

THE CRYPTOGRAPHY AND PALAEOGRAPHY OF A MEDIEVAL NARRATIVE MAP

Bir Ortaçağ Haritasının Kriptografisi ve Paleografisi

Gerard Edward Cheshire*

Abstract

This article demonstrates the technique used for reading the narrative of a Medieval map, listed as MS 408. The writing system and language had confounded linguistics scholars for some time because both were unfamiliar, but they were explained in 2017, allowing the translation of scripts and annotations accompanying the images drawn on the map. Here four examples are presented to explain the procedure used in transliterating the alphabet symbols and then translating the Medieval phrasing into English. The language of the map is an archaic form of Iberian Romance, mixed with Greek and Latin. The writing system is based on the ancient Greek, and Phoenician and Arabic alphabets. The map was created by the nuns at Castello Aragonese, Ischia, to record a rescue mission in the Tyrrhenian Sea, following a volcanic eruption in the year 1444. The date is included on the map, written in Latin abbreviation, otherwise known as sigla.

Keywords: Medieval, Manuscript, MS 408, Voynich, Ischia

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Öz

Bu araştırma, arşiv numarası MS 408 olan bir Ortaçağ haritasının üzerinde yazılanları okuma tekniğini anlatmak amacıyla hazırlanmıştır. Yazı dili ile yazı sistemi tam olarak bilinmemesi nedeniyle dilbilimciler arasında karışıklığa neden olmuştur. 2017 yılında haritaya çizilen resimlerin yanlarında bulunan metinlerin çevrilmesine imkân tanınmıştır. Araştırmada alfabe sembollerinin ve Ortaçağ metinlerinin İngilizceye çevrilmesinde kullanılan yöntemler dört örnekle açıklanmaya çalışılmıştır. Haritanın dili İber Roma dilinin Yunanca ile Latince'nin karışmış arkaik biçimindedir. Yazı sistemi ise antik Yunan, Fenike v Arap alfabelerine dayanmaktadır. Harita, 1444 yılında yaşanan volkanik patlamanın ardından Tiren Denizi'ndeki kurtarma görevini belgelemek üzere Ischia'daki Castello Aragonese rahibeleri tarafından hazırlanmıştır. Haritanın tarihi sigla olarak da bilinen Latince kısaltma ile yazılmıştır.

Anahtar Kelimeler: Ortaçağ, El Yazması, MS 408, Voynich, Ischia

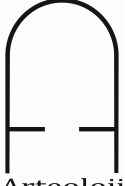
*Research Associate, University of Bristol, School of Sciences, Evolutionary Sciences, gerard.cheshire@bristol.ac.uk, ORCID: 0000-0003-1297-8447

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Genişletilmiş Özet

Arkeoloji genel anlamda geçmişten günümüze kadar ulaşan bütün kültür varlıklarının kalıntılarını inceler. Genellikle toprak altından çıkartılan kalıntıları ve eserleri inceliyor olsa da bunun yanında kaleler, kiliseler ve manastırlar gibi tarihi yapılar da tahrip olmadan günümüze kadar ulaşabildiği için araştırma konularına girer. Bu araştırma arkaik belgelerin içerdikleri dilsel ve görsel bilgiler açısından incelenmesinin arkeoloji için önemini ortaya koymak amacıyla hazırlanmıştır. Bu amaçla MS 408 koduyla listelenen bir ana el yazmasında yer alan Ortaçağ parşömen haritası örnek olarak ele alınmıştır. Bu el yazması İtalya'nın Ischia Adası'ndaki Castello Aragonese manastırının başrahibi tarafından yazılmıştır. İçinde aile sağlığı ve eczacılıkla ilgili çeşitli bilgiler mevcuttur. Bakıldığında genel itibarıyla Ortaçağ el yazmalarındaki karakteristik özellikleri göstermekle birlikte onu farklı kılan Akdeniz'de bir başka adada meydana gelen volkan patlamasından insanları kurtarma göreviyle ilgili bilgileri anlatmasıdır. Haritanın Sicilya'nın kuzeyinde bulunan Vulcano adasında 1444 yılında yaşanan volkanik patlamayla aynı yılda yapıldığı araştırmayla anlaşılmıştır. El yazması ve harita, Castello Aragonese'nin içindekilerle birlikte tarihi değeri ve bağlamı gözardı edilerek 1913 yılında özel mülkiyete geçirilerek satılmasına kadar korunmuştur. 2017 yılında el yazması ile haritanın yazı sistemi ve dilinin çözülmesiyle önemi ve kökeni hakkında bilgi sahibi olunmuştur. Harita doğru bir coğrafi bölgeyi işaret edecek şekilde hazırlanmamıştır. Yapılmasının asıl amacının kurtarma misyonu ile sonrasında oluşan olayların öyküsel anlatımında dayandığı ifade edilebilir. Harita 3x3 biçiminde tasarlanmış dokuz illüstrasyon panelinden oluşan bir dioramadır. Betimlemelerden sekiz tanesi anlatılmak istenen olaylar örgüsünün önemli coğrafi konumlarını temsil etmiştir. Bunların her biri birbirine göre konumlandırılmıştır ancak ölçekleri birbirinden farklılık göstermektedir. Aralarında yer alan mesafeler ise gerçek coğrafi koordinatlarla uyumlu değildir. Sekiz illüstrasyondan dört tanesi Ischia adasının, iki tanesi de Lipari adasının bazı bölümlerini, kalan iki tanesi ise 1503 yılında yine yaşanan volkanik bir patlama sonucu birleşen Vulcano ile Vulcanello adalarını göstermektedir. Son illüstrasyonda hayatta kalanlar için yiyecek ve şarap temini hakkında genel bilgiler vardır. Bu kurtarma öyküsü Hristiyan sembolizmine atıfla Haç (+) şeklinde dört yerde gerçekleşmiştir. Kuzey, güney, batı ve doğu bağlantılarıyla temsil edilmiştir. Bu yönler Baba, Oğul, Kutsal Ruh ve Meryem Ana'yı sembolize etmektedir. Haritada gösterilen unsurları açıklamak ve kurtarma konusunun önemli noktalarını anlatmak amacıyla üzere çok sayıda el yazısı bulunmaktadır. En büyük zorluk haritada yer alan yazı sembollerinin modern alfabeye transkripsiyonunda yaşanmıştır. Çünkü bu iş aynı anda hem yazı sistemini anlamak hem dili tanımlamak anlamına geldiği için dilbilimsel araştırmalara ve tarihsel belgelerin karşılaştırılmasına dayandırılmıştır. Örneğin harita dilinin Grekçe ve İber Roma dilinin eşsiz bir karışımı olduğu anlaşılmıştır. Bunun nedeni olarak Ischia ve Castello Aragonese'nin haritanın yapımından sekiz yıl önce Kral V. Alfonso yönetiminde Aragon Krallığı'nın hâkimiyetine girmesi gösterilmiştir. Dilinin Yunanca yazılması ise adanın M.Ö. 8. yüzyılda Büyük Yunanistan (Magna Graecia) ideali doğrultusunda Ischia'ya ulaşan diaspora göçünün ardından Erken Ortaçağ Hristiyan rahiplerinin Ischia manastırını kurmasından kaynaklanmaktadır. Bu eski tarih harita alfabesinin neden Yunan, Fenike ve Arap harfleriyle türetildiğini açıklamaktadır. Haritanın yazı sisteminde ağırlıklı olarak antik Yunan sembollerinden türetilmiş arkaik bir alfabe, Fenike sembollerinden türetilmiş iki harf ile Arap sembolünden türetilmiş bir harf olduğu görülmüştür (Görsel 3). Castello Aragonese'deki manastırın Basilian Yunan diasporası tarafından kurulması ve haritanın da bu olaydan birkaç yüzyıl sonra yapılması antik Yunan dilinin yoğun görülmesine nedendir. Harita harf sembollerinin çözümlemesi ve çevrilmesinde semboller ilk önce eşdeğer Latin alfabesi sembollerine dönüştürülmüştür (Görsel 2). İlk çeviri örneği



Arteoloji
Dergisi

Gerard Edward Cheshire

haritada kaydedilen olayları gösteren panelden alınmıştır. Bu panel sol ortada yer alır ve Ischia'nın güneyinde bulunan Cavascuro adıyla bilinen termal banyoları göstermektedir (Görsel 4). Bu banyoların belirtilmesinin özel bir nedeni vardı çünkü Castello Aragonese rahibeleri, anne ile bebeklerine bakmak için özel kutsal bir çağrıyla kurulan Colettine Poor Clares tarikatının üyeleridir. Dolayısıyla aslında bu panel mülteci annelerin iyileşmesini sağlamak amacıyla volkanik suların tedavi edici termal banyolarına götürülmesini konu edilmiştir. Ortaçağ'da sıcak suda yıkanmak, hamamlarda yüzmek keyif almak yanında manevi bakımdan bir terapi anlamına da gelmiştir.

