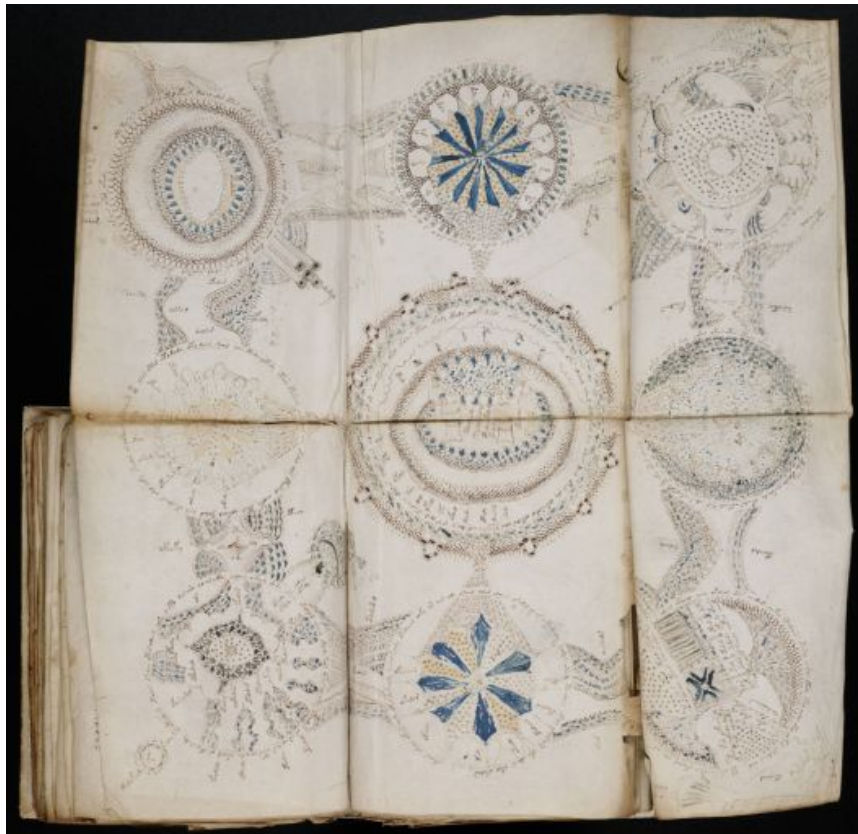


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**To what extent can the illustrations found in the Voynich Manuscript help shed light on the manuscript's contents?**

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*The "Rosettes" Page*

*Vedant Batra*

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<sup>1</sup> [http://Voynich Manuscript.voynich.nu/q14/rosettes\\_crd.jpg](http://Voynich Manuscript.voynich.nu/q14/rosettes_crd.jpg). 1:25pm, 9/7/2013

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## Abstract

This exploration investigates the question **“To what extent can the illustrations found in the Voynich Manuscript help shed light on the manuscript’s contents?”**

In order to investigate this question I have analysed a number of sources: *“The Voynich Manuscript: The mysterious code that has defied interpretation for centuries”* by Gerry Kennedy and Rob Churchill; *“The Curse Of The Voynich: The secret history of the world’s most mysterious manuscript”* by Nicholas Pelling; *“The Voynich Manuscript: An elegant enigma”* by M.E.D’imperio; *“The Codebreakers”* by David Khan; I have also read through research papers and the website, <http://VoynichManuscript.voynich.nu>, by René Zandbergen.

The structure of my exploration is as follows; firstly I will provide an introduction that is divided into certain key sub parts to educate the reader on the background of the Voynich Manuscript and its importance to historians, next I will analyse my principal sources and comment on the nature and structure of the illustrations by grouping them into sections, then I will provide my final analysis leading to the conclusion.

The conclusion of my investigation is that the illustrations of the Voynich Manuscript can only provide us a cursory understanding as to what the nature and purpose of the manuscript truly is. Through my research I have realised that in order to ascertain the content it is imperative to decipher the Voynich manuscript as the symbolism of the imagery is too abstract to draw definitive conclusions.

## Introduction

The Voynich manuscript or the VMS is a medieval folio that is considered one of the greatest mysteries of our world. It is written in a script that is still incomprehensible<sup>2</sup> and not found in any other historical artefact. There exists no evidence that can help determine its author, and although various hypotheses have existed, till now historians have no clue as to what the manuscript is, and why it was written, largely due to failed decryption attempts. One school of thought advocates that it is a hoax meant to con a wealthy individual, while another is adamant that it is a genuine treatise on botany. The Manuscript contains bizarre images of our galaxy only visible through telescope along with illustrations of vegetation that has no resemblance to any species of plants in our planet.

The significance of the Voynich Manuscript arises from two major factors: Firstly, according to experts, the manuscript could provide a highly interesting picture of the theories, doctrines, beliefs and practices of an individual or medieval sect. Secondly, decrypting the manuscript would prove it's not a hoax and revolutionize the way we think about medieval cryptography, since it would shed light on a cipher system that could evade decryption attempts for over six centuries, indicating a level of skill that modern historians never believed medieval cryptographers possessed.

These factors, which have made the Voynich Manuscript one of the greatest medieval enigmas, and its decryption the goal of an entire community of scientists and cryptologists, are the reason I chose to

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<sup>2</sup> See appendix 1

investigate the question “**To what extent can the illustrations found in the Voynich Manuscript help shed light on the manuscript’s contents?**”

## **Description**

Most historians and experts of the VMS have provided detailed sketches of the manuscript such as did P. Kraus<sup>3</sup>, a former owner of the Voynich Manuscript. However, for the sake of simplicity I shall delineate a succinct description of the manuscript. The VMS is a codex measuring 23.5 x 16.2 cm, with over 200 vellum leaves and over a hundred *folios* (*An individual leaf of paper or parchment, numbered on the recto or front side only, occurring either loose as one of a series or forming part of a bound volume.*<sup>4</sup>) divided into 18 quires. The corner of each right hand page is numbered from 1-116 and almost all pages contain coloured images.

