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Here it is. A Nahuatl translation of European cosmology : context and contents of the Izcatqui manuscript in the Royal Tropical Institute, Amsterdam

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Chapter Five

European Worldview Translated: calendar, cosmos and astrology

The *reportorio de los tiempos* is a physical and tangible product of the way humans perceived the world around them. Moreover, the *reportorio* is also a product that reflects its creator's position within its world. This chapter will focus on three important and major preoccupations that influenced the way of understanding the world that is captured in the Nahuatl manuscript. In the first place, there is the human observation of cyclical changes in the natural environment (including changes within ourselves). This observation has caused a long and culturally diverse development of calendar systems throughout the world. Secondly, the entanglement of these calendar systems with the practicality of daily life and the planning of future events – be it on the fields or carrying out certain rituals or religious celebrations. Finally, the importance of these calendars in planning and to create a reference to what has occurred before and might happen in the future, on an individual and collective level. Thus, through the use of a calendar memories of both a historical and a primordial dimension are framed.

Because of the relevance of a calendar for day-to-day use, indigenous peoples and Spanish settlers tried to understand each other's way of time reckoning. There is quite an extensive amount of writing (mainly in Spanish, but also in indigenous languages) that attests to the efforts people went through to understand and interpret different calendar systems. A number of these documents not only describe a new calendar system, but also search for ways to correlate two systems. What's more, these texts highlight how difficult the endeavor really is, because alongside the study of a highly complex system it also entails communication and interpretation between different languages and forms of symbolism. For the purposes of the chapter and this thesis at large, the aim here is to describe how time is discussed by the *tlacuiloque* of Izcatqui. In this regard, I will consider the following question: to what calendar system did the *tlacuiloque* refer and how does the Nahuatl text relate to a Spanish *reportorio* in particular?

The second preoccupation that is evident in the *reportorios* and in Izcatqui is the conceptualization of the cosmos. The definition of cosmos employed here is the natural order of the universe as theorized by a certain group of people in a certain period of time. Again, here the relevant questions are: how was the cosmos represented in Izcatqui and how can this presentation be compared to that of a Spanish almanac? An additional question will also be addressed: can we determine whether or not the cosmos represented in Izcatqui is the same as the one favored by the readers of the manuscript by the time it was produced in the eighteenth century?

The third and final preoccupation of this chapter is the topic of Izcatqui's focus on astrology and divination. The analysis here will again combine several elements and so can best be summarized in terms of the following research questions. First, how can we best conceptualize what the *tlacuiloque* wrote about astrology? Secondly, how does the *tlacuiloque*'s text compare to a Spanish *reportorio*? Thirdly, what was the reception of astrology in colonial Mexico by the time Izcatqui was produced? These questions are not easily answered due to a couple of factors. Astrological discourse from what is now Western Europe was introduced into Mesoamerica as soon as the first settlers arrived. The period between that initial phase to the moment in which Izcatqui was produced is therefore long. Astrology

has a complex history in which it was both approved of and then disapproved of, and not necessarily by everyone at the same time. What, then, is Izcatqui's place within this history? Furthermore, what can we go from the type of astrological information contained within Izcatqui to make inferences about why this almanac was produced in Nahuatl and how it was used?

The content of Izcatqui represents a large period in which the calendar, the cosmos, and astrology/divination were discussed by people of both Spanish and indigenous descent throughout the sixteenth until the eighteenth century. Therefore, much can be said about their historical development up to the production of Izcatqui. This chapter will discuss some aspects of this complex history in relation to several selected fragments of the manuscript, as a first step towards developing a description of the general content of Izcatqui. There is no doubt, however, that more detailed studies in the future will yield even more nuanced details about this intriguing text.

5.1 The introduction of a new calendar system

The calendars of the Old and the New World were characterized by different terminology and different mathematical calculations. The construction and perceived experience of time in Mesoamerica was something that puzzled the first Spanish colonizers. The people of Mesoamerica had developed a calendar system that fascinated many and continues to fascinate up until today. For outsiders it is an intricate system, difficult to comprehend, and although scholars have come a long way in understanding its mathematics, there is still much to be learned about its full implications for religion, society, and daily life.

5.1.1 The Mesoamerican calendar system: *tonalpohualli*, *xiuhpohualli*, and *xiuhmolpilli*

Scholars argue that elements of what ultimately became Mesoamerican calendars originated in the Pre-classic period or Olmec horizon – a period that archaeologists have come to name the first period, from 1300 BC, in which similar traits of politics and ideology were found within a large geographical area (Stuart, 2011: 35-37). Tangible evidence that the calendar was invented at this time has yet to be found. The first real evidence of written calendar symbols so far are the Zapotec inscribed tablets with recognizable dates in the monumental site of Monte Alban in the Valley of Oaxaca, as well at San José Mogote in the same region (*ibid.*: 38). Archaeological and historical sources have taught us that Mesoamerican calendars have a protracted development. The diverse cultures of Mesoamerica share – in their own language and specific histories – calendar systems that were grounded on similar principles. The concept of a calendar plays a crucial part in Precolonial texts such as the codices. Fundamental to our understanding of Mesoamerican calendar systems are the studies of twentieth century scholars such as Eric Thompson, Linda Schele, Nikolai Grube concerning the Maya hieroglyphic books and of Eduard Seler, Karl Antony Nowotny, Alfonso Caso, Paul Kirchhoff, and others concerning the pictographic codices of Central and Southern Mexico. Their work was continued with the series of editions of and commentaries on the pre-colonial and several early colonial pictorial manuscripts by Ferdinand Anders, Maarten Jansen and Luis Reyes García.

Throughout Mesoamerica, calendars incorporated a sequence of 20 day symbols or day signs. Each day sign has its own name and iconography. Figure 34 displays the names as we know from them Classical Nahuatl of Central Mexico:

1. Cipactli (Alligator)	11. Ozomatli (Monkey)
2. Ehecatl (Wind)	12. Malinalli (Grass)
3. Calli (House)	13. Acatl (Reed)
4. Cuetzpalin (Lizard)	14. Ocelotl (Jaguar)
5. Coatl (Snake)	15. Quauhtli (Eagle)

6. Miquiztli (Death)	16. Coxcaquauhtli (Vulture)
7. Mazatl (Deer)	17. Ollin (Movement)
8. Tochtli (Rabbit)	18. Tecpatl (Flint)
9. Atl (Water)	19. Quiahuitl (Rain)
10. Izcuintli (Dog)	20. Xochitl (Flower)

Figure 34. Table with the twenty day signs from the Central Mexican calendar (after Anders, Jansen & Reyes Garcia, 1993: 52).

The combination of the 20 day signs plus a numeral in the sequence from 1 to 13 created a cycle of 260-days. This cycle was known in Nahuatl as a *tonalpohualli* or ‘count of day[s].’¹⁶⁸ Each combination of a number and a day repeated itself every 260 days (Broda, 1969: 13). The solar cycle was comprised of 18 periods of 20 day signs, taking the names of the day signs of the *tonalpohualli* and adding five extra days to form a cycle of 365 days (Anders, Jansen & Reyes Garcia, 1993: 57-59). These five days were called the *nemontemi* and were considered unlucky days (*ibid.*: 17). Each period, which we have come to correlate to the Western notion of a month,¹⁶⁹ was named after an important festival celebrated in that period (see Figure 35) (see, for example, Broda, 1969: 19-24).

1. Atlcahualo	10. Hueimiccailhuitl
2. Tlacaxipehualiztli	11. Ochpaniztli
3. Tozoztontli	12. Pachtontli
4. Hueytozotli	13. Huepachtli
5. Toxcatl	14. Quecholli
6. Etzalcualiztli	15. Panquetzaliztli
7. Tecuilhuitontli	16. Atemotzli
8. Hueitecuilhuitl	17. Tititl
9. Miccailhuitontli	18. Izcalli

Figure 35. Table with Classical Nahuatl designations for the 18 periods of 20 days of the *xiuhpohualli*.

In Central Mexico, the 365-day cycle is named as *xiuhpohualli*, a combination of the word *xihuitl* ‘year’ and *pohualli* ‘count.’ Each cycle of 365-days (a year) was named after a day sign from the *tonalpohualli*; this day is called a year bearer. Each year was named after the day sign that came five day signs later in the sequence of 20 signs. Following this, every fifth year, the year bearer day sign would repeat itself (though with a different number), so there is a total of four signs that could be designated as such. These signs in the Central Mexican calendar were House (III), Rabbit (VIII), Reed (XIII) and Flint (XVIII) (Anders, Jansen & Reyes Garcia, 1993: 57-59).

A year was known for its year bearer day sign in combination with a numeral prefix. Mathematically, the same combination of a sign and a number would reappear after 52 cycles or years (*ibid.*: 59). This greater cycle is called *xiuhmolpilli* or ‘the binding of the years’ in Nahuatl (Anders, Jansen & Reyes, 1991: 33). This name is a reference to the ceremony of the New Fire, a ritual that was held to symbolically end a 52-year period and initiate a new period by burning a ritual bundle that consisted of 52 reeds held together by a rope (Megged, 2010: 141).

¹⁶⁸ The word *tonalli* not only means ‘day’ but also ‘warmth of the sun’ (Kartunnen, 1983: 246) and simultaneously refers to someone’s life energy or ‘soul..’

¹⁶⁹ It has not been proven that the name ‘moon’ indicates a Mesoamerican reference between a time period and the astronomical revolution of the moon around the earth. Astronomically, the cycle of the moon varies in length between 27 1/3 and 19 1/2 days. The same is true for the months of the Julian and Gregorian calendar, which are also not astronomically in line with the cycle of the moon (Broda, 1969: 17-18).

The differences between the Mesoamerican and European calendar system challenged interpreters on both sides to make sense of one another's way of time reckoning. This involved getting to grips with one another's mathematics and the relation between religion and society. The following example (see also Chapter One) illustrates how the *tlacuilo* translated the concepts of time in a Western calendar for a Nahuatl readership. The example shows us that the *tlacuilo* and the reader were probably better acquainted with the Central Mexican calendar than with the newly introduced one. If not, there would not have been a need to translate the Western terminology in terms of a local system:

[f. 106v]

Anno yntoca xihuitl

mes y[n]toca metztli

Semana yntoca chiconilhuitl

dia yntoca ylhuitl

obacentlaco machio/tl nanauhcan

*memento yntoca canixō/chcahuitica*¹⁷⁰

*tie[m]po yntoca hue/.../*¹⁷¹

Anno ([año], year) is named xihuitl

mes (month) is named metztli

semana (week) is named 'seven days',

día (day) is named ilhuitl

half a sign is in four places

memento is named 'the leaving of the flower'

tiempo (time)

is named [something old of age]

The following paragraph will explain the calendar system portrayed in Izcatqui by its *tlacuiloque*.

5.1.2 The calendar system in Izcatqui – Julian or Gregorian?

The *reportorio* that was used as the main source for Izcatqui was the work by Sancho de Salaya from 1542. When this work appeared, people in Renaissance Europe lived by the Julian calendar. The Gregorian calendar count was not in place until 1582 when Pope Gregory XIII issued his calendar reform in the apostolic letter *Inter gravissimas* (Pederson, 1983: 308). According to the Julian calendar there had to be a leap year once every four years (Swerdlow, 1974: 48). Throughout the years, however, such a pattern would eventually lead to an accumulation of days that made the year run out of pace with astronomical (and climatological) reality. Therefore, the Gregorian calendar introduced a refinement of the leap year system; centennial years are no longer leap years, except those that are divisible by 400 (*ibid.*: 48). Furthermore, in order to correct the drift that already had occurred, the Gregorian calendar reform omitted ten days from the month of October of the year 1582 (Poole, 1995: 106). There is one reference – or at least an attempted reference by the *tlacuilo* – to an actual year number in Izcatqui. The *tlacuilo* copied the following sentence (see Figure 36) from the *reportorio* by Sancho de Salaya on folio ii.

“E nota que en aqueste año de.M.D.xlii. tenemos.iiii.de aureo numero [...].”

¹⁷⁰ *xōchicahuitica*. It is either composed of *xochitl* ‘flower,’ *cahua* ‘to leave’ followed by ligature *-ti-* and the auxiliary verb *-ca* ‘to be..’ It can be translated as ‘the flower is leaving..’ I have not found similar words for ‘memory’ in the dictionaries consulted. Perhaps it is composed of *xochi* ‘flower,’ *cahuitl* ‘time’ (‘flower time’) and ligature *-ti* plus relational *-ca* ‘by means of..’

¹⁷¹ In Karttunen’s dictionary, the word for ‘time’ is *cahuitl* (1983: 21). Here the authors have chosen a word that indicates the old age of the subject matter: *huecauh* ‘a long time; something old’ [this word does not fit the space left on the right margin of the page though] or *hueca* ‘far away..’ It is clear, though, that the authors have used a construction that not just refers to ‘time’ in general, but to something that has history.

The sentence can be translated as ‘In the year 1542, we have the Aureus Numerus of 4.’ The Aureus Numerus – or Golden Number¹⁷² – is a 19-year cycle of the phase of the moon for each day of the year. It was important for the calculation of the timing of Easter, which involves the moon cycle. After 19 years, the cycle of the lunar phases for each day began anew again (DelBrugge, 1999: 3). For religious purposes, the Aureus Numerus cycle was therefore an important one that appears frequently in old calendars.

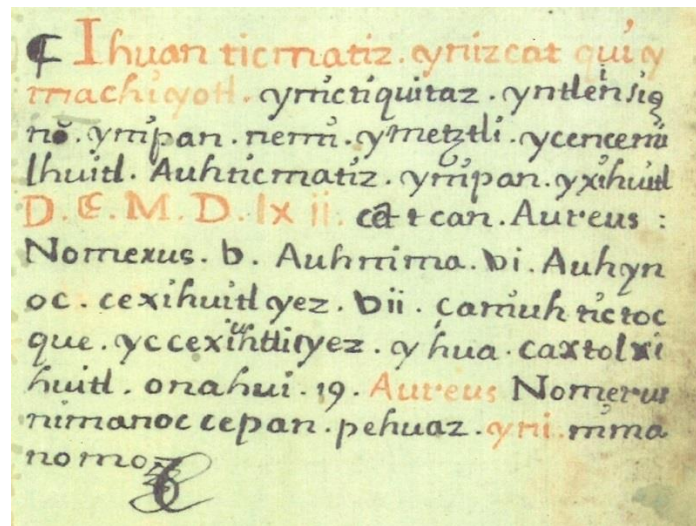


Figure 36. Doubtful translation of a Roman numeral by a *tlacuilo* of ms 3532-2, fol. 54r.

