemical imagery. None of their studies focus on the imagery of these four scrolls or their particular cultural significance.



thesis, which is that the scrolls in the British Library Series are objects of material culture commissioned by English patrons who became interested in the increasingly popular field of alchemy and that the scroll format is linked to this patronage, is just one of many topics concerning the Ripley Scrolls that require further research.

The most prominent Ripley Scroll scholars are Jennifer Rampling, Stanton Linden, and R.I. McCallum. Collectively, they have produced the majority of the known information on George Ripley and the Ripley Scrolls. Rampling's work explores the corpus of George Ripley, his career as an alchemist, and the intellectual history surrounding alchemical thought.<sup>21</sup> She has published extensively in the last ten years, producing much of the research that undergirds my ideas in this thesis, including the dating of Ripley's various manuscripts, his theories on alchemy, and recently, the role of alchemy in Early Modern England.<sup>22</sup> Linden's work takes a particular interest in the iconographic patterns and symbolism of the Ripley Scrolls and the history of alchemical ideas.<sup>23</sup> R.I. McCallum produced the extremely useful catalog of the known Ripley Scrolls, their locations, shelf marks, and descriptions, which is widely used in studies of the Ripley Scrolls.<sup>24</sup> In his catalog, McCallum also describes possible functions for the scrolls and interpretations of their iconography. Some of his conclusions include that the scrolls were studied from top to bottom, some were hung for display, and that wealthy families probably owned them.<sup>25</sup> He does not, however, suggest links to other scroll documents, only saying that the format is enigmatic and difficult compared to the codex.<sup>26</sup> My thesis relies on these authors' expertise in

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<sup>21</sup> Rampling, "Establishing the Canon," November 2008; Rampling, "The Catalogue of the Ripley Corpus"; Rampling, Jennifer M., "A Secret Language: The Ripley Scrolls," 2014; Jennifer M. Rampling, "Depicting the Medieval Alchemical Cosmos: George Ripley's Wheel of Inferior Astronomy," *Early Science and Medicine* 18, no. 1-2 (January 1, 2013): 45-86.

<sup>22</sup> Rampling, "The Catalogue of the Ripley Corpus"; Rampling, "A Secret Language: The Ripley Scrolls."

<sup>23</sup> Linden, "Reading the Ripley Scrolls."

<sup>24</sup> R. I. McCallum, "Alchemical Scrolls Associated with George Ripley."

<sup>25</sup> McCallum, "The Ripley Scroll of the Royal College," 44-45

<sup>26</sup> *Ibid*, 40-41.

the fields of history and history of science in supporting my visual conclusions with more concrete documentary and historical evidence.

In addition to these specialists, this thesis also draws on other studies of alchemy, both general histories of the field as well as those pertaining to early modern European alchemy.<sup>27</sup> The eccentric nature of the Ripley Scroll's format is acknowledged in the studies of Anke Timmermann, Aaron Kitch, and Jonathan Hughes. These studies, in particular, encouraged my belief that the format merited a more in-depth study.<sup>28</sup> Timmermann, in her recent publication, directly addresses the format of the Ripley Scrolls and ties them to "records and official documents as well as vernacular literature, genealogies, liturgy, and drama."<sup>29</sup> She follows this up with a short explanation of the uses of poetry scrolls, implying a probability of lineage of the Scrolls to the poetic documents, though she does say the format could be linked to any of the listed document types. Her disciplinary inclination towards poetry connects the format to the theme of her book, which examines the corpus of alchemical poetry of which Ripley's work is a part.<sup>30</sup>

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<sup>27</sup> For general alchemy, see: Lawrence M. Principe, "The End of Alchemy? The Repudiation and Persistence of Chrysopoeia at the Academie Royale Des Sciences in the Eighteenth Century"; Matilde Battistini, *Astrology, Magic, and Alchemy in Art*, 1 edition (Los Angeles: J. Paul Getty Museum, 2007); Roberts, *The Mirror of Alchemy*, 1995; Lennep, *Alchimie*; Tara Nummedal, "Alchemy and Religion in Christian Europe," *Ambix* 60, no. 4 (November 2013): 311–22; Tara Nummedal, *Alchemy and Authority in the Holy Roman Empire* (Chicago: University Of Chicago Press, 2007); Pamela H. Smith, *The Body of the Artisan: Art and Experience in the Scientific Revolution*, 1 edition (Chicago: University of Chicago Press, 2004); Michela Pereira, "Alchemy and Hermeticism: An Introduction to This Issue," *Early Science and Medicine* 5, no. 2 (2000): 115–120; Michela Pereira, "Alchemy and the Use of Vernacular Languages in the Late Middle Ages," *Speculum* 74, no. 2 (April 1999): 336–56; Bruce T. Moran, *The Alchemical World of the German Court: Occult Philosophy and Chemical Medicine in the Circle of Moritz of Hessen, 1572-1632*, Sudhoffs Archiv. Beihefte.; Heft 29; Variation: Sudhoffs Archiv.; Beihefte ; Heft 29. (Stuttgart: F. Steiner Verlag, 1991); Stanton J. Linden, *Mystical Metal of Gold: Essays on Alchemy and Renaissance Culture*. (New York: AMS Press, 2007); Betty Jo Teeter Dobbs, *Alchemical Death and Resurrection*.

<sup>28</sup> Timmermann, *Verse and Transmutation*; Kitch, "The 'Ingendred' Stone"; Jonathan Hughes, "Politics and the Occult at the Court of Edward IV," 2005.

<sup>29</sup> Timmermann, "Verse and Transmutation," 127.

<sup>30</sup> *Ibid*, 127.

The most prevailing themes in the scrolls are those of generation, marriage, and religion, with generation arguably being the most dominant and repetitious. Human generation in the scroll's imagery is used as a visual metaphor to describe the chemical production of the stone. Kitch makes a full argument of this, providing a visual analysis of one particular Ripley Scroll, Huntington Library MS HM 30313, in attempt to explore how the Scrolls offer a visual representation of generation as a foundational principle of alchemy".<sup>31</sup> Kitch describes the scroll as "self-consciously archaic" suggesting that the format is more than coincidence. He notes that that it "draws on a range of contemporary sources, including emblem books, heraldic imagery, and illuminated alchemical manuscripts" before continuing to his main argument that the imagery is connected to the idea of generation and particularly sexual union and the making of "new matter."<sup>32</sup> This argument is relevant because Folio 3, the key document, alludes to the generation of the Tudor line.

Jonathan Hughes also explicitly mentions the format of the Ripley Scrolls, but like Kitch and Timmermann this is not his focus. Hughes specializes in the English court and its occult ties. In his work, he examines the scrolls in addition to other alchemical manuscripts to show prophetic connections between the imagery of alchemical documents and the history of the royal families of England. In one case, Hughes likens the tree of Hermes, a reoccurring alchemical motif in the Scrolls, to the genealogical tree of the House of York.<sup>33</sup> Though Hughes sees the English royal families as alchemical patrons, his interest in the Scrolls is like most work on the subject, rooted in an interpretation of the imagery.<sup>34</sup> However, taken together with the work of M.T. Clanchy, which notes the use of the scroll in England by the royal government until the 13<sup>th</sup>

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<sup>31</sup> Kitch, "The "Ingendred" Stone," 105-115.

<sup>32</sup> Ibid, 87, 100-16.

<sup>33</sup> Hughes, "Politics and the Occult," 113.

<sup>34</sup> Ibid, 97-128. Hughes makes the claim in this article and elsewhere that the Ripley Scrolls refer to prophecies involving Edward IV and Richard III of England, which would date them during George Ripley's lifetime. Based on the two inscriptions we have from the later sixteenth century and the timing of the popularization of Ripley's *Compound* that I have discussed, I find this argument unconvincing.

century, Hughes work does show connections between the English court, the English alchemist George Ripley, and the Ripley Scrolls.<sup>35</sup> Altogether, the literature tends toward the idea of English patronage proposed in this thesis and calls for more attention to the format of the Ripley Scrolls.

## THE ORDER OF CHAPTERS

In this thesis, I demonstrate that we can learn more about the proliferation of the Ripley Scrolls, their unusual scroll format, and the patrons who desired them by examining British Library Series. To accomplish this, the study will be broken into three chapters each concerning a different aspect of my research question: alchemical context, format, and patronage.

Chapter Two gives a basic overview of alchemy and further introduces the British Library Series, outlining how scholars think they were used and providing an explanation of the alchemical imagery found on the scrolls to build a foundation for the rest of the thesis. Alchemical texts came to Europe having been translated into Latin from Arabic, in the twelfth century, but alchemy existed in varying forms for hundreds of years before.<sup>36</sup> Alchemy peaked in popularity around the fifteenth and sixteenth centuries just before the rise of the Scientific Revolution; wherein alchemical ideas were widely dismissed.<sup>37</sup> In the prime of alchemy, however, alchemists could be found in most European countries, and many alchemical texts still survive in a variety of languages. Germany, in particular, produced and seems to have influenced

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<sup>35</sup> Michael T. Clanchy, *From Memory to Written Record: England 1066 - 1307*, 3 ed. (Chichester, West Sussex, UK ; Malden, MA: Wiley-Blackwell, 2012), 143–46.

<sup>36</sup> Lawrence M. Principe, *The Secrets of Alchemy* (University Of Chicago Press, 2015), 24; Roberts, *The Mirror of Alchemy*, 13–31. The alchemists themselves claimed a much older heritage for alchemy beginning with Adam, however there is no surviving evidence that supports this claim and more likely a way of legitimizing alchemy by linking it to biblical figures. The earliest evidence of alchemy are ancient papyri scroll found in ancient Greece but relating to ancient Egyptian practices of making fake jewels and metals

<sup>37</sup> Roberts, *The Mirror of Alchemy*, 92–93; Stephen Pumfrey and Frances Dawbarn, “Science and Patronage in England, 1570-1625: A Preliminary Study,” *History of Science* 42 (2004): 138; Lawrence M. Principe, “The End of Alchemy? The Repudiation and Persistence of Chrysopoeia at the Academie Royale Des Sciences in the Eighteenth Cenury,” 97.

the English alchemical trade with codices like the *Splendor Solis* (Harley MS 3469) (Fig. 3-4); made in 1582 and similar to the Ripley Scrolls, *Splendor Solis* utilizes a visual language of metaphor to describe the making of a Philosopher's Stone.<sup>38</sup> Germany's use of the codex at this time also provides a counterpoint to the scroll format of the Ripley Scrolls and a place to begin discussion of the differences between the format in England and on the continent.

Chapter Three, therefore, picks up where the first left off, honing in on the differences between English-made and commissioned manuscripts and those from continental Europe, paying attention to format, language, and style. Here, I address the format of the British Library Series and analyze the similarities and differences between them and English scroll precedents such as genealogical scrolls, illustrated chronicles, and prayer rolls, some of which were contemporary with the Ripley Scrolls. By comparing these other scroll documents to the Ripley Scrolls, I show the continuing artistic tradition of scroll format documents in England in the fifteenth and sixteenth centuries.

Chapter Four asserts that the popularity of alchemy in the mid- to late-sixteenth century and the artistic traditions of England together make it probable that the British Library Series was made while Elizabeth I (1533-1603) governed England. The chapter begins by returning to Folio 3 to compare the rose motif on the scroll with examples of the Tudor Rose. Next, the discussion moves to Elizabeth's encouragement of scientific patronage including the employment of alchemist John Dee, her use of scientific imagery in her portraiture, as well as her dynasty's interest in humanist learning and astronomy.<sup>39</sup> This chapter also tracks the progression of English domestic and foreign policies relating to both manuscript production and science throughout the Tudor dynasty. Foreign policy, as used in this chapter, refers to the idea of international influence and trade between England and the continent affecting the exchange of alchemists, art, and ideas.

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<sup>38</sup> "Digitised Manuscripts," accessed September 29, 2016, [http://www.bl.uk/manuscripts/FullDisplay.aspx?ref=Harley\\_MS\\_3469&index=6](http://www.bl.uk/manuscripts/FullDisplay.aspx?ref=Harley_MS_3469&index=6).

<sup>39</sup> Pumfrey and Dawbarn, "Science and Patronage in England, 1570-1625."

Domestic policy is used to reveal the attitude towards science and alchemy within English borders in order to get a sense of who may have patronized alchemical study and why. This chapter concludes by arguing that many aspects of Elizabeth's reign make it probable that some of the Ripley Scrolls, especially Folio 3, were made for her court.

Shelf Mark / Dating*	Institution and location	Type*
Bodley Roll 1 (mid-15th century)	Oxford, Bodleian Library,	Type A
MS 276 (16th century)	Cambridge, Fitzwilliam Museum	Type A
Ashmole Roll 54 (mid-16th century)	Oxford, Bodleian Library	Type A
MS HM 30313 (2nd half of the 16th century)	San Marino (CA), Huntington Library	Type A
Mellon MS 41 (?c. 1570; late 16th century)	New Haven (CT), Beinecke Rare Book and Manuscripts Library	Type A
MS 93 (late 16th century)	Princeton (NJ), Princeton University Library	Type A
Ashmole MS 52 (late 16th century)	Oxford, Bodleian Library	Type A
Add MS 32621 (16th century)	London, British Library	Type A
MS 692 (late 17th century)	London, Wellcome Institute	Type A *1588 inscription
MS 693 (c. 1600)	London, Wellcome Institute	Type A *1588 inscription
Ashmole Roll 40 (17th century)	Oxford, Bodleian Library	Type A
[s.n.] (c. 1600)	Edinburgh, Royal College of Physicians	Type A
Add MS 5025 (2) (late 16th-early 17th century)	London, British Library	Type A
Add MS 5025 (2) (late 16th-early 17th century)	London, British Library	Type A *1588 inscription
Sloane MS 2523B (16th century)	London, British Library	Type A
The Sotheby Scroll (olim Dyson Perrins), untraced (undated)	Sold December 2000 to a private buyer	Type A
Los Angeles (CA)	MS 95003 (undated)	Type A
Ashmole Roll 53	Oxford, Bodleian Library	Type B "Reclining Monks"
Add MS 5025 (1) (late 16th-early 17th century)	London, British Library	Type B
Sloane MS 2524A (olim MS 2632) (16th century)	London, British Library	Type B
Add MS 5025 (3) (late 16th-early 17th century)	London, British Library,	Type C, 'Rose or Rosicrucian Design'

Table I-Known Ripley Scrolls with dates and locations

This table has been compiled using data from R. I. McCallum and the British Library website. Jacques Van Lennep, a French historian in his 1984 book, *Alchimie*, posited alternate dating prior to McCallum's study "Alchemical Scrolls Associated with George Ripley" in *Mystical Metal of Gold*, 2007. Both McCallum and Van Lennep based their dating on the material evidence of the scrolls, such as wear and paleographical style. McCallum reminds us that hands could be faked. Therefore none of the Ripley Scrolls can be dated definitively. Even the three scrolls with inscriptions claiming a date of 1588 are subject to skepticism because one or more is likely a copy.

## CHAPTER II

### ALCHEMY AND ARTISTRY

The modern day notion of alchemy is of a backward and long forgotten attempt by foolish or greedy men to do what modern science has taught us is impossible: changing base metals, iron or copper, into gold. However, during the period covered by this thesis, the fifteenth through seventeenth centuries, alchemy experienced a surge in popularity and many practitioners and patrons believed it to be not only possible to change matter, but also that alchemy was a worthwhile, even spiritual pursuit. Since the manuscripts examined in this thesis are alchemical in nature and my argument is that English culture produced them, it is crucial to begin with discussion of what alchemy was, where it came from, and how the British Library Series relays alchemical concepts to the culture of which it was a part.

#### WHAT WAS ALCHEMY?

Alchemy was a precursor to the modern science of chemistry; the two share the goal of to changing substances through chemical processes into new states and materials.<sup>40</sup> To accomplish these changes, alchemists believed that they needed to create an object known as the Philosopher's Stone. This stone was a small amount of perfect matter famed for its ability to purify or perfect materials with which it came into contact; it was created through a series

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<sup>40</sup> Rampling, "Establishing the Canon: George Ripley and His Alchemical Sources," 189–208.



of specific chemical interactions, usually involving the elements mercury and sulfur.<sup>41</sup> According to the texts of alchemical authorities such as Zosimas of Panopolis (c. 300 A.D.), Albertus Magnus (c. 1200-1280), Thomas Aquinas (c. 1225), the Philosopher's Stone was able to change base metals into either gold or silver.<sup>42</sup> Later, George Ripley (d. 1490) would also make the claim that the Philosopher's Stone could be further refined in order to purify human bodies of disease and extend life.<sup>43</sup> In a time where the majority of people were born poor into the disproportionately large lower class, and the death rate was very high due to lack of healthcare, nutrition, and wars, the Stone was an incredibly tempting hope, not only for the alchemists but all of the pre-Modern world. It provided a potential way of producing wealth and curing disease.<sup>44</sup>

Though the Philosopher's Stone itself, as well as the effects the alchemists claimed it would have on nature, are now understood to be impossible, the results of their experimentations may have appeared to be a success based on visual evidence. In his study of the history of alchemy, Lawrence Principe duplicated some of the alchemical processes and documented that the substances and reactions resulted in state, color, and smell changes.<sup>45</sup> In one case he produced, gold-looking metal, and in another, a silvery growing fungus that appeared to be what the alchemists described as the Tree of Alchemy, a sign that the process of creating the Stone was working.<sup>46</sup> As these experimentations by Principe demonstrate, the alchemists were probably interpreting what they were doing as real changes, especially without the ability to analyze the

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<sup>41</sup> Roberts, *The Mirror of Alchemy*, 54–63; Aaron Kitch, "The 'Ingredred' Stone," *Huntington Library Quarterly* 78, no. 1 (2015): 87.

<sup>42</sup> Roberts, *The Mirror of Alchemy*, 22–23, 31–35.

<sup>43</sup> Rampling, "Establishing the Canon."

