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 Two - Reportorio de los Tiempos

Calendars are a means to position oneself in a perceived present, past, and/or future. Moreover, the representation of time has a culturally-specific religious and ritual character. When combined, these factors made the introduction of the calendar system of Spain to the Americas a high priority in the early phase of European contact with the indigenous populations of Central America. In fifteenth-century Europe, the invention of the printing press allowed a fast dispersal of the Julian – and, from 1582 onwards, the Gregorian calendar system that people live by today in most of the world (Febvre & Martin, 1976: 97). An important genre of texts that contains the calendar is the almanac. In Spain, the almanac is known as a *reportorio de los tiempos* (repertoire of time). The first *reportorio* in Spain was edited by Andrés de Li in 1495 in Zaragoza. Laura DelBrugge is the first to fully transcribe and comment on his work. She writes:

> "Andrés de Li's *reportorio de los tiempos* represents a late fifteenth-century Spanish stage in the evolution of the western European calendar. It unites many different types of information, and its contents are the result of centuries of calendar construction including ecclesiastical, historical, astrological, medical, and agricultural sources. It was an extremely popular work, as is evident from its many reprints and editions."
> (1999: 20)

The Tropenmuseum manuscript, as other authors already pointed out (Anders & Jansen, 1988 & 1993[32]; Spitler, 2005; Tavárez, 2011) contains precisely such an almanac. These studies are excellent stepping stones from which to explore possible source texts as well as modes of translation of the almanac in further detail. This chapter will compare a variety of Spanish editions with ms 3523-2 to infer which source texts its *tlacuiloque* consulted *in* the process of the creation of Izcatqui. This chapter will start off with a discussion of the content of the Spanish almanac and the development of the genre in Spain itself. Then, I explore both the presence of almanacs in editions that entered the American continent and editions that were locally produced.

2.1 The development of a "guide to life"

The early calendars developed from observations of cycles in the natural environment and celestial bodies that were already well thought out in of the context of agriculture (Dutka, 1988: 56-57). The *reportorio* genre is a culmination of a long history of calendar revisions throughout the areas and periods of ancient Babylonia, Egypt, and the Roman Empire (DelBrugge, 1999: 1). Characteristic of the first pages of the *reportorio* genre is an account of the development of the Roman calendar. This calendar originally existed of ten uneven months of only 304 days. The second ruler of Rome, Numa Pompilius,

[32] Anders & Jansen do not mention the term *reportorio*, however, they do refer to European astrology and Zodiac Man in their 1988 publication 'Schrift und Buch im Alten Mexiko.' Their book contains the first publication of the image of Zodiac Man from ms 3523-2. They place it alongside an image of a similar figure from a German source of the late sixteenth century and relate the European almanac tradition to the Nahuatl manuscript.

added the months January and February to establish a 354-day calendar in the 8th century BC (Pedersen, 1983: 21). To correct the runoff from the solar year, an additional month of 23 days was intercalated (*ibid*.: 21). In the first century AD, Julius Caesar made several crucial changes to the calendar. He extended it to 365 days and decreed that February would have an extra day every four years (so a mean year of 365 ¼ days) and decided that the first day of the calendar would no longer be the 1st of March but the 1st of January (*ibid*.: 21). As a result, the calendar was incongruent with the solar year by the time Caesar finished implementing his new calendar. As an adjustment, the year 46 BC lasted 445 days and became known as the "year of confusion" (DelBrugge, 1999: 2; Dutka, 1988: 57 and Pederson, 1983: 21). In accordance with the Julian calendar, the months were divided into Kalends, Nones, and Ides (or *kalendae, nonae*, and *idus*). The Kalends being the first day of the month, the Nones either the fifth or seventh day, and the Ides the thirteenth or fifteenth day (*ibid.*).[33] The day of the month was counted as a backward reference to one of these three divisions or markers; so, a reference point would be, for example, *x* days before the Nones of March.

A large corpus of manuscripts from the medieval period in present Western and Southern Europe testifies to a thriving occupation in the study of time. These studies and practices either had a physical correlation to the passing of time – such as agriculture – or were conceptually related to time – such as ecclesiastical celebrations and the venerations of Saints. In addition, we find evidence in manuscripts as early as the tenth century AD that there was also concern with zodiacal and medical information from the Arabic almanac tradition (DelBrugge, 1999: 5-6; see also Varisco, 1994). This Arabic and later Medieval development transformed the calendar into something that was much more than just a representation on paper of how people perceived the passage of time. The almanac became a practical guide, not merely for the cleric in church who needed to calculate the date of a religious celebration, but also for the farmer, who was aided by the almanac to determine when and what to sow and harvest throughout the year. Therefore, the representations of agricultural activities in each of the twelve months accompanied by the Zodiac signs, in mostly churches, grew fast in Western Europe in the early Middle Ages. It is precisely these types of illustrations that we find in the medieval Book of Hours or prayer books that contain prayers for each hour of the day (often added with a liturgical calendar as well) (see Wieck et.al., 2007).

The motions of the heavenly bodies and their relative positions were an integral part of science in the medieval period. According to Greek philosopher Aristotle, knowledge about the movements of the planets was crucial for our understanding, and dealings with, earthly affairs. This understanding had its implications for time-specific medicinal practices such as administering medicines, gathering medicinal plants, and phlebotomy (DelBrugge, 1999: 8-9). We see this reflected in important drawings of so-called 'Zodiac' and 'Vein' men in *reportorios*, images that are also present in ms 3523-2 (see more on this in Chapter Six). The Spanish almanac thus included a variety of themes ranging from the development of the calendar into the Julian/Gregorian calendar (depending on the year of publication); ecclesiastical feasts; agriculture; and medicine. A long history of calendar revisions – linked with religion, scientific theories on astrology/astronomy, and a need for agricultural advice – culminated into a practical guide for life that came to be known as the *reportorio de los tiempos*.

2.2 The reportorio in Spain

The first accessible and legible printed edition of a complete *reportorio* that still exists today, is the 1495 edition by Andrés de Li, which was printed at the publishing house of Pablo Hurus in Zaragoza.[34] This

[33] The *nonae* of a long month fell on the 7th day; this was the case for March, May, July and October. Consequently, their *idus* fell on the 15th day. For the short remaining months the *nonae* occurred on the 5th day and the *idus* on the 13th day of the month (DelBrugge, 1999: 2; Pedersen, 1983: 21).

[34] Possibly an edition exists in Catalan from 1488 as well as an earlier Spanish version printed in 1492. If there was indeed a Catalan edition, another possibility arises that the work by de Li, of which information on his origin

manuscript is located in the Biblioteca Nacional in Madrid (DelBrugge, 1999: 40). We do not know a great deal about Andrés de Li. The introduction to his 1495 edition states that the almanac was "fecho por Andres de Li ciudadano de Çaragoça," although it is not clear whether he originated from this city or only stayed there for an unknown number of years (*ibid.*: 18). There are some clues about his place of birth that link him to Barcelona or the Eastern Pyrenees – and, in either case, to Catalonia. This would explain De Li's usage of Catalan terms and would possibly explain why De Li incorporated an astronomical work called the *Lunari*, by the Barcelona-based Catalan Bernat de Granollachs.

According to DelBrugge, Bernat de Granollachs published his *Lunari* – or a lunar text of thirty-four folios – in Catalan in the year 1485. His work consisted of tables of the moon phases for the years 1485 to 1550. For each month of the year, De Li listed the moon phases, the time of appearance and degree, as well the Aureus Numerus and Dominical Letter for each year (see more on the Aureus Numerus and Dominical Letter in Chapter Four). DelBrugge adds that the original edition also included an introduction discussing the concept of the eclipse, the number of minutes in an hour, and several moveable Christian feasts. Granollachs *Lunari* was a very popular text and the basis for later versions in French, Latin, Castilian, and Italian (*ibid.*: 15). De Li omitted the introductory pages but copied the entire lunar chart and on his own initiative added the astrological, medical, and agricultural information.

DelBrugge lists a number of editions printed in the fifteenth century, followed by those printed before and after 1530 (cited from first and second references). There is an important addition to the original *reportorio* by de Li: editions from 1506 (Valencia, Costilla) onwards include a discussion on the characteristics of the four winds and there appears to be an additional discussion of phlebotomy. Another important shift takes place from the printings of 1510 (Sevilla, Cromberger) onwards: these editions include the months of November and December, which were not present in earlier editions (*ibid*.: 41). This has important repercussions for the search of a source text or texts for ms 3523-2 since, to reiterate, these include the characteristics of the four winds, the final two months of the year, and an extensive discussion of phlebotomy. Any attempt to identify the source text of Izcatqui, then, has to begin with *reportorios* that were printed from 1510 onwards.

Below, I will represent the table provided by DelBrugge on *reportorios* printed before 1530, including those she claims were added and printed after 1530, but which in her work are not represented. Even though Izcatqui could not have been based solely on the text by de Li as it was printed before 1510, I do include these editions in the table. Later in my attempts to identify the source text of Izcatqui, I will compare the texts of several *reportorios* with one another to see how where they differ or not, and I will consider how these differences and similarities relate to the text of Izcatqui. DelBrugge does not refer to any other editor in her discussion on the *reportorio* editions. She mentions that Sancho de Salaya added years to the lunar charts in a 1542 *reportorio*, but nowhere does she make a link to another name in regard to possible source text of the Nahuatl almanac. Moreover, she states that "[t]hese additions demonstrate the relative freedom publishers enjoyed with respect to their texts. Marketability was usually the driving force behind their decisions to alter original material" (*ibid.*: 42). The present concept of editor was not yet fully formed in the period before 1550. In fact, there was at that time no established copyright law and so basically anyone who felt the need could freely alter and add to existing texts (Brown, 1995: 29). For example, in the 1542 *reportorio* we read on the title page: *Reportorio de tie[m]pos nueuamente corregido por el famoso doctor Sancho de Salaya […]* (De Li 1542).

