

A possible solution to the Beinecke MS408 using transliterated phonetic Hebrew

Abstract – The use of phonetic Hebrew is proposed as a solution to Beinecke MS408 (Voynich). The manuscript may contain details of occult practice.

1.0 Introduction

It is widely thought that the Voynich manuscript was first reported at the end of the 16th century [1] when Emperor Rudolph II purchased a book in an unknown language for 600 gold ducats (roughly the equivalent of £76,000 in 2019). Radiocarbon analysis of the parchment in 2009 gave a date for the parchment of 1404 CE to 1438 CE and suggested that the ink was applied shortly after the manuscript parchment was prepared [1, 2]. Protein testing in 2014 revealed that the manuscript was comprised of the skins of 14 to 15 animals [3]. The manuscript provenance is incomplete but there is good evidence that the manuscript was in the ownership of Jacobus Horcicky de Tepenecz, Johannes Marcus Marci of Cronland and in 1666 CE to Athanasius Kirchner. In 1912 CE Wilfred M. Voynich purchased the manuscript from the Jesuit college at Frascati near Rome. It was donated to the Beinecke Library [4] by H.P. Kraus in 1969 CE who purchased it from the estate of Ethel Voynich. To date the manuscript has defeated all attempts to translate it into a readable form. The unknown script is in a rounded Humanistic font associated with the Renaissance period (as opposed to a square block Gothic style) and some of the illustrations of towers, clothing and hair styles in the manuscript also suggest an Italian Renaissance origin. The manuscript contains sections on Herbs and Plants, Astronomy, Biology, Cosmology, and possibly Pharmacy or Witchcraft. The manuscript has not come down to us unscathed over the centuries and 28 folios are missing. There are drawings in the manuscript of over 128 plants none of which can be identified with absolute certainty. There are also images of ladies bathing in green pools with overhead plumbing and water conduits that look biological in origin rather than being made from engineering materials. There have been many attempts to decode the Voynich manuscript since its rediscovery. Mary D'Imperio [5] produced a comprehensive and incisive review of the contents of the Voynich called "An Elegant Enigma" published in the 1978 CE well before the advent of modern computers and the internet. Since then G. Landini [6], M. A. Montemurro & D.H. Zanette [7] and S. Reddy and K. Knight [8] have added to our understanding of the Voynich and have examined the linguistic structure contained in the manuscript and have shown that it obeys Zipf's entropy law and is most probably an abjad. However, not everyone agrees and in 2004 CE G. Rudd [9] published a paper entitled an Elegant Hoax in which he proposed that the Voynich was randomly generated using a letter grate and was not a language. More recently in 2014 CE Stephen Bax [10] published his proposal for solving the Voynich based on his identification of herbs and stars in the manuscript. I attended Stephen Bax's lecture on the Voynich at the University of Bedford in April 2014 CE [11] and spoke to him afterwards. Although Stephen's proposals have been since been largely dismissed I found him an engaging and passionate speaker and I will return to re-examine his article later. Finally in 2019 CE Gerard Cheshire published an article in

Romance Studies [12] with his view that the Voynich was written in a form of "proto" Romance. Again as happened with Stephen Bax, Gerard Cheshire's proposals were not generally accepted although his article was widely read. When I looked last it had received over 100,000 hits on line. The article preceding it in the same issue had received only 3 hits. Gerard Cheshire did make an interesting point in his article. If a computer could solve the Voynich it surely must have been able to do so by now. Gerard Cheshire thought that human ingenuity would solve the mystery of the Voynich and not computational analysis. I agree with him on this proposal.

I have been intrigued by the Voynich for over 20 years and have tried many times to work out a possible solution. My early attempts were based solely on a study of the letter frequencies in the text and illustrations but most of what I was able to decode was unintelligible. The Voynich scholar and blogger Nick Pelling advised me by email over 10 years ago that any proposed translation of the Voynich must be able to produce tracts of intelligible text and not just one or two random words in a block of text. This is where many proposed solutions to the Voynich come unstuck. I decided that to try to understand the Voynich I would first have to gain an understanding of the Renaissance mind. It was a time where science and magic were thought to be largely interchangeable as were Astronomy and Astrology, the Earth was the centre of the Universe and knowledge was not always widely circulated. In 1534 CE King Henry VIII granted Cambridge University Press a Letters Patent that gave the press the right to appoint three printers to print "all manner of books" for open circulation [13]. Cambridge University Press is the world's oldest publishing house. The word patent in the phrase Letters Patent derives from the Latin *pateo* or open. The opposite is Letters Close (from the Latin *clausae*) which are works intended for closed circulation or possibly just one reader who is the author. This difference can be illustrated by comparing two works from the Renaissance period. In 1610 CE Galileo published his *Sidereus Nuncius* [14] or Starry Messenger. It was widely circulated and remains a model example of how to report scientific research. It is written in simple Latin in which Galileo sets out his objectives and then describes some practical aspects of building a telescope, his observations and conclusions. The booklet was widely circulated and read and helped bring about the demise of the Geocentric model of the Universe. In comparison in Leonardo Da Vinci's notebooks written between 1478 and 1519 CE, he predicted much of the technology of the modern age, but these did not result in any scientific advances as they were only intended for his own readership. I think it is likely that like Leonardo Da Vinci's notebooks the Voynich manuscript was also created only for a closed readership and possibly just for the author's own reference.

