## LABYRINTH of RUINS

## Thomas Watson's <br> Self-Restoring Masterpiece

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Thomas Watson's Self-Restoring Masterpiece

## To my parents

Who provided me with a liberal education and encouraged the lifelong pursuit of learning

## Contents

Prologue ..... ix
Part I Introduction
1 Ruin and Restoration ..... 3
Part II Stage One: Love's Labyrinth
2 The Puzzle Sonnet ..... 43
3 Translation, Rhetoric, and Hermeneutics ..... 101
Part III Stage Two: Reason Prevails
4 The Auto-exegetical Restoration System ..... 159
5 The MY LOVE IS PAST Subsequence ..... 193
6 Decoding the Designs ..... 249
Part IV Stage Three: Man's Destiny
7 The Missing Sonnets: L90 Series ..... 275
8 A Plea and a Pledge: L64 Series ..... 311
9 The Link of the Universe: L39 Series ..... 339
10 The Epiphany: L50 Series ..... 373
11 Love's Double Destiny: L73 Series ..... 397
Part V Conclusion
12 A Mirror of Nature and Self ..... 421
Endnotes ..... 461

## Prologue

Thomas Watson's Hekatompathia (1582) contains an extraordinary puzzle that uses various devices-indices, intratextual links, the Ars Memoriae, semiotic figures, and cryptographic messages-to specify a new order for its sonnets. At a critical juncture, a cryptographic puzzle is presented that invites the reader to "decipher" a message encrypted by the "secret transposition of letters" using a specified set of tables. Once deciphered, this message sets the exegete on a labyrinthine journey that restores the work's scrambled sonnets to their true order. Once restored, many of the sequence's anomalies and self-contradictions dissolve, and a loose collection of poems is transformed into a structured, organic whole. Watson's puzzle has remained unsolved for four centuries-apparently those with the cryptographic skills required to solve it took no notice of it. Although the scale of Watson's literary use of cryptography is unprecedented, his aim was to do what poets have always done: create a strategic disruption between appearance and meaning, and to hide significands behind signifiers.

The Hekatompathia's puzzle might easily be dismissed as an eccentric or esoteric device of only marginal interest to the study of Elizabethan poetry. In fact, it reveals the fascinating structure that underlies this sonnet sequence and much about the process of poetic creation. The Hekatompathia practices "ruin and restoration," an established literary model in which a work's outward appearance and meaning diverge. Watson's puzzle is a complex contraption that allows one work to be hidden within another. This literary model was promoted by Erasmus in an adage in which he evokes the image of a "statue of Silenus," a reference to Alcibiades's use of that image in the Symposium. Alcibiades compares Socrates to a statue of Silenus, a figure that has the appearance of an ugly satyr on the outside, but once opened, reveals inner beauty. Solving the puzzle transforms a pedestrian sonnet sequence into a brilliant literary performance in which the poet presents a "golden world," the term Philip Sidney used to describe a poetic paracosm in his Defence of Poetry. The restored work contributes
to our understanding of Elizabethan and Jacobean poetics in two important ways: it exposes how a cosmological model can be coded into a poetic work, and how certain rhetorical and hermeneutic methods may be shrewdly practiced.

A precedent for the intentional misordering of a work is found in Alan of Lille's Anticlaudianus. James Simpson recognized its disorder and persuasively argues that its true order is obtained by the shifting several of its books from its end to its beginning. Although Alan's intentional corruption of his text is less radical than Watson's shuffling of many sonnets, both poets are playing the same literary game: the text is obfuscated in order to hide its meaning. This pushes the reader to an intense engagement with the details of the text and most importantly, with the overall architecture of the work.

The objective of this study is to solve Watson's puzzle, a step-by-step process that reveals the sonnet order that the poet intended for a future reader to discover. My goal, then, was to publish what is, effectively, a new Elizabethan sonnet sequence. Yet how can we be sure that this new order is the intended text of the poet? Might there be other pathways through Watson's unusual maze that lead to a different ordering of the sonnets? To avoid this uncertainty, Watson practices overdeterminism: multiple methods operate in parallel ensuring that the precise sonnet order that he intended can be recovered. The puzzle's most critical component in this overdeterminism is its cryptographic backbone, which allows mathematical validation of the work's new order-a type of proof rarely seen in literary studies. This cryptographic backbone acts like a combination lock: one can hypothesize a different sonnet order, but when that order is fed into the cryptographic system, it generates gibberish, an indication that the order is incorrect. The cryptographic technology behind Watson's system was developed in the fifteenth and early sixteenth centuries, and though primitive by modern standards, it has much in common with the technology that protects your online bank account. This combination of poetry and technology may seem strange, but the division between the arts and sciences is a modern perspective; in the medieval worldview, all arts and sciences were components in a universal system of knowledge.

Although the sheer scale of the Hekatompathia's textual corruption is astonishing, this study shows that the principles and methods that underlie Watson's ruin and restoration were widely practiced in the medieval and early modern periods. The Hekatompathia makes extensive use of reading practices and hermeneutic procedures promoted earlier in the century by Erasmus and Melanchthon. Another essential feature of Watson's poetics-unlike modern poetics-is its foundation in certain cosmological beliefs. The importance of Platonist natural philosophy in this
period is often underappreciated and therefore this study treats this subject at some length.

In most literary studies, the author freely chooses the scope and course of their investigation; here, however, I was forced to follow the poet's preestablished path through the puzzle that reorders the sonnets. Literary critics are not allowed to rearrange texts at will, and therefore I must extensively document the pathway through Watson's labyrinth, substantiating each turn that I navigate in this remarkable maze. This detailed rendering of the puzzle's solution requires the presentation of diagrams, tables, deciphered messages, mathematical formulae, and quantitative argument-hardly the norm for literary criticism. This material is much like a blueprint: it documents the work's many intratextual links, the cryptographic cross braces that stabilize it, and the structural walls that divide it into discrete segments. The Hekatompathia is like a clockwork, and in demonstrating its mechanism, details cannot be spared. Moreover, in order to meet this study's objective of establishing the restored sequence as the authoritative text, copious evidence must be presented. Although I believe that the cryptographic tests seal my argument, I recognize that few of the literary scholars in my audience will feel themselves competent to make judgments in an unfamiliar field. Therefore, I have also presented the conventional (non-cryptographic) evidence for the restored sonnet order as comprehensively and precisely as possible.

The complexity of Watson's system and the goal of establishing a definitive text have had unavoidable consequences for the content and form of this book. One obvious consequence is its length-far longer than I would have liked. I also faced certain difficulties in my efforts to faithfully reproduce the Hekatompathia's text. The puzzle is dependent upon certain bibliographic features of the original edition, and these features have only been re-typeset once in the last four centuries, in 1869. (The alternative, facsimiles of the original edition, are laborious to read.) This book typesets the original text along with its bibliographic features, one sonnet per page, alongside a facing commentary page. The trouble and expense of producing such a book is well outside the comfort zone of an academic press. After gaining acceptance of my manuscript at a major publishing house, the typesetting challenges could not be negotiated. In the end, I typeset the sonnet pages myself, under the guidance of an independent typesetter.

I came to literary criticism later in life, after retiring from a career in the computer industry. Although coming late to this challenging field has its disadvantages, sometimes a practitioner from another field brings a different perspective or skill set than that found among the field's usual practitioners. For example, the application of computer processing to texts
is practiced in the digital humanities (this study is unrelated to that field). In this instance, my experience in architecting complex systems, modeling, indexing, and cryptography were pivotal in solving Watson's puzzle. Computer programmers create their own small worlds that are highly structured and abide by rules, paracosms that spring from their minds-not entirely different from Sidney's idea of a "golden world." Thus, ironically, the skills and mindset of a modern-day engineer have some applicability to medieval systems-those hierarchical, complex behemoths built by lofty-minded idealists who sought to organize the entire world and all human knowledge.

The Hekatompathia's self-restoring system is unique, complex, and extensive, and when confronted with something that so deviates from the norm, a skeptical attitude comes easily. And yet, the Hekatompathia is not an aberration but a product of the medieval and early modern poetics that it practices, even as it takes those practices to their ultimate limit. Watson's extraordinary sonnet sequence and puzzle reveal the trade secrets of an Elizabethan poet-the very process by which the poet conceives the poem.

## Part II

## Stage One: Love's Labyrinth

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## 2

## The Puzzle Sonnet

The Hekatompathia's title page declares that the work is divided into two parts, which this study refers to as "Subsequences." The title page describes the second "part" or Subsequence as a long farewell to loue and all his tyrannie. The headnote of the last sonnet of the first Subsequence, Sonnet 79, states that the sonnets that follow are all made vpon this Posie, My Loue is past. This poesy then appears in bold capital letters, blazoned over every sonnet in the second Subsequence, which we refer to as the MLIP Subsequence. The first Stage of Watson's Puzzle appears on the first three pages of the MLIP Subsequence: his decision to place it at this, the work's critical dividing point, elevates the importance we attach to it. The three pages consist of Sonnets 80 through 82 , one on each page. However, Sonnet 80 (Fig. 2.1), though labeled as if it were the $80^{\text {th }}$ sonnet, is not actually a sonnet but the Puzzle's prose instructions. This contradicts the work's title: "Hekatompathia" promises "100 passions" but the work delivers only 99. Moreover, two headnotes appear to bolster this contradiction. ${ }^{1}$ This violation of decorum further alerts us to the significance of these instructions. A further suggestion of its significance is found in the illumination of its first letter; only two other illuminated letters appear in the work: the dedication to de Vere and the "To the frendly Reader" preface.

For convenience, Fig. 2.2 shows Sonnet 80 reset in modern type and reformatted so that its five enumerated "Points" are distinctly set off (the numbers 1 through 5 appear at the left margin in the original). Sonnet 81 (Fig. 2.3) is a sonnet whose shape has been strangely distorted. It is labeled A Pasquine Piller erected in the despite of Loue, a reference to a statue in Rome that was used to post anonymous messages, as later discussed. Sonnet 82 (Fig. 2.4) shows the same text as Sonnet 81, though reformatted into the sonnet's customary form. In his Point 2 (Fig. 2.2), Watson observes that if ye gather but the first letter of each line of the sonnet (referring to it in its customary form) except the last two, reading vertically
downward yields this poesy: amare est insanire (loving is madness). The same is true for the last letters of each line, making this sonnet a double acrostic poem.

L X X X.

## MY LOVE IS PAST.



7 3 I fuch ag are but of indifferent capacitife, and bause come faill in Arithmetike, by biefoing tyis bonnet follomints compiled by tule and numther, into the fozme of a pillet, map coane fuoge, bowe muth att t flube the gutboz baty betoterd in the fams. dathere
 wifl fet dobone, map be marked $\mathfrak{f u z}$ tbe peincipall, fiant man jaue fuct iole Leafute to looke it ouer, as the gutbout jad, when be ftamed ft. Jitit therione it is to be noted, that the whole piller (eriept the baity of toute theteof) is by relation of either balfe to tye otjer Antitheticall of Antifilabicall. Eeconoly, botw thíd poite (Amare eft infanire) tunneth tmpee theough out pe ©olumne, if pe gatter but the futt letter of euety whole berie pgoely (excepting the top laft) and then in like manize take but tje latt letter of euety one of thjz faido betfex, as the ftano. Thitrity is to hee obletued, that euect
3 an eut too tu, thowe he for though not aftre our accultomed manner. foultile, that filt of the piller is Orchematicall, $p^{t}$ is to fay, foundee bp tranfilititan of
(39: the lectet bettue whereof map be Leained in *Trithemius, as namelp be tables of trantitition to decepper any thing that if wait: ten bp fectet tranfpoftion of letterg, bee it netuer fo cunningly con: ueigheo. Gno lactly, this obiectuation is not to be negleteo, that
5 when ail the fozefaide particulaty ate perinued, the whole piller is but ittl 18 betces, as will appeace in tbe paige tollowing it, Per modum expanfionis.


Fig. 2.1 Sonnet 80: The Puzzle Sonnet instructions
(Reproduced from the 1869 edition)

ALL such as are but of indifferent capacitie, and haue some skill in Arithmetike, by viewing this Sonnet following compiled by rule and number, into the forme of a piller, may soone iudge, howe much art \& study the Author hath bestowed in the same. Where in as there are placed many preaty obseruations, so these which I will set downe, may be marked for the principall, if any man haue such idle leasure to looke it ouer, as the Authour had, when he framed it.

1. First therfore it is to be noted, that the whole piller (except the basis or foote thereof) is by relation of either halfe to the other Antitheticall or Antisillabicall.
2. Secondly, how this posie (Amare est insanire) runneth twyse through out ye Columne, if ye gather but the first letter of euery whole verse orderly (excepting the two last) and then in like manner take but the last letter of euery one of the said verses, as they stand.
3. Thirdly is to bee obserued, that euery verse, but the two last, doth end with the same letter it beginneth, and yet through out the whole a true rime is perfectly obserued, although not after our accustomed manner.
4. Fourthly, that the foote of the piller is Orchematicall, that is to say, founded by transilition or ouer skipping of number by rule and order, as from 1 to $3,5,7, \& 9$ : the secret vertue whereof may be learned in *Trithemius, as namely by tables of transilition to decypher any thing that is written by secret transposition of letters, bee it neuer so cunningly conueighed.
*Polygraphiae suae Lib. 5
5. And lastly, this obseruation is not to be neglected, that when all the foresaide particulars are performed, the whole piller is but iust 18 verses, as will appeare in the page following it, Per modum expansionis.

Fig. 2.2 Sonnet 80: Puzzle instructions reformatted for clarity

## $L X X X I$ ．

## MY LOVE IS PAST．

A Pafquine Piller erected in the despite of Loue．


Fig．2．3 Sonnet 81：Puzzle Sonnet in＂pillar＂format （Reproduced from the 1869 edition）

## $L X X X I I$ ．

## MY LOVE IS PAST．

## Expanfio Columna pracedentis．

A 9t laft，though late，farewoll olor metlada；A
m sqitth foz mífotaunce ftife op a netoe alatm； m
a Gind Ciprya la nemica mia a
$r$ Retees to Cyprus 7 te and ceale tye matt， r


$s \quad 30$ frames it with me now，that 7 confeff
$t$ Che life 3 ledoe in zoue deupyo of left
I It was a
n $\{202$ any mith life miferíg foelozn．n
$s$ Since therefole nom my worg ate merred lefl，s
a gind Reafon bios me leatue olde mellada，a

i S＇Ie thoole a path that thall not leade amex．i
$r$ 发eft then witty me from pout blínoe Cupids tatr r
e．本解 one of you，that fetue and mould be tree．e
тóv тót тúpa＝
＂＊）F＇is double thzall that líu＇s as Loue thinkg beit ＂ dubofe band ffill Tpzant líke to butt ig peet．


Fig．2．4 Sonnet 82：Puzzle Sonnet in customary format
（Reproduced from the 1869 edition）

Watson's reference to tables of transilition, the ability to decypher by secret transposition of letters, the suggestion of something cunningly conueighed (Fig. 2.2, Point 4), his sidenote referencing Trithemius's Polygraphia 5, and the title of Pasquine Piller (Fig. 2.3) all suggest the existence of an encrypted message. Wendy Phillips addresses the possibility of a hidden message:

> It seems extraordinary that Watson should have referred the reader to Trithemius merely to draw attention to the syllabic count of each line increasing by odd instead of consecutive numbers [in the base], and it is tempting to look for a message encoded along the lines of Trithemius's principles. But, given the existing complexity of the poem, it would be even more extraordinary had Watson managed to include yet another arcane device. $^{2}$

Phillips is skeptical that Watson could add a secret message ("yet another arcane device") to a sonnet that is already severely constrained by its double acrostic. It is hard to imagine, for example, that the direct application of Trithemius's tables to the acrostic amare est insanire would yield another short text. ${ }^{3}$ Nevertheless, as we will discover, Watson, by means of a clever trick, succeeded at this exactly. Indeed, he boasts in the first sentence of the instructions of howe much art \& study the Author hath bestowed upon this Puzzle Sonnet.

Roland Greene opines that the Puzzle is an appropriation of a "ritual event for fictional purposes." However, he does not specify what ritual is being appropriated, making it difficult to test his assertion. ${ }^{4}$ Nor is there much reason to expect a "ritual event," given that rituals are not found elsewhere in the Hekatompathia. On the other hand, there is every reason to read the prose instructions literally. Its five Points are delivered in simple declarative sentences that do not suggest any mystical or other nonliteral interpretation. The references to Orchematicall tables (Point 4 and Sonnet 81's sidenote), deciphering (Point 4), and Trithemius's Polygraphia 5 (Sonnet 80's sidenote) are details that are unlikely to have any purpose other than cryptographic. The Puzzle's length, specificity, and prominent position argue for its importance and bid the diligent reader to undertake Watson's challenge. However, scholars who study the history of cryptography appear not to be aware of the Hekatompathia, and to my knowledge, no one has previously attempted to solve the Puzzle.

## Puzzle-solving: An inductive process

Puzzle-solving requires an inductive reasoning process that begins with inferences and ends with a hypothesized solution that is quickly recognized (if the puzzle is well-designed) as being the correct solution. This recognition of a puzzle's validity is based on the solution providing a sense of coherence-puzzles begin in contradiction or disorder, but end in order. The following riddle, perhaps the most prolific folk riddle in the twentieth century, illustrates this point:

## What is black and white and red all over?

This riddle is meant to be delivered orally: the word pronounced "red" may be either the color red or its homophone, a participle of the verb "to read." When we hear this riddle, we instinctively hear the color red because it follows the naming of two other colors. To answer the riddle, one must overcome this association and instead recognize red as "read." The riddle's solution is a newspaper, whose print is black on white paper and "read" all over. The earlier mention of two colors causes the homophone red/read to be discerned as "red" rather than "read." This is known as a riddle's "block" or "distraction" because it impedes the recipient of a riddle from finding the solution. Once the block is recognized, the incoherence of how something can be black and white and "red" dissolves, and the solution appears to be correct, in part because reading a newspaper is such a common act. Although other less common solutions may be possible-a scanner reading a bar code-we feel that we have arrived at the correct solution to the riddle.

At the outset of tackling a puzzle, the puzzle-solver must adopt this fundamental assumption: the puzzle was designed in such a way as to allow the puzzle-solver to find its unique solution. This is true for virtually all puzzles because if a puzzle is not solvable, then it provides nothing more than frustration, and if the solution is not unique, then the puzzle is inelegant, with its multiple answers providing no sense of completion. This fundamental assumption is essentially a hypothesis that coherence can be found, and it is often the starting point in an inductive reasoning process. Scientists begin with a similar assumption: they presume that their observations of nature will cohere to some model.

Typically, a puzzle's rules are not overly elaborated (if at all), and this leaves the puzzle-solver with many-indeed, too many-degrees of freedom. Therefore, the puzzle-solver seeks reasonably simple or straightforward solutions, following a principle somewhat akin to that of Occam's Razor. We will see that, in Watson's Puzzle, most of the assumptions undertaken in solving it are reasonably straightforward.

