

Where No Tradition Has Gone Before: Astrological Geography in the New World

Donde ninguna tradición ha llegado antes: la geografía astrológica en el Nuevo Mundo

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Associations of zodiac signs with lands, kingdoms, and cities were a common element of astrological forecasting. Since antiquity, these associations have assessed where the main effects of comets, eclipses, lunations, and planetary configurations would take place. Yet the discovery of new continents and territories in the early modern period challenged this system, since no associations existed for these new lands. This paper examines how astrologers faced this lacuna and the clash between traditional astrological knowledge and early modern geographical discoveries by exploring the propositions of astrologers working in the New World, their technical coherence, and their reception.

PALABRAS CLAVE: Astrology; America; Astrological Geography; Enrico Martínez; Antonio de la Calancha; Diego de Cisneros; *Thema Mundi*.

Las asociaciones de los signos del zodiaco con tierras, reinos y ciudades eran un elemento común de los pronósticos astrológicos. Desde la antigüedad, estas asociaciones evaluaban dónde se producirían los principales efectos de los cometas, eclipses, lunaciones y configuraciones planetarias. Sin embargo, el descubrimiento de nuevos continentes y territorios a principios de la Edad Moderna desafió este sistema, ya que no existían asociaciones para estas nuevas tierras. Este artículo examina cómo los astrólogos enfrentaron esta laguna y el choque entre el conocimiento astrológico tradicional y los descubrimientos geográficos modernos tempranos, explorando las proposiciones de astrólogos trabajando en el Nuevo Mundo, su coherencia técnica y su recepción.

KEYWORDS: astrología; América; corografía astrológica; Enrico Martínez; Antonio de la Calancha; Diego de Cisneros; *Thema Mundi*.

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Introduction

One of the notable features of the early modern period is the large production of astrological almanacs, driven forward by the development of the printing press. Among this varied genre of publication were prognostications on the quality of the year, the effects of planetary conjunctions, visible eclipses, and the occasional comet. The simpler almanacs were little more than calendars enhanced with data on lunations, tides, and other agricultural information. However, the more sophisticated almanacs involved a much more complex knowledge and skill sets. This means mathematical and astronomical expertise and an in-depth knowledge of astrological practices. This higher tier of almanacs presented yearly prognostications for weather and economic conditions, some even commenting on current-day politics.¹ These prognostications were achieved by applying the astrological canons to the year's planetary configurations (ex., lunations and conjunctions). This involved the study of various astrological charts or figures, such as the time of the seasonal ingresses of the Sun, the moment of notable conjunctions, the charts of a visible eclipse, or the movement of a comet through the heavens.²

Many of the astrological effects predicted through the judgement of eclipses, comets, and seasonal ingresses were specific to the location for which the respective astrological chart had been calculated. Thus, a large part of the judgement relied on the position of the phenomena (ingress, eclipse, lunation, etc.) in relation to the local horizon. However, the astrological canons allowed a wider scope of interpretations. These were generally used to obtain a more worldwide perception of the effects and were applied when the timing of a chart was difficult to ascertain, such as the appearance of a comet, or to identify where certain effects of an eclipse or a conjunction were likely to be felt.

The most important of these astrological canons was geography. This is not just in the form of the latitude and longitude required for the computation of charts but also in the association of signs and planets to certain countries, lands, and peoples: what is known as astrological geography or astrological chorography. This allowed the astrological practitioner to better deduce where the effects of a given astrological configuration of phenomena would have greater effects. At the same time, it provided a cultural and behavioral profile of the people of a certain region, kingdom, or city.

Due to its recurrent and prominent presence in astrological texts, some astrology historians have addressed this topic. The earliest studies, by Cumont and Bouché-Leclercq, focused mainly on the Greek traditions, such as those of Manlius and Ptolemy, by emphasising their relevance and central role in astrological practice.³ These were more recently addressed by Márton Veszprémy, who updated the study of these Greek sources.⁴ Helena Avelar de Carvalho offers a broader range of the historical development of this system, as well as a comprehensive listing and discussion of its medieval and early modern sources. She clearly shows how the attributions of signs to countries and regions developed in parallel with the political maps of the world and how these attributions are usually focused on the regional background of the author. While medieval Arabic authors such as Alcabitus (d. 967) list chiefly the sign correlations for the Middle Eastern territories

¹ The role of almanacs in early modern culture has been discussed widely in works such as Capp, 1979; Casali, 2003; Jensen, 2021.