My first step was to purchase and read a copy of *Forgotten Scripts* by Cyrus H. Gordon [15]. In this book the author describes practical approaches and methods to code breaking that have worked successfully in the past. Simply put these are finding the right point of entry into a text, making an educated guess and thirdly luck! The author also advises would be code breakers not be too concerned about the minutiae of deciphering texts as most proposed solutions will get improved and refined because more people will study them once they are published. Unfortunately this has not been the case with the Voynich manuscript which has earned something of a reputation as a destroyer

of academic reputations. Fortunately I do not have an academic reputation to defend so I have decided to go ahead and publish my ideas and transcriptions.

2.0 The Voynich Manuscript

There are several good quality reproductions of the Voynich manuscript available for the interested reader to consult as well as on line editions. I find it easier to make comparisons between pages using a printed copy and I found the Yale University Press edition from 2016 CE [16] to be helpful because of the large fold out pages. Looking at the Voynich manuscript the first thing that most people notice is the repetition of key words. Also whatever English characters one assigns to the Voynich characters there seems to be a pattern or flow to the text that is reminiscent of religious texts, or the Icelandic sagas, both of which were intended to be recited. The meter or rhythm of the text enables an easier vocalisation. I also thought of the three weird sisters from Shakespeare's *Macbeth* and their lines from Act IV, scene 1 ("Double double toil and trouble; Fire burn and cauldron bubble"). A book of witchcraft and spells would be a very dangerous item to have in one's possession in the Renaissance era unless it was encrypted so that no one else could understand it.

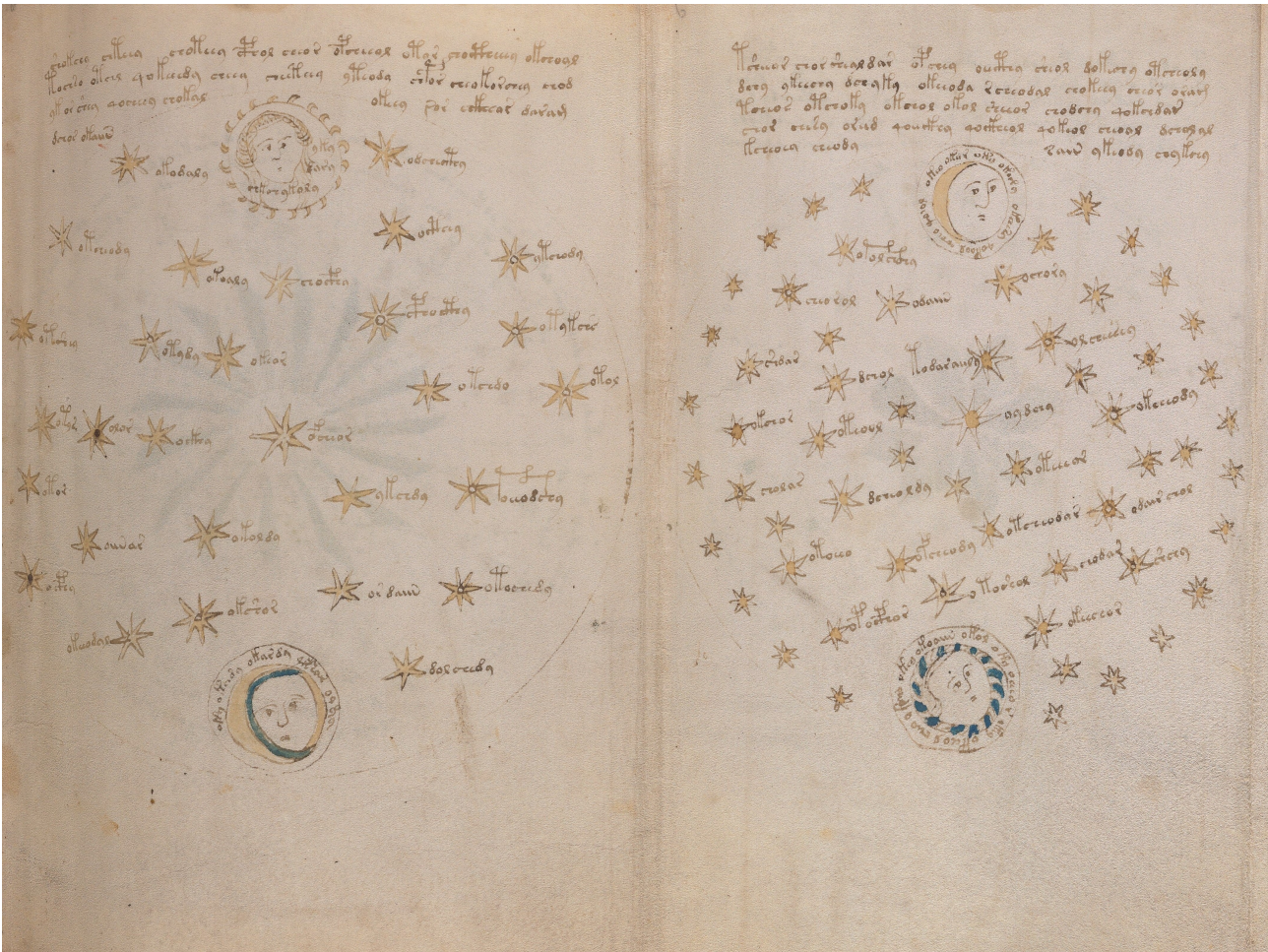
The second thing that I noticed from looking at the printed reproduction was that there are at least two types of handwriting and no crossings out or corrections. This made me think of the venerable Bede who used a scribe. A stained glass window in Gloucester Cathedral shows Bede dictating notes to his scribe (Figure One). What if the author of the Voynich has used two or more scribes to write down what they heard as best they could. There would have been no time to make corrections they would have just had to carry on transcribing what they had heard leaving any errors in place.