The Spanish editions that I have found (through primary and secondary sources) independent from the text of DelBrugge do refer to editors and I will accredit them as such in the table below[35]. As

is lacking, was written in Catalan and later translated into Spanish by Hurus (DelBrugge, 1999: 16). The Library of the Hispanic Society in New York houses an earlier edition by de Li that was printed in Burgos in 1493. This version, however, is incomplete and damaged (DelBrugge, 1999: 39).

[35] The genre was also known in Italian, Portuguese, and French (DelBrugge, 1999: 44).

for the editions from 1506 onwards, I will leave the editor column empty as I have not seen these editions myself and do not know whether or not an editor or 'corrector' was mentioned.

Year	Editor	Place	Printing house
1492	Andrés de Li	Zaragzoa	Pablo Hurus
1493	Andrés de Li	Burgos	Fadrique de Basilea
1495	Andrés de Li	Burgos	Juan de Burgos
1495	Andrés de Li	Zaragoza	Pablo Hurus
1501	Andrés de Li	Valencia	Cofman
c. 1506		Valencia	Costilla
1510		Sevilla	Cromberger
1510		Toledo	Hagembach successor
c. 1514		Sevilla	Cromberger
1515 (or 1513)		Zaragoza	Coci (?)
1518		Burgos	Alonso de Melgar (?)
1529		Sevilla	Cromberger
1542	Sancho de Salaya	Granada	Unknown
1542	Unknown	Granada	unknown
1546	Sancho de Salaya	Zaragoza	Diego Hernández
1546	Unknown	Toledo	Unknown
1554	Unknown	Valencia	
1552		Valladolid	Francisco Fernández
1563	Bernardo Pérez de Vargas		
1567		Sevilla	Hernando Díaz & Benito López
1575		Sevilla	Alonso de Barrera
1580	Hieronymo de Chavez	Sevilla	
1581	Ambrosio de Gante	Valladolid	
1584	Hieronymo de Chavez	Sevilla	
1585	Francisco Vicente de Tornamira	Pamplona	
1585	Rodrigo Zamorano		
1594	Rodrigo Zamorano	Sevilla	

Figure 7. Table of Spanish printed editions of *Reportorios de los Tiempos*.

2.3 Astrological texts and readership

The *reportorio* is one type of text that documents the contemporary discourse on astrology and astronomy in the period that is the main focus for this study (i.e. the sixteenth through eighteenth centuries). Astronomical theories about the movement of earth, the visible planets and constellations, and theories of the effect of astronomical objects on human affairs gave rise to a large variety of texts – some very theoretical, others with a more practical approach.

Lanuza-Navarro (2009) classified astrological texts produced in Spain or abroad by Spanish authors in the seventeenth century. The author first differentiates texts into a category that includes

cosmography, the calendar, and predictions of the weather – or as she terms them *repertoires* or *reportorios/Cronografía* (Lanuza-Navaro, 2009: 119).

The second category of texts contain a treatise: a book which explains the theory of astrology in general and its relation to meteorology and medicine (*ibid.*: 120). The treatise not only explained astrology – and by doing so, defended its practice – but also included astrological prognostications. As these are mainly theoretical texts, they were produced to be read by the intellectual elite. An example of such a text is the work by professor of astrology, Salamanca Antonio Núñez de Zamora, on the astronomy of comets and their astrological value. His *Liber de cometis* from the early seventeenth century was written in Latin, but included prognostications for the year 1603 in the vernacular language. And another treatise that is of particular interest is Diego Cisneros *Sitio, naturaleza y propiedades de la Ciudad de Mexico* (1618), because it was printed in Mexico (a transcription and commentary was published by Martha Elena Venier in 2009). Cisneros' treatise deals with weather phenomena caused by heavenly bodies and astrological medicine.

The third category of Lanuza-Navarro is several types of texts that were less theoretical and more directed to a practical application under the header "pamphlet". They consistent of fewer pages than the heavier treatise and *repertorios*. An example of such a pamphlet is the lunar calendar (*lunario*) and annual prognostication (often called *almanaque*, which originally meant "calendar"). These often excluded astrological information and focused exclusively on lunar cycles and liturgical calendars. However, for the majority of people both these *lunario* and their denser *almanaque* counterparts came to signify annual prognostications (Lanuza-Navarro, 2009: 121).

There were different ways to establish a prognostication and often several methods were combined. The first method depended on the celestial configuration at the beginning of each season (so when the Sun entered the four Zodiac signs Aries, Libra, Cancer and Capricorn). By paying attention to these configurations, the astrologer was able to prognosticate about the weather, which then enabled him to give advice about the administration of medicines and bloodletting and purging. The second method was called the theory of the "Lord of the Year" in which it was determined which one of the seven planets influenced earth the most. From this method, prognostications for the weather, agriculture, and health were derived from the "Lord" (i.e. planet) (Avalos, 2007: 286).

The difference in readership between the treatises and the almanacs and prognostication calendars was clear. The almanacs were mostly of a theoretical character, and so were produced for an intellectual elite, often working for universities. The latter, however, included prognostications for the year to come, and so these were mostly intended for a public of "country people" who would care most about meteorological developments (Lanuza-Navarro, 2009: 122). If we extend the horizon to other parts of Europe – such as Italy, Portugal and England – we can find more data on the readership and availability of the highly popular annual prognostications in the sixteenth and seventeenth century. In England, these prognostications were so that by the 1660s, one third of all households owned an almanac. The earliest known printed almanacs were imported from Antwerp in 1493 and were edited by Gaspar de Laet Borchloen. From 1498 onwards, locally edited English almanacs were printed (Kassell, 2011: 431, 438). Such an almanac was published each year and included a calendar of the upcoming year, the liturgical calendar, and lunar cycles, alongside other astronomical data. It also included medical advice and prints of Zodiac man. The main difference between these almanacs and a *reportorio* was that the almanacs included prognostications for the upcoming year about the weather and health, but also about plagues, famines, and political and military events (*ibid.*: 431-436). According to Kassell, therefore, these almanacs,:

> "[…] [W]ere commodities; almanac makers and booksellers collaborated in marketing them to select buyers […] [f]ormat and price were geared to the desired market. Did the buyer want, like Byng [who bought an almanac in 1586 in

> Cambridge], a small, unbound book that fitted easily in a pocket, or, like the unnamed man from Worcestershire, a sturdier book, bound and interleaved? […] Almanacs had begun to be produced in England in significant numbers from the 1550s, and had soon become a staple of the book trade."
> (2011: 437, 438)

Kassell adds that almanacs were under regulation by the state, because their contents predicted, amongst other things, the political and economic developments of the future. Nevertheless, such almanacs were permitted to be sold throughout England[36] (2011: 439). According to Kassell, however, these English almanacs did not a reflect consumers' adaptations of their actions *per se*, and so such appeals to heavenly bodies cannot be said to have promoted blind astrological determinism. Instead, they were used more as a tool to manage the days of the year for a household, as is evidenced by several annotated almanacs from the sixteenth and seventeenth century. In these annotated almanacs, blank leaves had been incorporated on which its owner could leave notes as a type of diary (these were promoted from the 1560s onwards) (*ibid.*: 436).

In Italy and Portugal, the almanac was also readily available (Avalos, 2007: 285-286). In Italy, however, this type of text was forbidden by ecclesiastical censorship in the mid-seventeenth century, although it remained in circulation in a clandestine manner during the remainder of the century. In Portugal, almanacs were sold cheaply by bookstores and from the seventeenth century onwards in the streets or in ferries (Avalos, 2007: 286).

The *reportorio* genre, as we have seen, is a different type of text than, for example, the mainly theoretical treatise or the annual prognostication. A *reportorio*, in fact, contains a bit of both the treatise and the prognostication: it contains the historical and theoretical background of the calendar, astronomy, and astrology, while also providing general advice on agriculture and health issues. The *reportorio*, therefore, was not intended to provide a prognostication on the influence of a concrete astronomical configuration within the solar calendar on, for instance, sowing and harvesting or bloodletting. Rather, it created a general context in which agricultural and medicinal practices could be recommended or discouraged.

According to Burdick (2009), the list of authors who asked permission to publish a lunar calendar and prognostication or almanac is extensive. In Appendix D, I have listed the authors that intended to publish such a work in the seventeenth century (Burdick 2009).