İncelenen bu Ortaçağ haritası birçok nedene bağlı olarak tarihi bir öneme sahiptir. Harita hem görsellik hem de içindeki bilgiler açısından oldukça büyüleyici bir hikâyeyi anlatmaktadır. El yazması adanın antik Yunan kökenine dair dilbilimsel kaynaklar sunmakla birlikte Aragon Krallığı'nın işgalinin etkisiyle Yunan, Roma ve Latince'den oluşan melez ve karışık bir dille kaleme alınmıştır. Bu dil ve yazı sistemi, ana el yazması yazıldıktan ve harita yapıldıktan kısa bir süre sonra yok olmuştur. Çünkü aynı dil ve yazı sisteminde yazılmış başka hiçbir belge ele geçmemiştir. Castello Aragonese ve manastırının küçük bir ada üzerinde yer aldığı düşünüldüğünde bu yaz sistemi ve dilinin çok az insan tarafından kullanıldığı söylenebilir. XVI. yüzyıla gelindiğinde Aragon Krallığı Ischia'yı terk etmiş ve kale ile manastırın kontrolü İtalyanlara geçmiştir. Okunamadığından dolayı bu eski el yazmaları tarihi yapıların içinde neredeyse çürümeye bırakılmıştır. Bu araştırma ile hem yazı hem de çözülebilen dilbilimsel sistemi ana yazma ile harita hakkında bilgi sahibi olunmasını sağlamıştır.

Introduction

Archaeology, in its broadest sense, is the study of all cultural evidence from the past that has survived to the present day. Although more usually it relates to the examination of remains and artefacts excavated from the ground, occasionally ancient relics survive intact because they have been kept safely in substantial old buildings, such as castles, and churches, and monasteries.

This paper demonstrates the archaeological value of analysing archaic documents for the linguistic and visual information they contain. In this instance, the document is a Medieval parchment map contained within a parent manuscript listed as MS 408. The manuscript was created by the mother superior at the monastery of Castello Aragonese, Ischia Island, Italy, as a compendium of advice on family healthcare and pharmaceuticals. Although much of the contents of the manuscript are commonplace in Medieval European manuscripts, the map is unique as it relates the story of a mission to rescue the survivors of a volcanic eruption on another island in the Mediterranean Sea. Furthermore, the map is dated 1444, which corresponds with a known eruption on the island of Vulcano, north of Sicily.

The manuscript and map remained in the library at Castello Aragonese until 1913, when the building fell into private ownership and the contents were sold off in ignorance of their historical value and context. In 2017 the place of origin and the relevance of the manuscript and map were rediscovered when the writing system and language came to light, making it possible to read and apprehend the contents.

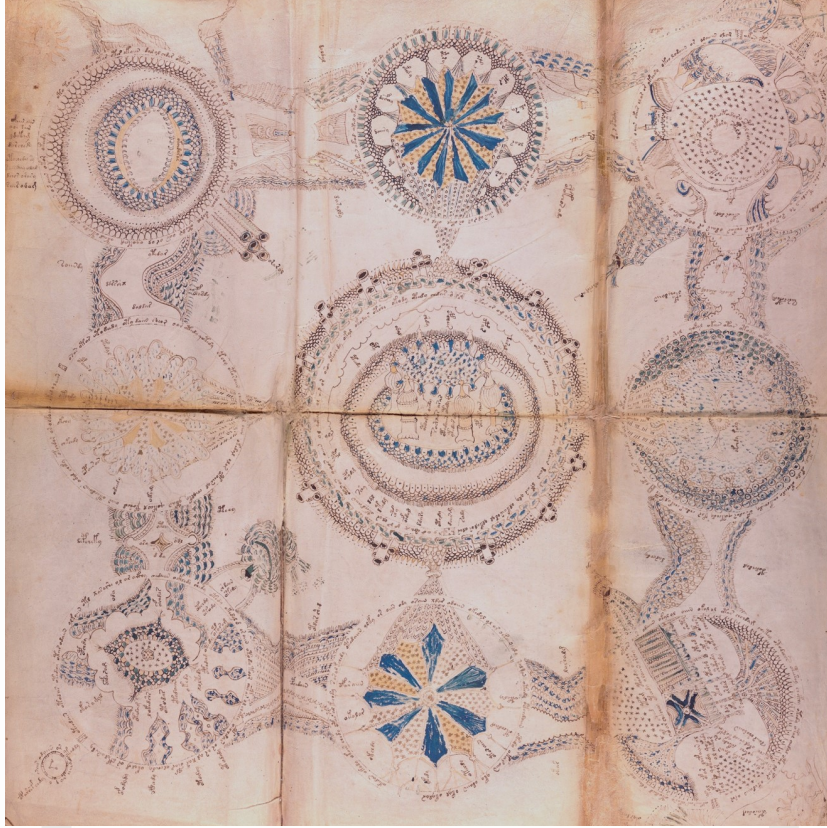


Figure 1: The Medieval Map showing the zones described in this article. The pale grey outline is the map zone Cavascura (Ischia thermal baths) and the dark grey outline is the map zone Lar (Generic cooking hearth).

The map is not intended to be an accurate geographical representation of the region it describes. Instead, it is a narrative map of the series of events that comprised the rescue mission and its aftermath. As such, the map is a diorama of nine illustration panels arranged in a 3 x 3 format, to form a square. Eight of the illustrations represent the important geographical locations in the story and are relatively positioned with one another, but the scales vary and the distances between them do not correspond with the true geographical coordinates. (Figure 1).

Four of the eight illustrations show parts of the Island of Ischia, two illustrations show parts of the island of Lipari, and the remaining two illustrations show the islands of Vulcano and Vulcanello, which subsequently became joined together by another volcanic eruption in 1503. The remaining central illustration is a generic image representing the survivors being provided with food and wine, which occurred in four places during the playing out of the rescue story. This is indicated by connectors north,

south, west and east, which also forms the shape of a holy cross (+) in allusion to Medieval Christian symbolism. The four arms of the cross represent the Father, the Son, the Holy Spirit and the Mother Mary.

In addition to the visual elements of the map, there are many handwritten scripts and annotations to explain them and to narrate the key events of the rescue story itself. The challenge was to transcribe the map writing symbols into modern alphabet and then translate into modern language. This meant having to simultaneously apprehend the writing system and identify the language, which was achieved with a combination of linguistic experimentation and historical research (Cheshire, 2019, pp. 30-67).

The writing system of the map was found to use an archaic alphabet mainly derived from Ancient Greek symbols, with two letters derived from Phoenician symbols and one letter derived from an Arabic symbol. (Figure 3). This was because the monastery of Castello Aragonese had been founded by Basilian Greek diaspora several centuries prior to the creation of the map.


























							
a (held)	a (free)	ais aix		auç aus aux auz		a+e: æ ae ai i I g y	
							
d	e (i)	è grave accent		é acute accent		i (e)	l
							
m		n	o	p	qu gu cu	r	ç s x z
							
ç s x z	ç s x z	s+a: sa za	t	t+a: ta	u	v f	v f

Figure 2: Transliteration table. Showing the map alphabet symbols and their equivalents in modern Italic alphabet symbols.














		
Origin of symbols for <i>a</i> Greek <i>alpha</i>	Origin of symbol for <i>d</i> Greek <i>delta</i>	Origin of symbols for <i>e</i> Greek <i>epsilon</i>
		
Origin of symbol for <i>i</i> Greek <i>iota</i>	Origin of symbol for <i>l</i> Greek <i>lambda</i>	Origin of symbol for <i>m</i> Greek <i>mu</i>
		
Origin of symbol for <i>n</i> Arabic <i>nuun</i>	Origin of symbol for <i>o</i> Greek <i>omicron</i>	Origin of symbol for <i>p</i> Greek <i>pi</i>
		
Origin of symbol for <i>qu</i> Phoenician <i>qop</i>	Origin of symbol for <i>r</i> Phoenician <i>resh</i>	Origin of symbols for <i>s/z</i> Greek <i>zeta</i>
		
Origin of symbol for <i>t</i> Greek <i>tau</i>	Origin of symbol for <i>u</i> Greek <i>upsilon</i>	Origin of symbol for <i>v/f</i> Greek <i>digamma</i>

Figure 3: Origins table. Showing the original ancient alphabet symbols, from which the map alphabet symbols were derived.

The language of the map was discovered to be a unique hybrid of Greek and Iberian Romance (Galician-Portuguese). This was because Ischia and Castello Aragonese had become a possession of the Crown of Aragon, under King Alfonso V, eight years before the map was created. The Greek element of the language resulted from Ischia monastery, which was founded by Early Medieval Christian monks following the diasporic migration of Magna Graecia (Greater Greece), which originally reached Ischia in the 8th century BC, when the island was known as Pithekoussai. This ancient history also explains why the map alphabet is derived from Greek, and Phoenician, and Arabic letters.

The map scripts also include some Latin abbreviations of well-known phrases, known as sigla, which were used commonly in Medieval manuscripts to save space. They often take the form of initial letters but can include internal letters and some are Roman numerals to represent numbers and dates.