Why is it that after one has found the solution to a well-designed puzzle, one usually feels relatively certain that it is the unique solution intended by the puzzle's creator? Most often it is because the answer appears to be simple: the disorder initially presented is reduced to a simple, ordered state. The same is true of cryptographic puzzles: they are not validated during the process of solving them, but only after the solution is in hand, through a mathematical procedure that measures complexity or information. Such a validation process is fundamentally different from the deductive method that we find in mathematical proofs. Deductively proven claims, such as "the sum of the angles of a triangle is equal to 180 degrees," provide a fully guaranteed certainty; in contrast, induction leads to a probability assessment. That probability may be so high that we describe the claim as a "certainty," but mathematicians would object, saying that the word "certainty" should be applied only to deductively proven arguments.

Induction is the principle investigatory method in the empirical sciences, and indeed, the empirical study of nature, based on sensory data, is on the rise in this period. Nature, as God's creation, was thought to mirror the divine, and thus by "reading the book of nature," one could make inferences about the divine. Similarly, the poet, viewed as the creator of his own small imaginary world, writes with an expectation that the reader will come to understand this fictive world by means of an inductive process. Interpretation usually begins with an inference or conjecture that is necessarily provisional until it is later validated by examining its applicability to a broader range of the text's passages and structures.

## The misordered Puzzle Sonnet

As previously discussed, puzzles and riddles often have a block, an apparent contradiction that must be resolved. If one examines the Puzzle's instructions, the Points listed in Fig. 2.2, a contradiction is immediately evident in Point 3, which states that through out the whole a true rime is perfectly obserued, although not after our accustomed manner. "Accustomed manner" must refer to the work's standard ababcc/dedeff/ghghii rhyme scheme. This rhyme scheme is followed in all of the work's 94 English-language sonnets, excluding only the Puzzle Sonnet. ${ }^{5}$ The Puzzle Sonnet does not adhere to any sort of rhyme scheme. However, as Wendy Phillips has observed, it does include potential rhymed endings for every line:

The meter is impeccably maintained but the rhyme conforms neither to his "accustomed manner" nor to any recognizable scheme. ... Yet if one admits the pronunciation of mia with a long "a" no end-word remains without its rhyming counterpart, although that may be considerably separated from it: a,b,[a],c,b,d,e,f,g,h,e,a,h,g,c,d,f,f. ${ }^{6}$

In the worst case, the distance between the "c" rhyme of warr and carr stretches from line 4 to line 15 , an absurdly long gap between rhymed lines. I have calculated the average gap between rhymed lines in this sonnet to be 4.7 lines. ${ }^{7}$ This is surely unsuitable for any rhyme scheme, per se, because the human ear generally will not pick up a rhyme after three or four unrhymed lines are heard. Indeed, if one calculates what the gap would be if the poem's lines were ordered by a random process, the average gap would be 4.2 lines. ${ }^{8}$ Thus the actual average gap of 4.7 lines is slightly worse than random. In the rhyme pattern given in the above Phillips quotation, there are 6 pairs of rhymed endings ( $\mathrm{b}, \mathrm{c}, \mathrm{d}, \mathrm{e}, \mathrm{g}, \mathrm{h}$ ) and 2 triplets ( $\mathrm{a}, \mathrm{f}$ ), accounting for all 18 lines. The triplets make it impossible for this sonnet to follow the Hekatompathia's customary rhyme scheme, which requires 9 pairs of rhymed endings and permits no triplets. Watson acknowledges this in Point 3 (although not after our accustomed manner). Thus, the Puzzle Sonnet is unique among the sequence's English sonnets, failing to adhere to the rhyme scheme of the other 93 English sonnets. Yet, curiously, Watson insists that throughout the Puzzle Sonnet, a true rime is perfectly obserued (Point 3). This is clearly contradicted by the worse-than-random gap between rhymed lines. Such a large gap between rhymes is well outside of any known practice, and further, it could not possibly fulfill the purpose of the rhyme, an enhanced sense of flow and rhythm.

There are other indications that the lines are misordered. The sonnet lacks any recognizable structure, and sonnets are invariably a highly structured form. ${ }^{9}$ Another difficulty is that its order of events appears to be inverted: it begins with a dismissal of love (farewell olde wellada; 1) and ends with love's hand pressed upon and hurting the speaker (18). Given that the Subsequence describes a fall from Love and all his lawes (79.HN), the sonnet ought to instead start with the speaker being pressed by love's power and end with love's dismissal. The sonnet's final couplet, in which love presses upon the speaker, is at odds with the other ending couplets of the MLIP sonnets, virtually all of which affirm the speaker's freedom from love. It is surprising that the concluding couplet of this first sonnet of the Subsequence contradicts the Subsequence's overall theme.

Watson's apparently counterfactual statement that the Puzzle Sonnet exhibits true ryme ... perfectly observed is an obvious block. Riddles, popular in this period, are usually built upon a series of contradictions. Archer Taylor writes:

The literary riddle ordinarily contains a long series of assertions and contradictions. ... The first assertion and its denial are almost certain to conflict with the next pair. Yet the author goes on and on, while his conception becomes more and more incoherent. ${ }^{10}$

Riddles are solved by resolving their stated contradictions. In word riddles, this is often accomplished by changing the context in which the riddle's words are understood, as in the above folk riddle. In the case of the Puzzle Sonnet, the putative rhyme scheme will only appear if we reorder the sonnet lines. True, Watson does not explicitly tell the reader to reorder the sonnet lines. However, it would have been inelegant and contrary to the style of puzzles for him to state this directly. And yet, Watson hints at this demand in his Point 5:
> [T]hat when all the foresaide particulars are performed, the whole piller is but iust 18 verses, as will appeare in the page following it, Per modum expansionis. [bold added]

These foresaide particulars refer to the prior 4 Points, which include descriptions of work done by the poet in framing his Puzzle: the two matching acrostics; the inverse relationship between the top half and bottom half of the pillar (excluding the base); and the syllable count of the base (1, 3, $5,7,9)$. Yet, these foresaide particulars also leave work for the reader: the secret vertue that may be learned from Trithemius that allows for deciphering (Point 4) is not disclosed. The reader is also left with a contradiction: through out the whole a true rime is perfectly observed (Point 3). The puzzle-solver, if cognizant of the puzzle genre, will recognize this false statement as a cue to rectify the lack of a rhyme scheme. The only way to accomplish this is to reorder the Puzzle Sonnet's lines-the Puzzle's first challenge. It has the effect of generating new acrostics that, as we will later discover, encipher a Latin message.

## Reordering the Puzzle Sonnet

The reordering of the Puzzle Sonnet requires that we find an order that has a reasonable flow from line to line, adheres to a reasonable but unknown rhyme scheme, and is generally consistent with the style and themes of the overall sequence. The task of reordering a poem's scrambled lines is not only difficult, but in some circumstances would be impossible; for if the flow from line to line resembles free association, then multiple orders might be equally valid. At first, the task appears daunting because 18 lines may be reordered in 6,402,373,705,728,000 (18 factorial) permutations. However, sonnets are a structured form, and this significantly eases the task of reordering its lines. If, for example, the sonnet was clearly structured as two 9-line halves, then each half would have a more manageable number of permutations: 362,880 (9 factorial). A principle of computer science can be applied here. Reordering is essentially sorting, and one well-known method of sorting is the so-called
"bucket sort." In this procedure, a rough sort into buckets (subsets) is first performed, followed by independent sorts within each bucket. This procedure will be applied in our reordering of the Puzzle Sonnet.

Before attempting to discover the Puzzle Sonnet's true order, we should enumerate the conditions that we expect to be met by the sonnet in its reordered state. These conditions or "Rules" are:

1. It must adhere to a plausible rhyme scheme.
2. The flow from one line to the next must be logical and grammatical, as is the case in Watson's other sonnets.
3. For each line, the division of syllables must respect the boundaries of the Pillar Sonnet. That is, multisyllable words cannot overgo the end of any of the Pillar Sonnet's 28 lines.
4. Sonnets are a structured form, and Watson states that one half of the Puzzle Sonnet is antithetical to the other (Point 1). Thus, our reordered sonnet should exhibit structure, a requirement of the sonnet genre.
5. The reordered sonnet, which is the lead sonnet of the MLIP Subsequence, must be thematically consistent with that Subsequence it introduces.

Reordering the sonnet is difficult because there is no methodical approach for applying these Rules to the trillions of possible line orders. It is a problem akin to cracking the combination of a safe, where one must guess at a series of numbers, and only after dialing in every number of the series can one check to see if the safe will open. It would be relatively easy to crack a safe if after dialing in each number individually, one could determine whether that single number is correct (e.g., by hearing a tumbler fall). Similarly, the challenge in reordering the sonnet lines is difficult because one cannot determine whether the position of any one line is correct independently from the others. Only with a complete reordering of all lines is it possible to fully test the validity of the reordering.

In my attempt to reorder the Puzzle Sonnet's lines, I spent endless hours unmethodically trying countless possibilities until finally one strategy for reordering the sonnet emerged. Point 1 states that the whole pillar (except the basis or foote thereof) is by relation of either halfe to the other Antitheticall or Antisyllabicall. The opposed relationship of the first 12 lines of the Pillar Sonnet (81) to the next 12 lines is clearly visible in its syllable counts, which increase from 1 to 12 and then decrease from 12 to 1 . The relationship between these two halves is thus obviously antisyllabicall, but Watson also adds the word antitheticall. The OED lists the Hekatompathia as the first to use the word "antithetical" and defines it as the use
of "antithesis," that is, the "opposition or contrast of ideas" (OED 1). Although Watson's use of the word antitheticall may be merely redundant of antisyllabicall, it is also possible that he intends it as a hint that the sonnet is structured as two thematically opposite halves. This would hardly be surprising because sonnets are often structured around two opposing views. Adopting this hypothesis seemed warranted given Watson's probable hint and the dialogic nature of the sonnet form. In any event, following the inductive process that puzzles require means, at some point, one must undertake assumptions, and this one seemed to be a reasonable one with which to start.

Watson appears to exclude the base of the sonnet from the two halves: except the basis or foote thereof. The base consists of 24 syllables ( $3+5+$ $7+9$ ), a little more than two lines of 10 syllables each. We can only reorder whole lines and therefore must assume the base to be either 2 or 3 lines. We make the more likely assumption of a base of 2 lines because this fits best with the sonnet form, which often ends in a rhyming couplet. This base of only 2 lines is too small to introduce a third theme, or even deliberate between the opposing themes of the 2 halves. Indeed, a structure, consisting of two large halves of 8 lines each, followed by a couplet that injects a new idea or attempts mediation, would be an unbalanced structure. ${ }^{11}$ More likely, and consistent with the sonnet form, the couplet ought to provide a strong conclusion, but not introduce any new ideas.

Let us begin by considering what thesis might divide the sonnet into two antithetical halves. This sonnet is located at the boundary of the two Subsequences, the first of which describes the speaker's suffering under love's power, and the second describes the speaker's escape from love. From this, we might hypothesize that the sonnet's two antithetical themes are (1) the speaker still living under love's tyranny and (2) the speaker being free of love's tyranny. This is consistent with a cursory review of the sonnet's lines: some depict the speaker suffering under love while others show him free from love. We might further hypothesize that the order of these two halves is consistent with the order of the two Subsequences: the speaker first suffers under love and then escapes it. Let us adopt this as our working assumption.

A brief reminder about the inductive process is warranted. In the actual practice of solving a puzzle, one makes many wrong assumptions along the way-mistaken paths through the labyrinth that lead nowhere. In presenting a puzzle's solution, however, these errant paths are not discussed because to do so would be both pointless and tedious. I make no claim that the assumptions presented here are the only possible ones, or even the best ones, only that they are reasonable. Proof that these assumptions are correct only comes when one exits the labyrinth.

Let us now consider the base, the sonnet's ending couplet. The final couplet in the published order is as follows:

> H'is double thrall that liu's as Loue thinks best Whose hand still Tyrant like to hurt is prest.

This depicts the speaker as still living under love's thrall and therefore, under our working assumption, belongs in the first half of the sonnet and not at its end. Moreover, this couplet, as it stands, is inconsistent with the other concluding couplets in the MLIP Subsequence, virtually all of which indicate that love has been dismissed. Finally, these two lines are part of a triplet rhyme (with line 8), an uncommon way of ending a sonnet. The Puzzle Sonnet contains 6 rhyme pairs and 2 rhyme triplets, as previously discussed. These rhyme groups are assigned numbers in Fig 2.5. The assigned Pair numbers and Triplet numbers are arbitrary; the order in which the lines are presented is also arbitrary.

| It was a Hell, where none felt more then I, I'le choose a path that shall not leade awri. | $\begin{aligned} & \text { Pair } 1 \\ & (9,14) \end{aligned}$ |
| :---: | :---: |
| So frames it with me now, that I confess | Pair 2 |
| Since therefore now my woes are wexed less, | $(7,11)$ |
| Rest then with me from your blinde Cupids carr Retyre to Cyprus Ile and cease thy warr, | Pair 3 $(15,4)$ |
| Each one of you, that serue and would be free. Pair 4 |  |
| Enforce to flight thy blyndfold bratte and thee. | $(16,6)$ |
| Els must thou proue how Reason can by charme | Pair 5 |
| Mirth for mischaunce strike vp a newe alarm; | $(5,2)$ |
| No longer shall the world laugh me to scorn: | Pair 6 |
| Nor any with like miseries forlorn. | $(13,10)$ |
| The life I ledde in Loue deuoyd of rest | Triplet 1 |
| H'is double thrall that liu's as Loue thinks best |  |
| Whose hand still Tyrant like to hurt is prest. | $(8,17,18)$ |
| At last, though late, farewell olde wellada; * | Triplet 2 |
| And Ciprya la nemica mia $\dagger$ |  |
| And Reason bids me leaue old wellada, | $(1,3,12)$ |
| * wellada: a lamentation $\dagger$ and Venus my enemy |  |

* wellada: a lamentation $\dagger$ and Venus my enemy

Fig. 2.5 Puzzle Sonnet rhyme groups

Let us try to find a good candidate for the concluding couplet among the 6 rhyme pairs in Fig. 2.5. In Pair 1, the speaker has yet to leave love; in Pair 2, he is about to make a confession-no way to conclude a sonnet; Pairs 3 and 4 call out to others-neither sounds conclusive; Pair 5 is deliberative; in Pair 6, however, the speaker makes a bold declaration that applies both to himself and others, striking a note of finality. Let us make another working assumption, that Pair 6 is the concluding couplet in the restored order.

We will now divide the sonnet into two halves, as best we can, in accordance with our hypothesized thematic division. In performing this division, we reorder pair and triplet rhymes as a unit because presumably these lines are proximate to each other. However, this assumption is only adopted on a preliminary basis: it may not hold because a rhyme group could transcend the two halves of the sonnet. In the first half of the sonnet, we might expect to find lines that look back at the speaker's sufferance under love, his condition in the first Subsequence. One rhymed pair and one triplet show the speaker reflecting upon his past condition and therefore ought to fall in the first half of the sonnet:


Fig. 2.6 Lines assigned to first half of the Puzzle Sonnet

In Pair 1, the first line describes the speaker's most intense pain (Hell) in the past tense, and its other line (I'le choose a path) indicates that he has not yet made the decision to leave love-both reasons to assign Pair 1 to the sonnet's first half. Similarly, Triplet 1 describes intense pain (devoyd of rest) in the past tense; continued pain in the present (to hurt is prest) seems to indicate that the speaker is not yet free of love. For these reasons, we assign this triplet to the first half. All 5 lines in Fig. 2.6 appear to come before the speaker's complete abandonment of love and therefore ought to fall in the first half. This leaves us 3 lines short of the 8 lines needed for the first half. Later we will discover that these lines are part of a transition between the two halves.

The 5 lines in Fig. 2.6 look back to the prior Subsequence and therefore seemed good candidates to occupy the first 5 line positions of the reordered sonnet. After giving consideration to logical sense, likely rhyme
schemes, and the restrictions on syllable boundaries, I found only one possible order:

| The life I ledde in Loue deuoyd of rest | (8; Position 1) |
| :--- | :--- |
| It was a Hell, where none felt more then I, | (9; Position 2) |
| H'is double thrall that liu's as Loue thinks best | (17; Position 3) |
| Whose hand still Tyrant like to hurt is prest. | (18; Position 4) |
| I'le choose a path that shall not leade awri. | (14; Position 5) |

Now let us consider which lines are likely to fall in the second half of the sonnet. In accordance with our working assumption that the second half of the sonnet depicts the speaker as free from love's tyranny. There are 3 rhymed pairs that fit this criterion:

| Rest then with me from your blinde Cupids carr <br> Retyre to Cyprus Ile and cease thy warr, | Pair 3 <br> $(15,4)$ |
| :--- | :--- |
| Each one of you, that serue and would be free. |  |$\quad$| Pair4 |
| :--- |
| $(16,6)$ |
| Enforce to flight thy blyndfold bratte and thee. |

Fig. 2.7 Lines assigned to second half of the Puzzle Sonnet
In Pairs 3 and 4, the speaker also calls on others to abandon love: Rest then with me from your blinde Cupids carr (15); Enforce to flight thy blyndfold bratte and thee (6). Presumably, these calls to others to join the speaker in a love-free state ought to occur only subsequent to the speaker's departure from love and thus fall in the second half. Pair 5 asserts that the speaker is bound to Reason and therefore has some immunity from the temptation (newe alarm) to return to love. Of course, this must refer to a time subsequent to the speaker winning his freedom from love. All 3 pairs are consistent with Pair 6, our assumed final couplet, in which the speaker vows that he will never again suffer under love, and neither will others if they heed his call to abandon love.

We have now assigned 5 lines to the first half leaving 3 unassigned places, and 6 lines to the second half leaving 2 unassigned places. These 5 unassigned places must be filled with our 5 unassigned lines, the one remaining triplet and the one remaining pair:

| At last, though late, farewell olde wellada; | Triplet 2 |
| :--- | :--- |
| And Ciprya la nemica mia |  |
| And Reason bids me leaue old wellada, | $(1,3,12)$ |
| So frames it with me now, that I confess  <br> Since therefore now my woes are wexed less, Pair 2 (7,11) |  |

## Fig. 2.8 Lines that remain unassigned

Assuming our work to this point is correct, these 5 lines must span the two halves, with 3 lines falling in the first half and 2 in the second half, as shown in Fig. 2.9.