² The ingress or revolution was the chart for the moment (time and date) of the entry of the Sun in the sign of Aries, Libra, Cancer, and Capricorn. This was usually calculated for the capital city of a kingdom. Another important set of configurations was the conjunctions of Jupiter and Saturn, Mars-Saturn, and Mars-Jupiter, since they were considered to signal changes in politics and on the weather. Any visible eclipse was also considered to have a significant impact. Lunations (New and Full moons, and sometimes the quarters) were used to predict minor meteorological changes.

³ Cumont, 1909. Bouché-Leclercq, 1884; 1899, 332.

⁴ Veszprémy, 2018.

around the Arabian Peninsula, early modern authors such as Antonio de Najera list sign attributions to fit the complex political map of sixteenth-century Europe.⁵ However, as Avelar de Carvalho points out, the use of astro-geographic associations for the New World is commonly absent in these discussions.

The present paper proposes to contribute to bridging this gap by taking a detailed look into astro-geographical attributions to the territories of the New World and, to a lesser extent, into existing references to the African and Asian territories unknown to ancient and medieval sources. Current historical research has engaged many of the novelties and transformations in European knowledge derived from the discovery of the American territories, which has generated a vast and varied academic production too large to debate here. The topic of astrology, however, has been addressed in a very limited form. Historians Jorge Canizares Esguerra and Claudia Brosseder have contributed most to this matter. They have demonstrated how the search for an astrological identity in South America had a noticeable role in the racial profiling of Indigenous and Creole populations and emphasized the narratives of their difference from Europeans.⁶ However, their studies are mostly focused on the cultural and social history of South America, not engaging the complex technical debates behind these attributions much beyond those of natural philosophy. Continuing Esguerra's initial study, Tayra Lanuza-Navarro explores this topic from a perspective of the history of science by addressing the new epistemologies and methodologies applied by astrologers to the New World. Yet, the discussion only focused on the debate of the sign of New Spain and did not engage its development, complexification, and impact on the astrological narrative of the new territories.⁷

This paper offers a development of the understanding of the astro-geographical discussions on the American continent by engaging the technical discussions within the context of the history of science. It studies the existing astrological sources on the New World to provide an updated view of this topic and its historical discussion and offer a map of the diverse opinions on the astrological correlations of the new territories from the sixteenth to the eighteenth centuries. Furthermore, it explores how the astrologers engaged with this technical problem by attempting a modification of the known traditional doctrines to fit the new paradigm of an expanded Earth.

The World and the Zodiac

Since antiquity, there has been a tradition linking regions, kingdoms, and cities with zodiacal signs and sometimes with planets. This was an established part of the astrological tradition even when political changes divided ancient territories or gave rise to new kingdoms. One of the earliest sources of this methodology (Figure 1), Marcus Manilius (*fl.* 1st cent.), considered that the world was:

Distributed among the twelve signs, and from the signs themselves must the laws prevailing among them be applied to the areas they govern; for these areas maintain between themselves the same relationships as exist between the signs; and just as the signs unite with each other or clash in enmity, now confronting one another across the sky and now linked in triangular federation, or as some other principle directs them to their various feelings, even so is land joined with land, city with city, and shores are at war with shores, realms with realms.⁸

