

---

# An Overview of the Mathematics and Astrology of the Enochian System

by Clifton J. “Cliff” Wigtil, RFSPE

*Author’s note:* The following article is adapted and expanded from my blog, “Enochian.Today.”



## Part I: Introduction

Much can be said about the magical system received by Dr. John Dee and his hired scrier, Edward Kelley, in the late 1500s. (“Scrier” is a term referring to someone who reported visions with the assistance of an object of visual focus.) Entire books have been written on Dee and Kelley’s magical system and will, no doubt, continue to be written. The history of how this system came to be is enough to fill many books. The reader is referred to Jason Louv’s book, *John Dee and the Empire of Angels*, for a recent treatment of the subject.<sup>1</sup>

The purpose of this article is to show the interested reader the elegance of the Enochian system, insofar as any part of it can be said to be basic. The Enochian system is an elegant systematization not only of angelology, the classical elements, astrology, and magic, but also of mathematics and linguistics. New discoveries within the Enochian system are still being made, and the contributions I have been fortunate enough to make in this field are only a drop in the ocean of what has been uncovered by many dedicated scholars. My primary sources for the Enochian transmission are the diaries included in the British Library: Sloane Manuscripts 3188, 3189, and 3191<sup>2</sup>; and the Cotton Appendices I and II.<sup>3</sup>

## Part II: Preliminaries of Medieval Magic

### *Elements and Astrology*

The concept of four classical elements—namely, fire, earth, air, and water—was common in ancient Greece, and it continued to have influence in the medieval world. Hellenistic astrologers would go on to apply these elements to the 12 signs of the zodiac: Aries with fire, Taurus with earth, etc.

Each of the 12 zodiacal signs was also thought to be the domicile of one of the seven astrological planets: the sun and moon (the luminaries), Venus and Jupiter (the *benefics*), Mars and Saturn (the *malefics*), and Mercury (which, being *mercurial*, can be considered to be its own category of astrological planet). All but the sun and moon were assigned to two signs. Each planet also had a single sign of exaltation along with a specific degree of greatest exaltation within that sign. Domicile and exaltation are the two highest forms of essential dignity associated with planets; other forms of dignity include triplicity, term, and decan, but are too broad to discuss in detail here. Finally, let me introduce the concepts of “antiscia” and “contra-antiscia.” These ideas suggest relationships between two zodiacal signs based on how they mirror each other across the zodiac. Two signs mirroring each other across the solstice diameter of the zodiac (0° Cancer to 0° Capricorn) are said to be antiscia, while two signs mirroring each other across the equinox diameter (0° Aries to 0° Libra) are said to be contra-antiscia. I have created the following table of these for ease of reference.

| Zodiacal Sign | Element | Domicile of | Exalted planet (° of sign/° of zodiac) | Antiscia to | Contra-Antiscia to |
|---------------|---------|-------------|--|-------------|--------------------|
| Aries         | Fire    | Mars        | Sun (19°/19°)                          | Virgo       | Pisces             |
| Taurus        | Earth   | Venus       | Moon (3°/33°)                          | Leo         | Aquarius           |
| Gemini        | Air     | Mercury     | [none]                                 | Cancer      | Capricorn          |
| Cancer        | Water   | Moon        | Jupiter (15°/105°)                     | Gemini      | Sagittarius        |
| Leo           | Fire    | Sun         | [none]                                 | Taurus      | Scorpio            |
| Virgo         | Earth   | Mercury     | Mercury (15°/165°)                     | Aries       | Libra              |
| Libra         | Air     | Venus       | Saturn (21°/201°)                      | Pisces      | Virgo              |
| Scorpio       | Water   | Mars        | [none]                                 | Aquarius    | Leo                |
| Sagittarius   | Fire    | Jupiter     | [none]                                 | Capricorn   | Cancer             |
| Capricorn     | Earth   | Saturn      | Mars (28°/298°)                        | Sagittarius | Gemini             |
| Aquarius      | Air     | Saturn      | [none]                                 | Scorpio     | Taurus             |
| Pisces        | Water   | Jupiter     | Venus (27°/357°)                       | Libra       | Aries              |

**Table 1: Zodiacal Signs**

Planets were typically sequenced according to ascending visible speed in the night sky. This sequence is known as the “Chaldean order”: Saturn, Jupiter, Mars, the sun, Venus, Mercury, and the moon. This order was used in magical rituals to divide up the day into two sets of 12 planetary hours (from sunrise to sunset, and from sunset to sunrise), starting with the planet of that day (e.g., Venus would be the first planetary hour of Friday, followed by the hour Mercury, etc.). Note that this planetary-hour order is not broken from night into the following day. Finally, planets were also considered to be of the day or night “sect” (i.e., more important during the day or night). The sun, Jupiter, and Saturn were of the day sect, while the moon, Venus, and Mars were of the night sect. Mercury was of either the day or the night sect, depending on whether it rose before the sun (as a morning star and of the day sect) or set after the sun (as an evening star and of the night sect).