Figure One – An image of Bede and his scribe in stained glass from Gloucester Cathedral.



With all of this in mind I just now needed to find a point of entry as Cyrus Gordon had proposed. After many failed attempts I settled on folio pages 68r1 and 68r2 as my starting point. Figure Two shows the two side by side.

Figure Two – Folio Pages 68r1 and 68 r2.



In many cultures the Moon is associated with feminine characteristics and the Sun with male ones so let us assume that the figures top and bottom are representations of the Sun and Moon. This gender assignment can be seen in the medieval stained glass windows at St Mary's church in Burnham Deepdale in Norfolk (Figure Three).

Figure Three – Burnham Deepdale Church Windows



In Shakespeare's age the Moon was referred to as Cynthia, the pale queen of the night or as Diana or Phoebe whilst the Sun is referred to as Hyperion or Apollo (or Phoebus) or Phaeton (Apollo's Son). Also in Shakespeare's time it was widely believed that if there was order in the heavens there would be order and stability on Earth but that disorder in the heavens such as a eclipse was the portent for disorder on Earth such as plague, famine or civil unrest. Gloucester makes this clear in *King Lear* (Act I, Scene 2) when he says "These late eclipses in the Sun and Moon potend no good to us". My starting point was that the images on folios 68r1 and 68r2 were representations of solar and lunar eclipses respectively. Let us look at the words written around the Sun and Moon on folio 68r2 side by side.

Moon

olico olor? olo olonog olavog 4olloox rco 4oox

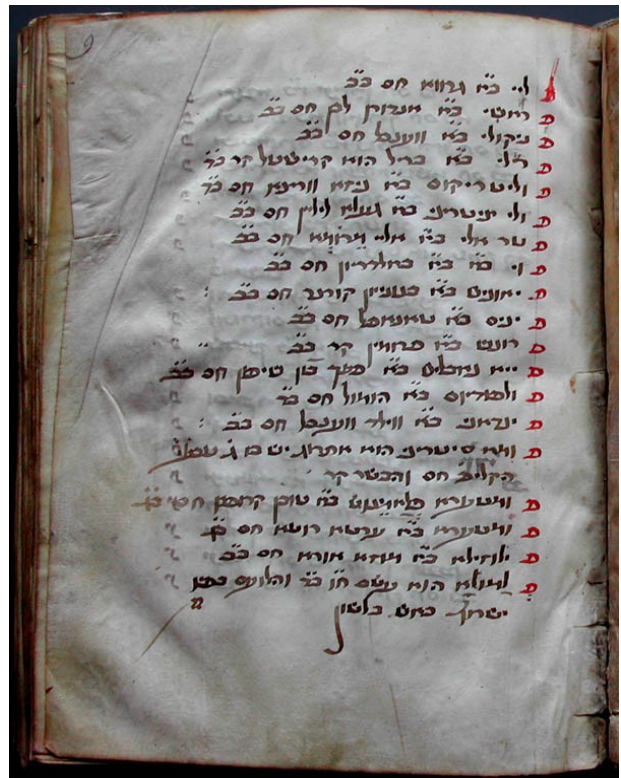
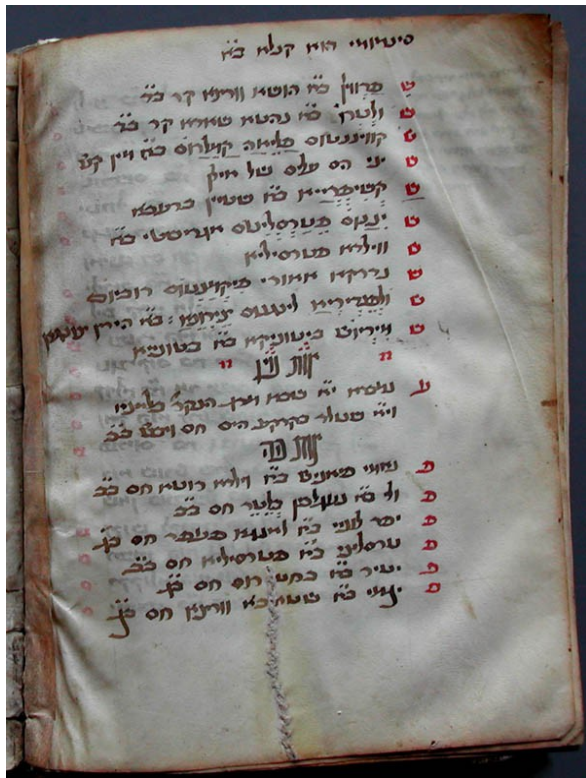
Sun