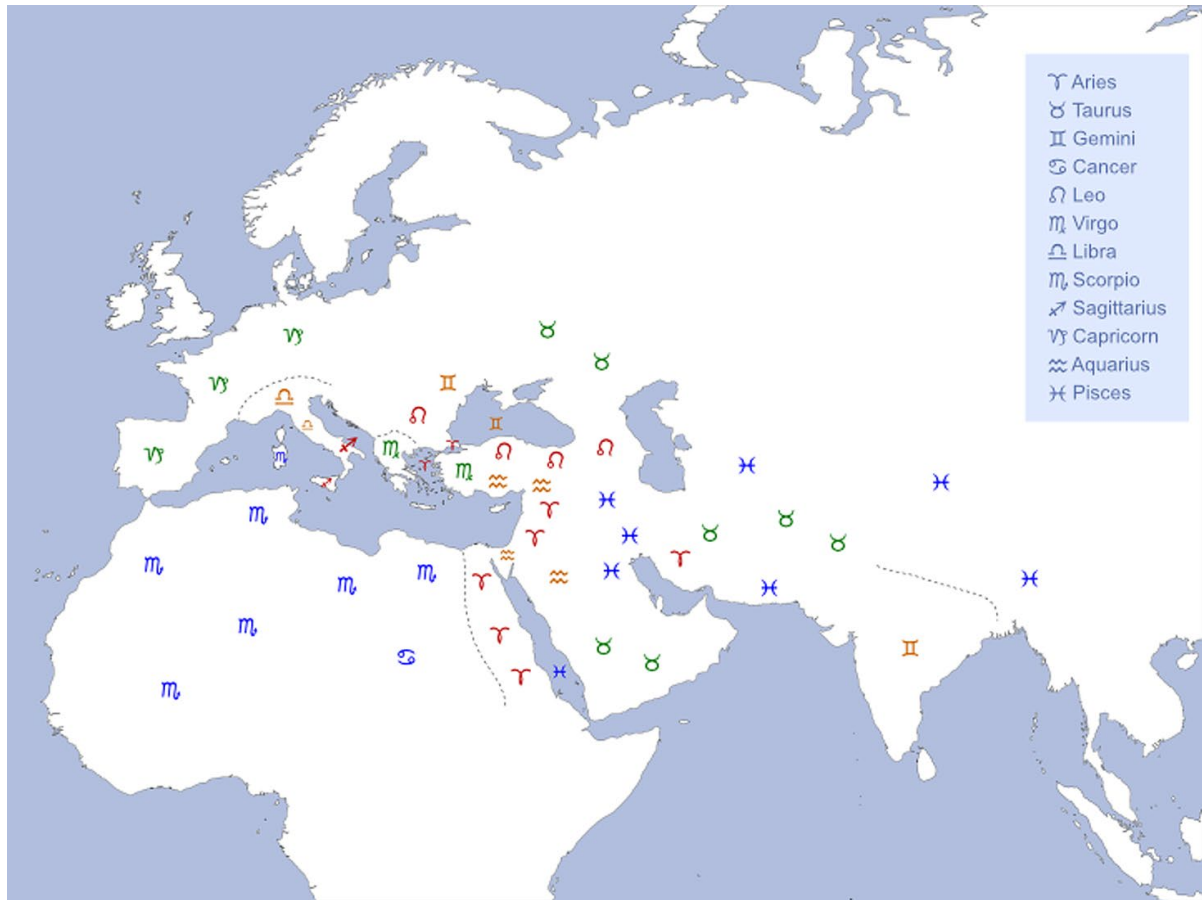
⁵ Avelar de Carvalho, 2019.

⁶ On this topic, see Esguerra, 1999; Brosseder, 2010; 2014; 2016.

⁷ Lanuza Navarro, 2016.

⁸ Manilius, 1977 [1st c. AD], 287-289.