Through examining various aspects such as the inks used, the images and the handwriting, experts have ascertained the European heritage of the Voynich Manuscript. There is an on-going debate among historians as to whether the manuscript was written by a single scribe (or writer) or multiple scribes. A strong pool of evidence exists that the codex has been tampered with over the years. The current page order of the Voynich Manuscript is different from its original order and quite a few of its pages are missing.

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<sup>3</sup> See appendix 2

<sup>4</sup> [http://oxforddictionaries.com/us/definition/american\\_english/folio.2:38pm](http://oxforddictionaries.com/us/definition/american_english/folio.2:38pm), 9/7/2013

## **Why the illustrations?**

There are numerous aspects of the Voynich Manuscript that are open to speculation and investigation. However, this researcher feels that studying the illustrations in the VMS is perhaps the most effective way to get an idea of the manuscript's contents. The reason that Robert S. Brumbaugh (professor at Yale University) titled his paper on the Voynich manuscript, "The World's most mysterious manuscript", was the eccentric and alien nature of the manuscript's drawings. They confound anyone who studies them. Almost all the text in the VMS is accompanied by images, and on examining the structure of this text we notice that it is written carefully to avoid the drawings. This is important since it shows that the images were drawn before the text was written and therefore the text is directly related to them. Hence, finding what the drawings mean can help historians crack the accompanying text. This is why experts consider the drawings in the Voynich Manuscript as the first frontier of attack. This essay too will focus just on investigating the illustrations, since through my research I have come to the understanding that the images contain the key to deciphering the VMS.

## **Known History and Background**

Before proceeding with the topic of investigation, it is imperative to provide the known history of the Voynich Manuscript in order to further understand the codex and put it into context.

Much of the early history of the VMS is unknown. In a carbon dating test conducted at the University of Arizona in 2008, experts determined that

the manuscript was created approximately in the early 15<sup>th</sup> century.<sup>5</sup> Through evidence based on a letter dated 1666 found accompanying the Voynich Manuscript<sup>6</sup>, experts have determined Jacobus de Tepenec, a physician in the court of Emperor Rudolph II, to be the earliest known owner of the manuscript in 1600's. However there is no information as to how he got into the possession of the manuscript in Prague, where he resided. According to René Zandbergen, an expert on the VMS, the manuscript remained in Prague for some time until little-known alchemist Georgius Barschius bequeathed it to his friend Johannes Marcus Marci, a scientist and the author of the letter found in the Voynich Manuscript. Later Marci sent the codex to his colleague Athanasius Kircher in Italy in 1666, along with the letter have mentioned before. This was the last recorded history of the manuscript until it was rediscovered and bought in Villa Mondragone near Rome by antique book collector, Wilfrid Voynich (after whom it is named), in 1912. Finally the Voynich Manuscript ended in Yale University's Beinecke Rare Book and Manuscript Library in 1969 where it still resides today.

The paucity of historical knowledge regarding the VMS is one of the primary reasons that it remains an enigma. Nothing is known about its origin or its almost 600 year history except a short period during the 17<sup>th</sup> century. The fact that deciphering the Voynich Manuscript has been the goal of such a large pool academics over the history makes investigating it an even more fascinating endeavour.

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<sup>5</sup> <http://phys.org/news/2011-02-experts-age.html>. 3:15pm, 9/7/2013

<sup>6</sup> See appendix 3

## Investigation

### Analysis of Sources

Although I have investigated a number of sources for this essay, I have focused on three main sources for my research:

- **Source 1: “The Voynich Manuscript: The mysterious code that has defied interpretation for centuries” by Gerry Kennedy and Rob Churchill.**

This text contains a fair amount of resources in the context of my research. The authors are highly knowledgeable when it comes to the Voynich manuscript, and Wilfrid Voynich is also one of Gerry Kennedy’s ancestors<sup>7</sup>, hence the source gains value from the origin. The authors analyse a vast amount of secondary sources by prominent experts on the manuscript and provide in depth investigation on a number of illustrations found in the manuscript with constant external perspective. The book focuses on key facts thereby avoiding vague descriptions.

However the book has certain limitations with respect to my research topic. The authors seem more inclined to provide a summary of analyses by prominent experts than to provide their own input on the illustrations. This makes it repetitive and superfluous for my research. Also, The book was

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<sup>7</sup> Kennedy, Gerry; Churchill, Rob. *The Voynich Manuscript: The Mysterious Code That Has Defied Interpretation For centuries*. p. 2



published two years before the Voynich Manuscript was carbon dated. Therefore, it leaves out certain critical information that could have affected the analysis of a number of factors including that of the images.

- **Source 2: “The Curse Of The Voynich: The secret history of the world’s most mysterious manuscript” by Nicholas Pelling.**

The author of this source is a computer programmer who has spent a major part of his life investigating the VMS. What sets this source apart from all others is the originality and approach. Nicholas Pelling writes about the manuscript in the form of a story with the central character being the individual whom he assumes as the author of the manuscript. He *“separates himself from other researchers and outlines his own views on the entire matter”*<sup>8</sup>. The fact that Pelling could predict the correct period the manuscript was composed before it was even carbon dated adds to the credibility (Since Antonio Averlino, who Nicholas hypothesizes to be the author of the VMS, lived in the 15<sup>th</sup> century, the period to which the manuscript was carbon dated.).