### *Medieval Angelology*

With this background in place, I direct the reader’s attention to a basic overview of archangels, powerful beings under the authority

of God in Judaism and Christianity. The number and correspondences of these beings have evolved over the centuries. As of the time of the Enochian transmission, the seven main archangels more or less followed the systematization of the archangels compiled by Agrippa: Gabriel with the moon, Michael with Mercury, Haniel with Venus, Raphael with the sun, Cumeal (or Khamael) with Mars, Zadkiel (or Tzadkiel) with Jupiter (depending on whether one pronounced the Hebrew letter *Tzaddi* with a leading *T* or not), and Zaphkiel (or Tzaphkiel) with Saturn.

### **Part III: Selected Features of the Enochian System**

*“The last will be first, and first last.”*

One’s understanding of the Enochian system is incomplete without referring to Jesus’s saying in the Gospel of Matthew, chapter 20, verse 16: “So the last shall be first, and the first last: for many be called, but few chosen.” This idea of keeping an eye out for reversals comes up often in Enochian and leads to discovering more about its interesting structure.

The concept of the number seven and its multiples (49, 343, etc.) is important to the structure of Enochian.

#### Part IV: Heptarchy

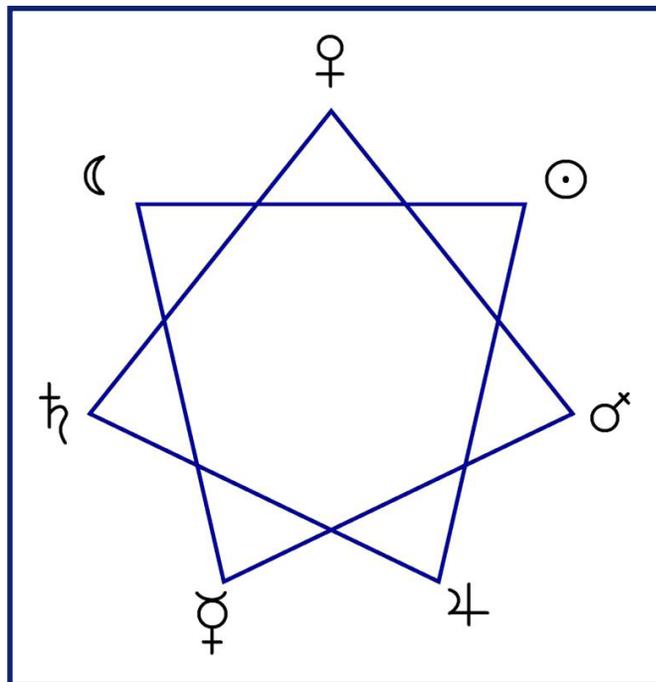
The first example of the septenary nature of the Enochian system is the first part of the transmission received, which is to say an angelic heptarchy (no doubt a heavenly reflection of the seven Anglo-Saxon kingdoms of England). Each angelic king was to be called on a specific day of the week for specific powers. Each day of the week is associated with an astrological planet (Sunday with the sun, Monday with the moon, Tuesday with Mars, etc.), and the nature of the kings' powers, in turn, reflected common powers associated with the planets. For example, King Babalel, who was to be called on Tuesday during Mars's hour, was described as "mighty and wonderful in waters," and Mars has the most dignity (domicile, triplicity, term, and decan) in the sign of Scorpio, a water sign. King Bnaspol was to be called on Wednesday (the day of Mercury) and during Mercury's hour, when "the Earth with her bowels, and secrets whatsoever are delivered," and Mercury has the most dignity in the early degrees of Virgo (domicile, exaltation, and term), an earth sign. Finally, King Baligon, to be called on Friday during Venus's hour, is uniquely powerful in the air, and Venus likewise has domicile in Libra.

Each angelic king also had an angelic prince associated with him. Each prince was to be called on the same day as his king but was to be called on a different hour. The reader may guess that the hour would follow the aforementioned Chaldean order, but this was not the case: the prince called on Tuesday, Befafes, was called during the hour of the sun, while the prince called on Wednesday, Blisdon, was to be called during the hour of Jupiter. This initially struck me as quite odd, and it will be explained shortly.

It should be noted that there is an additional king (Carmara, who is sometimes called Marmara) and corresponding prince (Hagonel), who are overall rulers over the seven heptarchical kings proper.

#### The Ensigns of Creation

Around the same time that the angelic heptarchy was received, so, too, was the furniture associated with the Enochian system. Here, I will focus on the planetary "ensigns of creation," given in the following clockwise order in Figure 1, starting at the top: Venus, the sun, Mars, Jupiter, Mercury, Saturn, and the moon.



**Figure 1: Enochian Assignments to the Ensigns of Creation on the Holy Table of Practice**

Note that this matches the reverse order of the princes above; and, indeed, all seven princes are called on the planetary hour of the planet which precedes it in the above order. However, this is not the end of the story, for I wondered how this order related to the planets' essential dignity, for which I found the following lengthy answer. First, consider again the following exaltation placement of the planets, as shown in Figure 2.