<sup>44</sup> Pamela H. Smith, "Alchemy as a Language of Mediation at the Habsburg Court," *Isis* 85, no. 1 (1994): 1–7; Robert Bucholz and Newton Key, *Early Modern England 1485-1714: A Narrative History*, 2 edition (Chichester, U.K. ; Malden, MA: Wiley-Blackwell, 2008); Christopher Dyer, *Standards of Living in the Later Middle Ages: Social Change in England C.1200-1520* (Cambridge University Press, 1989).

<sup>45</sup> Lawrence M. Principe, *The Secrets of Alchemy*, 158–71.

<sup>46</sup> *Ibid.*, 167–71.

material with modern instruments.<sup>47</sup> The visual confirmation of some of these experiments and even false accounts of success prompted successive generations of alchemists to seek after the Stone.<sup>48</sup>

Though similar to chemistry, alchemy differed in that it had a component of religiosity to it. The changing of matter was viewed as an act of purifying nature and achieving a state of perfection and an analog to the Christian life of purification through repentance and prayer.<sup>49</sup> Whereas modern science is disconnected from ideas of theology, the interwoven nature of religion and science, however odd to the modern reader, was quite common in the Middle Ages and Early Modern period.<sup>50</sup> Science and intellectual learning were generally seen as a natural consequence of man's intelligence and as useful for achieving closeness to the divine.<sup>51</sup> The same religious connections can be found in studies of philosophy, medicine, astronomy and various other related fields.<sup>52</sup>

At the same time, this blurriness between the secular and spiritual characteristics of pre-Enlightenment ideas sometimes led to the condemnation alchemy and other sciences by spiritual authorities. Alchemy and astronomy, in particular, ran a high risk of being seen as overly curious, contrary to biblical teachings, and even demonic.<sup>53</sup> Astronomy and the related astrology were then much more interwoven and sought to understand the meaning hidden in the vast movements of the heavens. Together astronomy and astrology were used to track time, predict the most

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<sup>47</sup> Smith, "Alchemy as a Language of Mediation at the Habsburg Court"; Principe, *The Secrets of Alchemy*; Roberts, *The Mirror of Alchemy*.

<sup>48</sup> Rampling, "A Secret Language: The Ripley Scrolls"; Roberts, *The Mirror of Alchemy*; Teeter Dobbs, *Alchemical Death and Resurrection*.

<sup>49</sup> Rampling, Jennifer M., "A Secret Language: The Ripley Scrolls"; Roberts, *The Mirror of Alchemy*; Teeter Dobbs, *Alchemical Death and Resurrection*.

<sup>50</sup> Paul H. Kocher, *Science and Religion in Elizabethan England*, First Edition (San Marino, CA: Huntington Library, 1953), 25–27.

<sup>51</sup> Ibid.

<sup>52</sup> Ibid., 29.

<sup>53</sup> Ibid., 65–69; Principe, *The Secrets of Alchemy*, 60–62.

productive dates for events such as medical procedures, and also to create horoscopes and prophecies.<sup>54</sup> Prophecy and horoscopes, while widely utilized as a way of understanding the future, were often also seen as dubious due to the frequency of inaccuracy and the underlying notion that too much curiosity led to evil. Alchemists claimed that biblical figures such as Moses and Adam were alchemists and also that they had the ability to purify nature, which was considered in its creation by God to be perfect.<sup>55</sup> These claims, as well as the use of astronomy and astrology in alchemical practice, often led to alchemy being viewed with similar skepticism. Whether in response to these risks or in line with the idea that science should serve God, most scientists in early modern Europe were also aligned with the Christian church. The majority of scientific treatises, including that of George Ripley professing the need for spiritual enlightenment of learned individuals.<sup>56</sup>

Though at a base level all alchemy centered on the idea of transformation, scholars in the history of science have observed that alchemical ideas and practices varied widely depending on the culture and time in which alchemical practices took place.<sup>57</sup> For example, the earliest alchemical-like practices were recorded on an ancient papyrus roll.<sup>58</sup> This roll relates how to create forgeries of gems and precious metals, in clear acknowledgment of a simple change of appearance.<sup>59</sup> On the other hand, Arabic and Latin codices from the Middle Ages describe the

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<sup>54</sup> Kocher, *Science and Religion in Elizabethan England*, 67.

<sup>55</sup> Ibid.; Roberts, *The Mirror of Alchemy*, 13–16.

<sup>56</sup> George Ripley, “The Compound of Alchymy,” trans. Adam McLean, *The Alchemy Web Site*, Original text c 1471, <http://www.levity.com/alchemy/ripgates.html>.

<sup>57</sup> Smith, “Alchemy as a Language of Mediation at the Habsburg Court,” 1994; Moran, *The Alchemical World of the German Court*, 1991; Bruce T. Moran, “German Prince-Practitioners: Aspects in the Development of Courtly Science, Technology, and Procedures in the Renaissance,” *Technology and Culture* 22, no. 2 (1981): 253–74; Stanton J. Linden, *Mystical Metal of Gold: Essays on Alchemy and Renaissance Culture*, 2007; Rampling, “Establishing the Canon,”; Rampling, “The Catalogue of the Ripley Corpus”; Principe, *The Secrets of Alchemy*; Roberts, *The Mirror of Alchemy*; Betty Jo Teeter Dobbs, *Alchemical Death and Resurrection*.

<sup>58</sup> Principe, *The Secrets of Alchemy*, 10.

<sup>59</sup> Ibid., 10–11.

refining of materials with clear belief in the total transformation of the material.<sup>60</sup> Later, the work of pseudo-Raymond Lull and George Ripley explains the creation of a medicinal version of the Philosopher's Stone with the ability to purify the ailments of the human body.<sup>61</sup>

An additional facet of alchemy and alchemical practice is the importance of secrecy.<sup>62</sup> The study of this field required knowledge in a variety of other sciences such as natural science, philosophy, theology, as well what were considered crafts like metallurgy.<sup>63</sup> The range of intellectual knowledge needed by would-be practitioners made alchemy difficult to practice. The requirement of an education was exclusionary in itself. The spiritual component of early modern alchemy, which required the "true" alchemist to be spiritually enlightened, further emphasized the practice as something in which few were able to participate. Finally, because society frowned upon greed and the alchemists were searching for a way to ultimately create infinite wealth, the few with the knowledge and spiritual understanding to practice alchemy viewed it as their duty to protect the secrets of their practice from those with less-than-noble intentions.<sup>64</sup>

Together these aspects of alchemy created a field of science characterized by an attitude of secrecy and exclusive knowledge. This led to alchemical texts being complex, highly metaphorical, and obscure. Because longer alchemical treatises are the precursors to the illustrated alchemical manuscripts like the British Library Series, the pictorial schemes of the scrolls became complex, metaphorical, and obscure as well, so difficult for the alchemical outsider to interpret that they have been called a "secret language".<sup>65</sup>

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<sup>60</sup> Ibid., 81.

<sup>61</sup> Rampling, "Establishing the Canon," 191–93; Principe, *The Secrets of Alchemy*, 69–73.

<sup>62</sup> Roberts, *The Mirror of Alchemy*, 1995, 13–30; Principe, *The Secrets of Alchemy*, 62.

<sup>63</sup> Principe, *The Secrets of Alchemy* Gareth Roberts; Roberts, *The Mirror of Alchemy*, 31–42; Rampling, "A Secret Language: The Ripley Scrolls."

<sup>64</sup> Principe, *The Secrets of Alchemy*, 62–65.

<sup>65</sup> Rampling, "A Secret Language: The Ripley Scrolls."

## THE ORIGINS OF ALCHEMY

Alchemy came to Europe by way of textual transmission, or the copying of texts, in the twelfth century.<sup>66</sup> There is evidence that a form of alchemical practice existed in ancient Egypt, but as mentioned earlier, it was different in its essence and expectations from the later version practiced in the Early Modern period.<sup>67</sup> A better record of alchemy begins to appear in ancient Greece. At this time, the first alchemical authority figure, Hermes Trismegistus, crops up. Hermes is mainly known through his attributions in later alchemical theory and history and is reported to be many things: a conflation of an Egyptian god, the Greek deity Mercury, and sometimes simply a great pagan philosopher and prophet. With all of these ideas about Hermes and no actual proof of his existence, Hermes may simply be the alchemical origin story: a myth. Real or not, Hermes is credited with the foundation of alchemy as well as Hermeticism, a spiritual belief in the attaining of knowledge for divine purposes.

In addition to Hermes, the Greek philosophers, Galen and Aristotle would also figure largely in later alchemical theory; Galen for his humoral theory which described a need for balance in natural bodies, and Aristotle for his theory of nature comprised of the four elements. Zosimas of Panopolis (c 300 A.D.), who is the earliest documented alchemical author, also appears during this period proclaiming the ability to transmute metals.<sup>68</sup> Zosimas was deeply influenced by Hermeticism and wrote about the early history of alchemy, such as its foundation by Hermes, contributing or creating to the mythos of the earlier figure.<sup>69</sup> In addition to Hermes, Zosimas also credited the invention of the many alchemical apparatus such as alembics and stills

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<sup>66</sup> Principe, *The Secrets of Alchemy*, 51; Roberts, *The Mirror of Alchemy*, 31.

<sup>67</sup> Principe, *The Secrets of Alchemy*.

<sup>68</sup> *Ibid.*, 13–26; Roberts, *The Mirror of Alchemy*, 17–23.

<sup>69</sup> Principe, *The Secrets of Alchemy*, 15–17, 31.

to a woman called Mary the Jewess (c. 1<sup>st</sup> Century). Like Hermes, Mary the Jewess is also only known through Zosimas' accounts and others that are probably based on them.<sup>70</sup>

As with the transmission of many scientific and philosophical ideas, Greek texts were translated into Arabic, and many of the theories and practices were advanced upon in the Middle East, this applies to alchemy as well.<sup>71</sup> In the early Middle Ages, a Persian alchemist named Jabir ibn Hayyan (d. 815), called Geber in Latin texts, devised the most common form of alchemical practice called the Sulfur-Mercury method.<sup>72</sup> Geber thought, based on the theories of the Aristotle and Galen, that the elements of mercury and sulfur represented the purest elements available in nature.<sup>73</sup> Mercury as silvery liquid represented the cold and wet humors, usually associated with female nature. Sulfur, found near active volcanic sites, represented the hot and dry humors, and male nature. Together the two, in Geber's theory, could be brought together and through a series of steps including distillation and boiling, create unity and balance of the four humors and elements becoming perfect. This perfect material could then be used to perfect other materials. So while Hermes, is credited with the creation of alchemy, he primarily influenced the theoretical side positing that nature could be perfected and man should strive towards that knowledge. It was Geber who devised practical side of actually changing the material into the Philosopher's Stone.

From the Middle East, Iberia, Spain, and other predominantly Islamic countries, Arabic texts were translated into Latin and disseminated across Europe in the twelfth century.<sup>74</sup> The main alchemical figures from the Middle Ages include Arnald of Villanova (1240-1311), Raymond Llull (1235-1316), Thomas Aquinas (1225-1274), and the natural scientist Albertus Magnus (1200-1280). All of these figures were from continental European that practiced in other scientific

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<sup>70</sup> Ibid., 15.

<sup>71</sup> Ibid., 28–31.

<sup>72</sup> Ibid., 33–39.

<sup>73</sup> Ibid., 33–45.

<sup>74</sup> Ibid., 51.

fields but also took an interest in and wrote about alchemy.<sup>75</sup> All but Raymond Lull were also associated with the Christianity. Their practice met with opposition from the Catholic Church in Rome, then a great power, as well as with many governments who were concerned with the production of fraudulent metals.<sup>76</sup> Despite these challenges, alchemy did not disappear but continued to be practiced and written about. Some alchemists, such as Roger Bacon, also wrote in defense of alchemical practice and the benefits of scientific experimentation, eventually gaining more leniencies from with powerful friends like Pope Clement IV, King Henry IV, and Edward IV of England.<sup>77</sup>

This loosening of the strictures on alchemical practice in the thirteenth and fourteenth century allowed for the emergence of figures like George Ripley (d. 1490) in England. Ripley studied abroad in Italy as a young man, but eventually returned to England, becoming a canon in Bridlington in Yorkshire.<sup>78</sup> In addition to the *Compound of Alchemy*, which became his most famous work, Ripley wrote other alchemical texts such as the *Medulla Alchimiae*, *Bosome Book*, and *Concordantia Guidonis et Raimondi*.<sup>79</sup> Through the circulation of his treatises, first in copied manuscripts and then in print by the later sixteenth century, Ripley became one of the most famous English alchemists and was known as an alchemical authority on the continent during the sixteenth-century as well. Ripley's posthumous popularity is also traceable through the increasing number of false attributions of later alchemical texts to him.<sup>80</sup>

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<sup>75</sup> Roberts, *The Mirror of Alchemy*, 31–41.

<sup>76</sup> Principe, *The Secrets of Alchemy*, 58–62. Principe links the opposition to alchemy with increasing levels of secrecy as well as to the Christianization of alchemical themes and images.

<sup>77</sup> Principe, *The Secrets of Alchemy*, 61–62.

<sup>78</sup> Rampling, "The Catalogue of the Ripley Corpus," 126.

<sup>79</sup> *Ibid.*, 127.

<sup>80</sup> *Ibid.*, 126–27.

The practice of false attribution was very widespread even before Ripley's time; a good example of it is the large corpus of pseudo-Llullian alchemy studied by Michaela Pereira.<sup>81</sup> These false attributions were a way of establishing authority for the lesser-known alchemists. By name-dropping the well-known alchemists like Llull and Ripley their writings received credibility and readership that would have likely taken a long time to establish otherwise.<sup>82</sup> While benefiting the actual author, this practice also served to celebrate and increase the fame of the alchemist referenced and was in many ways recognition of alchemical mastery by later generations.

Of George Ripley, much of what is known of his life is derived from later alchemists writing of him and his own writing. The most extensive research about him specifically that I have found is from Rampling, though he is discussed in larger studies of the history of alchemy as well.<sup>83</sup> Ripley was influenced by the earlier alchemical figures, especially the pseudo-Raymond Llull, who he drew upon in his work, calling him "Raymond" and adopting the idea that a Philosopher's Stone could be refined to a state where it also purified the human body. In a recent study by Jennifer Rampling, it has also been found that Ripley also relied on heavily on the alchemist Guido de Montanor, who is little known but thought to have lived just before or during Ripley's lifetime.<sup>84</sup> A treatise attributed to de Montanor called *Scala Philosophorum*, the Ladder of the Philosophers, is thought to be the basis for Ripley's best-known treatise, *The Compound of Alchemy*, alternately called *the Twelve Gates leading to the Discovery of the Philosopher's Stone*. Ripley references de Montanor in the *Compound* and the alchemical theory therein is similarly based on the idea of twelve distinct steps as in the *Scala* of de Montanor: calcination, solution,

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<sup>81</sup> Michela Pereira, "Catalogue of the Alchemical Works Attributed to Raimond Lull," *Raimond Lull*, 1989, [http://www.ramonllull.net/sw\\_studies/l\\_br/s\\_pseudo\\_0.htm](http://www.ramonllull.net/sw_studies/l_br/s_pseudo_0.htm).

<sup>82</sup> Principe, *The Secrets of Alchemy*, 2015, 54–63; Michela Pereira, "Catalogue of the Alchemical Works Attributed to Raimond Lull."

<sup>83</sup> Rampling, "Establishing the Canon"; Rampling, "The Catalogue of the Ripley Corpus"; Roberts, *The Mirror of Alchemy*; Principe, *The Secrets of Alchemy*; R. I. McCallum, "Alchemical Scrolls Associated with George Ripley."

<sup>84</sup> Rampling, "Establishing the Canon," November 2008, 193–95.



separation, conjunction, putrefaction, congelation, cibation, sublimation, fermentation, exaltation, multiplication, and projection.<sup>85</sup>

#### FROM TEXT TO IMAGE: VISUAL LANGUAGE OF ALCHEMY

The British Library Series draws its imagery from the text of Ripley's *Compound of Alchemy*. The metaphors and *decknamen*, common nicknames or cover names for alchemical ingredients (e.g. red man for sulfur, green lion for fermentation agents) used in the treatise are the general basis for the images found in the series.<sup>86</sup> The interpretation of the text is generally very literal and retains the coded nature of the text; for example, the green lion in alchemy refers to a particular chemical agent but appears in the British Library Series as a chartreuse lion sitting on its haunches (Fig. 9).<sup>87</sup> However, other categories of imagery coexist with these interpretations of the text including practical or scientific illustrations as well as depictions that reference Christian narratives.

Before the fifteenth century, alchemical manuscripts were just texts, with very few illustrations.<sup>88</sup> Nothing like the British Library Series (Fig. 5-8) or the German *Splendor Solis* (Fig. 3-4) had yet been made. The creation of more visual forms of alchemical communication came with the increasing cultural acceptance and popularity of alchemy in the mid-fifteenth to early-seventeenth centuries. This popularization led more people, and especially people of wealth, to invest in the translation of alchemical ideas into objects of display. Earlier alchemical imagery was more practical if it was present: illustrations such as the alchemical furnace (Fig. 1) or diagrams such as that from *My Lady Alchemy* (Fig. 2). The furnace is an illustration that indicates necessary equipment or a specific part of the alchemical process; either of these could be the case

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<sup>85</sup> *Ibid.*, 127–28.

<sup>86</sup> Rampling, "A Secret Language: The Ripley Scrolls," 2014, 40.

<sup>87</sup> Principe, *The Secrets of Alchemy*, 18. Here, Principe gives a brief and useful history of the use of codename in alchemical texts beginning in the early period of alchemy.