I have discussed the erroneous translation of this fragment earlier on page 65. The table of the Aureus Numerus on folio 55r, however, does not seem to be a copy from the Sancho de Salaya edition of 1542 but rather from an edition by Andrés de Li. This is evident because the *tlacuilo* added a third line for Pisces which is not present in the work by Sancho de Salaya, but it is present in Andrés de Li’s edition of 1495 on folio 135r (Delbrugge, 1999: 82) and 1529 (folio ciiii).

Izcatqui was produced in the eighteenth century. Therefore, it was produced well after the introduction of the Gregorian calendar system that was issued by Pope Gregory XIII in 1582. The *tlacuiloque* of Izcatqui were acquainted with the Pope, as the religious introduction of the Nahuatl manuscript indicates. It is clear that Izcatqui’s calendar is copied and interpreted from the *reportorio* genre. However, it is likely that the calendar that Izcatqui copies is from the mid-sixteenth century, and therefore technically refers to the Julian calendar system.

5.1.3 Teaching the liturgical calendar – mnemotechnic devices

Izcatqui contains a number of complex calculation methods that are related to the liturgical calendar. The goal in this subsection is to render the folios concerned less enigmatic, even though the complexity of the methods itself will remain. An early description in the Tropenmuseum suggests that the manuscript was “written by (a) Spanish clergyman/clergymen as a study book for young Aztec noblemen.” In the early colonial period in Mexico, the sons of nobility were trained in the “Christian thought and practice” (Schwaller, 2000: xx). In the capital of Mexico, Tlatelolco, one such school of “Christian thought and practice” was established by the Franciscans that went by the name Colegio de Santa Cruz. This school in particular was founded on the idea that people would be prone to take on the religion held by their leaders (*ibid.*). It is, however, also possible – even more likely – that Izcatqui was

¹⁷² The Aureus Numerus cycle is probably named Golden Numbers because in old calendars they appear in gold (DelBrugge, 1999: 3, note 12).

created by native Nahuatl speakers and intellectuals, who translated and adapted one or more Spanish reportorio texts.

The publication by Marijke Gumbert-Hepp in 1987 concerning a textbook on time measurement written by a certain Magister Jacobi in 1436 in Kampen, the Netherlands, can be of great help here to understand the content of some of Izcatqui's fragments. In the introduction of his work, Magister Jacobi wrote that for God's glory, this textbook was to educate young clerics. Gumbert-Hepp's research provides important clues as to the methods used in ms 3523-2 and the primary intention of its composition. As early Christian leaders ordered for the synchronized worldly celebrations of Easter to unify the religion and all its feasts, the development of clear formulas to calculate their dates became crucially important (*ibid.*: 13). The work by Magister Jacobi explains how this calculation was achieved according to three methods. Below, I explain these methods in relation to their appearance in Izcatqui.

5.1.3.1 Verses and tables

In Izcatqui, a variety of verses were explained in prose and exemplified by illustrations, most often circular diagrams. These verses functioned as mnemonic devices: each of the twelve months had its own rhyme and the number of syllables of that rhyme corresponds to the total number of days held by that particular month. For example, for the month of March there was a rhyme that consisted of a total of 31 syllables, the same as the amount of days in that month. By reciting the rhyme out loud, a Saint Day could be found according to the number of the first syllable of the rhyme that held the name of the Saint. For example, if the first syllable of the name of a Saint was the sixth syllable in sequence, the feast day would be held on the sixth day of the month to which the rhyme belonged.

Such verses were known as a *cisiojanus*, named after the oldest Latin version that begins with 'Cisio Janus' after the circumcision of Jesus on the first of January (Lie & Van Der Poel, 1983: 70). It was, however, not only important to know on which date a feast was celebrated, but also on which day of the week. This was calculated using the "Sunday Letter" of the year. The seven days of the week are each linked to one of the first seven letters of the alphabet. The first day of the year (January 1st) is given the first letter [a]. The first Sunday following that day would be the Sunday Letter for that year, so if the first Sunday would happen to occur on the fifth day, the Sunday Letter for that year would be [e] (DelBrugge. 1999: 88). So, first one of the twelve rhymes would be used to calculate on what day within a month a certain Saint's Day would be celebrated. Second, through the use of the Sunday Letter it would be possible to know on what day of week that celebration should occur. For example, the sixth of January (Three Kings) would count up to the letter [f]. If for that year, the Sunday Letter is an [e], then the sixth of January is a Monday. Of course, it would be a great challenge to calculate a feast day in October; therefore, another mnemotechnic device was invented. This device was a single sentence in which the consecutive words or syllables started with the first Sunday letters of the month. Two examples are:

(counting the words)

Altitonans, dominus, divina, gerens, bonus, extat, Gratuito coeli fert aurea dona fideli.

(counting the syllables)

Adam degebat ego cifos adrifex

(Lie & Van Der Poel 1983:72)

For both examples, we find that the fourth word or syllable begins with the letter [g], indicating that the month of April begins with the Sunday Letter [g] (Lie & Van Der Poel, 1983: 71-72). Although the enigmatic character of the details remains, the presence of the verses in Izcatqui (see Figures 37 and 38) illustrate that one of its aims was to teach the reader methods for the calculation of the liturgical calendar.

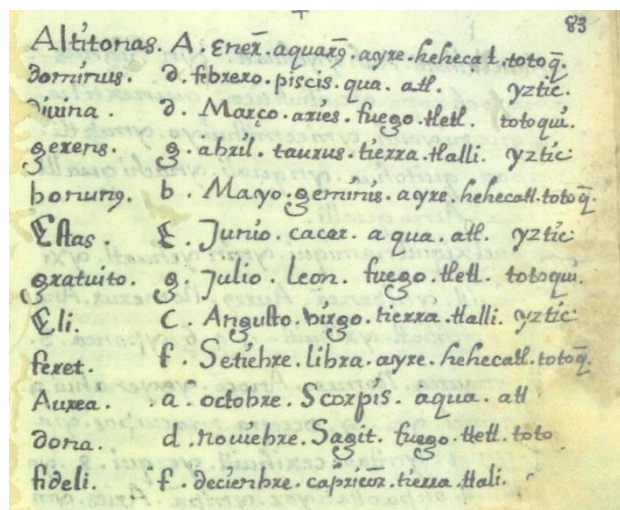


Figure 37. Table with mnemotechnic verse, ms 3253-2 folio 83r.

The table on folio 83r is explained in Nahuatl through the following:

[f. 83r] yzcatqui tapla¹⁷³ ynic yximachoz
 ynaq^e/...// quiximatis /n/equi yehuatl/
 Rale[n]dario¹⁷⁴
 y[n] queni/n// tlameI/a/uhtiuh¹⁷⁵ cemilhuil
 huel quitas ycemil/huilit /I/etra
 campatlaiuh apecdario
 ynopan ynim[a] yeccapā Ralendaxio
 huel mochihuas yquito[...] yn ipan ompā
 quitemos yn tleyxedxa:
 yn i[p?]ā tlatiuh Auxeus Numex9
 qu[i?]h[uica?] [f.84v] yehua xihuitl
 Auh y yehuatl yn Signus: ymo[p]ochcopa
 y[n] cuiliuhtica quinextilia yn queni yauh
 yn icemilhuiyo ymetzli yn ipan
 quitohua yn quali yn achi qualli nima
 Amo qualli
 Huel xiquilnamiqui
 ynin yehuatl yxihuitl ynipancā Aure9. Nomeru
 Anoço yehuatl yxihuitl 1546
 ypanca S yn aurea numero ye ycnahui 9

Here it is, the table so it will be known
 [...] as it is necessary that we will know
 the calendar
 how each day [is counted correctly]
 so, we will see the letter of each day well
 and where the alphabet is going
 there and here the calendar is at the right side
 it will occur well, [it says?]
 it will descend, the [redra]
 it settles in the Aureus Numerus
 [...] the year
 and the sign: your incense
 go take it, it makes it appear, how will go
 the day sequence of the month and
 it says the good [and] the mediocre good
 Here
 [and] something not good
 May it be remembered well
 the Aureus Numerus that awaits this one year
 the year 1546
 it awaits the Aureus Numerus [...]

¹⁷³ Read 'tabla'.

¹⁷⁴ Read 'Calendario'

¹⁷⁵ tlamelauhtih: tla+melauh+tiuh (something+straight+to go), freely translated as 'to do something the correct way'; i.e. to count the coming of days correct.

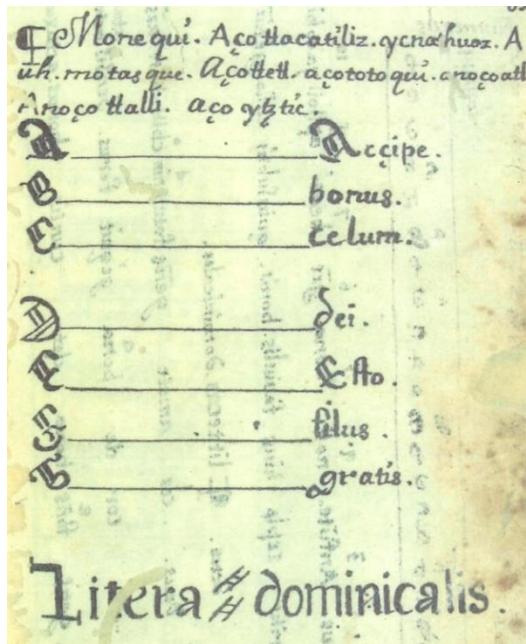


Figure 38. The Dominical Letters A through G, ms 3523-2 folio 85r.

The *tlacuilo* added two tables that link the Aureus Numerus and the Sunday Letters (see Figure 39). How the readers were supposed to work with these tables remains uncertain. However, it seems reasonable to argue that these tables functioned as a mnemonic device in the calculation of Christian feasts in the Nahua communities. Moreover, they also prove that the *tlacuiloque* of Izcatqui faced considerable complications in the making of the manuscript.

qñ. aurey	5	3	6	12		a	
A	f	5	2	9	16	b	
numerye	10	15	14	11		c	
	15	9	13			d	
b	qñ. aurey	6	5	10	3	9	17
	numerye	f	2	15	13	14	15
		17	12	5	11		
c	qñ. aurey	9	3	10	4	13	14
	numerye	16	15	16	17	17	19
		2	12	5	11	15	19
d	qñ. aurey	1	10	7	3	14	19
	numerye	6	11	5	12	16	15
		4	9	13	2	17	15
e	qñ. aurey	1	5	12	4	14	19
	numerye	11	12	7	3	16	17
		5	9	12	7	17	15
f	qñ. aurey	3	5	2	10	15	19
	numerye	12	10	15	7	16	24
		6	11	13	5	17	19
b	qñ. aurey	3	5	1	7		
	numerye	7	12	9	19		
		11	15	11	19		
		10	14	5			
		2	6	4			

Figure 39. Another mnemotechnic device in ms 3523-2, folios 85v and 86r.

5.1.3.2 Circular diagrams

The second method of explaining verses was to exemplify them by illustrations, most often circular diagrams. This method is introduced in Izcatqui as follows:

[f.101v] *Ahuin yehuatl tlacuiloli yn tlanepantla
tlayahualotoc ynic necis Aureo Numero*

ynic huel machos yn quesqui ynitlapohual

Aro Numero: yn cexiuhtica quistiuh

[f.102r] *ticmatisque*

ca no ypan pehua yn ipohualoca yeyehuatl xihuitl

ypa[n] no pehua letxa dominical

huelixpa[n] pehua yhitic yn [symbol of cross] cruz

and in the middle, it is written

[something round] in order to show the
Aureus Numerus

so that it will be known, how many [there are in]
its count

[of] the Aureus Numerus: of the year to be
we will know it

the beginning and the count of the year
in which dominical letter it begins

in front of us, it begins in the circle at the cross

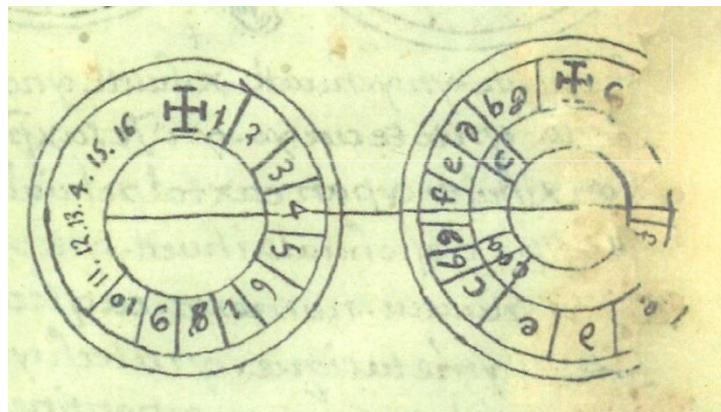


Figure 40. Circular diagrams ms 3253-2, folio 102r.

On the following folio we see two new diagrams:

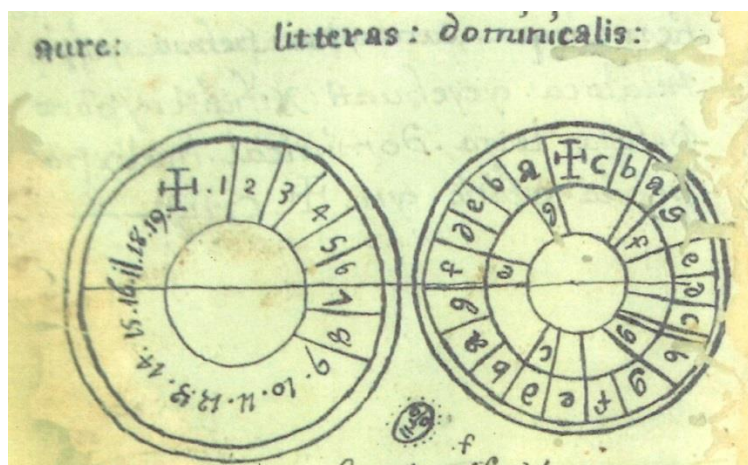


Figure 41. Circular diagrams ms 3253-2, folio 102v.