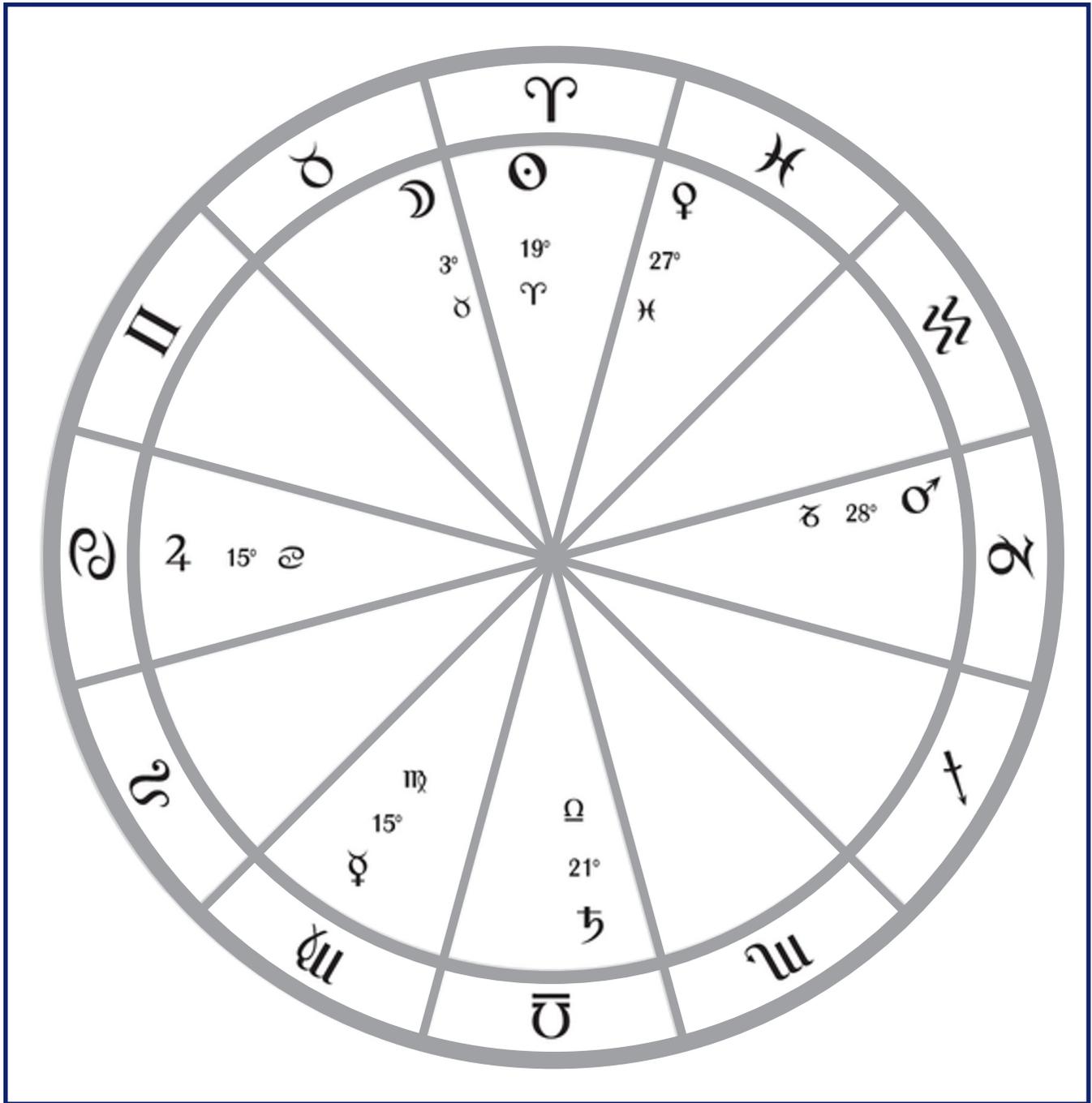
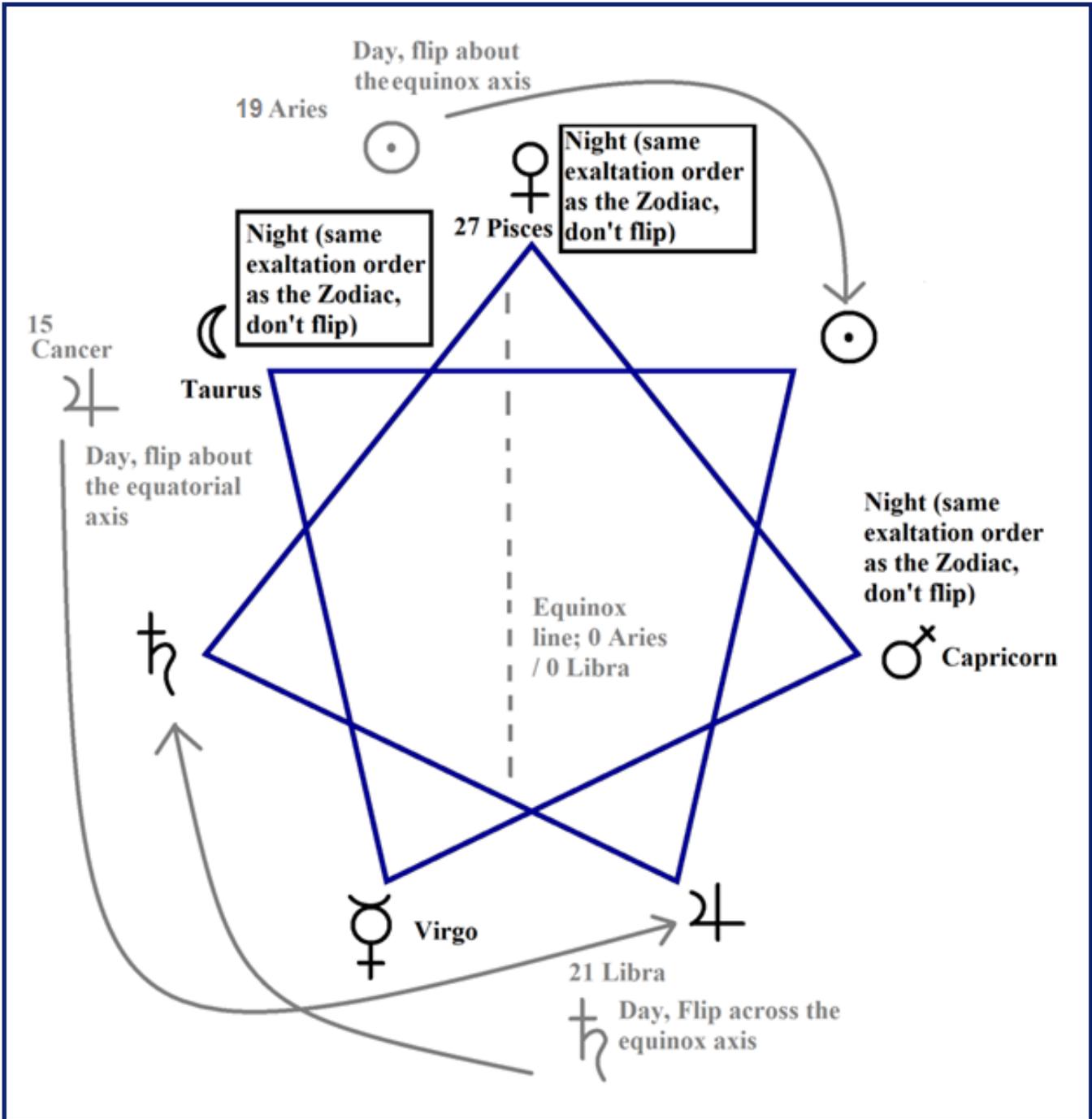