The only demerit in this source in the context of my research topic would be that although Pelling gives a completely different angle on the illustrations in the VMS, he does not focus much on them. Therefore, the analysis is limited. Also, I feel that the contribution of secondary sources

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<sup>8</sup> <http://VoynichManuscript.tandfonline.com/doi/abs/10.1080/01611190701244541#.UdcEbD4pbGU>. 5:43pm, 9/7/2013

in his work is inadequate, and therefore the text has a paucity of external perspectives.

- **Source 3: “The Voynich Manuscript: An elegant enigma” by M.E.D’imperio.**

The value of this source primarily comes from its origin, D’imperio. She is one of the foremost experts on the Voynich Manuscript and was employed by USA’s National Security Agency (NSA) to publish a book on the codex.<sup>9</sup> The source contains detailed account of illustrations found in the VMS along with in depth analysis and the opinion of other experts. D’imperio also brings in her own personal theories that are now mentioned in almost all investigations on the Voynich Manuscript.

The biggest limitation of this source is the fact that it was published in 1978, which makes it a bit obsolete since it does not contain any of the new findings that were possible due to modern cryptography and technology.

### **Nature and style of drawings**

When someone examines the plethora of images found in the manuscript for the first time, he/she is overcome by a sensation of “*extreme oddity, quaintness and foreignness*”<sup>10</sup>. Along with this another noticeable fact is

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<sup>9</sup>[http://VoynichManuscript.nsa.gov/about/cryptologic\\_heritage/center\\_crypt\\_history/publications/misc.shtml](http://VoynichManuscript.nsa.gov/about/cryptologic_heritage/center_crypt_history/publications/misc.shtml). 11:26am, 11/7/2013

<sup>10</sup>M.E.D’imperio. *The Voynich Manuscript: An Elegant Enigma*. p. 11

its similarity to an herbal and astrological manuscript. Most of the illustrations in the VMS are weird plants and herbs of unrealistic make up along with charts and diagrams that are reminiscent of cosmology and astrology<sup>11</sup>. They seem to be, as very rightly put, symbols of “*life generating natural forces*”<sup>12</sup> and devoid of any malevolent images such as those of “*blood, lightning, monsters or mythical beast*”<sup>13</sup>. The Voynich Manuscript also contains no proven references to any religion or sect<sup>14</sup>. This is odd since religion had a very strong influence in the medieval era and hence most European manuscripts contained scenes from religious texts.

According to D'imperio although the drawings are erratic, they contain a definite structure.<sup>15</sup> This fact is important since it proves that the illustrations are indeed drawn logically and have a direct link with the text. It means that as the content changes so do the illustrations. Gerry Kennedy and Rob Churchill believe the herbal images to be faithful renders of a plant's anatomy, although not greatly artistic. For them too, this suggests “*credibility*” in the images.<sup>16</sup> However there exists a community of experts such as Charles Singer, a famous British historian, who do not agree with this notion. They believe that the drawings are too clumsy to be proportionate portrayals of the subject matter, a fact of considerable importance to medieval scribes who wished to relate their drawings of

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<sup>11</sup> See appendix 4

<sup>12</sup> Kennedy, Gerry; Churchill, Rob. *The Voynich Manuscript: The Mysterious Code That Has Defied Interpretation For centuries.* p. 158

<sup>13</sup> IBID p. 158

<sup>14</sup> IBID p. 158

<sup>15</sup> M.E.D'imperio. *The Voynich Manuscript: An Elegant Enigma.* p. 11

<sup>16</sup> Kennedy, Gerry; Churchill, Rob. *The Voynich Manuscript: The Mysterious Code That Has Defied Interpretation For centuries.* p. 162, 163

plants to the surrounding text and represent a plant's stages of growth accurately.<sup>17</sup>

Nicholas Pelling, on the other hand, has a completely different say on this matter. For him the drawings are made in such a manner that only their creator can comprehend them. According to him the Voynich Manuscript is an enciphered copy of a separate manuscript, and therefore it is not the original work. He feels that the images are drawn subtly to serve as cues, and insinuate the reader of the subject matter in the original manuscript through a process known as *Steganography* (*The art or practice of concealing a message, image, or file within another message, image, or file.*<sup>18</sup>).<sup>19</sup> If Pelling's theory is proven correct, then because the actual content is ingeniously sketched as forms of vegetation, the illustrations have effectively enciphered the subject matter by deceiving the viewer who will think that the Voynich manuscript is an herbal manuscript. This would also explain the weird form and construction of the plants and herbs.

## **Categorization**

On an in depth analysis of the Voynich Manuscript, experts have determined that the VMS can be divided into a certain number of sections on the basis of the nature of illustrations found in the manuscript. Although there is disagreement on how many categories the codex can really be divided into, experts are certain that the Voynich manuscript is indeed

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<sup>17</sup> IBID p. 162

<sup>18</sup> <http://www.merriam-webster.com/dictionary/steganography> 6:20pm, 11/7/2013

<sup>19</sup> Pelling, Nicholas. *The Curse of the Voynich: The Secret History Of The World's Most Mysterious Manuscript.* p. 133

divided into sections due to the changing nature of the drawings. I personally believe that René Zandbergen provides the most accurate of these categorizations. He divides the VMS into 6 sections:<sup>20</sup>

- An **Herbal** section that contains most of the drawings related to vegetation such as plants and flowers, which are unidentifiable. This arguably the largest of the sections.
- A **Biological** or **Balneological (related to bathing)** section that is perhaps the most intriguing. It contains illustrations of human like figures bathing in some liquid along with a system of interconnected pipes.
- An **Astrological** or **Astronomical** section that as the name suggests is related to horoscopes, study of zodiac signs using charts of the sun, moon etc.
- A **Cosmological** section with bewildering charts of what seems like views of our galaxy.
- A **Pharmaceutical** section that contains drawings of various herbs and roots along with weirdly shaped jars.
- A **Recipes** section that contains no illustration but copious amounts of text arranged in short paragraphs, each accompanied by star in the margin.