The text continues:

[...] ¹⁷⁶ <i>h ynpan yn yehuatl xihuitl</i>	in the year
<i>y nomo[...] li yn totecuiyo yn Jesuxpō</i>	[in which] our lord, Jesus Christ [was born]
<i>ye ytzonxihuitl ypan caxtolpohual xih[uit]l</i>	1560
<i>ypa[n] yepohualxihuitl</i>	
<i>yn ipohua [yn to]ca yn Auxeus nomexos</i>	it counts the Aureus Numerus
<i>ca ytechtica [...]sque</i>	[...]
<i>ynic taçique yn itech yn ye[h]uatl xihuitl</i>	[we arrive?] with the year
<i>axcan ypan tinemi: ynic huel ticmatisque</i>	in which we now live: thus we will know it well
<i>yn quesqui ynipohualoca yn auxeu numexu</i>	how many there is in the count of the aureus numerus
	it shows the year in which we live
<i>yc necis ca yehuatl xihuitl y nipa[n] tinemi</i>	
<i>huel etzo xihuitl ypan caxtolpo [f.103r] hualxihuitl</i>	1543
<i>ypan òpohua xihuitl omey</i>	[it meets 2 in vi (6?)]
<i>huel quinamiqui 2 in bi</i>	Aureus Numerus here, we will find it below and it appeared
<i>yn auxeu numexos nipā tictemosque Auh yn ones</i>	its count of the Aureus here, there in we will find it below
	below it has been written
<i>yn ipohualoca Auxeus niman ipa[n] tictemosque</i>	the Aureus [and the] Numerus
	it appeared here, also we will find it below the dominical letter
<i>yn tlatzintlan ycuihuhtoc</i>	so we will count it correctly, thus is will appear
<i>yn auxeus Auh yn Numexo</i>	how many days there are in which month
<i>ilaones nima[n] no tictemosque yn letxa dominical</i>	in [...] the day, the great [...]
	each year to be broadens itself/widens up [...]
<i>ynic ticmelauhcapohuasque ynic huel nesis</i>	[...] that which is called [dominicales?]
<i>yn catlehuatl metzli [...] huā quesqui tonali</i>	Septuagesima will appear there
<i>ypan qu[i...] yhehuatl yn ilhuitl yn huey[...]</i>	it makes it appear over [...] the day
<i>yn cecexiuhctica mopatlaiuh [...]</i>	and we will know it well [when] Aureus numerus is
<i>nachtonesis yn itoca domi[nicales?]</i>	
<i>Septuagesima</i>	
<i>ça tepānestias y[...]qui ylhuaitl</i>	
<i>Auh ticmatisque Cay[...]niq Auxeu Numexo</i>	
	[when] it meets the dominical letter [...]
<i>quinamiqui letxa dominical [...]</i>	

If we follow the text above, the Aureus Numerus cycle is counted from 1543 onwards ‘it show[s] the year in which we live, 1543.’ This would coincide with the argument that the *reportorio* of Sancho de Salaya from 1542 was used as one of the primary sources of Izcatqui.

Interestingly, even though the reader is taught a variety of methods to identify and calculate Christian feasts, Izcatqui does not contain what typically is part of a *reportorio*: a Saints calendar. There is no list of the twelve months of the Western calendar and their corresponding number of days, their Dominical Letter, and the names of religious celebrations. This seems to suggest that its *tlacuiloque* made the conscious decision to only translate the paragraphs with agricultural and medicinal information below each month, while omitting the Saints calendar. To a much more exaggerated extent, the *tlacuilo* of the handwritten folios attached to the *Doctrina Christiana* from 1553 had done the same. From the range of information in a *reportorio*, he too selected only the agricultural and medicinal information below the Saint’s calendar and added astrological information. In the following section, one particular selection of information in the case of Izcatqui – on cosmography and astrology – will be analyzed.

¹⁷⁶ The left margin of the folio is damaged.

5.2 Cosmography

Presumably, the manuscript's content originates from the late sixteenth century or beginning of the seventeenth century. As a text belonging to this historical period, Izcatqui should be situated at the heart of the transition between the Ptolemaic and Copernican cosmographies. The manuscript itself was produced in a time that was firmly rooted in the heliocentric scientific realm: the eighteenth century. But in order to adequately conceptualize Izcatqui's cosmological content, we must first engage with the question: what concept of 'the sky' or 'a sky' does Izcatqui endorse?

Ilhuicatl: philosophical rendering of the sky

In Izcatqui, the sky is described as follows:

[f.24r]

<i>In yehuatl yn ilhuicatl quitoznequi:</i>	it, the sky, that is,
<i>tocal yn timacehualtin</i>	the house of us commoners
<i>yhuan ical y[n] tonatiuh</i>	and the house of the sun

The Nahuatl word *ilhuicatl* is translated as "heaven, sky" or Spanish "cielo" (Karttunen, 1983: 104). As Karttunen shows, the word *sky* is often equated with the word *heaven*, although the latter can be endowed with religiosity in contrast to the former, which is merely a geographical reference to 'up there..' It is no surprise that Spanish friars – who were typically looking for Nahuatl substitutes for Spanish words encompassing major religious concepts – used the word *ilhuicatl* to represent a Christian 'Heaven..'

John F. Schwaller studied the use of the word *ilhuicatl* in texts that he describes as 'pre-conquest' and 'after the conquest' (2006: 393). He recognizes that these 'pre-conquest' texts that have been written in the colonial period are fused with a 'significant Christian content' (ibid.). Schwaller studied a sample from two collections of texts that were handed down from indigenous peoples: *Cantares Mexicanos* and *Romances de los señores de la Nueva España*. The *Cantares* are a collection of 91 indigenous Nahuatl songs or poems, written down in the 16th century (Bierhorst, 1985; Moreno de Alva, 1994). Following Schwaller's analysis, we can say that a pre-colonial use of *ilhuicatl* would have referred to the "source of good things, a place of delight" (2006: 393). It would also have been used to describe a place of a being called *Ipalnemoani* or "Life Giver" or "Giver of Life" (ibid.: 394; León-Portilla, 1963: 59). This "being" is described by León-Portilla as having characteristics rather similar to the Christian God; "it" is seated in an "enclosure of clouds," "it" sets the moon and stars in motion, and "it" gives life to everything (León-Portilla, 1963: 60). On other occasions, *ilhuicatl* might possibly simply refer to the sky; and therefore, it was often represented using the image of the bird. However, as Schwaller has noted, birds, together with flowers and precious stones, were also metaphors used in Nahuatl for friendship or places of 'heavenly delight'; for example, in remembrance of deceased warriors (394).

Romances de los señores de la Nueva España is another collection of Nahuatl poems (see Garibay 1964). The few references to *ilhuicatl* in *Romances* point to the geographical and physical characteristics of the sky – such as place of thunder and rain – but also as the realm where movement is felt: *cuauhtli ixpan in tlalli mocuepa, ilhuicatl olinia ica cahualoc* 'In front of the eagle the earth turns, the sky is in movement (after Schwaller, 2006: 396, italic mine). According to Schwaller, indigenous Nahua cosmography did not include a heliocentric model of the cosmos, thus the turning of the earth mentioned in the *Romances* might have referred to another movement such as an earthquake. The description of the sky in movement underlines this idea through the use of the word for movement: *ollin*; a term also used to describe earthquakes (Schwaller, 2006: 396). What is interesting about this description of undergoing and feeling the earth 'turn' and shake is that it is immediately related to the

sky being in movement. It seems to describe an earthquake as not just something ‘of the earth,’ but also as a matter of air, with the two sharing the same realm. There is no clear differentiation or dichotomy of what belongs to a realm of earth and to a realm of sky. This is reflected in Izcatqui’s description of what ‘the sky’ encompasses: “it, the sky, that is our house [of the commoners] and the house of the sun.” There is just one realm, where we as humans live and where the Sun is seated. This in contrast to Spanish *reportorios* where they only refer to the sky as the home of the Sun: “Cielo, como scriue Zenocrito [Greek philosopher], es compuesto de casa & elios, que es sol, que tanto quiere dezir como casa del sol” (Andrés de Li, [1495] in DelBrugge, 1999: 57 and *Repertorio de los tiempos* [...], Fernandez, Valladolid 1554: xv).

5.2.1 Cosmographic discourse - Ptolemy

It does not take long to place Izcatqui in a cosmographic discourse when going through its folios. The universe is divided into several spheres (skies) that fit the Ptolemaic geocentric model:

- 1) Moon
- 2) Mercury
- 3) Venus
- 4) Sun
- 5) Mars
- 6) Jupiter
- 7) Saturn
- 8) Zodiac signs
- 9) “Prime Mover”

There is, however, no drawing of the Ptolemaic model in Izcatqui. The Ptolemaic model has several versions or interpretations varying between nine, ten, or even more spheres. This variation is reflected when comparing two Spanish *reportorios*. Andrés de Li [Zaragoza 1495] mentions nine spheres, coinciding with Izcatqui. The *repertorio de los tiempos* [...], published by Francisco Fernandez [Valladolid 1554] counts up to ten spheres. The table below illustrates where Izcatqui and the two Spanish works correspond and where they do not.

	<i>Izcatqui</i>	<i>Andrés de Li [1495]</i>	<i>Repertorio [1554]</i>
<i>Sphere</i>			
<i>First</i>	Moon	Moon	Moon
<i>Second</i>	Mercury	Mercury	Mercury
<i>Third</i>	Venus	Venus	Venus
<i>Fourth</i>	Sun	Sun	Sun
<i>Fifth</i>	Mars	Mars	Mars
<i>Sixth</i>	Jupiter	Jupiter	Jupiter
<i>Seventh</i>	Saturn	Saturn	Saturn
<i>Eight</i>	Zodiac signs	Zodiac signs	Zodiac; Stars (fixed)
<i>Ninth</i>	Prime Mover	Prime Mover	Prime Mover
<i>Tenth</i>			Prime Mover

Figure 42. Table with descriptions of Ptolemy’s geocentric model and spheres in Izcatqui, and two Spanish *reportorios*.

The table itself seems to indicate that there is just a slight difference between the three *reportorios*. The differences in the textual descriptions of each of the spheres, however, are much more telling, and this is important to note when trying to fit the pieces of the puzzle together in the search for the most original sources used in the translation of Izcatqui. Let's take a closer look at the description of the eighth, ninth, and tenth spheres:

Eight Sphere

[f. 33r]:

<p><i>Ca nican tiami ilhuicatl yn ican</i> <i>planetas chicon tlamatli</i> <i>ihuan yn tleyn ipan mochiuhtiuh</i> <i>anoço yn itech quiçan</i> <i>inic chicue tlamantli ylhuicatl</i> <i>ca yehuatl ynitech cate</i> <i>yx et omome oma[chiy]otl y gignos [signos ?]</i> [Initial] <i>Iuh ynic chicue tlamatli yn ilhuicatl</i> <i>ynitechca ynipan motlalia</i> <i>ym[a]tlactli omome [Signos] [sic]</i> <i>yehuatl mocuecuepa</i> <i>iniuh catqui nenono[tz]aliztli</i> <i>yniuh quitohua Pthole[m]jeo</i> <i>ynipa[n] cenpohualli o[n]caxtollli</i> <i>o[n]cen xi[qui]pilli ylhuil [red mine]</i> <i>yn ipan ynnic [sic] chicue tlamatli yl[hui]catl</i> <i>yn itechcate y[n] matlacatli omome [Signos] [sic]</i> <i>ynic mocentlallia amo ça ya yxquich</i> <i>Ca no cempoalli [sic] oncaxtollli once Signos</i> <i>ymocentlalia Amo huel</i> <i>nica mitoz</i> <i>ca no cenca monequi</i> <i>yehuatl huelquimatis</i> <i>Huelquitas</i> <i>huelhuehuetque Astrologo</i> <i>ynqueni cencan ya[black stain]can momachiyotia</i> <i>ca mochiuh ticate yciciltin</i> <i>in quexquich huei in quexquich in tepiton</i> <i>ic mocentlalia</i></p>	<p>here in the sky is the home of the seven planets and what is going to come about or emerges with the eight sky it is with [lit: and two] signs [read: twelve signs] the eight sky is with it, it settles itself the twelve signs it turns itself as if they were a consultation as was said by Ptolemaeus (In 20 plus 15 plus 1) 36.000 (8000) days¹⁷⁷ in the eight sky there are twelve signs they have not yet been gathered [there are] also 320 signs that have not been gathered well here it will be said it is very necessary that they will know it very well that they will say it very well the ancient astrologers how [...] to observe the occurrence of stars the many great, the many small when they are gathered</p>
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Andrés de Li, [Zaragoza 1495] (in DelBrugge 1999:63, cursive and translation mine):

¹⁷⁷ In the Spanish original text by Andrés de Li [1495:f.117r, DelBrugge, 1999:63] we read the following: “El octauo cielo es donde tienen su asiento los doze signos. El qual faze su mouimiento segun la opinion de tholomeo en treynta & seys mil años.” The Nahuatl text literally reads: 20 (cenpohualli) plus 15 (caxtollli) plus 1 (cen) 8,000 (xiquipilli) days (ylhuil). The term ‘xiquipilli’ is a ‘purse, pouch’ that symbolically represents a unit of eight thousand (Kartunnen, 1983: 326). The translation seems to suggest that ‘xiquipilli’ was used as a reference to a high number in general, rather than specifically ‘one thousand’. So the translation into Nahuatl is ‘36 8,000 days’ instead of ‘36,000 years’.

[fol. 117r] **Del octauo cielo**

“El octauo cielo es donde tienen su asiento los doze signos. El qual faze su mouimiento segun la opinion de Tholomeo en treynta & seys mil años”

The eight sky is where the twelve signs have their seat. Which makes it movement, according to the opinion of Ptolemy, in 36 thousand years.