2.4. Imported and locally produced *reportorios*

At least nine Spanish editions published between 1495 and 1583 were either shipped to Mexico or would have been known to scholars working with the genre in Mexico[37] (Spitler, 2005: 79). Jerónimo de Chávez's *Cronografía o Reportorio de los Tiempos* was such an edition. The import of his *reportorio* is evidenced by Irving Leonard's *Books of the Brave*: a work of undeniable value to historians of the written word in the Americas. De Chávez's edition of the *reportorio* was published in Spain in 1548 and six of his copies entered Mexico City in 1576, as testified by the *protocolos de Antonio Alonso* (now

[36] Astrology was also mocked in England, evidenced by the many 'burlesque almanacs and prognostications,' blaming astrologers 'for taking advantage of the superstitious beliefs and explaining the psychological needs of the uneducated masses' (Kassell, 2011: 440). The same occurred in Spain in the seventeenth century (Lanuza-Navarro, 2009: 131-132)

[37] There is also evidence that these were imported to other Spanish colonies. For example to the Phillipines: one of Leonard's appendices (1992, [1949]: 358-60) is a *Memoria los libros sigvientes que taygo yo Trebiña* from 1583 (now in AGN) in which don Trebiña lists 55 books that he brought from Spain to Mexico. Number 44 is the *reportorio* by Chávez, printed in Sevilla in 1581. The *reportorio* was also imported in Peru, as evidenced by a list of books imported in 1583. Among a variety of religious, historical, and fictional literature, we find 12 copies of the *reportorio* by Jeronimo de Chávez (*ibid.*: 351).

in the Archivo de Notarías in Mexico D.F., listing all books entering Mexico from Spain (Leonard, 1992 [1949]: 337-342). Apparently, Chávez's edition was so popular that new editions were regularly published in Spain and also in Mexico until the end of the sixteenth century (Spitler, 2005: 83, 84). A *reportorio* of unknown authorship was sold for five pesos by Franciscans Molina and Sahagún at the Colegio de Santa Cruz in Tlatelolco. This particular *reportorio* was sold amongst other books that belonged to the school in order to pay for its remodelations (Tavárez, 2011: 135).

Enrico (or Henrico) Martínez published his *Reportorio de los tiempos e historia natural de Nueva España* in 1606 in Mexico City. According to Francisco de la Maza, editor of the 1948 publication of Martínez's work, he tried to resolve the contradictions between the New and Old Worlds in his publication (Martínez, 1948: xii). Martínez himself points out that books brought from Spain did not make accommodations for other parts of the world, and the "gusto y presuroso" of those living there (*ibid*.: xv). His aim was to try and please his readers to his best abilities; i.e. to adjust the information in such a manner that it agreed with Mesoamerican circumstances. For example, Martínez constructed a table for the lunar cycle in the years between 1606 and 1620, and calculated the conjunctions of the signs and eclipses for the same period on the meridian of Mexico City, rather than those of a Spanish city (*ibid.*: xv, xvii).

2.5 The Inquisition and censorship

The import and circulation of books was – in theory at least – highly controlled by, first, Episcopal censorship first, and, later, by the Holy Office of the Inquisition established by Pedro Moya de Contreras (see the work by Poole, [1971] 2011). This meant that the import of books from Europe was checked each time a ship arrived at the coast of the Americas, and that each library and bookstore had to be able to present an up-to-date list of books it owned (Avalos, 2007: 236). In practice, however, the circulation of prohibited books in print or manuscript was not stopped by edicts issued on the matter (Leonard, [1949] 1992: xv-xvi; Tavárez, 2011: 156-158). The first edict that prohibited the publication of books on the matter of forecasting and astrology was ordered by the aforementioned apostolic Inquisitor, Pedro Moya de Contreras. The list of forbidden books included the *reportorio* genre (Quintana, 1969: 32). Pope Sixtus V ordered an edict on the 5th of November 1586 entitled, *Coeli et terrae dominus*, in which he forbade judiciary astrology (forecasting events in the lives of individuals) and only allowed for astrological books that were based on natural astrology; thus, prognostications on medicine, meteorology, navigation, and agriculture (*ibid.*: 32).

Apparently, this edict was not effective enough, because another edict arrived Mexico at the end of 1647 or in early 1648 with practically the same content.[38] And as from that year on almanacs had to be approved by the Inquisition, documentation on the publication of almanacs is rich (Burdick, 2009: 184). The underlying argumentation provided to support the issuing of this edict was that the fields of natural astrology, medicine, meteorology, navigation, and agriculture were beneficial to society as a whole. Therefore, it was seen as justified and understandable that practitioners of these fields were in need of annual almanacs to facilitate their work (Peraza-Rugely, 2011: 109). As Burdick explains, there is less information on the circulation of the almanac in Mexico before the mid-seventeenth century and, hence, before the introduction of the edict (2009: 184).

Censorship occurred in two phases; namely, preventive censorship and punitive censorship. The first could prevent a book from going to the printing press if it contained forbidden content; the second

[38] The edict obliges all who desire to print a prognostication to "de aqui en adelante no escriban ni impriman pronóstico alguno más de tan solamente en lo tocante a la navegación, agricultura y medicina, juicio de tiempos que poviene necesaria y frecuentemente de causas naturales como son ecliplses, lluvias, pestes, tiempos serenos o secos…, apercibiéndolos que lo contrario hacienda serán castigados y se ejecutarán en ellos las penas impuestas. Y en caso que tengan impresos algunos se retendrán sin consenter se vendan ni distribuyan hasta que vistos por ese Tribunal se provea lo que fuere de justicia…" (cited from Quintana, 1969: 47-48).

occurred after a work had already been printed. In principle, preventive censorship was exercised by civil authorities, although at times – and especially in case of the almanac – the Inquisition intervened as well. Punitive censorship, in any case, was a matter for the Inquisition (Avalos, 2007: 236). Books could either be forbidden in their totality or they went through an expurgation to remove unwanted fragments from the text that would then otherwise be allowed to be printed. In some cases, an author suspected of heterodoxy was no longer allowed to print any books. In this case, he or she would be listed as an *auctor damnatus* (*ibid.*: 236).

As is evidenced by the Archivo General de la Nacion, the seventeenth and eighteenth centuries were characterized by an ongoing concern for astronomy and prognostications. The Archivo holds a multitude of petitions to publish calendars, *lunarios*, and prognostications (see Quintana 1969).[39] These petitions not only show the level of preoccupation with contemporary science in Mexico, but also indicate what was and what not allowed to be published (and thus read).

Consider the following concrete examples of the censorship processes that Avalos (2007) described. An author who had no problem getting his work published in the second half of the seventeenth century was Juan Ruíz. This 'neighbor' or rather inhabitant (*vecino*) of Mexico City had made a prognostication in 1669 for the year 1670 concerning the allowed fields of agriculture, navigation, and medicine. His request was accepted by fray Alonso de la Barrera on the grounds that he did not find anything "*contraria a nuestra S[an]ta fee*[40] *y buenas costumbres*." Furthermore, the work did not introduce any judiciary matter. With the same ease, Joseph Salmeron de Castro y Escobar, *medico catedratico* of surgery and anatomy at the University of Mexico City, was granted permission to print his work. His work included a *lunario* and prognostication for the year 1683 on medicine, agriculture, and navigation, which was similar to the work by Ruíz. His petition was received in 1682 by Inquisidor Licenciado Don Juan Gómez de Alvarez who, in his turn, sent it to fray Francisco Muñiz. His reply, after having read the complete work by Salmeron de Castro y Escobar, was that he did not find any evidence of judiciary within the document itself or any criminal record on the *medico* himself, and thus the work was open to publication. The final permission was granted by fray Miguel Dominguez, who, on Sunday November 17th 1682 added that he did not find any content that went against the Catholic faith.

Both Ruíz and Salmeron de Castro y Escobar received little feedback on their writing other than basically a stamp approval. Others received a more critical stance as we can read in the documentation on a work submitted by well-known seventeenth century intellectual Carlos de Siguënza y Góngora. Siguënza was born on August 14th, 1645 in Mexico City from Spanish parents. In 1660 and still at a young age, Sigüenza entered the Jesuit order in Tepozotlan, state of Mexico, where he authored several poems (Peraza-Rugely, 2011: 55, 60). After having been expelled from the order in 1668 due to "*sus desórdenes y salidas nocturnas*," Sigüenza decided to study at the University of Mexico City, while at the same time he kept trying to re-enter the Jesuit order. He was never able to go back to the Compañía de Jesús, but was ordained as a secular priest in 1673 (*ibid*.: 60-61). In July of the preceding year (e.g. 1672), he was able to obtain the position of chair of Mathematics and Astrology[41] at the University of Mexico City (Rojas Garcidueñas, 1960: xx). By 1680 he was named royal geographer by King Carlos II (Peraza-Rugely, 2011: 61). Throughout his academic career, Sigüenza tried to convince others through his writing that astrology had no place in science – a contradictory position for an astrologer, which he

[39] The work by José Miguel Quintana published in 1969 *La Astrología en la Nueva España (de Enrico Martínez y de Sigüenza y Góngora)* includes extensive appendices of every author Quitana found in the Archivo General de la Nación who asked for permission to publish a lunario, prognostication or almanac. For my appendices A, B and C I have consulted the original documents of the AGN and I have used my own transcription rather than the ones provided by Quintana.

[40] Should read 'fe'.

[41] The work by Peraza-Rugely names this chair Astronomy and Mathematics (2011: 61)

was in essence (Benítez Grobet, 1982: 144). In the final six years of his life, the scholar fell ill many times. He died on the 22nd August 1700, in his beloved Compañía de Jesús, to which he was allowed to return at last. The majority of his writing is lost, and that which survives is dispersed around the globe (Rojas Garcidueña, 1960: xxii-iii).