The writing system is also unusual in having no punctuation marks or punctuative structure, so that the words of phrases are sometimes conjoined and sometimes separated. The letters also have no distinction between uppercase and lowercase, and variants of some letters are used to represent different phonemes. The writing system is also phonetic and pronunciational, so that words are written as they would have been spoken, with silent and junctural consonants omitted. An example is the word *na'us*, which means *to eat*. It is a phonetic contraction of *gnathus*, where the *g* is silent and the *th* is junctural. The word *gnathus* is the Latinised form of the Greek word γνάθος and literally means jaw bone. It is akin to the Latin word *mando* (to eat), which derives from *mandibula* (jaw bone).

All of the map scripts and annotations have been successfully translated to reveal the entire story of the rescue mission and the subsequent convalescence of the refugees (Cheshire, 2023. pp. 15-130). Four translation examples are presented here, to demonstrate the translation process and technique. There is also a corresponding lexicon of all translated words and definitions to elucidate their linguistic points of origin, their linguistic evolution, and their linguistic survival in the modern Romance languages and in modern Greek. The Latin abbreviations (sigla) are also listed and explained in the lexicon.

The translation technique is to first convert the map letter symbols to their equivalent Latin alphabet symbols. (Figure 2). This is followed by necessary adjustments, such as changing the letter *s* to *ç*, *x*, or *z*, where appropriate and changing *æ* to *i* or *I*. This is followed by a process of identifying the word division points where necessary and adding omitted consonants. It is also necessary to convert the Latin abbreviations and to identify those words that are Greek. The script can then be

translated into English or any other desired language, with some experimentation and finessing, with use of the lexicon.

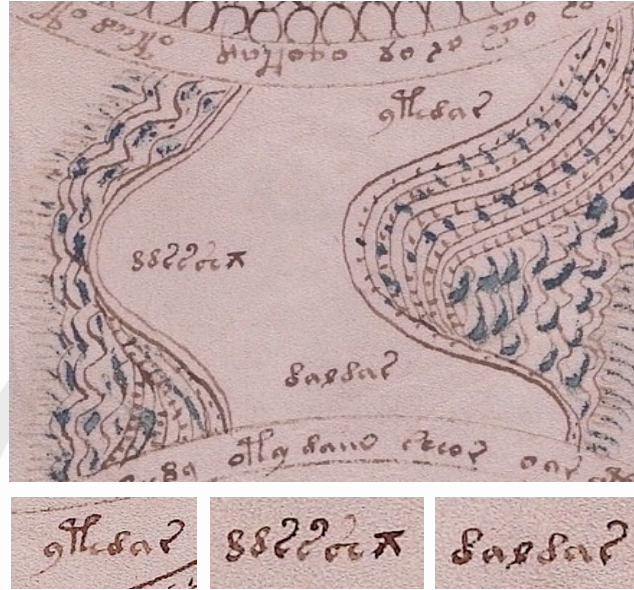
1- Map Zone: Cavascura



Figure 4: Map zone Cavascura (Ischia thermal baths), showing the access path Via Lesca at the top.

The first translation example is taken from the panel that includes the date of the events recorded on the map. It is the middle-left panel, which shows thermal baths known as Cavascura, to the south of Ischia. (Figure 4). The nuns of the monastery of Castello Aragonese were Colettine Poor Clares who had a specific religious calling to look after mothers and infants, and this panel describes the refugee mothers being taken for a therapeutic bathe in the hot volcanic waters as part of their recovery. The access route to the baths is a meandering pathway, known as Via Lesca, that follows the floor of a steep-sided gorge, with Cavascura situated at the end.

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Transliterations into Italics.		
Modified Transliterations.		
Translations into English.		
a minas	nn tt æv	nar nat
a minas	anno quattraginta IV	anar natacio
to thermal spa	in the year 44	go bathing
Modern paraphrase.		
In the year 1444 we visited the thermal spa of Cavascura to go bathing.		

Example 1: The three annotations written on the image of Via Lesca read “*a minas, nn tt æv (anno quattraginta IV), anar natacio*” which translate as “*to thermal spa, in the year 44, go bathing*”.

We know that the eruption began on 9th February, 1444, from an account written and published by the Italian historian Tommaso Fazello (Fazello, 1558, p. 5). Therefore, the map itself would have been created following the rescue mission, in 1444-45. The nuns normally lived a life of enclosed seclusion and contemplation, so the rescue mission would have presented itself as a rare opportunity to venture outside of the monastery and to encounter new people and places, albeit under baleful circumstances. Thus, we can presume that the map was created as a proud record and memento of their

humanitarian achievement in delivering sanctuary to the mothers and infants of the natural disaster.



Transliterations into Italics.			
Modified Transliterations.			
Translations into English.			
o minar	a pauso	om é na	olé a
o minar	a pauso	com é na	colé a
of the spa cavern	to rest	together it is in	immersed to
é lei na	apaix as	o neon a	ola na
é lei na	apaixonado as	o νέων: neon a	cola na
it is worship in	impassioned at	of the floating to	soak in
Modern paraphrase.			
Taking a rest together in the Cavascura spa to immerse and worship, impassioned by floating and soaking in the hot water.			

Example 2: The second translation example describes bathing in Cavascura thermal baths, which are shown beneath a decorative canopy to make the experience more inviting. The name Cavascura is a portmanteau of ‘cava scura’ which means dark

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hollow, due to the shadowy setting at the bottom of the gorge. The eight annotations written around the canopy read “o minar, a pauso, com é na, colé a, é lei a, apaixonado as, o véov (neon) a, cola na” which translate as “the baths, to rest, together it is in, immersed to, it is worship in, impassioned at, of the swimming to, soak in”.

In the Medieval period bathing in hot water would have been a novel experience. Floating and soaking in the baths was clearly highly regarded and enjoyed as a form of relaxation therapy and spiritual communion. The thermal waters would have had genuine medicinal benefits too, by cleansing the skin and hair of grime and pathogens.



Transliterations into Italics.					
Modified Transliterations.					
Translations into English.					
otas	o mas	om o nènà	om a naus	seios	o as
otas	o mas	com o nènà	com a γνάθος: gnathus	seios	o as
espy	the mothers	with the baby	with the feeding	breasts	of the at
o mina	domina	om é a	o mas auç	é e la nos	
o mina	domina	com é a	o mas auçon	é e la nos	
of the spa	improves	with it is the	the mothers' performance	it is and there theirs	
or aus	ol en ar oros	o poiet ar	é e orla		
ora auçon	oleo en ar oros	ο ποιητός: poietos arangar	é e corla		
now provide	oil in appearance golden	of the well-made to fix	it is the protective coating		
a mas	doleo r	dmæen	auç	om è naus	
a mas	doleo recessit	demien: demientres	auçon	com è γνάθος: gnathus	
to mothers	grief reduces	during	performance	with be feeding	
o nar	é ela	om é nos	os orlo ais	o lar	o r
o anar	é ella	com é nos	os orlo ais	o lar	omnibus restitutis
of the going	it is she	together it is theirs	they surround thus	the stove	all restored
Modern paraphrase.					
The Cavascura spa is seen to improve the performance of the mothers' breast feeding their babies. Golden bathing oil is now added to the spa water to provide an efficacious protective coating to reduce grief in the mothers during the act of feeding. They then go together to encircle the stove, all restored.					

Example 3: The third translation example is the script encircling the Cavascura panel, which goes into far more detail about the therapeutic benefits of the thermal waters.

The third script example tells us that the mothers are seen at the baths breast feeding their babies and that the hot water improves the mother's performance. The script also tells us that bathing oil was added to the water as a therapy to help the mothers forget the grief and anguish caused by the effects and consequences of the volcanic eruption. The script then describes everyone leaving the baths to surround the stove for a restorative meal.