Now consider a selection of fragments from Repertorio [Valladolid 1554: f.xx, cursive and translation mine]:

“*Del octauo cielo, donde estan situadas las estrellas fixas, que por otro nombre llaman firmamento.*”

[Initial] *El octauo cielo es, dōde tienē su asiento los, xxii. signos, y estā situadas las estrellas fijas, fue llamado firmamēto, como si dijéramos diferente o mouedoꝝ de estrellas firmes y fixas. Los Griegos lo llamauan Apsanes, que quiere decir, sin horror, porq las estrellas que en el estan, guardan siempre entre si una misma distancia, no allegando se ni apartando se unas con otras, segun los planetas. Ay en el octauo cielo, tantas y tan innumerables estrellas, quantas hasta oy ningun hombre ha podido numerar. Aun que los antiguos, como fuerō los Caldeos, Babilonios, y Egipcios cōsideraron cierta quātidade dellas, y para mejor numerar las, teniēdo atencion tambien a los efectos que experimentaron de sus influencias, ordenaron las en quarenta y ocho ymages, donde son collocadas mil y veynte y dos estrellas, las mas prefulgentes, toda la otra multitud queda ignota. Este octauo cielo segun el rey don Alfonso contiene en si tres mouimientos, uno que el tiene proprio, y dos preternaturales. [...]*”

The eight sky, where the fixed stars are situated, is by another name, named *firmamento*. The eight sky is where the twelve signs have their seat and where the fixed stars are situated, that was named *firmamento*, [how we say differently, the motor of the steady and fixed stars]. The Greeks named them Apfanes, which wants to say, without error, because the stars that are within are, are always protected within the same distance, they do not reach nor go away from each other, like the planets. In the eight sky, there are innumerable stars, many that until now, no human being has been able to count. Although the ancients, as there were the Caldeans, Babilonian and Egyptians, they considered a certain amount of them [stars], and in order to number them better, giving attention also to the affects that they were perceiving, they ordered them in 48 images, where there are gathered 1022 stars, [...]. This eight sky according to King Don Alfonso holds within it three movements, [...]

Ninth Sphere

Ms 3523-2 [f. 36v-r]:

<i>[Initial] Inic chi[u]cnauhtlamatli yn ilhuicatl</i>	the ninth sky
<i>Amotle ytechca y[n] çičitlaltin Anoço planetas</i>	is not with the stars, or planets
<i>yhuan yehuatl quicuepa</i>	and it turns them
<i>yn itzqui tlamatli</i>	clever thing
<i>yn ilhuicatl quimalacachohua</i>	he turns the sky
<i>conixitia yn ipan yn itequiuh</i>	he arrives there, it is his duty
<i>cenpohuallatmatli omei horas</i>	[in] 23 hours

yn quinamiqui yn oc nauhtlama[n]tli yn ilhuicatl he meets the four skies

Andrés de Li: [Zaragoza 1495] (in DelBrugge 1999:63, cursive and translation mine):

“El noueno cielo es donde no hay estrellas ni planets, & faze su mouimiento de leuante en poniente en .xxiiij. horas, contrario delos otros cielos.”

The ninth sky is where there are no stars nor planets, and which makes it movement from east to west in 24 hours, contrary to the other skies.

Fragment from Repertorio [Valladolid 1554: f.xx-xxi, cursive and translation mine]

Del noueno cielo. [Initial] El noueno cielo es aqui en Ptholomeo llamo primer mobil, y don Alfonso considera por segundo mobil. Este segun es opinion de todos los Astrologos y Philosophos no tiene estrellas. Y por la gran diaphanidad suya es llamado cielo, christiano. Otros dizen que en este cielo estan las aguas que se leen en el primero del Genesis. y segun el canto de los tres niños. ℄ Benedicite aque que super coelos sunt. Algunos dizen (segun lo trae Beda.) Que estas aguas se hubieren aqui guardado para la ynungacion del diluuio. Otros afirman que se pussieron aqui para la templança del gran calor y fuego que el mouimiento del cielo y de las estrellas causan. y dicen estas aguas estar muy claras, muy subtiles y transparentes. y por esto algunos llamaron a este cielo Aguco, o Christalino por la gran transparencia y diaphanidad suya. Tiene dos mouimientos. Uno es preternatural, que es causado & la decima sphaera o primer mobile el espacio de veynte y quatro horas. [...]

The ninth sky. The ninth sky is what Ptolemy has called prime mover and which don Alfonso considers the second mover. This, according to the opinion of all astrologers and philosophers contains no stars. And for its great transparency, it is called the Christian sky. Others say that within this sky are the waters of which one reads in the first of Genesis. And according to the song of the three children. ℄ Benedict [...] Some say (according to what is carried by Beda) that these waters [...] are protecting from flooding due to a deluge. Others affirm that they are here to cool off the great warmth and fire caused by the movement of the sky and the stars. And they say that these waters are very clear, subtle and transparent. And for this, some have called this sky Aguco or Crystalline for the great transparency and its deluge. It has two movements. One is preternatural, which is caused in the tenth sphere or prime mover [in] the space [span] of 24 hours [...]

Fragment from Reportorio [Valladolid 1554: f.xx, cursive and translation mine]

Interestingly, what is absent in Izcatqui but present in several Spanish *reportorios* is a discussion of a tenth sphere in the Ptolemaic model of the cosmos.

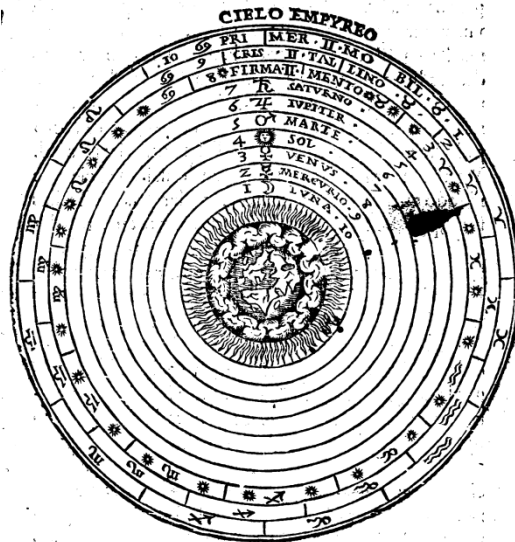


Figure 43. Ptolemy's cosmography. From Jerónimo de Chavez' reportorio de los tiempos [1584:112].

5.2.2 Mapping the World

In addition to revealing a history of conceptualizing the universe, a history of how the world as such was conceived can also be ascertained by considering the content – most notably images – of *Izcatqui* or any other relevant manuscript. The geography of the Earth, either envisioned as a flat disk or an endless round globe, has produced an incredible amount of maps and studies from the ancient Greeks onwards. And again, it was Claudius Ptolemy who was fundamental in developing world maps. His *Geographia* (ca. AD 150) is a (textual) description and prescription of how to construct a world map by listing a multitude of cities and their coordinates as a two-dimensional projection of a three-dimensional sphere (Garfield, 2012: 35). The maritime explorations of the fifteenth century forever changed the maps of the globe. Thus, the content of *Izcatqui* is firmly rooted in a period that was aimed towards the creation of detailed and correct geographic representations of the earth. The earliest map that includes the American coast was the map produced by Juan de la Cosa in 1500. This development in map making, however, is not portrayed in *Izcatqui*. Rather, the images presented in *Izcatqui* depict only the African, Asian, and European “continents,” as shown in Figure 44.

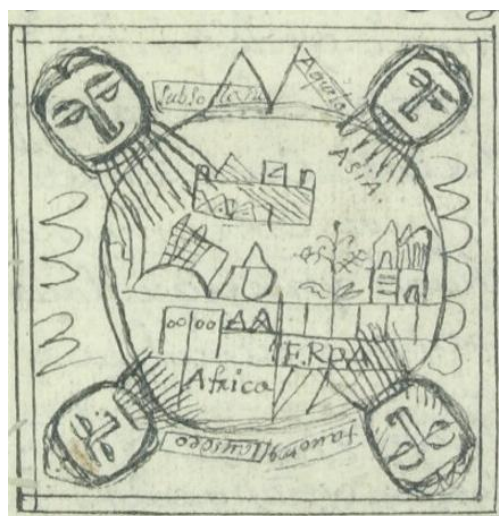


Figure 44. A T-O map with the four winds. Ms 3523-2, folio 65v.

Here, the earth is not illustrated as a twodimensional overview of how the then existing polities were conceived, but is drawn as a flat disk divided into three areas. Its upper half is designated as Asia and its lower half as Africa and Europe (ERPA). The three divisions are filled with drawings that represent a hill, buildings, and some vegetation. The depicted earth is flanked by four faces blowing wind towards the surface of inhabited lands, representing four main wind directions. These four winds are named in a clockwise manner: aquilo, fauoma [sic] , ausdeo [sic], and subsolar.

This early type of drawing of the earth, crudely divided into Asia, Europe, and Africa, is situated in the tradition of ‘T-O’ maps (or ‘T within an O’ map). This type of map is said to have been designed by the Roman Emperor Agrippa (12 BC) and is known through its many copies from the ninth century onwards (Edson & Savage-Smith, 2004: 49). The then known continents were organized most commonly with Asia at the top, often divided by the Nile and the river Don from Africa and Europe, which were themselves divided by the Mediterranean Sea. A various amount of winds and/or the four cardinals were at times also added to the map (*ibid.*: 50). This image in Izcatqui is helpful in the search for a possible reconstruction of the assembly of sources that its author(s) have used in the making of the document as there is such a T-O map in a Spanish *reportorio* from the sixteenth century (see Figure 45)



Figure 45. A T-O map similar to the one in ms 3523-2. Reportorio by Antonio de Gante, Valladolid 1581, page 56

Even though it is not so surprising to find a T-O map in ms 3523-2, it is striking that a ‘map of the world’ *excludes* the continent in which this manuscript was produced.

5.2.3 The four wind directions

Izcatqui names four winds. These are, in a clockwise manner: aquilo, fauoma [sic] , ausdeo [sic], and subsolano [sic]. As described by Vitruvius, Aquilo is the Roman personification of the north wind; Favonius is God of the West; and Auster is God of the South. In Izcatqui, this image itself is not explained through text. The four winds are not named as being Roman deities nor are there references to the world map (which is missing its author’s continent in total). Rather, it seems to have been of more importance to the *tlacuiloque* to explain the benign or maleficent characteristics of the wind on body and mind (this is the case in Izcatqui as well as the reportorio the image is from).

[f.65r]

*Nican quipohua ytemachtiani ynauhtlamatli y[n ehe]catl
yhuan ycanitlacati yba que/.../
tlatacati ytimacehualti yacatqui
ynitoca oriental meridiano ocçitede Septrettiano*

¶ *Inic centlamatli yn ehecatl yhuelaauh
[f.65v] yn orieden
ynopahualquiça yntonatiuh
yniyyelis toto[n]qui
qualli tie[m]po melahuac
yhua[n] monamiqui occentlamatli Ehehecatl
Auh ynin Ehecatl Aqualli
yhuan pantihuani
maçihui ynocentlamatli nextia
ytonacayo Amo yc quemochihuan
Amoycmiqui
¶ *Inicontlamatli Ehecatl yhualauhmerichiano
nepantlatonatiuh yztic
[m]onamiqui occentlamatli hehecatl
auhynin Ehecatl yztic
nohuiyaq[ui]ça yncani
onohuac ynicani
huehuey altepetlipan
ynopacehuaya[n] ynquauhtla ynin Ehecatl**

*cenca temicti cocolisço
yhuan yquac cencamocohua toztonteco[n]
yhuan ynoccequitlacatl nohuiya[n]
yntlacapna quicocohua yhua[n] cencateapitzaltin
¶ *Inichetlamatli ynEhecatl yhua[n]lauh
ynoccidende
yno[m]pacalaq[ui] ytonatiuh
monamiqui [Ehecatl yehuatl totoqui] oncaquiça
[occentlamatli]
yncani tonacatlalpa Amoquetechiuh**

[A]mo cocolisço
[f. 66r] ¶ *Inicnauhtlamatli yniehecatl ytoca
Septetrional
ytoca tlalpa çierco
ynopan Açì tinemi tlalpan noruegor
yztic yhuanehualo*

here the teacher counts the four
winds
and [explains] where they are born [...]
those born under
what are called the oriental, meridian¹⁷⁸
occidental, septentrional
the first wind comes from
the orient
where the sun rises
its state is very warm
it is a good time, [good]
and it meets another wind
this wind is neither good
nor bad
however, the first to appear
it is not going to harm our body
we are not going to die
the second wind comes from the meridian
during the day (at midday), it is cold
it meets another wind
and this wind is cold
everywhere it appears
it came from
an ancient *altepetl*
this wind is bringing things from over the
Forest
it is mortal, illness
it hurts our head
of some people
the third wind comes from the occidente
where the sun goes down
it meets another wind, the wind is very warm
where it emerges
where it does not do anything to our body of the
land
there will be no illness
the fourth wind is called Septentrional
it is called *tlalpa çierco*
there we arrive to live in the land of *Noruegor*
it is cold [and cold]

¹⁷⁸ Meridianus/meridiana is Latin for noon, midday, and Southern. According to a German to English dictionary from 1798, the ‘Mittagsluft’ (or Meridian) is a ‘Southern Wind or Air, also Noon-Air, a Wind, a Breeze that blows about Noon’ (Ebers, 1798: 697).

monamiq[ui] nocentlamatli Ehecatl
ynopa[n] q[ui]ça tonaya
tlatotoniya ynin heecatl
Amoqlicocolisço
yhua[n] temicti
yh[uan] tlatlaxiçoquitzayana
yntelpa[n] yehica ynizquitla/.../matli
omito ynehecatl
Anquimatis[que] yn amixquichtin
no yhuan huicpa[n] Amo piasque

it also meets another wind
 it enters our body
 something very warm, this wind
 it is not something good, there is illness
 and it is mortal
 and it tears up good things
 the chest, because it is very cold
 there it was said, the wind
 you will know it, you all
 and will not keep it

Now consider a fragment from Repertorio [Valladolid 1554: f.xliii, cursive and translation mine]:

¶ Aquí cuenta al auctor de los q[ua]tro vie[n]tos, y de sus naturalezas, y ta[m]bien como gobiernan la natura humana, los quales vientos son los siguientes. Ori[n]tal, Meridiano, Occide[n]te, Septe[n]trion. [Initial] El primero viento viene de Oriente, de donde sale el Sol, su naturaleza es caliente, y produce muy claro tiempo, y tiene en cada costado otro viento. Estos vientos son buenos, y sanos, que aunque parece que alteran nuestros cuerpos no los bañan. ¶ El segundo viento viene de medio dia, y es frio y humedo, y tiene a cada costado otro viento. Estos vientos son frios y humedos y passan por el desierto de Romalia, y por las partes que son frias y humedas. Estos vientos son muy dañosos a la cabe[z]a y a todos los otros miembros, dañan y provocan mucho las camaras. ¶ El tercero viento viene de Occidente a donde el sol se pone, y tiene a cada costado otro viento que es caliente y humedo de su naturaleza, porque passan por tierras calie[n]tes, y no son dañosos a nuestros cuerpos. ¶ El quarto y ultimo viento es Septentrion, llaman le comumente en esta tierra, Cierço, el qual passa por tierra de Noruega, es frio y seco. Tiene a cada costada otros vientos que vienen de tierras frias y secas, estos vientos son dañosos a los cuerpos, bazen mucho tosser, y bazen aprecamiento en los pechos, y alli segun que estos vientos suso dichos vienen, sepan las personas guardarse dellos.