Figure 2: Exaltations<sup>4</sup>

This order, of course, does not match the order above. However, it occurred to me that if the sun, Jupiter, and Saturn (the day-sect planets) were flipped along the equinox line (contra-antiscia), then the order would match perfectly, as follows in Figure 3 (figure shows original position in gray).



**Figure 3: Sun, Jupiter, and Saturn Flipped**

Furthermore, the order remains the same regardless of whether Mercury “flipped” from 15° of Virgo to 15° of Libra. However, note that in the original exaltation scheme (and ignoring the actual geometry of the solar system!), Mercury at 15° of Virgo would rise in the sky

after the sun at 19° of Aries, making it an evening star and, thus, of the nocturnal sect. Consider, now, the placements of the planets by degree after flipping (or not) according to sect as well as the differences, as shown in Table 2.

## Differences of the Exaltation Degrees of the Planets after Flipping According to Sect

|         | Sun | Moon | Mercury | Venus | Mars | Jupiter |
|---------|-----|------|---------|-------|------|---------|
| Moon    | 308 |      |         |       |      |         |
| Mercury | 146 | 162  |         |       |      |         |
| Venus   | 16  | 324  | 162     |       |      |         |
| Mars    | 43  | 265  | 103     | 59    |      |         |
| Jupiter | 86  | 222  | 60      | 102   | 43   |         |
| Saturn  | 182 | 126  | 36      | 198   | 139  | 96      |

**Table 2: Differences of Exaltation after Flipping**

The sum of these differences comes to 2,878, or very nearly 8 times 360 (the latter being the number of degrees of any circle, such as the zodiac itself).

### *Sigillum Dei Aemeth*

Around the same time that Dee and Kelley received instructions on the table, they received instructions on the “*Sigillum Dei Aemeth*,” the first two words of which are Latin for “seal of God,” and the last word is Hebrew for “truth.” The pair were first given a ring of 40 cells, each with a letter and some also containing numbers. The sum of all the numbers in the outer ring was 440, to which the archangel Michael directed that 1, a symbol of God’s unity, be added for 441 (this number will be important later). Starting at a cell with a capital letter and a number, and moving either clockwise or counterclockwise (depending on whether the number was above or below the letter) according to the number of the cell, the letters of seven angel names were derived, like spinning the dial of a padlock: Galas, Gethog, Thaoth, Horløn, Innon, Aaoth, and Galethog.

Interestingly, only 28 (four times seven) of the cells were used. The remaining 12 cells, however, yield two names very similar, if not identical, to Egyptian gods’ names: YMON (“Amon”) and LNNON/L-NNON, which is similar to “[the] god [of] No” (likely also Amon). The third name which can be derived, BORAOTH, does not have a correspondence, ancient or otherwise, with which I am familiar.