olico olo and ollox olg ootto ? olig olroox rco llawd

There are several words common to both phrases (olico, rco, and olo) also it occurred to me that possibly the author of the Voynich might have used grammatical gender (olor?/ollox and olavog/olig) as the image of the Sun looks masculine and the image of the Moon looks feminine. Also was and an attribute the Sun possessed but not the Moon? To look at this in greater detail I looked into the origins of language. Many animals use sound to communicate as do human babies. We can become attuned to these sounds given enough time so that most people know if their dog is hungry, wants to go outside in the garden, wants a walk, wants their attention or just wants to lie down next to them on the sofa. Marmosets and other primates make many different complex sounds to communicate to each other as do male humpback whales. However, what distinguishes human speech from animal sounds is our ability to join sounds together to form complex sentences. We use conjunctives, prepositions and other transition phrases to join sounds together in a way that animals do not. These joining words are usually the most commonly used words in languages. I made lists of the 20 most common linking words in 40 European and Middle Eastern languages where applicable (the, be, to of, and, a, in, that, have, I, it, for, not, on, with, he, as, you, do & at) and compared them to the 20 most common words in the Voynich. I rejected languages that seemed a poor fit which left me with Russian, Latin, Arabic and Hebrew as being the best possible matches. My next stage was to utilise word frequency software (<https://www.sttmedia.com/wordcreator-frequencies>) to make lists of the top digrams and trigrams for the four languages I had identified above to compare them with the Voynich. I reasoned that if the Voynich obeyed Zipf's entropy law there should be a correlation of digrams and trigrams. At the end of this exercise I felt that the best fits were Arabic and Hebrew which are both abjads and possessed grammatical gender. It was at this point that I discussed my ideas with Stephen Bax in 2014. Stephen told me that he was a fluent Arabic speaker and that he did not think the Voynich was written in pure Arabic as the structure seemed wrong. He thought that Hebrew was worth

investigating further because like Arabic it was an abjad although he admitted he only knew a few words of Hebrew. Although I communicated with Stephen on a few occasions after our meeting by email I never got the chance to meet him again before he sadly passed away. However, there was an immediate problem. Hebrew and Arabic are written right to left, they both follow the motion of the Sun which rises in the East and sets in the West. The creator of the Voynich wrote from left to right. To resolve this problem I envisaged a scribe writing down what they had heard in Voynich characters so that each word was reversed. Again Leonardo Da Vinci did something similar in his notebooks and used mirror writing. My hypothesis is that the creator of the Voynich did something similar to this. However, there was another problem. I had never seen a Hebrew herbal manuscript from this period to make a comparison with. I searched on line and found Or. 4732 in the University of Lieden's manuscript department. A fourteenth of fifteenth century Ashkenazi manuscript in a semi cursive Italian font. The manuscript has the English title Names of the Herbs (Shemot HaAsavim or שמות העשבים). Two pages from this manuscript in the public domain are shown in Figure Four.

Figure Four – Or. 4732 Lieden Folio 9a left and Folio 8a right



The script is very difficult to read and is a mixture of Hebrew mixed with Yiddish and German. On the left hand figure three line up from the bottom in the middle word Petrosilie (פטרוליא) can be seen which is German for Parsley. On the right hand figure seven lines up the word Etrog (אתרוג) can be made out which is a Citron fruit. At this point I asked for help and two academics very kindly offered to assist me interpreting the text. It was very gracious of them and the only reason I have not included their names is because as I mentioned earlier the Voynich is a notorious destroyer of academic reputations and I do not want to repay their kindness by harming their credibilities. Thus in Or. 4732 there are Hebrew words with Yiddish and German words all written in

Hebrew script. Many words are abbreviated and show only the first and last letters with two superscript dashes (gershayim) in between which denotes an abbreviation (fortunately these are largely missing in the Voynich). We should not be too surprised at this mixing of languages because the venerable Bede (672 to 725 CE) used four Anglo Saxon characters when writing Latin as well as Tironian shorthand. We are very accustomed to the easy ownership of inexpensive books these days that are written for the reader to understand easily. Some people treat books as disposable items and will read them once and then give them to a charity shop or stick them in the paper recycle bin. Manuscripts on the other hand were valuable items not always written for a wider readership and it requires many hours of study, often with a tutor, to understand their contents.

So let us return to the Voynich and its unique script. I identified 18 characters and another four rare characters that I thought might be used for loan words. The 18 main characters are: a, c, e, ll, f, g, z, r, zc, d, o, p, q, x, d, ll, and v (the four rare characters are s, x, ^ and g). At this point I made a couple of educated guesses as Cyrus Gordon suggested in his book *Forgotten Scripts*. I assigned the Voynich symbol g to the Hebrew Vav (ו). Vav can mean "and", it also reverses the direction of a verb and can be an "o" or "u" vowel sound in the middle of a word. For example the word Voynich can be written וויניך. The Hebrew letter Bet (ב) can sound like Vav (b and v are betacisms in Spain, in Neapolitan and to some extent in Hebrew) and there is little difference between them when vocalised. Bet at the beginning of a word indicates in or with. To make a distinction between Vav and Bet at the start of a word I assigned the Voynich character f to the Hebrew Bet. The Voynich character f usually appears at the start of a word so the two could be confused. I assigned the Voynich character o to the Hebrew digram ha. The Hebrew character He or h can mean the article (or that or who), it can be a prefix denoting that a sentence is a question, it can imply motion towards a location when used at the end of a noun and can also indicate female grammatical gender in some instances (e.g. King = מלך & Queen = מלכה). The Hebrew character Alef or a has no sound but it can take a vowel sound.

So let us return to folio 68r2. By comparing diagrams and trigram frequencies I produced the following transcription of the wording around the Moon.