As *presbitero cathedratico proprietario de Mathematicas* of the University Real, Sigüenza requested to publish a *lunario* and a weather forecast for the year 1679. Sigüenza himself argued that his work "*no tener cossa alguna contra la Fe, Disposiciones Pontificias y mandatos deste S[an]to tribunal"* (see Appendix A for a full transcription of his request). His *lunario* and prognostication were read by two Inquisitors; their feedback lists a series of propositions in the text that worry them and suggests how the text should be altered (see Appendices B and C). The first concern treats a discussion on the first folio of Sigüenza's text, paragraph 2. Here, he suggests that mist and fog equal good fortune as these reject light to the dead. According to the inquisitor, this proposition is improper and mistaken (*impropia, y equivoca*). The commentator continues stating that it is improper because mist does not reject light, it just hinders it. Clearly the commentator wants to delete the agency which is given to mist by Sigüenza. Regarding this point, the commentator refers to the Biblical narrative of Tobias (or Tobit) who at one point wonders "what kind of gladness will be for me, since I sit in darkness and do not see the light of Heaven?" In addition, it is noted that darkness only rejects the material aspect of light, in contrast to the light of heaven; according to the author of the prognostication the latter would be more indicative than the former. Several other rectifications are suggested by the commentator, who refers to errors that derive from *mala intelligencia*. Sigüenza is reprimanded for arguing that eclipses are determinatively fatal for humankind and cause harm. According to the commentator, it is agreed upon that eclipses can possibly influence earthly affairs, but a deterministic outlook is to be eschewed.

The second commentator takes a rather different approach to the prognostication for the year 1679. This commentator does perceive the text in relation to the Catholic Faith and 'good customs,' however, he operates more as an editor of the text to improve its readability. For instance, he advises Sigüenza to delete a fragment that repeats something that the author had already stated in an earlier paragraph; and he urges Sigüenza to add an explanation on the nature of eclipses and their negative effects. Thus, in contrast to the first commentator, the second does not see any problem in the deterministic character ascribed to eclipses. These fragments are a nice example of how processing texts through the Inquisitorial system took place – and it is clear that personal taste and levels of criticism on the part of commentators played an important role. This resulted, more often than not, in the deleting of ideas irreconcilable with the accepted account of scientific thinking; or the editing of a text to conform with – and under the pretext of – Inquisitorial standards. In total, the Archivo General de la Nación holds documentation for almost every year in the period 1672 to 1701 in which Siguenza (or his nephew Gabriel Lopez de Siguenza[42] after his death in 1700) asked permission to publish a *lunario* and/or a prognostication.

2.6 Izcatqui and possible source texts

Both Susan Spitler (2005) and David Tavárez (2000; 2011) link the Tropenmuseum manuscript to the *reportorio* genre. Spitler related Izcatqui to a *reportorio* edited by Sancho de Salaya, who published his work in Granada, Spain in 1542. She acknowledges that many of the *reportorios* are direct copies of one another, nevertheless she states that "[…] the wording of several of the texts in the Tropenmuseum manuscript follows so closely that of Sancho de Salaya's *Repertorio* that I am confident it was one of

[42] He was also the first biographer of de Sigūenza y Góngora. After his uncle's death, the Compañía de Jesús received 470 books that were in his collection (of which 28 were manuscripts) and all contained original content according to Lopez de Sigüenza. These manuscripts are lost nowadays although their content can in parts be reconstructed through the writing of others who were acquainted with them (Trabulse, 1988: 23).

the author's primary sources" (2005: 232). Indeed, Izcatqui even mentions the work by Sancho de Salaya as follows:

[f.69r]	
[Initial] *Onpehua yn metztlapohualistli*	here begins the month count
yn [a]quin axcan	how now/today
ya[n]cuican omo [f.69v] *tlalli*	it was settled for the first time
ynic mopohua	in order to count
cenpohualli omome xihuitl	twenty two years
oquitlalia yn cenca huey tlamatini	he settled it, the great knower
doctor Sancho de Salaya	doctor Sancho de Salaya
temachtiani Astrologia	teacher of astrology
ynic cepa Salamanga	one time in Salamanca
Auh oc cepa quiyacuili Juliano	and once it took Juliano
huey temachtiyani	the great teacher
yeh ican motocayotia	because he named
yn ipa[n] libro lunario qq	the libro lunario
metztlapohualistli	the moon count

This fragment is clarified by Laura DelBrugge. She explains that there is an edition – based on de Li's edition from 1542 – in which 22 years were added to the lunar chart by Sancho de Salaya (1999:43). It is, thus, very possible that the authors of Izcatqui had either seen the work by de Salaya or had seen a later edition mentioning him as editor.

David Tavárez refers only to one source text for Izcatqui: the work by Andrés de Li. Tavárez mentions the first edition of his work in 1495, but does not mention any of the later editions by de Li (2011: 134). However, the 1495 edition of de Li does not include a discussion on the four winds or a second section on phlebotomy; and is missing in its totality a treatise of the months of November and December (DelBrugge, 1999: 17). Since these sections are present in the Izcatqui manuscript, it is evident that the Nahuatl version is not based on the de Li edition from 1495.

Let's return to Spitler's conclusion that Izcatqui is a literal copy of the text of Sancho de Salaya. Following her lead, but constructed independently, Figure 8 compares the text of ms 3523-2 with the *reportorio* by Sancho de Salaya [Granada 1542]. [43] I agree with her conclusion that the work by De Salaya was one of the principal sources for Izcatqui.

Izcatqui	Folios	Passage in Sancho de Salaya [1542]
Text on Holy Bull of the Holy Crusade and Indulgencia Plenaria	1r-9v	Absent
Matins	10r-11r	Absent

[43] In an earlier stage of my research in which I was unfamiliar with the work of Spitler, I constructed a similar table, but only compared the content of Izcatqui with the work by Andrés de Li from 1495. However, since it is clear that the authors of Izcatqui did not use the 1495 edition as it lacks certain fragments that are represented in both Izcatqui and later *reportorios,* I have not included that table in the present work. The fact that the *reportorio* by de Salaya is a copy of the work of de Li, however, does lead, to a large degree, to the same results in the comparison.

Introduction to the *reportorio*	12r-12v	2r
Concept of the day	13r-13v	2v-3r
Hours of the day	13v-14v	3r-3v
Concept/divisions of the year	14v-16r	3v-6r
January	16v	6r-6v
February	17r (incomplete)	7r-7v
March	17r (incomplete)	7v-8r
April	17v-18r	8r-9r
May	18v-19v	10r-10v
June	19v	10v-11r
July	19v-20r	11r-11v
August	20r-20v	11v-12r
September	20v	12r-13r
October	21r	13r-13v
November	21v	14r-14v
December	21v	14v-15r
Concept of the week	22v	15r-15v
The planets related to the seven weekdays	23r	16r-16v
On the hours	23v	16v
On the planets	24r-v	16v-17v
The first sphere and moon	25r-26r	17v-18v
Second sphere and Mercury	26r-27r	18v-19v
Third sphere and Venus	27r-28r	19v-20v
Fourth sphere and Sun	28v-29v	20v-21v [according to text this is number 22v]
Fifth sphere and Mars	29v-30v	22v-23v
Sixth sphere and Jupiter	30v-31v	23v-24v
Seventh sphere and Saturn	31v-33r	24v-25v
Eighth and ninth sphere	33r	25v-26r
Introduction *reloj de la noche*	33r-35r	26r-26v
Figure *reloj de la noche*	35v	27r
Concept of the Zodiac signs	36r-37v	27v-28r

Aries	37v	28r-29r [according to the text, this is page 30r]
Taurus	38v	30r-30v
Gemini	39r	30v
Cancer	39v	30v-31r [according to the text, this is page 32r]
Leo	40v	32r-32v
Virgo	41v	32v-33r
Libra	42r	33r-33v
Scorpio	42v	33v
Sagittarius	43v	33v-34r
Capricorn	44v	34r-34v
Aquarius	45r	34v-35r
Pisces	45v	35r-35v
Table relating the zodiac signs to one of the four elements	46v	35v
The twelve months of the year and advice on agriculture, health issues, and humors for[44]:		
January	46v	36r-36v
February	47r	37r-37v
March	48r	38r-38v
April	48v	[according to the text, this is page 40r-40v]
May	49r	41r-41v
June	49v	[according to the text, this is page 43r-43v]
July	50r	44r-44v
August	51r	45r-45v
September	51r	46r-46v
October	52r	47r-47v
November	52v	48r-48v
December	53r	[according to the text, this is page 50r-50v]
explanation and Aureus Numerus table	54r-55r	[according to the text, this is page 52r
explanation *figura de la Amistad*	55v-58r	53r-54r

[44] Izcatqui does not contain a Saint's day calendar, which is present in Spanish *reportorio*. Only the recommendations have been selected by the writer(s).

Figura de la amistad/Zodiac Man	58v-59r	54v-55r
Influence planets and body parts	59v	
Influence zodiac signs and body parts	59v-60v	
Drawings and explanations illness and Vein Men – phlebotomy	60v-65r	55v-57v
Drawing T-O map and explanation four winds	65r-66r	58r-58v
Planets	65r-67r	[according to the text, this is page 60r-62r]
How to calculate the weekday of the first day of the month	67r-67v	62v-63v
Cuenta del alguarismo	67v-69r	[according to the text, this is page 67v-68v]
Explanation on the *lunario*	69r-74v	84v-86v
Months and their relation to the Zodiac signs	72r[45]-75v	
Negative influences on health by the zodiac signs	75v-78r	
Incomplete note on which planet governs the hours of the day and night	78r-78v	58r
Medical section	78v-80r	
Agricultural activities for each of the 12 months	80r-82r	
Tables and diagrams to calculate the Aureus Numerus and Dominical Letters as well as relating the four elements to the Zodiac signs and the planets to weekdays, Zodiacs, and elements	82r-86v	

[45] an error occurs here in the numbering of folios. This is the second sequence that starts at 72.