Dee and Kelley then received the aforementioned archangel names of Zaphkiel, Zadkiel, etc., in a 7x7 table, making 48 letters followed by a cross. Then they received another 7x7 table, this time used in five directions (along with some cryptographic substitution of numbers for letters) to create 35 angel names. In all, the pair had received 49 angel names, and these were placed in a heptagram which inscribed a pentagram, reminiscent of the seal in *The Sworn Book of Honorius*.

### **Part V: *Liber Loagaeth***

The second part of the Enochian system is *Liber Loagaeth*, a 49-leaf book consisting mostly of

49x49 tables, with the exception of the last leaf, which has three 3x7 tables on the front and two 3x7 tables on the back. The table on the first page has words placed within each cell, while the table on the back of that page has words in the cells of the first 40 rows, and letters in the cells of the last 9 rows (for  $9 \times 49 = 441$  letters).

The remaining 49x49 tables were to be completely filled in through leaf 28. Seven of these tables (the back of leaf 25, and the pairs of tables on leaves 26, 27, and 28) had letters angled in multiple directions. Leaves 29 through 48, however, consisted mostly of tables with letters in every other cell (the rest were similar with a few additional letters filled in). According to Kelley's angelic vision, he and Dee were to create a "perfected copy" of this book—transliterating the English letters into the Enochian alphabet (comprised of  $3 \times 7 = 21$  letters) and reversing the direction to right-to-left: no small task (and one at which Dee and Kelley dawdled)!

### **Part VI: Watchtowers**

Once Dee and Kelley had followed the instructions regarding making a copy of the book, the pair received a 25-column, 27-row table, united by a central "black cross." This cross contained four names of God in the angelic language (later dubbed "Enochian" due to its association with the biblical patriarch, Enoch) in which the angels spoke to one another, Dee and Kelley were told. The remainder of the table was divisible into tablets (often called "Watchtower tablets," due to the imagery Kelley received in addition to the tablets themselves) and colored according to the colors of the elements of the day: red for fire, white for air, green for water, and nearly black for earth. Each 12x13 tablet also contained a 12-letter name of God in its middle row. The angels then described not only the powers common to all four tablets but also the angels possessing those powers (whose names were on the tablets). Those angels and powers appeared to take on an elemental quality, depending on which tablet was used. In addition

to four elemental kings in total across the four tablets, there were 24 total angelic seniors (or elders), 16 kerubic (cherubic) angels, and 16 "lesser" angels.

Here, I draw the reader's attention to the dimensionality. If one removes all of the rows and columns containing the names of God in the great table, one is left with a 24x24 table. If one were to place copies of this great table at each of the four corners of a typical table of *Liber Loagaeth*, then one is left with a one-column, one-row central cross.

### **Part VII: Aethyrs**

The Watchtowers tablets alone were related not only to the four elements but also to 30 heavenly "Aethyrs" or "Aires," which relate to 91 governors (each of whom is related to 91 "parts" of the earth). The Aethyrs also seem to parallel the  $30^\circ$  of each sign of the zodiac.

### **Part VIII: Calls**

The angels of the Watchtower tablets and the 30 Aethyrs are called forth, or unlocked, by performing specific calls in the Enochian language. There are 49 calls in all. The first was "not to be spoken" until God's time (practitioners have commonly taken this to be a reverent silence). The remaining 48 calls (also referred to as "keys") are to be spoken and are usually formally enumerated 1 to 48 (ignoring the call which was not to be spoken). These calls are used as follows: two for practices of evocation (calling forth to the practitioner's environment) and invocation (calling into the practitioner's body), four calls specific to each of the four tablets' classes of angels, and one call to each of the 30 Aethyrs.

Of interest are very large numbers within the text of the calls, as shown in Table 3 on the next page.

| Spoken-Call Number | Large Number in Text of Call (and Excerpt from Same)  |
|--------------------|---|
| 18                 | 6,332 (“O thou mighty light and burning flame of comfort which openest the glory of God to the center of the earth, in whom the secrets of truth 6,332 have their abiding...”)  |
| 17                 | 7,336 (“O thou third flame whose wings are thorns to stir up vexation, and hast 7,336 lamps living going before thee...”)   |
| 16                 | 8,763 (“...which walkest on the earth with feet 8,763 that understand and separate creatures...”)   |
| 15                 | 6,739 (“O thou the governor of the first flame under whose wings are 6,739 which weave the earth with dryness...”)  |
| 14                 | 1,636 (“O you sons of fury, the daughters of the Just, which sit upon 24 seats vexing all creatures of the earth with age, which have under you 1,636...”)  |
| 12                 | 3,663 (“Bring down your train 3,663 that the Lord may be magnified whose name amongst you is wrath...”)   |
| 10                 | 5,678 (“These be the thunders that 5,678 times in the 24th part of a moment roar with a hundred mighty earthquakes and a thousand times as many surges...”)   |
| 9                  | 9,996 (“...have settled their feet in the West and are measured with their ministers 9,996.”)   |
| 6                  | 7,699 (“...whom the first hath planted a torment to the wicked and a garland to the righteous, giving unto them fiery darts to van[ne] the earth and 7,699 continual workmen...”)   |
| 5                  | 69,636 (“...and they are the brothers of the first and second and the beginning of their own seats which are garnished with continually burning lamps 69,636, whose numbers are as the first, the ends, and the contents of time...”) |
| 4                  | 9,639 (“Are not the thunders of increase numbered 33 which reign in the second angle under whom I have placed 9,639, whom none hath yet numbered but one...?”)  |

**Table 3: Very Large Numbers within the Text of the Calls**

These numbers will be discussed in further detail in Part X; but, first, the zodiacal kings must be introduced.