FIGURE 1
MANILIUS'S ASTROLOGICAL GEOGRAPHICAL ATTRIBUTIONS

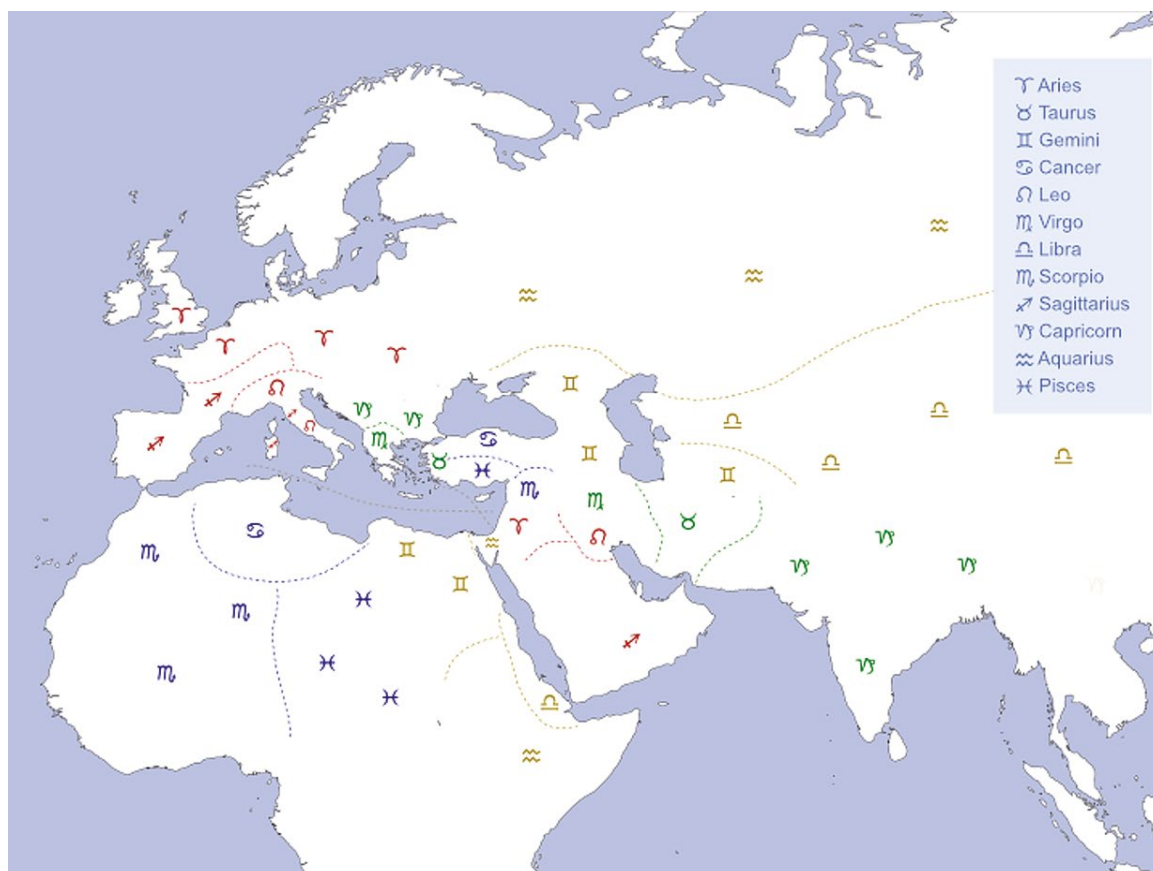


Source: Adapted from Avelar de Carvalho 2019 based on Manilius 1977 [1st c. AD]. Note that his figure and the next offer only an approximate overview of the astrological geographic associations.

As in many other aspects of astrology, Ptolemy was an extremely influential author in the matter of astrological geography. He dedicates an entire chapter of *Tetrabiblos* to discussing these associations and offers a system of attributions of lands to signs and planets according to the directions of space and the four elements.⁹ Ptolemy's mapping of astrological geography became the standard upon which to build, with added considerations from medieval Arabic and Latin authors adapting the model to be more specific for new kingdoms and cities (Figure 2).

⁹ Ptolemy, 1940 [2nd c. AD], II:3, 129-161.

FIGURE 2
PTOLEMY'S ASTROLOGICAL GEOGRAPHICAL ATTRIBUTIONS



Source: Adapted from Avelar de Carvalho, 2019 following *Tetrabiblos* (Ptolemy, 1940 [2nd c. AD], II:3).

By the early modern period, astrologers had structured a consistent corpus of sign associations to the main territories, kingdoms, and cities, which could be found in most astrological books, usually in the section discussing the qualities of the signs. These associations were chiefly used to predict where the effects of a planetary conjunction, an eclipse, or a comet would fall. According to the astrological doctrine, the effects would be observed mainly in the territories under the sign where the conjunction or eclipse took place or those under the signs where a comet had passed.

In the sixteenth century, this geographic correlation system faced a challenge of great importance that tradition was unprepared to deal with: the European maritime expansion and the discovery and colonization of new lands. While astrological doctrine had accounted for and encompassed the progressive historical variations in the divisions of territories, its ancient scheme had always been used as a template for these modifications. However, most of the novelties brought forth by maritime travel seemed beyond traditional limits. The distant regions accounted for by Ptolemy began to be explored in unparalleled detail, and even more significantly, an entirely new continent had been discovered. Astrologically speaking, the extended geography of Africa and Asia had some astrological foundation on which to base new associations, as proposed by Ptolemy and other ancient authors. The New World, however, was an unprecedented challenge to astrological doctrine. Since these regions were completely unknown, astrological associations had never been established for them. Consequently, estimating the impact of astrological

phenomena such as conjunctions, eclipses, and lunations on these new territories would be difficult. This would have been more pressing once the occupation of the territories had begun.

These discoveries prompted a reaction from the scholars of the period. Consequently, the territories of the New World were very early associated with the element of water.¹⁰ This was due to its humidity and the apparent phlegmatic traits of the land and its inhabitants, which were established characteristics of that element. Early chroniclers had referred to this extensively, and this idea was consolidated during the seventeenth century. The appearance of a fourth continent made the association with the four elements almost direct. The associations already in place in the Ptolemaic corpus were adapted: fire became associated with Europe, Air with Asia, earth with Africa, and water with America.