Fig. 2.9 Division of Puzzle Sonnet into halves

Returning to Fig. 2.8, in line 1 of Triplet 2 the speaker bids farewell to love (wellada). This avowal in the present tense belongs in the second half of the sonnet because the speaker's mind is finally resolved. Line 12 belongs in the first half because the speaker is still contemplating leaving love in the future. Line 3's position cannot be distinguished based on its content. We now consider Pair 2 in Fig. 2.8. One of its lines, Since therefore now my woes are wexed less (11), depicts the speaker still deliberating about leaving love, and therefore it belongs in the first half. Pair 2's other line, So frames it with me now, that I confess (7), includes the significant word, confess. In a period of intense religious warfare and confessionalism, the word confess in the present tense implies that the moment of avowal or conversion is at hand. The word now adds to the sense of immediacy of this confession. The speaker is here announcing his farewell to love, making this line a good candidate to be positioned as the first line of the second half. This position is known as the volta in a Petrarchan sonnet. The first line of a Petrarchan sonnet's sestet (the second stanza) is thought of as a volta (jump) from the octave (the first stanza).

Where does this leave us? We have assigned line 12 (Triplet 2) and line 11 (Pair 2) to the first half, filling 2 of the 3 open positions. We have assigned line 1 (Triplet 2) and line 7 (Pair 2) to the second half, filling both of the 2 open positions. The one line whose position could not be distinguished, line 3 (Triplet 2), can now be assigned to the only open position, which is in the first half. This summarizes our sorting of these 5 lines into the two halves (the position of lines within each half is arbitrary):

First half:<br>Since therefore now my woes are wexed less<br>And Ciprya la nemica mia<br>And Reason bids me leaue old wellada,

## Second half: <br> At last, though late, farewell olde wellada; <br> So frames it with me now, that I confess

The number of permutations is now vastly reduced. For the two second half lines, there are only two possible orders. The word confess (7), meaning "avow," indicates that this line ought to precede the speaker's dismissal of love: At last, though late, farewell olde wellada (1). This is consistent with the prior discussion in which line 7 was determined to be the volta, the first line of the second half. Then, the order that begins the second half is:

> So frames it with me now, that I confess
> At last, though late, farewell olde wellada;

We now consider the 3 lines above that end the first half. There are 6 possible orders for these three lines. Let us begin by considering which line might precede line 7, the first line of the second half. The words so frames (7) limits the choice of the preceding line. The word "frames" (OED, 5c, "to shape the action, faculties, or inclinations of a person") refers to the forces acting upon the speaker's mind prior to the speaker's avowal. Neither line 11 nor 12 fits prior to line 7 , however, line 3 fits perfectly: placing it before line 7 specifies Venus, or love's painful effects, as the force that frames the speaker's mind to depart from love. Now only the order of lines 11 and 12 must be determined. If line 11 is placed first, then the rhyme scheme is an awkward abbba-a triple repetition of a rhyme; if line 12 is placed first, then the rhyme scheme is a reasonable ababa. We now have reordered lines 6 through 10 of the sonnet:

| And Reason bids me leaue old wellada, | $(12 ;$ Position 6) |
| :--- | ---: |
| Since therefore now my woes are wexed less, | $(11 ;$ Position 7) |
| And Ciprya la nemica mia | $(3 ;$ Position 8) |
| So frames it with me now, that I confess | (7; Position 9, the volta) |
| At last, though late, farewell olde wellada; | $(1 ;$ Position 10) |

We now turn our attention to line positions 11 through 16, the remainder of the second half of the sonnet. From Fig. 2.7, Pairs 3, 4, and 5 provide the 6 lines that we must now order. A careful examination of Pair 5 will show that it is a continuation of the speaker's avowal, At last, though late, farewell olde wellada. Pair 5 is presented as contiguous and in its likely order:

Els must thou proue how Reason can by charme Mirth for ${ }^{12}$ mischaunce strike vp a newe alarm;
(Position 11)
(Position 12)

The speaker declares that his vow will hold unless (Els) you can proue to him that Reason can once again be overtaken by (a lover's) charme. Only then might pleasure (Mirth) or ill-luck (mischaunce) initiate a new war (alarm means a call to arms). The implication is that the speaker has embraced Reason, and he is safe as long as Reason is immune from a beloved's charm.

Only Pairs 3 and 4 remain unassigned, and only positions 13 through 16 are open. Pairs 3 and 4 have this in common: they call upon others to join the speaker in his avowal to forswear love: Each one of you, that serve love should remove yourself from Cupid's carr, and enforce to flight thy blyndfold bratte [Cupid]. Restrictions of rhyme order, logical flow, and syllable boundaries allow for only one ordering of these 4 lines from Pairs 3 and 4:

| Retyre to Cyprus Ile and cease thy warr, | (Position 13) |
| :--- | :--- |
| Enforce to flight thy blyndfold bratte and thee. | (Position 14) |
| Rest then with me from your blinde Cupids carr | (Position 15) |
| Each one of you, that serue and would be free. | (Position 16) |

The reordering of Sonnet 82, presented in Fig. 2.10, is now complete.
$\begin{array}{lr}\text { The life I ledde in Loue deuoyd of rest } & \\ \text { It was a Hell, where none felt more then I, } & \\ \text { H'is double thrall that liưs as Loue thinks best } & \\ \text { Whose hand still Tyrant like to hurt is prest. } & \\ \text { I'le choose a path that shall not leade awri. } & \\ \text { And Reason bids me leaue old wellada, } & \\ \text { Since therefore now my woes are wexed less, } & \\ \text { And Ciprya la nemica mia } & \\ \text { So frames it with me now, that I confess } & \\ \text { At last, though late, farewell olde wellada; } & \\ \text { Els must thou proue how Reason can by charme } & \\ \text { Mirth for mischaunce strike vp a newe alarm; } & \\ \text { Retyre to Cyprus Ile and cease thy warr, } & \\ \text { Enforce to flight thy blyndfold bratte and thee. } & \\ \text { Rest then with me from your blinde Cupids carr } & 15 \\ \text { Each one of you, that serue and would be free. } & \\ \text { No longer shall the world laugh me to scorn: } & \\ \text { Nor any with like miseries forlorn. } & \end{array}$
Fig. 2.10 Reordered Sonnet 82
Restored to its true order, Sonnet 82 shows a progressive development that allows for some confidence in our reordering. (Full confidence will come after deciphering the message that results from this reordering, later in this chapter.) The first 4 lines describe the torments of living under love's influence, which include restlessness (1), being subject to a double thrall (3), and painful oppression (4). In the next 4 lines, the speaker declares that he will leave love (5) and then gives reasons for leaving: Reason has led him to this decision (6); he is now in less pain (7); Venus has in some way affected his thinking (8). The second half begins with the volta, a declaration that he is now making a confession (9) and his declaration that he has at last left love (10). In the next two lines (11-12), anticipating an (unstated) objection that he might yet return to love someday, he explains that his adherence to Reason will likely prevent any such possibility. In the next 4 lines, he calls for others to follow his lead in abandoning love. In the sonnet's final 2 lines (the base section), he concludes that love will no longer control his life or that of others.

The sonnet exhibits both a logical and chronological flow. The speaker begins by telling us of his past pain in love, an obvious starting point. Moving forward in time, using the present tense, he declares his departure from love. Finally, looking to the future, he calls on others to follow his course. Any change to the order of these sections would break the logical flow of the poem. The progressive development of the reordered Sonnet

82 fits perfectly with its role as the lead sonnet of the MLIP Subsequence. As we will discover in chapter 5, the MLIP Subsequence follows roughly the same course set by Sonnet 82: beginning with sonnets that describe the woes of love, followed by sonnets that scoff at love, and lastly sonnets that call for others to abandon love. Thus the course of topics in Sonnet 82, the lead sonnet of the Subsequence, foreshadows the course of topics presented in the Subsequence.

Although we reordered the sonnet using a procedure whose starting point was a division into halves plus a closing couplet (the base), other procedures may have produced the same result. For example, a recognition of the sonnet's chronological and logical flow without first dividing it may have achieved the same result. The task of reordering turns the puzzlesolver into a quasi-poet-a "maker" in Sidneian terms. The puzzle-solver becomes engaged with the text at a detailed level in order to understand its structure and even its line-to-line ordering. The reader is made to wander through this labyrinthine Puzzle, and perhaps this makes for some affinity with the sonnet speaker, who is also a wanderer.

How can we be sure that our reordering is exactly the reordering intended by the poet? Ordinarily we would have no way of knowing whether our reordering is the uniquely correct solution; however, because the sonnet hides a cryptogram, and that cryptogram depends upon the sonnet being correctly reordered, the reordering can be verified. Next, we will decipher the cryptogram and, with the result in hand, validate it mathematically. Because an incorrect reordering would produce gibberish instead of an intelligible message, this mathematical test will not only validate the cryptogram but also validate the reordering of the Sonnet 82. Watson has ingeniously set before the reader a literary problem-the sonnet reordering -along with a mechanism for definitively verifying whether the reader has correctly performed their task. What other poet, long after his life has past, is nevertheless able to approve or disapprove of his reader's interpretation?

## The Cryptography of the Polygraphia

Prior to resuming our efforts to solve the Puzzle's first Stage, a brief description of the Polygraphia 5's cryptography is needed. This section does not assume that the reader has any prior knowledge of cryptography. Following this section is a discussion of the method by which cryptograms are validated, an essential argument of this study. First, an explanation of a few cryptographic terms used throughout this study will be provided. "Ciphertext" refers to an enciphered text that usually appears to be gibberish. Ciphertexts often lack word boundaries and are therefore conventionally presented in groups of 5 letters as shown:

## XJCDA BAEZW KLURD

"Plaintext" refers to the original message, a plainly readable text. A plaintext is enciphered to produce a ciphertext; a ciphertext is deciphered to produce a readable plaintext, as shown in Fig. 2.11.


Fig. 2.11 Encipher and decipher processes
The deciphering of a ciphertext may either be authorized-as when an official legitimately has access to the tables needed to decipher a messageor unauthorized-as when someone uses cryptographic techniques to crack a cipher. An unauthorized person who discovers cipher tables by technical tricks (e.g., cracking a cipher by frequency counting or other means) is known as a cryptanalyst.

Ciphering and deciphering in the Renaissance were typically performed using tables that substitute one character for another. For example, whenever an "A" appears, it is substituted with a " $K$ "; whenever a " $B$ " appears, it is substituted with a "T," and so on. Trithemius refers to such a substitution scheme as a "table" (tabula) or "Alphabet" (alphabetum), and the process of enciphering or deciphering as "transposition" (transpositio). Watson, in the passages previously quoted, uses the term "transposition" just as Trithemius does. However, in modern terminology, "transposition" refers to an altogether different form of encryption, the rearranging of the order of the letters of a text. So, to avoid confusion with this modern usage, the word "Transform" will be used rather than "transposition" to describe the enciphering and deciphering processes employed by Trithemius and Watson.

During the Renaissance, most cryptography used only a single Alphabet (monoalphabetic substitution) to Transform all the letters of a text. However, single Alphabetic substitution was vulnerable to cryptanalytic techniques, and this led to the invention of more sophisticated cryptographic techniques. In the fifteenth century, Leon Battista Alberti invented a system that used multiple tables (or Alphabets) in a method known as "polyalphabetic substitution." Trithemius uses this method in his Polygraphia 5: the advantage of using multiple tables (or, in our terminology, Transforms) is that it makes for a stronger cryptographic system (meaning that it is hard to crack). The virtue of polyalphabetic cryptography is that one letter is not always Transformed into the same letter, which would otherwise be a vulnerability.

## Rectatranfpofitionistabula.

|  defgbiklmopoqustuxy wab efgbiklmnopqrstuxy $\mathrm{g}_{\mathrm{g}} \mathrm{mab}$ fobiklmnopqrstuxy g wabcd gbiklmnopqrstuxy $\begin{gathered}\text { buabcde }\end{gathered}$ biklmnopqrstuxy wabcdef iklmaopqrstuxy wabcdef k!mnopqratuxy wabcdefg b <br>  nopqrstuxyzwabcdefgbiki opqrstuxy $\begin{gathered}\text { pabacdefgbikim }\end{gathered}$ pqrstuxy3wabcdefgbiklmm qratuxybwabcdefgbiklma。 rstuxy wabcdefgbiklmnop <br>  uxy wobacdefgbiklmaopqr s $\boldsymbol{x} \boldsymbol{y} 3 \boldsymbol{w a b c d e f g b i k l m n o p q r s t ~}$ <br>  3 wabcdefgbiklmnopqrstux Habcdefgbiklmaopqrstuxy |  |
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Fig. 2.12"Recta transpostion table" from Trithemius's Polygraphia 5 Courtesy of Library of Congress

Polygraphia 5 provides three types of tables for implementing polyalphabetic Transforms: Recta, Aversa, and Orchema. The Recta Transforms are the simplest of cryptographic tables and are known as a "Caesar shift." In a Caesar shift, one letter is enciphered into another by shifting a fixed number of letters within an ordered alphabet. Fig. 2.12 shows the Polygraphia's master Recta Transposition Table, ${ }^{13}$ which is a collection of 23 Recta tables: each column represents one Recta table. I have inserted column numbers 1 to 23 into Trithemius's master table so that each of the 23 Recta tables may be easily referenced (nothing in the original is obscured). The Polygraphia, on subsequent pages, disperses this master table into the 23 Recta tables that appear as 23 pairs of columns: the left-hand columns of
each pair repeat the leftmost column of the master table; the right-hand columns of each pair duplicate the 23 columns of the master table in sequential order. The first table implements a Caesar shift of 1, the second a Caesar shift of 2, and so on. In total, Trithemius presents 23 Recta tables, each table shifting between 1 and 23 places in a 24 -letter alphabet (a shift of 24 , equivalent to no shift at all, is omitted). ${ }^{14}$

A polyalphabetic cipher may be implemented through the use of multiple Recta tables. Trithemius suggests the following simple procedure to produce a polyalphabetic cipher: use the first column (labeled " 1 ") to encipher the first letter of a message (a shift of one letter), then use the second column (labeled " 2 ") to encipher the second letter of the message (a shift of two letters), and so on. This pattern is continued until all 23 columns of Fig. 2.12 are exhausted, at which point one cycles back to the first column.

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | B | C | D | E | F | G | H | 1 | K | L | M | N |
| B | C | D | E | F | G | H | I | K | L | M | N | 0 |
| C | D | E | F | G | H | I | K | L | M | N | O | P |
| D | E | F | G | H | 1 | K | L | M | N | O | P | Q |
| E | F | G | H | I | K | L | M | N | 0 | P | Q | R |
| F | G | H | I | K | L | M | N | O | P | Q | R | S |
| G | H | I | K | L | M | N | O | P | Q | R | S | T |
| H | 1 | K | L | M | N | O | P | Q | R | S | T | U |
| 1 | K | L | M | N | O | P | Q | R | S | T | U | w |
| K | L | M | N | O | P | Q | R | S | T | U | W | X |
| L | M | N | 0 | P | Q | R | S | T | U | W | X | Y |
| M | N | O | P | Q | R | S | T | U | W | X | Y | Z |
| N | O | P | Q | R | S | T | U | W | X | Y | Z | A |
| 0 | P | Q | R | S | T | U | W | X | Y | Z | A | B |
| P | Q | R | S | T | U | W | X | Y | Z | A | B | C |
| Q | R | S | T | U | W | X | Y | Z | A | B | C | D |
| R | S | T | U | W | X | Y | Z | A | B | C | D | E |
| S | T | U | W | X | Y | Z | A | B | C | D | E | F |
| T | U | W | X | Y | Z | A | B | C | D | E | F | G |
| U | W | X | Y | Z | A | B | C | D | E | F | G | H |
| W | X | Y | Z | A | B | C | D | E | F | G | H | I |
| X | Y | Z | A | B | C | D | E | F | G | H | I | K |
| Y | Z | A | B | C | D | E | F | G | H | I | K | L |
| Z | A | B | C | D | E | F | G | H | 1 | K | L | M |

Fig. 2.13 Recta Tables

Trithemius's Recta tables (Fig. 2.12) could, in practice, be treated as either enciphering tables or deciphering tables. Watson treats these tables as deciphering tables: the ciphertext letter is the far-left column, and the plaintext letter is one of the 23 numbered columns to the right. In contrast, Trithemius's explanation and examples use the Recta tables as enciphering tables. This minor variation between Watson's and Trithemius's treatment of the Recta tables is not surprising. Indeed, Trithemius advises his readers that his tables can be used flexibly and that many variations are possible. ${ }^{15}$ Fig. 2.13 reproduces the first 12 Recta tables from Fig. 2.12 (called transpositions or alphabets by Trithemius) in a more easily readable format. Only 12 of the 23 Recta tables or Transforms are reproduced because Watson only uses the first 12, as later discussed. Also, a minor change has been made to the alphabetic order in Fig. 2.13: the position of the letter "W" is made consistent with the English ordering of the alphabet, as opposed to Trithemius's German ordering, in which "W" is the last letter. ${ }^{16}$ The Recta table in Fig. 2.13, which is used throughout this study, is replicated for convenience in Appendix A, Fig. A.1.