“Here tells the act of the four winds and of their natures, and also how they govern human nature, the winds are the following. Orient, Meridian, Occident, Septentrion. The first wind comes from the East, where the Sun rises, his nature is warm, it produces clear weather, and on each flank has another wind. These winds are good, and healthy, although they appear to alter our bodies which are not to bathe. The second wind comes from midday, and is cold and humid, and has on each flank another wind. These winds are cold and humid and pass over the desert of Romalia, and over parts that are cold and humid. These winds may be very damaging to the head and the other parts, damaging and [provoking places very much]. The third wind comes from the West where the sun settles and has on each flank another wind which is warm and humid of nature, because they pass warm lands, and are not damaging to our bodies. The fourth and final wind is Septentrion, which are commonly called in this land Cierço, which passes over the land of Norway, it is cold and dry. On its other flanks are other winds that come from cold and dry lands, these winds are damaging to the bodies, causing [people] to cough a lot, and for the chest to be full/closed [with mucus], and [there according to the saying, these winds are coming, known by the persons that hold them].”

It is clear that the Nahuatl manuscript follows a Spanish source text quite accurately. The text begins by naming the four winds ‘oriental, meridiano, occidente, septentrion.’ In both texts, the first wind (accompanied by another wind) is said to be warm and beneficial for people’s health (although the

Spanish text also advises one not to bathe when winds come from the East). The second wind, coming from midday in both texts, is cold and has a negative character. When this wind blows the text asserts that people might experience pain in the head. According to the Spanish text, the same wind can also be damaging to other parts of the body, but not as drastically as the Nahuatl text. According to Izcatqui, this wind is dangerous: *cenca temicti cocolisço*, the illness which its causes can even kill people. Here, the wind does not pass over the desert of *Romalia* but over an anonymous *altepetl*, a pre-colonial political and social entity constructed through consecutive years of royal lineage. This *altepetl* was geographically indicated but is not necessarily equal to the combination of *atl* ‘water’ and *tepetl* ‘mountain’ (Schroeder, 2010: 2; Lockhart, 1992: 14). The third wind in both instances comes from the west, is warm, and is not harmful to people. The final wind, Septentrion, – which goes by another name of *Cierço* in the Spanish text – passes over the land of Norway; both are mentioned in Izcatqui as well. This wind is said to be cold. However, the wind that it is accompanied by in the Nahuatl text is warm. In both languages, this wind is bad and mainly causes problems in the chest area. In contrast to the Spanish text, the reader of the Nahua text is directed to in person *Anquimatis[que] yn amixquichtin* “you will know it, you all...” In the manuscript Mexicain Fonds 381 (National Library, Paris), we also find a reference to the four winds (see also Chapter Three). The text is preceded by a drawing (see Figure 46):

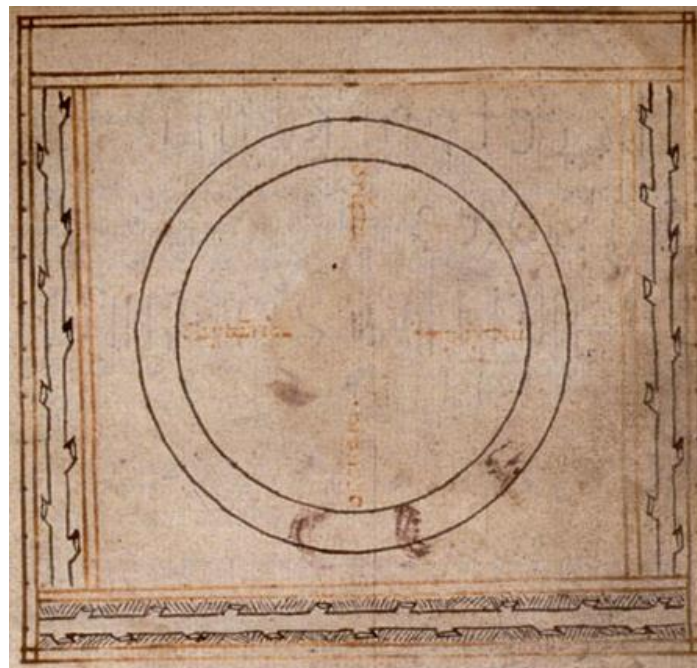


Figure 46. The four wind directions in Fonds Mexicain 381.

Although the words have faded over time, we can discern on the left *septe[nt]rion*, or the northern direction. The word on top reads *orie[n]tal*, or the east. Taking into account the four wind directions with the north to the left, the other two words that are more difficult to read would then be *meridian* (South) and *occidental* (West). This image is seemingly different from the T-O map from any of the Spanish *reportorios* or Izcatqui. In fact, there are no other iconographical elements other than a circle that would point to the image of the earth. There are no features that point to any kind of landscape, either adorned with buildings or with vegetation. Neither does the image from Fonds Mexicain 381 visually copy the idea of four winds by drawing a wind-like motif. The names of the four winds do not adorn the disk-like earth, but rather divide it into four areas.

The text presented is an abbreviated discussion of the qualities of four winds, even if the *tlacuilo* only includes two of them. In the following, the translations of the first two winds of Izcatqui and

Mexicain Fonds 381 are placed side by side below (see Chapter Three for the transcription of the Nahuatl text of Fonds 381):

Mexicain Fonds 381 [f.47r-v]

Here it is counted, the four winds come
some [are] warm, some [are] cold
some illness they bring
one, there the East approaches
second, there the West approaches
third, there the West approaches
fourth, there the North approaches
all winds, it brings all things
the East, it brings the wind, it is very warm
it is very far away
it warms all [on] earth a lot
some time ago
the next wind is very good
we want something good for ourselves
the next wind
there it brings [what] is called the South
[something] cold
we do not want for ourselves, here it is with us,
illness

Ms 3523-2 [f.65r]

Here the teacher counts the four winds
and [explains] where they are born [...]
those born under what are called the oriental,
meridian, occidental, septentrional
the first wind comes from the oriental
where the sun rises, its state is very warm
it is a good time, [good]
and it meets the first wind
this wind is neither good nor bad
however, the first to appear
it is not going to harm our body
we are not going to die
the second wind comes from the meridian during
the day (at midday)
it is cold, it meets the first wind and this wind is
cold everywhere it appears
it came from an ancient *altepetl*
this wind brings things from over the forest
we dream much
we are sick, we hurt our head, of some people

5.2.3.1 The four winds in the *Historia General*

Book 7 of the twelve books of the *Historia General* by Bernardino de Sahagún – entitled ‘*De la Astrología*’ – also includes a description of four winds. The first Wind (*ehecatl*) came from the East and was named Tlalocayotl (derivation from Tlalocan or place of Tlaloc, the God of Rain). This wind was hardly more than a breeze and provided perfect weather conditions to take a canoe and cross a lake safely. The second wind from the North was named after the place it came from: Mictlampla or ‘land of the dead.’ This wind frightened those on the water as it blows too strong for canoes to be out on the water. As a result, this wind was perceived as evil. The third wind from the West was named Ciuatécayotl after the place it came from: Ciuatlampa, “place of women”; i.e. the West. This wind was also known as One Wind or Maçua. Although this wind was not very strong, it was perceived to be very cold and dangerous, deadly even. Apparently, people would shake and experience pains in their stomach, lungs, or head as a result of this wind. However, it would not prevent them from being out on the water, because the wind itself did not frighten them when canoeing. The fourth and final wind described in the Florentine Codex comes from the South and is named Uitztlampa ehecatl after Uitztlampa where it originates. This is the wind that is feared most of all, and that even silences men out of pure terror. It is a violent wind, that tear trees from the soil and destroys walls and huts made of straw. During this wind, the sea is wild, and waves are strong and high, producing a ‘crackling noise.’ It is not safe to be in a canoe; the violence of the wind will lift any canoe high into the air. It is very furious, just as the wind from the North.

The text is then followed by a drawing of a blue sky and 11 stars. The text preceding the description of the four winds treats several appearances of stars (comet; shooting star; S-shaped constellation; and Scorpion constellation). Thus, even though the drawing itself does not represent any

of these appearances, it is related to those fragments. In addition, linguistically it takes more lines in Nahuatl than in Spanish to explain a certain theme, so the *tlacuiloque* had to find a way to balance both texts in order to keep them running alongside one another. One technique to achieve this balance was to incorporate drawings to fill in blank spaces and then to link a Nahuatl text to an otherwise Spanish text immediately next to it. Therefore, where the Spanish text on the four winds already comes to an end in the middle of the left column on folio 236r, the Nahuatl text continues the length of the entire page and even onto the consecutive one. Consequently, there was enough space in the left column for not only the image of the stars but also for a T-O map (see Figure 47). The image displays a representation of the Medieval world, a disk divided into three areas (their names are left out of the image) through an upside-down T incorporated into the disk (mostly the T is positioned as we would read a T, so the *tlacuilo* probably decided in his artistic freedom to change its lay-out). The four winds are represented by four male human figures whose heads are flanked by wings (thus Angels), that blow wind from their mouths. These winds, just as the continents, are not named as such in the drawing.



Figure 47. T-O map in Book 7 ‘de la astrología’ of the Historia General, folio 236r
<http://teca.bmlonline.it/ImageViewer/servlet/ImageViewer?idr=TECA0001503299#page/478/mode/1up>

The sequence of a description of four winds, followed by an image of a T-O map is typical for a number of *reportorios* and is also similar to Izcatqui. The T-O map itself is left unexplained in Sahagún’s work; and the same is true for similar images in Spanish almanacs and the Tropenmuseum manuscript. This raises the question – which I will not attempt to answer here – about how far the treatise on the four winds is representative of Central Mexican culture, and to what extent is it influenced by the literary traditions of Spanish collaborators. The final section of this chapter is both related to the calendar (perception of time, past, present, and future) and cosmos (celestial bodies). The aim is to analyze the astrological fragments that were selected from a Spanish almanac and to consider how they were translated. More specifically, I will focus on the following question: what do these translations tell us about how the *tlacuiloque* conceived the practice and theories of astrology?

5.3 Astrology

The *reportorio de los tiempos* genre developed in a period in which time calculation was directly related to how humans experienced their lives and how they spent their days and weeks accordingly. For most people, tangible activities such as sowing and beneficial or detrimental auguries were what mattered, not the astronomically correct number of days, hours, and minutes within a solar year (DelBrugge, 1999: 6). This is the primary reason why the almanac included what by the end of the fifteenth century was well established in scientific discourse: astrology. In the history of science, astrology has a peculiar biography. At times, it was conceived to be absolutely fundamental, and was taught at universities in Europe during the Renaissance. However, later it became considered to be an ‘irrational disease suffered by western culture’ in the modern period (Hilary Carey, 1992: 5 quoted in Avalos, 2007: 8).

In the last decades, an increasing number of scholars have analyzed (historical) astrological writings for their historical value without portraying it as either occult or pseudo-scientific. Ana Avalos, for instance, studied the place of astrology in the early modern period with a specific interest in New Spain under pressure of the Inquisition. She argues that scholars try to illustrate astrology’s scientific character by linking it to what nowadays is considered *science*: astronomy and medicine (2007: 12). This tendency, according to Avalos, reinforces the dichotomy between what is considered ‘science’ and what not, rather than illustrating how astrology was often taken to be a valuable part of the ‘intellectual landscape’ (*ibid.*:12).

An article published recently illustrates how scientific research today reinforces this dichotomy. A study by Magali Clobert and colleagues (2016) deals with the tangible effects that the daily reading of a horoscope has on people’s performances that day; and they consider for whom an effect would be apparent and why. This study concludes that people tend to internalize the negative or positive expectation (in this case told by a horoscope prognostication) that immediately affects their cognitive performance (i.e. the Pygmalion effect) (Clobert et al., 2016: 349). Prior research had already indicated that people are prone to link their personality type to the description of personality types of their zodiac sign, rather than that of any of the other zodiac signs. In addition, people also tend to relate recent events to those described in a horoscope prognostication (*ibid.*: 349). The authors of the article introduce their study by arguing that “[in] the course of history, it has always been common for people to believe in astrology and other paranormal occurrences; these beliefs have in turn shaped how people behave. While modern people seem to reject magical beliefs, in fact, when measured via subtle techniques, some people do still endorse magical beliefs” (*ibid.*: 349). The conclusions of their study are well argued and very valuable to understand the at times unconscious effects of horoscopes. The dichotomy between what is considered *science* and *pseudoscience*, however, is reinforced through the deliberate contradiction between the results of empirical research and the supposed ‘paranormal’ and ‘magical belief’ involved in horoscopes and astrology.

Brandon Dooley described astrology in an introduction of an edited volume on astrology in the Renaissance as “a form of knowledge that enthralled, informed, inspired, consoled, sometimes enraged, generations of humans, supplying essential material for artists, philosophers, creative writers, healers of every type” (2014: xvi). I consider astrology in full agreement with that statement. It is from this perspective that the text below continues. I will consider the following question: in what way is astrology discussed in Izcatqui and how does the Nahuatl text relate to possible source texts?

The content of Izcatqui was known early in the colonial period and Izcatqui itself was read in the mid-eighteenth century, so the readership of European astrology covers at least 200 years. This immediately makes it important to understand how astrology was perceived in this period by scholars – both indigenous and Spanish – and from inside and outside the colony as well as authoritative powers. And, moreover, it makes it important look into why European astrology was a topic of interest for an indigenous readership.