2- Map Zone: Lar

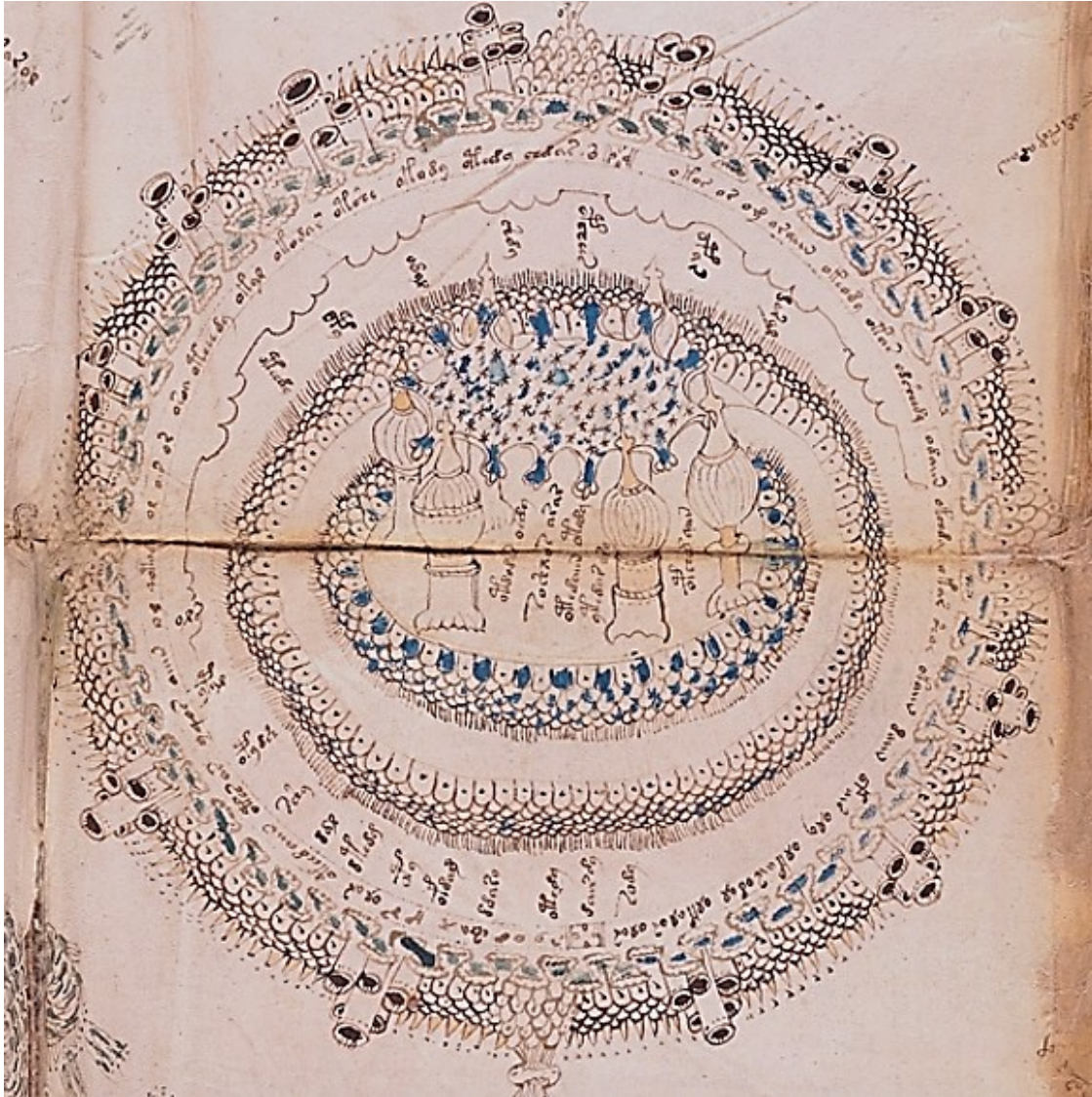
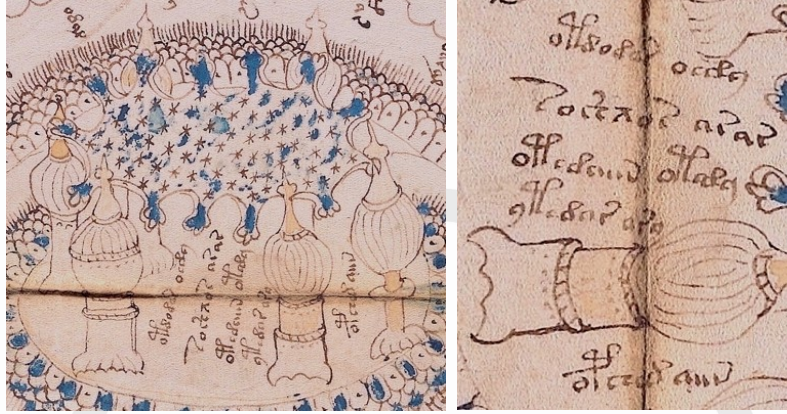


Figure 5: Map zone Lar (Generic cooking hearth), showing six Ottoman braziers at the centre, sitting on a foculus or fire stand.



Transliterations into Italics.			
Modified Transliterations.			
Translations into English.			
omno nas	o e na	toæfos asas	om e naus
omnino nas	o e na	toifos: týfos: τῦφος asas	com e γνάθος: gnathus
everywhere into	of the at	ember roast	with the eating
o mena	amenas aca	op é en aux	
o mena	amenas acá	opus é en auxero	
of the kind	enjoyable here	holy work is to strengthen	
Modern paraphrase.			
At each place there is a hot roast to provide eating of the pleasant kind with the holy work to strengthen the body and mind.			

Example 4: The fourth translation example comes from the stove panel itself, at centre of the map. In the language of the map the stove is described as the *Lar*, which is the name of the Roman protective spirit of the home and hearth. The word is a pronuncial contraction of the Latin *alar*, meaning to foster, to nourish, to raise, to maintain, to tend, etc.

The illustration of the Lar (stove) panel shows six Ottoman or Turkish bronze cooking braziers sitting on a bronze foculus (fire stand), with script written between. The script reads “*omnino nas, o e na, τῦφος (toæfos) asas, com e γνάθος (gnathus), o mena, amenas acá, opus é en auxero*”. This translates as “*altogether into, of the at, hot roast, with the eating, of the kind, enjoyable here, holy work it is to strengthen*”. The

described hot roast was a kind of stew or casserole, known in English as pottage, containing various vegetable, and legumes, and grains and meat ingredients. It comprised whatever foodstuffs were available. The map text also indicates that olive oil was added to the stew, as it was believed to contain the goodness of sunlight, absorbed by the olives, due to its golden colour.

3- Complete Map Lexion

The map vocabulary has been historically researched and attested to belong in five groups: i. Iberian Vulgar Latin. ii. Early Iberian Romance. iii. Classical Latin. iv. Classical Greek. v. Early Western Mediterranean Romance.

The language of the map is both temporally transitional and geographically transitional due to its time of creation, in 1444 CE, and its place of creation, at Ischia Citadel convent. The result was a hybrid vocabulary, comprising some words that were ancient and others that were contemporaneously modern, yet all linguistically interrelated due to the historical context, culturally and politically, in which the language evolved. It was due to the collision of the language brought from Iberia by the Crown of Aragon with the existing language of Ischia monastery, which was Graeco-Latin due to prolonged religious isolation from outside influence, such as that of the nearby Kingdom of Naples and the rest of the Italian peninsula.

Some of the abbreviations were used to save space, known as sigla, which was commonplace in Medieval manuscripts due to the cost of velum and ink. Other abbreviations were due to the pronuncial and informal nature of the writing system, so that words were written as they were spoken, with many phonetically silent and junctural letters omitted. Example: naus = gnathus.

The words that are not Latin or Greek, are found in modern and archaic forms of the Iberian Romance languages. These include Aragonese, Asturian, Castilian (Spanish), Galician, Leonese, Mirandese, Occitan, Portuguese and Valencian (Catalan).

Some words are found in just one of these languages, whilst others are found in two or more languages, as shown in brackets.

Some words and variants are also found in Corsican, Italian, Neapolitan, Sardinian and Sicilian, due to historical language flux in the Western Mediterranean region, resulting from trade, migration, political communication and conquest.

Although the vocabulary of the map includes words from various source languages and uses many sigla and phonetic abbreviations, it still has orthographic structure, as recurring words have the same spelling, thereby enabling the assembly of the lexicon.

a.

a: abb. alibilis: *able to provide nourishment, sustenance* [Lat]

a: a, da: *of, about, by means of, by, per, of the, from the* [Cat, Gal, Ita, Nea, Por]

a: a, á: *to, towards, via, for* [Ara, Cat, Gal, Nea, Occ, Por, Spa]

a: a, la: *the* [Ara, Ast, Cat, Ita, Mir, Nea, Occ, Por, Spa]

aei: agi, ayi: *make, create, function, act, conduct* [Lat, Por]

aca: acá: *here, to here, thither, as of* [Gal, Mir, Por, Spa]

aear: atear: *ignite, light, catch fire* [Por]

aei: αει: aeikínito: αεικίνητο: *always moving, always mobile,*

in perpetual motion [Gre]

ais: aissi, així: *thus, therefore, so* [Cat, Gal, Occ]

aiti: aiti, aiuti, ajuti, ajudi: *helps, assists, supports* [Cat, Gal, Ita, Sic]

aix: així, aissi: *as a result of, this way* [Cat, Gal, Occ]

alén: *afterlife, world beyond, next life* [Gal, Por]

alena: alena, allena, allenar: *expiring, weakening, tiring, emptying, gasping for breath* [Cat, Ita, Occ]

alèna: allèna: *change of realm, ascension to heaven* [Gal, Por]

alina: alinha, aliña: *prepare, instruct, align, guide* [Gal, Ita, Por]

alon: allon: άλλων: *next, after, then, following* [Gre]

amé: *love, affection, care, compassion* [Spa]

amè: *pleasant, nice, welcome, agreeable* [Cat]