The twelve Zodiacs and prescriptions on what to eat or avoid	87r-89v	
The seven planets and influence on health	88v-91r	
12 ways of curing (amongst others with herbs cardo bendito and artemisia	91r-93r	
Ways of curing according to four doctors (amongst them Pedianus Dioscorides)	93v-96r	
Characterization of zodiac as either good or bad	96r-97r	
On which day of the month the Sun enters the twelve Zodiacs	97v-102r	
Diagrams and texts on dominical letter	101v-106v	
'De la Semana'	106v-107r	
Text on Aureus Numerus (the years between 1541-1560)	107r-v	
Table relating the days of the week, months, planets, Zodiacs, and elements	107v	
Tabla cuenta de quarismo	108v	
Tabla cuenta de castellano	109r	
Table indicating whether a zodiac sign is good, bad, or neutral for purging and bloodletting	109v	52v
The number or stars in each zodiac sign	1010r-102r[46]	
Explanation on the kalends, nones, and idus	102r-104v[47]	62v-63v

[46] Should read f.110r-112r.
[47] Should read f.112r-114v.

Ownership statement Maestro Felipe de Santiago	104v[48]	
Tabla para saber que horas tiene el dia en qualquier tiempo del año	unnumbered folio – the final folio of ms 3523-2	[according to the text, this is page 71v-72r]

Figure 8. A comparison of the content of ms 3523-2 to the reportorio by Sancho de Salaya [Granada 1542].

What the table above illustrates is that the text of Izcatqui, to a large extent, corresponds to the text of Sancho de Salaya. As de Salaya's work from 1542 is an edited copy of the work by Andrés de Li, it inevitably follows that Izcatqui is also similar to the text of de Li. What the table also illustrates is that ms 3523-2 is not a complete copy of the *reportorio* of Sancho de Salaya. For this reason, we have to turn to other sources in order to find the original texts used by the *tlacuiloque* of Izcatqui. I will come back to this search in the next paragraph.

There is another clear indication that the work by Sancho de Salaya was a source text for Izcatqui. On folio 54r of Izcatqui, the *tlacuilo* tried to copy a sentence preceding a table that helps to clarify in which Zodiac sign the moon resides each day in a cycle of 19 years. The sentence in the *reportorio* by Sancho de Salaya is as follows: "*E nota que en aqueste año de.M.D.xlii. tenemos.iiii.de aureo numero […]*". The *tlacuilo*, however, writes D.[E/C].M.D.l.x.i.i. He does not seem to be well acquainted with Roman numerals and was likely wondering about the *año de.* Thus, instead of reading "year of" followed by M.D.xlii or 1542, the *tlacuilo* mistook *de* to be part of the Roman numerals and added this word to the year. So, the letter 'd' was turned into a Roman numeral. The letter 'e,' however, posed the *tlacuilo* some difficulty, and it seems in the end he wasn't sure how to interpret this letter at all. In ms 3523-2, this letter is neither a clear 'e' nor 'c,' but rather something in-between. The combination DC with a following M is impossible, so this suggests that the *tlacuilo* was not used to this system of writing numbers. In addition, the *tlacuilo* reversed the letters 'x' and 'l', transforming the number 42 into 62.

Much more can be discerned through a more detailed comparison of the several *reportorios* that include drawings as well. The importance to include drawings in the search for source texts is evidenced by the comparison below. Here we have two fragments, one from Andrés de Li [Seville, 1529] and the other from Sancho de Salaya [Granada, 1542], both of which explain the first sphere occupied by the seventh planet – the moon – according to the cosmological model of Ptolemy.

[48] Should read f.114v.

Andrés de Li [1529]
[f.viiii]

¶ Siguense los planetas

[*drawing of a man holding a stick over his shoulder, in a field of grass. The moon and sun are to its left and right respectively and in between his feet we see a crab or Cancer*]

¶ Del primer cielo: y el Septimo planeta que es la luna que tiene en el su asiento.

[next folio]
El primer cielo es donde tiene su asiento la luna que es el inferior planeta y seteno: el qual esta co[n]stituiydo en l[a] mas baxo circulo de la espera: y en espacio de ocho anos consumo su circulo: y es señor del seteno y vltimo clima. Llama se luna quasi lucina: porque con ajena lumbre resplandesce: ca toma la del sol y ministra la en los cuerpos inferiores. Llamaron la los poetas por tres principales efectos que tiene luna en el cielo. Diana en los montes: y en los infiernos proserpina. E allende de ser feminino.
[….]

Sancho de Salaya [1542]

Siguense los planetas.

¶Del primer cielo y del septimo planeta que es la luna que tiene en el su asiento.

[*drawing of a scene in the clouds, a woman holding a bow and arrow sits on a chariot that is being pulled by two men. A moon is drawn in the upper middle of the drawing and below the feet of the woman we see a crab (Cancer)]*

El primer cielo es donde tiene su assiento la luna que es el inferior planeta y sesteno: el qual esta contituydo el mas baxo ciculo d[e] la sphera: y en espacio de veynte y siete dias y ocho horas consume su circulo: y es señor del seteno y vltima [sic] clima. Llama se luna quasi lucina: porque con ajena lumbre resplandesce: ca toma la del sol y ministra la en los Cuerpo inferiores. Llamaron la los poetas por tres principales effectos que tiene luna el el Cielo. Diana en los montes y en los infiernes Proserpina. E allende de ser feminino.
[…]

The Spanish texts are similar up to a crucial point. They differ in the following: the amount of time it takes for the moon to complete one cycle. According to the work by Sancho de Salaya [1542], this period of time is 27 days and eight hours: *y en espacio de veynte y siete dias y ocho horas consume su circulo.* In the *reportorio* by Andrés de Li, however, the text omits the 27 days and erroneously turned the eight hours into eight years: *y en espacio de ocho anos consumo su circulo*. The same error is present in his edition from 1495, and thus presumably was a consistent error in editions by de Li.

Ms 3523-2

[f.24v]	
¶ /…/ yntla nepantli yn ilhuicatl yhua[n]	[…] in the middle of the sky and
/ynic/ chicome planetas yehuatl yn lu[na][49]	the seventh planet, the moon
Ynoncaquitquitica yninetlaliyaya [sign made by tlacuilo]	there it governs, there it goes and settles itself
[f.25r]	the first in the middle of the sky, the sky
¶ ynic centlanepantli yn ilhuicatl yn ilhuicatl ychicome yn planetas Ehuatl yn luna ynocanquitquitica yninetlaliayan_	the seventh of the planets, the moon there it governs, there it goes and settles itself
[*drawing of a man holding a stick over his shoulder, in a field of grass. Two similarily drawn planets are drawn to its left (appear to be two moons but probably represent sun and moon). To its right, we see grass, a star and a crab (Cancer)]*	
[Initial] Inic centlamatli yn ilhuicatl ca yehuatl yn itechca metztli yehuatl y/…/tlatoquilia planetas no yh/uan/ tlachiconcayotia yn yehuatl y/…/ pepech ynizquitlamatli ylhuicatl Auh q[ui]p/e/hua cenpohualilhuitl ochicome yhua ch/i/cuey hora yn oca[n]monamiqui quitlatocati/a/ ychicontlamatli: ynilhuicatl yhuan tlalti/c/pactli yncanitlami mitohua metztli tlanextli yehi techtlanextilia tlalticpac titlaca[n] ytechquicui ytonatiuh ynitlanex yehica q[ui]tocayotia yn huehuetque etetl ynitla tocayo […]	The first sky is that, it is with the moon, it /…/ is the final planet and also the seventh /…/ it is the last of all the skies and it begins, 27 days and eight hours, there it meets itself it rules the eight skies and on earth it ends, it is said, the moon it lights up, this makes us light up on earth, it gives us, the light of the sun because the elders name its reign, threefold

The Nahuatl text follows the text by Sancho de Salaya: *it begins, 27 days and eight hours, there it meet itself* (i.e. its cycle). However, when we compare the image preceding the text on the first sphere in ms 3523-2, it is a clear copy of the image from Andrés de Li's *reportorio* [1529],[50] and is very different from the image in the edition by de Salaya (see Figure 9). For the other spheres and planets, Izcatqui does not include drawings of the scenes, only the Zodiac signs which are present in both Spanish *reportorios*, so the comparison of these images stops here.

[49] The text is red in Izcatqui.

[50] The edition from 1495 includes the same image. The work by DelBrugge does not show the images, but she does describe it as a "[m]an walking with staff; small picture of a crab representing Cancer" (1999: 57).

Figure 9. Drawings from ms 3523-2 (top), de Li [Sevilla 1529] (lower left) and de Salaya [Granada 1542] (lower right) respectively that precede the description of the first sphere.

The image in ms 3523-2 is clearly a copy of the man walking with a staff over his shoulder in a field of grass. The similiarties between the two images go right up to his clothing and shoes. Moreover, the star and Zodiac sign are almost in the same location as in the work by de Li, although the *tlacuilo* has added another moon to the image. This drawing is in clear contrast to de Salaya's classical representation of the moon as a lady holding an arrow, on a chariot that is being pulled by two youngsters somewhere high up in the sky. An anonymous edition from 1554, which was probably also edited by Sancho de Salaya, is identical in text to his 1542 edition, but also here the image is different from Izcatqui. The scene on display is a man in a large cloak and hat covering his ears in the center of the image. He stands in front of a large brick building that almost looks like the entrance of a castle. The man points to the right where there is a typical image of a crescent moon with a face looking straight at him; the Zodiac sign Cancer is located below the moon. So the image in Izcatqui is different from both images in the *reportorios* of Sancho de Salaya, while it is identical to the one in the work by Andrés de Li.