Voynich: 400x 400x 400x 400x 400x 400x 400x 400x 400x 400x

Hebrew: האלכהא האלה אם האלהא האלכגו האלעימו באלהאהאש תהכהא בהאהאש

English: These g-ddesses, if g-d is all-glorified, glorify g-d in darkness

I then did the same with the wording around the Sun.

Voynich: $\text{דונון סו סזאס פאלס ? סדסס פאלס דונון סו סזאס פאלס סו סזאס}$

Hebrew:

האלכהא האלהא עיין האלהאש האו האכ כ כהא ם כלכו האלתההאש תהכהא להאיין

English: G-d see the g-ddess if the flame is extinguished the fire will be darkened

I then extended this to the set in the same manner to include of the 18 main Voynich characters to give the following transcription table.

Table One – Voynich to Hebrew Transcription

\circ = הא	$\text{𐤀} = \text{ח}$
α = ע	$\text{𐤁} = \text{ט}$
𐤂 = o (sometimes ז or צ a sharp sound)	$\text{𐤃} = \text{ל}$
𐤄 = תה (sometimes טה)	$\text{𐤅} = \text{ב}$
𐤆 = מ or ם	$\text{𐤆} = \text{פ or ק}$
𐤇 = ד (sometimes דה)	$\text{𐤇} = \text{'}$
𐤈 = ש (sometimes שח)	$\text{𐤈} = \text{נ (initial or middle nun)}$
𐤉 = ג	$\text{𐤉} = \text{ה}$
𐤊 = ן (final nun)	$\text{𐤊} = \text{כ or ך (sometimes ק)}$

Hebrew has a 22 letter alphabet but some letters do sound very similar so I have condensed 22 letters down to 18 Voynich characters. Also there are four additional Voynich characters that I have not assigned, but I have not needed to use them so far. I have assigned 𐤈 to initial and middle נ as I thought the character 𐤊 would not work well in combination with 𐤄 as it would look messy when written in ink. Jastrow notes that נ and ק can be interchanged but I did not need to do this. The letter ק can also be a prefix meaning next or it stands. For the translations from 15th century Hebrew I used Jastrow's Dictionary available on line at (<http://www.tyndalearchive.com/TABS/Jastrow/>) my own knowledge of prayerbook Hebrew and also on line translation sites such as Morfix, Reverso, Google, Microsoft Online and Do It in Hebrew. The on-line sites can give wildly different answers (and sometimes spurious as they use modern Hebrew and give phrases like modem and memory stick) so its best to check them all to get a concensus. Morfix and Reverso will both indicate if a word is archaic or biblical to avoid confusion with modern Ivrit.

At this stage it seemed sensible to continue with folio 68r2 and then to see if the decryption would work with some other pages. So let us now look at the text at the top of folio 68r2. I transliterated these into Hebrew using my table and then translated them into English. As I thought the folio pages represented

an eclipse I was anticipating to read something relating to this.

Voynich

פּלֶזֶטֶטֶט טֹטֶט זֵטֶט דֶטֶט פֶטֶט וֹטֶט זֵטֶט דֶטֶט פֶטֶט וֹטֶט
דֶטֶט פֶטֶט וֹטֶט דֶטֶט פֶטֶט וֹטֶט פֶטֶט וֹטֶט זֵטֶט דֶטֶט פֶטֶט וֹטֶט
פֶטֶט וֹטֶט פֶטֶט וֹטֶט פֶטֶט וֹטֶט זֵטֶט דֶטֶט פֶטֶט וֹטֶט
טֹטֶט זֵטֶט דֶטֶט פֶטֶט וֹטֶט פֶטֶט וֹטֶט זֵטֶט דֶטֶט פֶטֶט וֹטֶט
פֶטֶט וֹטֶט זֵטֶט דֶטֶט פֶטֶט וֹטֶט פֶטֶט וֹטֶט זֵטֶט דֶטֶט פֶטֶט וֹטֶט

Hebrew transliteration

ח ס ככהאם תהאם סכעם רהעם האפהתהכו האכנתחהו סכהאם רההאחכתהו האחתהכהאשו רהתהו
ולכנתהו רהתהוּלו האלכנהארעה מתהכהארעש תחאהלכנו תהכהאם האמעג חתהכהאם האחתההאלו
האלתההאש האלהאש סך האם תההארהתהו בהאלתרהעם תההאש תהכדו האמ"רה
בהאלכהאשתהכהאעש רהתההאשפש לתהכהאנו תהכהארהו דעין ולכהארהו תהילתהו

English

He did so wonder if storms thunder you would have gone the cleansing is over
the oppressor is the guilty one she saw him and wept Oh Lord it is like a
thunderstorm darkness darkness I wondered if you would go I wondered if the
amazement was imminent g-d is one the g-ddess of fire the g-d of fire
total/whole g-d they wondered about the time to stand still fire be joined they
were united in it you have consumed him when the fire comes to you in the
way of fire thus to stand still there is no g-d but g-d to cry out to the darkness
Oh Lord to be waiting yet/still and so enlighten him they wondered

The Stars

פֶטֶט וֹטֶט פֶטֶט וֹטֶט פֶטֶט וֹטֶט פֶטֶט וֹטֶט פֶטֶט וֹטֶט פֶטֶט וֹטֶט פֶטֶט וֹטֶט
פֶטֶט וֹטֶט פֶטֶט וֹטֶט פֶטֶט וֹטֶט פֶטֶט וֹטֶט פֶטֶט וֹטֶט פֶטֶט וֹטֶט פֶטֶט וֹטֶט
פֶטֶט וֹטֶט פֶטֶט וֹטֶט פֶטֶט וֹטֶט פֶטֶט וֹטֶט פֶטֶט וֹטֶט פֶטֶט וֹטֶט פֶטֶט וֹטֶט