To illustrate the use of the Recta tables, let us encipher the word LOGOS (the plaintext). The Recta tables, following Watson, are deciphering tables, so we need to perform a reverse lookup when enciphering. We encipher the first plaintext letter, "L," by looking for that letter in column 1. The letter that appears to its left in the row header is the letter "K." This is the ciphertext letter used to encipher the plaintext letter "L." Column 2 is used to encipher the next plaintext letter, "O," and so on. This process generates the ciphertext KMDKN, as shown below. Note that unlike a monoalphabetic cipher, the letter "O," which appears twice in the plaintext, is transformed into two different ciphertext letters, M and K , which defends against the usual frequency counting technique used to break ciphers. The use of different Transforms for different letters is the defining characteristic of polyalphabetic cryptography.

| Plaintext: | L | O | G | O | S |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Transform column: | 1 | 2 | 3 | 4 | 5 |
| Ciphertext: | K | M | D | K | N |

Deciphering is accomplished by the same process in reverse. We simply find the ciphertext letter among the row headers and its deciphered value in the appropriate column. Alternatively, enciphering and deciphering operations can be performed without tables, using simple arithmetic (Watson mentions arithmetic in his instructions). The standard practice was to assign a numerical value to each letter in a standard 24-letter alphabet based on their normal order, as shown:

## Numeric values of the letters of the Elizabethan alphabet

| A | B | C | $D$ | $E$ | $F$ | $G$ | $H$ | $I$ | $K$ | $L$ | $M$ | $N$ | $O$ | $P$ | Q | $R$ | S | T | U | W | X | Y | Z |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |

To encipher, one simply subtracts the Transform number from the plaintext letter's numeric value. To decipher, one adds the Transform number to the ciphertext letter's numeric value. The deciphering operation, used frequently in solving the Puzzle, is performed using the Recta Deciphering Formula that appears below. "Mod" refers to modular or clock arithmetic: if the sum obtained by adding the Ciphertext to the Transform number ever exceeds 24 , then following the rules of modular arithmetic, one must subtract 24 and use the remainder. For example, if a ciphertext letter T (19) is to be deciphered using a Transform value of 10, then a sum of 29 is obtained. Then applying modular arithmetic, one must subtract 24, which yields 5 , which is E.

$$
\begin{array}{ll}
\text { Plaintext }=(\text { Ciphertext }+ \text { Transform number })(\bmod 24) & \text { Recta } \\
& \text { Deciphering } \\
& \text { Formula }
\end{array}
$$

Let us use this formula and the numeric values of the Elizabethan alphabet (given above) to decipher the ciphertext, KMDKN of our previous example, as shown below:

| Ciphertext: | K | M | D | K | N |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Numerical value of letter: | 10 | 12 | 4 | 10 | 13 |
| Transform number to add: | 1 | 2 | 3 | 4 | 5 |
| Sum: | 11 | 14 | 7 | 14 | 18 |
| Plaintext: | L | O | G | O | S |

Trithemius also provides tables that he calls Tabulae Aversae; a master Aversa table, as implemented by Watson, appears in Fig. 2.14. ${ }^{17}$

The Aversa table, which is used throughout the study, is replicated for convenience in Appendix A, Fig. A.2. Trithemius called these tables "aversa" because of the descending alphabetic in each column, rather than the ascending order found in the Recta tables. An arithmetic deciphering formula, which may be used instead of looking up values in the Aversa table, is given below:

$$
\begin{array}{ll}
\text { Plaintext }=(50 — \text { Ciphertext }- \text { Transform number })(\bmod 24) & \text { Aversa } \\
\text { Deciphering } \\
& \text { Formula }
\end{array}
$$

## Endnotes

## Chapter 1 notes

1 See this study's Reader's Guide.
2 "The Fig Tree and the Laurel: Petrarch's Poetics" Diacritics. 5.1 (1975): 39, passim.
3 For ruinae, see Thomas M Greene, The Light in Troy: Imitation and Discovery in Renaissance Poetry, Elizabethan Club series 7 (New Haven: Yale University Press, 1982), 92.
4 "Poetry and the Scattered World" in Poetry, Signs, and Magic (University of Delaware Press, 2005), 256, 250.
5 See E. Pearlman, "Watson's Hekatompathia [1582] in the Sonnets and Romeo and Juliet." English Studies 74.4 (1993): 343-51.
6 This disorder has prompted complaints that the Hekatompathia is a loose collection of poems without much movement or development over the course of the sequence. See the quotations of S. K. Heninger, Jr. and William Murphy provided later in this chapter and further discussion in chapter 3.
7 The "To the Frendly Reader" preface and "A Quatorzain of the Authour" preface.
8 The "Protrepticon" preface.
9 As later discussed, William Murphy finds a series of 11 poems to be out of place. Dana Sutton argues that Sonnet 90 expresses a "pieistic concern" that poorly fits the speaker's personna.
10 Sutton Edition: Thomas Watson, The Complete Works of Thomas Watson (1556-1592). Ed. Dana Sutton (Lewiston, NY: Edwin Mellen Press, 1997), vi.
11 Ibid., xiv-xv.
12 "Thomas Watson, Playwright: Origins of Modern English Drama" in Lost Plays in Shakespeare's England. Ed. D. McInnis and M. Steggle (Springer, 2014), 198.

13 Ibid., 187.
14 Wendy Phillips argues that "Watson's first madrigal reads like an autobiographical account of a first meeting with Sidney, leading to a close friendship." Phillips Dissertation: "Thomas Watson's Hekatompathia or Passionate

Centurie of Love, 1582: A facsimile edition with notes and commentary." Dissertation, UCLA, 1989, 63-66.
15 See Harry Morris, "Richard Barnfield, 'Amyntas,' and the Sidney Circle." PMLA (1959): 318-24. Also, William Ringler, "Spenser and Thomas Watson." Modern Language Notes 69.7 (1954): 484-87.
16 Frank Ardolino, "Thomas Watson, Shadow Poet of Edmund Spenser." Notes and Queries 61.2 (2014): 225-29.
17 Hirrel describes Watson as a "rogue." "Thomas Watson, Playwright: Origins of Modern English Drama," 198.
18 Ibid., 199.
19 Sutton Edition, vN2.
20 The 100 poem count is not exact. There are precisely 100 pages labeled with Roman numerals. However, the page marked LXXX contains the puzzle instructions, not a poem. There is also a poem called an "epilogue" that appears subsequent to the last numbered poem, and another poem, Quid Amor, consisting of 39 Latin hexameters, which is unnumbered, and appears between XCVIII and XCIX. Watson refers to the poems as "passions" threequarters of the time, and as "sonnets" the remainder of the time, according to Phillips: "Thomas Watson's Hekatompathia or Passionate Centurie of Love, 1582," 30.
21 Oddly, Watson refers to his Neo-Latin poem 45 as a sonnet in its headnote.
22 See A. E. B. Coldiron, "Watson's 'Hekatompathia' and Renaissance Lyric Translation" Translation and Literature 5.1 (1996): 7-8.
23 Murphy Dissertation: William Michael Murphy, "Thomas Watson's Hecatompathia, or the Passionate Centurie of Loue (1582)." Dissertation, Harvard, 1947, abstract 5 . The abstract is a separate document stored with the dissertation, available at the Harvard Archives.
24 Coldiron, "Watson's 'Hekatompathia' and Renaissance Lyric Translation," 7.
25 Ardolino, "Thomas Watson, Shadow Poet of Edmund Spenser," 225-29. Also, Phillips Dissertation: "Thomas Watson's Hekatompathia or Passionate Centurie of Love, 1582," 43.
26 The Designs are discussed in chapter 2.
27 Heninger Edition: Thomas Watson, The Hekatompathia; or, Passionate Centurie of Love (1582). Ed. S. K. Heninger (Delmar, NY: Scholars' Facsimiles \& Reprints, 1964), xvii-xviii.
28 Thomas Watson, "A Looking glasse for Loovers," Manuscript: (British Library: Harleian 3277, n.d.). The British Library has available a microfilm of the manuscript from which copies may be ordered.
29 Wendy Phillips, "No More Tears: Thomas Watson Absolved" Comitatus: A Journal of Medieval and Renaissance Studies 20.1 (1989): 75. However, there are three lines that break metrical form: an 11-syllable line (48.9); a tetrameter (56.14); and a hexameter (92.3), as later discussed.
30 Thomas Watson, Thomas Watson Poems. Ed. Edward Arber (London: English Reprints, 1870), 3-4.
31 Murphy Dissertation, abstract: 4, xcvii.

41 Spenser's Ruins and the Art of Recollection (University of Toronto Press, 2012), xii, passim.

42 Willy Maley, "Spenser's Languages: Writing in the Ruins of English," in The Cambridge Companion to Spenser. Ed. Andrew Hadfield, (Cambridge: Cambridge University Press), 175.
43 The Poetics of Ruins in Renaissance Literature (New York: Fordham University Press, 2016), 2.
A. Kent Hieatt, "The Genesis of Shakespeare's Sonnets: Spenser's Ruines of Rome:by Bellay" PMLA, vol. 98, no. 5 (Oct., 1983): 800-14. See also See also Anne Ferry, All in War with Time: Love Poetry of Shakespeare, Donne, Jonson, Marvell, (Cambridge: Harvard University Press, 1975).
The argument of his Sciences and the Self in Medieval Poetry: Alan of Lille's Anticlaudianus and John Gower's Confessio Amantis, Cambridge Studies in Medieval Literature 25 (Cambridge: Cambridge University Press, 1995). Ibid., 67.
Ibid.
Ibid., 14.
Ibid., 138.
Ibid., 25.6.
51 Sciences and the Self in Medieval Poetry, 29-30.
52 Ibid., 31.
53 Prominently located at the center of the title page, as shown in Fig. 12-2.
54 There are 21 numbered poems, 80 through 100 (counting Sonnet 80, the

Puzzle Sonnet's prose instructions, which is numbered as if it were a poem), plus two unnumbered Neo-Latin poems, "Quid Amor" and "Epilogue."
55 Sutton Edition, 139.
56 The adherence strictly to reason is not a tenet of Christian, Platonist, or Aristotelean thought. Nor is Stoicism the underlying philosophy of the MLIP Subsequence: the speaker's emotions are in high gear.
57 See E. R. Dodds, The Greeks and the Irrational, (Berkeley: University of California Press, 1951). Chapter 7 is especially relevant: "Plato, the Irrational Soul, and the Inherited Conglomerate," 207-35.
58 Ardolino, "Thomas Watson, Shadow Poet of Edmund Spenser" 227.
59 Monson, Andreas Capellanus, Scholasticism, and the Courtly Tradition, 56.
60 See Robert M. Durling, The Figure of the Poet in Renaissance Epic (Cambridge: Harvard University. Press, 1965), 35.
61 English Literature in the Sixteenth Century Excluding Drama: The Completion of the Clark Lectures, Trinity College, Cambridge, 1944, Clark lectures 1944 (Oxford: Clarendon Press, 1962), 61.
62 Erasmus's Adages, translated into English, appeared in 11 editions in the sixteen century. Claudia Corti argues that Erasmus was at "the very core of the extraordinary co-textual and inter-textual experience of the English Renaissance." Silenos: Erasmus in Elizabethan literature, Studi di letterature moderne e comparate 1 (Ospedaletto [Italy]: Pacini, 1998), 9-10.
63 Thomas More, Utopia: with Erasmus's the Sileni of Alcibiades. Trans. David Wootton (Indianapolis: Hackett Publishing Company, Inc., 1999), 169.
64 Ibid., 169-70.
65 Quoted from Arthur F. Kinney, "Rhetoric as Poetic: Humanist Fiction in the Renaissance." ELH 43.4 (1976): 422-23. Kinney quotes the English translation of Sir Thomas Chaloner (1549): E3.
66 Ibid., 426.
67 Utopia: With Erasmus's the Sileni of Alcibiades, 24-25.
68 Ibid., 169.
69 Ibid., 175.
70 "Prologue of the Author" in Gargantua and Pantagruel. Trans. Michael Andrew Screech (Penguin Books, 2006), 207.
71 "Rhetoric as Poetic," 430.
72 Ibid., 427-29. Kinney argues that although Utopia's commonwealth appears to be devoted to "peace, stability and democracy," its people have "no capacity for a humanist faith in humanity; rather, their state adumbrates a totalitarian regimen." Of course, critical assessments vary, but in any case, Utopia demands that it be read through a rhetorical lens.
73 Ibid., 415.
74 Ibid., 416.
75 Ibid., 425.
76 Ibid., 430. Italics in the original.
77 Ibid., 438, passim 433-39.
78 Ibid., 440.

79 Rhetoric, Hermeneutics and Translation in the Middle Ages (Cambridge: Cambridge University Press, 1991), 64.
80 Ibid., 66-67.
81 Ibid., 70. Copeland quotes "On the Scope and Function of Hermeneutical Reflection," in Gadamer, Philosophical Hermeneutics, 23-24.
82 His letter to Can Grande, \#15, 16. Dantis Alagherii Epistolae: The Letters of Dante (Oxford: Clarendon Press, 1920), 202.
83 O. B. Hardison, The Enduring Monument: A Study of the Idea of Praise in Renaissance Literary Theory and Practice (Chapel Hill: University of North Carolina Press, 1962), 190.
84 The Discarded Image an Introduction to Medieval and Renaissance Literature (Cambridge: Cambridge University Press, 1964), 10.
85 This work, a dialog between Ficino and Landino, is quoted from Annabel M. Patterson, Hermogenes and the Renaissance; Seven Ideas of Style (Princeton: Princeton University Press, 1970), 38.
86 Dialogues of Love. Trans. Rossella Pescatori and Cosmos Damian Bacich (Toronto: University of Toronto Press, 2009), 303.
87 Touches of Sweet Harmony: Pythagorean Cosmology and Renaissance Poetics (San Marino, CA: Huntington Library, 1974), 296.
88 Heninger Edition, xi.
89 Sutton Edition: 135, 135N4. The quotation reflects minor word changes that Sutton made in the internet version of this passage.
90 Andreas Capellanus, Scholasticism, and the Courtly Tradition 209. Monson gives the example of Lancelot's experiences in Chretien Troyes's Chevalier de la charrete (vv. 314-44).
91 For a discussion of "the sixteenth-century Phaedrus," see Kenneth Borris, Visionary Spenser and the Poetics of Early Modern Platonism (Oxford: Oxford University Press, 2017), 92-98. See also his argument for the centrality of the Phaedrus in the Shepheardes Calender's month of Maye, 83-121.
92 Patterson, Hermogenes and the Renaissance; Seven Ideas of Style, 21-26.
93 Ibid., xiv.
94 Summa Theologiae, vol. 1, 38, 8C.
95 For the importance of Hermogenes to Sidney and Tasso, see Patterson, Hermogenes and the Renaissance; Seven Ideas of Style, 39-43.
96 The Art of English Poesy: A Critical Edition. Ed. Wayne A. Rebhorn and Frank Whigham (Ithaca: Cornell University Press, 2007), 347 (III.23).
97 Dahlberg is specifically addressing the Roman de la Rose "Macrobius and the Unity of the 'Roman de la Rose." Studies in Philology 58.4 (1961): 577-78.
98 Fables of Identity: Studies in Poetic Mythology (New York: Harcourt Brace \& World, 1963), 123.
99 The Genesis of Secrecy: On the Interpretation of Narrative, Charles Eliot Norton lectures 1977-1978 (Cambridge: Harvard University Press, 1979), 5.
100 "The Structure of English Renaissance Sonnet Sequence." ELH 45.3 (1978): 362-63.

101 Wendy Phillips (Phillips Dissertation) argues that the puzzle is flawed, as discussed in chapter 2. Roland Greene believes the unusual features of the puzzle suggest a ritual is being appropriated for fictional purposes (PostPetrarchism Origins and Innovations of the Western Lyric Sequence [Princeton: Princeton University Press, 1991], 102-6).
102 The reference to the significance of the Designs occurs in the prefatory Latin poem titled Authoris ad Libellum suum Protrepticon, as discussed at the beginning of chapter 4.
103 "Deciphering and the Exhaustion of Recombination" in A Material History of Medieval and Early Modern Ciphers: Cryptography and the History of Literacy. Ed. Katherine Ellison and Susan Kim (New York: Routledge, 2018), 181.

104 Quinn Dupont, "The Printing Press and Cryptography: Alberti and the Dawn of a Notational Epoch" in A Material History of Medieval and Early Modern Ciphers, 106-10.
105 "Deciphering and the Exhaustion of Recombination," 189, 199.
106 "Limited by Their Letters: Alphabets, Codes, and Gesture in Seventeenth Century England" in A Material History of Medieval and Early Modern Ciphers, 161-62. See also his "Deciphering the Language of Nature: Cryptography, Secrecy, and Alterity in Francis Bacon." Configurations 19.1 (2011): 117-42.

107 In De Augmentis, Bacon distinguishes between certain characters such as Chinese ideograms and hieroglyphs that are emblematic of the thing signified, and other characters that are arbitrary, such as phonetic letters (4:439440). References to Bacon's works are from The Works of Francis Bacon, Ed. James Spedding, Robert Leslie Ellis, and Douglas Denon Heath, (London: Longmans and Co., 1857).
108 Shawn Rosenheim, The Cryptographic Imagination: Secret Writing from Edgar Poe to the Internet (Baltimore: Johns Hopkins University Press, 1997), 2.

109 See James Daybell, The Material Letter in Early Modern England: Manuscript Letters and the Culture and Practices of Letter-Writing, 1512-1635 (New York: Palgrave Macmillan, 2012), 149. See also Lisa M. BarksdaleShaw, "'That You Are Both Decipher'd': Revealing Espionage and Staging Written Evidence in Early Modern England" in A Material History of Medieval and Early Modern Ciphers, 118-36.
110 Watson is believed to have spent approximately seven years abroad based on his statement in his 1581 translation of Antigone. He was a friend of Thomas Walsingham, cousin of Sir Francis Walsingham. He eulogized Sir Francis in an eclogue written upon his death. See Hirrel, "Thomas Watson, Playwright: Origins of Modern English Drama" 196. Also, see Charles Nicholl, The Reckoning: The Murder of Christopher Marlowe (Chicago: University of Chicago Press, 1995), 182-84.
111 Daybell, The Material Letter in Early Modern England, 151.
112 See Clody, "Deciphering the Language of Nature," 122. See also John Briggs,

Francis Bacon and the Rhetoric of Nature (Cambridge: Harvard University Press, 1989).
113 "The Cryptographic Imagination: Revealing and Concealing in Anglo-Saxon Literature" in A Material History of Medieval and Early Modern Ciphers, 83.
114 Ibid.
115 Ibid., 81, 80.
116 Ibid., 90.
117 See Stephen J. Harris, "Anglo-Saxon Ciphers" in A Material History of Medieval and Early Modern Ciphers, 73-75.
118 Christie, "The Cryptographic Imagination: Revealing and Concealing in Anglo-Saxon Literature," 87.
119 Laurence de Looze, "Signing Off in the Middle Ages: Medieval Textuality and Strategies of Authorial Self-Naming" in Vox Intexta: Orality and Textuality in the Middle Ages. Ed. Alger Nicolaus Doane and Carol Braun Pasternack (Madison: University of Wisconsin Press, 1991), 171-72.
120 The dropping of duplicate letters in anagrams was sometimes allowed. Writing in 1615, Drummond of Hawthornden says: "This admitteth some Exceptions, which is, That some one or other Letter may be omitted; but with great Judgment, That that Letter be no eminent principal Letter of the Name, which is omitted: But such, without which the Name may consist. For when the same Letters occur many times in the Name, then the Omission of one or more is pardonable; especially for some excellent Sense that agreeth to the Person, as in that of Auratus PIERRE DE RONSARD. ROSE DE PINDARE, of four R's, two are omitted" (R. H. Winnick, "Loe, here in one line is his name twice writ': Anagrams, Shakespeare's Sonnets, and the Identity of the Fair Friend." Literary Imagination 11.3 [2009]: 9.)
121 The poem is written to one of La Pléiade, Pontus de Tyard, an early sonneteer. It appears on the page immediately prior to page 1.
122 "Deciphering and the Exhaustion of Recombination," 202.
123 De Augmentis, 4:446-447. The Works of Francis Bacon.
124 Ibid., 450.
125 "Deciphering the Language of Nature," 122, passim 117-42.
126 "The Editor as Reader: Constructing Renaissance Texts" in The Practice and Representation of Reading in England. Ed. James Raven, Helen Small, and Naomi Tadmor (Cambridge: Cambridge University Press, 1996), 109.
127 See Borris, Visionary Spenser and the Poetics of Early Modern Platonism, 148. Borris references Fraunce's Countesse of Pembrokes Yuychurch. Part 3 (1592), STC 11341, 3v-4r, and Harrington's introduction to Orlando furioso in English Heroical Verse (1591), STC 746, 4r-v.
128 "Deciphering and the Exhaustion of Recombination," 202.
129 The Shakespearean Ciphers Examined: An Analysis of Cryptographic Systems Used as Evidence That Some Author Other Than William Shakespeare Wrote the Plays Commonly Attributed to Him (Cambridge: Cambridge University Press, 1958). William Friedman and Elizebeth Friedman debunked these claims showing that they were not based on any system of
cryptography. Typically, these claims are based on an unsystematic selection or rearrangement of letters.
130 "Deciphering and the Exhaustion of Recombination," 193-94.
Ibid., 194.
132 Clody, "Deciphering the Language of Nature," 137-38; 137N47.
133 Amor nodus perpetuus, et copula mundi, De Amore, 3.3.
134 For example, in John Florio's Second Fruits, Silvestro says: "Love is the keykeeper of the world, as Orpheus saies, not onely the auncientest, as Hesiodus shewes, but even the God of Gods. . ." (Y4/167). John Chapman writes "That Love being the only Parent, and argument, of all Truth, in any wisdome or learning; without which all is sophisticate, and adulterate; howsoever painted \& splinted with Degrees and Languages." (Epistle Dedicatorie to Francis Bacon in Hesiod's Georgics A2v.)
135 Dante: Poet of the Secular World. Trans. Ralph Manheim (NYRB Classics, 2007), 22.

