This article investigates the presence of a concealed and previously undetected numerical symbolism in a Stuart-era emblem book, Henry Peacham’s *Minerva Britanna* (1611). Although alien to modern conceptions of art, emblem books constitute one of the most widely published and popular genres in early modern book production. Drawing from an eclectic tradition of literary, religious, and iconological traditions, the emblem book combined words and images into complex patterns of signification, often of a markedly didactic character. Popular in all the European vernaculars, it appealed to a wide range of Renaissance readers, from the nearly illiterate (by virtue of its illustrated nature) to the most erudite (by virtue of its reputation for dazzling displays of intellectual and aesthetic virtuosity).

By convention the emblem was divided into three parts: superscriptio, pictura, and subscriptio: the superscriptio was the short legend or motto that typically appeared at the top of the page; below it appeared the pictura – the emblem per se – followed by the subscriptio, a longer responsive analysis, usually written in verse, which completed the design. While emblem book scholars still debate the exact relationship between the three parts – and no doubt individual emblem writers themselves sometimes conceived of it in different ways, Dietrich Walter Jöns’ definition constitutes a useful and standard point of departure: “Between the motto and the picture there existed a more or less hidden relationship in meaning which the epigram illuminated.” This definition may readily be illustrated by Figure One, where the subscript of Peacham’s emblem #24 (E4r) explains the connection between the superscript, Merenti – “to the one meriting” – and the pictura, remarking that in Peacham’s day, unlike the romanticized past “Age of Justice,” “Mome and Midas...
share/In vertues merit, and th’ inglorious is/allowed sometimes a place in Honours chair.” This explains why the accompanying emblem shows a coat of arms that is incomplete and of undesignated reference. Honor’s chair, Peacham implies, has been usurped by the pretender and true merit goes unrecognized and unrewarded.

Figure One: Emblem 24, Merenti (“To the one meriting”).

Although many of Peacham’s emblems are derived from the author’s own Basilikon Doron manuscripts (see Young 1998) or one of several continental sources detailed in a series of articles by Mason Tung, the arrangement and many details of the emblems, as well as most of the verses and the work’s elaborate critical apparatus, are unique to Minerva Britanna.³ Peacham’s book contains 206 emblems (including the well known title page),⁴ comprised of the usual tripartite structure consisting of emblem, epigrammatic superscript, and lyrical exposition (subscript) – the latter typically composed of two six-line stanzas of iambic pentameter, rhyming ababccdedeff.

Although long regarded as the most sophisticated exemplar of the emblem book genre produced in early modern England, analysis of the formal dimension of Peacham’s work has proven controversial for several reasons. Beyond the generic skepticism faced by all studies of putative numerical structures in early modern
literary works there exists a prevailing emphasis in emblem book studies on analyzing individual emblems as isolated elements possessing little or no significant semiotic relationship to other emblems or to the entire work in which they appear. Mason Tung’s studies of the sources of Peacham’s emblems are typical of a discourse which has lavished attention, however productively, on the origins and interpretation of individual emblems while uncritically assuming that Minerva Britanna possesses “little intrinsic unity as an emblem collection apart from its generally sustained tone of moral didacticism.” While this discourse has contributed much to a collective understanding of Peacham’s influences, and to the rich semiotic and historical context of individual emblems, it has also tended to take for granted a critical assumption that instead deserves investigation – namely that Peacham’s book is an uncoordinated assemblage of emblems (with corresponding verses) in which the whole is no more than the sum of its individual parts. There is little visible unity in Peacham’s book, and on the surface his rhetoric can be taken to support what Peter M. Daley has called “a characteristically emblematic view of the universe, namely that whatever is presented to the eyesight carries significance to the beholder.” But eyes can also deceive, as Garter Herald William Segar paradoxically insists in his dedicatory verses to Peacham’s book:

Eies may deluded be by false illusions:
Eies may be partiall, eyesight may decline
By weakenes, age, or by abusions.
Pride, envie, folly, may the sight pervert,
And make the eie transgresse against the heart.
With outward ei’ne first view, and marke this booke,
Variety of obiects much will please;
With inward ei’ne then on the matter looke....

(B3v)

With all due respect to the many fine scholars who have approached Peacham’s emblems primarily as uncoordinated elements that do not belong to any larger semiotic pattern, I propose in this paper to follow Herald Segar’s advice “with inward ei’ne” to “on the matter looke” — to see, in the words of Bushy in Shakespeare’s Richard II, if something “eyed awry” may better “distinguish form” (2.2.19-20). In investigating the possibility that Peacham might have employed a sophisticated numerical symbolism to impart some unity to his book it will be important to understand the central role that number theory played in Medieval and early modern aesthetics. Although mathematics was an arcane and taboo subject, number theory had long remained a prominent topic of sub rosa speculation and inquiry. According to Paulinus of Nola (c. 354-431), articulating a widely-shared metaphysics, all things in creation had been disposed “ut numerus cum re conveniret/so that number should agree with matter.” This theory of the commensurability of numerical form with substance is a specific application of a more generic Medieval mentalité, one that survived well into the Renaissance (and
beyond), in which the boundaries between things and symbols were permeable, and the act of representation was inseparable from the exercise of influence. Doctrines incorporating the belief that representation was a species of influence were especially prominent in the visual arts. According to E.H. Gombrich, “claims for the special [esoteric] position of the visual tradition were rooted in a philosophical tradition of long standing” in which “no clear gulf separate[ed] the material, visible world from the sphere of the spirit,” and consequently the modern distinction between what an image represents and what it symbolizes was unknown.