Hebrew

החהאשתהטחהו תהכהא מהאש הארהעיין הא טה האמו זרהעם רהתההאש חהאר
העמעיישו האשתהכמכו האל תההם האחכה האש הארה התהו האל תהכה אתהו
תהאשעם רהתתהכהאשרהו האחר כ כהאם כחהאתההא האנתה מרה האחתהך הארהעם
הארהים תההאש האפהאתפההם האח האסהאש תהארהעם סתהו האלך כתהאנום

English (I have used capitals to show the start of each phrase)

The fire will endure Let it burn Enlightenment Slowed down
Strange The fire has burned He was amazed The fire will burn
G-d will be To fasten the fire The light was pure g-d will be with him
You will be amazed His greeting was confirmed The other is like that
The power of the beholder The teacher is his authority
The other is the people Enlightenment with the fire
Where I shall end The fire is burning I will be with you
I walked away
G-d is the creator

The g-ddess of war (or the g-ddess was waking)
 Illumination will be given to him
 Revival (or Resurrection)
 Enlightenment The g-ddess did She waited And he praised
 The other is gone Its interpretation g-d is the mother
 He blazed
 The union They are The suspension
 The open place to join
 This life And for his praise Let it be as it were
 There is no g-d bless
 Preached Conversion (or speculation) Raising awareness
 The opposite is true g-d is whole The test is done

The Moon - *אלוהים ואלהים ואלהים ואלהים ואלהים*

האלו האלערהו האלעמרהו בעך עם האשרהו

These are the ones who have turned him into darkness with his approval.

This and other phrases suggest that folio 68r1 is a solar eclipse (Moon in front of the Sun) and folio 68r2 is a lunar eclipse. To me folio 68r3 looks like an annular eclipse where a faint ring of light can be seen around the Moon as it has not obscured the Sun in its entirety. There is a lot of text on folio 68r3 including radial lines and writing around the inner and outer circumferences. I treated the figure as a clock face and started at the top which I termed 12 O'Clock. I started with the outside circumference, then the radial lines, the inner circumference and finally the star chart. Unlike the previous folios where the stars fill the page evenly with little or no structure the stars in folio 68r3 appear to have a structure to them which has made many Voynich researchers think the figure must be a map of the night sky.

Figure Five – Folio 68r3



Outer circumference starting at 12 O'Clock

וּפְתַח מִן הַיָּמִין וְהָאֵלֹהִים בְּיָמֵינוּ
וְהָאֵלֹהִים בְּיָמֵינוּ וְהָאֵלֹהִים בְּיָמֵינוּ
וְהָאֵלֹהִים בְּיָמֵינוּ וְהָאֵלֹהִים בְּיָמֵינוּ
וְהָאֵלֹהִים בְּיָמֵינוּ וְהָאֵלֹהִים בְּיָמֵינוּ

האחת ההארעה דהאשה תהכאם האחרה האחכנ האכחתהרהו האפתהכה ארהו רהתהכרהו רעין
האחר הארהו רהערהתהכרהו האחר הארהו בהאתהך כתחהיג רהתהמכה האלכה רהשו ראהו שם
האדת העיין תהכהאתל הכרהתהו תההארעה תהכהארו תהאשה עשה החך הארה תהכרה האלכרו
בהאלך כו תהא לו ראש רהעשך כדהרהו האלין עיין הארה תהרה החתהרו תהכה חכנה האזתההכו
תההאחהש תהכהארהו תהכרו האחר האיהעין

One is enlightenment/radiance that woman/that fire darkness the other is refined they dazzled his joy was gone behold the darkening that was his recognition a woman the others were shining he shook his head the others were in your own right this is the truth the g-ddess spoke to meet with/to see there clear your eyes thou shall not recgnise her this is the case behold the woman to do work the light of enlightenment will be recognised the lord has burned in the hereafter it will be for him beginning this is the beginning it is not simple enlightenment started be bold just wait listen to him let the fire be you will wait think then he saw the light.

12 O'Clock Radial וְהָאֵלֹהִים בְּיָמֵינוּ
חהאכנד תהתפהו בהאת הרו רהאש האלושו
The captive will be enveloped/covered in his glorius glory

2 O'Clock Radial וְהָאֵלֹהִים בְּיָמֵינוּ
רתהולתהו רעיים תההאל האתחה הארההאם
The question is whether the mother is enlightened

3 O'Clock Radial וְהָאֵלֹהִים בְּיָמֵינוּ
האלהאש הרהתההאש בהאחככו תהכחכתהו האלתהרו
With the g-d of fire the fire was darkened by the heart of the fire

5 O'Clock Radial וְהָאֵלֹהִים בְּיָמֵינוּ
רהתההאלתם זהו הלכו האחכהאם האלה אשסר
These are the g-ds who have gone astray

6 O' Clock Radial וְהָאֵלֹהִים בְּיָמֵינוּ
פתההארהו בהאלתהו רהסהאש רהמו האח!האשרהש
They were amazed at the presence of the Lord, the Lord of One (or the Lord of Fire) symbol ⚔ unassigned

8 O' Clock Radial **ללסזלל ואלללל ואלללל ואלללל**
לתהאחו האחככו רהעיין רהתהכך הארהו האחככו
For a long time the darkness was softened

9 O' Clock Radial **ללללל ואלללל ואלללל ואלללל**
רהתהכו בהאלככו רהתה ככו רהעיין האחתעש
They continued to serve as spiritual leaders

10 O' Clock Radial **ללללל ואלללל ואלללל ואלללל**
חהאכדה וחכהאאסך גהאלהאשתהכו בהאלתהרהו
It was aching and waiting for the goddess to dwell on the wish of the faded

Inner Circumference - **ללללל ואלללל ואלללל ואלללל**
האחתה הארהו תההאלתהו האלהאש טההאש רעם תהא לכהאש בהאשעיין האלך האש האשהו
The first is enlightenment the glory of the god of fire the thunder let the fire be
the fire of the wicked let the fire stay.