136 The Art of Shakespeare's Sonnets (Cambridge: Harvard University Press, 1997), 6.

137 Spenser Studies devoted a special volume that includes many contributors to the subject of Spenser and Platonism: Kenneth Borris, Jon Quitslund, and Carol Kaske, eds. Spenser Studies 24 (2009).

## Chapter 1 notes

1 Two poems fall outside of Watson's numbering scheme: Quid Amor and the Epilogue. The headnote of Sonnet 98 (which precedes Quid Amor) states that the poet placed Quid Amor on the next page following, but not as accomptable for one of the hundreth passions of this booke, thus excluding it from being counted. The headnote of the Epilogue also appears to exclude it from being counted as one of the 100 passions: more like a praier than a Passion. Thus no poem replaces Sonnet 80 in the sonnet count and the title's promise of 100 passions falls short by one.
2 The reference to "the syllabic count of each line increasing by odd instead of consecutive numbers" refers to the "orchematicall" base of the Pasquine Pillar featured in Sonnet 81. Phillips Dissertation, 424.
3 In steganography, an ordinary, readable text forms the ciphertext (ciphertexts are normally gibberish), which is deciphered to produce the (secret) plaintext. Typically, only a modest percentage of the ordinary text-say the first letter of every sentence-is used in deciphering. Here, a small percentage of the letters of the acrostic (amare est insanire) would amount to only one or two letters, hardly sufficient for a message. In the course of this chapter, we will discover that Watson, through his prodigious skill (how much art and study the Author hath bestowed; Sonnet 80), managed to utilize $50 \%$ of each acrostic, a surprising accomplishment.
4 Post-Petrarchism Origins and Innovations of the Western Lyric Sequence (Princeton: Princeton University Press, 1991), 102-6. Roland Greene
recognizes correctly that the Puzzle Sonnet marks a significant turning point in the work, and such an event could be marked by ritual. However, an acrostic sonnet is neither mystical nor a sacrament.
5 Of the 100 numbered poems, 4 are Neo-Latin poems ( $6,45,66$, and 90) and 3 are devoted to the Puzzle Sonnet (the instructions and the two versions of the Puzzle Sonnet). This accounts for 94 English language sonnets, counting the two Puzzle Sonnet versions as one sonnet.
6 Phillips Dissertation, 421.
7 I calculate the average number of lines that intermediate a rhyme pair or triplet: zero is the value for adjacent lines and one for alternating rhyme lines, etc. The scheme is $\mathrm{abacbdefgheahgcdff}$. "a" rhyme (a triplet), its first gap (one intervening "b" line) is equal to 1 ; the second gap (these lines intervene: c b d ef ghe) is equal to 8 . The calculated gap values are: a: 1,$8 ; \mathrm{b}: 2 ; \mathrm{c}: 10 ; \mathrm{d}: 9 ; \mathrm{e}: 3 ; \mathrm{f}: 0,8 ; \mathrm{g}: 4 ; \mathrm{h}: 2$. The average of these 10 gaps is 4.7.
8 I calculated what the average gap value would be for a randomly ordered poem consisting of 6 rhyme pairs and 2 triplets. For rhyme pairs, the maximum gap is 16 and the average gap is (1 to 16) $\sum\left((1\right.$ to 16$\left.) \sum \mathrm{N}\right) /(1$ to 17$) \sum$ $\mathrm{N}=5.33$. For triplets, the maximum gap, averaged across the two gaps, is 7.5 and the average gap is $.5(1$ to 15$) \sum\left((1\right.$ to 15$\left.) \sum \mathrm{N}\right) /(1$ to 16$) \sum \mathrm{N}=2.5$. A weighted average between the 6 pair gaps and the 4 triplet gaps yields an average gap of 4.2.
9 Examples of sonnet structure include the three-quatrain plus couplet Shakespearean sonnet (actually Wyatt's invention), the octave-plus-sestet Petrarchan sonnet, and Watson's own three-sestet sonnet.
The Literary Riddle before 1600 (Westport: Greenwood Press, 1948), 3.
11 The couplet would be forced to play some role of intermediation between the two octaves, and it is too small to do so. In a Shakespearean sonnet, the third quatrain often intermediates between the first two quatrains. In a Petrarchan sonnet, no couplet follows the two sections, the octave and the sestet.
"For" may be a misprint: Sonnet 81 reads "or" and Sonnet 82 "for." However, the manuscript's Sonnet 81 reads "for," and thus three of four instances read "for." Here, "for" likely means "under the influence of" (OED 20a) and thus mirth is said to arise from mischance.
13 Polygraphia 5, Oii.
The Recta tables include 25 rather than 23 tables, but this includes 2 erroneous tables that fill up what would otherwise be empty columns on the page titled "Quinta figura expansionis tabulae rectae." These 2 extra tables are actually Orchema tables and are clearly out of place. Most of my references to Polygraphia 5 are made by page title or other means because many of the work's page numbers are misprinted.
Polygraphia 5, second page: "And if, on account of a multitude of difficulties, the family of alphabets which we have noted are not sufficient, or if some of them seem too open and too obvious, we will be able to introduce various new transpositions of which the number is large, and the mode of the secrecy
remains always concealed." (The original text begins with the words "Quod si prae multitudine..." and ends with the word "occultus.")
Trithemius uses a 24-letter alphabet that includes the non-Latin letters, K and W. It is identical to the 24-letter Elizabethan alphabet except that Trithemius's alphabetic order places "W" as the last letter of the alphabet, as was the custom in the German language. Watson uses the standard order of the 24-letter Elizabethan alphabet, in which W follows U/V.
17 Trithemius's master Aversa Table, titled Tabula transpositionis aversa appears on the fourth page of Polygraphia 5. This master table is incorrectly rendered and is inconsistent with his expansion into the 23 tables that appear on the tenth through fourteenth pages of Polygraphia 5. My version uses the correct values from the 23 -table expansion. Also, my version, following Watson, is modified such that " W " is the $21^{\text {st }}$ letter of the alphabet.
18 In an "equiprobable" alphabet, all letters appear with the same frequency. For the purposes of this basic introduction to information theory, we will sometimes overlook the defined equiprobability of information in our examples to avoid complexity.
19 Shannon developed the theoretical framework under which a cryptogram may be validated in his Communication Theory of Secrecy Systems, Bell System Technical Journal, Vol. 28 (1949): 656-715. Shannon's seminal work in the field of information theory can be found in A Mathematical Theory of Communication, Bell System Technical Journal, Vol. 27 (July and October 1948): 379-423 and 623-56. Reprinted in The Mathematical Theory of Communication, University of Illinois Press, 1964, along with a helpful introduction by Warren Weaver.
20 Phillips Dissertation, 427.
21 Ibid., 427-29.
22 In this assignment of tables, only two binary assumptions have been made. The first is the assignment of the increasing numbers to the Recta tables and the decreasing numbers to the Aversa tables, as opposed to vice versa, which would be an unnatural choice. With respect to the Recta tables, one can read them either as encryption or decryption tables, also a binary choice.
23 Alberti embedded letters in the ciphertext itself that signaled what alphabet would be used.
24 If in cryptanalysis, one makes too many arbitrary and elaborate assumptions about the cryptographic system, the validity of any deciphered message may be called into question. For example, if one's conjecture about a cryptographic system arbitrarily settles on one of a million possible systems, this reduces confidence in the validity of the deciphered message. Here we have made only a handful of assumptions; if the assumptions had instead been numerous, it would be necessary to factor this into the mathematical validation at the conclusion of this chapter.
25 Credit to mathematician David Silverman. Reportedly published in August 1970 in Kickshaws (no further information is available).
26 Aloys Meister, Die Geheimschrift im Dienste der Päpstlichen Kurie von
ihren Anfänge bis zum Ende des 16. Jahrhundert (Paderborn: Schöningh, 1906), 297. The table below provides references to some sixteenth-century polyphonic ciphers documented in Die Geheimschrift.

| Year | Correspondent | Page in Die Geheimschrift |
| :--- | :--- | :--- |
| $1544-50$ | Bishop of Ajaccio | 178 |
| 1579 | Camillo Capozucca | 296 |
| 1582 | Vincenzo Vitelli | 296 |
| $15 ? ?$ | Cardinal Sabellus | 200 |
| 1583 | Cardinal Sabellus | 297 |
| 1585 | Cardinal Sabellus | 298 |
| 1585 | Bishop of Amalfi | 350 |
| $1586(?)$ | Anonymous | 255 |

27 For each letter, the absolute rate of language is 4.6 bits ( $\log _{2} 24$ ). To compare the information content of the absolute rate of language with the output of a polyphonic cipher with one bit of indeterminacy, divide the information content of each: (4.6-1) / 4.6 $\approx 78 \%$.
28 Katherine Ellison, "Deciphering and the Exhaustion of Recombination" in A Material History of Medieval and Early Modern Ciphers: Cryptography and the History of Literacy. Ed. Katherine Ellison and Susan Kim (New York: Routledge, 2018), 187.
29 The Book of Memory: A Study of Memory in Medieval Culture, 2nd ed. (Cambridge: Cambridge University Press, 2008), 230-31, 245.
30 Sonnet 25 , line 8 where the weird pronoun "*he" represents he or she. This is necessary in the poem to account for the change in the gender of the person referenced in the echo.
31 Blyndfold bratte and thee (M, F); Blind cupids carr (M); Ciprya la nemica mia (F).
32 See Clive S. Lewis and Alastair Fowler, Spenser's Images of Life (Cambridge: Cambridge Univ. Press, 2013), 16.
33 Ibid., 15.
34 "Emanations of Glory: Neoplatonic Order in Spenser's Faerie Queen" in Judith M. Kennedy and James A. Reither, A Theatre for Spenserians: Papers of the International Spenser Colloquium, Frederiction, New Brunswick, October, 1969 (Toronto: University of Toronto Press, 1973), 54.
35 The Polygraphia 5's Orchema tables, printed on a single page labeled "Orchema," consist of 6 tables or Alphabets. The first and second tables skip 1 and 3 letters, respectively, between entries. The third and fourth tables exhibit a wholly different pattern consisting of sequential letters with periodic reversals of direction. The fifth and sixth tables are recta tables, an error. The OED lists pesum (pensum), the neuter gender of this masculine verbal adjective, pesus, in its entry for "avoirdupois."
37 A hypogram is a key word or phrase that underlies a complex network of relations within a text.
38 The final word, PESUS, was only a guess because the value of the Orchema Transforms is unknown. Therefore, it is not included in our validation test.

It should be noted that Shannon's figure of $25 \%$ is based on experiments he conducted in which his subjects made successive guesses at each letter of a text that was 100 letters in length. On average, they had 50 letters of prior context to help them in their guessing. This is significantly longer than our 13-letter text. As evident from Fig. 2.17, meaning, grammar, and context are implicit in this 25\% information rate. The reason that I believe that the $25 \%$ rate is applicable to our plaintext message, even though it is short, is that it is meaningful, grammatically correct, and fits perfectly with its larger context, the Puzzle Sonnet from which it emerged. The Puzzle Sonnet, the circumstance of the Hekatompathia's poet addressing a reader, and the necessity of giving a clue to the Puzzle's next stage, all severely limit what text we might expect to find. The plaintext message is four words forming two sentences. The compactness of Latin allows for this amazingly concise message. Despite its short length, the message exhibits grammatic structure: it includes two sentences. Most importantly, its words precisely fit the context of the Puzzle Sonnet from which it emerged.
40 The probability of an event occurring at least once if repeated $n$ times is not actually the product of $n$ and the probability of the event, $p$. However, when $\mathrm{p} \ll 1$ and $\mathrm{n} \ll \mathrm{p}, \mathrm{n}$ times p is a close approximation.
41 We begin with an estimation of the number of permutations by which the Puzzle Sonnet may be reordered under a reasonable rhyme pattern. The sonnet lines end in only 8 different letters: A, E, I, M, N, R, S, and T. Different lines that begin and end in the same letter are cryptographically equivalent and therefore, for our purposes, need not be counted as different possibilities. If we restrict the rhyming pattern such that any rhyme lines can have at most 2 lines in-between, then a choice of one of 8 letters for the first line is followed by 3 possibilities: the rhymed line must appear in either the second, third, or fourth lines. Subsequent to that, there are 11 lines left to consider. We can then repeat the same process until all 13 positions are filled. The following formula is a very imperfect estimate of the number of cryptographically different permutations that adhere to our rhyme rule:

Rhymed Reorderings $=8 \times 3 \times 8 \times 3 \times 8 \times 3 \times 8 \times 3 \times 8 \times 3 \times 8 \times 3 \times 8 \approx$ 1.53 billion

This formula overestimates possibilities by assuming there are still 8 different letters available even after filling 12 places. It underestimates possibilities by neglecting to account for the higher range of 10 possible letters for the left-hand acrostic. There are likely other inaccuracies. Computer and mathematical techniques could improve this estimate considerably. However, I did not feel that this would alter the calculation enough and would thus be incommensurate with the time required to perform the work.

The next criterion to consider is the required logical flow from line to line and the reordering's appropriateness to the sonnet's poetic meaning. Of course, this is extremely difficult to quantify. My sense from having spent so many hours trying to reorder this sonnet is that for any given line, fewer
than half of the other lines might logically follow it. There are 12 transitions between adjacent lines in the 13 lines of our reordered sonnet. For any valid reordering, the flow from line to line in each of these 12 transitions must be reasonable. If the probability of any one transition being coherent is $50 \%$, then the probability that all 12 transitions will be coherent is $(50 \%)^{12}=$ $1 / 4096$. Multiplying this with our 1.53 billion Rhymed Reorderings gives an estimate of 374,000 valid reorderings. This is rounded up (in the conservative direction) to one million valid reorderings.
42 The use of a one-way function has an important role in the modern world. A one-way function known as public key encryption is used in most online computer security: two very large prime numbers are easily multiplied, but the inverse function (going in the reverse direction), the factoring the large number into its two constituent primes, is too time consuming for a computer to perform, preventing unauthorized decryption.

## Chapter 3 notes

1 Patrick Cheney, "Spenser's Pastorals: The Shepheardes Calender and Colin Clouts Come Home Againe" in The Cambridge companion to Spenser. Ed. Andrew Hadfield (Cambridge: Cambridge University Press, 2001), 79-80.
Exceptions include Dante's Vita Nuova, which includes commentary; Scève's sequence has elaborate designs.
3 Rhetoric, Hermeneutics and Translation in the Middle Ages (Cambridge: Cambridge University Press, 1991), 3.
4 Ibid., 112.
5 Ibid., 70.
6 Andreas Capellanus, Scholasticism, and the Courtly Tradition (Washington, DC: Catholic University of America Press, 2005), 88.
7 M. B. Parkes, "The Influence of the Concepts of Ordinatio and Compilatio on the Development of the Book" in Medieval Learning and Literature: Essays Presented to Richard William Hunt. Ed. J. J. G. Alexander and Margaret Gibson (Oxford: Clarendon Press, 1976), 116N1.
8 The Book of Memory: A Study of Memory in Medieval Culture, 2nd ed. (Cambridge: Cambridge University Press, 2008), 222.
9 Rhetoric, Hermeneutics and Translation in the Middle Ages, 203.
10 Ibid., 202.
11 Ibid., 203.
12 Ibid., 66, 70-71.
13 Ibid., 67, 69.
14 "Continental Poetics" in A Companion to Rhetoric and Rhetorical Criticism. Ed. Walter Jost and Wendy Olmsted (Malden: Blackwell Publishing, 2004), 81. Ibid., 80. Cicero's influence on Renaissance rhetorical theory is discussed later in this study. Rhetoric, Hermeneutics and Translation in the Middle Ages, 70.
17 Ibid., 77.

18 Ibid., 187-88; 77-78.
19 Quoted from Kathy Eden, Hermeneutics and the Rhetorical Tradition: Chapters in the Ancient Legacy and its Humanist Reception (New Haven: Yale University Press, 2009), 83-84.
20 Rhetoric, Hermeneutics and Translation in the Middle Ages, 82.
21 Parkes, "The Influence of the Concepts of Ordinatio and Compilatio on the Development of the Book," 117-19.
22 Ibid., 130-32.
23 "'Well Grounded, Finely Framed, and Strongly Trussed up Together' the 'Medieval' Structure of 'The Faerie Queene'" in Review of English Studies 52.105 (2001): 28, 26.

24 Odyssey 5.193.
25 Hermeneutics and the Rhetorical Tradition, 58.
26 Hermogenes and the Renaissance: Seven Ideas of Style (Princeton: Princeton University Press, 1970), 9-10.
27 III.23. The Art of English Poesy: A Critical Edition, Eds. Wayne A Rebhorn and Frank Whigham (Ithaca: Cornell University Press, 2007), 348.
28 Hermeneutics and the Rhetorical Tradition, 17-18.
29 7.10.16-17. Quoted from Eden (Ibid., 29-30).
30 De inventione 2.40.117. Quoted from Eden (Ibid., 18).
31 Hermogenes and the Renaissance: Seven Ideas of Style, 12-13.
32 "Epistle," 125. The Yale Edition of the Shorter Poems of Edmund Spenser, Ed. William Oram et al. (New Haven: Yale University Press, 1989), 17.
33 Philip Sidney and the Poetics of Renaissance Cosmopolitanism (London: Routledge, 2008), ix.
34 Ibid., 359-60. See also James Coulter, The Literary Microcosm: Theories of Interpretation of the Later Neoplatonists (Leiden: Brill, 1976), 95-126.
35 Eden, Hermeneutics and the Rhetorical Tradition, 71.
36 Ibid., 57.
37 De doctrina, 3.9.13; 3.10.14. Tr. Rev. J. F. Shaw.
38 Hermeneutics and the Rhetorical Tradition, 62-63.
39 De Doctrina Christiana, 3.10.15-16.
40 Rhetoric, Hermeneutics and Translation in the Middle Ages, 44.
41 Hermeneutics and the Rhetorical Tradition, 39.
42 Rhetoric, Hermeneutics and Translation in the Middle Ages, 61.
43 John of Garland, The "Parisiana poetria" of John of Garland, Tr. Traugott Lawler (New Haven: Yale University Press, 1974), 31.
44 Ibid., 30. The translation, however, is Copeland's (Rhetoric, Hermeneutics and Translation in the Middle Ages, 261N32).
45 "The Scope of Sidney's Defence of Poesy: The New Hermeneutic and Early Modern Poetics" English Literary Renaissance 32.3 (2002): 366-67.
46 Ibid., 368.
47 Ibid., 361-63.
48 Carol V. Kaske, Spenser and Biblical Poetics (Ithaca: Cornell University Press, 1999), 149.