Milton Klonsky records the belief “that in some lost Arcadian foretime mankind had actually possessed a single sacred language in which idea and image were one.” The advent of printing paradoxically facilitated the dissemination of this idealized tradition of a sacred language, tracing a genesis back through the Greek Pythagoras to Egyptian hieroglyphics. The 1505 publication in Venice of the *Hieroglyphika* of Horapollo, a fifth-century scribe, popularized the association between the emblem book and ancient forms of hieratic consciousness. By the time of Achilles Bocchi’s 1574 *Symbolicarum Questionum*, the emblem book genre was inseparable from these hermetic doctrines, and more generally with traditions about number popularly derived from Pythagoras:

Quam originationem ait
Fabius. fuere symbola
Priscorum in arcanis diu
Mysterijs, ut gratia
Verbim papaer fertilem
Signat annum. Huiusmodi
Sunt Pythagoric Symbola

Ut Alciati Emblemata
Dicuntur &
Mysteriorum plena

Fabius says that symbols originated in the secret mysteries of the ancients. The poppy, for example, signified a fertile harvest. Of these same sorts are the Pythagorean symbols; as Alciat11 has said they are “full of secrets.”

It was even widely believed that Pythagoras, who adopted the practice of Egyptian priests by delivering his precepts in the form of recondite *dicta*, first infused into the Western tradition the doctrines of pictorial mystery eventually embodied in the Renaissance emblem book. As S.K. Heninger recounts the tradition, “[Pythagoras’] *Symbola*, reinforced with literary esoterica such as the *Hieroglyphica* of Horapollo and the mystic symbols of the Kabalists, were assimilated by neo-Platonists of the Florentine academy and eventually gave rise to the prolific emblem literature of the sixteenth century.”
A frequent objection to numerical analysis of Renaissance literary works is the absence of any explicit discussion, either in ancient or Renaissance arts theory, of the application of number theory to literature. Despite impressive witness that “numbers, ratios, and geometric figures link the arts generally, by way of the microcosm, to the macrocosm,” numerical analysis of literary works has historically been inhibited by the fact that “the principles underlying the applications of numbers to composition tend to remain assumed rather than expressed.” In other words, evidence for numerical structure is largely implicit, concealed in the numeric and proportional aspects of the works themselves rather than articulated in an explicit doctrine.

That such a numerical scaffolding exists for many Medieval and early modern works is, however, generally accepted and in itself relatively uncontroversial. So sober an intellectual historian as Ernst Robert Curtius, who coined the term “numerical composition” (zahlenkomposition), proposes that in the Middle Ages the dominant principle of written composition, in part to compensate for the absence of more formal rhetorical rules of dispositio, was based on the principle of number. Such an organizational strategy, suggested Curtius, accomplished the twofold purpose of supplying “formal scaffolding” and endowing a work with “symbolic profundity,” by connecting formal design to explicit content. As Maren-Sofie Røstvig clarifies, numerical composition “can be defined as structural use of pre-selected numbers whose symbolism accords with the contents” of a work. Since the 1960s, a steady stream of books and articles — Hieatt (1960), Røstvig (1963), Fowler (1964, 1970) and MacQueen (1985), among others — have demonstrated the semiotic richness of numerical analysis of literary works and gone far to expose the “hidden sense” embodied in the numerical structures of early modern literature. Although doubters remain, by now the premise that arithmology is “one of the prime symbolic language systems of the Renaissance,” employed to embody metaphysical realities in a visible form, enjoys wide and growing currency.

From a synthetic view of intellectual history, it is unsurprising that number should play a significant role in literary art. The ideals of symmetry, proportion, and ratio are guiding principles of all other arts – architecture, music theory, and visual art – from their earliest developments. Renaissance ideals of beauty, as Leon Battista Alberti attests in a well known passage, were closely tied to the idea of proportion and number:

Beauty is a kind of harmony and concord of all the parts to form a whole which is constructed according to a fixed number, and a certain relation and order, as symmetry, the highest and most perfect law of nature, demands.

This Pythagorean belief that number was an intrinsic and universal property of the cosmos, underlying visible realities of every kind and requiring application in all the arts, was inherited from the ancient world, applied through the Middle Ages, enthusiastically embraced in the Renaissance, and eventually endorsed even by the founder of modern scientific practice, Rene Descartes. A formidable library
containing works of such eminent 15th and 16th century intellectuals as Marsilio Ficino, Joachim Camerarius, and Claude Mignault endorsed and systematized the Pythagorean principles. In Plutarch’s synopsis, as translated by Philemon Holland, Pythagoras “held that the principle of all things were Numbers, and their symmetries, that is to say the proportions they have in their correspondency one unto “another...termed by him Geometricall.” Scriptural tradition reinforced a pagan conception of primordial number that increasingly was acknowledged to have immediate practical utility in architecture, war, and mechanics: “But thou hast arranged all things by measure and number and weight.”

Beyond the prominent role of arithmology in early modern aesthetics, and especially the close affinity between number theory and symbolic emblems (reputedly going back as far as Pythagoras), there are several specific reasons to hypothesize that Minerva Britanna might be built on the scaffolding of an esoteric numerical structure. Although best known for his emblem books, epigrams, and instructional manuals on the art of drawing, Peacham was a Renaissance polymath, versatile in music, astronomy and mathematics as well as poetry and drawing. As an acolyte of the “Pythagorean poet” Spenser—who may well have composed the dedicatory verses prefixing Minerva signed “E.S.” some twelve years or more before the book appeared in print—Peacham may well have been familiar with Renaissance numerological strategies. His experience as a painter, arts theorist, and emblem designer would have reinforced the omnipresent analogy between literature and painting that pervades both ancient and Renaissance arts criticism, and exposed him to the relevant doctrines of symmetry and numerical form. This affinity for Renaissance number theory would also have been confirmed through his study and practice of music, a discipline in which, as Alan R. Young (1979) has shown, Peacham was both theorist and practitioner. Most significantly, Peacham explicitly acknowledges his affinity for the occult science of mathematics, describing himself in The Truth of Our Times (1638) as one “ever naturally addicted to those Arts and Sciences which consist of proportion and number, as Painting, Musicke, and poetry, and the Mathematical Sciences.” This explicit confession of “addiction” to the principles of “number and proportion” assumes a larger significance when we recall the scarcity of explicit discussion, either in ancient or Renaissance arts theory, of the application of number theory to literature. Paradoxically, such criticisms implicitly acknowledge that the presence of overt numerical language can be strong evidence for the existence of arithmetical structure in a particular work.