2.1 The Folio 68r3 Star Map

Many cryptologists who have studied the Voynich are convinced that the stars on folio 68r3 represent a map of the night sky. However, no one has ever unambiguously identified the stars to celestial objects. The seven star cluster on the right hand side has been thought to be the Pleiades but there are two problems with this association. Firstly it looks nothing like the shape of the Pleiades which look like a miniature scythe and secondly in Galileo's *Sidereus Nuncius* [14] he asserts that most people can only see six stars. Galileo is easy to debunk as many historic cultures have a tradition of seven stars in the Pleiades. They are referred to as the seven sisters, Freya's seven little hens, the seven goats, the seven virgins and sometimes as just the seven stars. The book *Star Names and their Meanings* by R. Hinckley Allen [17] provides many more examples. Possibly Galileo could only see six stars with his unaided eye and wanted to extol the power of his telescope. Also I do not think we need to be overly concerned about the shape of the seven stars because the plant diagrams in the Voynich have defied categorisation. I used my Voynich to Hebrew transcription chart on the star map and surprisingly I was able to get a degree of sense out of all of the Voynich names, however, some names are far easier to identify with celestial objects than others.

From Inner Circumference to Seven Star Cluster - **ללללל ואלללל**

This is relatively easy **ללללל ואלללל** means the lantern/the crystal like fire. This could be explained by an annular eclipse.

North-West Stars - **ללללל ואלללל** - רההאעמהא - to see Maia. Maia is the oldest of the Pleiades sisters and the mother of Hermes. Maia was held in such high regard by the ancient Greeks that the month of May was named after her. The star to the left of the seven star cluster has often been associated with Aldebaran but I am going to propose something different. I transliterated **ללללל ואלללל**

as $\text{רַטַּה הָאֵשׁ רֵעַן}$ which is to sprinkle (or wet) the shepherd's fire. This star could still be Aldebaran but I think Capella is more likely. The Pleiades and Capella are associated with the arrival of spring rain and also they rise at the same time in the evening sky in the spring when the wet weather starts. Capella is sometimes known as the Shepherd's Star.

North-East Stars - גְּמַלִּים - האלהד or the g-ddess this would fit well with Venus. The nearby קִימָה is little more difficult. It could be translated as 'This Kuma' (ν - Draco - fairly dim star) but I think 'This fever' or 'This heat' is more likely. Associations could be Mars which is red and possibly also Regulus whose rising in the night sky was associated with the season of fever (malaria) in the summer.

South-East Stars - וְאֵלֵי פִּדְיוֹן - ולותהרהו ולו - purity and to join (or to him or and if not) the first word tahara is the ritual washing of a corpse before burial. The star most associated with purity is Spica. The next star is פְּתָחוּ - עתפהו is tripods. There are several stars called tripods (or trivets) in the night sky named after the three stones used to support a cooking pot over an open fire δ -Aries and Genam are possible but Vega is most likely because it is the brightest. The third and final star in this section is שִׁמְשֵׁם which I transliterated as האלהאשתהו which means 'The g-ddess is silent'. The Romans did have a silent g-ddess called Dea Tacita who was celebrated on December 23rd every year on Larentalia. However, she does not seem to have an associated star. Dea Tacita was worshipped as a g-ddess of the dead.

South-West Stars - There are four stars in this section three of them are easy to assign but the fourth one is more problematic as there are several possible assignments. אֵלֵי עֵצִים - האלתההארהו is the g-ddess of enlightenment, however, there are lots of stars that could be so described to its impossible to make a firm assignment. The g-ddess of enlightenment was Athena (Minerva) but she does not have an associated celestial body. Looking wider afield the Egyptian g-ddess Sophdet was associated with Sirius and was known to the ancient Greeks as Sothis but there are many possible candidates. The next star is עֵשׂוֹן - רעם עשש to be strong thunder. I assigned this to Jupiter or Zeus (in the play *Cymbeline* by William Shakespeare there is a scene towards the end of the play when Jupiter descends on a giant eagle and starts throwing thunderbolts onto the stage - Act V, Scene 4- if anyone was dozing off to sleep at the end of a long day that would have certainly woken them up!). The star אֵלֵי זָקֵן translates as the old man (החורהג) so is most probably Saturn known the g-d of old age. This leaves only אֵלֵי אֲשֵׁר which I have assigned to Arcturus on the basis that the transliteration תהו האש תהו means 'to gaze upon fire revival or resurrection'. In Arabic Arcturus is known as Al Simak or the uplifted one which does fit the decription.