<sup>88</sup> Barbara Obrist, "Visualization in Medieval Alchemy," 131.

with the illustration of the furnace. Heating was an essential part of most alchemy, so the illustration of the furnace may indicate its necessity to the process or act as a visual cue prompting the heating phase. The diagram explains elemental theory by presenting each element as a separate piece of nature as a whole.<sup>89</sup>

Practical imagery such as illustrations of equipment and diagrams continued in later manuscripts, even in the deluxe manuscripts like the British Library Series. In Folios 1 and 4 (Fig. 22-23) the wizard's flask contains a series of small scenes that make up a diagram showing the steps in the alchemical process. In Folio 3 there are numerous depictions of equipment including a furnace, interconnected alembics, and pelican flasks (Fig. 13-14). These objects and diagrams demonstrate the continued use of scientific imagery in the British Library Series and represent a focus on process and the laboratory setting. Even though this type of image was retained, it became more detailed in the British Library Series to fit with the increasingly luxurious artistic style, clearly meant to be more than practical.

The main type of imagery in these scrolls is symbolic and draws on the tradition of emblems. Emblems are visual motifs with specific iconographic characteristics usually accompanied by or corresponding to stories or phrases.<sup>90</sup> Most emblems were widely recognizable symbols and largely ubiquitous across European society. England became familiar with the continental European tradition of emblems in the late-fifteenth century and by the mid-to-late-sixteenth century they were importing and producing printed emblem books.<sup>91</sup> Recognition and interpretation of emblems was often a marker of artistic and intellectual savvy, and this definitely extends to the emblems in the British Library Series.<sup>92</sup> The emblems used here require

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<sup>89</sup> Barbara Obrist, "Visualization in Medieval Alchemy," 131–70.

<sup>90</sup> Peter M. Daley, ed., *English Emblem and the Continental Tradition* (New York: Ams Pr Inc, 1988), 2.

<sup>91</sup> Peter M. Daley and Alan R. Young, eds., "The English Tournament Imprese," in *English Emblem and the Continental Tradition* (New York: Ams Pr Inc, 1988), 61–64.

<sup>92</sup> Daley, *English Emblem and the Continental Tradition*, 5-6.

familiarity or explanation for their full meaning to be understood and often carry multiple meanings simultaneously within the alchemical context.<sup>93</sup> Further, while individuals might understand pieces of the scrolls' imagery the overall scheme juxtaposes emblems into a complex sequence of visual signs that is likely to confuse the viewer.

For example, even to modern eyes, Adam and Eve and the apple from the Tree of Knowledge located near the top of all the British Library Series scrolls, but especially clear in Folios 3 and 4 (Fig. 15-16), is a recognizable emblem of sexuality and sinfulness. While the biblical and sexual connotations of this image would not have been lost on contemporary viewers, this emblem for alchemy actually refers to “the chemical wedding” or conjunction of mercury and sulfur, here represented by a man and woman, a meaning which may not be as apparent to the lay-viewer.

This scene corresponds to the fourth step in Ripley's alchemical process, called Conjunction. Two passages from this step will make clear how the text was interpreted into imagery, carrying over and inspiring the use of the biblical iconography. In the sixth stanza we read:

“Male and female, Mercury and Sulphur vive,  
Matter and form, thin and thick to thrive,  
This lesson will help thee without any doubt,  
And our Conjunction truly to bring about”

From this passage, we understand the need for the unity of the male and female natures. The Sulfur-Mercury theory of alchemy states that together, sulfur, the hot and dry male nature and mercury, the cold and wet female, attain balance. Therefore using a man and woman to represent

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<sup>93</sup> Principe, *The Secrets of Alchemy*, 75.

these concepts makes sense. Their casting as Adam and Eve and the use of the fountain in this emblem takes this male/female analogy a step further and is probably derived from this passage, also from Conjunction, which mentions original sin and baptism:

"For until the time the soul be separated,  
And cleansed from its original sin with the water,  
And thoroughly spiritualised"

The moon and sun, like the man and woman, refer to elemental natures and balance and are mentioned several times throughout the *Compound*. As in the selection below, it is no surprise that images of both are found in the British Library Series scrolls, often near the "chemical wedding" scene (Fig. 17-19). This text also notes that the alchemist should "thank God" showing the pious tone of Ripley:

"This under the moisture of the Moon,  
And under the temperate heat of the Sun,  
Your Elements shall be incinerated soon,  
And then you have the mastery won.  
Thank God your work was then so begun"

Other imagery such as alchemical tower (Fig. 12) or the green lion (Fig. 9) were not standard emblems. These motifs are directly instead taken directly from the *Compound* in two passages from the first step, Calcination, and the sixth step, Congelation:

"You are now within the first gate,  
Of the Castle where the Philosophers dwell.  
Proceed wisely that you may win"

“The blood of our green Lion and not of vitriol,  
Dame Venus can the truth of this tell to you”

Though reading these references reveals the inspiration for the later images in the scrolls, it brings little knowledge about the actual meaning of these alchemical illustrations. This is likely to preserve the coded nature of the text.

This complexity in the alchemical imagery is the reason that historians of science have been preoccupied with riddling out the true meanings of alchemical imagery, searching through vast amounts of text for hints at the real process and materials behind the coded references. From these authors, we now know that the green lion refers to a ferment or catalyst for changing the sulfur-mercury mixture.<sup>94</sup> In this passage, there is a reference to vitriol, another ferment, apparently disliked by Ripley. Knowing that vitriol was ferment and that there were alternatives to it may have been enabled the identification of the green lion referenced here. However, someone unfamiliar with alchemical ingredients would not automatically come to this conclusion or know the alternative to vitriol that Ripley demands. The castle refers to the completion of the process of making the Philosopher’s Stone. If we look closely at the castle in Folio 3 (Fig. 12) this begins to make sense. The castle we see is tiered and has twelve openings or gates, indicating the twelve steps required by the text of the *Compound of Alchemy*, alternatively called the *Twelve Gates Leading to the Discovery of the Philosopher’s Stone*. While in the British Library Series they are modified to carry alchemical meanings, the castle and lion were highly recognizable motifs on their own: The lion traditionally referred to bravery, strength, and royalty and the castle to luxury, hidden or stored treasure, and chivalrous activity.<sup>95</sup>

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<sup>94</sup> Rampling, “Establishing the Canon,” November 2008.

<sup>95</sup> Charles Boutell and R. B. Utting, *The Handbook to English Heraldry*, ed. Arthur Charles Fox-Davies, 2007, 84–85, 108; Battistini, *Astrology, Magic, and Alchemy in Art*, 48, 341.

This small selection of images and text by no means covers the wealth of imagery to be found in the British Library Series, but by pairing these passages we can begin to understand how the original alchemical text was sifted through, selected, and translated into emblematic imagery that was simultaneously enigmatic and alluring to the sixteenth-century viewer.<sup>96</sup> On some level parts of these imagery found in the British Library Scrolls would have been accessible to a broader audience of non-specialists, but the level of meaning that could be gained from these scrolls depended on an external knowledge of the *Compound of Alchemy* and other alchemical texts. While the creation of visual modes of alchemical knowledge, obviously created with care, shows evidence that alchemy and alchemists were starting to slacken in their attitude of utter secrecy, the use of emblems would have still facilitated a decent degree of the secrecy associated with alchemy. The commissioners of the scrolls could designate specific emblems to the artist or workshop producing the scroll without giving away much of the actual alchemical process.

With an understanding of alchemy and how its concepts were visually translated from dense books full of confusing and elaborate written instruction into the highly ornamental and finely illustrated and colorful British Library Series, we can now move on to further investigation of the series through comparison with other manuscripts circulating in Europe at this time. As art objects that functioned as a part of the material culture of an increasingly popular alchemy, it is important to understand the influence of artistic traditions in the production of this series. Chapter three considers the British Library Series connection to both styles imported from the Continent as well as the English tradition of using the scroll as a format.

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<sup>96</sup> For more information on the imagery of the Ripley Scrolls see: Rampling, "A Secret Language: The Ripley Scrolls." The article is very short, but full of information about the underlying ingredients and processes shrouded in the imagery of the Ripley Scrolls. She also gives special attention to the British Library Series in particular and poses some similar ideas to those in this thesis such as courtly patronage.

## CHAPTER III

### FORMAT AND INFLUENCE

This chapter argues that the British Library Series reflects influence from a combination of sources including the English tradition of scroll use, the secretive character of alchemical practice, as well as the broader manuscript culture of Europe. While the format of the British Library Series is linked to a distinct history of scroll production and use in England, the imagery used in the four British Library Series scrolls demonstrates that they were part of a larger culture of manuscript exchange between England and the continent during the fifteenth-century.<sup>97</sup> We will begin by looking at that feature that makes the British Library Series unique amongst contemporary manuscripts: their scroll format.

#### A QUESTION OF FORMAT

What is a scroll? To understand the significance of this feature, we must know what it is and how it differs from other forms that the British Library Series could have taken. A scroll is a single long folio or page. They can be made out of one large piece of material or by gluing or sewing shorter sheets of paper or parchment together, end to end.<sup>98</sup> When referenced in popular culture

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<sup>97</sup> Lotte Hellinga and Trapp, J.B., *The Cambridge History of the Book in Britain Vol. 3. 1400-1557*. (Cambridge: Cambridge Univ. Press, 1999), 51–54.

<sup>98</sup> Richard Gameson, “From Vindolanda to Domesday: The Book in Britain from the Romans to the Normans,” in *The Cambridge History of the Book in Britain*, ed. Richard Gameson (Cambridge, UK ; New York: Cambridge University Press, 2012), 2; Clanchy, *From Memory to Written Record*, 137–43.

such as movies or books they are usually described as very long, but they can be made to any length. The document is then rolled into a tube shape for portability and storage. Sometimes the top and/or bottom of a scroll are attached to a piece of wood or other material that acts as a weight.<sup>99</sup> This piece keeps the scroll from rolling when spread out and demarcates the end of a scroll.

As the scroll is essentially one page, all of the information contained in it is accessible at the same time if the scroll is fully opened. It may also be unrolled in sections to display only part of the information at a time. Scrolls open vertically and are typically read from top to bottom.<sup>100</sup> However, Betty Jo Teeter Dobbs, in her analysis of alchemical scrolls, claims the Ripley Scrolls were intended to be read the opposite way, from bottom to top.<sup>101</sup> Though the terms were used interchangeably in fifteenth-century England, the majority of scholars differentiate the term *roll* from the term scroll.<sup>102</sup> A roll refers to a long folio following the same rules as a scroll, except that it is oriented horizontally instead of vertically.<sup>103</sup>

These single page formats had existed in the ancient world and were once the dominant form of written communication.<sup>104</sup> The discovery of Ancient Egyptian, Greek, and Roman

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<sup>99</sup> Victor M. Schmidt, "Some Notes on Scrolls in the Middle Ages," *Quaerendo* 41, no. 3 (January 1, 2011): 373–83.

<sup>100</sup> *Ibid.*, 377.

<sup>101</sup> Teeter Dobbs, *Alchemical Death and Resurrection*. Dobbs claims that since matter is being "exalted through the alchemical process, and the direction of exaltation is understood to be heavenward, up, that the Ripley Scrolls should be read that way as well. I do not think that this is the case. When comparing the imagery of the British Library Series to the text of Ripley's compound, the process appears to be laid out from top to bottom; the marriage scene, which represents Conjunction, the fourth step, comes higher up on the page, than the Green Lion, which is a part of the sixth step, Congelation.

<sup>102</sup> Schmidt, "Some Notes on Scrolls in the Middle Ages"; E. P. Goldschmidt, "An Obituary Rotulus from York, 1405," *Studies in Art and Literature for Belle Da Costa Greene*, 1954. However, not all scholars refer to the scroll and roll as distinct types. De Laborderie, in his study of Medieval Genealogies which open vertically, refers to his documents as rolls, but I think this may be to reflect the of the terminology used by the original English owners who used both words.

<sup>103</sup> Schmidt, "Some Notes on Scrolls in the Middle Ages"; Clanchy, *From Memory to Written Record*, 140.

<sup>104</sup> Schmidt, "Some Notes on Scrolls in the Middle Ages"; Clanchy, *From Memory to Written Record*, 140. The roll is also actually the older form of the document. The scroll was mentioned first here because it is



documents has shown that they were often made in roll format.<sup>105</sup> When Roman culture came to England, in the first century AD, it brought with it the roll, or *rotulus* in Latin, made from papyrus sheets.<sup>106</sup> Papyrus does not respond well to the English climate, and consequently, it did not take long for the standard support to switch over to parchment because of the abundance of sheep and goat farming on the island.<sup>107</sup> The downside to the roll and scroll is that they are both somewhat unwieldy for holding large amounts of information; for a treatise of any length, twenty or more pages, multiple scrolls would be used.<sup>108</sup>

The codex, or book, with which we are all familiar, came later (around the first century), and presents its contents differently.<sup>109</sup> Sections of information are laid out on rectangular pages of a certain size, then grouped into bifolios, and bound between some material, usually leather and/or wood in the period discussed here. This organization allows the reader to seek out information more quickly and efficiently. The protective outside covering, while making the book heavier than the scroll, also makes it more durable and easier to store.<sup>110</sup> While both formats were seen to have merits in certain situations, the codex began to surpass the scroll in popularity

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the format of the British Library Series and takes priority in this study. The transition from writing horizontally to vertically, thus changing the roll to a scroll, occurred between the fourth and sixth centuries, but it by no means eliminated either format. The English manuscripts examined later in this chapter consists of both rolls and scrolls.

<sup>105</sup> Gameson, "From Vindolanda to Domesday: The Book in Britain from the Romans to the Normans," 2; Schmidt, "Some Notes on Scrolls in the Middle Ages," 377; Principe, *The Secrets of Alchemy*, 2015, 10.

<sup>106</sup> Gameson, "From Vindolanda to Domesday: The Book in Britain from the Romans to the Normans," 1–2.

<sup>107</sup> Clanchy, *From Memory to Written Record*, 140.

<sup>108</sup> Richard Gameson, ed., *The Cambridge History of the Book in Britain: Volume 1, c.400-1100* (Cambridge University Press, 2011), 2–3.

<sup>109</sup> Nigel J. Morgan and Rodney M. Thomson, eds., *The Cambridge History of the Book in Britain: Volume 2, 1100-1400* (Cambridge, UK ; New York: Cambridge University Press, 2014).

<sup>110</sup> Gameson, *The Cambridge History of the Book in Britain*, 13–60.

by the fourth century and by the sixth had eclipsed the format altogether as a way of communicating long texts.<sup>111</sup>

The European continent specifically began utilizing the codex in the third and fourth centuries as the principal documentation type for things like taxes and census lists.<sup>112</sup> Codices were also used to hold non-governmental information. Households often kept their records in codices; Religious texts like the Bible, Gospels, and later Books of Hours, were made as codices; Latin versions of Greek and Arabic scientific theories about natural philosophy, medicine, astrology, and even alchemy, as we saw in chapter two, also were well suited to this format because of their length.<sup>113</sup>

In the fifteenth century, around the time of the life of George Ripley, the codex made another leap; the advent of the printing press dramatically decreased the price of production, compared to the handwritten and illustrated manuscript.<sup>114</sup> This made information more available to a wider variety of social classes and also spurred the proliferation of etchings and other printed images as an early form of mass media.<sup>115</sup> Printing had a large effect on alchemical treatises, particularly in Germany, making them more widely available and cheaper. Additionally, these printed alchemical treatises allowed for the inclusion of more illustrations because the reproducibility of the woodcut images; this can be seen in the printed frontispiece of the 1550 edition of *De Alchemia Opuscula complura veterum philosophorum* published in Nuremberg (Fig. 20). Here various parts of alchemical treatises from authors like Lull and Geber have been

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<sup>111</sup> Gameson, "From Vindolanda to Domesday: The Book in Britain from the Romans to the Normans," 2–4. However, shorter documents like letters, charters, papal bulls, wills, deeds continued to be made as scrolls.

<sup>112</sup> Clanchy, *From Memory to Written Record*, 137.

<sup>113</sup> The scroll, while less and less popular, continued to be used for letters, charters, and other documents that tended to be business or personal in content and contained smaller amounts of information than a codex, were often scroll format but are less relevant to this study,

<sup>114</sup> Lotte Hellinga, "Printing," in *The Cambridge History of the Book in Britain*, ed. Lotte Hellinga and J. B. Trapp (Cambridge: Cambridge University Press, 1999), 65–108.

<sup>115</sup> *Ibid.*

combined into a single volume.<sup>116</sup> The imagery is no longer drawn by hand, but depicted with a woodcut, printed alongside the type. However, this woodcut has been hand-colored after printing, giving it some of the individuality found in older manuscript illustrations. Printed alchemical books, like this one, maintained the desirable artistic quality of the manuscript but made alchemical information much more affordable. These qualities facilitated a familiarity with alchemical concepts by a greater spectrum of people and induced popularity for alchemical practice in the sixteenth century.<sup>117</sup>

The triumph of the codex and printed book provides context for the why the scroll format of the Ripley Scrolls in general, and the British Library Series in particular, is often questioned.<sup>118</sup> It seems odd that there would be a continuing desire for fine, handmade alchemical scrolls in the sixteenth and early seventeenth centuries, especially knowing that around this same time printed alchemical books were being made. How do we come to terms with these documents and their format, which has repeatedly piqued the curiosity of scholars? There are many possibilities, but I argue that a combination of influence from the existing English artistic traditions, the broader manuscript culture of Europe, and the secretive and archaic attitudes of the alchemists, converged to make the scroll seem the most appropriate to carry the alchemical ideas of George Ripley.

#### LOOKING IN: THE USE OF SCROLLS IN ENGLAND

Nowhere in Europe is the continuing usefulness of the scroll shown more than in medieval and early modern England. Here, as M.T. Clanchy tells us, with the transition from oral to written records, the scroll format held special prominence in the English court and was used for a variety

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<sup>116</sup> *De Alchimia Opvscvla Complvra Vetervm Philosophorum ...* (Ex officina Cyriaci Iacobi, 1550).

<sup>117</sup> Principe, *The Secrets of Alchemy*, 107–11.