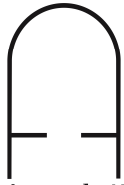
amen: ἀμήν: *ending, finishing, the end* [Gre]

amena: amena, ameno, amoena: *calm, quiet, passive s.* [Cat, Ita, Por, Spa]

amenas: *enjoyable, pleasing, calming p.* [Cat, Ita, Por, Spa]

anais: *yearly, annually, each year, year-on-year* [Cat, Por]

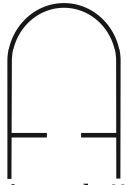
anelusa: ἀνέλυσσά: *fall apart, break down, disassemble, deconstruct, analyse* [Gre]



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ani: ani, ane: <i>crater</i> <i>ring, anus, orifice</i> [Ita, Lat]	<i>drenching, cleaning</i> [Cat. Ita, Lat]	as: at, to, on, it [Cat, Gal, Por, Spa]
apaix: apaixonado, apasionado: <i>impassioned, fervent, enthusiastic</i> [Por, Spa]	aquas: acuas: <i>stimulate, excite, activate, arouse, sharpen, emphasize</i> [Lat]	as: as, elas, ellas: <i>they f.</i> [Ara, Cat, Gal, Occ, Por, Spa]
apar: aparar: <i>to prepare, cook, provide, protect with – food</i> [Gal, Ita, Occ, Spa]	ar: ar, arrè, arreri: <i>again, repeat, also, furthermore, additionally</i> [Gal, Sic]	asar: asar, assar: <i>to burn, scald, scorch, sear, singe, char, roast, expose to heat</i> [Ast, Gal, Por, Spa]
apar: aparece, aparecer: <i>appear, arrive, turn up, attend</i> [Gal, Por, Spa]	ar: ar, aer: <i>appearance, look, aspect, air of</i> [Gal, Por]	asas: asás: <i>roast, roasting, grilling - food</i> [Ast, Spa]
apaz: apaziguar, apaciguar: <i>to appease, satiate, pacify, placate</i> [Por, Spa]	ar: arranjar, arranxar: <i>arrange, fix, sort out, mend, dress wounds</i> [Cat, Gal, Por]	auç: aução, ação: <i>effort, courage, mettle, fight, to engage, action</i> [Por]
aqua: aqua, agua, acqua, aigua: <i>water, seawater, freshwater</i> [Ast. Cat. Gal, Ist, Ita, Por, Spa]	arna: arena, arrena, raña, sarna: <i>reef, sandbar, beach, riprap, strand, shoal, submerged rocks</i> [Ara, Ast, Cat, Gal, It, Por, Sar, Spa]	auç: auçar, alçar: <i>lift, carry, haul, hoist, elevate, raise, erect</i> [Occ, Por]
aquar: aguári, aquare: <i>watering, splash with water, rinsing, dousing,</i>	arna: arna: <i>scratch, scrape, abrade, scourge, graze</i> [Spa]	auç: auçon, ação: <i>perform, act out, behave, do something</i> [Por]
		auis: aluisse: <i>nourishes, fosters, feeds</i> [Lat]
		aux: auxero: <i>improves, adds to, embellishes,</i>



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*augments, increases,
expands, strengthens*
[Lat]

azar: *of the dice, jinxed,
unlucky, cursed* [Por,
Spa]

æ.

æ: I, y: *and* [Ara, Ast,
Cat, Mir, Sp]

æa: ia: iam: *presently,
at the moment, and now*
[Lat]

æema: iema: hiema,
hiemo: *winter, winter
cold, chilled* [Lat]

æequ: æqu: æquor,
æquoreus: *surface of
the sea, relating to the
sea* [Lat]

æn: in: *by way of,
accordingly* [Lat]

æna: aina: aína: *rapidly,
quickly, soon,
immediately* [Ast, Spa]

æo: ago: ᾠω: *achieved
by, brought about by*
[Gre]

æt: it: *moves, happens,
goes, flows* [Lat]

æta: ita: *in this manner,
in this way, so, thus*
[Lat]

æv: iv: IV: *Roman
numerals: four, 4* [Lat]

c.

ca: cá: *here, right here,
at this place, at this
point, hither* [Por]

d.

dmæen: demien:
demientra, demientres,
de mientra: *during,
whilst, meanwhile, of
the while* [Ast, Spa]

do: do, dar, dare: *give,
give out, hand over, gift,
donate, of the, belong
to, impart, grant* [Ara,
Ast, Cat, Gal, Ita, Lat,
Mir, Por, Sp]

doei: doi, doar: *given,
provided, presented*
[Gal, Por]

dola: dola, dolo:
damaged, harmed,

*Gerard Edward Cheshire
hacked, hewn, maliced,
tricked, deceived* [Ita,
Lat, Por, Soa]

dolar: *reduced,
lessened, cut away,
honed* [Spa]

dolena: dolenda,
dolenta: *to be lamented,
sorrowed, mourned,
grieved, suffered,
hurtful* [Cat, Lat]

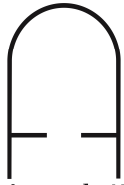
doleo: *grief, distress,
anguish, worry, hurt*
[Lat]

dolina: *trench, valley,
hole, sinkhole, pit* [Cat,
Por, Spa]

dolina dolena: dolina
dolenda: *holes of
lament, holes of sorrow,
graves, tombs* [Cat, Lat,
Por, Spa]

dolor: *agony, extreme
pain, aching* [Ast, Cat,
Lat, Occ, Spa]

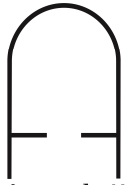
dom: dom, don, donum:
*abled, enabled, offered,
sacrificed* [Lat, Por]



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domei: domei, domar:	é: <i>it is, is, are, am, to be</i>	emé: gemé, geme:
<i>tamed, controlled,</i>	[Gal, Por, Spa]	<i>groaning, moaning,</i>
<i>curbed</i> [Por]		<i>sighing</i> [Ita, Lat, Por]
	è: èsser, esser, essere:	
domina: domina,	<i>being, to be, exist, real</i>	emé: temé, teme: <i>fear,</i>
dominar, dominare:	[Cat, Ita, Nea, Occ]	<i>anguish, dread</i> [Cat,
<i>control, improve,</i>		Cor, Ita, Por]
<i>dominate, rule over,</i>	ea: <i>on that side, on that</i>	
<i>govern, hold sway over</i>	<i>place, at there, at here</i>	en: en, in, endo: <i>in,</i>
[Cat, Ita, Por, Spa]	[Lat]	<i>within, enter</i> [Ast, Cat,
	éiqui: éiqui, eiqui, e	Gal, Lat, Leo, Por]
dor: <i>soreness, pain,</i>	aqui, ecce aqui: <i>of this</i>	en: <i>look out, watch out,</i>
<i>aching, grief</i> [Gal, Por]	<i>place, at this place,</i>	<i>beware, behold</i> [Lat]
	<i>behold here, is here</i> [It,	
dot: dota, doto, dotar,	Lat, Mir, Por]	enana: enana, enano:
dotare: <i>endow, furnish,</i>		<i>dwarf, diminutive,</i>
<i>award, apportion</i> [Cat,	el: el, il, ela: <i>it, him,</i>	<i>small, midget</i> [Gal, Ita,
Ita, Lat, Por, Spa]	<i>she, the</i> [Ara, Ast, Cat,	Spa]
	Gal, Ita, Leo, Mir, Occ,	
e.	Por, Spa]	enaus: egnathus:
e: abb. egregio:	ela: ela, elha, ella: <i>she,</i>	εγνάθος: <i>infeed,</i>
<i>excellent, wonderful,</i>	<i>her</i> [Ara, Ast, Cat, Cor,	<i>engorge</i> [Gre]
<i>amazing, impressive</i>	Ita, Gal, Occ, Por, Spa]	eo: eo, meo: <i>I do, I</i>
[Lat]		<i>advance, I go, I</i>
e: <i>and</i> [Gal, Ita, Nea,	elaus: elatus: <i>elated,</i>	<i>proceed, I move along</i>
Occ, Por, Sar, Sic, Spa]	<i>lifted, raised, very</i>	[Latin]
e: e, de: <i>of, from, about,</i>	<i>pleased, delighted,</i>	eo: eo, io: <i>I, me</i> [Ita,
<i>out of</i> [Cat, Gal, Ita,	<i>exalted</i> [Lat]	Lat, Sar]
Lat, Nea, Occ, Por, Sar,	ele: eles, elles, illes: <i>she</i>	ep: epa, heap, hepar:
Spa]	<i>pl., her pl., females,</i>	<i>stomach, belly, tummy,</i>
e: e, le: <i>the, it</i> [Cor, Ita,	<i>girls, women</i> [Lat,]	<i>abdomen</i> [Ita, Lat]
Nea, Spa]		



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ep: epulo, epulae: *dinner guest, someone who feasts, a feast, a banquet* [Lat]

epios: ἡπιος: *pleasant, mild, hospitable* [Gre]

f.

f: abb. fecerunt: *to make, create, construct, fashion* [Lat]

fac: facio: *I do, I make, I construct* [Lat]

faz: fazer, facer: *clean up, cleanse, tidy, perform, execute, carry out* [Gal, Por, Spa]

forme: forme, forma, formar: *forming, setting, taking shape, hardening, becoming* [Ast, Ita, Lat, Por, Spa]

i.