### **Analysis of the sections**

In my analysis of the Voynich Manuscript I have focused on the three major sections of the manuscript: Herbal, Biological and Astrological.

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<sup>20</sup> <http://Voynich Manuscript.voynich.nu/descr.html> 6:52pm, 11/7/2013

The reason I have done this is because these three sections are the most prominent and investigated parts of the manuscript. They are interlinked and therefore provide the best avenue to study the Voynich Manuscript.

- **Herbal Section**

The herbal section covers around half of the VMS. Out of the 18 quires in the manuscript, 8 (quire 1-7, quire 17) of them along with a few additional folios from other quires, contain drawings from this section. A number of illustrations from this category have caught the eyes of researchers who have tried to find real life substitutes for the plants in this section. One such researcher was Hugh O'Neill, who declared in 1944 that he had found an actual plant that represented an image found in folio 93<sup>21</sup>. The plant, according to him, was the sunflower.<sup>22</sup> This claim was highly sensationalized since the sunflower was only introduced to Europe in the post-Columbian period (around 1492), and hence would have helped date the manuscript.

On examination of folio 93, we indeed find a similarity: both have a thick stem and a large flower centre. However, experts have largely refuted this claim since the sunflower found in medieval Europe had a much smaller head and larger petals unlike the modern sunflower, which this folio seems to represent.<sup>23</sup> Another drawing that tentatively represents a sunflower is

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<sup>21</sup> See appendix 5

<sup>22</sup> M.E.D'imperio. *The Voynich Manuscript: An Elegant Enigma*. p. 14

<sup>23</sup> Kennedy, Gerry; Churchill, Rob. *The Voynich Manuscript: The Mysterious Code That Has Defied Interpretation For centuries*. p. 163

folio 33<sup>24</sup>. However, due to its oddly shaped leaves and roots this does not seem possible.

Nicholas Pelling takes a completely different approach on this drawing. According to him the leaves have a strange similarity to a gear system and the bulbs found at the ends of the roots symbolize wheels with spokes pointing out. Hence this represents a strange medieval automobile design that the protagonist of his novel (the author of the Voynich manuscript-Averlino) apparently copied from another manuscript and then enciphered by illustrating it as a weird plant.<sup>25</sup>

There is a set of plants in the herbal section that has regularly bewildered experts. The plants appear to be hybrid species and it is believed that they have been created by combining parts from various plants, through a process known as *grafting*<sup>26</sup> (*To unite a shoot or a bud with a growing plant by insertion or by placing in close contact.*)<sup>27</sup>

The hybrid nature is interesting as it shows that the author of the codex experimented with plants in order to perhaps alter their properties or examine their survivability when grafted. This could mean that the text surrounding these images contains information regarding the author's experiments on grafting.

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<sup>24</sup> See appendix 6

<sup>25</sup> Pelling, Nicholas. *The Curse of the Voynich: The Secret History Of The World's Most Mysterious Manuscript*. p. 127,130

<sup>26</sup> See appendix 7

<sup>27</sup> <http://www.thefreedictionary.com/graft>. 1:47pm, 12/7/2013

The herbal section also contains a number of plants that seem to have “animal and human faces attached to them” along with roots that appear to be shaped in the form of animal bodies.<sup>2829</sup>

According to D'imperio, the reason such animal figures were represented on these plants was to signify different forms of association. For example, the snake like root in folio 43v might indicate that the plant can be used as an antidote for snakebites. Similarly, the horse body shaped root of folio 34v suggests that the plant was a perhaps a source of food for the horse like animal. D'imperio also reveals that medieval scribes would draw plants shaped like animals in order to indicate that the plant possessed certain qualities of that animal.<sup>30</sup>

- **Biological or Balneological section**

The Balneological section (quire 13) is by far the oddest section of the manuscript and contains the drawings the Voynich manuscript is most recognized for.

The most prominent aspects of this section are the plump human like figures that seem to be bathing in pools of green liquid and the intricate pipework that is found in the margin of all the folios in this section.<sup>31</sup> Most experts believe these creatures to be *nymphs (a minor nature goddess usually depicted as a beautiful maiden<sup>32</sup>)*. For, D'imperio, their bulging

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<sup>28</sup> See appendix 8

<sup>29</sup> M.E.D'imperio. *The Voynich Manuscript: An Elegant Enigma*. p. 15

<sup>30</sup> IBID. p. 15

<sup>31</sup> See appendix 9

<sup>32</sup> <http://www.vocabulary.com/dictionary/nymph>. 2:12pm, 12/7/2013



bellies hint towards fertility and “*maternal fecundity*”<sup>33</sup>. Gerry Kennedy believes that the herbal preparation is used to abort unwanted offspring.<sup>34</sup>I, on the other hand, feel that since the Voynich manuscript primarily comes across as an herbal manuscript, this scene of nymphs bathing could very much hint at *Hydrotherapy (or water therapy, is the use of water - hot, cold, steam, or ice - to relieve discomfort and promote physical well being.*<sup>35</sup>) to treat certain diseases.

Another intriguing sight is found in the top corners of folio 78r<sup>36</sup>. It is a structure is shaped like a bunch of grapes or even a pineapple. This construction appears to be the source of the green liquid circulating in the pipes and is associated with some sort of “*divine illumination*”<sup>37</sup> that strengthens the liquids effectiveness.