### Part IX: Zodiacal Kings

The Aethyrs’ governors are each paired with one of 12 additional kings (each of these kings is related to a sign of the zodiac). However, the 12 zodiacal kings do not appear in a balanced manner across the 91 governors (i.e., each king paired with 6 or 7 governors). Instead, each king appears with the following frequency according to his zodiacal sign:

King Olpaged, Aries: 5 times  
King Ziracah, Taurus: 7 times  
King Hononol, Gemini: 7 times  
King Zarnaah, Cancer: 8 times  
King Gebabal, Leo: 7 times  
King Zurchol, Virgo: 5 times  
King Alpudus, Libra: 8 times  
King Cadaamp, Scorpio: 4 times  
King Zarzilg, Sagittarius: 8 times  
King Lavavoth, Capricorn: 10 times  
King Zinggen, Aquarius: 7 times  
King Arfaolg, Pisces: 15 times

Note that only Lavavoth’s name has eight letters. Furthermore, the imbalanced frequency of kings

struck me as odd. Therefore, I reviewed the frequency of sign-based dignity—domicile and exaltation—and asked the following question: How many times does the zodiacal sign of a king associated with a planet in domicile or exaltation appear? The answer is as shown in Figure 4:

| Planet       | Exaltation                   | First Domicile  | Second Domicile (if applicable) | Total |
|--------------|------------------------------|-----------------|---------------------------------|-------|
| Venus        | 15 (Pisces)                  | 7 (Taurus)      | 8 (Libra)                       | 30    |
| Moon         | 7 (Taurus)                   | 8 (Cancer)      | N/A                             | 15    |
| Saturn       | 8 (Libra)                    | 10 (Capricorn)  | 7 (Aquarius)                    | 25    |
| Mercury      | 5 (Virgo)<br>(also Domicile) | 7 (Gemini)      | (see exaltation)                | 12    |
| Jupiter      | 8 (Cancer)                   | 8 (Sagittarius) | 15 (Pisces)                     | 31    |
| Mars         | 10 (Capricorn)               | 5 (Aries)       | 4 (Scorpio)                     | 19    |
| Sun          | 5 (Aries)                    | 7 (Leo)         | N/A                             | 12    |
| Grand Total: |                              |                 |                                 | 144   |

**Table 4: Number of Times Zodiacal Signs of King/Planet Associations Appear**

Together, the signs of domicile and exaltation associated with Venus and Mars (the benefic and malefic planets of the night sect) total 49. The signs of the sun and Mercury (with Raphael and Michael assigned to one or the other, depending on the angelic correspondence system of the time) total 24, matching the 24 seniors of the watchtowers, 24 hours in a day, and—a favorite of John Dee—24-carat gold (see also Dee’s *Monas Hieroglyphica*, where Dee further explores the number 24). The signs of the moon and Saturn together total 40, matching the 40 outer cells of the *Sigillum Dei Aemeth*, as well as the 40 days and 40 nights of Noah’s ark, and Jesus’ 40 days in the desert (important stories from the Bible). This leaves the sign of Jupiter,

which appears 31 times. Jupiter’s heptarchical king Bynepor is said to have exceptional qualities among the heptarchical angels (being like the Creator but for one degree!). The number 31 equates to the name of God, *El*, in the Hebrew numerological system known as Gematria.

Finally, consider the grand total of 144. This represents not only the square of 12 (the number of signs of the zodiac), but also the reverse of 441, which we have seen already. The square root of 441 is 21, the reverse of the square root of 12.

The last digit is indeed first, and the first digit is indeed last.

## Part X: Servient Angels to the Zodiacal Kings

The last part of the Enochian system I want to touch on is a matter of very large numbers of

servient angels associated with the zodiacal kings and their associated governors, as shown below in Table 5, which spans the next three pages.