49 "The Scope of Sidney's Defence of Poesy," 369.
50 In the first translation, I have associated lea with the participle pesus, and in the second, with the verb nuo.
51 Dialogues of Love, 68, 176.
52 II.8. Translation from Commentary on Plato's Symposium on Love, tr. Sears Reynolds Jayne (Spring Publications, 1985), 144.
53 Dialogues of Love, 68.
54 The Book of the Courtier, Ed. Virginia Cox, Tr. Thomas Hoby (London: Everyman, 1994), 343.
55 Jeffrey Todd Knight, Bound to Read: Compilations, Collections, and the Making of Renaissance Literature (Philadelphia: University of Pennsylvania Press, 2013), 115.
56 See the discussion in the "Notes on the Text" section of this study's backmatter. William Murphy sees this proverb as similar to one quoted by Michael Drayton in his Idea: "Fortune assists the boldest" (Idea, 59.7) (Murphy Dissertation, 134).
58 See Kaske, Spenser and Biblical Poetics, 24.
59 Semiotics of Poetry (Bloomington: Indiana University Press, 1978), 161.
60 Michael Riffaterre, Text Production (New York: Columbia University Press, 1983), 111-12.

61 Tr. Dana Sutton. He believes the likely source is Plutarch, Praecepta Gerundae Reipublicae xxviii ad fin (Sutton Edition, 244).
62 Sutton's comment on this sidenote: [It] cites line 2 of an epigram by Hercules Strozzi [1473-1508], de Diva Borgia Canente. Cf. Strozii Poetae Pater et Filius (Paris, 1530) fol. $86^{\mathrm{v} .1}$ [This is this version that is included in the microfilm series Italian Books Before 1601 rather than the 1513 Aldine edition (Sutton's online notes)]. The same sidenote cites Pliny, Natural History X.lxiii (a passage not calculated to appeal to romantics), olorum morte narratur flebilis cantus, falso, ut arbitror, aliquot experimentis, idem mutua carne vescuntur inter se. Swans do not sing on the point of death, [but] they eat their own kind. (Sutton Edition, 244).
63 Ibid.
64 Sutton's note and translation: The sidenote refers to Erasmus, Chiliadis Primae Centuria V.lxxiv, Philostratus in epistola quadam ad uxorem [Epist. 21] de Momo sscribit in hanc ferme sententiam. Hunc in Venere nihil alloqui, quod reprehenderet invenisse, nisi quod sandalium illius calumniabatur, ut stridulum nimisque loquax, ac strepitu molestum. Quod si Venus citra sandalium incessisset, ita ut emersit a mari, tota nuda, nullam omnino ansam carpendi Momus invenisset. Captious Momus could find nothing to criticize about Venus save that her slipper squeaked: were she as naked as the day she was born, he would have nothing at all to criticize. Watson must have liked this tale, for he referred to it in the manuscript version of the Authoris ad libellum suum protrepticon, then shifted the allusion to the prose "To the frendly Reader" of the printed book, and also alluded to the tale in line 50 of the dedicatory poem preceding his translation of Coluthus's Raptus Helenae. (Sutton Edition, 244)

65 "Andreas Capellanus's Scholastic Definition of Love" Viator 25 (1994): 20910. Monson provides the following note: According to Aristotle, De anima 1.5 (410a25-26), thinking, like sense perception, is a kind of passion; that is, in perceiving or thinking the soul both acts and is acted upon. Cf. Aquinas, Summa theologiae la2ae.22.1, contra: "sentire et intelligere est quoddam pati." (210N53).
66 Hearing is a poetical representation of the intellectual (as opposed to sensual) acquisition of knowledge. This is the "coaptation of visible forms to demonstrate something invisible" (Dionysius the Areopagite, as discussed later in this chapter). A nonphysical, spiritual event is given a physical representation. In the Annunciation, it is a dove-symbolically the Holy Ghostthat enters through Mary's ear.
67 Dialogues of Love, 177-78.
68 Book 1, 1.1. Translation: The Art of Courtly Love, Trans. John Jay Parry (W.W. Norton, 1969), 28.

69 4377-84. See Charles Dahlberg, "Macrobius and the Unity of the 'Roman de la Rose"" Studies in Philology 58.4 (1961): 579.
70 Douglas Kelly, "Courtly Love in Perspective: The Hierarchy of Love in Andreas Capellanus" Traditio 24 (1968): 147.
71 In De Amore, the cognitive process is what distinguishes courtly love from sensual love. Douglas Kelly writes: "For as both Paul Zumthor and Schlosser have shown, the difference between Andreas' conception of courtly love and other forms of sensual love lies in the rational control the courtly lover exercises over his senses when directing his love to only one person..." (Ibid., 131-32.)
72 Sweet: 11.2; 11.17; 12.8; 13.HN; 14.10; 16.HN; 16.1. Delight: 12.14; 13.4; 14.12; 16.7; 17.12.

73 Six other instances of love's double power:
For nowe my life is double dying still,
But I feele paines, though blinde and double deade
And to my double hurt his pow'r do proue?
Am now twise free, and all my loue is past.
Though now my selfe twise free from all such care.
74 Dialogues of Love, 191.
75 An interesting view on the philosophical development of these two categories, sense and intellect, and their treatment in Petrarch can be found in Edward Cranz, "A Common Pattern in Petrarch, Nicholas of Cusa, and Martin Luther" in Humanity and Divinity in Renaissance and Reformation: Essays in honor of Charles Trinkaus. Ed. John W O'Malley et al. (E. J. Brill, 1993), 53-70.

76 Ebreo, Dialogues of Love, 283. See also 335, 338-39. Ebreo, like Andreas, distinguishes between the sensual apprehension of the beautiful of "corruptible bodies" and the apprehension of "universal, incorporeal, and incorruptible grace and beauty" (220).

77 "The Subject of the 'De Amore' of Andreas Capellanus" Modern Philology (1953): 149, 152, 152N41.

78 "Macrobius and the Unity of the 'Roman de la Rose"" 578-9.
79 See Robertson, "The Subject of the 'De Amore’ of Andreas Capellanus" 152. Also, Augustine, City of God, 8.17.
80 Ibid., 152-53.
81 See Monson, Andreas Capellanus, Scholasticism, and the Courtly Tradition, 209.

82 Ebreo, Dialogues of Love, 283.
83 See S. K. Heninger, Touches of Sweet Harmony: Pythagorean Cosmology and Renaissance Poetics (San Marino: Huntington Library, 1974), 287-397. Heninger argues that in early modern poetics the poet is a "maker," analogous to the demiurge in Plato's Timaeus, which is the locus classicus of this tradition (291). He further argues that poetry may be a literary microcosm patterned after creation. In this way, the poet is not an imitator of imitation, a criticism that Plato makes in the Republic, but a revealer of the true nature of things (364). See also Coulter, The Literary Microcosm, 32-126. For cosmopoesis in Spenser, see Kenneth Borris, Visionary Spenser and the Poetics of Early Modern Platonism (Oxford: Oxford University Press, 2017), 50-53, passim.
84 "From the Universal to the Particular in Medieval Poetry" MLN 85.6 (1970): 822.

85 The hieroglyphics of Horapollo (Princeton : Princeton University Press, 1993) 28.

86 Essays in medieval culture (Princeton: Princeton University Press, 1980) 19.
87 The Subtext of Form in the English Renaissance: Proportion poetical (University Park: Pennsylvania State Univ. Press, 1994), 41.
88 Touches of Sweet Harmony, 5-6. See also S. K. Heninger, "Sequences, Systems, Models: Sidney and the Secularization of Sonnets" in Poems in Their Place: The Intertextuality and Order of Poetic Collections. Ed. Neil Fraistat (Chapel Hill: University of North Carolina Press, 1986), 69-71.
89 Semiotics of Poetry, 115, 154, 160.
90 The Rhetoric of Poetry in the Renaissance and Seventeenth Century (Baton Rouge: Louisiana State University Press, 1983) 8-10, 15. Houston argues that Scève, as Petrarch's heir, takes this use of images for structural purpose even further (32-33).
91 "Sequences, Systems, Models: Sidney and the Secularization of Sonnets," 71.
92 "The Mind's Eye: Memory and Textuality" in The New Medievalism. Ed. Marina Scordilis Brownlee, Kevin Brownlee, and Stephen G. Nichols (Baltimore: Johns Hopkins University Press, 1991), 31.
93 Underlying this model is Aristotelean causality and scholastic psychology, according to Don Monson: "Andreas Capellanus's Scholastic Definition of Love" Viator 25 (1994): 209-11.
94 See Robert J. O'Connell, Images of Conversion in St. Augustine's Confessions (New York: Fordham University Press, 1996), 126-27.

95
See Brian Stock, Augustine's Inner Dialogue: The Philosophical Soliloquy in Late Antiquity (Cambridge: Cambridge University Press, 2010), 102.
96 See Winthrop Wetherbee, Platonism and Poetry in the Twelfth Century: The Literary Influence of the School of Chartres (Princeton: Princeton University Press, 1972), 59.
97 For the Vita Nuova, see Peter Dronke, Dante's Second Love: The Originality and the Contexts of the Convivio, Ed. Society for Italian Studies (Exeter: Society for Italian Studies, 1997), 8.
98 The Individual and the Cosmos in Renaissance Philosophy (Chicago: University of Chicago Press, 1963), 22.
99 The Elizabethan Love Sonnet (London: Methuen, 1966), 135-36.
100 This is treated in depth in the discussion of Sonnets 44 and 45 that appears in chapter 7.
101 215a-c, 216c-d, 221d-e.
102 Sonnets 44 and 45 are an obvious pair. Sonnet 79 , which refers to the forthcoming MLIP Subsequence, is properly placed immediately prior to Sonnet 80 .
103 There are a few exceptions: Sonnets 80-82, which form the Puzzle Sonnet, are in their proper order. Sonnet 98 and the unnumbered Quid Amor poem are correctly adjacent. The Epilogue, naturally, is the last poem of the sequence.
104 Murphy Dissertation, lxxiv-lxxv.
105 The meaning of triple hurte is discussed in chapter 10.
106 Sutton Edition: The Complete Works of Thomas Watson (1556-1592), 266.
107 Quoted earlier in this chapter.
108 See O'Connell, Images of Conversion in St. Augustine's Confessions, 25, 136, 269.
109 Eden, Hermeneutics and the Rhetorical Tradition, 4.
110 Ibid., 53.
111 Ibid., 52. Basil of Caesarea also "imagines the interpreter's labors in terms of Odysseus's struggle to reach home" (48, passim., 41-53). Also, Plutarch recognizes that "Odysseus's travels thematize the power of accommodation to effect the journey home" (36, passim., 31-39).
112 Ibid., 4-5.
113 Ibid., 39.
114 Bound to Read, 95-6; passim, 94-116.
115 Ibid., 93; 220N30. Moreover, interleaved books were relatively common in the sixteenth century: the printer could easily add blank pages in between the pages of a book in the printing stage-be that "on demand" for a prospective customer or, which frequently occurred, for commercial reasons in religious texts that invited extensive glossing well beyond the page margins. See Petra Feuerstein-Herz: "Weiße Seiten. Durchschossene Bücher in alten Bibliotheken" in Idee. Zeitschrift für Ideengeschichte XI/4 (Winter 2017): 101-14. My appreciation to Gerhard F. Strasser for this insight.
116 Knight, 93-94.

117 Ibid., 106.
118 Ibid., 111.
119 Ibid., 12.
120 Ibid., 113.
121 Copeland, Rhetoric, Hermeneutics and Translation in the Middle Ages, 153.
122 Eden, Hermeneutics and the Rhetorical Tradition, 31-32.
123 Copeland, Rhetoric, Hermeneutics and Translation in the Middle Ages, 124-25.
124 "The Influence of the Concepts of Ordinatio and Compilatio on the Development of the Book," 128-29.
125 Katherine Jackson, "Sylvester's 'Du Bartas'" The Sewanee Review 16.3 (1908): 317. Joshua Sylvester published a full translation in 1605.

126 "'Well Grounded, Finely Framed, and Strongly Trussed up Together' the 'Medieval' Structure of 'The Faerie Queene"' The Review of English Studies 52.205 (2001): 26.

127 Copeland, Rhetoric, Hermeneutics and Translation in the Middle Ages, 152.
128 Ibid., 190.
129 Stillman, "The Scope of Sidney's Defence of Poesy," 372.
130 The Literary Microcosm, 84, passim, 95-126.
131 Copeland, Rhetoric, Hermeneutics and Translation in the Middle Ages, 108-9.
132 Ibid., 124.
133 Ibid., 174-75.
134 Sciences and the Self in Medieval Poetry: Alan of Lille's Anticlaudianus and John Gower's Confessio Amantis, Cambridge Studies in Medieval Literature 25 (Cambridge: Cambridge University Press, 1995), 70.
135 Ibid., 70. Simpson quotes Geoffrey of Vinsauf's Poetria nova, which describes "the initial creative act as the formation of an idea." Vinsauf writes: "[T]he measuring line of his mind first lays out the work, and he menally outlines the successive steps in a definite order" (70).
136 Ibid., 72-74.
137 Copeland, Rhetoric, Hermeneutics and Translation in the Middle Ages, 153. Institutio oratoria 2.17.26; 18.1-2.
138 Philip Sidney and the Poetics of Renaissance Cosmopolitanism, 114. Reference to Sidney's Defence: An Apology for Poetry: or, The Defence of Poesy, Ed. Geoffrey Shepherd (London: T. Nelson and Sons, 1965), 101. For a similar view on Sidney, and also on Potano, see Victoria Kahn, Rhetoric, Prudence, and Skepticism in the Renaissance (Ithaca: Cornell University Press, 1985), 41, 40.

139 See Stillman, "The Scope of Sidney's Defence of Poesy," 383. "Strange effects:" An Apology for Poetry, 114.
140 Stillman's translation of Melanchthon, Corpus Reformatorum XIII, 138: "The Scope of Sidney's Defence of Poesy," 380N44.
141 Semiotics of Poetry, 139, 161.
142 The Hekatompathia's "To the Frendly Reader" preface.
143 Semiotics of Poetry, 150 (italics in original).

144 Chapter 5, lines 4-8. Translation of Traugott Lawler: The "Parisiana poetria" of John of Garland, 85.
145 Eden, Hermeneutics and the Rhetorical Tradition, 8.
146 Augustine insists the res or doctrine is set although the words or signa (signs) are not (Copeland, Rhetoric, Hermeneutics and Translation in the Middle Ages, 157-58). Eden cites the Clavis scripturae sacrae (1567) of Matthias Flacius, which recognizes that "a discrepancy between the writer's words and her or his intention" must be resolved. Eden concludes: "The ultimate aim of interpretation, in other words, is to establish authorial intention, the mens authoris: to look beyond the meaning or signification of the words to what the writer meant (magis in mentem, quam in verba Scriptoris, respicere) (2.31)" (Hermeneutics and the Rhetorical Tradition, 93-94).
147 Puttenham, The Art of English Poesy, 347N1; 360.

## Chapter 4 notes

1 "The Influence of the Concepts of Ordinatio and Compilatio on the Development of the Book," in Medieval Learning and Literature: Essays Presented to Richard William Hunt, ed. J. J. G. Alexander and Margaret Gibson (Oxford: Clarendon Press, 1976), 117, 131.
2 Sutton Complete Works: Vol. 2, 11 (see List of Primary Sources). Also available in Latin and English online (see Primary Sources).
3 "A Kind of Sagacity: Francis Bacon, the Ars Memoriae and the Pursuit of Natural Knowledge," Intellectual History Review 19, no. 2 (2009): 156, 169, 172.
4 Running titles are present in Sidney's sequence and Shakespeare's, but not most others. In the case of the Hekatompathia, the appearance of running titles only over the second Subsequence arouses our curiosity.
5 The Jewish prayer, Shemoneh Esreh, which means 18, is central to liturgical practice, and the order of its 18 blessings is considered significant. Also, the gematric value of $n$, which means life, is 18 . The Greeks considered it an important number because the perimeter and area of a $3 \times 6$ rectangle are both equal to 18 .
6 Spenser and Biblical Poetics (Ithaca: Cornell University Press, 1999), 18-19.
7 Ibid., 20. The Leclercq quotation is from The Love of Learning and the Desire for God, 91.
8 Ibid., 21.
9 Spenser and Biblical Poetics, 21.
10 Ibid., 21. Luther quotation is from World and Sacrament 3 (Vol. 37 of Works), 21.
11 Ibid., 27.
12 Ibid., 27. Kaske's index, which appears in her study in Appendix 2, covers the images that she treats in this book.
13 Ibid., 59.