<sup>118</sup> R. I. McCallum, “Alchemical Scrolls Associated with George Ripley”; Timmermann, *Verse and Transmutation*; Jonathan Hughes, “Politics and the Occult at the Court of Edward IV”; Rampling, “A Secret Language: The Ripley Scrolls.”

of purposes.<sup>119</sup> Some of these documents were quite mundane: census lists, receipts, or deeds, sharing only format with the lavish British Library Series.<sup>120</sup> However, the English also made very elaborate rolls that are as striking as the British Library Series, with intricate visual schemes and narratives, both before and after the codex became prominent for official documentation in England in the late thirteenth century.<sup>121</sup>

The scroll format occurs in these later medieval English manuscripts for several reasons: documents whose length was not predetermined were made as scrolls to facilitate additional space for text and images; those designed to be easily portable and lightweight were made as scrolls, to eliminate the heavy bindings of a book; process-oriented documents, whose text or content suggested an unbroken format, were made as scrolls; and intentionally archaicizing documents, intended to reference past beliefs, practices, or traditions, were also made as scrolls because the format was ancient.<sup>122</sup> In each of these cases, the format was chosen because it was thought to suit them better than the codex; content was a key determinant of form.<sup>123</sup>

As there were only a few reasons that producing a scroll was viewed as appropriate, scroll format documents tend to share characteristics. British Library Series, for example, when compared to other English scroll manuscripts reveals particular artistic lineage through the use of similar organizing principles as well as an emphasis on demonstrating cohesion through the use of scroll format. One of the oldest surviving illustrated English scrolls is the Life of Saint Guthlac, Harley Roll Y 6 (Fig. 26-27). It depicts events in the life of the old English saint. Dating from the late twelfth to early thirteenth century, the Life of Saint Guthlac was likely made as a roll because it depicts a continuous line of events. Each significant event in Guthlac life is an

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<sup>119</sup> Clanchy, *From Memory to Written Record*, 138–42.

<sup>120</sup> *Ibid.*, 137–40.

<sup>121</sup> *Ibid.*, 143.

<sup>122</sup> “A Brief Introduction to Scrolls · Medieval Scrolls at Harvard · Neatline - Hosted by Harvard CGA,” accessed November 13, 2016, <http://omeka.cga.harvard.edu/exhibits/show/medscrolls/intro>.

<sup>123</sup> *Ibid.*

illustrated scene in a series of large roundels which progress left to right across the long folio. The scroll is artistically stylized, the figures of Saint Guthlac himself and others flattened and defined mostly by the black ink outlines of their bodies (Fig. 26-27). However, the scenes are elaborate with multiple figures and architectural features that appear as cutaways or in slightly distorted perspective. This roll is an indicator that the English were creating scroll manuscripts that conveyed narrative through visual imagery at least two hundred years before the creation of the British Library Series, providing models of organization as well for the later scrolls. The small roundel scenes within the flask of Hermes found atop the Folios 2 and 4 of the British Library Series (Fig. 22-23) give evidence that earlier models such as the life of Saint Guthlac were being referenced in the creation of the British Library Series. As in the Life of Saint Guthlac, the steps of the alchemical process within the flask are illustrated as singular events, each inside a roundel, and arranged in a particular order. Both manuscripts utilize the roundel scenes to communicate the entirety of a process by positioning the roundel scenes in a sequence, representing part of a whole: for the life of the saint it is the linear progression of Guthlac towards holiness; for the British Library series the cyclical production of creating and refining the Philosopher's Stone.

A century after the Life of Saint Guthlac roll, in the late thirteenth and early fourteenth centuries, forty illustrated genealogies of the line of English kings appear as scrolls.<sup>124</sup> These scrolls depict the family tree of the English royalty and measure, on average, around twenty feet in length, dwarfing the British Library Series. Two of these of these genealogies, Royal MS 14 B V and Royal MS 14 B VI, at the British Library provide us with further examples of the artistic tradition in England of communicating narrative process through the use of scrolls. These

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<sup>124</sup> "Digitised Manuscripts," accessed November 14, 2016, [http://www.bl.uk/manuscripts/FullDisplay.aspx?ref=Royal\\_MS\\_14\\_B\\_VI&index=1](http://www.bl.uk/manuscripts/FullDisplay.aspx?ref=Royal_MS_14_B_VI&index=1). According to the British Library website about forty such genealogical chronicles of English kings survive from the period between Edward I's accession to the throne (1272) and the death of Henry V (1422). Besides these there are several mortuary rolls held in the collection, which dates to the thirteenth and fourteenth centuries. Most of these other types of documents are the same relative size as the Ripley Scrolls, anywhere from three to twenty feet in length. Royal MS 14 B VI itself is sixteen feet long.

genealogies, like the life of Saint Guthlac, also utilize roundels as part of their organization along with the use of line to convey family ties as in depictions of family trees.

Royal MS 14 B V and Royal MS 14 B VI follow the same pattern as larger group of forty genealogical scrolls, with a nearly identical organizing schemes and styles; likely because all are copies of an older, unidentified model. Each begins with a large dominating wheel shape (Fig. 24-25) followed by a web of roundels with bust-length, stylized portraits of many generations of English monarchs (Fig. 21). Lines showing marriages and births connect the encircled caricatures while small lines of texts give information about the historical figures.

Inside the wheel at the top of each genealogical scroll, seven small roundels contain text and are decorated with frolicking animals and small figures; this is referred to as the heptarchy (Fig. 24-25).<sup>125</sup> Heptarchy means “seven rule” and refers to the parts of the English kingdom: East Anglia, Essex, Kent, Mercia, Northumbria, Sussex, and Wessex.<sup>126</sup> The texts inside the small roundels are descriptions of the lands. English genealogies, both in codex and scroll formats, use the wheel is used to show the unity of the heptarchic or seven-part kingdom of England.<sup>127</sup> The wheel as a symbol referred to the heavenly organization and cyclical progression.<sup>128</sup> These ideas stemmed from the widely read philosophers such as Ptolemy and Aristotle who theorized about the motions of the heavens.<sup>129</sup> Ptolemy’s definition of the heavens as “nested spheres” moving together almost perfectly describes the nested roundels that make up the heptarchy (Fig 24-25).<sup>130</sup>

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<sup>125</sup> Olivier de Laborderie, “A New Pattern for English History: The First Genealogical Rolls of the Kings of England,” in *Broken Lines: Genealogical Literature in Medieval Britain and France*, ed. Raluca L. Radulescu and Edward Donald Kennedy (Turnhout: Brepols Publishers, 2008), 45–61.

<sup>126</sup> *Ibid.*, 51.

<sup>127</sup> *Ibid.*, 60.

<sup>128</sup> Battistini, *Astrology, Magic, and Alchemy in Art*, 370-371.

<sup>129</sup> Cornelius O’Boyle, “Astrology and Medicine in Later Medieval England the Calendars of John Somer and Nicholas of Lynn,” *Sudhoffs Archiv*, 2005, 1–22.

<sup>130</sup> *Ibid.*, 4-5.

This scheme not only organizes information about the structure of the kingdom for the viewer, but also represents that structure as a sort of divine construction.

The wheel and roundels are used similarly in the British Library Series. Folios 1, 2, and 4 of the British Library Series all utilize these elements: in Folios 2 and 4, they appear at the very top of the scroll, visible inside the flask of Hermes (Fig. 22-23); and in Folio 1, they appear below the monks. The construction of this wheel closely resembles the heptarchy found at the top of the genealogical scrolls. This “wheel of alchemy”, as the flask with roundels is called, fluctuates in the amount of smaller roundel scenes it possesses, sometimes having seven like the heptarchy and other times having eight. The wheel of alchemy, like the heptarchy, serves as a way of communicating the process of creating the Philosopher’s Stone as a divinely unified whole.

Like the Life of Saint Guthlac, the scroll format is used in Royal MS 14 B V and Royal MS 14 B VI to facilitate the depiction an unbroken process, in this case English succession. Both the Life of Saint Guthlac and the genealogies are then precursors to the use of the scroll format of the British Library Series, which conveys an unbroken alchemical process. However, in addition to the use of the format, the genealogies also share with the British Library Series the use of the wheel as a symbol of divine structure as well as a focus on the generative theme in their imagery. The generative them can be seen in the use of lines and figures in the genealogical scrolls that indicate the human product of marriage, birth, and death. Likewise the British Library Series communicates the marriage, birth, and death of natural material into new forms in its use of human figures.

Two final examples demonstrate the continuation of the scroll format and use of the same structural features we have just seen in the Life of Saint Guthlac, Royal MS 14 B V, and Royal MS 14 B VI into the late fifteenth and early sixteenth centuries; these are the Rous Roll (Add MS 48976) and the Prayer Roll of Henry VIII (Add MS 89929). The Rous Roll dates from 1483 and depicts many small full-length figures, the benefactors of the town Warwick with their coats of

arms above and descriptions of their deeds below (Fig. 28).<sup>131</sup> This roll, in contrast to the more process-oriented Life of Guthlac, genealogical rolls, and British Library Series, depicts a sort of visual list. There is no process being accomplished here, but the use of the scroll in this case communicates the idea of unity between a group of people, with the figures perpetually standing together on the folio. Therefore, while not necessarily a process in the same way as the previous examples, the people depicted still become parts of the whole, each contributing to the overall welfare of Warwick and again showing the scroll as a way of expressing and emphasizing a narrative of cohesion.

The Prayer Roll of Henry VIII is dated between 1485 and 1509 and has fourteen painted miniatures of biblical scenes and saint's lives interspersed with prayers (Fig. 29-30). Prayer rolls are akin to books of hours and are apart of Catholic and Orthodox religious practice. At certain times during the day, morning, midday, evening, midnight certain prayers were to be recited by the faithful. Prayer rolls and books of hours could be carried on a belt or in a pocket so that they would be on hand at the appropriate times (hours) of the day when prayers were appointed. At these times the prayer roll would be unrolled to the appropriate place, the prayer read, and the image meditated upon. Henry VIII's prayer roll was probably used in a similar way to that of the way that the British Library Series. Though it has been posited that the Ripley Scrolls were hung as decoration or advertisements, it seems more probable that they were laid on a flat surface and rolled and unrolled to reveal parts of the alchemical process at the appropriate times.<sup>132</sup> The Prayer roll of Henry VII is also linked to the British Library Series in its adoption use of Christian iconography. The British Library Series utilizes Crucifixion and Garden of Eden as recognizable

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<sup>131</sup> "Digitised Manuscripts," accessed November 14, 2016, [http://www.bl.uk/manuscripts/FullDisplay.aspx?ref=Add\\_MS\\_48976&index=0](http://www.bl.uk/manuscripts/FullDisplay.aspx?ref=Add_MS_48976&index=0).

<sup>132</sup> R. I. McCallum, "Alchemical Scrolls Associated with George Ripley." Due to the length of the scroll, hanging on the wall would not actually facilitate in-depth observation of the manuscripts. At six feet in length the top of the scroll would require straining to view if hung and render the rich detail of the scroll as vague outlines and shapes. The wear at the top of the scroll likewise refutes this idea of hanging by showing evidence for the repeated rolling and unrolling of the scrolls



analogues for alchemical processes and as a way of communicating the alchemist's need for spiritual enlightenment.<sup>133</sup> While Christian imagery and literature were extremely widespread, they were sometimes used to communicate ideas other than Christianity, as in the British Library Series. This reveals a very familiar and widespread system of visual language that existed through manuscript exchange and could be manipulated to serve a variety of purposes.

All of these examples illustrate that the use of the scroll format emphasized ideas of continuation and process. Additionally, the organization of these scrolls is similar to that found in the British Library Series, with smaller scenes depicted in sequence, often using roundels or the wheel. Though the subject matter is different in each example and it is unknown whether the British Library Series was directly modeled on any of these manuscripts, together they represent the continuation of the scroll tradition and a three-century period overlapping with codex production and print production of books. Despite the availability of the codex, English patrons were deliberately requesting the established model of the illustrated scroll.

#### LOOKING OUT: THE IMPORTATION OF CONTINENTAL IMAGERY

The English tradition of scroll manuscripts that provided the catalyst for the creation of the British Library Series, by providing an established format that was seen as appropriate for the process-driven content of the scrolls. While format undoubtedly influenced the organization and the format of the British Library Series, the manuscript trade with continental Europe was also being drawn on as a source for the imagery and style found in the British Library Series.

In the second chapter, we saw that each of the four scrolls in the British Library Series have a different stylistic character by which figures, shading, script, and color are rendered (Fig. 5-8). It is unlikely that any of them were made by the same artist. It may well be that they were

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<sup>133</sup> Theologians, scientists, and artisans were also simultaneously adopting the alchemical terms and imagery to communicate non-alchemical processes.

not even produced in the same country, but were instead commissioned from artists working in places like Flanders, France, Italy, or Brussels and then brought to England.<sup>134</sup> J.G. Alexander finds that England was readily importing manuscripts from all of these places, especially near the end of the sixteenth century.<sup>135</sup> We also know that at least one Ripley Scroll was probably made in Germany, though Alexander notes that trade in manuscripts with Germany and further east was less common than with the closer trading countries.<sup>136</sup> Looking at a few examples it will become apparent that the British Library Series scrolls were definitely influenced by incoming manuscripts and artistic traditions of the continent, most notably books of hours.<sup>137</sup>

“The chemical wedding” in alchemical imagery consists of a naked man and woman usually in a fountain with a tree and a serpentine female figure. The scene simultaneously represents the reaction of the principal elements used in preparing the Philosopher’s Stone, mercury and sulfur, and references the Christian narrative of Adam and Eve in Eden, taken from textual allusion to original sin in *The Compound of Alchemy*.<sup>138</sup> Nearly identical iconography of the biblical scene found in Folios 2, 3, and 4 (Fig. 15-16) also appears in books of hours made in the mid fifteenth century (Fig. 33-34). The female serpent figure, in alchemy referred to as the Melusine, that can be found in both books of hours and three of the British Library Series scrolls is notable because this figure has proved difficult to interpret in the literature on alchemy.<sup>139</sup> Betty

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<sup>134</sup> J. J. G. Alexander, “Foreign Illuminators and Illuminated Manuscripts,” in *The Cambridge History of the Book in Britain*, ed. Lotte Hellinga and J. B. Trapp (Cambridge: Cambridge University Press, 1999), 47–48. There is not space to parse out the difference in aesthetics, but an in-depth stylistic comparison between the British Library Series and manuscripts made in these countries may provide further evidence for the scrolls being made outside of England.

<sup>135</sup> *Ibid.*, 48–51.

<sup>136</sup> *Ibid.*, 54.

<sup>137</sup> *Ibid.*, 52.

<sup>138</sup> George Ripley, “The Compound of Alchymy,” Gate 4, Conjunction.

<sup>139</sup> Roberts, *The Mirror of Alchemy*, 1995; “The Sexualization of Eve and the Fall of Woman,” *Melissa Huang*, March 9, 2012, <http://www.melissahuang.com/2012/03/09/sexualization-eve/>. This blog article by Huang is a study of the evolution of image of the serpent from a sexless reptile to a voluptuous woman with a tail. The feminization of the serpent places the blame of original sin directly on women, by making both the villain and main character of the story female.

Jo Teeter Dobbs describes it as a reference to a pagan goddess, while others don't even mention it or take it as a symbol of sexuality.<sup>140</sup> Due to the similarity of the scenes, I think that the Melusine may simply be a result of copying to the scene into the alchemical manuscripts as the emblem for the chemical wedding, and that the figure may have no actual alchemical significance. Other Christian imagery such as the Crucifixion, creation through the symbols of the sun and moon, and the presence of angels and monks show further relation to the common imagery in illustrated Bibles and books of hours and the appropriation of religious images to form an alchemical visual language as well as to bring alchemy into alignment with the Christian church.

The presence of the zodiac wheel near the bottom of Folio 3 of the British Library Series (Fig. 31) also suggests the borrowing of imagery from other sources, in this case other scientific fields. Not all of the British Library Series scrolls have this astrological diagram. Folio 3, unique for being the only Ripley Scroll to depict the Tudor Rose, is also the only scroll with this type of diagram (Fig. 31). Astronomy and astrology were as important to alchemy as to most scientific practices, but none of the other British Library Series scrolls states this relationship as forwardly as Folio 3. However, since Folio 3 is the principle link between alchemy and the Tudor court, the presence of the diagram on this particular scroll speaks to a specific interest in astrology and astronomy by the patron of Folio 3, to be discussed further in the next chapter. The diagram itself recalls the astrological diagram, commonly referred to as the Zodiac Man, an extremely common image. One of the most famous iterations of this image is found in the *Tres Belles Heures du Duc de Berry*, a book of hours made for Jean of Berry in the fifteenth century (Fig. 32). The Duke's interest in astrology left him to commission this book of hours to include constellations and the Zodiac Man.<sup>141</sup> The presence of the astrological diagram on this folio too seems a deliberate

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<sup>140</sup> Betty Jo Teeter Dobbs, *Alchemical Death and Resurrection*; R. I. McCallum, "Alchemical Scrolls Associated with George Ripley," 184.

<sup>141</sup> Wendy A. Stein, "Patronage of Jean de Berry (1340–1416)," *The Met's Heilbrunn Timeline of Art History*, accessed November 14, 2016, [http://www.metmuseum.org/toah/hd/berr/hd\\_berr.htm](http://www.metmuseum.org/toah/hd/berr/hd_berr.htm).

choice that, like the Garden of Eden scene, reflects the alchemical appropriation of imagery being circulated through manuscript culture between England and the continent.