5.3.1 Great wise men, the astrologers *huehueitin tlamatineme yn astrologosme*

The first reference to astrology in Izcatqui is dedicated to astrologers, or as they are described in Nahuatl, *tlamatinime*, or great wise men [lit. they who know]:

[f.23r]

<p>¶ tlatlani in tlamatini tlei quitoznequ/i/ horas__ [f. 23v] [Initial] <i>In yehuatl hora</i> <i>quitoznequi ytequi/uh</i> <i>yntonatiuh yn yehuantin</i> <i>canpato/oncate</i> <i>huehueitin tlamatinime yn as/trologosme</i> <i>huelquimati y[n] metztli</i> <i>yn/ quenin momalacachohua yncemilhuitl</i> <i>ce/yohual [...]</i></p>	<p>the teacher asks questions about what the hour is the hour that is, its duty [of] the sun and they they just played, they were there the great wise men, the astrologers who know well of the moon how they turn themselves, each day each night</p>
--	---

The astrologer was thus someone who knew of the cycle of the sun and the days and the nights. The reader of the next folios of Izcatqui is being informed about the layers of the cosmos and their occupancy by planets according to Ptolemy. The astrologer is not explained in further detailed until folio 33r. There, the astrologer is described as the one who observes the stars and the constellations that make up the Zodiac signs (see also page 20):

[f. 33r]

<p><i>nica¹⁷⁹ mitoz</i> <i>ca no cenca monequi</i> <i>yehuatl huelquimatis huelquitas</i></p> <p><i>huel huehuetque Astrologo</i> <i>ynqueni¹⁸⁰ cencan ya[black stain]can</i> <i>momachiyotia</i> <i>ca mochiuh ticate yciciltin</i> <i>in quexquich huei in quexquich in tepiton</i> <i>ic mocentlalia</i></p>	<p>here it will be said it is very necessary that they will know it very well and that they will say it very well the great ancient astrologer[s] how [...] to observe</p> <p>the occurrence of stars the many great, the many small when they are gathered</p>
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The *reportorio* of Sancho de Salaya of 1542, says the following in the paragraph on the hour in connection to the astrologer:

<p>¶ <i>De las horas.</i> <i>De quantos antiguos leemos: los de egipto</i> <i>fuero[n] los mayores y mas ciertos astrologos:</i> <i>y los que mas supieron en los cursos</i> <i>del año: de la luna y del sol</i></p>	<p>Of the hours of how many ancient we read, the Egyptians were the greatest and most correct astrologers and those who knew the most on the course of the year: of the moon and the sun</p>
---	--

The remainder of the paragraph in both languages is quite similar in that it explains the Egyptians naming the hours after one of their gods Horus, who is said to be equal to time. Contextual information that is not provided in the *reportorios* in both languages is that Horus was one of the Egyptian sky gods (Lesko,

¹⁷⁹ Read as *nican*.

¹⁸⁰ Read as *inquenin*.

1991: 93). He is often depicted as a man with the face of a falcon and represented the reigning king of Egypt (*ibid.*: 93). During one of several fights with his uncle Seth, who killed his father Osiris, he lost one eye but triumphed. His surviving eye came to represent the sun and the other eye the weaker luminary moon (*ibid.*: 93). In the *reportorio*, we read ‘[e] los egipcianos le llamaron Horus, que quiere dezir tiempo, ca el es el que con su curso discorre los tiempos’ (the Egyptians have named it Horus, which means time, because he, due to his course, invented times’ (De Salaya 1542). In Izcatqui this is translated as ‘*auh yn ecipto tlaca quitocayotia Horas quitoznequi tiempos anoço tonatiuh* (‘and the [E]gyptians have named it Horas, which means time or ‘sun’). The word *tonatiuh* is literally translated as ‘sun’ and as the visible movement of the sun is linked to visible changes of light to dark and back to light again, it is also that which makes the day.¹⁸¹ The astrologer in the Nahuatl text is not related to any Egyptian astrologer but is characterized as someone who is great and trustworthy: a *tlamatini*. The astrologers are characterized as persons who are knowledgeable, *huehueitin tlamatinime* or ‘great wise men,’ and those who are part of a discipline with a long history, *huel huehuetque Astrologo* or ‘great ancient astrologer[s].’ For the Nahuatl writers and readers of Izcatqui, the word *tlamatini* had significant connotations that will be explained below. It seems likely that this word was chosen to describe astrologers in such a way as to enhance the authority of their work and accomplishments. Any link to a great Egyptian ancestry was left out – perhaps because people did not necessarily have to be from Egypt in order to be knowledgeable.

Anthropologist and important scholar of Nahuatl texts, Miguel León-Portilla, has written extensively about the *tlamatini*. He published his book *La Filosofía Náhuatl* in 1956 in Mexico. This was the beginning of a long career in which he followed in the footsteps of his teacher Ángel María Garibay Kintana. They both promoted the study and translation of Nahuatl texts and offered their own interpretations. His books have appeared in numerous editions and translations and he is a true authority within the discipline. However, his work, and that of Garibay as well, have not only been applauded but are also under scrutiny.¹⁸² For example, in his *La Filosofía Náhuatl* León Portilla aims to analyze if Nahuas experienced a ‘restlessness of spirit’ that would have, as in Greek philosophy, resulted in a ‘rational inquiry’ of where humans come from and where they are going (1990: xxiii). This illustrates how León Portilla searched for a way of thinking by indigenous peoples that measures up to a Western standard, and more crucially what he termed ‘intellectual progress’ (*ibid.*: 8). We should, however, take into account the age in which León Portilla was educated when evaluating his work.

The aim in the remainder of this subsection is to illustrate how Izcatqui’s reference to the *tlamatini* has a larger connotation than purely its literal translation as ‘wise men’, and León-Portilla’s work serves as a good starting point. The first observers of (central) Mesoamerican culture wrote about these “wise

¹⁸¹ Yucatec Maya *k'in* and Quiché *k'ij*, in line with other Highland Maya languages, have the same character as the Nahuatl *tonatiuh*. The words signify both ‘sun’ and ‘day’ and through metonymy, also signify time in general (Tedlock, 1982: 1).

¹⁸² See, for example, the critique on the legacy of these scholars in the article by Jongsoo Lee (2014). He argues that after the Mexican Revolution (1910-1917) scholars had a role in the process of nation building and the formulation of ‘a Mexican identity’ as ‘mestizo.’ This creation of a mestizo identity, according to Lee, was a political means to homogenize the nation through the oppression of indigenous identities and substituting them with European values. The works by Garibay and León-Portilla inspired contemporary Nahuatl literature, however, both scholars focused on alphabetic writing which in their eyes, were not much affected by a European influence. According to Lee again, this is a false presumption to start with. By selecting alphabetic texts that went through a ‘colonization’ of their own, and the study and division into genres according to a European classification of literature, modern Nahuatl writers (who themselves had been taught by Garibay and León-Portilla ‘non-indigenous, white scholars’ how to write Nahuatl) were trained to produce texts in their own language, but in accordance with a European system of literature. Therefore, the ‘Europeanization of Nahuatl literary genres’ enforces a colonization and even participation of contemporary Nahuatl writers of their own culture (2014: 41; 44).

men.” For example, the Nahuatl contribution of Bernardino de Sahagún’s Book X of his *Historia general de las cosas de Nueva España* includes the following about the *sabio* or *tlamatinime*:

“The wise man: a light, a torch, a stout torch that does not smoke. A perforated mirror, a mirror pierced on both sides. His are the black and red ink, his are the illustrated manuscripts, he studies the illustrated manuscripts. He himself is writing and wisdom. He is the path, the true way for others. He directs people and things; he is a guide in human affairs. The wise man is careful (like a physician) and preserves tradition. His is the handed-down wisdom; he teaches it; he follows tradition. His is the handed-down wisdom; he teaches it; he follows the path of truth. Teacher of the truth, he never ceases to admonish. He makes wise the countenances of others; to them he gives a face (a personality); he leads them to develop it. He opens their ears; he enlightens them. He is the teacher of guides; he shows them their path. One depends upon him. He is the teacher of guides; he shows them their path. One depends upon him. He puts a mirror before others; he makes them prudent, cautious; he causes a face (a personality) to appear in them. He attends to things; he regulates their path, he arranges and commands. He applies his light to the world. He knows what is above us (and) in the region of the dead. He is a serious man¹⁸³. Everyone is comforted by him, corrected, taught. Thanks to him people humanize their will and receive a strict education. He comforts the ears, the comforts the people, he helps, gives remedies, heals everyone.”
(León-Portilla, 1990: 10-11)¹⁸⁴

The *tlamatini* is characterized as a guiding light for many: he or she is a bright mirror, is well-read, and is a model for others. He or she is also an owner of codices and *is* writing and wisdom. The words *in tlilli in tlapalli* (the black, the colored¹⁸⁵) is a reference to two colors that were used in painting the iconography onto the codices (Boone 2007). The codices themselves contain different types of information; historical narratives of rulers, their genealogy and their origin, and books of a religious and calendrical nature that were used during rituals and consultations. The *tlamatinime* not only owned these codices but were also the ones who were able to read their complex iconography. Sahagún’s work mentions *tlamatinime* (the wise ones), *tonalpouhqui* (counters of the days), *tlapouhqui* (counters of something) and their practices, but, in fact, they are all *tlamatinime* who possessed great, ancient knowledge and functioned as (inter)mediaries between people and divinities. Several chroniclers translated *tonalpouhqui* (counters of the days), *naoalli*, and *tlacihqui* as ‘astrologers’ just because their status and practices were so similar to the astrologers that they knew. In terms of cultural translation, the interpretative party searched for a word that for a reader of the target text (in this case Spanish) would be familiar and which would relate it directly to something that was well-known from their own cultural background. There were several disciplines in which the relative position of the celestial bodies had an importance, such as for medical and agricultural purposes (see Chapter Six).

¹⁸³ The Nahuatl text is *aquequelti* which can be translated as ‘to be proud, not to be ridiculed.’ The Nahuatl text does not provide a gender to the *tlamatini* and the third person object is also without a male or female connotation. Therefore, I do not agree with the translation of ‘he is a serious man,’ and I would argue instead that the ‘he’ reference in the fragment should be substituted with ‘he/she’ In fact, in contemporary indigenous communities the term wise person is applied both to women and to men (see Macuil Martínez 2017).

¹⁸⁴ The Spanish contribution in Sahagún is not a complete translation of the Nahuatl text and leaves out critical information. For example, the Spanish text fails to describe the *tlamatini* as one who owns books and is knowledgeable about the realm of the dead.

¹⁸⁵ According to my understanding, *tlapalli* can not be translated literally as ‘red’ but as ‘color’ (Molina, 1970: 27). In Spanish there are the words *coloreado* and *colorado*, these perhaps were used interchangeably. See also Townsend (2017) who argues that black and red ink are taken together in speech were synonymous with the act of writing.

5.3.2 Reading the Zodiac signs

Each of the twelve Zodiac signs is discussed in detail in Izcatqui and their discussion is repeated no less than three times. The first description of the constellations is preceded by an introduction on folios 36 and 37 – folio 117r in de Li.

<p>[f.35v] <i>Inic chicnauh tlamatli yn ilhuicatl</i> <i>Amotle itechca yçitlaltin Anoço planetas</i> <i>yhuan yehuatl quincuepa</i> <i>ynitz [f.36r]qui tlamatli yn ilhuicatl quimalaca</i> <i>chohua conaxitia</i> <i>yn ipan yn itequiuh</i> <i>cenpohuallamatli omei horas</i> <i>yn quinamiqui yn oc nauhtlamātl yn ilhuicatl</i> <i>¶tlatlani ytemachtiani</i> <i>tlenquitoznequi yn Signus</i> <i>in yehuatl Signus miec tlamatli</i> <i>quitoznequi yn oc centlamatli quitzonequi</i> <i>Machiyotl [...]</i> <i>machiyotl</i> <i>namiquiliztli Anoço tlazaloli [...]</i>¹⁸⁶ <i>ca yuh tiquitoque miyacpa machiyotl [...]</i></p>	<p>the ninth sky is not with the stars or the planets and it turns them clever thing, the sky turns it, and there it arrived that is its duty 23 hours it meets the four sky [skies] [the/its] teacher asks questions what the Sign wants to say the Sign is many things that is, in another way, that is Machiyotl [sign] the meeting or adjustment we see the sign many times</p>
<p><i>inezcan</i>¹⁸⁷ <i>yn aquin iztlacatini Anoço tlaneltiliani</i></p> <p><i>i[n] nelli quitohua yehuatl</i>¹⁸⁸ <i>yc mitohua tlanelliztli</i> <i>tlaqualtloni Auh yn occenci mitohua [</i></p> <p><i>ca quitoznequi testigo</i> <i>y yniuh tiquitohua yniuh tictocayotia</i> <i>in aqui</i>¹⁸⁹ <i>huelnemi</i></p>	<p>its sign, who is a liar or someone who tells the truth something good, it says it when it says something good a provider and in a particular place it is Said that is, proof/witness thus we say it, we give it a name [who] live well</p>
<p><i>yn ipan miqui yniquallachihualiz</i> <i>yehica mitohua tlaneltiliani testigo de fe</i></p> <p><i>ca yntla catlaneltocani q[ui]chihuaz</i> <i>Auh yn occeci mitohua Signus</i> <i>Quitoznequi</i> [i.36v] <i>Armas tlahuiztli Anoço Altepetylacuiloli</i> <i>ynic quiximatiz</i></p>	<p>and which good works of faith die since it is said, something proves to be true, proof of faith if it is a believer, it will do and in some place it is said [to be] a Sign that is insignia¹⁹⁰, <i>tlahuiztli</i>¹⁹¹ or the chronicle may it thus be known</p>

¹⁸⁶ Patientive noun from *zaloa* ‘something glued/stuck together’.

¹⁸⁷ *nezçayotl* ‘sign, token, gift’ (Karttunen, 1983: 172).

¹⁸⁸ Read as *in yehuatl*.

¹⁸⁹ Read *in aquin*.

¹⁹⁰ Items or symbols to indicate someone’s dignity, also used to name the physical liturgical appearance of dignity – ring, cross, headdress of a bishop etc.

¹⁹¹ *Tlahuiztli* according to Molina translates as ‘arms and insignia.’ In pre-colonial Nahuatl, this term was used for arms and legs plates to protect an Aztec soldier or warrior priest, its hairdo, or his shield. Being a visible object or symbol, it represented the hierarchical status of warriors, each military rank assigned with specific items and hairstyles (Osvaldo F. Pardo, 2006: 68)

yn quenami ceceyaca yyaxca
 Auh ynocceeni mitohua Signus
 quitoznequi yn quenami techtiqui
 Techyacana
 çan iuhqui in mitl
 inic tlamina in canpa
 yauh no iuhqui in çitlalin
 in aquin quiyacana
 intlanelocauh in ipampa
 inic titenonotzan
 ic titocenlalia in machoz
 in iximachozque imatlactl omome S[ignu]s
 inic xexliuh ticate in cexiuhlapohualli
 [in] ipan motlalitiuh ylhuicatl yntonatiuh
 caxtol[poh]ualli ome y huan macuililhuitl yhuan
 macuilli hora

in cenemiquiliztica
 yniuhotiq[ui]toque tlacpac
 Auh yehuantinin
 ARIES. TAURUS. GEMINIS. CANCER. LEO.
 VIRGO. LIBRA. SCORPIO. SAGITARIUS.