With this in mind we will be intrigued to notice how thoroughly the rhetorical posture of Minerva’s elaborate introductory apparatus amplifies Peacham’s own overt testimony in Truth of Our Times. Peacham’s book is prefaced by an extensive dedicatory apparatus including Peacham’s own prose and verse dedications to Prince Henry Stuart, as well as dedicatory verses, in English, Latin, French and Italian, by Thomas Harding, “Hannibal Ursinus Neapolitanus,” Giovanni Batista Cassell, N.M. Fortunatus, Thomas Heywood, English Garter Herald at Arms William Segar, and “E. S.” A peculiar “Author’s Conclusion” of 180 iambic tetrameter lines of ekphrastic verse, divided into 22 ½ eight-line stanzas, concludes the work.
Thomas Harding’s Latin exordium (Appendix A) seems particularly noteworthy from the perspective of a numerical semiotics. Composed in cryptic mathematical terminology, it praises the contributions of the other dedicatory poets as the “friendly testimony of the skilled ones,” adding “I follow them and join (iungo) my own counter (calculum).” Calculus is the proper technical term for the pebble used by the ancients for counting purposes. Both Harding’s title, “ex puris iambris” (“from pure iambics”), and the structure of his lyric mirrors the numerical content by invoking arithmology in design: the poem consists of three eight-line stanzas of iambic hexameters, for a total of 144 feet, or twelve squared. The fraught mathematical terminology of Harding’s exordium, embedded in the context of an explicitly mathematical structure, furnishes a rare yet striking example of relatively overt testimony to the numerical character of a Renaissance literary work. In fact, Harding’s entire exordium, which begins by specifying a moral methodology for correct “measurement” of Peacham’s work (“iniquus aestimator ille ducitur suo metitur omne qui modo ac pede/iniquitous is deemed that appraiser who measures everything by his own method and foot”), is based upon a conceit of measurement.

While the precise implication of the invoked measurement – the “feet” and their relationship to the “calculi” – is far from clear, the most obvious place to begin investigation of a numerical structure would be with counting lines, treating each one as a “calculum.” The results will encourage the hypothesis that Peacham’s work is organized around well-understood but previously undetected abstract principles of Pythagorean number symbolism. Following this hypothesis, we soon discover confirmation in several features. First, there is the curious fact that Peacham’s own introductory exordium to Prince Henry numbers exactly sixty-six lines of dactylic hexameters. Sixty-six is a peculiar and suggestive number: not only does it mirror the characteristic stanza structure of most of Peacham’s emblems (two stanzas of six lines each), and replicate the dominant mode six in the hexameter lines of which it is composed, but most significantly belongs to the Pythagorean sequence of triangular numbers (appendix B).

![Figure Two: The series of triangular numbers.](image)

Triangular numbers – the sequence of natural numbers 1, 3, 6, 10, 15, 21, 28, etc. derived from the formula \( t(n) = \frac{n(n+1)}{2} \) and forming a triangle when drawn using “calculi” – belong to an ancient class of figurate numbers (Figure Two). Because they establish a connection between the visible world of geometry and the
suprasensible world of pure number, figurate numbers – including square, triangular, cubic and pyramidal numbers – had been central to Pythagorean doctrine for many centuries.

As the eleventh in the sequence of triangular numbers, 66 exhibits a novel characteristic that could not have escaped the attention of Renaissance number theorists: As a palindromic – reversible – number it belongs to a very small list of numbers that are both triangular and reversible. Of triangular numbers with bases from 10-100, only 5 others – 55, 171, 595, 666, and 3003 – are also palindromic. Of these, only 66 and 3003 share the most unique characteristic of all: they are not only palindromic in themselves, but also derived from palindromic bases (11 and 77). It is accordingly striking to discover that the total number of lines in Peacham’s work, 3003 (Figure Three), belongs, with 66, to this select list of palindromic triangular numbers derived from triangular bases.