This association had direct implications for astrology and medicine regarding the effects of the temperament of the new lands on European bodies and the temperament of those born in the New World. Jorge Canizares Esguerra and Claudia Brosseder have studied this matter extensively and shown how early astrological correlations for South America impacted the racial perception of the indigenous and Creole population.¹¹ As mentioned above, the association of the American continent with the elements water and phlegm gave rise to the idea that it generated individuals with a predominance of the phlegmatic temperament. This was mostly unflattering for the New World inhabitants since the phlegmatic complexion was considered weak, while the Europeans, being under the element fire and the choleric temperament, were considered industrious and predominant. Consequently, all those born in the Americas, both the Indians and the Creole, would be considered less willing to work, unreliable, idle, and easily susceptible to sensuous activities—all traits associated with phlegm—. Yet, this characterization was not entirely negative. Early Chroniclers such as Barnabé Cobo also considered the phlegmatic trait to give the Americans relentless patience to learn crafts, making them excellent artisans.¹² Included in this debate was also the matter of whether the stars of the Southern Hemisphere were brighter and more beneficent than those of the north. This would also have implications in arguments regarding the superiority or inferiority of its inhabitants.¹³ The largely pejorative image of those born in the New World generated a response that reversed the arguments and demonstrated the superiority of the lands of New Spain and those born in them. Authors such as Augustinian Antonio de la Calancha (1584-1684), the Jesuit Alonso de Ovalle (1603-1651), and the Mercedarian Diego Rodríguez (1596-1668) contributed to the rise of a “patriotic astrology” that reinforced the idea of the beneficial, and thus superior, effects of the celestial influences in America. This could be experienced in the temperate and fertile land and consequently, in the superiority of its native inhabitants.

However, despite their implications for racial identity, the association of America to the phlegmatic temperament (and later with also the sanguine complexion), as well as the discussion about the brightness of the stars, were, in an astrological sense, only generalisations with limited practical applications.¹⁴ For the effective exercise of astrology, much more was needed. To achieve the same level of specific prognostication as the European almanacs, the general temperament of the American continent was not enough. As new territories were colonized and new cities were founded, specific sign associations had to be procured so that the traditional methods of astrology could be applied to America.¹⁵ This directly impacted the ability to do weather forecasting (important

10 Early sources for this debate are Enrico Martínez, 1606 and Cisneros, 1618 (discussed below). See also, Esguerra, 1999 and Lanuza Navarro, 2016.

11 Esguerra, 1999. Brosseder, 2010; 2014; 2016.

12 Cobo, 1892 [16th c.], 22

13 Esguerra, 1999, 40-47.

14 Note that both the phlegmatic and the sanguine temperaments are moist (cold and moist and hot and moist, respectively) and thus associated with the perceived moisture predominant in the American territories.

15 A first approach to this topic was made by Lanuza Navarro, 2016.

for agriculture and navigation) and medicine, both extensively dependent on astrological doctrine. Furthermore, it was also relevant for any kind of political prognostication, which was still sought after despite being seen as suspicious by the Church.¹⁶ Thus, practitioners in the New World attempted to create an astrological identity for the new territories and cities like those commonly found in astrological writings. This paper addresses how such an astro-geographical identity was developed by combining traditional concepts with experimentation and explores some of the proposals for astrological geography of the new lands uncovered by the global navigations of the early modern period.

Under the Sign of Capricorn

The cosmographer Enrico Martínez (1550-1632), working in New Spain since 1589 seems to have been the first to attempt an association of a zodiacal sign to the territories of the New World.¹⁷ He presented his ideas in the *Reportorio de los tiempos, y historia natural desta nueva espana* (1606), the first almanac published in the New World.¹⁸ Martínez first explained that the ancient astrologers determined which lands and countries corresponded to each sign by observing over time which regions were affected by the occurrence of celestial phenomena and planetary configurations in certain signs. Over the centuries, this empirical correlation led to the system of correspondences available to European astrologers. This type of data was lacking for the new territories; therefore, considering these traditional methods, he proposed two ways of addressing the astrology of the new lands, as follows.