This section, therefore, contains perhaps the only references to religion in the Voynich Manuscript. On close examination we see that the top most nymph in folio 79v is holding a cross. This has been identified as a crucifix and therefore a reference to Christianity. However, since this is an isolated occurrence, not coherent with the rest of the VMS, I find it highly unlikely.

For me, Nicholas Pelling provides the most pragmatic explanation of this section. According to him, the nymphs represent the flow of liquid and the

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<sup>33</sup> M.E.D'imperio. *The Voynich Manuscript: An Elegant Enigma*. p. 20

<sup>34</sup> Kennedy, Gerry; Churchill, Rob. *The Voynich Manuscript: The Mysterious Code That Has Defied Interpretation For centuries*. p. 177

<sup>35</sup> <http://medical-dictionary.thefreedictionary.com/Hydrotherapy>. 2:23pm, 12/7/2013

<sup>36</sup> See appendix 9

<sup>37</sup> M.E.D'imperio. *The Voynich Manuscript: An Elegant Enigma*. p. 20

crosses denote the direction of flow.<sup>38</sup> Pelling states that the Balneological section actually contains Alverlino's ingenious plumbing designs that have been enciphered into these eccentric drawings.<sup>39</sup>

- **Astronomical or Astrological section**

In my analysis of this section, I have only considered the astrological portion and left out the analysis of astronomical charts, since historians have not been able to determine definite links between them and the rest of the manuscript, and therefore are not a centre of investigation.

The astrological section (quire 11-12 and some scattered folios) includes a series of circular charts that experts believe contain the months of the year with a zodiac sign drawn in the centre.<sup>40</sup> An interesting oddity in this section is that a later owner of the Voynich manuscript wrote next to the charts the name of the months that they represent.

Just like the Balneological section, the Astrological section contains human like figures, however some of them have been identified as men in this case.<sup>41</sup> Most of the charts have around 30 figures, some of which

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<sup>38</sup> Pelling, Nicholas. *The Curse of the Voynich: The Secret History Of The World's Most Mysterious Manuscript*. p. 135, 136

<sup>39</sup> IBID. p. 137

<sup>40</sup> See appendix 10

<sup>41</sup> M.E.D'imperio. *The Voynich Manuscript: An Elegant Enigma*. p. 16

emerge from can like structures and are seen pointing at stars drawn above their heads.

The reason that this section is important to investigators of the Voynich Manuscript is due to its connection with the Herbal and Balneological sections. If we examine folio 71r and folio 71v that represent the Aries and Taurus zodiac signs respectively, it can be seen that both the animals in the centre are feeding on something. Aries appears to be eating a shrub while Taurus seems to be feeding from a box. This according to D'imperio establishes a "*horticultural, medical or agricultural context*"<sup>42</sup> that is imperative in the context of the VMS.

If D'imperio's reference to medicine is found out to be correct, then it suddenly makes the manuscript a lot more comprehensible. I deduce from this that the astrological charts contain information regarding the proper dates to prepare or administer the herbal remedies. Perhaps, the author of the Voynich manuscript believed that for patients with different zodiac signs, medicines needed to be prepared at different times to increase effectiveness. Gerry Kennedy states that "(medicinal plants were) picked if possible at the most propitious astrological time to make use of their full potency"<sup>43</sup>, this could very well mean that the astrological charts were indeed drawn for this purpose.

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<sup>42</sup> IBID. p. 16

<sup>43</sup> Kennedy, Gerry; Churchill, Rob. *The Voynich Manuscript: The Mysterious Code That Has Defied Interpretation For centuries.* p. 187

## Final analysis

Therefore we find a connection between the images of the three analysed sections of the Voynich Manuscripts, which according to me relay the following:

- **Herbal section:** contains information on plants and herbs that have medicinal properties.
- **Balneological section:** contains information regarding the methods by which medicines should be administered; I believe one of those methods is Hydrotherapy.
- **Astrological section:** contains information on the correct time and date the medicines should be administered by studying a person's zodiac sign etc. to increase their potency.

Similarly, it is possible to find a connection with the Pharmaceutical and Recipe section that could contain information on the preparation of medicines from the herbs. Interestingly, according to Gerry Kennedy, medicines were often assumed to derive their properties from planets in medieval Europe<sup>44</sup>, could this mean that the astronomical charts are not so isolated from the rest of the manuscript and contain information on herbal medicine too?

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<sup>44</sup> IBID p. 187

## Conclusion

My investigation has sought answer to the question **“To what extent can the illustrations found in the Voynich Manuscript help shed light on the manuscript’s contents?”**. Through research and analysis of sources I have come to the conclusion that although the illustrations do provide a definitive insight into the Voynich manuscript, we can never actually, with full confidence, point out its exact nature or contents. Only deciphering the script can tell us that.

Images are visual representation of text and therefore provide an abstract idea of the information contained in the text itself. Therefore, although on studying the various drawings of the manuscript I have come to the understanding that it is a comprehensive treatise on herbal medicine that contains knowledge on the identification, preparation and administration of medieval remedies, unless the script is deciphered I will never know the true nature of the manuscript; I will never know the actual herbs and recipes that were used in the preparations (partly due to the eccentric nature of the drawings). In fact, the illustrations could simply be distractions to delay the decryption or the VMS could be a hoax.

Nevertheless, I have encountered a number of hurdles that have limited my investigation. Firstly, I am no expert on the Voynich manuscript. Although, I have thoroughly investigated the manuscript using a number of secondary sources, my analysis will be more limited than that of those who have personally studied the VMS for years. This brings me to my second hurdle; I did not get the opportunity to examine the manuscript since getting permission from the Beinecke would have been impossible, although I did spend time examining the online photocopied version. Lastly, the word limit of 4000 words restricted me from writing a more thorough analysis than what I did in this essay.