i: abb. illustre: *well-regarded* [Lat]

i: io, eo: *go, walk, run, travel* [Lat]

ia: ia, ir: *departing, leaving, disembarking, going, visiting* [Ara, Gal, Por, Spa]

ien: ἔεν: *shall come, will come* [Gre]

iit: *continue, proceed* [Lat]

iit: abiit: *transform, change, alter* [Lat]

iit: abiit: *depart, leave, go away, pass away, retire* [Lat]

il: illa, ilha: *island* [Cat, Gal, Leo, Mir, Occ, Por]

ilar: illar: *isolated, separated, quarantined* [Gal]

ilea: isleta: *refuge island, pedestrian island* [Spa]

ilei: ilei, ileo, ilio: *guts, alimentary canal, digestive system, insides* [Gal, Ita]

ilos: illatos, illatus, illatio: *interred, buried,*

Gerard Edward Cheshire entombed, brought in [Lat]

in: *in doing so, by way of, in the manner of, accordingly, as expected* [Ita, Lat, Por]

iqu: igu: igual: *equal, alike, similarly, indifferent, the same* [Ara, Ast, Cat, Gal, Por, Spa]

is: is, id: *and, plus, of that, the nature of* [Lat]

l.

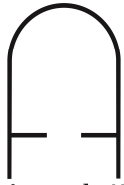
l: abb. libens: *happy, cheerful, jovial* [Lat]

l: abb. loci: *places, locations pl.* [Lat]

l: abb. locum: *place, location s.* [Lat]

la: la, lá, ala, allá: *the, it, this, there, at that place, over there, that is* [Ast, Ita, Leo, Nea, Occ, Por, Spa]

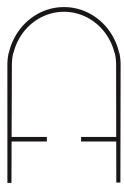
laesa: *injuries, wounds, cuts, lacerations* [Lat]



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laic: laica, laico: laypeople, lay crowd, commoners, hoard, throng [Cat, Ita, Lat, Por, Spa]	lasa: lasa, lassa: becoming tired, weary, fatigued [Cat, Lat, Spa]	leio: leio, leo: I examine, look at, read, peruse [Gal, Por, Spa]
lais: religious singing, chanting, folk song, songs of lament [Gal, Por]	lasa: lassa, lasso, laxa, laxo: loose, loosen, lax [Ita, Lat]	leis: religious rite of passage, holy permission, divine laws [Gal, Por]
lar: stove, cooker, hearth, baking surface, hotplate, craticula, brazier, foculus, chafing dish, trivet, trammel [Gal, Lat, Por, Spa]	laus: to praise, glorify [Lat]	lena: energized, invigorated, heated, fuelled up, with stamina, alive and breathing [Gal, Ita, Spa]
lar: Lar: Roman goddess of domestic protection and provision of food [Lat]	laxa: relaxing, therapeutic, loosening [Lat]	lena: llena, llená, lleno: full, complete, to fill [Ast, Spa]
las: elas, ellas: they, them [Ara, Gal, Occ, Por, Spa]	laza: laza, lazo, laça: strips, ribbons, bandages, laces, bands [Gal, Por, Spa]	léna: léña, leña, lenna: firewood, kindling, logs [Gal, Spa]
las: las, llas, lassus: exhausted, spent, tired out, dying, finished, used up [Cat, Lat]	le: le, ile, ille: of, them, him, her [Ara, Cor, Ita, Nea]	lèna: llèna: fill, filled, filled up, containing, complete [Gal, Spa]
	léa: léda, lédo, ledó: joyful, happy [Gal, Ita, Por]	lenar: llenar: filling, filling up [Gal, Spa]
	leet: levet: relieving, comforting, alleviating, easing [Lat]	leo: lego: profess, orate, read out [Lat]
	lei: godly worship, exaltation, divine law [Gal, Por]	lié: lié, lie, líe, liar, ligar, ligo: to bind, tie, bandage, dress, wrap,



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connect [Gal, Occ, Por, Spa]

liet: libet: *it is agreeable, pleasing, nice* [Lat]

linas: liñas, linhas: *lines, guy lines, ropes, cords* [Gal, Occ, Por, Spa]

lio: lixo, licor, liquo: *corpses, waste, rubbish, trash, liquor of putrefaction, liquified or melted remains* [Cat, Gal, Lat, Por]

lo: *the, him, it* [Ara, Cat, Gal, Ita, Occ, Por, Spa]

los: los, os: *them, these, the pl.* [Ara, Ast, Occ, Por, Spa]

lona: *sail, sailing, age like a sail* [Cat, Gal, Por, Spa]

lona: *canopy, tent, gazebo s.* [Cat, Gal, Por, Spa]

lonas: *canopies, tents, gazebos pl.* [Cat, Gal, Por, Spa]

lonas: *sailcloth, canvas, sheets* [Cat, Gal, Por, Spa]

lor: lor, lloro, lur, loru: *them, they, those* [Cat, Ita, Nea, Sic]

lot. illot, illote, islote, ilhote: *island refuge, islet* [Cat, Gal, Por, Spa]

loza: loza, louza, louça: *earthenware wine casks, wine ewers, pithoi* [Gal, Por, Spa]

m.

m: abb. mulcatus: *mauled, grazed, damaged, bruised* [Lat]

mar: mar, mare: *sea, Mediterranean Sea, Tyrrhenian Sea, sea edge, seaside. expanse, multitude* [Ara, Ast, Cat, Gal, Ita, Occ, Por, Spa]

Gerard Edward Cheshire

mar: marea, maré: *tide, current, drift* [Ast, Cat, Gal, Ita, Por, Spa]

mar: marear: *navigate the sea* [Gal]

mas: mas, mamas, mães: *mothers* [Ast, Gal, Por, Spa]

masa: μᾶζα: *masa, maza, massa: bread, dough, cake* [Gal, Gre, Lat, Por, Spa]

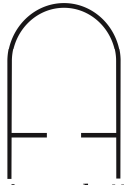
mea: mea, meo, meare, meatus: *pass by, traverse, go along* [Ita, Lat]

mena: *type, kind, class, sort of, manner of* [Cat, Occ]

mena: μήνα: *month* [Gre]

ména: ménage, menaxe, menatge: *household, home, domestic place* [Cat, Gal, Por]

mèna: menàre, minare: *force, drive, push, goad* [Ita, Lat]



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mena: menar, menare:

*to direct, instruct,
guide, take the lead*
[Cat, Ita, Occ, Spa]

menaza: menaza,
menaça, ameaça:
menace, threat [Occ,
Por, Spa]

ménous: μένος: *wish,
desire, want* [Gre]

mensa: mensa, mēnsa:
*refectory, canteen, food
table, feasting table,
buffet* [Ita, Lat, Spa]

meora: melhora:
*improved, better,
recovered* [Occ, Por]

mera: *thick smoke, fog,
drizzle, mist, smog,
smotherer*

Portuguese mirra:
mirrar: *to wither*
plants) [Gal, Por]

meta: *aim, objective,
goal, destination, target*
[Cat, Ita, Lat, Por, Spa]

mio: mio, mío, míu,
meo, meu: *my, mine, me*

[Ast, Gal, Ita, Lat, Nea,
Por, Spa]

mina: *cave, cavern,
fount, spa s.* [Cat, Gal,
Ita, Occ, Por, Spa]

minar: *to the spa, cave,
cavern, mine,
underground* [Cat, Occ,
Por, Spa]

minas: *founts, spas,
thermal baths, caves,
caverns p.* [Cat, Gal, Ita,
Lat, Occ, Por, Spa]

miras: *look after, care
for*

mon: mona: μόνα:
*singly, one at a time,
each alone* [Gre]

monas: monjas: *nuns*
[Por, Spa]

monas: μονάς: *one
mass, one unit, one
body* [Gre]

moos: moos, modos:
*moods, temperaments,
frames of mind, ways,
manners, settings,*

modes [Ast, Lat, Por,
Spa]

mor: mort, morto,
mortos, mortu: *dead,
the dead* [Cat, Cor, Gal,
Por]

mor: mori, morir,
morint, morendo,
morrer, morti: *to die,
dying, death* [Cat, Cor,
Gal, Por, Sar, Sic, Spa]

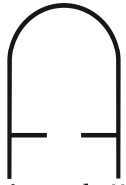
mot: mot, molt, multus:
much, a lot [Cat, Lat,
Occ]

mun: mundo, mundus:
commune, world of
[Ara, Gal, Lat, Por, Spa]

mun a monas: mundo a
monjas: *commune of
nuns, world of nuns,
convent, nunnery,
monastery* [Ara, Gal,
Lat, Por, Spa]

n.

n: abb.
nostrae/nostrorum/nostri
: *of ours, of us* [Lat]