The first method was to assume that each land would be subject to the sign rising on its horizon when the world was created. Here, he brought forward a core concept of the astrological tradition, the *Thema Mundi*, which is the astrological chart of the beginning of the world.¹⁹ Rooted in antiquity, this concept was often used in the tradition to explain foundational concepts of astrology, such as planetary rulerships and other essential dignities, becoming an important reference in early modern authors due to the period's interest in Classical authors. Traditionally, it was considered that the cosmos had come into existence as the sign of Cancer was the ascendant (usually 15°), and all main sources seem to agree with this premise. However, regarding the positions of the planets, there were two main views on the *Thema Mundi*. The first considered that all planets would be placed in the signs of their rulership sequentially –the Moon in Cancer, the Sun in Leo, Mercury in Virgo, Venus in Libra, Mars in Scorpio, Jupiter in Sagittarius, and Saturn in Capricorn. For early modern authors, its main source is the writings of Firmicus Maternus (Figure 3). Another alternative stated that the planets were in the signs of their exaltations– Moon in Taurus, Sun in Aries, Mercury in Virgo, Venus in Pisces, Mars in Capricorn, Jupiter in Cancer, and Saturn in Libra. This later version was debated due to the astronomical impossibilities offered by the positions of Mercury and Venus, which cannot be distant from the Sun more than 28° and 48°, respectively. Some authors offer corrections to make them astronomically sound. However, there are variants

¹⁶ See, for the Iberian case almanacs such as the *Reportorio del mundo particular* by Bartolomé Valentín de la Hera y de la Varra or the *Almanach prototypo* by Francisco Casmach: Varra, 1584; Casmach, 1644. On this type of astrological practice, see, for example, Ernst, 1991; 1993; Azzolini, 2013; Lanuza Navarro and Navarro-Brotons, 2013.

¹⁷ On Enrico Martínez, see Maza, 1943.

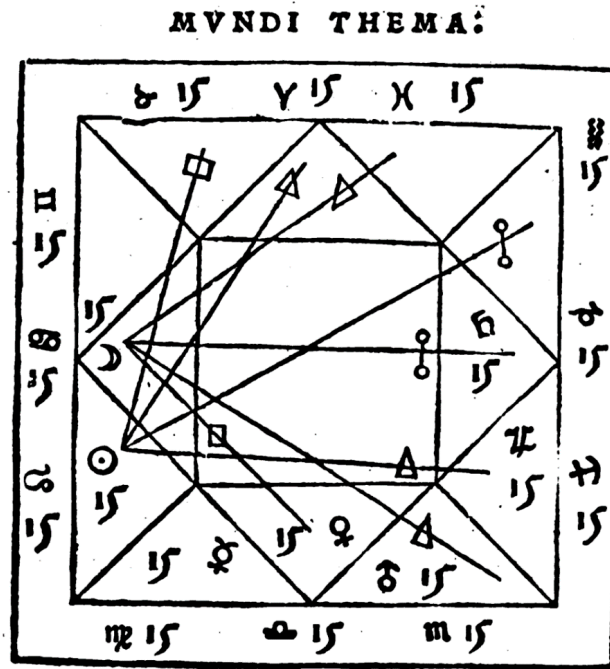
¹⁸ Martínez, 1606. The first would be the *Lunario y Regimiento de Salud* also by Martínez and published in 1604. However, although this work is referred to by Martínez in the *Reportorio*, there are no known surviving copies. See Burdick, 2009, 186.

¹⁹ On the relevance and history of the *Thema Mundi*, see Greenbaum, 2009, 185-93; Raffaelli, 2001; Bezza, 1999; 1995, vol. I, 283-293; Lippincott, 1990.

of the *Thema Mundi* which combine positions of rulership of the planets with those of exaltation, such as in Figure 4.²⁰

FIGURE 3

THE *THEMA MUNDI*, ACCORDING TO FIRMICUS MATERNUS.



Source: Maternus, 1533 [4th c. AD], 46.

In the early modern period, there were several propositions for the *Thema Mundi*. Almost all agreed with Cancer rising, but there were some disagreements on the exact degree of the ascendant. The positions of the planets by sign and degree also changed according to the opinions of different authors.²¹

Martínez's is very specific regarding his source which is Francesco Giuntini (1523-1590) and Pierre d'Ailly (1351-1420) as cited by Giuntini.²² Assuming d'Ailly's opinion was correct, that Cancer was rising at the moment of creation (Figure 4), and considering this would have occurred at the meridian of Damascus, Martínez concluded that the sign of Capricorn would be rising in Mexico:

20 In this chart, the Moon and the Sun are in their exaltation signs (Taurus and Aries, respectively), while Venus is in its rulership of Taurus, Mars in Scorpio, Jupiter in Pisces, and Saturn in Aquarius. Mercury is the only planet not placed in one of its rulerships or exaltations to keep the chart astronomically possible. Note that besides the Sun and the Moon, the other planets have two signs where they have rulership, which expands the possible combinations. On the rulerships and exaltations of the planets and their explanations, see *Tetrabiblos*, Ptolemy, 1940 [2nd c. AD], I:17 and I:19.