#### ARCHAISM HAS APPEAL

In a study of manuscript production after print, David Carlson notes that different communication media always overlap and interact.<sup>142</sup> No one media ever fully dominates a culture, and he says this keeps it from stagnating. His study argues that though the printed book had many desirable qualities, such as uniformity and low price, manuscripts continued to be valuable because each was unique. Even when directly copied, manuscripts were never uniform in the way printing was; each had a different character because of their intimate relation to both artisan and owner.<sup>143</sup> Therefore the manuscript never actually became archaic; it simply had a narrower niche to fill. Carlson also mentions that people are often driven to go against the dominant form of communication in order to attain and possess an alternative knowledge or feeling. These concepts are just as applicable to the relationship between the scroll and codex as they are to the codex and the printed book.<sup>144</sup> Although the codex had the ability to convey more information and was durable in a way the scroll was not, the scroll still had a niche. The English obviously recognized it as part of their artistic heritage and continued to use it for specific projects such as the illustrated scrolls we have seen in this chapter. Likewise, the alchemists regarded it as a fitting format for depicting the process for making the Philosopher's Stone.

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<sup>142</sup> David R. David R. Carlson, "Manuscripts After Printing: Affinity, Dissent, and Display in the Texts of Wyatt's Psalms," in *Prestige, Authority, and Power in Late Medieval Manuscripts and Texts*, ed. Felicity Riddy, York Manuscripts Conferences, v. 4. (Woodbridge, Suffolk ; Rochester, N.Y.: York Medieval Press, 2000), 172.

<sup>143</sup> *Ibid.*, 172–77.

<sup>144</sup> *Ibid.*, 177.

Earlier in the chapter, one of the reasons listed for the continuation of scroll making into the late medieval and early modern periods was purposefully archaizing.<sup>145</sup> In addition to showing a process, the British Library Scrolls also fit into this category. The format served to communicate the hidden, secret, and long lost notions of the Philosopher's Stone and the way the alchemists desired to view and portray themselves. The alchemists, of course, claimed a connection with the ancient world in which the dominant written form was the roll. Perhaps by emulating the historical format of their predecessors, the alchemists were also seeking to draw firmer connections to them. Producing a scroll, as Carlson noted, was also a way of setting the Ripley Scrolls apart in a sea of codices.<sup>146</sup> Because the information encoded in the Ripley Scrolls was precious to the alchemists, it is not much of a stretch to see how one of them could see making an elaborate scroll document as a way of emphasizing that preciousness. The choice to commission an alchemical scroll manuscript may also be a reaction against the widespread availability of alchemy through print.<sup>147</sup>

Outside of the more serious practitioners of alchemy like Ripley who actually contributed to the field, there was also the emerging middle class and courtiers who were beginning to take an interest in alchemy.<sup>148</sup> These alchemical hobbyists, who are the most likely consumers of the British Library Series, with the manuscripts minimal text and detailed illustrations, would have also found the archaic format appealing. Those with wealth enough to collect, were usually also interested in display and competition, by having an alchemical scroll versus a codex, the hobbyist could participate in the growing alchemical trend while setting themselves apart from other

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<sup>145</sup> "A Brief Introduction to Scrolls · Medieval Scrolls at Harvard · Neatline - Hosted by Harvard CGA," accessed November 13, 2016, <http://omeka.cga.harvard.edu/exhibits/show/medscrolls/intro>.

<sup>146</sup> David R. Carlson, "Manuscripts After Printing: Affinity, Dissent, and Display in the Texts of Wyatt's Psalms," 174–75.

<sup>147</sup> Many thank to Dr. Louise Siddons for pointing me towards this idea.

<sup>148</sup> Pumfrey and Dawbarn, "Science and Patronage in England, 1570-1625"; Moran, "German Prince-Practitioners"; Moran, *The Alchemical World of the German Court*; Pamela H. Smith, "Alchemy as a Language of Mediation at the Habsburg Court," 1–25.

hobbyists by possessing what was probably viewed as an exotic artifact, thereby retaining some of alchemy's exclusivity.

This chapter has shown the variety of influences that contributed to the creation of the British Library Series. The continued tradition of scroll making in England, which began with mundane documents and eventually became the vehicle for more elaborate artistic works which served as models for the British Library Series. This format was also probably attractive to alchemists and patrons who would have viewed it was not only convenient for depicting the process of creating the Philosopher's Stone, but also for communicating the archaic and exotic qualities of alchemy. The iconography used in British Library Scrolls, however, was sourced from emblem books, books of hours, and other manuscripts as a part of an increasingly international trade in manuscripts, and the English preference for foreign styles. The final chapter will investigate potential sources of alchemical patronage by focusing on Folio 3 of the British Library Series and its unique rose and zodiac motifs.

## CHAPTER IV

### THE TUDORS: PATRONS OF SCIENCE

This chapter identifies the Elizabethan court as the source of possible patrons for Folio 3 of the British Library Series based on the folio's unique design, which incorporates the Tudor Rose, the dating of British Library Scrolls, and the court's patronage of science. Following from this evidence, the chapter shows that Elizabeth was not the first Tudor monarch to take an interest in science. Both Elizabeth's father and grandfather employed astronomers and commissioned scientific art works and manuscripts, all three monarchs using scientific figures and imagery to craft a learned persona and as an aid in solving England's problems. Though Tudor patronage of science was not as grand as some of their continental competitors, this chapter will show that they did participate in the growing popularity of scientific inquiry, including alchemical practice.

#### FOLIO 3

The distinguishing feature of British Library Series Folio 3 is the inclusion of the red and white rose near the top (Fig. 35). This motif differentiates it from the others in the British Library Series, as well as the larger group of Ripley Scrolls and makes it the only known Type C, or Rose scroll. This design has been referred to in the literature on alchemy as Rosicrucian or as the

golden flower of alchemy.<sup>149</sup> The Rosicrucian order was a society that emerged in the sixteenth century, and they did practice alchemy, but the red and white rose on Folio 3 is not their symbol. Their name means “rosy cross”, and their symbol is a red rose atop a cross.<sup>150</sup> The other proposal for this symbol, the golden flower of alchemy, similarly does not fit with the visual evidence. If this were the golden flower of alchemy, why does it appear as a stacked white and red rose? The specificity of the rose motif found on Folio 3 makes it apparent that it is a Tudor Rose, as evidenced by comparing it to other contemporary examples of the symbol (Fig. 36-38).

The Tudor Rose as a symbol is the conflation of two earlier symbols: the white rose of the Yorks and the Red Rose of the Lancasters.<sup>151</sup> Henry VII fused the two showing visually the unity of the lines following the War of the Roses and his marriage of the York princess Elizabeth.<sup>152</sup> After him, the Tudor rose became a symbol of the dynasty and was used by Henry VIII and his children. Elizabeth, though she also cultivated many other symbolic emblems and motifs to build her persona, continued to use the Tudor Rose as a reference to her dynastic line and right to rule.<sup>153</sup> The rose was built into walls, painted on churches, carved into doors,

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<sup>149</sup> C. G. Jung, *Psychology and Alchemy*, trans. Gerhard Adler and R. F. C. Hull, 2 edition (Princeton, N.J.: Princeton University Press, 1968), 76–78; R. I. McCallum, “Alchemical Scrolls Associated with George Ripley,” 181; Jonathan Hughes, “Politics and the Occult at the Court of Edward IV,” 97–129.

<sup>150</sup> Principe, *The Secrets of Alchemy*.

<sup>151</sup> Bucholz and Key, *Early Modern England 1485-1714*, 43–45.

<sup>152</sup> Ibid., 43–44.

<sup>153</sup> Frances A. Yates, *Astraea : The Imperial Theme in the Sixteenth Century* (London: Boston, 1975); Roy Auteur Strong, *The English Icon : Elizabethan and Jacobean Portraiture*, The Paul Mellon Foundation for British Art. Studies in British Art; (London : Routledge and Kegan Paul: New York, 1969); Roy C. Strong Roy C. Strong and I. Portraits of Queen Elizabeth, *Gloriana : The Portraits of Queen Elizabeth I* (Thames and Hudson, 1987), <http://www.gbv.de/dms/bowker/toc/9780500250983.pdf> Materials specified: Table of contents <http://www.gbv.de/dms/bowker/toc/9780500250983.pdf>; Freeman M. O’Donoghue, *A Descriptive and Classified Catalogue of Portraits of Queen Elizabeth* (London: B Quaritch, 1894); Stephen J. Greenblatt and Roy Strong, “The Cult of Elizabeth: Elizabethan Portraiture and Pageantry.,” *Renaissance Quarterly* 31, no. 4 (1978): 642; Jean C. Wilson, “Queen Elizabeth I as Urania,” *Journal of the Warburg and Courtauld Institutes* 69 (2007): 151–73; John N. King, “Queen Elizabeth I: Representations of the Virgin Queen,” *Renaissance Quarterly* 43, no. 1 (1990): 30–74; Janet Arnold, “The ‘Coronation’ Portrait of Queen Elizabeth I,” *The Burlington Magazine / Ed. Benedict Nicolson. London* 120 (1978): 727–41; Helen Hackett, “A New Image of Elizabeth I: The Three Goddesses Theme in Art and Literature,” *Huntington Library Quarterly* 77, no. 3 (2014): 225–56; James D. Milner, “A Portrait of Queen Elizabeth for the National



embroidered on cloth, and included in several of Elisabeth's painted portraits, either held by the queen, worn in her hair, or crowned and slipped in the background of the painting as seen in the famous *Pelican Portrait* (Fig. 44). Prints tended to include the Tudor rose into the borders or architectural elements surrounding the queen (Fig. 45).

The first long passage of text on Folio 3 that is just above the rose directly references the creation of house Tudor, referring to the union of red and white roses. Contained within a scroll motif, the text reads "Take the fayer roses, white and red, and joyne them in won bid. So between these roses mylde, thou shalt bring forth a [goldyn or glowing?] chylde." This text, simultaneously refers to the unity of the "red man" and "white woman," aliases for mercury and sulfur, the two elements needed to create the philosophers stone, but also the joining of the houses of York and Lancaster. The golden child then refers to the Tudors on one level, represented by the Tudor Rose immediately following these lines. On another, the golden child is the Philosopher's Stone and is symbolized by the image of the golden child at the bottom of the scroll (Fig. 17). By using this motif with this text it is clear that that the commissioner of this scroll deliberately chose to make reference to the Tudor line, utilizing alchemical language to create parallels between the succession of the Tudors and the production of the Philosopher's Stone. The presence of the rose and text on this particular scroll links the English dynasty (1485-1603) to alchemical practice.

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Portrait Gallery," *The Burlington Magazine for Connoisseurs* 46, no. 265 (1925): 167–166. Each of these authors offers interpretations of one or more of Elizabeth's symbols. Due to the immense amount of surviving portraits and her use prodigious use of symbol there is much to be said. The most broad and in-depth studies are those of Strong, who dominates the field of Elizabethan portraiture.

## A LINEAGE OF SCIENTIFIC INTEREST

The Tudor period, which has been the topic of many studies, was marked most by war and religious upheaval, which affected many aspects of English life.<sup>154</sup> In the midst of these more grim realities of the Tudor reign, however, there is also evidence of a cultural flowering. As elsewhere in Europe during the fifteen and sixteenth centuries, humanist thinking and Renaissance ideas had come to England and were fostered at the Tudor courts. The Tudor line, born out of the War of Roses and directly following the Hundred Years War with France, bred monarchs deeply concerned with maintaining control.<sup>155</sup> Elizabeth's grandfather, Henry VII, who began the dynasty, and her father Henry VIII, both patronized and used science and art as way of gaining and showing off their knowledge and control.

Through engagement with artists, scientists, theologians, and other thinkers, both native and foreign, the Tudor court demonstrated its ability to compete culturally with continental Europe. Henry VII, adding to the collection of Edward IV, started what would become a vast library collection under his son Henry VIII and later, during the reign of Elizabeth I, theatre and literature too experienced a golden era.<sup>156</sup> The monarchs increasingly attempted to strengthen international trade with the continent, importing people, instruments, and trade goods, but especially relevant to this study, foreign artists and books.

Though he had some trouble reading, and did not possess the humanist education that he would provide for his children, Henry VII collected a large number of manuscripts on varying

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<sup>154</sup> Dyer, *Standards of Living in the Later Middle Ages*; Bucholz and Key, *Early Modern England 1485-1714*; Strong and Portraits of Queen Elizabeth, *Gloriana : The Portraits of Queen Elizabeth I*; Jason Eldred, "The Just Will Pay for the Sinners': English Merchants, the Trade with Spain, and Elizabethan Foreign Policy, 1563-1585" 10, no. 1 (2010); R. B. Wernham, *Before the Armada: The Growth of English Foreign Policy, 1485-1588*. (London: Jonathan Cape, 1966); Pumfrey and Dawbarn, "Science and Patronage in England, 1570-1625," 2004.

<sup>155</sup> R. B. Wernham, *Before the Armada: The Growth of English Foreign Policy, 1485-1588*.

<sup>156</sup> Strong and Portraits of Queen Elizabeth, *Gloriana : The Portraits of Queen Elizabeth I*.

subjects adding to a collection that was begun by Edward IV.<sup>157</sup> This collection ranged from topics of history and religion to classical texts and even to astronomy. He began by importing manuscripts for the royal library from France in his early reign.<sup>158</sup> In 1484, Henry VII excluded foreign artists living in London from the strict regulations being imposed on other professions, promoting their making of even more manuscripts.<sup>159</sup> Henry's emphasis on accruing knowledge at his court through manuscripts is significant to this study because it represents an early Tudor interest in patronizing and possessing items of knowledge.

The most famous of Henry VII's manuscripts is Arundel 66 (Fig 39-40), held at the British Library, which reveals his interest in astronomy. A large manuscript, Arundel 66 contains several astrological treatises, miniatures with constellations, a very detailed miniature depicting the book being presented to Henry, and various astronomical tables including those of John Killingworth, one of the major English astronomical authorities of the Middle Ages.<sup>160</sup> He also employed several astronomers throughout his reign including Lewis of Caerleon, John Argentine, William Parron, and John Baptists Boerio.<sup>161</sup> Parron and Boerio were both Italian and travelled at Henry's request to stay at his court.<sup>162</sup> They served Henry in various ways, acting as physicians to the royal family as well as using their astronomical knowledge to advise the crown; from drawing up horoscopes as a kind of courtly entertainment, to the decision to marry Prince Arthur, Henry's oldest son to the Spanish princess Catherine of Aragorn.<sup>163</sup>

After the death of both his father and brother, the next Tudor monarch, Henry VIII, continued to encourage a greater culture of learning in England. As a humanist, he was concerned

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<sup>157</sup> Hilary M. Carey, "Henry VII's Book of Astrology and the Tudor Renaissance," *Renaissance Quarterly* 65, no. 3 (2012): 668.

<sup>158</sup> *Ibid.*, 662-668.

<sup>159</sup> Gameson, "From Vindolanda to Domesday: The Book in Britain from the Romans to the Normans," 51.

<sup>160</sup> Carey, "Henry VII's Book of Astrology and the Tudor Renaissance," 661-665.

<sup>161</sup> *Ibid.*, 663.

<sup>162</sup> *Ibid.*, 662.

<sup>163</sup> *Ibid.*

with acquiring knowledge. One of the ways in which he cultivated this part of his identity was by continuing to build the royal library that his father had begun; amassing enough books to fill chambers that spanned several palaces.<sup>164</sup> His particular interest, though he had book on many topics in his library, lay in theology.<sup>165</sup> However, he also took an interest in astronomy, retaining John Baptist Boernio who had served as court astronomer to his father and later he hired the German astronomer and inventor Nicholas Kratzer.<sup>166</sup>

Kratzer, like the German painter Hans Holbein, was introduced to Henry VIII through their mutual friend and fellow humanist, Thomas More. From Kratzer, Henry VIII commissioned a particularly splendid astronomical clock (Fig. 41).<sup>167</sup> The clock, which survives, hanging on the exterior of the Hampton Court Palace in London, is based on the Earth-centric, astronomical system of Ptolemy.<sup>168</sup> Its purpose is to display the day and month of the year, the position of the sun in the zodiac, and the phases of the moon. With painted dials, bells and gilded dials the clock certainly counts as a luxury object, but the complicated system of gears which act as the mechanism and were quite advanced for their time, simultaneously show the engagement with scientific theory and experimentation. The clock is also important because it demonstrates the kind of ostentatious patronage akin to the scientific pursuits of continental Europe, an object of both knowledge and display.

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<sup>164</sup> James P. Carley, "The Royal Library under Henry VIII," in *The Cambridge History of the Book in Britain*, ed. Lotte Hellinga and J. B. Trapp (Cambridge: Cambridge University Press, 1999), 274–82. The collection became so vast and spread out that Henry VIII retained a librarian that organized and curated his collection for him.

<sup>165</sup> *Ibid.*, 274–76.

<sup>166</sup> Carey, "Henry VII's Book of Astrology and the Tudor Renaissance"; David Starkey, *Henry VIII: A European Court in England*, New edition edition (London: Collins & Brown, 1991), 70.

<sup>167</sup> Starkey, *Henry VIII*, 70–72.

<sup>168</sup> *Ibid.*

The astronomical patronage of Henry VII and Henry VIII is relevant to this study because astronomy was closely tied to alchemy in the Early Modern mind.<sup>169</sup> Knowledge of astronomy and astrology were needed to accurately practice alchemy due to specific times and alignments that facilitated the alchemical process.<sup>170</sup> Both astronomy and alchemy were linked to a divine understanding, alchemy through understanding and manipulation of the earthly realm, astronomy by that of the cosmic realm. While viewed as useful, and in many ways both precursors to modern understandings, the two fields of science were seen as the most dangerous, in terms of conflict with religion, as well. Astronomers and alchemists alike had to remain wary lest they go too far; false prognostications or promises were likely to land a scientist of either field out of favor and in prison.<sup>171</sup> Despite these risks of practice it is apparent that even the early Tudor monarchs took an interest in these subjects, using astronomy, manuscripts, and humanism to engage in the growing popularity of science and intellectual learning. Their patronage also reveals the source of Elizabeth's later use of scientific symbol and employment of astronomers and other scientists as well as her possible patronage of objects like the British Library Series.