Bush is referring to the works of Donne and Andrewes: English Literature in the Earlier Seventeenth Century, 1600-1660 (London: Oxford University Press, 1945), 305.
Kaske, Spenser and Biblical Poetics, 60.
16 Another example of linkage between one sonnet and another is found in the Hexameral Rings, which are introduced in chapter 8. These Hexameral Rings are essentially thematic links: they provide a taxonomic system that aids the reader in reordering the scrambled sonnets.
17 Elizabethan and Metaphysical Imagery: Renaissance Poetic and TwentiethCentury Critics (Chicago: University of Chicago press, 1947), 44.
18 "Yeats and the Language of Symbolism," University of Toronto Quarterly 17 (October 1947): 1.
19 Elizabethan and Metaphysical Imagery: Renaissance Poetic and TwentiethCentury Critics, 24-26.
20 Spenser's Images of Life (Cambridge: Cambridge University Press, 1967), 8-10.
21 Sciences and the Self in Medieval Poetry: Alan of Lille's Anticlaudianus and John Gower's Confessio Amantis, Cambridge Studies in Medieval Literature 25 (Cambridge: Cambridge University Press, 1995), 11, 11N22.
22 Two particularly useful studies that discuss prefaces are Gérard Genette, Paratexts: Thresholds of Interpretation, Literature, Culture, Theory 20 (Cambridge: Cambridge University Press, 1997) and Jacques Derrida, Dissemination (Chicago: University Press, 1981).
23 See discussion in chapter 1.
24 Sutton's translation.
25 A revision of Sutton's translation. Sutton identifies cyprigeno (Venus-born) as Cupid; Heninger claims it is Venus, however, cyprigeno means Venusborn, not Cyprus-born (Cupid was not born in Cyprus).
26 Sutton's translation; however, I have modified his translation of qua from "any girl" to "any Nymph." The word qua, which appears in both lines 35 and 37, surely a refers back to piis Nymphis (33). The whole passage is about readers in the literary circle, who are called nymphs, and therefore the feminine qua.
27 Heninger, Hekatompathia edition, xv.
28 Sutton Edition, 149, as updated in the online version. He changed his translation of sigilium from "imprint" to "woodcut."
29 Heninger, in justifying his translation, reports that the Romans called the highest throw at die "the Venus" (xvN8). However, Sutton asks, "What game would be indicated by fixum calce sigllum?" (Sutton Edition, 240).
30 Sutton Edition, 240. I quote Sutton's slightly modified online version. The Hekatompathia's title page (a combination title page and frontispiece) has an illustration of Venus and Cupid to the left of the title. See Fig. 12.2.
31 Sutton Edition, 240.
32 There are two other difficulties. Sutton's assumption that the title page's illustration of Venus and Cupid somehow scorns them is not evident from
viewing the illustration. It is also at the left and not the foot of the page (see discussion of calce).
33 LS calx (2), II.B; also, Quintilian 8.5.30.
34 Reading qua (ablative) as tying to calce (ablative).
35 The 18 Designs include 4 pictorial Designs (Fig. 4.2a through 4.2d), the DoubleA Design (Fig. 4.2d) printed inverted (Fig. 6.6), 6 Flower Designs (Fig. 6.2), 2 Bulb Designs (Fig. 6.4), 2 Root family Designs (Fig. 6.5; Roots-4 appears with Sonnet 4), a diamond shaped Design (see Sonnet 42/L90.6 in chapter 7), a diamond with a border Design (see Sonnet 52/L64.5 in chapter 8), and a Design that appears to be a combination of bulbs and flowers that appears only once (Sonnet 5).
36 On Daedalus, see Yves Bonnefoy, Greek and Egyptian Mythologies (Chicago: University of Chicago Press, 1992), 88-90.
37 According to Peter Dawkins, the image of a "Double-A" first appeared in 1577 in Christopher Platin's edition of Andrea Alciato's Emblemata (Antwerp), Emblem XLV (The Shakespeare Enigma [London: Polair Publishing, 2004], 328-29).
38 "Changed Opinion as to Flowers," in Renaissance Paratexts, ed. Helen Smith and Louise Wilson (Cambridge: Cambridge University Press, 2011), 63.

39 Visionary Spenser and the Poetics of Early Modern Platonism (Oxford: Oxford University Press, 2017), 87-92, 87N16.
40 The two locations are below the prefatory poems of Royden and Peele and below Sonnet 85 . There are press variants at other locations, which may be an attempt to correct the orientation to the author's specification. We will discover, in the second and subsequent Stages of the Puzzle, the normal and inverted printings of this Design signal different Transform Pairs (cryptographic tables). See further discussion in chapter 6.
41 Polygraphie, et vniuerselle escriture cabalistique, de M. I. Tritheme abbé ; traduicte par Gabriel de Collange, natif de Tours en Auuergne (Paris: Pour Iaques Keruer, 1561), Clavicle et interpretation, Kv.
42 If one may choose among 18 possibilities, then with polyphony, there are 36 chances to generate the desired letter. However, given that certain beginning and (especially) ending letters are more common than others, and thus repeated among the possibilities, there are far fewer opportunities to generate different letters, and the full range of letters in a 24-letter alphabet will often not be covered.
43 De Augmentis Scientiarum (1623), Book VI, chapter 1.
44 Spenser's Images of Life, 61.
45 The Dyer's Hand and Other Essays (New York: Vintage Books, 1962), 50.
46 Semiotics of Poetry, 168-9N16, 70, 165, 150.
47 Touches of Sweet Harmony, 338.
48 Fables of Identity: Studies in Poetic Mythology (New York: Harcourt Brace \& World, 1963), 71.

## Chapter 5 notes

1 See the discussion in chapter 2 concerning the "hermaphroditic" contraction "H'is."
2 See the discussion in chapter 10 concerning Sonnet L50.5 (56). In the "To the frendly Reader" preface, Watson claims that a poet must falter when required to do so, citing Vergil's procumbi humi bos, which is an intentionally faulty line. In the Hekatompathia, metric faults are signals to the reader that exegesis is required.
3 Watson's source reads: Bellum saepe parit ferus exitiale Cupido / Saepe manus itidem Bacchus ad arma vocat. (P. Virgilii Maronis poetae Mantuani Vniuersum poema, apud Petrum Dusinellum, 1580), 37. The pseudo-Vergilian author finds that the effects of love and drink are similar.
4 See Sutton quotation in chapter 3, the section titled "Into the wilderness: the ruined text."
5 This period of 7 years matches the period of time he spent living abroad, according to a dedicatory poem that prefaces his Antigone. He claims that he spent a lustrum and a half abroad, about 7 or 8 years.
6 These references to Watson's own life, if they are that, would seem to contradict his assertion that his love affair is not real, but supposed ("To the frendly Reader" preface). This contradiction over the autobiographical content of the Hekatompathia remains an unresolved critical issue, as discussed in the note that follows.
$7 \quad$ Sutton opines: "The Author expresses his regret for having been diverted by love from devoting himself to litis in arcendae studiis, et pace colendae [should be "colenda"], which appears to express repentance for having neglected legal studies, and this last detail may perhaps point to Watson himself, not his fictitious Author. It is, however, obviously dangerous to claim any authentic personal content in a single line unsubstantiated by anything else in Watson's writings: is this genuine Christian repentance, or is he merely striking a momentary Petrarchan pose?" (Sutton Edition, 266-67). If we take litis in arcendae studiis to be a modification of the poem to fit Watson's life, the line takes on new significance. The poem's headnote mentions a change in the number of years spent in love and the years subsequent to love's end, but it omits this modification that fits his professional life, which is perhaps meant to draw attention to it.
8 Watson's quotation of Servius refers to his commentary on Aeneid, 1.28. Watson's story about Hebe appears to be taken from the Church of England's Latin-English Dictionary: "Hebe bringing his [Zeus's] cup in a slippery place chaunced to fall, and disclosed further of hir neather partes, then comelinesse woulde have to be shewen" (Thesaurus Linguae Romanae \& Britannicae, ed. Thomas Cooper (London, 1565), J4r). Catherine Loomis writes: "This explanation neatly elides the usual narrative of Zeus's homoerotic desire for Ganymede." (Catherine Loomis, "Bear Your Body More Seeming,"
in The Emblematic Queen: Extra-Literary Representations of Early Modern Queenship, ed. Debra Barrett-Graves (New York: Palgrave Macmillan, 2013), 61, 61N33.
9 Gehenna, a valley near Jerusalem where children were sacrificed, is known as a cursed place.

## Chapter 6 notes

1 Peter Pesic, "François Viète, Father of Modern Cryptanalysis-Two New Manuscripts," Cryptologia 21, no. 1 (1997), 12.
2 See discussion in "Notes on the Text" section of this study's backmatter.
3 Many examples of such cosmological models can be found in S. K. Heninger, The Cosmographical Glass: Renaissance Diagrams of the Universe (San Marino: Huntington Library, 1977).
4 Fables of Identity: Studies in Poetic Mythology. (New York: Harcourt Brace \& World, 1963), 18.

## Chapter 7 notes

1 Sutton, as quoted in the first chapter.
2 Durling's translation.
3 Sonnet 90 does not appear elsewhere in the manuscript. Only these three lines appear, above the Epilogue, on the manuscript's last page.
4 Phillips Dissertation, 471; Sutton Edition, 275-76.
5 As discussed in chapters 1, 3, 4, and 12.
6 Sciences and the Self in Medieval Poetry: Alan of Lille's Anticlaudianus and John Gower's Confessio Amantis, Cambridge Studies in Medieval Literature 25 (Cambridge: Cambridge University Press, 1995), 31.
7 On the Nature of Love: Ficino on Plato's Symposium, Tr. Arthur Farndell (London: Shepheard-Walwyn Publishers, 2016), 16 (Speech 2, chapter 2).
8 Dialogues of Love, Tr. Rossella Pescatori and Cosmos Damian Bacich (Toronto: University of Toronto Press, 2009), 324.
$9 \quad$ Visionary Spenser and the Poetics of Early Modern Platonism (Oxford: Oxford University Press, 2017), 160; passim, 127, 136, 160-65.
10 The classic study on this subject is Arthur O. Lovejoy, The Great Chain of Being; A Study of the History of an Idea (Cambridge: Harvard University Press, 1936).
11 For Ficino, see On the Nature of Love, 25-27 (Speech 2, chapter 7). For Ebreo, see Dialogues of Love, 272.
12 Borris, Visionary Spenser and the Poetics of Early Modern Platonism 10610, passim, 83-121.
13 "(H)eroic Disarmament: Spenser's Unarmed Cupid, Platonized Heroism, and The Faerie Queene's Poetics" Spenser Studies, 31-32 (2018): 97, 117.
14 An exception to this statement-a "collapsed Platonism"-is taken up in the final chapter.

Due to Juno's jealousy; see Metamorphoses 2.466-530. Although these constellations might descend toward the horizon in some tropical latitudes, this has no relevance here.
In the "To the frendly reader" preface, where he cites Vergil's metrical fault, . . . procumbit humi bos. See discussion in chapter 10.
17 Riffaterre is quoted in chapter 3: "As always this ungrammaticality is at one and the same time the locus of obscurity and the index to the solution."
18 Watson does not specify a source, and scholars have not found one. Murphy, who carefully traced Watson's sources, believed it to be "completely original" (Murphy Dissertation, 248).
19 Mythologiae viii.1; for Comes on Neptune, ii.8. See John Hankins, Source and Meaning in Spenser's Allegory: A Study of The Faerie Queene (Oxford: Clarendon Press, 1971), 229-30.
20 Neptune aids the Greeks against Trojans in the Iliad; he is an ally of Venus and Aeneas, calming the storm that threatens Aeneas in Book 1.
21 True, the genders in the Faerie Queene and Hekatompathia are reversed: Thames (m) vs Thamesis (f); Medway (f) vs. Triton (m). Nevertheless, in the former, the names are the same; with respect to the latter, both Medway and Triton are typological figures of a "moist" restoration or consecration. See David Quint's Origin and Originality in Renaissance Literature (New Haven: Yale University Press, 1983), 159-61. See also Jon A. Quitslund, Spenser's Supreme Fiction: Platonic Natural History and The Faerie Queene (Toronto: University of Toronto Press, 2001) 286-87.. There is also a parallel between the wedding location in this sonnet, Nereus Hall (11), and that of the Faerie Queene, Proteus Hall. Both Nereus and Proteus are sons of sea gods, and both have prophetic powers: Proteus predicts the fall of Troy.
22 Whether in the Faerie Queene as noted above, or in Aeneas's betrothal to Lavinia, which represents the fated succession of the Trojans in Aeneid 7.
23 Nancy J. Vickers, "This Heraldry in Lucrece' Face" Poetics Today, 6.1/2 (1985): 181, passim 171-84.

24 Murphy Dissertation, 223-25.

## Chapter 8 notes

1 For antiquity, see William S. Anderson, "The Theory and Practice of Poetic Arrangement from Vergil to Ovid," in Neil Fraistat, Poems in Their Place: The Intertextuality and Order of Poetic Collections (Chapel Hill: University of North Carolina Press, 2011). For the early modern period, see Earl Miner, "Some Issues or Study of Integrated Collections," also in Fraistat.
2 Ibid., Anderson, 49.
3 These diagrams appear in Doranne Fenoaltea, "A Poetic Monument: Arrangement in Book 1 of Ronsard's 1550 Odes," in The Ladder of High Designs: Structure and Interpretation of the French Lyric Sequence, ed. Doranne Fenoaltea and David Lee Rubin (Charlottesville: University Press of Virginia, 1991), 55, passim, 54-72.

4 The term "Hexameral" is only meant to mean "six of something" and is not related to the hexameral literature that organizes around the six days of Creation.
5 The conceit that Cupid has two arrows, one gold and one lead, can be found in Ebreo's Dialogues of Love, however, his symbolism is entirely different. Dialogues of Love, trans. Rossella Pescatori and Cosmos Damian Bacich (Toronto: University of Toronto Press, 2009), 142-43, 164.
6 Don A Monson, Andreas Capellanus, Scholasticism, and the Courtly Tradition (Washington: Catholic University of America Press, 2005), 108-9.

## Chapter 9 notes

1 Edgar Wind, Pagan Mysteries in the Renaissance (London: Faber and Faber, 1958), 57-59.

2 De amore, 3.3. A translation of the Tuscan version, Sopra lo Amore: "This is why all the parts of the cosmos-being the works of a single craftsman, parts of a single mechanism, and mutually alike in being and living-are bound together by means of a reciprocal love, in such a manner that Love may rightly be called the everlasting knot and bond of the cosmos, the unmoving support of its parts, and the firm foundation of the whole mechanism" (On the Nature of Love: Ficino on Plato's Symposium, trans. Arthur Farndell [London: Shepheard-Walwyn Publishers, 2016], 38 [Speech 3, chapter 3]).
3 Wind, Pagan Mysteries in the Renaissance, 82.
4 Petrarch Sonnet 164, as subsequently discussed on the commentary page for L39.B.4.
5 Dialogues of love, trans. Rossella Pescatori and Cosmos Damian Bacich (University of Toronto Press, 2009), 194.
6 Alastair Fowler, "Emanations of Glory: Neoplatonic Order in Spenser's Faerie Queen," in A Theatre for Spenserians, ed. Judith Kennedy and James A Reither, Papers of the International Spenser Colloquium, Frederiction, New Brunswick, October, 1969. (Toronto: University of Toronto Press, 1973), 54.
7 Wind notes the interweaving of opposites in a perfect maze in Jonson's Pleasure Reconciled to Virtue (Pagan Mysteries in the Renaissance, 168) and in the riddle that the Sphinx proposes to Cupid in Love feed from Ignorance and Folly (180). On the spread of knowledge to England: Ibid., 181-82.
8 The other two metrical faults are MLIP.Scoff.7/92.3, a hexameter and L50.5/56.14, a tetrameter. However, the manuscript has Ev'n, so perhaps it is a compositor's error and not a hint.
9 Wayne A Rebhorn, "His Tail at Commandment': George Puttenham and the Carnivalization of Rhetoric," in A Companion to Rhetoric and Rhetorical Criticism, ed. Walter Jost and Wendy Olmsted (Malden: Blackwell Publishing, 2004), 99.
10 This trope can be found in Cusanus, Ficino, and others (Pagan Mysteries in the Renaissance, 183, 183N3) and in Dante's Vita Nuova (XII).

11 In context, I translated Laurae in umbra as "Laura's faint presence" (see umbra, LSII.B/C).
12 See previous note.

## Chapter 10 notes

1 "The Fig Tree and the Laurel: Petrarch's Poetics," Diacritics 5, no. 1 (1975): 34, 36.
2 Ibid., 35.
3 The use of italics in Watson's sonnets is uncommon, as discussed in the "Notes on the Text" section of this study's backmatter.
4 Michael Riffaterre writes, "Ungrammaticality is a sign of literariness" and a call to exegesis (Semiotics of Poetry, 139).
5 Annabel M Patterson, Hermogenes and the Renaissance: Seven Ideas of Style (Princeton: Princeton University Press, 1970), 11-12.
6 Ibid., 12-13.
7 Ibid., 13.
8 Puttenham expresses hostility toward carnivalesque (in Bakhtin's sense of the word) poetry, at length, but then indulges in the very same in his treatise on poetry, breaking the decorum that he advocates. See Wayne A Rebhorn, "'His Tail at Commandment': George Puttenham and the Carnivalization of Rhetoric," in A Companion to Rhetoric and Rhetorical Criticism, eds. Walter Jost and Wendy Olmsted (Malden: Blackwell Publishing, 2004), 96-99, passim.
9 Virgil's Aeneid, tr. Rev. Oliver Crane (New York: Baker \& Taylor Company, 1888), x.

10 Previously quoted in chapter 1: Wendy Phillips, "No More Tears: Thomas Watson Absolved," Comitatus: A Journal of Medieval and Renaissance Studies 20, no. 1 (1989): 75.
11 John Freccero, In Dante's Wake: Reading from Medieval to Modern in the Augustinian Tradition, ed. Melissa Swain and Danielle Callegari (New York: Fordham University Press, 2015), 60-61.
12 Ibid., 67.
13 Ibid., 207.
14 "The Fig Tree and the Laurel," 34, 37.
15 On the translation of pruritus as sexual craving, see LS 2 and OLD, purire, 2.

## Chapter 11 notes

1 The assertion that De Vere perused the book appears in two of Watson's prefaces, his "Epistle Dedicatorie" (15-16) and his "Protrepticon" (27). The table below lists each line in Serafino's poem that begins with "Col tempo" alongside its corresponding line in Sonnet 77 that begins with the word "Time." In Serafino's poem, 13 lines begin with "Col tempo" (all but line 14); in Sonnet 77, all lines except 6, 12, 17, and 18 begin with "Time." In Sonnet 77,
there is only one line that begins with "Time" that has no corresponding line in Serafino's poem: Time doth convey to ground both foe and friend (5).

|  | Serafino Lines |  | Watson Sonnet 77 |
| :--- | :--- | :--- | :--- |
| 1 | Col tempo passa gli anni, i mesi e l' ore, | 1 | Time wasteth yeeres, and month's, and howr's: |
| 2 | Col tempo le riccheze, imperio e regno, | 13 Time turneth into naught each Princely state: |  |
| 3 | Col tempo fama, onor, forteza e ingegno | 2 | Time doth consume fame, honour, wit and strength: |
| 4 | Col tempo gioventù con beltà more; | 4 | Time weares out youth and beauties lookes at length: |
| 5 | Col tempo manca ciascun' erba e fiore, | 3 | Time kills the greenest Herbes and sweetest flowr's: |
| 6 Col tempo ogni arbor torna un secco legno, | 7 | Time maketh eu'ry tree to die and rott: |  |
| 7 | Col tempo passa guerra, ingiuria e sdegno, | 9 | Time causeth warres and wronges to be forgott: |
| 8 | Col tempo fugge e parte ogni dolore; | 8 | Time turneth ofte our pleasures into paine: |
| 9 | Col tempo el tempo chiar s' inturba e imbruna, | 10 Time clears the skie, which first hung full of rayne: |  |
| 10 Col tempo ogni piacer finisce e stanca, | 11 Time makes an end of all human desire, |  |  |
| 11 Col tempo el mar tranquillo ha gran fortuna; | 15 Time calmes the Sea where tempest was of late: |  |  |
| 12 Col tempo in acqua vien la neve bianca, | 14 Time brings a fludd from newe resolued snowe: |  |  |
| 13 Col tempo perde suo splendor la luna, | 16 Time eats what ere the Moone can see belowe: |  |  |
| 14 [Ma in me già mai amor con tempo manca.] |  |  |  |

3 For example, a short poem appended to the Amoretti: The Yale Edition of the Shorter Poems of Edmund Spenser, eds. William Oram et al. (New Haven: Yale University Press, 1989), 656-58. In the Hekatompathia, unlike other versions, Asclepius appears as Cupid's healer. Asclepius also appears in two other sonnets (13.1; 20.3), again as a healer.
4 To be more precise, 12 of the 13 undeciphered values derive from Orchema Designs, and the $13^{\text {th }}$ from the Diamond Design. Because the Diamond Design only appears once in the third Subsequence, its value was implied but remains uncorroborated.
5 The true probability is one out of $1 /\left(1-(23 / 24)^{2}\right) \approx 1$ out of 12.25 .
6 The analysis is only approximate because we have only estimated the number of different first and last letters available in each of the sonnets. A stricter analysis would instead use the actual number of first and last letters available for of the 24 sonnets. In this stricter analysis, I found that probability slightly more remote, 1 in 40 million as opposed to 1 in 16 million.