| Aethyr Name | Governor | Zodiacal King | # Servient Angels |
|-------------|----------|---------------|-------------------|
| LIL         | Occodon  | Zarzilg       | 7,209             |
|             | Pascomb  | Zinggen       | 2,360             |
|             | Valgars  | Alpudus       | 5,362             |
| ARN         | Doagnis  | Zarnaah       | 3,636             |
|             | Pacasna  | Ziracah       | 2,362             |
|             | Dialioa  | Ziracah       | 8,962             |
| ZOM         | Samapha  | Zarzilg       | 4,400             |
|             | Virooli  | Alpudus       | 3,660             |
|             | Andispi  | Lavavoth      | 9,236             |
| PAZ         | Thotanp  | Lavavoth      | 2,360             |
|             | Axziarg  | Lavavoth      | 3,000             |
|             | Pothnir  | Arfaolg       | 6,300             |
| LIT         | Lazdixi  | Olpaged       | 8,630             |
|             | Nocamal  | Alpudus       | 2,306             |
|             | Tiarpax  | Zinggen       | 5,802             |
| MAZ         | Saxtomp  | Gebabal       | 3,620             |
|             | Vavaamp  | Arfaolg       | 9,200             |
|             | Zirzird  | Gebabal       | 7,220             |
| DEO         | Opmacas  | Zarnaah       | 6,363             |
|             | Genadol  | Hononol       | 7,706             |
|             | Aspiaon  | Zinggen       | 6,320             |
| ZID         | Zamfres  | Gebabal       | 4,362             |
|             | Todnaon  | Olpaged       | 7,236             |
|             | Pristac  | Zarzilg       | 2,302             |
| ZIP         | Oddiorg  | Hononol       | 9,996             |
|             | Cralpir  | Lavavoth      | 3,620             |
|             | Doanzin  | Zarzilg       | 4,230             |
| ZAX         | Lexarph  | Zinggen       | 8,880             |
|             | Comanan  | Alpudus       | 1,230             |
|             | Tabitom  | Zarzilg       | 1,617             |
| ICH         | Molpand  | Lavavoth      | 3,472             |
|             | Usnarda  | Zurchol       | 7,236             |
|             | Ponodol  | Hononol       | 5,234             |

|     |          |          |       |
|-----|----------|----------|-------|
| LOE | Tapamal  | Zurchol  | 2,658 |
|     | Gedoons  | Cadaamp  | 7,772 |
|     | Ambriol  | Ziracah  | 3,391 |
| ZIM | Gecaond  | Lavavoth | 8,111 |
|     | Laparin  | Olpaged  | 3,360 |
|     | Docepax  | Alpudus  | 4,213 |
| UTA | Tedoond  | Gebabal  | 2,673 |
|     | Vivipos  | Alpudus  | 9,236 |
|     | Ooanamb  | Arfaolg  | 8,230 |
| OXO | Tahamdo  | Zarzilg  | 1,367 |
|     | Nociabi  | Lavavoth | 1,367 |
|     | Tastoxo  | Arfaolg  | 1,886 |
| LEA | Cucarpt  | Ziracah  | 9,920 |
|     | Lavacon  | Hononol  | 9,230 |
|     | Sochial  | Arfaolg  | 9,240 |
| TAN | Sigmorf  | Ziracah  | 7,623 |
|     | Avdropt  | Olpaged  | 7,132 |
|     | Tocarzi  | Zarzilg  | 2,634 |
| ZEN | Nabaomi  | Gebabal  | 2,346 |
|     | Zafasai  | Alpudus  | 7,689 |
|     | Yalpamb  | Arfaolg  | 9,276 |
| POP | Torzoxi  | Arfaolg  | 6,236 |
|     | Abriond  | Cadaamp  | 6,732 |
|     | Omagrap  | Zinggen  | 2,388 |
| CHR | Zildron  | Gebabal  | 3,626 |
|     | Parziba  | Hononol  | 7,629 |
|     | Totocan  | Alpudus  | 3,634 |
| ASP | Chirzpa  | Arfaolg  | 5,536 |
|     | Toantom  | Cadaamp  | 5,635 |
|     | Vixpalg  | Zurchol  | 5,658 |
| LIN | Ozidaia  | Arfaolg  | 2,232 |
|     | Paraoan  | Olpaged  | 2,326 |
|     | Calzircg | Arfaolg  | 2,367 |
| TOR | Ronoomb  | Zarnaah  | 7,320 |
|     | Onizimp  | Lavavoth | 7,262 |
|     | Zaxanin  | Zinggen  | 7,333 |
| NIA | Orcanir  | Zarnaah  | 8,200 |
|     | Chialps  | Lavavoth | 8,360 |
|     | Soageel  | Zinggen  | 8,236 |

|     |          |          |       |
|-----|----------|----------|-------|
| UTI | Mirzind  | Zarnaah  | 5,632 |
|     | Obvaors  | Ziracah  | 6,333 |
|     | Ranglam  | Arfaolg  | 6,236 |
| DES | Pophand  | Arfaolg  | 9,232 |
|     | Nigrana  | Cadaamp  | 3,620 |
|     | Bazchim  | Arfaolg  | 5,637 |
| ZAA | Saziarni | Ziracah  | 7,220 |
|     | Mathula  | Zarnaah  | 7,560 |
|     | Orpanib  | Gebabal  | 7,263 |
| BAG | Labnixp  | Lavavoth | 2,630 |
|     | Pocisni  | Zarzilg  | 7,236 |
|     | Oxlopar  | Zurchol  | 8,200 |
| RII | Vastrim  | Hononol  | 9,632 |
|     | Odraxti  | Zarnaah  | 4,236 |
|     | Gomziam  | Arfaolg  | 7,635 |
| TEX | Taoagla  | Arfaolg  | 4,632 |
|     | Gemnimb  | Zarnaah  | 9,636 |
|     | Advorpt  | Hononol  | 7,632 |
|     | Doxinal  | Zurchol  | 5,632 |