2.2 Folios 1r, 84v and Baxisms

Having looked at the astronomical pages I thought it would be a good idea to look at another couple of pages to make sure that my decrypting did not produce more reference to eclipses and goddesses. Folio 1r seemed a good place to start so I looked at the first section. Then at random I picked a short isolated section at the top of folio 84v which is one of the pages with ladies bathing. Lets look at Folio 1 r first.

פאטגל גלאג אר אלאנד זעז זעזג אהרל גלול זעזג
זעזג אהראר זעז גלאר זלאנד זעז אר אהראר אהראר זעז
זעזג זעזג זעז גלאנד זעז אהראר אהרל זעזג זעז
זעז אהראר אהראר זעזג אהראר זעז אהראר זעז
זעז אהראר אהראר אהראר אהראר זעזג

My translation suggests the promulgation of knowledge, but by close teaching with a master rather than by studying the manuscript in isolation. Possibly those who chose to study this way, although appalled at first, will be surprised by their new found knowledge and will become separated from their people. This seems to be something like a secret cult with initiates and followers.

נעתהוד ולעש עם עחעיין סהאש סהאמו תחהמכו להאים סהאשרהו דהאמו תחהעם האם להים תחהעיין
עם עמך תחהעם תחהעם רהען דועיים סכלו האם ולעיין סהוה תחה האעמו תחהכד רהאמעין דע דהעיין
אהאככו אהאכהאד מהאשהאחו רהעיין אהאעיין האם האלען רהעים תהכעם תחהעיין תפהעם תנהעיין
ורהעם עיסו

We will go and do that with the eye of the people and the people will come to them we will not meet with you and discuss with them thou shall not perish with thy people thy people knowing they are evil have failed and to see moonlight under the cloud be trapped love (or mercy) which (or that) the hell the darkness the fire was the fire of the people's eyes I will see if those who are appalled will be surprised by their astonishment and wonder.

Next I chose a page at random. There is a short isolated section of seven words on the top of folio 84v that reads

אפגז זעז אהראר אהראר אהראר אהראר אהראר אהראר

אהארהו רהעם תהרהו רהעם אהמעג דהעיין אהאכך כו דהאש האלעשו

The selected from bad to be clean to swing hyssop that to rub to tread upon punishment.

Hyssop is a well known cleansing herb (Psalm 51) but where else does אהראר occur in the Voynich. There are ten matches on other pages: F33v, F68r2, F79v, F84v, F85r, F88r (with a picture of the plant), F104v, F108v, F112 (twice). However, the tiny plant on folio 88r does not really look like hyssop. The roots shown are fine but the leaves illustrated are lobular whilst hyssop has lanceolar leaves. However, the Talmudic rabbis seem to have experienced several problems deciding what hyssop actually was with some claiming it as majorum, thyme or sage [18]. The phrase used is Hemag which is a variant of hyssop according to Jastrow.

Finally I thought I would try some of Prof Stephen Bax'es assignments to see if there was a match. I could not match centaurea (folio 2r), the castor oil plant

(folio 6v), or coriander (folio 41v). However, I did find something interesting on folio 16r which Prof Bax assigned to juniper on the basis of **גריס**. When this is transliterated as **הארהר** it is the herb thyme. However, most people associate folio 16r with hemp, or the cannabis plant, or agnus castus rather than juniper (see Figure 6).

I do not think that the illustration on folio 16r is thyme but it is possible that thyme could be mentioned in the accompanying text block as an associated herb. I cannot see the Hebrew word for cannabis (**קנה בשם**) on folio 16r but it is possible that the Voynich author used another name for it, possibly or the folio is depicting another plant altogether. Medieval herbals are notoriously badly illustrated according to Minta Collins in her book *Medieval Herbals* [18].

Figure Six – Folio 16r and Red Thyme.



3. Conclusions

There are both pros and cons to my attempted translation of the Voynich as phonetic Hebrew. The cons are that there are a lot of degrees of freedom when transcribing from a unknown foreign language and that not all of the translations I have made make complete sense. In addition several Hebrew characters have the possibility to be used both as a prefix (**ב**, **ו**, & **ל**) and also as part of a normal word (see Jastrow for examples). The pros are that I have managed to transcribe and interpret every word into English and there are common threads which seem to indicate the manuscript contains occult knowledge that could have been turned into code to protect the owner in the event of discovery. In the early Renaissance the consequences of discovery would have been an accusation of witchcraft followed by prolonged torture and death. If the manuscript is hard to interpret it is because it was designed to be so. The author was well aware of the pantheon of Roman and Greek g-ds. Eclipses were seen as a time when the two fire g-ds (one male and one female) became united as one. The star names and also the short section on folio 84v mention purity and cleansing. Also the introduction and the short section on folio 84v both mention the selection and separation of individuals for learning or purification. Despite the widespread acceptance of Christianity in

Europe the older religions and beliefs did not completely vanish. We know little of the early druidic and pagan beliefs except for the little that others have written down, which is often not always complimentary. It is possible that the Voynich manuscript contains some of this pagan knowledge such as the combined use of herbs and incantations for healing and also observations of the night sky. The manuscript is pocket sized and would have been too easy to conceal and carry. It could even have been used to teach new initiates. The manuscript was probably deliberately encoded to protect its owner and the encryption used has certainly served its purpose.

I do realise that not everyone will agree with my interpretation here and I am very aware that the Voynich has been the destroyer of many academic reputations. However, if we stop writing and sharing our numerous points of view about the Voynich then it will never be solved and the knowledge it contains will be lost to us.

Acknowledgements

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