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n: abb. numeri: *many, numerous, lots, number of* [Lat]

na: (en-a, em-a, en-la): *in, in the, at, on, here* [Ast, Gal, Por, Spa]

nais: natis, nates: *transit, convey, transport, carry, to flow, to stream, proceed, go forth, escape, egress, exit* [Lat]

nais: nadis, nadar: *to swim, wade, travel through water* [Ara, Ast, Cat, Gal, Occ, Por, Spa]

naix: naixer, nàixer, nacer, nascer: *giving birth, in labour, birth* [Ara, Ast, Cat, Gal, Por, Spa]

nar: anar, andar, andare, ndar, adnare: *to go, proceed, advance* [Ast, Cat, Gal, Ita, Occ, Por, Spa]

nas: (en-as, em-as) *into, inside, within* [Gal, Por]

nas: v. as: *them* [Gal, Por]

nat: natacio, natatio: *bathing, swimming* [Cat, Lat]

naus: gnathus: γνάθος: *food, eating, feeding, drinking, consuming, swallowing, ingesting, (to jaw)* [Gre]

naza: naza, nacer, naçer: *spring forth, rise, launch* [Gal, Por]

næ: ni: niti: *to rely on, depend on, supported by* [Lat]

nea: νέα: *daughter* [Gre]

nen: *baby girl, female child* [Gal, Spa]

nèna: *baby, infant* [Gal, Spa]

neon: νέων: *floating, buoying, afloat* [Gre]

Gerard Edward Cheshire

néos: νέος: *newborn babies, babies* [Gre]

nep: nepentes: νηπενθής: *forget grief* [Gre]

nien: nien, niente, nenti: *nothing, nothing left* [Ita, Occ, Sic]

nn: abb anno: *year, in the year, the year, of the year* [Lat]

nnas: nonas: *ninth, 9th* [Lat, Por, Spa]

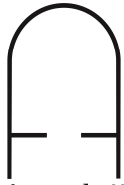
nnr: abb. nostrorum: *our people* [Lat]

nnttaev: nnttiv: abb. anno *quattaginta/quattor IV: year 44* [Lat]

no: *no, not, none* [Cat, Ita, Occ, Spa]

noa: νόα: *in mind, thoughts, will* [Gre]

nos: nos, nós, os: *us, we, our, ours, theirs* [Ara, Ast, Cat, Gal, Mir, Por]



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The Cryptography and Palaeography of a Medieval Narrative Map

nr: abb. nostris: *our*
people [Lat]

ns: abb. nostri: *of ours*
[Lat]

nvas: envas, envase,
envasar: *en-vase,*
contain wine, wine
filled, bottoms up, drunk
on wine, wine shop,
Aragonese (Logroño)
vintner [Ara, Cat, Cor,
Gal, Por, Spa]

nvas: invasare, invasi:
intoxicate, invade,
possess, imbibe wine
[Ita, Lat]

o.

o. o, do: *the, of the, of,*
for, from, by, or [Ara,
Ast, Cat, Cor, Gal, Ita,
Nea, Occ, Por, Sic, Spa]

oç: ὅς: ὅσος απαιτώ: *as*
much as required, as
much as needed [Gre]

ocas: *hollows, cavities,*
solfataras, fumaroles
[Por]

oes: oes, οἶο, oir,
ouvir, ouço,: *hear, listen*
to [Gal, Por, Spa]

oio: oio, oir: *listening,*
hearing [Gal]

ol: ola: οἷα: *all,*
everyone [Gre]

ol: ol.: olei: *oil of*
vitriol, sulphuric acid,
sulfuric acid, mineral
oil H₂SO₄ [Lat]

ol: oleo, óleo, oli, olei,
oliu, olio: *oil, olive oil,*
animal or vegetable oil,
edible oil, organic oil,
bathing oil, cleansing
oil [Cat, Cor, Ita, Lat,
Por, Spa]

ol: sòl, solo, solum: *soil,*
earth, dirt, ground,
floor, land, terrain,
terra firma [Cat, Gal,
Lat, Por]

ol: tol: tollo, tolla, tolli,
toldre: *halt, cut, stop,*
annul, remove, take
away, erase [Cat, Lat,
Spa]

o l: abb. optimo locus:
best place, suitable
place, appropriate
place, optimum place
[Lat]

ola: cola, colar, colare:
soaking, steeping,
drenched, sweaty,
dripping wet, sudate,
muggy [Cat, Gal, Ita,
Por, Spa]

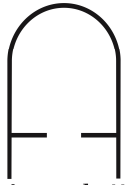
olar: ollar, olhar: *look,*
observe, stare, watch,
glance, study [Gal, Por]

olas: *waves on sea,*
waves of heat,
undulations (from Latin
undulas: und-olas) [Por,
Spa]

olas: ollas: *cooking*
pots, pots, jars, vessels
[Lat, Spa]

olé: colé, colar: *depart,*
leave, go away, filter
out, strain, drain away
[Ast, Cat, Spa]

olé: colé, colar:
immerse, submerge,



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plunge, dip [Ast, Cat, Spa]

olen: όλεν: *wholly, reliably, consistently* [Gre]

oleo: oleo, óleo: *olive oil, edible oil* [Gal, Lat, Por, Spa]

olo: golo, gola, golar: *thirstily, greedily, hungrily, throat, swallow, glutton, gullet, gulp, gorge, open mouth* [Ast, Cat, Gal, Ita, Occ, Spa]

olon: όλων: *of all* [Gre]

olos: ὅλος: *whole, complete* [Gre]

om: com, cum: *with, as, together, how, like, alongside, against, side-by-side, using* [Cat, Lat, Occ, Por]

omnas: omni nas: *all into, all inside* [Lat, Gal, Por]

omno: omnino: *everywhere, entirely, altogether, wholly* [Lat]

omo: como, quomo, quomodo: *whereby, how, in that way, why, reason, like* [Gal, Lat, Por, Spa]

omor: homor: homoros: ὄμορος: *border channel, borderline, boundary, to merge* [Gre]

on: on, onde, donde: *where, at what place, with which, whence* [Ast, Cat, Gal, Ita, Occ]

o n: abb. omni nocte: *every night, each night* [Lat]

ona: onda, unda: *surf, swell, surge, rough sea, breakers* [Ast, Gal, Ita, Lat, Por, Spa]

op: opera, operar: *purpose, function, task, produce, achieve, work,*

Gerard Edward Cheshire task, perform, carry out [Cat, Ita, Por, Spa]

op: opus: *holy work, work, effort, deed* [Ita, Lat]

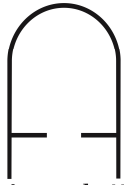
opa: copa, caupa, caupona: *a long holy feasting table (originally for twelve people: alluding to the disciples at the Last Supper), tavern, saloon, breakfast room* [Lat, Por]

opa: copa, coppa: *cup or bowl for food, eating bowl, drinking bowl* [Ast, Cat, It, Spa]

opon: opón, opor, oponer, oponer: *to oppose, in opposition to* [Gal, Por]

opna: ὀπνα, o'pena: *of the floating membrane, raft, pelt, pumice, feather-like* [Lat, Gal]

opna: o'penha, o'peña, o'pena, o'penedo,



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o'penhasco,

o'penhascoso: *of the rock shelf, outcrop, cliff, cliffy, bluff* [Gal, Por, Spa]

or: ora, hora: *now, presently, at that moment, at that time, this hour, this minute* [Cor, Gal, Ita, Lat, Occ, Por, Spa]

or: aur: aura: αῶpā: *steam, mist, breeze, breath, flatus* [Gre]

o r: abb. omnibus restitutis: *all restored* [Lat]

ora: cora, corar: *warm up, heat up, blush, redden, ruddy, to kindle a fire* [Gal, Por]

oraius: oratibus: *pray, praying, entreat* [Lat]

orar: *praying for, hoping, wishing* [Cat, Gal, Por, Spa]

oras: horas: *hours, time period, duration, season* [Lat, Por, Spa]

orla: orela, ourela: *waterfront, waterside, coastline, shore, bank* [Gal, Por]

orla: corla, corlar: *coating, protective layer, golden varnish, lacquered gilt (from Latin corolla: small golden crown, wreath, halo)* [Spa]

orlar: orlar, orlare, orlareis, orulare: *surrounding, encircling, befringing, bordering* [Ita, Por, Spa]

orlaus: orlatus: *edge, rim, border, brim, hem* [Lat]

orlei: orlei, orlar: *a rim, a border, an edge* [Por, Spa]

orlo: *surrounding, around, circular brim* [Ita, Por, Spa]

oros: oros, ouros, auros, aurosus: *golden, gold, golden-yellow* [Ast, Cat, Gal, Lat, Por]

orta: orta, orto, ortus: *appeared, originated, come from, risen, sunrise* [Lat, Por]

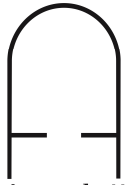
os: os, elos, nós: *we, us, ourselves, one pl., they, them* [Cat, Gal, Por, Spa]

o s: abb. opus sanctus: *holy work* [Lat]

osas: osas, osus, perosus: *dislike, hate, resent, despise* [Lat]

osas: Osas: *devil, god of the underworld, Medieval equivalent of Roman god Vulcan and Greek god Typhon, the hated one* [Lat]

osos: ossos: *difficulties, struggles, hardships, hazards* [Por]