2.6.1 Diagnostic features of Izcatqui

Figure 8 showed that several features of Izcatqui are not included in the *reportorio* of Sancho de Salaya [1542] and that some illustrations do not correspond to his work either. The content of one *reportorio* can, of course, differ from the content of another. Therefore, I will list all of the specific features of Izcatqui below and compare them to a variety of *reportorios* in Figure 18. I have selected 10 *reportorios*, three of which are by or credited to Andrés de Li. I selected these in order to investigate if his later editions do include more features present in Izcatqui. I have also selected one *reportorio* that was certainly edited by Sancho de Salaya [1542], and another one that is very likely based on that same edition, but which was published in 1554 after de Salaya's death in 1542. This anonymous text is entitled: *Repertorio de los tiempos, el qual tura [sic] desde el año M.D.L. iiij. hasta el año de M.D.xc.ij. va añadido en muchas cosas y lugares, con toda dilige[n]cia [et] cuydado, por vn religioso dela horden [sic] del glorioso doctor sant Bernardo ; el qual tomo este trabajo por charidad y amor de sus proximos, en este año de 1554.* The *reportorio* was published at the house of Francisco Fernández de Córdova, on the 22nd of June 1554, in Valladolid.

Although the work is left without a name of the editor who composed the work, an important clue is present on the title page. The image on the cover has many parallels to a painting of Sancho de Salaya, located in the Museo Naval in Madrid (see Figure 10). As the title of the *reportorio* suggests, it was

written for or in the order of the glorious doctor San Bernardo. This order is the Cistercian monastic order founded in the late 11th century in Cîteaux, France, which originated out of protest by the Rules of St. Benedict from the abbey of Molesme against the lack of a strict discipline in the church (Newman, 2013: 25). By joining the order around 1112 AD, St. Bernard of Clairvaux turned it from a small family into one that was spread across Northern Europe, the British Isles, and the eastern Mediterranean (*ibid*.: 25) The members of the order were nicknamed White Monks after the color of their cloak – and this is the same color cloak Sancho de Salaya is wearing (see also Figure 10). I will return to this order later in the hypothetical reconstruction of the work by the *tlacuilos* of Izcatqui.

In addition, I have also selected a *reportorio* by Jerónimo de Chávez [Sevilla 1584] since his editions were frequently imported from Spain and were probably among the best known *reportorios* in Mexico. The work by Rodriguez Zamorano also circulated in Mexico, at least in the Yucatec area where it served as one of the major sources for miscellaneous manuscripts of the Chilam Balam corpus in Yucatec Maya (see Bricker & Miram 2002) which I will include in the discussion later on in this chapter. Three other *reportorios* will feature in the table: two *reportorios* produced in Spain by Ambrosio de Gante [Valladolid 1581] and Francisco Vicente de Tornamira [Pamplona 1585]; and one produced in Mexico by Enrico Martínez in 1606. The selection of these *reportorios* is in part based on availability and is thus a subjective, but not random, choice. However, they also represent a small but varied corpus of texts that came from Spain and were known to have been read in Mexico. One of the texts was specifically composed for a Mexican readership and this, I think, is a helpful point of comparison. This is the case because although the editions by de Li and de Salaya had a great influence on Izcatqui, they do not cover its entire content.

Figure 10. Similarities between the cover of a Reportorio de los Tiempos published in Valladolid in 1554 and a painting of Sancho de Salaya [year and artist unknown, Musee Naval Madrid].

Diagnostic features of Izcatqui that are not present in every *reportorio* are listed in Figure 18. Of course, a comparison of the literal wording of texts is crucial as well, but this is not included in the table itself as I will comment on this aspect later in this chapter.

The diagnostic features of Izcatqui are the following (for some I have included the image of a diagram or of a table of explanatory text, which I will explain in detail in the subsequent thematic chapters of this dissertation):

1. Description of the twelve months.
2. A short one-folio description of four winds.

3. *Reloj de noche*.
4. Drawing of a T-O map.

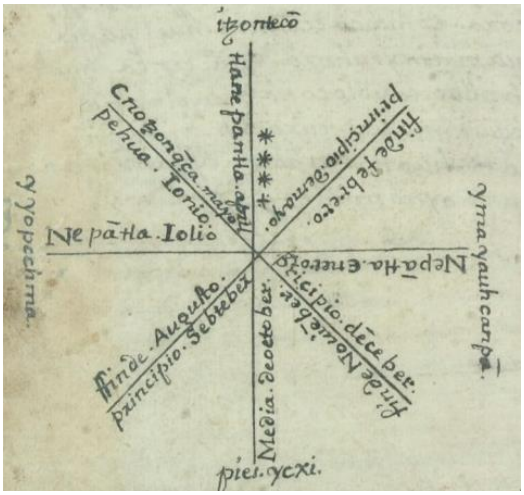

Figure 11. Reloj de Noche, f.36v.

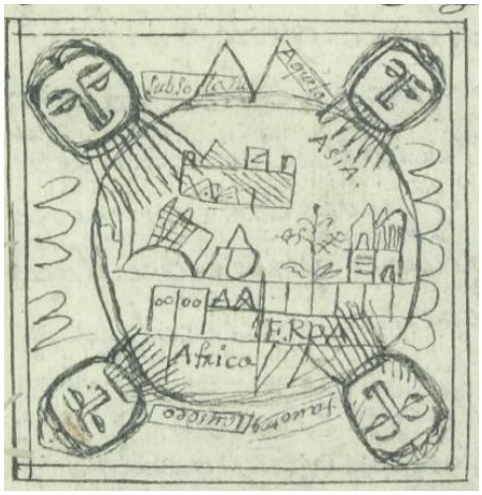

Figure 12. T-O map, f. 65v.

5. Drawing of Zodiac Man.
6. Drawing of Vein Men.

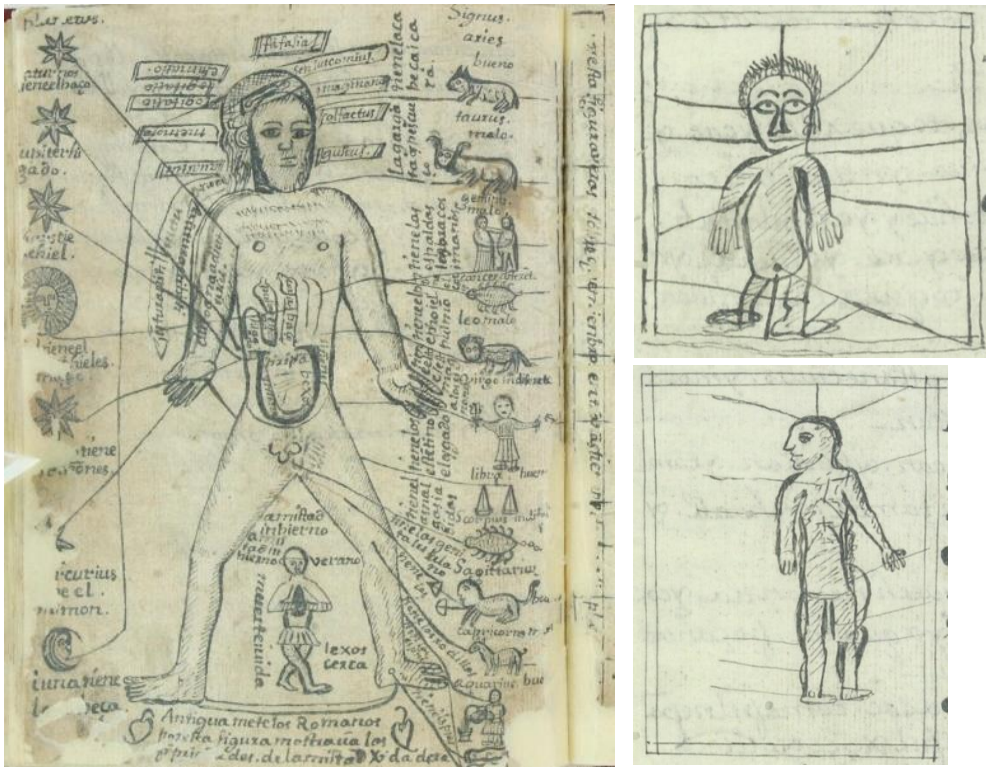

Figure 14. Vein Man, f. 63r (above) and f. 61r (below).

Drawing of Zodiac Man that includes a *figura de la amistad* in between his legs, the six senses around the head of the male figure written upside down, and the title of the drawing in its totality to the right side of the figure.

7. Explanation of mnemotechnic devices used to calculate Christian feast days; including rhymes and circular diagrams.

8. Table to infer in which Zodiac sign the moon resides in each year of the 19 year cycle of the Aureus Numerus.

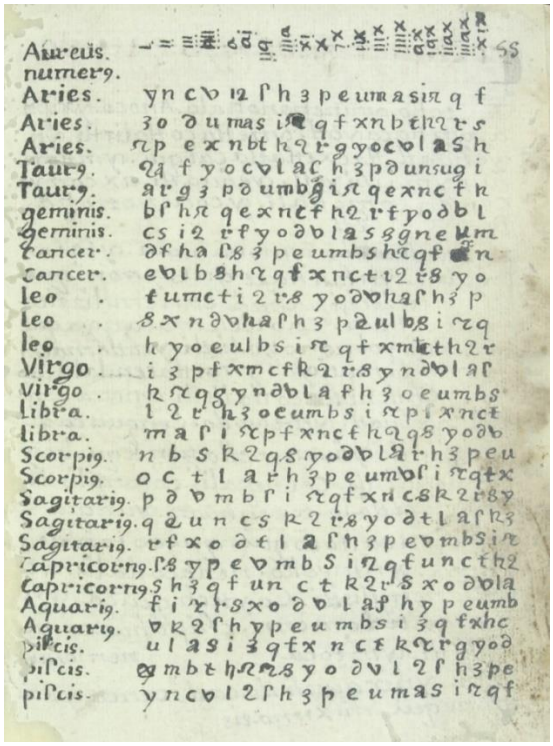

Figure 15. Table as an aid to calculate which Zodiac sign is the house of the moon

9. *Tabla para numerar* (both Arabic and Roman numerals).