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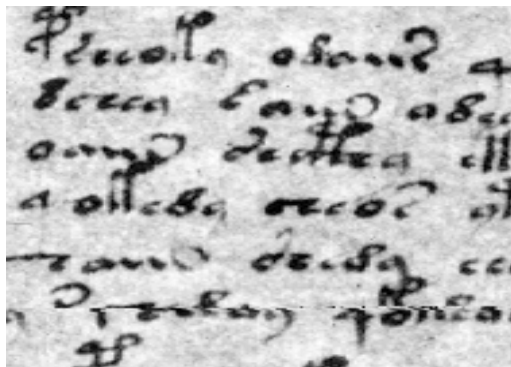
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- [http://Voynich Manuscript.voynich.nu/q02/f016v\\_crd.jpg](http://Voynich%20Manuscript.voynich.nu/q02/f016v_crd.jpg). 6:44pm, 13/7/2013
- [http://Voynich Manuscript.voynich.nu/q06/f043v\\_crd.jpg](http://Voynich%20Manuscript.voynich.nu/q06/f043v_crd.jpg). 6:53pm, 13/7/2013
- [http://Voynich Manuscript.voynich.nu/q06/f046v\\_crd.jpg](http://Voynich%20Manuscript.voynich.nu/q06/f046v_crd.jpg). 6:54pm, 13/7/2013
- [http://Voynich Manuscript.voynich.nu/q04/f025v\\_crd.jpg](http://Voynich%20Manuscript.voynich.nu/q04/f025v_crd.jpg). 6:57pm, 13/7/2013
- [http://Voynich Manuscript.voynich.nu/q05/f034v\\_crd.jpg](http://Voynich%20Manuscript.voynich.nu/q05/f034v_crd.jpg). 7:05pm, 13/7/2013
- [http://Voynich Manuscript.voynich.nu/q13/f077v\\_crd.jpg](http://Voynich%20Manuscript.voynich.nu/q13/f077v_crd.jpg). 7:09pm, 13/7/2013
- [http://Voynich Manuscript.voynich.nu/q13/f078r\\_crd.jpg](http://Voynich%20Manuscript.voynich.nu/q13/f078r_crd.jpg). 7:11pm, 13/7/2013
- [http://Voynich Manuscript.voynich.nu/q13/f079v\\_crd.jpg](http://Voynich%20Manuscript.voynich.nu/q13/f079v_crd.jpg). 7:16pm, 13/7/2013
- [http://Voynich Manuscript.voynich.nu/q13/f083v\\_crd.jpg](http://Voynich%20Manuscript.voynich.nu/q13/f083v_crd.jpg). 7:18pm, 13/7/2013
- [http://Voynich Manuscript.voynich.nu/q11/f071r\\_crd.jpg](http://Voynich%20Manuscript.voynich.nu/q11/f071r_crd.jpg). 7:23pm, 13/7/2013
- [http://Voynich Manuscript.voynich.nu/q11/f071v\\_crd.jpg](http://Voynich%20Manuscript.voynich.nu/q11/f071v_crd.jpg). 7:26pm, 13/7/2013
- [http://oxforddictionaries.com/us/definition/american\\_english/folio](http://oxforddictionaries.com/us/definition/american_english/folio). 2:38pm, 9/7/2013
- <http://phys.org/news/2011-02-experts-age.html>. 3:15pm, 9/7/2013

- <http://VoynichManuscript.tandfonline.com/doi/abs/10.1080/0161190701244541#.UdcEbD4pbGU>. 5:43pm, 9/7/2013
- [http://VoynichManuscript.nsa.gov/about/cryptologic\\_heritage/center\\_crypt\\_history/publications/misc.shtml](http://VoynichManuscript.nsa.gov/about/cryptologic_heritage/center_crypt_history/publications/misc.shtml). 11:26am, 11/7/2013
- <http://www.merriam-webster.com/dictionary/steganography>  
6:20pm, 11/7/2013
- <http://VoynichManuscript.voynich.nu/descr.html>. 6:52pm,  
11/7/2013
- <http://www.thefreedictionary.com/graft>. 1:47pm, 12/7/2013
- <http://www.vocabulary.com/dictionary/nymph>. 2:12pm, 12/7/2013
- <http://medical-dictionary.thefreedictionary.com/Hydrotherapy>.  
2:23pm, 12/7/2013
- <http://images.fineartamerica.com/images-medium-large/sunflower-fotografias-de-rodolfo-velasco.jpg>. 5:15pm, 13/7/2013