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ota: lota, lotar, lotear:
*crowded, crammed
together* [Por]

otas: otas, otar, otear,
oteas: *espy, watch,
observe in passing,
survey, catch sight of,
assess, size-up – from a
vantage point* [Spa]

p.

pa: panis: *food
provisions, loaf of bread*
[Lat]

par: *equally, the same,
just a, even, like, alike*
[Lat, Por, Spa]

parva: parva, parvo:
small, tiny, little [Gal,
Lat, Spa]

pas: pas, passar,
passare, passus:
*passage, crossing,
stepping* [Cat, Lat]

pas: pasarela:
*footbridge, gangway,
walkway* [Spa]

pasa: pasa, pasar:
*stepping, passing,
treading* [Gal, Spa]

paso: paso, passaggio,
pasilio: *route,
passageway, course,
pathway* [Gal, Ita, Spa]

pauso: rest, pause,
interrupt, relax, halt,
cease [Ita, Lat, Por,
Spa]

paz: *peaceful, passive*
[Ara, Ast, Gal, Por,
Spa]

pæona: piona: πίονα:
plenty, lots of, much
[Gre]

pè: pè, pé: *foot, by foot
(feet)* [Gal, Occ, Por]

pena: pena, poena:
*concern, suffering,
worry, penalty,
punishment* [Ast, Cat,
Gal, Ita, Lat, Occ, Por,
Spa]

péna: péna, **peña,**
pena: *rock, stone,*

*Gerard Edward Cheshire
cooled lava, igneous
rock* [Ara, Lat, Spa]

péna: pénnna, penna,
penna, pinna, penha,
penya: *peak, hilltop,
summit, pinnacle, point,
pen nib, quill point,
crag, outcrop* [Cat, Cor,
Ita, Lat, Por]

péta: péta, pétar, petar,
peto: *kick, knock, strike,
hit, blow, peck, rap,
collide, scuff* [Cat, Gal,
Spa]

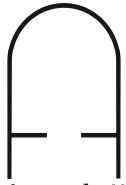
poléos: πολέος: *mighty,
large, giant* [Gre]

pos: pos, po, poo, poos,
pó, pós, pulvis: *dirt,
dust, powder, grime,
smut, deposits* [Gal, Lat,
Por]

qu.

qu: que, porque: *that,
what, which, because,
than* [Ast, Gal, Occ,
Por, Spa]

qu: qui, que: *who,
whom, whomever,*



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whoever [Ara, Cat, Lat,
Occ, Spa]

quais: quais, quaisquer,
qualis: *which, that,*
what, whatever [Lat,
Por]

quas: quas, quis: *who,*
whom, anyone, that,
which [Lat]

quas: quasso, quassa:
tremors, quakes, shakes,
agitations, seismic
shockwaves, volcanic
subterranean vibrations
[Ita, Lat]

quæe: quie: quies:
cease, stop, halt,
quiesce, cessation [Lat]

qué: *that which, what,*
such is, what? which?
[Ast, Occ, Spa]

qunas: cunas pl., cuna
s.: *cradle, crib,*
birthplace, nest [Lat,
Spa]

quo: quo, quorsum:
whereto, whereabouts,

as is, wherein, whither,
what end, why so [Lat]

r.

r. abb. recessit: *reduces*
[Lat]

r. abb. regio: *region,*
part, area [Lat]

r. abb. restituti: *restored*
[Lat]

raæar: raiaar, rajar,
rayar: *procession,*
stream, flow, line,
queue, beam, ray [Cat,
Gal, Occ, Spa]

ras: rasca, rascar:
scrape, scratch [Cat,
Gal, Por, Spa]

ras: raso, rasa:
platform, plateau, flat
area, level, razed, open,
plain, shallow [Gal, Lat,
Por, Spa]

raux: rauxa: *rapidly,*
suddenly, hastily, rashly
[Cat]

requea: requeria:
requires, needs, wants
[Cat, Por]

requia: requeria,
requiria: *it required, it*
needed [Cat, Gal]

rolen: rolen, rolar:
veering, turning,
changing direction,
roam, wander, tumble,
roll [Gal, Por, Spa]

ronaus: pronaus:
religious pronaus/prone
service, last rites,
confessional for journey
to heaven (not to be
confused with pronaos:
temple portico) [Lat]

rs: abb. recessit:
restoring, recovering
[Lat]

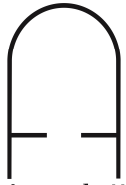
s.

s: abb. salutum: *of*
salvation [Lat]

s: abb. sanctuarium:
sanctuary [Lat]

s: abb. situam: *situated,*
positioned, placed [Lat]

sa: sa, sana, sano, sanar,
sanu, sanus: *good*
health, healthy in body



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and mind, healed, cured, salubrious [Ast, Cat, Ita, Lat, Por]

saca: sacá, sacar: *taken out, removed, extracted, pulled out, drawn out, withdrawn, extruded* [Ast, Gal, Por, Spa]

sae: sae, sair: *come out, go out, emerge* [Gal, Por]

saus: salus: *saved, rescued* [Lat]

sæa: sia: siga, ser: *happens, occurs, exists, it be, being* [Ast, Cat, Gal, Ita, Mir, Por, Spa]

sea: sea, ser: *nature, value, essence, worth, purpose, significance, importance* [Spa]

seios: seio, sêo s., seious pl., senos, sinus: *breasts, bust, mammary glands* [Gal, Lat, Por, Spa]

soa: sola, solu: *sole of the foot, plantar of the*

foot, underneath of foot, below foot [Ast, Cat, Gal, Por]

sol: sol, sole, solis: *the sun, sunshine* [Cat, Cor, Gal, Ita, Lat, Nea, Por, Spa]

t.

t: abb. totus: *total* [Lat]

t: abb. tribus: *folks, people, group* [Lat]

t: abb. triumphator: *triumphs* [Lat]

t: abb. turma: *team, crew, party, group, bunch, troupe* [Lat]

ta: ta, tar, estar: *to be, ar, is* [Ast, Por]

tacarn: tacarnos (tacarnos), taçarnos (taçar nos): *stain us, dirty us, mark us, load us, burden us, tarnish us, dishonour us* [Cat, Gal, Spa]

tais: tai s., tais pl.: *such, like this* [Cat, Gal, Por]

Gerard Edward Cheshire

tais: estais, estáis: *this is, they are, they were* [Por, Spa]

tar: estar: *be, being, it be* [As, Por]

tas: estas, estás, estar: *these are, that is* [Ara, Cat, Gal, Por, Spa]

tasarn: tasarnos (tasarnos), taxarnos (taxarnos): *test us, task us, trial us, tax us* [Por, Spa]

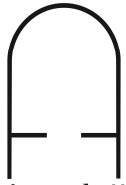
tea: tela: *difficult job, task, challenge, hard work, tedious undertaking* [Spa]

toæfos: toifos: týfos: τῦφος: *fever, sweats, heat, very hot* [Gre]

toæfos asas: toifos: τῦφος asás: *hot roast, fever roast* [Gre, Spa]

tois: τοῖς: *for some* [Gre]

tous: tou s., tous pl.: *gentle, soft, calm, still* [Cat]



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tt: abb. quattuor: *four, 4*

[Lat]

tt: abb. quattraginta:

forty, 40 [Lat]

v.

vnas: vanas, vano,
vanos, vanus: *empty,*
devoid, *vacant,*
pointless, in vain [Cat,
Ita, Lat, Spa]

z.

zoa: zoa, zoar: *joke, kid,*
fool around, laugh, be
jolly, the hum of a
happy crowd [Gal, Por]

zona: *at a certain time,*
temporal zone, stage in
a process, stage in
pregnancy [Cat, Cor,
Gal, Ita, Lat, Por, Spa]

zonas: *pieces, zones,*
parts, sections, areas
[Cat, Cor, Gal, It Lat,
Por, Spa]

Conclusion

The Medieval map has historical value for several reasons. The visual and narrative information provided by the map records a fascinating story in itself, but the language and writing system also betray important historical linguistic information relating to the human population of Ischia. They provide linguistic evidence of the ancient Greek ancestry of the island, followed by the influence of occupation by the Crown of Aragon, resulting in an evolved hybrid language, comprising Iberian Romance, Greek and Latin. It is also evident that the language and writing system of the map both became extinct shortly after the map and its parent manuscript were created, as there are no other surviving documents that use them. As Castello Aragonese and its monastery are situated on a small islet adjacent to Ischia, then evidently few people would ever have used the language and writing system. By the turn of the 16th century, the Crown of Aragon had abandoned Ischia, with patronage of the castle and monastery becoming Italian, so old documents would have then languished on the library shelves, rendered unreadable by new generations. Thus, the manuscript and its map remained unread until the language and writing system were understood once more.

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