#### ALCHEMY AND THE ELIZABETHAN COURT

The British Library Series is dated to the later sixteenth century and based on the popularity of alchemy and Ripley around this time, we can assert that the production of these scrolls, even those that do not have specific reference to the Tudor court overlapped, with Elizabeth's reign.<sup>172</sup> This is important to note, because it shows that though the queen and court may not have commissioned all of the scrolls, patronage of science and production of alchemical manuscripts was acceptable under her reign. There is evidence, however, that Elizabeth herself was also a

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<sup>169</sup> Kocher, *Science and Religion in Elizabethan England*.

<sup>170</sup> John North, "Astronomy and Astrology," in *The Cambridge History of Science*, ed. David c. Lindberg and Michael H. Shank, vol. 2 Medieval Science (Cambridge University Press, 2015), 456–84.

<sup>171</sup> Nummedal, *Alchemy and Authority in the Holy Roman Empire*; Carey, "Henry VII's Book of Astrology and the Tudor Renaissance"; Kocher, *Science and Religion in Elizabethan England*.

<sup>172</sup> Rampling, "The Catalogue of the Ripley Corpus," 126–28; Principe, *The Secrets of Alchemy*, 107.

patron of science, particularly of astronomy, and employed several courtiers, such as John Dee, who practiced astronomy as well as medicine and alchemy.<sup>173</sup>

Elizabeth, an unlikely queen as the last in line to the throne of Henry VIII, came to power after her brother and sister in 1558. She would reign for nearly fifty years until her death in 1603.<sup>174</sup> During this time she carried on many of the political and religious ideologies of her forbears. Under Elizabeth the religion of the crown shifted back again to supporting Protestantism and Elizabeth sought in her foreign policy to connect to other Protestant countries in alliance. She also entertained marriage for political reasons several times, most seriously to the Duke of Anjou in the 1570s, but she never actually married.<sup>175</sup> Like Henry VII, her grandfather, Elizabeth also attempted to further international trade, but whereas foreign merchants had largely thwarted him, the progression towards an ever more international trade system by the time of Elizabeth's reign aided her in taking more English goods to continental Europe.<sup>176</sup> This aided in the continued trade with Flanders and Spain, both rich and important.<sup>177</sup>

In fact, the majority of Elizabeth's court artists came from Flanders, the northern style having become incredibly popular due to the renowned skill of the artists and their naturalistic techniques.<sup>178</sup> These artists were used by Elizabeth as create an incredibly elaborate scheme of political propaganda that showed her to be a virtuous, constant, powerful, and intelligent. Art was particularly important to Elizabeth's court due to her precarious and often poorly regarded state as an unmarried queen with no heir. In an England threatened by political, financial, and religious

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<sup>173</sup> Stephen Pumfrey and Frances Dawbarn, "Science and Patronage in England, 1570-1625: A Preliminary Study," *History of Science* 42 (2004): 137-188.

<sup>174</sup> Bucholz and Key, *Early Modern England 1485-1714*, 116.

<sup>175</sup> *Ibid.*, 125.

<sup>176</sup> *Ibid.*, 140-50.

<sup>177</sup> R. B. Wernham, *Before the Armada: The Growth of English Foreign Policy, 1485-1588.*; Bucholz and Key, *Early Modern England 1485-1714*, 140-50; Alexander, "Foreign Illuminators and Illuminated Manuscripts," 54-55.

<sup>178</sup> Strong and Portraits of Queen Elizabeth, *Gloriana : The Portraits of Queen Elizabeth I*; Alexander, "Foreign Illuminators and Illuminated Manuscripts," 54-55.

turmoil, the propaganda served to put a positive spin on her choices and counteract the negative view of her that might rise from the country's circumstances.<sup>179</sup> Within the broad range of symbols employed in her portraits, we can pick out specific examples of scientific imagery interspersed with the other emblems and heraldic symbols, like the Tudor Rose.<sup>180</sup>

The main scientific imagery used by Elizabeth takes the form of scientific instruments: the globe, map, and armillary sphere. The use of these particular symbols speaks to scientific knowledge and interest. The *Armada* and *Ditchley Portraits* (Fig. 42 & 46) are particularly good examples of the way that scientific imagery was taken advantage of in Elizabeth's portraits. In both of these portraits she calmly rests a hand on a globe or stands on a large floor map, the geographical objects standing in for the real world they represent. Her physical interaction with these scientific objects displays her understanding of their significance and her use of them to display herself as an omniscient and dominating power. The armillary sphere, shown in the embroidery on Elizabeth's dress in another portrait (Fig. 43) refers to the scientific instrument that replicates the interactions of the heavenly bodies, revealing her interest in astronomy.<sup>181</sup> In a study of Elizabeth's use of the armillary sphere as a symbol, it is argued that the queen was aligning herself with the goddess of astronomy, Urania.<sup>182</sup> By this particular alignment she was able to position herself as a font of knowledge, since astronomy was equated with heavenly wisdom, as well as purity, due to Urania's close ties to the moon goddess, Belpheobe.<sup>183</sup> All of these symbols make it apparent that Elizabeth was utilizing science to make a public statement. The employment of these foreign artists and the production of courtly secular art also served to

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<sup>179</sup> Bucholz and Key, *Early Modern England 1485-1714*, 150-54; Strong, *Gloriana : The Portraits of Queen Elizabeth I*; Greenblatt and Strong, "The Cult of Elizabeth"; Wilson, "Queen Elizabeth I as Urania."

<sup>180</sup> Strong, *Gloriana : The Portraits of Queen Elizabeth I*.

<sup>181</sup> Greenblatt and Strong, "The Cult of Elizabeth"; Wilson, "Queen Elizabeth I as Urania."

<sup>182</sup> Wilson, "Queen Elizabeth I as Urania."

<sup>183</sup> Ibid.; Yates, *Astraea : The Imperial Theme in the Sixteenth Century*; Greenblatt and Strong, "The Cult of Elizabeth"; Strong and Portraits of Queen Elizabeth, *Gloriana : The Portraits of Queen Elizabeth I*.

encourage an English culture of art and science as well as to advertise Elizabeth's court as a potential patron.

Like her father and grandfather Elizabeth imported scientists in addition to artists, though she employed English-born scientists much more readily than English-born artists.<sup>184</sup> The most notable of the scientists employed by Elizabeth was the Englishman, John Dee.<sup>185</sup> Dee served Elizabeth as her court astronomer for twenty years, from the 1550s to 1570s, but also studied mathematics, theology, and alchemy.<sup>186</sup> He is a notable character for this study for several reasons, the most obvious being his activity as an alchemist and connection to Elizabeth I. However, Dee besides providing an additional connection between Elizabeth's court and alchemy, he also had a vast library and connected laboratory, and there is evidence that he commissioned at least one Ripley Scroll.<sup>187</sup>

Dee's early interactions with the Tudor court were rough; he got into trouble during the reign of Mary I for the casting horoscopes for Elizabeth I and Mary I which led to a brief imprisonment and inquiry, but was later cleared of charges.<sup>188</sup> After the death of Mary, he regained favor with Elizabeth and advised her throughout the rest of his life, sometimes working at court. However, what Dee did independent of the queen at in his house at Mortlake, is more significant for this paper.<sup>189</sup> Dee was left the manor by his mother, and outfitted it with a vast

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<sup>184</sup> Strong, *The English Icon : Elizabethan and Jacobean Portraiture*; Strong, *Gloriana : The Portraits of Queen Elizabeth I*. According to Strong, English artists at this time were viewed as less skilled than those from more recognizable centers of art.

<sup>185</sup> William H. Sherman, *John Dee: The Politics of Reading and Writing in the English Renaissance* (Amherst: University of Massachusetts Press, 1997); John Dee, *Diaries of John Dee*, ed. Edward Fenton (Charlbury, Oxfordshire, UK: Day Books, 1998); Jennifer M. Rampling, "John Dee and the Alchemists: Practising and Promoting English Alchemy in the Holy Roman Empire," *Studies in History and Philosophy of Science* 43, no. 3 (September 2012): 498–508.

<sup>186</sup> Pumfrey and Dawbarn, "Science and Patronage in England, 1570-1625," 2004.

<sup>187</sup> Ibid.; Sherman, *John Dee*. The scroll commissioned by Dee is thought to be one of the three with the 1588 inscriptions from Lubeck. The inscription date coincides with one of Dee's trips to Germany.

<sup>188</sup> Sherman, *John Dee*, 6–7.

<sup>189</sup> Ibid., 29–50.



library consisting of topics ranging from medicine, astronomy, theology, kabbalah, and alchemy to classical theories of natural philosophy. Altogether he amassed over three thousand titles in many languages.<sup>190</sup> This library functioned in much the same way as an Italian *studiolo* with nobles, including the Queen and her council, coming to use the library space by invitation.<sup>191</sup>

Amongst his titles, Dee had several of Ripley's works, including *The Compound of Alchemy*; according to William Sherman the alchemical section of Dee's library is the most heavily worn and annotated, showing his engagement with alchemical ideas.<sup>192</sup> The apparent engagement of Dee with alchemy makes for convincing evidence that he may have commissioned a Ripley Scroll while a visiting alchemist at the court of Maximilian I in the 1580s.<sup>193</sup> He had sought alchemical patronage from Elizabeth, but due to the penchant of England for more practical science, he did not receive it, so he travelled abroad for few years to work for other courtly patrons more interested in experimental science.<sup>194</sup> The 1588 date upon three Ripley Scrolls, claiming they were made in Lubeck, corresponds with the date of Dee's travels, his Riplean interest, and his English origin.

Dee's library opened up into three laboratories that Dee used for his experiments, corresponding to the interconnected rooms of other Renaissance scholarly space such as the *kunstammer* and *studiolo*.<sup>195</sup> This set-up in Dee's home aids in theorizing about the usage of the Ripley Scrolls; due to the status of the Ripley Scrolls as art objects that were expensive, they were most likely kept in the library to be read in conjunction with the actual *Compound of Alchemy*,

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<sup>190</sup> Ibid., 30–31.

<sup>191</sup> Ibid., 38–41.

<sup>192</sup> Ibid., 80.

<sup>193</sup> R. I. McCallum, "Alchemical Scrolls Associated with George Ripley," 160–165. Dee's potential possession of a scroll is very relevant. He came back to England after his travels. If he returned with a Ripley Scroll, it may be that scroll provided a model for other copies and/or catalyzed further English interest in the production of illustrated alchemical manuscripts.

<sup>194</sup> Pumfrey and Dawbarn, "Science and Patronage in England, 1570–1625," 2004.

<sup>195</sup> Paula Findlen, *Possessing Nature: Museums, Collecting, and Scientific Culture in Early Modern Italy*, New Ed edition (Berkeley: University of California Press, 1996); Sherman, *John Dee*, 30–50.

which Dee also owned.<sup>196</sup> The alchemist could study these two things and take notes before entering into the connected library. If the need arose during experimentation to again reference the scroll or text, the library was a short walk away, but the separation of the spaces served to protect the manuscripts from harm that could be done by the chemicals and fire of the laboratory.

In addition to Dee, Elizabeth's councilors, particularly, Lord Burghley, her chief advisor, also heard patronage proposals and appointed scientists to solve particular civil problems.<sup>197</sup>

Burghley, seeking to use science as a way to lessen England's financial burdens during the 1570s and 1580s, sent agents to scour the continent for bright minds who could improve the areas of manufacture and minting particularly in order to decrease dependence on foreign materials and processes.<sup>198</sup> As a consequence of this campaign, in 1579 he started a society of alchemists called "the Society for the New art of making Copper and Quicksilver by way of Transmutation."<sup>199</sup> His idea was to use alchemy for the practical purpose of transmuting base metals into more gold for the royal treasury.<sup>200</sup> However, because transmutation is impossible the initiative never met with much success. Even so, there is evidence for patronage of alchemy and natural science at court and in the wider context of England during the reign of Elizabeth consisting of around 60 patrons and 140 practitioners; more than enough to provide a client base for the British Library Scrolls.<sup>201</sup> These numbers show that there was a segment of the English population, mainly at court and in the urban centers where the wealthier merchant class lived, interested in alchemical thought that provided the catalyst for production of the Ripley Scrolls.

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<sup>196</sup> Sherman, *John Dee*, 89–90.

<sup>197</sup> Pumfrey and Dawbarn, "Science and Patronage in England, 1570-1625," 2004, 157–58.

<sup>198</sup> *Ibid.*, 158.

<sup>199</sup> *Ibid.*, 160–61.

<sup>200</sup> Pumfrey and Dawbarn, "Science and Patronage in England, 1570-1625," 2004.

<sup>201</sup> *Ibid.*

## DIFFERENT ATTITUDES TOWARDS SCIENTIFIC PATRONAGE

In contrast to the practical use of science at Elizabeth's court, we have accounts of German alchemists receiving extravagant alchemical patronage from the noble class. Of particular interest are the authors Tara Nummedal, Bruce T. Moran, and Pamela Smith who write about the experience and practice of alchemists between the fifteenth and eighteenth centuries at the courts of Berlin, Munich, and Kassel.<sup>202</sup> Funding alchemical exploits offered these princes the potential to gain additional wealth and power, usually by the promise of alchemical transmutation of base metals, but it also offered something else: a curiosity. These princes could observe and sometimes even participate in the transformation of the natural world, a main source of interest. Obtaining knowledge of and manipulation over the natural gave the princes a sort of cultural and intellectual wealth that allowed them to position themselves amongst the other princely courts of Europe.<sup>203</sup> These benefits account for the numerous of documents evidencing the relationship between alchemists and German princes, including orders for vast amounts of metals to be transmuted, contracts of employment including clauses in the event of the failure of alchemist, as well provisions for the room, board, stipend, and laboratory space for the alchemists.<sup>204</sup>

These German records provide to this study an opposing view to the careful searching of scientists by Lord Burghley and the preoccupation with finding solutions for industrial problems. This difference in approach to science tends towards the conclusion that the English court was disinterested in sciences in general and alchemy in particular. We know, however, that alchemy had already been in England since the twelfth century. The Plantagenet kings are known to have

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<sup>202</sup> Bruce T. Moran, *The Alchemical World of the German Court: Occult Philosophy and Chemical Medicine in the Circle of Moritz of Hessen, 1572-1632*, Sudhoffs Archiv. Beihefte,; Heft 29; Variation: Sudhoffs Archiv.; Beihefte ;; Heft 29. (Stuttgart: F. Steiner Verlag, 1991); Smith, "Alchemy as a Language of Mediation at the Habsburg Court," 1994; Pamela H. Smith, *The Body of the Artisan: Art and Experience in the Scientific Revolution*, 1 edition (Chicago: University of Chicago Press, 2004); Tara Nummedal, *Alchemy and Authority in the Holy Roman Empire* (Chicago: University Of Chicago Press, 2007).

<sup>203</sup> Smith, "Alchemy as a Language of Mediation at the Habsburg Court," 1994, 3–12.

<sup>204</sup> Nummedal, *Alchemy and Authority in the Holy Roman Empire*, 2007, 100–120.

had alchemical interest starting with Edward IV who used it as a tool for demonstrating power.<sup>205</sup> Several English alchemists, including George Ripley, are also documented as having lived and worked there. A study of scientific patronage in Early Modern England conducted by Stephen Pumfrey and Frances Dawbarn sheds light the reality of scientific patronage, particularly at the Elizabethan court. It also illuminates the reasons that a difference in patronage from continental Europe to England.<sup>206</sup> Pumfrey and Dawbarn argue that the main of the reason that scientific studies did not garner the popularity at the Tudor courts in the same way as those abroad is because of geopolitical differences between the continent and the English island. The memory of foreign and domestic conflict led to a preoccupation with their maintaining their position in the world and drew their interest towards projecting themselves as a world power.<sup>207</sup>

England, as a small island nation with a mostly centralized court, was not as connected to larger urban or courtly center as larger continental countries like Italy and Germany. These continental countries were comprised of many small duchies constantly vying for cultural supremacy through engaging in artistic and scientific patronage.<sup>208</sup> Due to this competitive culture a more experimental brand of science, which Pumfrey and Dawbarn term “ostentatious science” or science for display, became prevalent on the continent.<sup>209</sup> The grand claims that alchemy had an illustrious past and could produce miraculous results, fit into the “ostentatious” category and became a courtly endeavor. Despite the lack of overt patronage as a result of the factors addressed in this study, this chapter has shown that scientific patronage was in no way absent at the Tudor court, but simply utilized in a different way: as a practical solution to the country’s problems on one hand, and as a vehicle for displaying the knowledge and power of the monarchs on the other.

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<sup>205</sup> Jonathan Hughes, “Politics and the Occult at the Court of Edward IV,” 2005.

<sup>206</sup> Pumfrey and Dawbarn, “Science and Patronage in England, 1570-1625,” 2004.

<sup>207</sup> Ibid.

<sup>208</sup> Ibid.; Moran, *The Alchemical World of the German Court*, 1991; Nummedal, *Alchemy and Authority in the Holy Roman Empire*, 2007.

<sup>209</sup> Pumfrey and Dawbarn, “Science and Patronage in England, 1570-1625,” 2004.

I return to the point made at the beginning of this chapter about Folio 3 of the British Library Series being made for Elizabeth or a patron closely aligned with her at court. The use of scientific imagery and the Queen's employment of scientists makes it easy to theorize that an alchemist commissioned Folio 3 as way of appealing to the known interests of the queen that were displayed through her art and actions. In the culture of gift-giving that Folio 3 almost certainly seems part of, the content does not necessarily reflect the recipient's interests. Instead, the giver seeks to draw them in and win favor, often including referencing the illustriousness of the would-be patron and their status.<sup>210</sup> The text above the Tudor Rose on Folio 3 is one such reference. Also telling, is incorporation of the zodiac on Folio 3 (Fig. 31), which paired with the presence of the Tudor Rose (Fig. 35) sets this scroll apart from all other Ripley Scrolls. Elizabeth inherited astronomical/astrological interests from her father and maintained them through the employment of figures like Dee. Folio 3 is the only Ripley Scroll to incorporate the Zodiac Wheel. Its presence on the scroll would have tied the alchemical content to the field of astrology, which Elizabeth clearly already viewed as a useful scientific endeavor. The choice to include these motifs was a deliberate and targeted attempt to pique the curiosity of the queen or that of the councilor reviewing the request for patronage. If the scroll was a gift to the queen herself, the passage of text referring to "the golden or glowing child" can also be interpreted as an allusion to Elizabeth; making her into both the height of her dynastic line as well as the perfected material of alchemy, a very high compliment.