## Chapter 12 notes

1 See Daniel S Russell, The Emblem and Device in France, French Forum monographs 59 (French Forum, 1985), 48. Russell is referring to emblems, but I believe the principle applies more generally to poetry.
2 Bartolomeo Fontius (1455-1513). Quoted from Concetta Carestia Greenfield, Humanist and Scholastic Poetics, 1250-1500 (Lewisburg: Bucknell University Press, 1981), 288.
3 Summa theologiae I.Q. I, a9, r.2.
4 On Christian Doctrine, 2.6.8, Tr. Rev. J. F. Shaw; Golding, "Too the Reader," in Ovid, Metamorphosis, tr. Golding (London, 1567), A2v (STC 18956). His preface to Henry Savile's translation of Tacitus (1591).

6 The Discarded Image an Introduction to Medieval and Renaissance Literature (Cambridge: Cambridge University Press, 1964), 10.
$7 \quad$ Visionary Spenser and the Poetics of Early Modern Platonism (Oxford: Oxford University Press, 2017), 70.
8 Boccaccio on Poetry, tr. Charles Osgood (New York: Liberal Arts Press, 1956), 60-62.

9 "Allegory, Emblem, and Symbol," in The Oxford Handbook of Edmund Spenser, ed. Richard A McCabe (Oxford: Oxford University Press, 2010), 456.
10 Dante's Convivio is an exception: it provides extensive commentary that aids the reader in their comprehension of the work's poetics and architecture.
11 Sidney and Spenser: The Poet as Maker (University Park: Pennsylvania State University Press, 1989), 55.
12 Ibid., 39-41.
13 Sciences and the Self in Medieval Poetry, 69-70.
14 Michael Hetherington, "Renaissance Rhetorical Theory," in Edmund Spenser in Context, ed. Andrew Escobedo (Cambridge: Cambridge University Press, 2017), 172. See discussion in chapter 3.

15 Hermogenes and the Renaissance: Seven Ideas of Style (Princeton: Princeton University Press, 1970), 10.
16 Ibid., 12-13; 21-26.
17 "Renaissance Rhetorical Theory," 173.
18 Spenser's Supreme Fiction, 14.
19 Fables of Identity: Studies in Poetic Mythology. (New York: Harcourt Brace \& World, 1963), 32.
20 The Literary Microcosm: Theories of Interpretation of the Later Neoplatonists (Leiden: Brill, 1976), 75, 77.
21 Philip Sidney and the Poetics of Renaissance Cosmopolitanism (London: Routledge, 2008), 215.
22 Sidney and Spenser: The Poet as Maker (University Park: Pennsylvania State University Press, 1989), 207, passim.
23 The Literary Microcosm, 76.
24 Stillman argues for "the development of an early modern poetics in England that stood apart conspicuously and self-consciously from the allegorical tradition. . . . Sidney clearly belongs to an alternative, non-allegorical history of hermeneutics." (Philip Sidney and the Poetics of Renaissance Cosmopolitanism, 72).
25 Coulter, The Literary Microcosm, 74. He cites Phaedrus 268D.
26 Stillman, Philip Sidney and the Poetics of Renaissance Cosmopolitanism, viii.
27 Stillman argues that the microcosm is "a world in which the maker's intentions, at once clear and demonstrably coherent, both can and must be recovered by the best hermeneutic means available-by means, that is, of dialectic and rhetoric." A universal truth "stands at the center of the narrative [which] is simultaneously associated, like Melanchthon's loci, with the author's intention (voluptas), chief cause (summam causam) or main argument (status dicendi). (Ibid., 110-11).

28 "Plato and Platonism," in Edmund Spenser in Context, ed. Andrew Escobedo (Cambridge: Cambridge University Press, 2017), 279-80. The quote is from the Ruines of Time, 402.
29 Jean-Pierre Maquerlot, Shakespeare and the Mannerist Tradition: A Reading of Five Problem Plays (Cambridge: Cambridge University Press, 1995), 19.

30 Spenser's Supreme Fiction: Platonic Natural History and The Faerie Queene (Toronto: University of Toronto Press, 2001), 16.
31 Discourses on the Heroic Poem, tr. Mariella Cavalchini and Irene Samuel (Oxford: Clarendon Press, 1973), 78.
32 See section "Rewriting the text" in chapter 3 where part of this passage is also quoted.
33 Philip Sidney, An Apology for Poetry: Or, The Defence of Poesy, ed. Geoffrey Shepherd (London: T. Nelson and Sons, 1965), 101.
34 "Emanations of Glory: Neoplatonic Order in Spenser's Faerie Queen," in A Theatre for Spenserians, ed. Judith Kennedy and James A Reither, Papers of the International Spenser Colloquium, Frederiction, New Brunswick, October, 1969. (Toronto: University of Toronto Press, 1973), 54.
35 Edgar Wind, Pagan Mysteries in the Renaissance (London: Faber and Faber, 1958), 181.

36 The Expulsion of the Triumphant Beast, tr. Arthur D. Imerti (New Brunswick: Rutgers University Press, 1964), 90-91.
37 Spenser's Supreme Fiction, 291-92. Quitslund, 291-92. This division of the cosmos is, of course, also found in Platonism. Stillman asserts that Sidney "is not readily characterized as a neoplatonist [because he] does not conceive of Ideas as deriving from or participating in some transcendent realm of meaning and value" (Philip Sidney and the Poetics of Renaissance Cosmopolitanism, 109).
38 An Apology for Poetry, 120.
39 "Cosmology and Cosmography," in Edmund Spenser in Context, ed. Andrew Escobedo (Cambridge: Cambridge University Press, 2017), 328.
40 De amore, 3.3.
41 Spenser and Biblical Poetics (Ithaca: Cornell University Press, 1999), 63-64.
42 The Expulsion of the Triumphant Beast, 238.
43 Rosalie Colie asserts, "One Renaissance philosopher was able to marry the Platonic and Democritan worlds, in language at least, to achieve a fusion of Being and Becoming in which the concepts were mutually inextricable. Bruno presents the puzzling portrait of a philosopher and poet who was at once a pantheist-for which, among other things, he was terribly burnedand an atomist, a man who quite deliberately attempted the fusion of these utterly different traditions, with their utterly different concepts of the value of materiality" (Paradoxia Epidemica the Renaissance Tradition of Paradox [Princeton: Princeton University Press, 1966], 330).

47 The Spenser Encyclopedia (Abingdon: Routledge, 1996), 18.
48 Ibid., 20.
49 Ibid., 104.
50 Levinus Lemnius (1505-68) was a Dutch physician. The text quoted here is
Levinus Lemnius (1505-68) was a Dutch physician. The text quoted here is
Quitslund's translation (Spenser's Supreme Fiction, 104) of a French translation (Des occultes merveilles et secretz de nature [1574], 12r).
51 According to Quitslund, "Spenser goes a long way toward accepting Bruno's vision of a cosmos in flux, with everything in heaven and earth made of eternal substances, shaped from within by mutable formative principles" (295). Heninger asserts that
by the mid-fifteenth century in Ficino's Italy there had begun to emerge an ambiguous interpretation of mimesis: while art must be truthful to the ideal order prescribed by the deity, it may shamelessly imitate the world that lies open to our senses. . . . As the location of ultimate reality shifted from the Christianized version of Plato's realm of essences to the empiricist's world of observable nature, a work of art became a representation of what exists in fact, rather than a presentation of what is supposed to be in ideal principle. . . . By the time of Sidney and Spenser, the relocation of reality was well under way; they lived, in fact, when the conflict was at crisis. (Sidney and Spenser, 64)
Indeed, Spenser appears to be under the influence of Cusanus. Fowler opines that "Spenser's most obvious expression of his philosophical vision takes the form of representing aspects of the divine image by sexually coupled contraries" ("Emanations of Glory," 54).
The Expulsion of the Triumphant Beast, 235.
53 See F. J. E. Raby, "Nuda Natura and Twelfth-Century Cosmology," Speculum 43, no. 1 (1968): 72-73.
See D. W. Robertson, "The Subject of the 'De Amore' of Andreas Capellanus," Modern Philology, 1953, 148; N21; N22. Robertson quotes Ailred of Rievaulx: Quod in omnibus creaturis quoddam vestigium divinae charitatis appareat. He asserts that a similar idea can also be found in Augustine's De genesi ad litteram.
C. S. Lewis argues that such an explanation may be found in Cusanus, and that others, such as Spenser, should not necessarily be viewed as blasphemous when in their works nature assumes the appearance of God. Spenser's Images of Life (Cambridge: Cambridge University Press, 1967), 42-43.
"Cosmogony and Love: The Role of Phaedrus in Ficino's Symposium Commentary," Journal of Medieval and Renaissance Studies Durham, NC 10, no. 2 (1980): 152. Title of "Morals," ed. William W. Goodwin (New York: Little, Brown, 1909), 108 (Section 48).
work was translated into English in 1578. Natural philosophers were said to be at fault for confining their study to the phenomenal world-that is, secondary causes-and neglecting the primary causes, which are found in the Creator (Spenser's Supreme Fiction, 126-27).
57 The Greeks and the Irrational (Berkeley: University of California Press, 1951), 218.

58 The significance of the use of italics within the sonnet text is discussed in the "Notes on the Text" section of this study's backmatter.
59 Poetry, Signs, and Magic (Newark: University of Delaware Press, 2005), 247, 256. Also, the rest of this intriguing chapter titled, "Poetry and the Scattered World," 245-59.
60 She is mentioned in a reference to the past in L73.H. 11 and hypothetically in L73.2.16.
61 "Petrarch's laurel . . . stands for a poetry whose real subject matter is its own act and whose creation is its own author" ("The Fig Tree and the Laurel: Petrarch's Poetics," Diacritics 5, no. 1 [1975]: 34).
62 "Sequences, Systems, Models: Sidney and the Secularization of Sonnets," in Poems in Their Place: The Intertextuality and Order of Poetic Collections, ed. Neil Fraistat (Chapel Hill: University of North Carolina Press, 1986), 73.
63 Greene, in the prior quotation concerning Canzoniere 16, asserts that Petrarch's speaker does not reach an end. Alternatively, it could be argued that in the final three sonnets, he reaches an end, placing himself in God's hands. However, Greene's sense that the Canzoniere never reaches a resolution seems to me to be correct.
64 "Petrarch," in Edmund Spenser in Context, ed. Andrew Escobedo (Cambridge: Cambridge University Press, 2017), 239-40.
65 Stillman, Philip Sidney and the Poetics of Renaissance Cosmopolitanism, 117, 119. Quotation from Sidney: An Apology for Poetry, 104.
66 Philip Sidney and the Poetics of Renaissance Cosmopolitanism, 164.
67 Ibid., 223, 162.
68 Borris in his Visionary Spenser, 51. Borris references Tasso, Discourses on the Heroic Poem, 77-78. He also cites Coulter, The Literary Microcosm and S. K. Heninger, Touches of Sweet Harmony: Pythagorean Cosmology and Renaissance Poetics (San Marino: Huntington Library, 1974), 287-397.
69 Second World and Green World: Studies in Renaissance Fiction-Making (Berkeley: University of California Press, 1990), 49.
70 Ibid. 45, passim, 49-50.
71 Stillman, Philip Sidney and the Poetics of Renaissance Cosmopolitanism, 110.
72 See Stillman's description of Sidney's golden world, a description from which I have borrowed (Ibid., 163).
73 An Apology for Poetry, 100.
74 Ibid., 121. See commentary page for Sonnet L50.1: the poet prefers the inspiration of his beloved to that of the muses.
75 Sciences and the Self in Medieval Poetry: Alan of Lille's Anticlaudianus and

John Gower's Confessio Amantis, Cambridge Studies in Medieval Literature 25 (Cambridge: Cambridge University Press, 1995), 14-15.
76 On the "noetic plot" of the Anticlaudianus, Ibid., 31, 34, 122-27.
77 Ibid., 125.
78 As is the Anticlaudianus. Ibid., 62.
79 As quoted earlier in this chapter. An Apology for Poetry, 101.
80 Thomas Greene calls this the "lyricization of epic materials" in The Light in Troy: Imitation and Discovery in Renaissance Poetry, Elizabethan Club Series 7 (New Haven: Yale University Press, 1982), 115.
81 "Petrarch," 236.
82 Ibid., 243.
83 Ibid., 242.
84 "The Fig Tree and the Laurel," 38.
85 Freccero writes: "The love must be idolatrous for its poetic expression to be autonomous; the idolatry cannot be unconflicted, any more than a sign can be completely nonreferential if it is to communicate anything at all" (Ibid. 40). Shakespeare, in his sonnet 105, raises the issue of idolatry: "Let not my love be called idolatry / Nor my beloved as an idol show."
86 The words "ontological mezzanine" are borrowed from Borris, Visionary Spenser, 201.
87 Spenser's Colin Clouts Come Home Againe, 351.
88 Themes and Variations in Shakespeare's Sonnets (London: Hutchinson, 1961), 151.

89 "Petrarch," 239.
90 Richard Strier, referencing Sonnet 308, asserts that "Petrarch sees his (unachievable) poetic goal as quite literally incarnational- 'nor with my style her beautiful face can I incarnate' (né col mio stile il suo bel visio incarno [line 8])." He also notes in sonnet 4 "a direct parallel between the circumstances of Christ's birth and those of Laura's." The Unrepentant Renaissance: From Petrarch to Shakespeare to Milton (Chicago: University of Chicago Press, 2012), 73-74, 76. Freccero also sees Laura as incarnational: "As all desire is ultimately a desire for God, so all signs point ultimately to the Word. In a world without ultimate significance, there is no escape from the infinite referentiality of signs. Signs, like desire, continually point beyond themselves. . . . Short of the Word made flesh, there can be no bridge between words and things. . . ("The Fig Tree and the Laurel," 35.) In contrast to Dante's Beatrice, who is a mediatrix to God, Petrarch makes "his 'God' the lady Laura, the object of his worship" (Ibid. 38). Laura is the endpoint of referentiality, like the Word made flesh.
91 My Secret Book, tr. Nicholas Mann (Cambridge: Harvard University Press, 2016), 169.

92 The Unrepentant Renaissance, 60, 73-74.
93 Ibid., 60.
94 Ibid., 69.

95 Philip Sidney and the Poetics of Renaissance Cosmopolitanism, 163.
96 Ibid., 166-68. Stillman believes that critics have misapprehended Sidney's poetics because it has been viewed in "a critical context within which Reformed theology has been mistakenly identified as dogma proceeding from the writings of a single person, John Calvin." (xi)
97 Dante: Poet of the Secular World, trans. Ralph Manheim (NYRB Classics, 2007), 22.

98 See Gaetano Cipolla, "Labyrinthine Imagery in Petrarch," Italica 54, no. 2 (1977): 263-89.

99 Poetry, Signs, and Magic, 256.
100 This is also true in allegorical reading. I have quoted Edwin Honig, Dark Conceit; The Making of Allegory. (London: Faber and Faber, 1959), 29.
101 Rita Copeland, Rhetoric, Hermeneutics and Translation in the Middle Ages (Cambridge: Cambridge University Press, 1991), 182.
102 Paul Zumthor, "From the Universal to the Particular in Medieval Poetry," MLN 85, no. 6 (December 1970): 820.
103 Jean-Pierre Maquerlot credits Jean Rousset ("Saint-Yves et les poètes), who is describing baroque art of the seventeenth century (Shakespeare and the Mannerist Tradition, 19-20).
104 "The Fig Tree and the Laurel," 37. "Petrarch's laurel . . . stands for a poetry whose real subject matter is its own act and whose creation is its own author" (34).
105 Ibid., 38.
106 Of course, the idea that poetry is a vatic practice is prolific in antiquity. With respect to the early modern period, Gordon Teskey argues that "the fusion of Plato and Longinus resulted in the unplatonic and increasingly commonplace notion, witnessed in Fowre Hymnes, that poetry gives access to knowledge higher than that of philosophy." ("Renaissance Literary Theory," in Edmund Spenser in Context, ed. Andrew Escobedo [Cambridge: Cambridge University Press, 2017], 159).
107 Frye, Fables of Identity: Studies in Poetic Mythology, 17.
108 Pagan Mysteries in the Renaissance, 143.
109 There is an intrinsic value to suffering in the soteriological scheme presented in the New Testament. See Thomas More, Utopia: With Erasmus's the Sileni of Alcibiades, tr. David Wootton (Indianapolis: Hackett Publishing, 1999), 9.
110 Pagan Mysteries in the Renaissance, 144.
111 "De Libro Sexto Cum Commento," in François Rabelais: Critical Assessments, ed. Jean-Claude Carron (Baltimore: Johns Hopkins University Press, 1995), 190.

112 J. V. Cunningham avers that "the direction of the action in tragedy is from order to disorder; in comedy the converse" (Woe or Wonder: The Emotional Effect of Shakespearean Tragedy [Denver: University of Denver Press, 1951], 38).

113 Slightly modified, my three "pillars" are Patrick Cheney's three "grids" in his "Petrarch," 235.
114 From the 1579 edition, Fol. 52:
The meaning whereof is that all thinges perish and come to theyr last end, but workes of learned wits and monuments of Poetry abide for ever. And therefore Horace of his Odes a work though ful indeede of great wit \& learning, yet of no so great weight and importaunce boldly sayth.

Exigi monimentum aere perennius,
Quod nec imber nec aquilo vorax \&c.
Therefore let not be envied, that this Poete in his Epilogue sayth he hath mad a Calendar, that shall endure as long as time \&c. folowing the example of Horace and Ovid in the like.

Grande Opus exegi quae nec Iouis ira nec ignis,
Nec ferum poterit nec edax abolere vetustas \&c.
115 For example, in the first 18 sonnets and in the "Rival Poet" sonnets.
116 "Socratic Midwifery, Platonic Inspiration," Bulletin of the Institute of Classical Studies, no. 24 (1977): 9.
117 An Apology for Poetry, 95.
118 Philip Sidney, An Apology for Poetry, or, The Defence of Poesy, ed. R. W. Maslen (Manchester: Manchester University Press, 2002), 39.
119 An Apology for Poetry, 114.