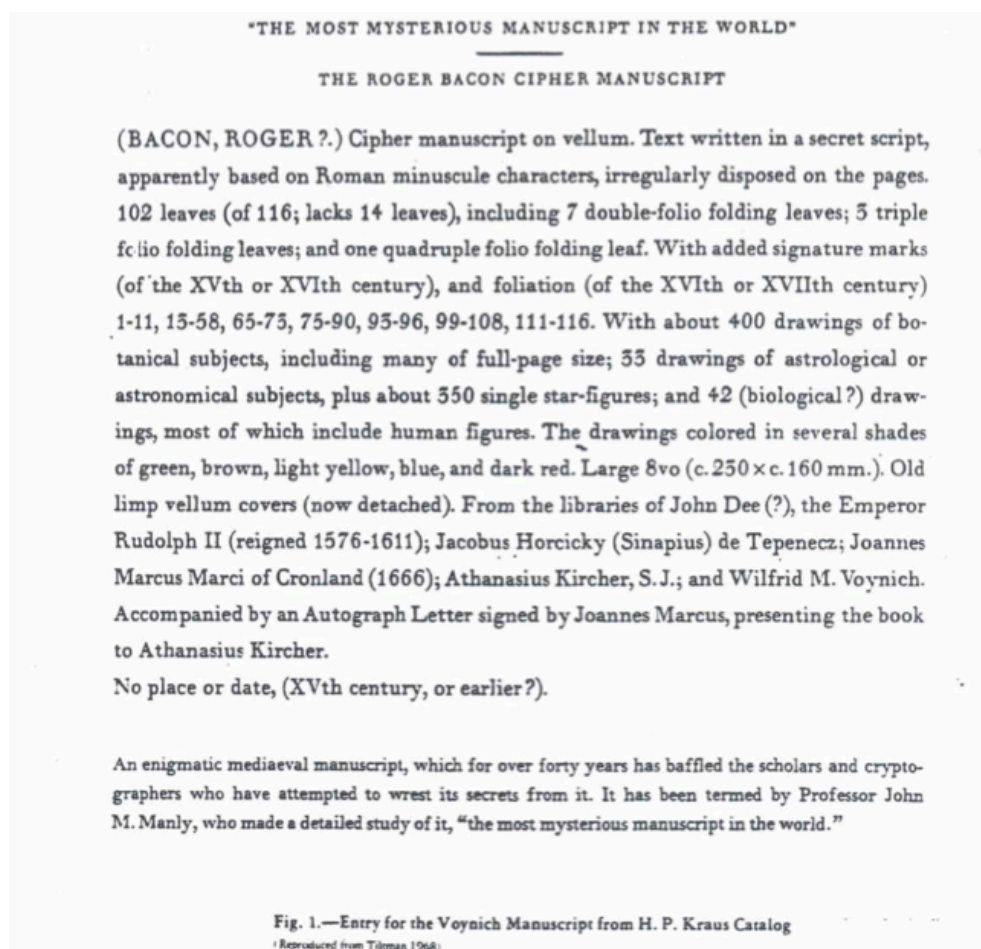


## Appendix

Appendix 1: An image of the VMS script taken from folio 26r



Appendix 2: VOYNICH MANUSCRIPT.P. Kraus' description of the Voynich Manuscript



<sup>45</sup> <http://VoynichManuscript.voynich.nu/img/clips/samp26r.gif>. 5:06pm, 13/7/2013

<sup>46</sup> M.E.D'imperio. *The Voynich Manuscript: An Elegant Enigma*. p. 79

*Appendix 3: Letter found by Wilfrid Voynich accompanying the manuscript.*

Reverend and Distinguished Sir, Father in Christ: This book, bequeathed to me by an intimate friend, I destined for you, my very dear Athanasius, as soon as it came into my possession, for I was convinced that it could be read by no one except yourself. The former owner of this book asked your opinion by letter, copying and sending you a portion of the book from which he believed you would be able to read the remainder, but he at that time refused to send the book itself. To its deciphering he devoted unflagging toil, as is apparent from attempts of his which I send you herewith, and he relinquished hope only with his life. But his toil was in vain, for such Sphinxes as these obey no one but their master, Kircher. Accept now this token, such as it is and long overdue though it be, of my affection for you, and burst through its bars, if there are any, with your wonted success. Dr. Raphael, a tutor in the Bohemian language to Ferdinand III, then King of Bohemia, told me the said book belonged to the Emperor Rudolph and that he presented to the bearer who brought him the book 600 ducats. He believed the author was Roger Bacon, the Englishman. On this point I suspend judgement; it is your place to define for us what view we should take thereon, to whose favor and kindness I unreservedly commit myself and remain,

— At the command of your Reverence,  
Joannes Marcus Marci of Cronland  
Prague, 19th August, 1666<sup>47</sup>

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<sup>47</sup>Kennedy, Gerry and Rob Churchill. *The Voynich Manuscript: The Mysterious Code That Has Defied Interpretation For centuries.* p. 19, 20

*Appendix 4: Folio 86v4 - Seems to be cosmological chart with a moon in the center.*

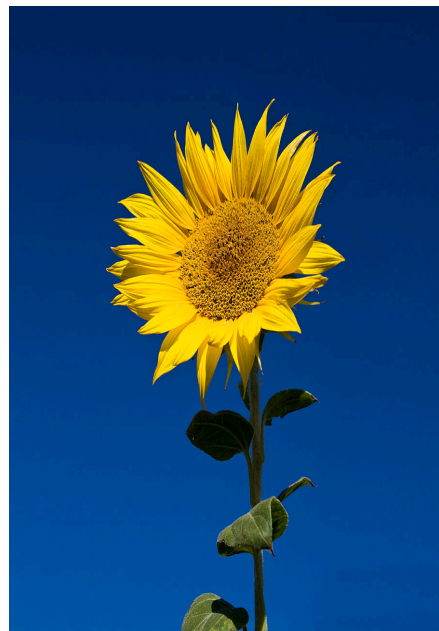


48

*Appendix 5: Folio 93, the “O’Neill’s Sunflower” on the left, and a real sunflower for comparison on the right*



49



50

<sup>48</sup> <http://Voynich Manuscript.voynich.nu/q14/index.html#f86>. 5:08pm, 13/7/2013

<sup>49</sup> [http://Voynich Manuscript.voynich.nu/q17/f093r\\_crd.jpg](http://Voynich Manuscript.voynich.nu/q17/f093r_crd.jpg). 5:10pm, 13/7/2013

<sup>50</sup> <http://images.fineartamerica.com/images-medium-large/sunflower-fotografias-de-rodolfo-velasco.jpg>. 5:15pm, 13/7/2013

Appendix 6: Folio 33, the other drawing that resembles a sunflower



51

Appendix 7: Plants showing evidence of grafting.