<table>
<thead>
<tr>
<th>Book/Author</th>
<th>Verse Type</th>
<th>Total lines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carmen Panegyricum/HP</td>
<td>Latin dactylic hexameter</td>
<td>66</td>
</tr>
<tr>
<td>Anon</td>
<td>Latin dactylic hexameter</td>
<td>16 (2x8)</td>
</tr>
<tr>
<td>Thomas Hardingus</td>
<td>Latin iambic hexameter</td>
<td>24 (3x8)</td>
</tr>
<tr>
<td>Hannibal Ursinus Neapolitanus</td>
<td>Latin dactylic hexameter</td>
<td>8</td>
</tr>
<tr>
<td>Italian verse</td>
<td>???</td>
<td>30 (5x6)</td>
</tr>
<tr>
<td>Giovan: Batista Casella</td>
<td>Iambic pentameter ?</td>
<td>14 (2x7)</td>
</tr>
<tr>
<td>English Sonnet Thomas Heywood</td>
<td>Iambic pentameter</td>
<td>12 (2x6)</td>
</tr>
<tr>
<td></td>
<td>Meter</td>
<td>Count</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>--------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>English Sonnet</td>
<td>Iambic pentameter</td>
<td>30 (5x6)</td>
</tr>
<tr>
<td>William Segar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English Sonnet E.S.</td>
<td>Iambic pentameter</td>
<td>14 (2x7)</td>
</tr>
<tr>
<td><strong>Totals from Introductory matter, book I</strong></td>
<td></td>
<td><strong>214</strong></td>
</tr>
<tr>
<td>Total of Book I Emblems</td>
<td>Iambic pentameter</td>
<td><strong>1214</strong></td>
</tr>
<tr>
<td><strong>Book II</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Introductory English verses</td>
<td>Iambic pentameter</td>
<td>35 (7x5)</td>
</tr>
<tr>
<td>HP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total of Book II Emblems</td>
<td>Iambic pentameter</td>
<td>1360</td>
</tr>
<tr>
<td>HP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Author’s Conclusion</td>
<td>Iambic tetrameter</td>
<td>180</td>
</tr>
<tr>
<td>HP</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Book I</td>
<td></td>
<td><strong>1428</strong></td>
</tr>
<tr>
<td>Book II</td>
<td></td>
<td><strong>1575</strong></td>
</tr>
<tr>
<td>Total both books</td>
<td></td>
<td><strong>3003</strong></td>
</tr>
</tbody>
</table>

**Figure Three: Total Verse Counts for *Minerva Britanna* are 3003.**

Apparently the verses forming Peacham’s dedication of the work to Prince Henry serve both to announce the work’s numerological theme and also form a microcosm of the entire sequence of verses, adumbrating the figurative form of the whole.

Confirming the existence of this structure, the numbers 11, 66, and 77 are repeated in various, sometimes subtle ways, both structurally and visually, in
Peacham’s book, through visual puns designed to invoke the “double-take, like the flash of insight followed by intellectual comprehension that occurs in solving a riddle.”

Figure Four: *VI VI* on the title page of *Minerva Britanna*.

A striking example is Peacham’s visual invocation of the Roman numerals *VI VI* on the title page of the work (Figure Four), an iconic pun created by splitting the word VIVI=TUR (he lives) into two frames of the scrollwork. The pun foreshadows the 66 lines of Peacham’s exordium to Prince Henry, as well as the triangular/pyramidal form of the entire work. Indeed, analysis reveals that Peacham’s book is organized principally through the complex iteration of Pythagorean triangular numbers, based on the syllogism 11:66::77:3003.

According to Alistair Fowler, the figure of the triangular number was considered an expression of the monumental form *par excellence*; the series was a common topic of arithmology, one “embod[yng] the ancient ideal of poetry as memorial,” invoked in works “intended to function as a monument...[and] especially appropriate for elegies and epitaphs.” Peacham, it would appear, conceived of *Minerva Britanna* as a contribution to the *paragon* – the contest – between monumental architecture and poetry, a debate memorialized in Horace’s lyrical 1st century (BCE) boast:
Exegi monumentum aere perennius
Regalienque situ pyramidum altius.
[I have built a monument more lasting than bronze,
Higher than the pyramids of the royal place] \(36\)
\((3.30)\)

The figure of the pyramid embodied in the triangular number sequence supplied an esoteric model suitable for Peacham’s purposes of composing a work of enduring aesthetic value for his royal patron. By employing the construct of triangular numbers to provide a mathematical unity to his work, Peacham replicates his own overt statement, that although

Pyramis [is] the worldes great wonderment
[and] is of their fame, some lasting Moniment.
\((E2v)\)

Yet,

Wise wordes taught, in numbers sweete to runne,
Preserved by the living muse for aie,
Shall still abide, when date of [monuments] is done.
\((Z2v)\)

As his intervention in this argument the emblematist arranged his “wise words,” taught “in numbers sweete to runne,” in the form of a pyramid, composing the conflict by endorsing both antecedent propositions, not only affirming Horace’s boast of the virtue of lyric, but simultaneously paying homage to the “competing” architectural tradition of the monumental pyramid. In short, Peacham resolved the literary with the pictorial, the lyrical with architectural, in a single aesthetic triumph – dedicated to the Protestant, nationalist cult of Prince Henry (1594-1612), at its apogee in 1611 right before Henry’s untimely death.

Through the arrangement of verses and emblems, Peacham replicates the structure of the entire sequence, affirming his belief in the ancient Platonic and Pythagorean principles, \textit{as above, so below}, and \textit{as in the macrocosm, so in the microcosm}. While the majority of the emblem superscripts follow a conventional pattern of having two stanzas of six lines each (again, duplicating the VI VI of the title page the 66 of Peacham’s exordium), a few have subscripts of 6,14, 18, or 21 lines, and one – the subscript to 185 (Figure Five) – consists of eleven stanzas of seven lines each.
The 77 lines of verse restate in microcosm the numerical structure of the whole, “keying” the Pythagorean symbolism of *Minerva Britanna*. That this structural anomaly is not coincidental is confirmed by the subscript’s *coy* allusion to “The rules of NVMBERING” which were “for the greatest part...first devis’d by Country Swaines” and “still the Art with them entire remains” (Cc3). A sidenote from Aristotle underscores the microcosm-macrocosm analogy: “θι θαυμαζον in re minima esse pulchre dixit”/ “he says it to be a beautiful thing to be amazed (θι θαυμαζον) by something in its smallest aspect” (Cc3). The superscript, which invokes a pastoral literary tradition as old as Theocritus, says “the rural life – and silence – is for me.”