CAPRICORNOS. AQUARIUS. PISCIS.
 [Initial] Inic matlactlomome Signus
 ypancate ynic chicuey ylhuicatl
 yca ymixiptla yuh quiteytitia
 in occenclamtli
 machiopan çitlaltin

The text continues:

in tlaco yetiuh
 yntoca meçionales yhuan Septenchionales
 yn ye mochi yn izquitetl
 o[m]pohualli onchicuey machiyotl figuras
 Ç Auh nican mitoz quezquitetl çitlallin
 q[ui]pia ynrece gignos¹⁹³
 yhuan quezquitetl ynrece machiyotl
 ynitoca [Septendrionales]
 cenpohualli o[n]ce quezquitetl quipia Signus

in what manner all, now and everywhere
 is said by the Sign
 that is, how it governs us, it governs us
 it makes us go directly
 like an arrow
 thus it is shooting arrows
 that move like the stars
 who it governs
 [unclear]
 thus we consult someone
 we gather ourselves, it will be known
 let the twelve signs be known
 they are divided in one year count
 the sun goes and settles itself in the sky
 365 days and five hours [in de

Li : ‘ccc.lxv dias y un cuadrante como
 arriba diximos’]
 is one meeting
 as we have said it above
 and they
 ARIES, TAURUS, GEMINIS, CANCER, LEO
 VIRGO, LIBRA, SCORPIO, SAGITARI
 US
 CAPRICORNOS, AQUARIUS, PISCIS
 the twelve signs
 are in the eight sky
 their image makes someone see
 things in another way/other things
 stars [are] in the place of the sign

¹⁹² The term “48 signs/figures” refers to the scholarly heritage of Ptolemaeus’ *Almagest* and its description of the 48 constellations seen from the Northern Hemisphere. Those visible in the Southern Hemisphere were known to people living south from the equinox. The translator of Izcatqui remains loyal to the source text, not adding another 40 constellations seen from the Southern Hemisphere, which were often added to documents about cosmology in the sixteenth to eighteenth century.

¹⁹³ Read as ‘signos.’

¹⁹⁴ Read ynrece as ‘many’ or ‘old.’

intoca Merichionales
caxtoltetl occequin miyec tlamatli
niquitoznequi yn cenca monequi
yuh ayamo co[...]/qui
yno tlaçotzopelicayollo Auh ca za[n] yehu[at]

are named Meridionals
 there are fifteen or more
 I want to say it, it is very necessary
 [...]

nican niquitoz yn quenin tlapac omito [...]
 above [...]
Aoctle centlamatli quitoznequi
caza ye y[x]qch ynemiya[n]yn chan yn tonatiuh
yac[...]/c[...]/to
motlaliz ynizquitetl matlactl omome Sig[no]s
ynitlamiliz yxihuilitl Anoço ynitlacatliliz
yn tonatiuh ca oncan tla[n]tiuh

here, I will say it, as how it was said
 [...] nothing, that is
 all is the home of the sun
 [...]
 the twelve signs will all settle themselves
 [at] its end of the year or its birth
 the sun

yn o[n]can mocaltitiuh Tonatiuh

the sun is going to build itself a house
 there

yn ican matlatctli omome Signus
ça no yuh quitoca yhuehuetque
yn onpa tlacati hualquiça Tonatiuh
y yehuatl Signus techititiya
yn ical tonatiuh quinamiqui anoço
 [f. 38v] *Anoço ça no yuhqui inin Signus*

at some time [in one of] the twelve signs
 they follow them, the elders
 there is born, here emerges the sun
 the signs have revealed themselves to us
 they meet the sun's house, or
 or this sign is going to set something in
 order

yn ican tecpantoc cecenyacan Etss.[sic]

each governs us etc.

5.3.2.1 Domesticating the Zodiac signs

The terminology of the Zodiac signs derives from an occidental context; the names of the Zodiac signs themselves have their origin in the Latin language. Prior to the introduction of their terminology in the New World, these words were unfamiliar and thus it is of interest how they are rendered in Izcatqui. Several segments of ms 3523-2 describe the Zodiac signs in their respective sequence of twelve in a variety of characteristics (f.37v-46r; 76r-78r [second]; 97v-102r; 1010 [sic]-102 [second]). Figure 48 summarizes the names of the twelve signs, which for some also include Spanish terms (Aries is a *carnero* or ram; Sagittarius is referred to as *cahuallo* [*caballo*] horse or *centauro* [centaur]; Capricorn is a *cabra* or goat). It is unclear why only three are described in Spanish and the other nine are not. From the descriptions it is evident that the authors have searched for descriptions that describe the image of the Zodiac in question or provides the reader with an image that most closely resembles them. Thus, Aries is *oquichichcatl* or 'male sheep' and Leo, and as there are no lions in the Americas, is *ocelotl* or 'jaguar.'

Zodiac sign	Nahuatl	Spanish
Aries	<i>oquichichcatl</i> "male sheep"	<i>carnero</i> "ram"
Taurus	<i>quāquahê</i> "ox, cow, bull"	
Gemini	<i>omentin pipiltzitzintin</i> "two children, twins" (REV)	

Cancer	<i>tecuictli</i> “crab”	
Leo	<i>ōcēlōtl</i> “jaguar”	
Virgo	<i>ychpochtli</i> “young woman”	
Libra	<i>tlatamachihualōni</i> “scale” (composed form)	
Scorpius	<i>cōlōtl</i> “scorpion”	
Sagittarius	<i>maçātl</i> “deer”	<i>cahuallo, centauro</i> “horse”, “centaur”
Capricornius	<i>quāquauh tēntzon</i> “horned animal with beard”	<i>cabra</i> “goat”
Aquarius	<i>celacatl atetecac</i> “one person by the water”	
Pisces	<i>michintin</i> “fishes”	

Figure 48. Table with the names for the twelve Zodiac signs in Nahuatl, some in Spanish as well.

In a similar vein to a *reportorio*, each Zodiac sign presented in Izcatqui is explained according to the physical characteristics of the sign itself. What is interesting about the figure of the Virgo depicted in Izcatqui is that the drawing does not follow the classic tradition of depicting a ‘pure’ woman next a unicorn.



Figure 49. Virgo holding two flowers in a *reportorio* by Tornamira [Pamplona, 1585].

Figure 50. Virgo in Izcatqui [f. 41v].


Printed edition de Salaya [1554]	Drawn version Izcatqui
	
	
	
	
	
	
	



Figure 51. Table with Zodiac signs from De Salaya and Izcatqui.

This is all the more striking since this is exactly how Virgo is depicted in the reportorios by de Salaya [1554] and Ambrosio de Gante [1581], which appear to be the sources most likely used for Izcatqui. Instead, the Nahuatl document depicts Virgo as a woman holding either one or two flowers.¹⁹⁵

A representation of Virgo wearing a padded shoulder dress and holding one flower in each hand (as is drawn on folio 41v (see Figure 50) is, however, very similar to her representation on page 55 of the *reportorio* by Francisco Vicente de Tornamira (see Figure 49) [Pamplona, 1585]. The motivation for

¹⁹⁵ On folio 31v in Izcatqui, Virgo is depicted as an undressed woman holding one flower who appears to be standing in water. On folio 41v, she is depicted as a woman apparently dressed in a dress with padded shoulders and holding a flower in each hand (see the image in Figure 50). These images are different from yet another representation of Virgo in the Maya Chilam Balam of Kaua, in which the kneeling Virgin does not carry flowers but a branch. She also holds a star close to her heart. Bricker & Miram write that “[t]he star probably represents the Sun, whose house is the sign” (note 802 in 2002: 213; see also figure 55 on page 215 (page 90 of the Kaua)). Perhaps this star does not so much refer to the sun but to the light that comes from and which is the good heart of the Virgin. This is seen in images of the Most Immaculate Heart of Mary, in which Mary is portrayed with a shiny heart in her chest and often holding a branch of lilies in one hand.

representing Virgo as a young lady next to a unicorn derives from the classical period, not so much in mythology but in the natural historical writings of, for example, Plinius (Pliny). In the Medieval period, the representation of Virgo became an animal that could only be trapped and tamed by a young maiden that stood for the Virgin Mary; a relationship that represented chaste love and faithfulness within a marriage. These images are present in, for example, the *reportorios*. The Virgo image in Izcatqui probably refers to another image of Virgin Mary known from religious iconography.

5.3.3 Astrology in colonial Mexico (sixteenth through eighteenth century)

The earliest travellers to the new continent navigated by the relative positions of the stars, planets, sun and moon, and so benefitted enormously from the predictions of astrologers. This reliance on astrologers only continued further during the initial process of colonization by Cortés and his men. It is fair to say, therefore, that the calculations and predictions of astrologers were taken seriously into consideration. We have seen already that the Christian Church supported the practice of astrology from the thirteenth century onwards. This notion is supported by Weckmann's claim that "at this time [of early colonization] astrology and religion had no quarrel with one another [...] the first Dominicans to arrive in San Cristóbal in 1545 [were seen as] good omens, "as good Christian astrologers"" (Weckmann, 1992: 558).

Weckmann relates the introduction of European astrology to a culture that had similar practices of predicting the future. Following this line of thought, it is helpful to consider the Nahuatl calendar system, which was composed of two cycles: a 260-day cycle existing of twenty periods of thirteen days each (*tonalpohualli*) and a 365-day cycle existing of eighteen periods of twenty days, plus five unlucky days to close each cycle (*xiuhpohualli*). The days of the *tonalpohualli* were recorded in a *tonalamatl* ("book of days"), and this pictorial book recorded its 260 days and the different deities who exerted their influence on them. These pre-colonial documents had a ritual and prophetic character for the upcoming *tonalpohualli*. because the document functioned as a manual – most notably in the form of a mnemonic device. This manual, then, would have aided its priestly authors to undertake the ceremonial activities that had to be carried out on specific days of the year. Priests consulting such a pictorial work interpreted the images related to the days and determined whether a day would be lucky or unlucky. Furthermore, priests would consider to what extent an individual's actions determined one's or another's fate on a particular day (Quiñones Keber, 1995; Siarkiewicz, 1995).

In her work on the sixteenth-century codex Telleriano-Remensis, Eloise Quiñones Keber explains that "the prognostications of the *tonalamatl* governed every aspect of human endeavour at every level of Aztec society, sacred and secular, public and private, from birth to death, from commoners to rulers [...]. A diviner might be asked to select a propitious day to cure an illness or confess one's sins [...]." (Quiñones Keber, 1995: 154). She also explains, quoting Diego Durán, how the *tonalamatl* served to help regulate agricultural activities such as sowing, cultivating, and harvesting, and that it even had an impact on the activities of bathing and on the consumption of certain foods. Referring to the colonial period, Quiñones Keber explains: "the survival of the *tonalamatl* into the postconquest period is a remarkable phenomenon considering its esoteric nature and the fact that its connection with divinatory rituals marked it and its possessor as a target of suspicion by Christian missionaries and ecclesiastical authorities" (*ibid.*: 153). She continues by stating that the cyclical perception of time by Nahuas was likely to be regarded with curiosity by Spaniards as the result of their more linear perception of time, and thus "the eventual disappearance of the *tonalamatl* in the process of Christianization was [...] ensured" (*ibid.*). Interestingly, Franciscan missionary Motolinia considered the *tonalamatl* to be an ancient and noteworthy calendar and compared its images to the Zodiac signs and the planets found in the European calendar (*ibid.*). Although the *tonalamatl*, unlike the *reportorio*, was not related to the stars and heavenly bodies, it was also a handbook with regulations for diverse activities.

Historical sources that tell us observing the sky was a common occupation of the Nahuatl nobility in pre-colonial times. Certain celestial observations such as those of comets and eclipses would convey

a feeling of unease, as these were omens of terrible events – at least according to Spanish authors such as Bernardino de Sahagún (Aveni, 1980). As was pointed out by Anthony F. Aveni in his work *Skywatchers of Ancient Mexico*, however, interpreting the meanings of celestial events is not unproblematic. According to Aveni, the problem in “identifying the celestial percepts of vanished cultures is that we often make too many assumptions about what those people must have seen” (1980: 30). The Western zodiac represents a context-sensitive segmentation into 12 constellations over a narrow band across the ecliptic, and Aveni discusses several sources and tries to determine whether or not non-Western depictions of constellations were similar to the European zodiacal constellations. By the time Aveni published his book, the arguments in favour of a Mesoamerican zodiac comparable to the European model are so limited that they did not firmly point to such a perceived concept. A closer look at this comparison remains an open subject for future studies.

There has been a lot of debate amongst European scholars on the American continent about the effects of the celestial bodies on the appearance, characteristics, and health of the ‘Indian.’ This debate is carefully described in an excellent paper by Jorge Cañizares Esguerra (1999): *New World, New Stars: Patriotic Astrology and the Invention of Indian and Creole Bodies in Colonial Spanish America, 1600-1650*. The article discusses how the European theoretical heritage, brought by colonists in the shape of astrology and Hippocratic physiology, determined a “scientific racism that claimed there were innate bodily and mental differences separating peoples from one another” (*ibid.*: 35).

In the last chapter we already encountered references to the belief, common in medieval times, that every individual carries four “humors” – blood, phlegm, and yellow and black bile – which determines one’s physical appearance and health. An imbalance due to excess of one of the humors was to be repaired by extracting some of that particular humor. In accordance with European astrology, stars and the relative positions of planets were taken to influence the humor ratio, and therefore had an impact on the health and “nature” of Europeans, Native Americans, and Creoles living on the continent. These “natures” were taken to be responsible for certain characteristics – such as intelligence – and also for the ways in which the body was susceptible to epidemics.