The majority of the Ripley Scrolls follow two set patterns, Types A and B, and diverge only slightly from these. Most are also made on cheaper material, paper, which leads to the suspicion that the majority of the Ripley Scrolls, including three of the British Library Series Folios 1, 2, and 4, were likely made for lesser nobles and middle class citizens, either alchemists or alchemical patrons, at Elizabeth's court or in London. The finer quality of Folio 3 gold leafing

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<sup>210</sup> Alexander, "Foreign Illuminators and Illuminated Manuscripts," 54.

and individualized design, different from all of the other known Ripley Scrolls, marks it out as a specialty commission rather than a copy of a similar Ripley Scroll. The dating of the majority of the Ripley Scrolls to the later half of the sixteenth century also aligns the group with the reign of Elizabeth I. Based on the visual evidence of the Tudor rose and Zodiac Wheel, the prose referencing the Tudor line, and the richness of this particular scroll, it appears to have been made in attempt to win the favor of the queen and induce her interest in alchemy.<sup>211</sup>

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<sup>211</sup> *Ibid.*, 54–58.

## CHAPTER V

### CONCLUSION

This thesis has investigated the British Library Series, with special emphasis on Folio 3, from an art historical perspective, in order to gain a better understanding of the series' history. As set out in the Introduction, my argument is that these four scrolls were made for English patrons and that the choice of format was linked to English artistic traditions. In the first chapter of this study, I addressed what alchemy was, how it came to be in England, the secrecy of alchemical practice, and the rationale behind that secrecy. In the following chapter, I explained that the format of the British Library Scrolls is modeled on a long tradition of scroll documents in England and analyzed the imagery found on the British Library Series: this imagery is a mixture of both literal interpretations of the *Compound of Alchemy* and imagery borrowed from the larger manuscript culture. The last chapter pointed out that the Tudor interest in science that was expressed through patronage of scientists and the use of scientific motifs, arguing for the plausibility that courtly patrons and practitioners commissioned or received Ripley Scrolls as way of participating in alchemy's growing popularity.

On a larger scale this thesis has demonstrated a gradual shift of alchemy from a shadowy, solitary practice of a few learned men to a recognized field with the potential to enact change in society, thus garnering the interest of a wider group of patrons. The obscure manuscripts such as Ripley's *Compound of Alchemy* shrouded their process in metaphor and symbol, a code. This

same obscurity was later translated into the visual language present on the Ripley Scrolls. However, there is a key difference in obscure texts and obscure images. A lay reader can read an obscure text and without the knowledge to comprehend the words and literary symbols, go away with no connections. Visual engagement is different; whether or not the recipient of these scrolls, court patrons, alchemists, or hobbyists could fully understand the scrolls or had the means to interpret them does not matter as much. The viewer may not have been able to make a *Philosopher's Stone*, but they were making connections to the imagery from their memory of other artworks, emblems, and symbols. Visual language enabled a kind of universal understanding on some level even by those who could not read Latin or English, the imagery would have been interesting and enchanting as they tried to puzzle out the meanings.

The increasing visualization is linked to this changing attitude towards alchemy and its resulting popularity in the sixteenth century. Due to this movement, alchemical knowledge was being communicated not only in text, but also increasingly through visual language, as with the *British Library Series*, in order to engage patrons on multiple levels: through material culture and alchemical ideas. The Ripley Scrolls, alongside the dissemination of alchemical treatises in print, provide evidence that alchemy in the later sixteenth century was reaching a greater audience than ever before and became a curiosity of its own with which more people wanted to engage and possess. However, whereas print culture facilitated the spread alchemy to a wider audience, the Ripley Scrolls with their fine illustration, minimal text, and intriguingly archaic format are an attempt to retain alchemy as an exotic and exclusive commodity.

A key point made in this thesis that has been thus far overlooked in studies of the Ripley Scrolls is that Folio 3 of the *British Library Series* was a specific commission and that the Rose motif, which sets it apart from the larger group, is a Tudor Rose. Based on visual comparisons with other examples of the Tudor heraldic symbol it is apparent that this image was specifically designed. By acknowledging this symbols as a link to the royal house we have explored explore



the Tudors, usually known as patrons of art and theatre, as patrons of science and particularly alchemy. From this point stems the notion that the Tudor courts, particularly those of Henry VII, Henry VIII, and Elizabeth I have been misread as a source of scientific patronage. In light of the scientific imagery in portraits of Elizabeth I, the commissioning of astrological books and instruments, the importation and employment of humanist scientist and artist, as well as the connection with alchemy through John Dee and the Ripley Scrolls, it seems that these monarchs were engaging heavily in scientific endeavors. Continental European courts are often seen as more progressive at this time in terms of the funding of scientific endeavors, whereas, England seems to have been less interested. While the English court may have lacked the ability and initiative to sponsor figures like Tycho Brahe, vast scientific collections, or tons of metals for court alchemists to transmute, my study has indicated that they were far from disinterested in science, and simply patronized on a smaller scale. Future studies should reevaluate Tudor use of science and scientific imagery in art as a way of engaging the international interest in science.

The format and imagery of the British Library Series suggest that the scrolls were made for lesser nobles or middle class English patrons or practitioners who had become interested in alchemical ideas.<sup>212</sup> Folio 3 meanwhile was a specific commission, separate from the larger group of Ripley Scrolls, which are probably copies of an earlier original, and looks to be an artifact of courtly gifting. The scroll format of the British Library Series reveals a well-recognized artistic and cultural tradition in England. The format was likely seen as compatible with the content of the complicated alchemical process of George Ripley's text, thus resulting in the creation of these splendid alchemical scrolls. This format by the deliberate archaism of the scroll format also serves to lend alchemy an exoticism and thus entice interest and fascination. By emphasizing the

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<sup>212</sup> The middle class here refers to the range of people outside of noble birth that could afford luxury items. These might be merchants, scholars, or professionals such as physicians.

pictorial aspect of the scrolls and minimizing text the British Library Series scrolls display the alchemical knowledge and participation of the patron.

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APPENDICES

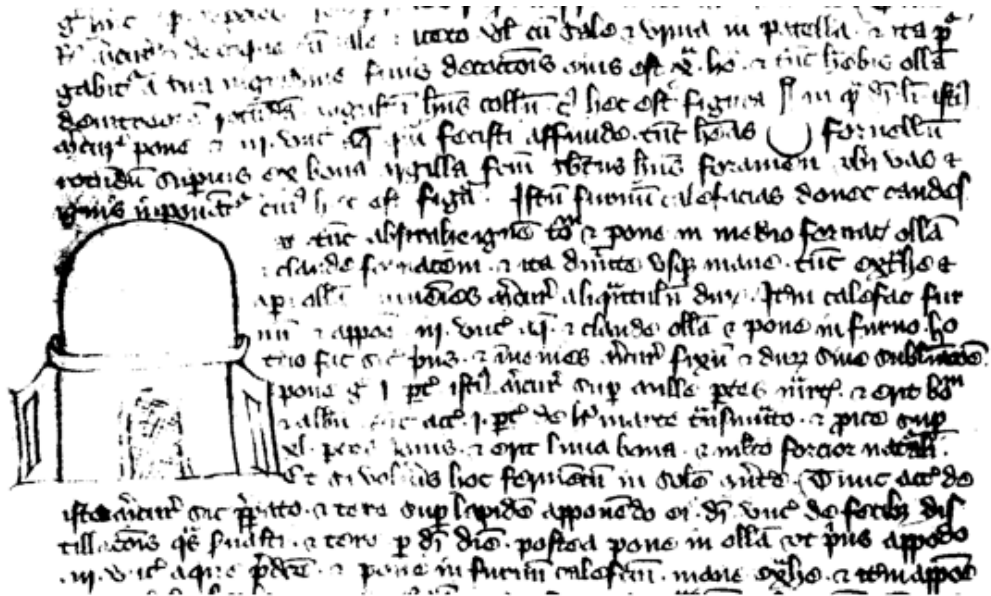


Figure 1. Drawing of a furnace

MS Hunt. 110 fol. 33v 14<sup>th</sup> C., University Library, Glasgow.



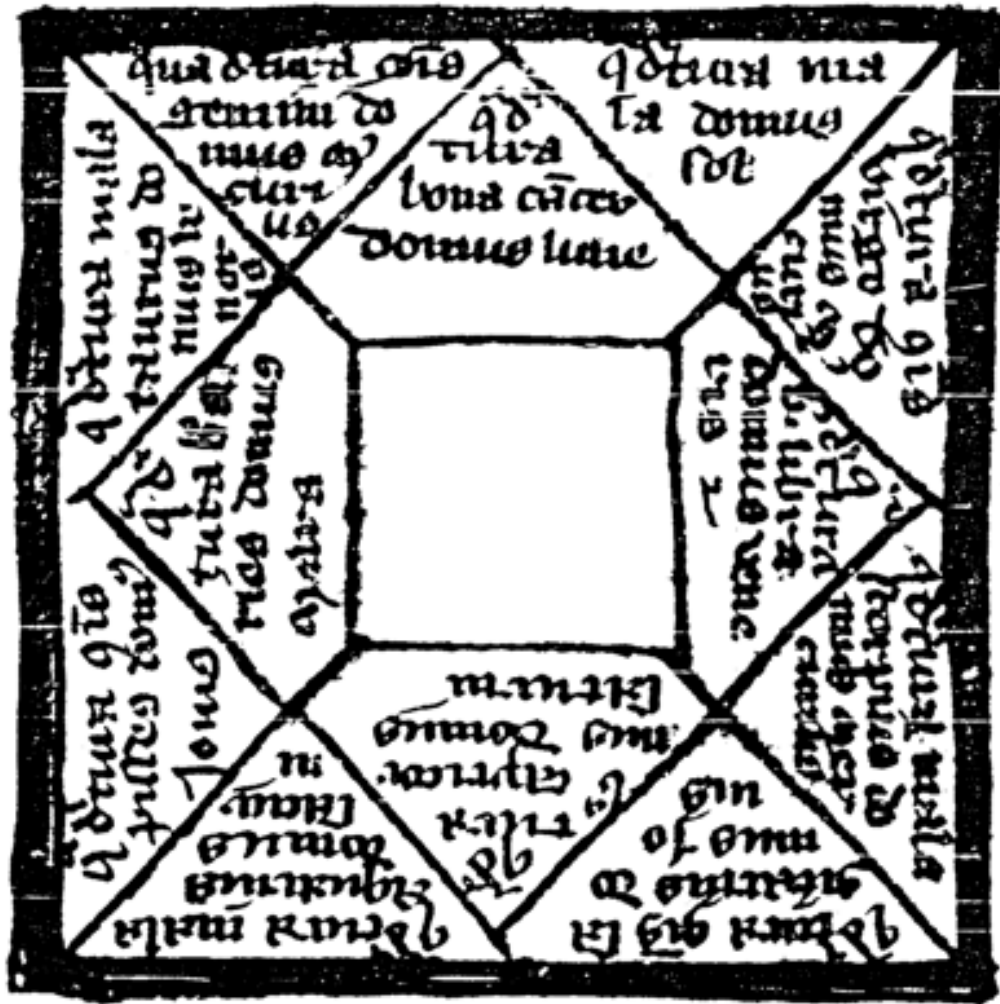


Figure 2. Table listing the qualities common to planets and to metals from *The Secrets of My Lady Alchemy*

MS 2372, fol. 35r late 14<sup>th</sup> C., Österreichische Nationalbibliothek, Wien.



Figure 3. Scholar of alchemy studying a flask from *Splendor Solis*

Harley MS 3469, 1582, ink and gold on parchment, 50" x 4.5", British Library, London.



Figure 4. "Transmutation" from *Splendor Solis*

Harley MS 3469, 1582, ink and gold on parchment, 50" x 4.5", British Library, London.

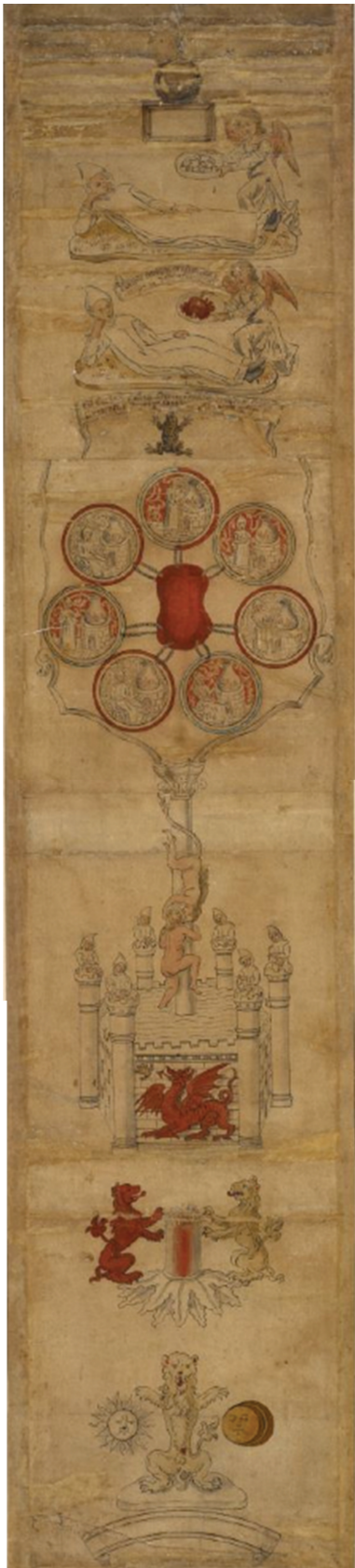


Figure 5. Add MS 5025 fol. 1, 16<sup>th</sup> C, ink on paper, 60" x 6", British Library, London.



Figure 6. Add MS 5025 fol. 2, 16<sup>th</sup> C, ink on paper, 50" x 4.5", British Library, London.



Figure 7. Add MS 5025  
fol.3, 16<sup>th</sup> C, ink on  
paper, 54" x 5",  
British Library, London.



Figure 8. Add MS 5025 fol. 4, 16<sup>th</sup> C, ink on paper, 50" x 5", British Library, London.



Figure 9. Green lion with pelican flask and dragon  
Add MS 5025 fol.3 (detail), 16<sup>th</sup> C, ink on paper, 54" x 5",  
British Library, London.





Figure 10. "Reclining monks" characteristic of Type B Ripley Scrolls  
Add MS 5025 fol. 1 (detail), 16<sup>th</sup> C, ink on paper, 60" x 6",  
British Library, London.



Figure 11. Hermes  
Add MS 5025 fol. 3, 16<sup>th</sup> C, ink on paper, 54" x 5", British Library,  
London.



Figure 12. "Castle of the Philosophers"

Add MS 5025 fol. 3 (detail), 16<sup>th</sup> C, ink on paper, 54" x 5", British Library, London.



Figure 13. Connected flasks  
Add MS 5025 fol.3 (detail), 16<sup>th</sup> C, ink on paper, 54" x 5",  
British Library, London.



Figure 14. Furnace  
Add MS 5025 fol.3 (detail), 16<sup>th</sup>  
C, ink on paper, 54" x 5",  
British Library, London.



Figure 15. "The chemical wedding"

Add MS 5025 fol. 3 (Detail), 16<sup>th</sup> C, ink and gold on paper, 54" x 5",  
British Library, London

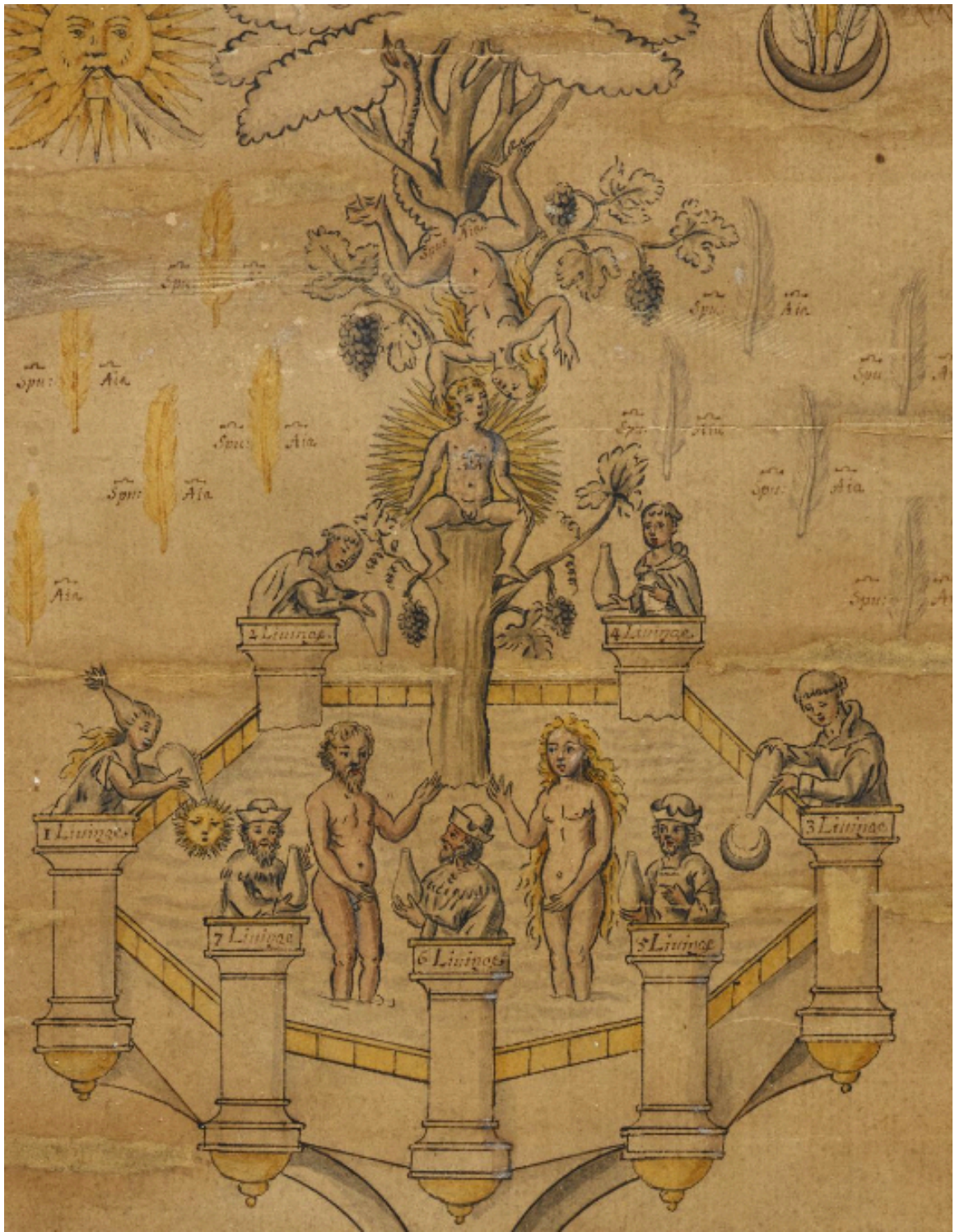


Figure 16. "The chemical wedding"

Add MS 5025 fol. 4 (Detail), 16<sup>th</sup> C, ink on paper, 50" x 5", British Library, London



Figure 17. "Alchemical (golden) child"

Add MS 5025 fol.3 (detail), 16<sup>th</sup> C, ink on paper, 54" x 5",  
British Library, London.