***

According to Maren-Sofie Røstvig, no 17th century literary theme “was more popular than the praise of the happiness of country life,” and throughout Peacham’s book the moral superiority of the country – contrasted to courts and cities – is emphasized, as in the exposition to emblem 185:

Wert thou thy life at libertie to choose,
And as thy birth, so hadst thy being free,
The City thou shouldst bid adieu, my Muse,
And from her streetes, as her infection flee....

(Cc2v)

But while Peacham contrasts court and country in conventional terms, the contrast is complicated through the repeated invocation of the idea of *ascent* and the
analogy of the court as a pyramid and Peacham’s covert linkage of this symbolism to his underlying numerical schema. The subscript to emblem 185, dedicated to the virtues of country life, unexpectedly concludes:

Content thy selfe, till thine Abilitie,
And better hap, shall answere thy desire,
But muse beware, least we too high aspire.

(Cc3v: emphasis added)³⁸

Peacham’s antidote to the ambitious impulses that lead to political disaster at court is spiritual purification through ascent, a widely influential consideration of Medieval aesthetics, rooted in Neo-Platonic, Kabbalistic, and Christian sources. Mystics of all three traditions shared the common goal of facilitating the ascent and union of the soul with God or The One. In the words of Gershom G. Scholem, “the earliest Jewish mystics...speak of the ascent of the soul to the Celestial Throne, where it obtains an ecstatic view of the majesty of God and the secrets of His Realm.”³⁹

For Plotinus, the rungs on the soul’s ladder of ascent are comparable to the stages of initiation into a mystery religion. The metaphor became widely accessible to a Christian readership through Boethius, who exposes the connection between the doctrine of ascent and the Platonic ideal of memory or “return”: His exhortation to “Let us now raise our minds as high as we can towards the high roof of the highest intelligence” is explained by personified Wisdom: “so that you may most speedily and easily come to your own home from where you previously came.”⁴⁰

Numerous ancient and Medieval philosophers, moreover, connected the ideal of the soul’s ascent with the specifically arithmetical traditions of the Quadrivium.⁴¹ According to Glen Wegge, Censorinus, Plotinus, and Martianus Capella all “agree that the mathematicals, which include music, are vital for the ascent of the soul.”⁴²

It seems apparent, from independent, converging lines of evidence including the prior probabilities established by the wide currency of the aesthetic ideals of so many early modern and Medieval arts theorists and the more direct evidence of Peacham’s own book, that Peacham has utilized as a numerical template both of the only two sets of palindromic triangular numbers: 11-66 and 77-3003. Given the singular numerological significance of both sets, it strains credibility to suppose that this structure can be attributed to coincidence. Instead, the structure of Minerva Britanna would appear to be a superlative expression of the author’s confessed “addiction” to the ideals of “proportion and number.” It appears that Peacham found the relationship between 77 and the theme of ascent already preformed in renaissance arithmology. In number symbolism since the scholastics, 77, although more generally known as the number of generations from Adam to Christ, had acquired the typological significance of the number of steps in the ascent to the godhead. According to Hugo St. Victor, the number itself symbolizes spiritual ascent through the remission of sins: “gradus significant, quod in Evangelio de remissione peccatorum dicitur: ‘septuagies septies’...Septuaginta septem ergo universam transgressionem significant, quae hic ascendentibus relaxatur”/“the steps mean the
same as that which the evangelist [Matthew] has said regarding the remission of sins: 77 therefore signifies universal transgression, which by ascending produces the mitigation of sin.”

The ideal of anagogic ascent is partially masked in Peacham’s book by the direct invocation of the *sensus allegoricus*, in which social climbing takes the place of the ascent to the Godhead. This theme is stated pictographically in emblem 201, which construes the court as precarious pyramid thronged with social climbers (Figure Seven).

![Figure Seven: ‘Minimus in summo’ (slightest at the top) (201).](image)

Pointed with the superscript, “minimus in summo” (slightest at the top), the emblem draws on the conventional analogy between the pyramid and the Jacobean social hierarchy, moralizing that “how much higher thou art plac’d in sight/so much the lesse affect thy state and might,” since honors “lend Ambition wing” (Ee2v). Implicitly comparing the stratospheric world of the court with the peak of the pyramid, the emblem warns the courtly opportunist of the moral treachery of a life of power, and the ever present temptation to recapitulate the myth of Icarus in the key of courtly life.

Numerical structure is only the most abstract and well-concealed of several modes of unity in *Minerva Britanna*. If Peacham’s title alludes to the dominant emblematic traditions of Minerva, then there is reason to suspect that another extended theme of Peacham’s book is hermetic knowledge. Long associated with the topoi of “arms and art” by the time of Alciat, she could stand for the principle “Prudens magis quam loquax” – “prudence should take precedence over rash speech.” Alciat’s influential *Diverse impresa* (1551) associates Minerva with “prudentia,” advising that “al prudente non convengono multi parole”/ “the prudent do not make use of too many words,” and “Saggio chi poco parla, e molto tace”/ “He is wise who speaks little and is often silent.”
The influence of Alciat’s emblem on Peacham’s book is evident by comparing the first emblem of Minerva Britanna with Alciat’s Minerva emblem (Figure Eight): both employ as background a maritime landscape with ships at sunrise/sunset. Both emblems also concern the source of contested authority; Peacham’s overt gesture of deference to triumphant royal authority is shadowed – and, it seems likely, problematized – by Alciat’s location of authority in the prudent exercise of human wisdom and discretion, the ancient ideal of initiatory, concealed knowledge. Not coincidentally, among the principles of the Pythagorean sect of mathematical adepts was a vow of silence, which represented not only self discipline, but a commitment to the suprasensible world of numeration and a frankly elitist view of knowledge. Such an emphasis on concealed knowledge is consistent with the well understood influence of neo-Platonic epistemology on the emblem book tradition, as E.H. Gombrich and others have described it, and is a theme reflected in several of Peacham’s emblems, including 156, silentii dignitas, which depicts the Athenian sage Solon, the prototype of the wise man, cutting his own tongue out. It is glossed with the subscript, echoing Alciat’s Minerva emblem, that “of silence never any yet complained/ or could say justly it had done him wrong/Who knowes to speak, and when to hold his peace/Findes fewest dangers, and lives best at ease.”
In case we need any reminding, Peacham’s sidenote to the emblem declares: “Quingennium silentium in Pythagorae schola quam εχεµυθιαν vocabant, teste Laertio indicebatur”/In the school of Pythagoras they did not speak for five years, which they called ‘holding one’s peace,’ as Laertio reveals.”