To avoid the conclusion that *everyone* on the continent – that is, both Europeans and Native Americans alike – would be influenced in the same manner by the celestial bodies, a new theory had to be devised. Thus, Spanish physician and long-time resident in the Indies, Juan de Cárdenas, “authored a book [...] [for which] it could be argued it was the first modern treatise on racial physiology” (*ibid.*: 60). He explains at great length how complexions differentiate Creoles from natives in multiple chapters of his *Problemas y secretos maravillosos de las Indias* (Cárdenas, 1988). Cárdenas focussed in particular on the distinction between “natural” and “accidental” complexions. Natural complexions were those characteristics inherent to anyone native to the continent and the accidental complexions were those characteristics which were caused by the environment due to a build-up of extra phlegm. Cárdenas argued that Creoles took on an accidental complexion in the American continent and, as a result, developed a naturally sanguine and choleric temperament – “la complexión más alabada y aprobada” – the best temperament anyone could have (*ibid.*: 210). The environment and heavenly bodies, however, could not change the natural complexion, so Cárdenas answered the question about whether or not colonists could change into “Indios” in the negative (*ibid.*: 215). Cárdenas’ theory furthered the idea that European origin was preferable. The theory of natural and accidental complexions would linger on at least until the seventeenth century, during which time several authors turned to Cárdenas’ writings for support of their own ideas (cf. Enrico Martínez and Franciscan friar Agustín de Vetancurt in his *Teatro Mexicano* [1696] (Cañizares Esguerra, 1999; Weckmann, 1992)).

The practice of and theorizing about astrology was very much present in scholarly discourse in the years following the Spanish arrival in Mesoamerica. Astrology, however, was not appreciated by the Spanish Inquisition and its Holy Office. This Spanish institution was formally established in the New World in 1571, but inquisitorial acts started early, after the arrival of the first Franciscan bishop Juan de

Zumárraga in 1528 (Moreno de los Arcos, 1991: 29). The Holy office was faced with the task of subduing native religious acts in favour of Christianity. People native to New Spain as well as those of European descent were deterred from practicing anything other than the Catholic faith (introduction Perry & Cruz, 1991; Moreno de los Arcos, 1991). At least seventeen individuals were tried in the period from 1582-1654 “for practicing astrology or for having books on the subject in their libraries” (Weckmann, 1992: 561). In direct contrast to the agenda of such prosecutions, the University of Mexico City – established on September 21st, 1551 – had an official chair of astrology and mathematics from some time in the first half of the seventeenth century onwards (Silva Herzog 1974; Cañizares Esguerra 1999). The first holder of that chair – Diego Rodríguez – was being kept under close watch by the Inquisition, and his membership of Christian associations was no doubt influenced by his witnessing of several of his peers being tried by the Inquisition and by him not wanting to undergo the same fate (Cañizares Esguerra, 1999; Weckmann, 1992).

Two of the most interesting questions in relation to Izcatqui are (i) why was it created and (ii) why was it read? And one can ask a further, supplementary question: what was the attraction of the *reportorio* at large and astrology in particular for both the makers of such a manuscript and for its readers? These questions are not only relevant for the study of Izcatqui, but also for the study of translated *reportorios* in other indigenous languages that we know of. My argument now is that part of that explanation for all these questions lies in the divinatory character of astrology.

5.3.4 The art of divination - Attraction of astrology to an indigenous readership

“This pestiferous superstition stands so [firmly] introduced among these Indians that there are many who live from it alone and support themselves as with a profession, to whom the needy ones come with their doubts and difficulties as to an oracle, thinking to find in them a remedy for their travails and a resolution of their doubts.”
(Ruíz de Alarcon, 1984: 142)

The description above – taken from Mexican Hernando Ruíz de Alarcon’s 1629 work, *Tratado de las supersticiones y costumbres gentílicas que oy viuen entre los indios naturales desta Nueva España* – is part of his fifth treatise ‘About the seers and superstitions of the Indians as regards divination’ (translation by Andrews and Hassig, 1984: 141). This treatise is part of his documentation of several religious traditions and medicinal practices and is “one of the most important sources of early colonial Mexico [..]” (Andrews & Hassig, 1984: xvii). The quote above filters out two factors related to divination in colonial Mexico. First, divinatory practices were more often called superstitious by chroniclers in the past, because they were related to diverse ‘barbarian’ and ‘heathen’ cultures that needed to be re-educated to meet ‘European standards.’ Second, the quote above, although from a distrusting point of view, strikes at the core of divinatory practices in general: whenever doubts or troubles arise concerning a specific decision to be made that could influence near future events, consulting a diviner creates a state of calmness, confidence, and relief that soothes the worrisome thoughts surrounding the taking of such a decision (Zeitlyn, 2001: 233).

The word ‘divination’ is derived from the Latin verb *divinare* “to foretell, prophesy, forebode, divine the future” (Tedlock, 2001: 190). Roman politician and philosopher Cicero wrote in his *De Divinatione* (1st c. BC) that the Romans named the ‘most extraordinary gift’ [i.e. divination] after a word derived from *divi* “gods” (1923 [44 B.C], Book I: 223). Divination, according to the Romans, was an ‘inductive’ type of divination, so there was no forecasting by a diviner able to receive insights on future events. Moreover, the presence or absence of natural phenomena were taken as indications of the gods approving or disapproving of an act that was even, on occasion, yet to be performed (Tedlock, 2001: 190). In her work from 1996, *Magic and Divination in Ancient Palestine and Syria*, Ann Jeffers states

that “[d]ivination is the art of reading signs in which the future lies hidden” (Jeffers, 1996: 1). The ultimate goal of foretelling the future is, in the words of Sarah Iles Johnston, ‘straightforward’: it is the goal of collecting knowledge that would not have been known without divining (2008: 3). However, situations in which divinatory knowledge is sought after are not solely related to the future:

“Divination has been consistently represented as a stepping-stone between pondering a problem and acting to resolve it, whether by ritual action or otherwise. It is a means of clarifying thought, of answering recondite questions.” (Zeitlyn, 2001: 225)

“Divination is a broader inquiry into life circumstances and meanings, [and related to healing processes] of which diagnosis of the immediate causes of malady is a part. [...] divination is putatively concerned with acquiring information used in decision making.” (Winkelman & Peek, 2004: 3, 4)

Stephen Karcher has written extensively on “I Ching divination” in China, and he considers the basis of divination to be a combination of two groups of meanings (1998: 215). The first is the ability to use an insight based on magic to see things that are blurred by irrational or supernatural means. The second meaning entails that the insight gained through divination is somehow linked to a god that offers a particular symbol to the diviner interacting with that deity (*ibid.*). Karcher refers to Carl Jung’s writings on human interaction with consciously imagined symbols termed the “Transcendent Function” (1998: 216,220). According to Jung’s thesis, there is a human tendency to attach meanings to objects that are not visible to the eye and that therefore go beyond their sheer materiality. The interaction between humans and “spiritual forces” is said to be made visible by the symbols that a diviner uses: a form of divinatory language (Karcher, 1998: 216). Facilitating the emergence and development of language involves the coming together of several components in the process of divining. This ‘synchronicity’ refers to the unlikely uniting of events that occurred in different time periods (past and future, for example). It is in this state of being that spirits decide which symbol(s) to lay before the diviner – spirits occasionally taken to be demons, once seen as mediators, but with the proclamation of monotheism now also taken to be fallen angels roaming with the Devil (Karcher, 1998: 221).

According to Jeffers, divination must be understood within a cosmological context, since it is this context that creates and endows meaning to the signs that are being read (1996: 2). With this in mind, defining divination would not be complete relating it solely to foretelling the future. Divinations are dynamic traditions embedded in a dynamic creation of links between the past, present, and the near future in which symbols have acquired ample validity to be used. Therefore, divining is not limited to foreseeing the future only, because the process of divining is just as important as its outcome. Thus, symbols selected in the past combine with a present situation that calls for an intervention.

The historical process leading up to selected objects that were found appropriate to use during the act of divining as well as the moment(s) in which they were endowed with their new task is hard to reconstruct. It is, however, often possible to link the items to, for example, cosmogonies, histories, or to important subsistence products for any given society. For instance, the pattern of fallen maize kernels – one of three primary dietary foodstuffs in Mesoamerica - is read by the diviners in order to be of help for specific questions (cf. Rojas, 2014). For the Montagnais-Naskapi (native to East-Canada), the shoulder blade of a caribou is held in fire and the following cracks and colorations lead a group of hunters to the area where they need to search for this game, which is vital for obtaining enough nutrition in the harsh area (Moore, 1957: 59).

There is an abundant amount of information from pre-colonial, historical, and contemporary sources on indigenous divination. Pre-colonial sources have challenged scholars with their enigmatic

character, but cumulative and ongoing research has led to a better understanding of these impressive sources. What is more, diachronic studies have emphasized that there is a strong cultural heritage stretching from pre-colonial times to present-day Mesoamerica. The Mesoamerican calendar system of 18 periods of 20 days facilitated a system of 20 periods of 13 days, or *trecenas*. This 260-day calendar was important for prognostications and guidance for a number of occasions. Their sequences were recorded and fortunately some – although relatively few – have survived the conquest. These *tonalamatl* or "books of days" that are still with us belong to the Teomoxtlī "Books of Wisdom" or Borgia group of codices, the main examples of which are codex Yoalli Ehecatl (codex Borgia), codex Tonalpouhqui (codex Vaticanus B), codex Tlamanalli (codex Cospi), codex Tezcatlipoca (codex Fejérváry-Mayer), codex Mictlan (codex Laud), and codex Cihuacoatl (codex Borbonicus).

As a worldwide phenomenon, there are general underlying motivations for the existence of an array of divinatory types. In an edited volume, *Divination and Healing – Potent Vision*, Winkelman argues for “a reconceptualization of divination from a false or mistaken epistemology to cultural systems for decision-making and therapeutic processes.” (Winkelman & Peek eds. 2004: vii). There are examples of how new divinatory types have been incorporated into an existing corpus. In Peru, the use of tarot-like cards called *naipes* was documented in the sixties of the twentieth century (Dobkin, 1969). This form of divination that was present in Europe in the sixteenth century, and that travelled along with Spanish settlers to Peru and “[...] became syncretized into Peruvian folk healing practices” (*ibid.*: 134). Similar processes have occurred in New Spain, of which the results in the present are also still visible. Araceli Rojas describes the heritage of a dying knowledge preserved with the memory a selective group of women of Chichicaxtepec in the Mixe region in Oaxaca, Mexico (2014). These women take on an impressive variety of roles in order to take care of the preoccupations of individuals or families and the community at large. They are the healers and they divine through their reading of maize kernels through which they communicate with the essence of Mother Earth. These women are the ones that truly understand the complexities of the indigenous calendar system and its consultation. That particular calendar does not exist in a written form (not anymore at least), so these women have an incredible memory of what they were taught by their parents and grandparents (Rojas, 2014: 137-139). Some, however, make use of the Mexican almanac *Calendario del más antiguo Galván* (*ibid.*: 137). This almanac has been published yearly in Mexico from the mid nineteenth century onwards. And, as a result, this almanac can be viewed as part of the legacy of the Spanish *reportorio* genre. Its content is calendrical in nature, combining the liturgical calendar with astronomical features and weather prognostications (*ibid.*: 137). According to Rojas:

“Interesantemente, este libro de contenido religioso, similar a una guía de celebraciones católicas, fiestas anuales e información relevante para el creyente, es una especie de sustituto de los códices pictográficos del Grupo Borgia, cuya temática también es ritual, un grupo de manuales para la labor propia de los antiguos sabios sacerdotes.”
(2014: 137)

Here, we find the Gregorian calendar that is used by the *sabios* of a community in order to count the days within the indigenous calendar system. After consultation, prognostications and advice are given, that are presented within the indigenous symbolic framework. Just as the reader of Fonds Mexicain 381 explicitly states that he will pick up the *reportorio* and read the fates of those in need, the women of Chichicaxtepec use the almanac as they see fit.

5.4 Concluding remarks

The Nahuatl manuscript of interest for this study was composed in the mid-eighteenth century. Its content is inspired by the genre of the Spanish *reportorio*, however, the content also illustrates that the reader of ms 3523-2 was expected to be familiar with a sixteenth century worldview. There are a number of arguments that point to this conclusion.

First, although the religious introduction of Izcatqui mentions Pope Gregory XIII – who issued our current time reckoning – it technically represents the Julian calendar. This is likely because the *tlacuiloque* translated (either as a primary or secondary source) the almanac by Sancho de Salaya from 1542. Life on a daily basis with the Julian or the Gregorian calendar would be the same; there were still seven weekdays, 12 months, and 52 weeks in a year. Izcatqui does not describe the actual year of 1582 in which 10 days were omitted from that year. Therefore, it probably was not the aim for the *tlacuiloque* to be explicit about the exact calendar system in their text.

Secondly, the cosmography represented in the manuscript is that of Ptolemy. Earth is in the center, and the moon, the sun, and the planets Mars, Jupiter, Venus, and Mercury were believed to circle around earth in their own separate spheres. The stars and the Zodiac signs occupy the eighth sphere and the outermost sphere was the Prime Mover, setting everything in motion. This geocentric model was, of course, disputed by Galileo Galileo in the first half of the seventeenth century (Findlen, 2012: 205), so only a century or so later the Ptolemaic model was no longer the authority on how the universe was to be conceived. Yet, in Izcatqui, the discussions that had taken place in the preceding century up to its moment of production in the mid-eighteenth century are not reflected in the Nahuatl text whatsoever.

Thirdly, the *tlacuiloque* were interested in composing a Nahuatl translation from what a sixteenth century *reportorio* had to offer. Astrology in Izcatqui is not disputed; it is not discussed in any way as something that might be put in doubt. Rather, it is presented to the reader in terms of historical developments that has led to a vision about the practice as it was theorized and presented to Spanish readers two centuries prior.

The *tlacuiloque*, in their efforts to produce a text for an indigenous readership, took on the task of both interpreters and translators. With great care, they tried to stay true to the original text(s) while explaining crucial terms according to an indigenous cultural and ecological framework. This is reflected in, for example, the explanations of the periods of time in the Western calendar. Furthermore, the new concept of the week employed by the *tlacuiloque* is the equivalent of *chiconilhuitl* or 'seven days' in Nahuatl; and the Zodiac sign Leo is an *ocelotl* or jaguar since this animal most closely resembles a lion (an animal that was not present in Europe either). These are just a few subtle examples, but they do demonstrate the viability of the text and the aim to produce something that would explain a worldview in comprehensible terms.

In the following chapter I will continue my exploration of the content of Izcatqui. A substantial amount of folios deals with medicinal practices and agriculture. I will analyze their translations, possible source texts and include them in order to answer to overall question about to how the scribes tried to convey the message to the reader.