Folio 11r



52

Folio 16r



53

51 [http://Voynich Manuscript.voynich.nu/q05/f033v\\_crd.jpg](http://Voynich Manuscript.voynich.nu/q05/f033v_crd.jpg). 6:30pm, 13/7/2013

52 [http://Voynich Manuscript.voynich.nu/q02/f011r\\_crd.jpg](http://Voynich Manuscript.voynich.nu/q02/f011r_crd.jpg). 6:33pm, 13/7/2013

53 [http://Voynich Manuscript.voynich.nu/q02/f016r\\_crd.jpg](http://Voynich Manuscript.voynich.nu/q02/f016r_crd.jpg). 6:39pm, 13/7/2013





Appendix 8: Animal shaped herbs and plants

Folio 43v, the "Snake" folio



Folio 46v, the "Eagle" folio

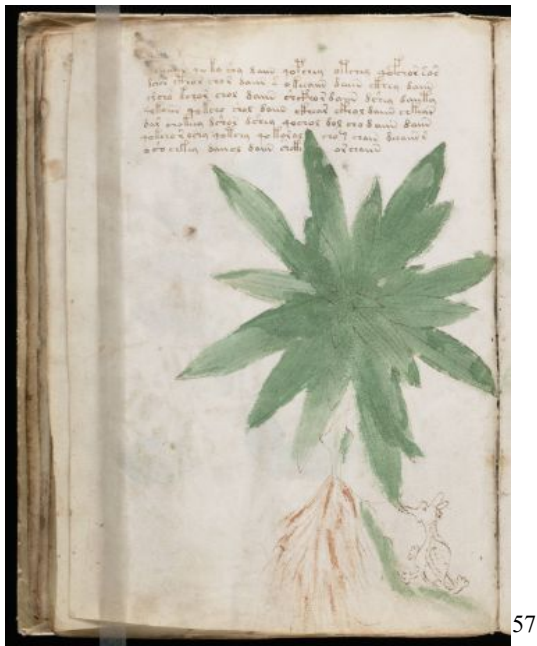


<sup>54</sup> [http://Voynich Manuscript.voynich.nu/q02/f016v\\_crd.jpg](http://Voynich Manuscript.voynich.nu/q02/f016v_crd.jpg) 6:44pm, 13/7/2013

<sup>55</sup> [http://Voynich Manuscript.voynich.nu/q06/f043v\\_crd.jpg](http://Voynich Manuscript.voynich.nu/q06/f043v_crd.jpg) 6:53pm, 13/7/2013

<sup>56</sup> [http://Voynich Manuscript.voynich.nu/q06/f046v\\_crd.jpg](http://Voynich Manuscript.voynich.nu/q06/f046v_crd.jpg) 6:54pm, 13/7/2013

Folio, the 25v “Dragon” folio



57

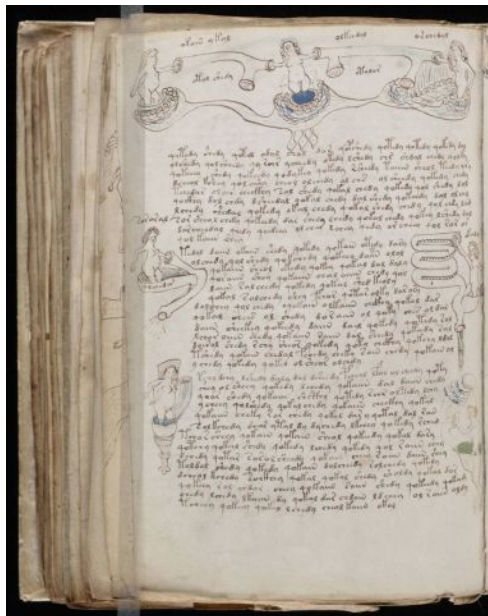
Folio 34v, the “Horse” folio



58

Appendix 9: Drawings from Balneological section

Folio 77v



59

Folio 78r



60

- 57 [http://Voynich Manuscript.voynich.nu/q04/f025v\\_crd.jpg](http://Voynich Manuscript.voynich.nu/q04/f025v_crd.jpg). 6:57pm, 13/7/2013
- 58 [http://Voynich Manuscript.voynich.nu/q05/f034v\\_crd.jpg](http://Voynich Manuscript.voynich.nu/q05/f034v_crd.jpg). 7:05pm, 13/7/2013
- 59 [http://Voynich Manuscript.voynich.nu/q13/f077v\\_crd.jpg](http://Voynich Manuscript.voynich.nu/q13/f077v_crd.jpg). 7:09pm, 13/7/2013
- 60 [http://Voynich Manuscript.voynich.nu/q13/f078r\\_crd.jpg](http://Voynich Manuscript.voynich.nu/q13/f078r_crd.jpg). 7:11pm, 13/7/2013



Folio 79v



Folio 83r



Appendix 10: Drawings from Astrological Section

Folio 71r Aires



Folio 71v Taurus



61 [http://Voynich Manuscript.voynich.nu/q13/f079v\\_crd.jpg](http://Voynich Manuscript.voynich.nu/q13/f079v_crd.jpg) 7:16pm, 13/7/2013

62 [http://Voynich Manuscript.voynich.nu/q13/f083v\\_crd.jpg](http://Voynich Manuscript.voynich.nu/q13/f083v_crd.jpg) 7:18pm, 13/7/2013

63 [http://Voynich Manuscript.voynich.nu/q11/f071r\\_crd.jpg](http://Voynich Manuscript.voynich.nu/q11/f071r_crd.jpg) 7:23pm, 13/7/2013

64 [http://Voynich Manuscript.voynich.nu/q11/f071v\\_crd.jpg](http://Voynich Manuscript.voynich.nu/q11/f071v_crd.jpg) 7:26pm, 13/7/2013