Although the present paper cannot elaborate the larger implications of the complex, multi-dimensional symbolism of *Minerva Britanna* it has shown that Peacham’s book is built upon a concealed numerical structure, utilizing the Pythagorean principle of triangular numbers. This numerical structure, it has been
argued, constitutes an expression of Peacham’s *tour de force* reconciliation of the ancient paragon between poetry and architectural form. On this view, Peacham’s work is representative of a definite Stuart trend, which continued throughout the century, towards poetic forms conceived under the strong influence of the pictorial arts, in which form “harmonically” restated or confirmed content. The increasingly formal verse structures of the period, represented in such pictorial poems as George Herbert’s “The Altar,” expressed a growing desire to “compress as much meaning into a poem as possible” (Røstvig 202) by invoking forms commensurate with their contents. As an expression of this trend – one deeply rooted, as we have seen, in principles of Arithmology stretching back over many centuries of artistic expression and boasting theoretical exposition in Boethius, the Bible, and Pythagoras – it is perhaps not surprising that *Minerva* should be organized around a subliminal but coherent numerical schema. The device not only communicates Peacham’s mystical affirmation of the Pythagorean doctrine, that all things are composed of number, but also reiterates, through its concealed design and esoteric symbolism, a preoccupation with the Renaissance ideal of the monumental and memorializing function of literature.

Like other Renaissance emblematists, Henry Peacham apparently drew inspiration from Neo-Platonic doctrines of the higher order of invisible knowledge embodied in principles concealed from the unsophisticated. He wrestled with the ancient debate over which of the arts was the “best,” and not only gave, but illustrated, an answer familiar to other Renaissance arts theorists: the best art was the one which most successfully imitated the others. But he also subscribed to the doctrine of poetic glory, believing that poetry constituted a form of memorial, honoring both dedicatee and author by embodying lasting values in abstract form. His dedicatory verses to Prince Henry, “ad Augustissimum et Longe Nobilissimum Henricum Walliae Principem,” conclude with the ringing promise of a new Golden Age of British imperialism that Peacham prophesies (vaticinor) will last until Henry’s rule extends wider than the world itself (toto regnabis latius orbe). Ironically, within months Peacham’s dedicatee was dead; the cult of the Elizabethan revival that had grown up around him, of which *Minerva Britannia* constitutes an outstanding exemplification, was forced to accommodate to a new age of growing Stuart absolutism, and Peacham’s living forms were relegated to the historical museum of misunderstood curiosities.
Appendix A

Ex puris Iambis. Ad eundem.

Iniquus aestimator ille ducitur
Suo metitur omne qui modo ac pede;
Sapitque perparum ille, cui nihil sapit,
Nisi quod approbatur a sua nota.
At aequus ille, quisquis addit ipsius
Opinioni, acutioris arbitri
probationem, et acre testimonium,
Et eius, et suis videns occellulis.
Peritiorum amica testimonia
Habes, labore de tuo probissimo;
Nec illa pauca, laude te ferentium
Ad astra, sicut hoc meretur inclitum
Opus. Mihi nec est opus quid amplius
Loqui, quasi adderem mari meas aquas;
Tamen quod ipse postulas, ego libens
Eos sequor, meumque iungo calculum.
PECHAME perge fausto ut incipis pede
Et ede plura, lividumque ZOILUM,
Malumque virus huius invidentiae
Teruntio valeto, cuncta qui potest,
Placere non potest ei, ipse IVPITER;
Nihil morare candidum lapillulum,
Nigrumque faecis infimae, places quibus
Sat est placere, doctioribus viis.
.

THO: HARDINGVS.
Appendix B:

The Sequence of Triangular Numbers and Bases

<table>
<thead>
<tr>
<th>n</th>
<th>Triangular Number</th>
<th>n</th>
<th>Triangular Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>3</td>
<td>41</td>
<td>861</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>42</td>
<td>903</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td>43</td>
<td>946</td>
</tr>
<tr>
<td>5</td>
<td>15</td>
<td>44</td>
<td>990</td>
</tr>
<tr>
<td>6</td>
<td>21</td>
<td>45</td>
<td>1035</td>
</tr>
<tr>
<td>7</td>
<td>28</td>
<td>46</td>
<td>1081</td>
</tr>
<tr>
<td>8</td>
<td>36</td>
<td>47</td>
<td>1128</td>
</tr>
<tr>
<td>9</td>
<td>45</td>
<td>48</td>
<td>1176</td>
</tr>
<tr>
<td>10</td>
<td>55</td>
<td>49</td>
<td>1225</td>
</tr>
<tr>
<td>11</td>
<td>66</td>
<td>50</td>
<td>1275</td>
</tr>
<tr>
<td>12</td>
<td>78</td>
<td>51</td>
<td>1326</td>
</tr>
<tr>
<td>13</td>
<td>91</td>
<td>52</td>
<td>1378</td>
</tr>
<tr>
<td>14</td>
<td>105</td>
<td>53</td>
<td>1431</td>
</tr>
<tr>
<td>15</td>
<td>120</td>
<td>54</td>
<td>1485</td>
</tr>
<tr>
<td>16</td>
<td>136</td>
<td>55</td>
<td>1540</td>
</tr>
<tr>
<td>17</td>
<td>153</td>
<td>56</td>
<td>1596</td>
</tr>
<tr>
<td>18</td>
<td>171</td>
<td>57</td>
<td>1653</td>
</tr>
<tr>
<td>19</td>
<td>190</td>
<td>58</td>
<td>1711</td>
</tr>
<tr>
<td>20</td>
<td>210</td>
<td>59</td>
<td>1770</td>
</tr>
<tr>
<td>21</td>
<td>231</td>
<td>60</td>
<td>1830</td>
</tr>
<tr>
<td>22</td>
<td>253</td>
<td>61</td>
<td>1891</td>
</tr>
<tr>
<td>23</td>
<td>276</td>
<td>62</td>
<td>1953</td>
</tr>
<tr>
<td>24</td>
<td>300</td>
<td>63</td>
<td>2016</td>
</tr>
<tr>
<td>25</td>
<td>325</td>
<td>64</td>
<td>2080</td>
</tr>
<tr>
<td>26</td>
<td>351</td>
<td>65</td>
<td>2145</td>
</tr>
<tr>
<td>27</td>
<td>378</td>
<td>66</td>
<td>2211</td>
</tr>
<tr>
<td>28</td>
<td>406</td>
<td>67</td>
<td>2278</td>
</tr>
<tr>
<td>29</td>
<td>435</td>
<td>68</td>
<td>2346</td>
</tr>
<tr>
<td>30</td>
<td>465</td>
<td>69</td>
<td>2415</td>
</tr>
<tr>
<td>31</td>
<td>496</td>
<td>70</td>
<td>2485</td>
</tr>
<tr>
<td>32</td>
<td>528</td>
<td>71</td>
<td>2556</td>
</tr>
<tr>
<td>33</td>
<td>561</td>
<td>72</td>
<td>2628</td>
</tr>
<tr>
<td>34</td>
<td>595</td>
<td>73</td>
<td>2701</td>
</tr>
<tr>
<td>35</td>
<td>630</td>
<td>74</td>
<td>2775</td>
</tr>
<tr>
<td>36</td>
<td>666</td>
<td>75</td>
<td>2850</td>
</tr>
<tr>
<td>37</td>
<td>703</td>
<td>76</td>
<td>2926</td>
</tr>
<tr>
<td>38</td>
<td>741</td>
<td>77</td>
<td>3003</td>
</tr>
<tr>
<td>39</td>
<td>780</td>
<td>78</td>
<td>3081</td>
</tr>
<tr>
<td>40</td>
<td>820</td>
<td>79</td>
<td>3162</td>
</tr>
<tr>
<td>41</td>
<td>861</td>
<td>80</td>
<td>3244</td>
</tr>
</tbody>
</table>
Bibliography


Dundas, Judith. “Unriddling the Antique: Peacham’s Emblematic Art,” in *Deviceful


Holland, Philemon. The Philosophie, commonlie called, the morals written by the learned philosopher Plutarch of Chaeronea. Translated out of the Greeke into English, and conferred with the Latine Translations and the French, by Philemon Holland of Coventrie, Doctor in Physicke. Whereunto are annexed the summaries necessary to be read before every treatise. London: Printed by Arnold Hatfield, 1603.


Wagner, David L. *The Seven Liberal Arts in the Middle Ages*. Bloomington, Indiana:


Endnotes


2 Forty-four emblems are dedicated to named individuals (including one to Jesus Christ, one to Peacham himself, and four to King James).

3 See the title page reproduction on xvii, this issue.


6 Peter Daley, English Emblem Tradition, 36. This is an excellent comprehensive introduction to scholarship of the emblem book genre and its implications for Renaissance literary studies.


8 Gombrich, 165.


Translation by the University of Glasgow online editions.


MacQueen, 5.


Heninger supplies a bibliography at 34-35.

Philemon Holland, The Philosphie, commonlie called, the morals written by the learned philosopher Plutarch of Chaeronea. Translated out of the Greeke into English, and conferred with the Latine Translations and the French, by Philemon Holland of Coventrie, Doctor in Physicke. Whereunto are annexed the summaries necessary to be read before every treatise. London: Printed by Arnold Hatfield, 1603, 806, Yyyr.


Ekphrasis is defined as the graphic, often dramatic, description of a visual work of art. Among the most famous ekphrastic passages in literary history is Homer’s description of Achilles’ shield in book 18 of *The Iliad*.

Peacham, B1v.

Calculum ponere: “put the stone [on the counting-board],” i.e., “settle accounts,” “come to a reckoning” (Andrewes 225). Penny McCarthy has kindly noted that *calcium* is also the word for a voting pebble, so that Harding’s reference
can also be translated “and add my vote (of approval) to theirs.” Although this is a satisfying first reading of the line, the elaborate numerical language of the entire poem suggests the presence of a conceit that goes beyond such a conventional expression of approval.

Harding’s familiarity with the Thracian tradition recorded by Pliny (6.11) of memorializing fortunate occurrences with a white (candidum) calculus and unfortunate ones with a black (nigrum) one is attested in his use of these very terms in the concluding stanza.