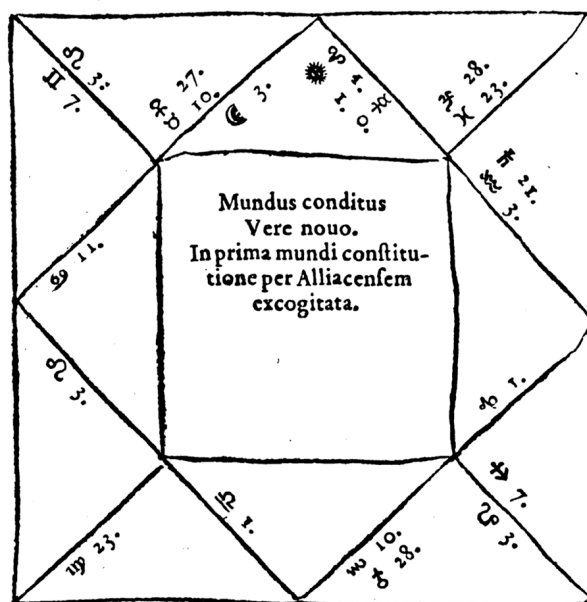
21 Francesco Giuntini discusses several variations in chapter two of his commentary to the *Sphere of Sacrobosco*. Giuntini, 1581, 659-661.

22 See Giuntini, 1581, 659-661.

Cardinal Pierre d'Ailly, a most knowledgeable man, and one of the authors that the aforementioned doctor Francesco Giuntino quotes, says that at the beginning of the creation of the World, the first degree of Aries was in the midheaven. This considers the meridian of the city of Damascus, according to which this computation is made. The longitude of Damascus is sixty-nine degrees and that of Mexico, the kidney of New Spain, two hundred and sixty-eight of which subtracted the sixty-nine, come to one hundred and ninety-nine which is the arc of the equinoctial that exists between the meridians of said cities. These one hundred and ninety-nine are the right ascension value of twenty degrees of the sign of Libra, which was thus in the meridian of this city of Mexico. Proceeding thus according to the doctrine of Johannes of Montereio, that is, adding to this right ascension of the midheaven, ninety degrees, results two hundred and eighty-nine, which in the table of the oblique sphere for the height of Mexico, come to nineteen degrees and fifteen minutes, which correspond to ten degrees of the sign of Capricorn. This was (if the opinion of d'Ailly is correct) the sign of the ascendant of this land in the creation of the World.²³

FIGURE 4

THE *THEMA MUNDI* ACCORDING TO PIERRE D'AILLY AS CITED BY FRANCESCO GIUNTINO, SHOWING 1° OF ARIES CULMINATING



Although Martínez was cautious about a method that depended on an alleged chart of the creation of the World with all the assumptions and opinions attached to it, he considered it an acceptable starting point. He established that New Spain was under the sign of Capricorn. His conclusion, he believed, was reinforced by more empirical data from the recent conjunctions and comets in the sign of Capricorn and its triplicity.²⁴ He associated the conjunction of Saturn and Mars, the two malefic planets, in Capricorn in 1510 with the conquest of the territory by the Christians, the fall of the local empire, and the great number of deaths of the indigenous population by small-pox in the following year. After the conjunction in 1546 of Saturn and Mars in 23° of Sagittarius, the planets entered Capricorn again, causing many deaths among the Indian population. Another conjunction of Saturn and Mars in Capricorn in 1576 corresponded with a great plague (*cocoliste*) where more than two million local people died. In this section, he also shows some concern regarding the coming conjunction of these planets in 1606. In his view, the damage experienced as a consequence of the conjunction of the malefic planets in Capricorn confirms the affinity of these lands and their people to this sign. Martínez further suggested that this is so because of the effects of the excessive dryness caused by these conjunctions on the moist complexion of the Indians, which were naturally phlegmatic and secondarily sanguine. These were the two moist temperaments –cold and moist, and hot and moist, respectively– and thus would be affected by the dryness brought by Mars, whose nature was hot and dry, with Saturn, cold and dry, in the sign of Capricorn, also cold and dry.