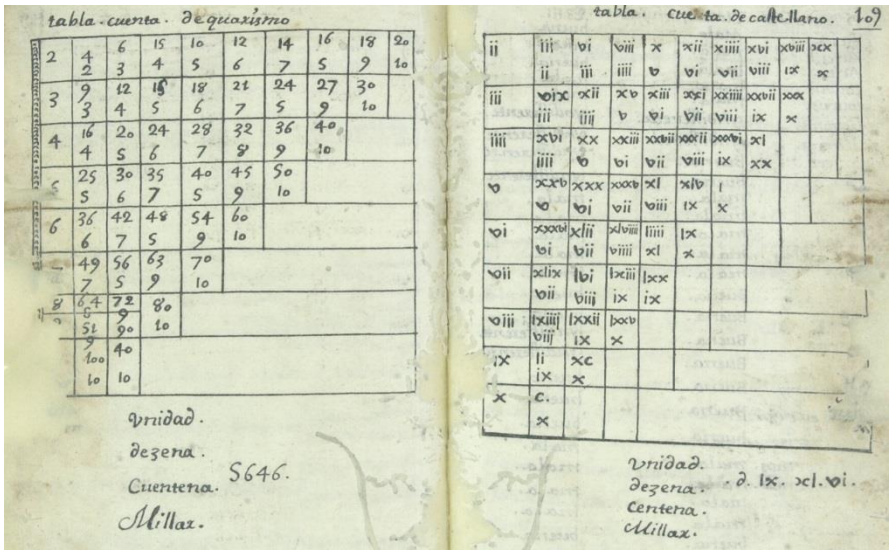

Figure 16. Table of multiplication in both Arabic and Roman numerals, f. 108v and f. 109r.

10. *Tabla para saber que horas tiene qualquier tiempo del año*.

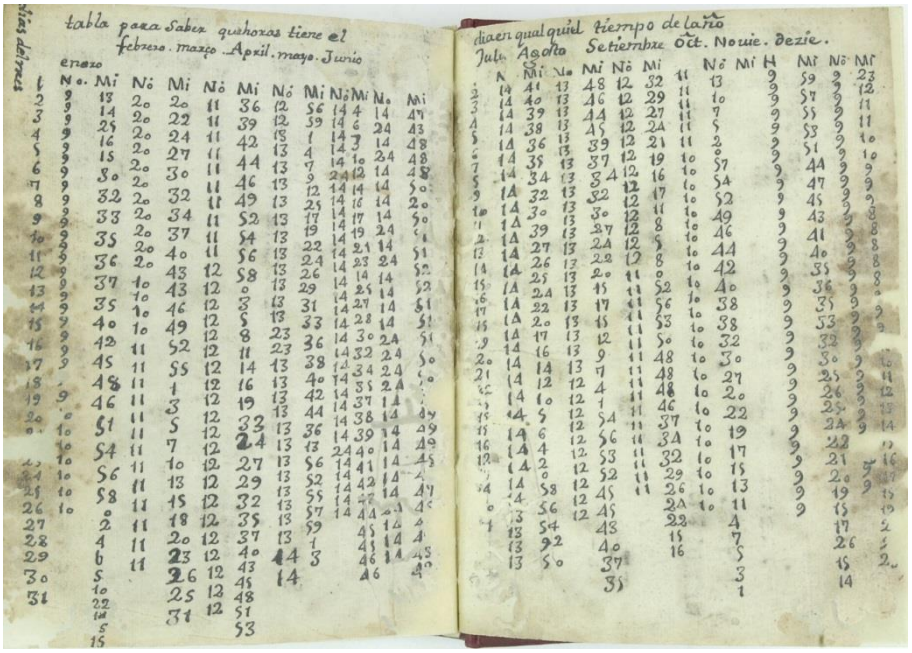

Figure 17. Table of number of hours and minutes of the day throughout the year, unnumbered final folio.

The results set out in Figure 18 exclude a number of *reportorios* as possible source texts for ms 3523-2. For example, the table omits reference to the lengthy almanacs by Jerónimo de Chávez, Francisco Vicente de Tornamira. and Rodríguez Zamorano (the first two well over 500 pages, the latter almost hitting 800), because aspects of these almanacs cannot be said to have been incorporated into the Nahuatl manuscript. It is safe to say that these almanacs and the Nahuatl manuscript have no similarities in literal wording and, moreover, the overall content of these almanacs is of a more astronomical nature than we find in Izcatqui.

Enríco Martínez's *reportorio* – which was specifically written for a Mexican readership – is the one that has the least similarities to Izcatqui; namely, none. The *tlacuiloque* were apparently only interested in translating Spanish almanacs of a different character. And Martínez' work is more similar to the work by the three editors mentioned above whose texts, as said, also do not correspond to the wording of Izcatqui. The *reportorios* that do correspond to the text of the Tropenmuseum manuscript are by three other editors: Andrés de Li, Sancho de Salaya, and, in parts, Ambrosio de Gante.

Features Izcatqui	Description 12 months	Agricultural advice	Concise description of the Four winds	Reloj de noche	T-O map	Zodiac Man	Explanatory note Zodiac Man in similar fashion and figura de la amistad	Vein Man (x2)
Reportorio								
Andrés de Li [Zaragoza 1495]	No, November and December exclused	Yes, and at times related to the phase of the moon	No	No	No	Yes	No	Yes
Andrés de Li [Sevilla 1529]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Andrés de Li [Sevilla 1575]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sancho de Salaya [Granada 1542]	Yes	Yes, and at times related to the phase of the moon	Yes	Yes	Yes	Yes	Yes	Yes
Anonymous [Sancho de Salaya? Valencia 1554]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hieronymo de Chaves [Sevilla 1584]	Yes	Yes, and always in relation to the phase of the moon	No, much lengthier description of more than 4 Winds	No	No	No	No	Present, but only a frontal image
Ambrosio de Gante [Valladolid 1581]	Yes	Yes, although slighty different (waning or crescent moon)	Yes	Yes	Yes	Yes	Yes	Yes
Francisco Vicente de Tornamira [Pamplona 1585]	Yes, but no agricultural or medicinal information	No	No	Yes, but different lay-out and more detailed	No	Yes	No	No
Rodriguez Zamorano [Sevilla 1594]	Yes	Yes, always in relation to the phase of the moon	No, much lengthier description of more than 4 Winds	No	No, two maps (Eurasia and the New World)	No	No	Present, but only a frontal image
Enrico Martínez [Mexico 1606]	No	No	No	No	No	No	No	No

Features Izcatqui	Explanation of mnemotechnic devices	Tablet to link phases ot the moon to a Zodiac sign	*Tabla para numerar*	*tabla para saber que horas tiene el dia en qualquier tiempo del año*
Reportorio				
Andrés de Li [Zaragoza 1495]	No	Yes	No	No
Andrés de Li [Sevilla 1529]	No	Yes	No	No
Andrés de Li [Sevilla 1575]	No	Yes	No	No
Sancho de Salaya [Granada 1542]	No	Yes	No	Yes
Anonymous [Sancho de Salaya? Valencia 1554]	No	Yes	No	Yes
Hieronymo de Chaves [Sevilla 1584]	No, an explanation without mnemotechnic devices	No	No	No
Ambrosio de Gante [Valladolid 1581]	No, an explanation without mnemotechnic devices	Yes	Yes, however Arabic numbers only	No
Francisco Vicente de Tornamira [Pamplona 1585]	Yes	No	No	No
Rodriguez Zamorano [Sevilla 1594]	Yes	No	No	No
Enrico Martínez [Mexico 1606]	No	No	No	No

Figure 18. Table (in two parts) that compares presence of diagnostic features of Izcatqui to printed editions of the Reportorio de los Tiempos.

It is important to note that both the *reportorio* by de Gante and that of Sancho de Salaya were printed in Valladolid by the same printing house of Francisco Fernández de Córdova in 1554. As such, their texts coincide; however their images do not. Rather, it seems that the (anonymous) printing house in Granada that published the edition by Sancho de Salaya in 1542 used the same wood blocks as did Fernández de Córdova in 1581 in Valladolid for the edition by de Gante (see Figure 19 as an example).

Figure 19. Preceding images to March from Reportorios by De Gante [1581] and Sancho de Salaya [1542].