Figure 18. Add MS 5025 fol.3 (detail), 16<sup>th</sup> C, ink on paper, 54" x 5", British Library, London.



Figure 19. Add MS 5025 fol.4 (detail), 16<sup>th</sup> C, ink on paper, 54" x 5", British Library, London.





Figure 20.  
Frontispiece of  
De alchimia  
opuscula  
complura  
veterum  
philosophorum

QD25 D4, 1550,  
hand-colored  
woodcut,  
Beinecke Rare  
Book and  
Manuscript  
Library, Yale



Figure 21. Genealogical roll of the kings of England

Royal MS 14 B V(Detail), 1300-1340, ink and gold on parchment, 187" x 10", British Library, London



Figure 22. "Hermes oversees the wheel of alchemy " Add MS 5025 fol. 4 (Detail), 16<sup>th</sup> C, ink on paper, 50" x 5", British Library, London



Figure 23. "Wheel of Alchemy" Add MS 5025 fol. 1 (Detail), 16<sup>th</sup> C, ink on paper, 60" x 6", British Library, London



Figure 24. "Heptarchy" from the Genealogical rolls of the kings of England

Royal MS 14 B V)(Detail), 1300-1340, ink and gold on parchment, 187" x 10", British Library, London



Figure 25. "Heptarchy" from the Genealogical rolls of the kings of England

Royal MS 14 B VI (Detail), 1300-1340, ink and gold on parchment, 187" x 10", British Library, London



Figure 26. "Guthlac builds a chapel" from The Life of Saint Guthlac (Harley Roll Y 6) (Detail), 1175-1215, ink on parchment, 7" x 112" , British Library, London



Figure 27. "Benefactors at Guthlac's Shrine" from The Life of Saint Guthlac (Harley Roll Y 6) (Detail), 1175-1215, ink on parchment, 7" x 112", British Library, London



Figure 28. John Rous, “The Rous Roll” Add MS 48679(detail), 1483, ink on parchment, 276” x 13”, British Library, London





Figure 29. St. George Slaying the Dragon from Prayer Roll of Henry VIII  
 Add MS 88929, 1485-1509, parchment, 133" x 7", British Library, London

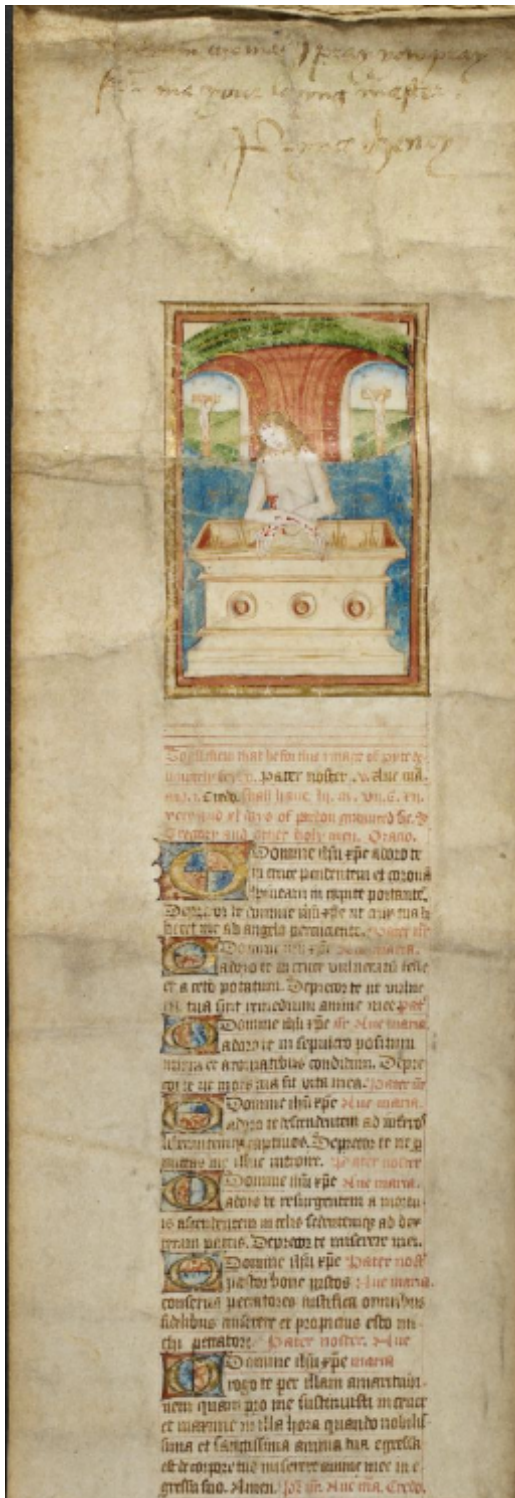


Figure 30. Christ as Man of Sorrows from Prayer Roll of Henry VIII

Add MS 88929, 1485-1509, parchment, 133" x 7", British Library, London



Figure 31. Astrological wheel with ourboros , Add MS 5025 fol. 3(Detail), 16<sup>th</sup> C, ink and gold on paper, 54" x 5", British Library, London

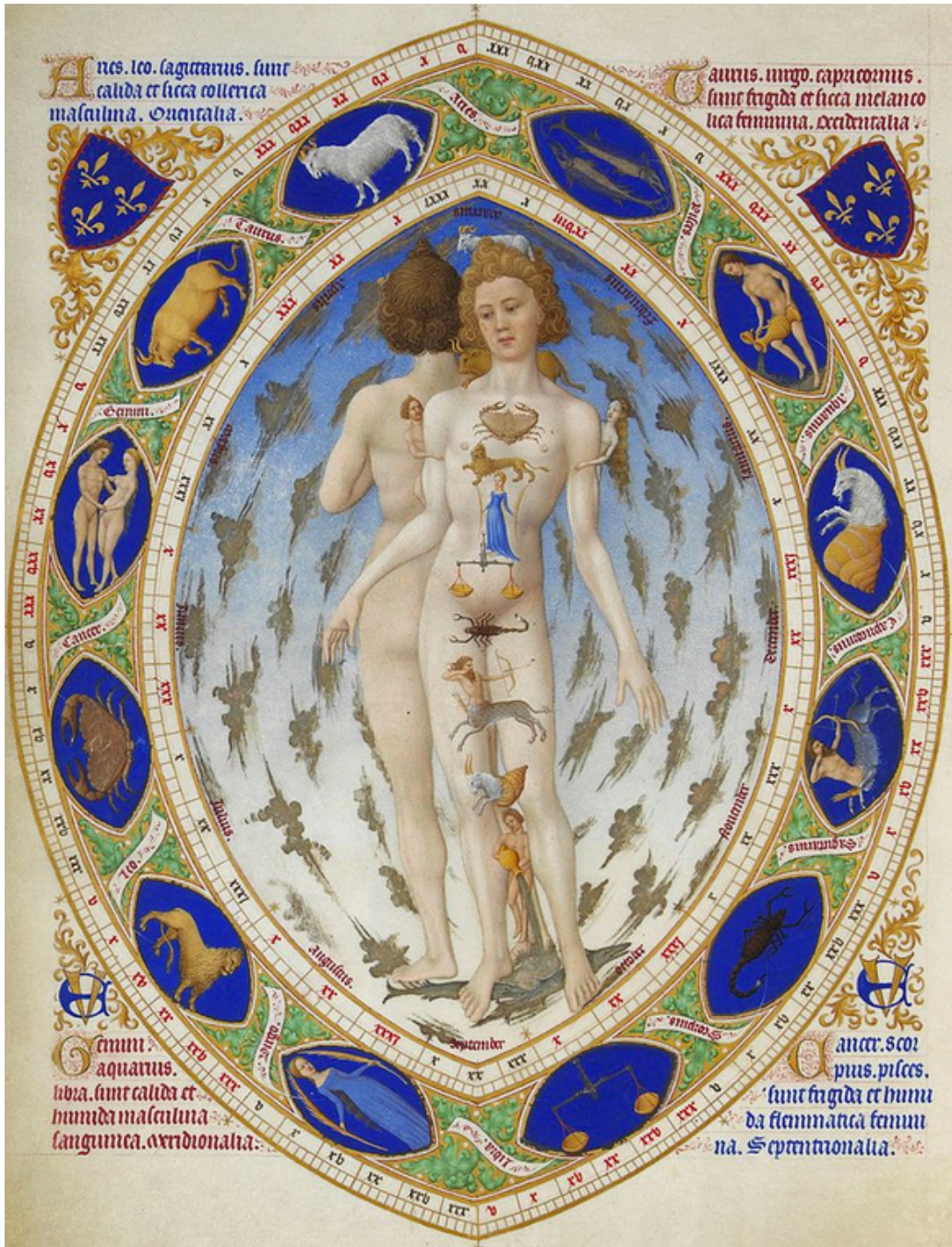


Figure 32. The Limbourg Brothers, Zodiac Man from the Tres Belles Heures du Duc de Berry (MS 11060-61), 1412-1416, ink and gold on paper. Bibliothèque Royale, Brussels.



Figure 33. Willem Vrelant, Adam and Eve Eating the Forbidden Fruit from the Arenberg Hours, early 1460s, tempera colors, gold leaf, and ink on parchment, 10" x 6" J. Paul Getty Museum, Los Angeles

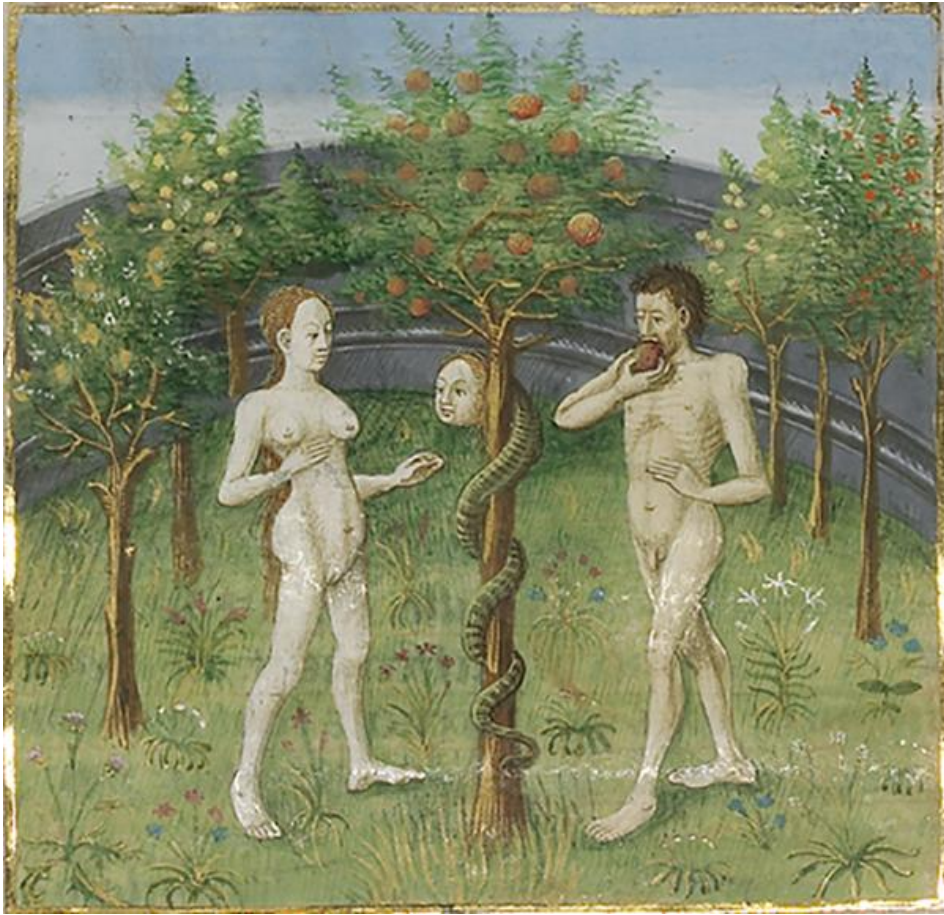


Figure 34. Master of the Oxford Hours , Adam and Eve Eating the Forbidden Fruit from the Oxford Hours, 1440-1450, tempera on parchment, J. Paul Getty Museum, Los Angeles



Figure 35. Tudor Rose, Add MS 5025 fol. 3 (Detail), 16<sup>th</sup> C, ink and gold on paper, 54" x 5", British Library, London



Figure 36. Elizabeth I's initials and Tudor Rose, fresco, St. Mary's Church, Berkley

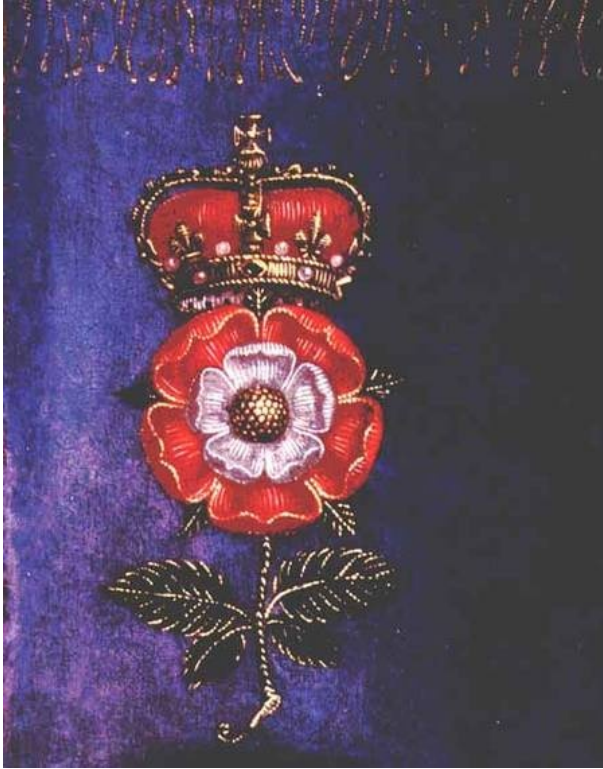


Figure 37. Crowned and slipped Tudor Rose

Nicholas Hilliard, *Pelican Portrait of Elizabeth I* (detail), circa 1574. Oil on panel. Walker Art Gallery, Liverpool.



Figure 38. Tudor Rose from Prayer Roll of Henry VIII (Add MS 88929), 1485-1509, parchment, 133" x 7", British Library, London





Figure 39. Arundel MS  
66, 1490 fol.201r.  
Parchment codex.  
British Library,  
London.



Figure 40. Arundel MS  
66, 1490 fol.40r.  
Parchment codex.  
British Library,  
London.



Figure 41. Nicholas Kratzer, astrological clock made for Henry VIII, circa 1530s. Hampton Court Palace, London.



Figure 42. Marcus Gheeraerts the Younger, *The Ditchley Portrait*, circa 1592. Oil on canvas. National Portrait Gallery, London



Figure 43. English school, Portrait of Queen Elizabeth I, *circa* 1580. Oil on panel. Christie's (international auction house).



Figure 44. Nicholas Hilliard, *Pelican Portrait of Elizabeth I*, circa 1574. Oil on panel. Walker Art Gallery, Liverpool.



Figure 45. Artist Unknown, Queen Elizabeth I of England flanked by Tudor Roses and Eglantine, 1588. Print (woodcut?)



Figure 46. George Gower, *The Armada* portrait of Queen Elizabeth I, circa 1590. Oil on panel.

VITA

Candace Marie Gilstrap

Candidate for the Degree of

Master of Arts

Thesis: THE RIPLEY SCROLLS: ALCHEMICAL PATRONAGE IN EARLY  
MODERN ENGLAND

Major Field: Art History

Biographical:

Education:

Completed the requirements for the Master of Arts in Art History at Oklahoma State University, Stillwater, Oklahoma in December 2016.

Completed the requirements for the Bachelor of Fine Arts in Graphic Design at The University of Tulsa, Tulsa, Oklahoma in 2014.