Although the triangular sequence constitutes the dominant structural principle of *Minerva Britanna*, it is not Peacham’s only use of number to impart structure. I am indebted to Lynne Kositsky for the observation that the “Authors Conclusion” that completes the book’s sequence of verses is composed of 22 ½ stanzas of 8, for a total of 180 lines of verse. Unlike the book as a whole, this sequence follows the typical Renaissance pattern of being organized around a symmetrical center that replicates the circular metaphor implied in a verse total of 180, replicating in its structure the circular symbolism of an ekphrastic Garter necklace worn by a Queen seated in a “circlet round”:

Within there was a Circlet round,  
That rais’d it selfe, of softest grasse,  
No Velvet smoother spred on ground,  
Or Em’rald greener ever was:  
In mid’st there sate a beauteous Dame,  
(Not PAPHOS Queene so faire a wight)  
For Roses by, did blush for shame,  
To see a purer, red and white.  

In Robe of woven Silver fine,  
And deepest Crimson she was clad:  
Then diaper’d with golden twine,  
Aloft a Mantle greene she had,  
Whereon were wrought, with rarest skill  
Faire Cities, Castles, Rivers, Woods;  
And here, and there, embossed a hill  
With Fountaine, and the Nymphes of Floods.  

A massie Collar set with stones,  
Did over all, it self extend  
Whereon in sparkling Diamonds,  
SAINT GEORGE, her Patrone did depend  

The “beauteous dame,” perhaps a personification of Lady England, the late Elizabeth I, or even Minerva herself, wears a garter livery collar like that
worn by Elizabeth I in her 1558 coronation portrait. It cannot reasonably be considered a coincidence that this emblematic device is introduced precisely at the center of the 180-line sequence, an effect which is emphasized by the statement that the “beauteous dame” is seated “in the midst” of a “Circlet.”

31 This excludes the single digit series 1, 3, and 6, which are palindromic only in the most technical sense.


33 All of which are triangular except, of course, 11.

34 Alistair Fowler, Triumphal Forms: Structural patterns in Elizabethan Poetry (Cambridge: At the University Press, 1970), 188.

35 Fowler, 188.


37 Verbal echoes are rare in Peacham’s book, and yet the same paranomasic fear, of “aspiring” too high, also occurs in emblem 142: “But ah I feare me, I too high aspire” (X1) as well as being repeated in the concluding emblem (206) of the series.


39 Boethius, De consolatione philosophiae 146.26-9; emphasis supplied.

40 The four elements of the quadrivium were defined as “number itself (arithmetic), number in relations (music); and quantity, which may be studied at rest (geometry) and in motion (astronomy)” (Wagner 153).


42 Heinz Meyer and Rudolf Suntrup, Lexicon Der Mittelalterlichen Zahlenbedeutungen. München: Wilhelm Fink, 1987, 768. The chief scholastic theorist of the divine ascent was St. Bonaventure (1221-74): “we are so created that the material universe itself is a ladder by which we may ascend to God.... Now since it is necessary to ascend before we can descend on Jacob’s ladder, let us place our first step in the ascent at the bottom, setting the whole visible world before us as a mirror through which we may pass over to God, the Supreme Creative Artist...” (chapter 1).

43 Cf. also, Emblem 21, dedicated to William, Earl of Pembroke, to whom the Shakespeare First Folio would in 1623 also be dedicated, which construes the pyramid as an emblem of the “glory of princes” endowed with “glorious proiectes of the mind” (E2v), and Minerva’s third comparable topos of monumental architecture, the Colossus at Rhodes (161).

44 See, for example, Henkel, Von Arthur & Albrecht Schöne. Emblemata: Handbuch Zur Sinnbildkunst Des XVI. Und XVII Jahrhunderts. (Stuttgart: J.B. Metzlersche


46 According to Gombrich, before the dawn of the Age of Reason, “preceding centuries were not worried by the apparent paradox of an art invented to convey a message in symbols which seemed to become more obscure the triter the meaning they were supposed both to hide and reveal” (162). “To the Neo-Platonic philosophers the conception of an inherent and essential symbolism pervading the order of things offered a key to the whole universe” (168).

47 Peacham overtly acknowledges the occult tradition even on the title page of his book, which invokes the figure of enigma, depicting a concealed author behind a theatrical discovery space writing the words “mente videbor/ by the mind I shall be revealed” (see note 3). Emblem 38 (G3), depicting a winged key, is glossed by the subscript as testimony that

\[
\text{The weightie counsels, and affaires of state,} \\
\text{The wider mannadge, with such cunning skill,} \\
\text{Though long lockt up, atlaste abide the fate} \\
\text{Of common censure, either good or ill:} \\
\text{And greatest secrets, though they hidden lie,} \\
\text{Abroad at last, with swiftest wing they flie.} \\
\text{(G3) }
\]

This emblem unites two themes, that of concealed knowledge – specifically the *arcana imperium* and *domesticum* of courts and kings – and that of the country-court dichotomy, through an equivocation on “abroad,” a word compressing the two meanings, “freely moving about...out of doors, out in the open air” (OED 2./3., 9) with “Out of the home country; in or into foreign lands” (4., 9).

48 Peacham’s emblem 177, dedicated to himself, echoes his verbal remark of his own addiction to “the science of proportion.” It depicts Urania, wearing a dress decorated with stars and holding a model of the globe in one hand and a staff in the other, pointing with her staff to the stars. The superscript, a Latin anagram on Peacham’s own name, reads “Hinc super haec, Musa” – “Muse, hither above these” (Bb2v). With this astronomical perspective in mind, it may be interesting to recall the semiotic function of the triangle in Renaissance cosmology. According to Johannes Sarabosco’s *Tractatus de Sphaera* (c. 1230), a book that remained the standard 16th century handbook of cosmology, a celestial sign or constellation should be viewed as a pyramid “whose equilateral base is that surface which we call a ‘sign’ whilst its apex is at the centre of the earth” (cited in Røstvig 221).