**Table 5: Very Large Numbers of Servient Angels and Their Associations**

Now, let us try to relate these large numbers to those in the calls as discussed in Part VIII. My first inclination was to think that, perhaps, one could simply add up the numbers of servient angels to meet the large numbers of the calls by a process of trial and error, but I soon realized that this would not be an easy task. Indeed, this type of issue is known as the “subset sum” problem, and I was able to solve half of them efficiently by using LibreCalc. The solutions are presented below. If a number is followed by the name of a Zodiacal King (ZK) and an Aethyr, it’s implied that the number preceding it is the number of servient angels this king commands. (In the following list, the name of the Zodiacal King is preceded by “ZK”; the name of the Aethyr follows the semicolon.)

Call 18 large number: **7,336** =  
 2,630 (ZK Lavavoth; BAG)  
 +  
 2,346 (ZK Gebabal; ZEN)  
 +  
 2,360 (ZK Lavavoth; PAZ) or (ZK Zinggen; LIL)

Call 17 large number: **8,763** =  
 1,617 (ZK Zarzilg; ZAX)  
 +  
 3,391 (ZK Ziracah; LOE)  
 +  
 1,367 (ZK Zarzilg) or (ZK Lavavoth; OXO)  
 +  
 2,388 (ZK Zinggen; POP)

Call 16 large number: **6,739** =  
 1,617 (ZK Zarzilg; ZAX)  
 +  
 1,367+1,367 (ZKs Zarzilg and Lavavoth; OXO)  
 +  
 2,388 (ZK Zinggen; POP)

Call 5 large number: **69,636** =  
 7,209+2,360+5,362 (ZKs Zarzilg, Zinggen,  
 and Alpuodus; LIL)  
 +  
 9,996+3,620+4,230 (ZKs Hononol, Lavavoth,  
 and Zarzilg; ZIP)  
 +  
 6,236+6,732+2,388 (ZKs Arfaolg, Cadaamp,  
 and Zinggen; POP)  
 +  
 9,632+4,236+7,635 (ZKs Hononol, Zarnaah,  
 and Arfaolg; RII)

Call 4 large number: **9,639** =  
 2,306 (ZK Alpuodus; LIT)  
 +  
 1,367+1,367 (ZKs Zarzilg and Lavavoth; OXO)  
 +  
 2,232+2,367 (ZK Arfaolg, appearing twice: once  
 with Governor Ozidaia and once with Governor  
 Calzirg; LIN)

The fact that subset sum solutions exist for half of these large numbers strikes me as remarkable. Moreover, the fact that the servient angels associated with Lavavoth—the only zodiacal king with a name eight letters long (rather than the usual seven)—appear as a solution to the subset problem of all of these large numbers strikes me as beyond a reasonable doubt that a genuine transmission was received by Dee and Kelley. This is only further confirmed by the extraordinary manner in which the calls were received: Each letter of each word of each call was taken from a cell within Liber Loagaeth.

## NOTES

1. Jason Louv, *John Dee and the Empire of Angels: Enochian Magick and the Occult Roots of the Modern World* (Rochester, VT: Inner Traditions, 2018).
2. “Sloane Manuscripts,” British Library, <https://www.bl.uk/collection-guides/sloane-manuscripts>.
3. “Cotton Manuscripts,” British Library, <https://www.bl.uk/collection-guides/cotton-manuscripts>.
4. Wikimedia Commons contributors, “File: Exaltation Degrees of the Planets.jpg,” *Wikimedia Commons, the free media repository*, [https://commons.wikimedia.org/w/index.php?title=File:Exaltation\\_Degrees\\_of\\_the\\_Planets.jpg&oldid=475677815](https://commons.wikimedia.org/w/index.php?title=File:Exaltation_Degrees_of_the_Planets.jpg&oldid=475677815). Ω

Of interest also are the remaining large numbers and their “near-solutions” (closest sum of servient angels mathematically possible) provided by LibreCalc:

6332 (near-solution: 6333)  
 1636 (near-solution: 1617)  
 3663 (near-solution: 3660)  
 5678 (near-solution: 5658)  
 7699 (near-solution: 7706)

The differences between the large numbers above and their near solutions are, in ascending order, 1, 3, 7, 19, and 20. We have already seen the number 1 as representing the unity of God. In Christianity, 3 represents the Trinity. We discussed the number 7 in the heptarchy and in the number of classical astrological planets. The number 19 represents three important concepts: the call to the 30 Aethyrs, the sum of the planets and zodiacal signs, and the rounded square root of 360 (the number of degrees in a circle). The number 20 is half of the number of cells in the outer ring of the *Sigillum Dei Aemeth*, and its square plus the number of cells in the outer ring yields a sum of 440 (which we discussed earlier). Together, the numbers 1, 3, 7, 19, and 20 sum to 50, an important number in the Jewish traditions of counting the Omer and the Kabbalah.

Thank you for your kind attention to this lengthy topic.