Here again we see how complex the copying of text and image became in the period under consideration. In the following table, I will provide a fragment from Izcatqui and show how the three texts by de Li [1495], de Salaya [1542], and de Gante are each very similar to this fragment [1581]. The latter in particular shares similar images, but, textwise, de Gante shares more similarities with the 1554 edition

(and as we have seen before, Izcatqui shares more similarities in drawings with Andrés de Li [1529]). According to the introduction of the *reportorio* in Izcatqui:

Ms 3523-2

[f.12r]

	Here it begins, the Reportorio, that is
¶ NICAN opehuA Reportorion quitoznequi[51]	
	that which is known, the day when
I[52]yn macho can ynilhuitl yniquac	in the town the people lived
altepetli pan: quitlallia ynmacehualtin	they became very rich
cenca motlacamatia	very wealthy
cenca mocuiltonohuaia	and he did not yet know how to sow/
auh ayamo qui:matia yniquitoco[53]	and didn't yet know that before Christianity
	or how to harvest
Anoço yniquipixca	they didn't have anything yet
ayamotlequipiayan	their month count
ymetztla pohualiz/tli/	or the order
Anoço yntlatecpānaliztli	it was mixed up
caça[n]monēlo/…/	something has not yet been ordered
necan Ayamotlatecpātli catca	because it is not yet ordered
ynipanpa ayamotlectecpantlicatcō	they did not yet believe, still one thing
Ayamo tlanelto cayan Caoccentlamātli	
ynic tlamani mopiaya	the devil's book was kept
yntlacatecolo amoxtli	his name is Aurelio Macrobio
ynitocan_ AVRElIVNACRobio	it does not end here
Amo ypan:tlamia	he didn't meet the day
Amohuel quinamiquia ynilhuitl	or the time
Anoço cahuitl	things weren't like that
Amoyuh q[ui]catcā yntlamantli	and now it is made, it is settled
auh ynaxcan omochiuh omotlalli	the month count is now very true
ymetz/…/pohualiztli yn yehuel nelli yuhqui	the days have returned
yuh qu/i/ye mocuepa[n] ynilhuitl	there it was harvested [?]
yn no[n]can toco yhu/…/can pixco	together with him, the years arrived
Ca yniquac ytechonaçi yxihuitl	
[f.12v]	the great year, his name is Saturn
huiac xihuitl ytocan Saturno	he, the sign
yehuatl machiyotl	there begin the people
Onca[n] pehua ymacehualtin	[?] to cultivate, to harvest
çacamohua elimiqui yhua[n]toca pixcan	its fields, they are 'fieldmakers'
iniuh que ymilchiuhque milchihuani	he shows them the day […]
huel[54] que quinextilian ynilhuitl […]	

[51] Decorative floral motif.
[52] A capital letter 'I.'
[53] The translation of *yniquitoco* is uncertain. Justyna Olko suggested that the final 'o' might be an 'a', reading *quitoca* to fit the verb 'to sow'. Or perhaps quitoco is derived from neltoconi 'faith'. Translation remains inconclusive.
[54] 'l' in superscript.

This is more or less similar to Spanish *reportorios* and the fragments below illustrate how close the wording at times is:

Andrés de Li [1495]	Sancho de Salaya [1542]	Ambrosio de Gante [1581][55]
[fol.99r] En aquel tiempo feroce & muy rustico ante que en Ytalia supiessen las gentes por orden sembrar ni coger (no touiendo dimension ni cuenta cierta alguna), andaua todo entre ellos confuso. Porende, como scriue Aurelio Macrobio, no hauia entonces tiempos ningunos. Ca tiempo no es al saluo vna cuenta o mesura cierta que dela continua conuersion del cielo se coje & alcança. E por quanto llegando ende Saturno a reynar, por su industria tuuo la gente noticia de arar, sembrar, cojer y enxerir por orden de agricultura, con tiempo & numero ciertos […]	[fol.2r] ¶ Comiença el Repertorio delos tiempos. En aquel tiempo feros y muy rustico antes que en Italia supiessen las gentes por orde[n] sembrar ni coger:no tenie[n]do dimension ni cue[n]ta cierta alguna:andaua todo entre ellos confuso. Porende (como escriuo Aurelio macrobio) no auia entonces tiempos ningunos. La tiempo no es al:saluo vna cuenta o mensura cierta que del continuo mouimie[n]to del cielo se coge y alcança. E por quanto llegando ende Saturno a reynar:por su industria tuuo la gente noticia para arar/sembrar/coger/y enxerir por orde[n] de agricultura con tiempo y numbero cierto […]	[fol.3v] ¶ Comiença el Repertorio de los tiempos. Antes que las gentes supiessen por orden sembrar ni coger, no teniendo orden ni cuenta cierta, andaua todo entre ellos co[n]fuso. Y como escriue Aurelio Macrobio, no auia entonces tiempos ningunos; ca tiempo no es otra cosa, saluo vna cuenta, o mensura cierta, que del continuuo mouimiento del cielo se colige y alcança. Y ansi estuuieron mucho tiempo, hasta que Saturno vino a reynar en Italia, por cuya industria tuuo la gente noticia para ara, sembrar, coger, y enxerir por orden de agricultura, por tiempo y numero cierro. […]

Overall, the editions by Sancho de Salaya are the ones that have the most in common with Izcatqui. Similarities include the literal wording of text; the iconography of the *reloj de noche*; the table of the Aureus Numerus; the instructions about how to infer the Zodiac sign in which the moon houses and the preceding text explaining that the year 1542 is the fourth in the cycle of 19 (even though erroneously copied by the *tlacuilo*); the T-O map and description of the four winds; the Zodiac Man in all its details is *completely* the same as the one in the 1542 edition (see Figure 20); the Vein Man displayed from the front and the back; and the table that lists the amount of hours of day light for each day of the year.

Several features are lacking, though. First, the *table para numerar* is not present in printed almanacs by Sancho de Salaya nor by Andrés de Li. This table, however, is present in the *reportorio* by Ambrosio de Gante on page 79v (see Figure 21). What is also missing from the work of Andrés de Li, Sancho de Salaya, and de Gante are the mnemotechnic devices; that is, the circular diagrams and rhymes to calculate the celebrations of Catholic feast days. So, we can infer that these must have come from other *reportorios* that at first sight do not seem have been sources for Izcatqui, because the majority of their text does not coincide with the Nahuatl manuscript. I will explain the nature of these mnemotechnic

[55] This text is the same in the *reportorio* printed in Valladolid in 1554 [presumably based on text by Sancho de Salaya].

devices in detail in Chapter 5, but for now it suffices to indicate that these appear in the *reportorios* by Francisco Vicente de Tornamira [Pamplona 1585] and Rodriguez Zamorano [Sevilla 1594], whose texts, other than these fragments, have nothing to do with the content of Izcatqui.

The comparison presented above has illustrated the complexity in trying to find 'the' source text for Izcatqui. Two hypotheses can be drawn from what I have illustrated above. First, that the authors of Izcatqui have consulted a variety of *reportorios* and turned it into what became ms 3523-2. It does, however, seem unlikely that they would have copied the text of one almanac (Sancho de Salaya 1542) and added the drawings of another right above that text (Andrés de Li 1529). Secondly, that the authors have consulted a *reportorio* in either Spanish (that I have been unable to locate) or Nahuatl which already combined features of several almanacs and which was translated or copied as such.

Figure 20. Zodiac Man from Reportorio by Sancho de Salaya [1542] and Izcatqui.

The images in Figure 20 are identical, up to the senses around the head in an up-side-down reading order, the text below the *figura de la amistad*, and the explanatory sentence to the right of the figure. In Izcatqui, this line did not fit on the page anymore, but the *tlacuilo* drew a line around the sentence in order to make it appear as if it was still on the same page as the drawing of the Zodiac Man.

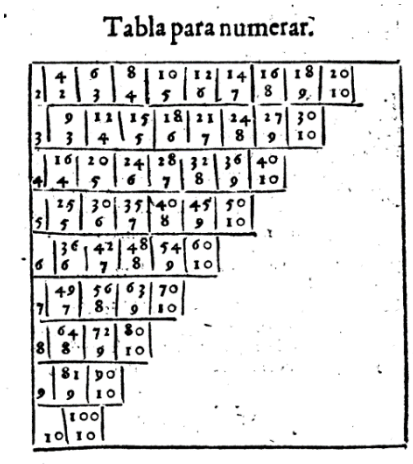

Figure 21. Table of multiplication from the Reportorio by de Gante [Valladolid 158: 79v].

2.7 Concluding remarks

The question remains whether the *tlacuiloque* compiled ms 3523-2 from a variety of sources or whether they translated or copied a source that already contained most of its features within a single *reportorio*. Whatever the true original almanac source(s) for Izcatqui, this (or these) source(s) itself (or themselves) must have evolved out of copying, combining, and adding text to already existing fragments. During this process, the Spanish texts that seems most likely to have been consulted were at least those by Andrés de Li [1529], Sancho de Salaya [1542 and 1554], and Ambrosio de Gante [1581]. With the exception of the text produced by de Salaya, these almanacs were produced for the order of San Bernardo. As stated earlier, this order originated in the 12th century in France on the initiative of St. Bernard of Clairvaux. The order was well known for the development of its own handwriting and style of initials, and the order also produced a large amount of manuscripts and books. The order became formally based in Mexico when its first convent was built in 1636 in the capital. This avenue needs to be further explored in future research.

The incorporation of the *reportorio de los tiempos* text is not limited to the single copy of Izcatqui. There are several manuscripts that include – to a greater or lesser extent – translations of fragments of the Spanish almanac. The following chapter provides a description of these manuscripts and compares them in a general way to Izcatqui. These texts have not only been written in Nahuatl but also in Otomí, a language spoken in Central Mexico and in Yucatec Maya. Even though the corpus known today is small, its variety in languages and its presence throughout hundreds of years is remarkable. It seems to suggest that the corpus today is just a remnant of a more thriving genre read in colonial Mexico.