Vertical Stars

The second method Enrico explores is that of the signs and stars, which are vertical to these lands. This method is drawn from the standard methodology for the judgement of comets, where their path in the celestial sphere is projected to the Earth as geographical latitude to assess where its major effects would be felt:

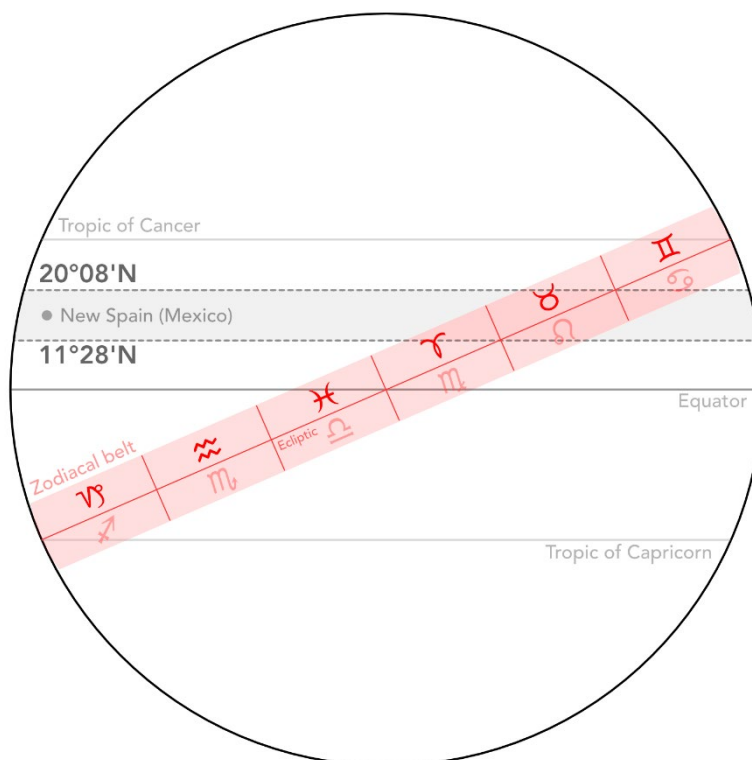
According to the doctrine of Johannes Sacrobosco in the third chapter of the treatise on the Sphere, all this New Spain falls within the torrid zone, and the main part of it, together with the City of Mexico, falls at the end of the first clime and beginning of the second. Its vertical signs, from a height of eleven and a half to twenty and a one-fifth degree, are Taurus, house of Venus, and Leo, house of the Sun. The constellation that transverses through the vertical points of almost all the region is the image of the horse Pegasus, which is composed of twenty stars and extends from the Equinoctial line to the Arctic pole from seven degrees up to twenty-five, although other constellations also do the same, none of them extends through it as much as this one. [...] And because in the time of the creation of the heavens, according to Aesculapius and Anubis, and according to the Arabs and Egyptians, the planet Venus was positioned almost at the meridian of Mexico, having its main domain over the tenth house and essential dignity on the ascendant, which are the main angles, and also because Taurus, the vertical sign of this region is the house of Venus: it seems that this is the planet whose qualities have greater power and influence over this land; and with the participation of the Sun because, according to some authors, it was in the house of Venus when it began to illuminate the World, and because its sign also traverses the vertical points of the region. Therefore, it seems that the planet that predominates in this kingdom is Venus, with the participation of the Sun.²⁵

²⁴ Capricorn is part of the triplicity of earth together with the signs of Taurus and Virgo. Thus, according to standard astrological doctrine, any celestial phenomena in these signs would potentially cause some effects in the region.

²⁵ “Segun Doctrina de Iuan de Sacrobosco, enel capitulo tercero del tratado de la sphaera, esta toda esta Nueva España dentro de la torrida Zona, y lo principal della con la Ciudad de Mexico cae enel fin del primer Clima, y principio del segundo: sus signos verticales desde altura de onze grados y medio hasta veinte grados y vn quinto, son Tauro casa de Venus, y Leon casa del Sol. La constellacion que passa por los puntos verticales decasi toda ela: es al imagen de cauallo Pegaso, que se compone de veinte estrellas, y se estiende de al Equinocial al Polo Artico desde siete grados hasta los veinte y cinco, y aunque tambien pasan otras constellaciones, ninguna dellas al coge toda como esta. [...] Y por quanto al tiempo de la creacion de los cielos segun Esculapio y Anubio, y segun los Arabes y Egypcios, se hallaua el planeta Venus casi en el

Thus, Martínez projected the terrestrial latitude of the main area of New Spain, including the city of Mexico, onto the celestial sphere, which corresponds to the declinations occupied by the signs of Taurus and Leo, the houses of Venus and Sun, respectively.²⁶

FIGURE 5
THE VERTICAL SIGNS FOR NEW SPAIN



Source: diagram by the author

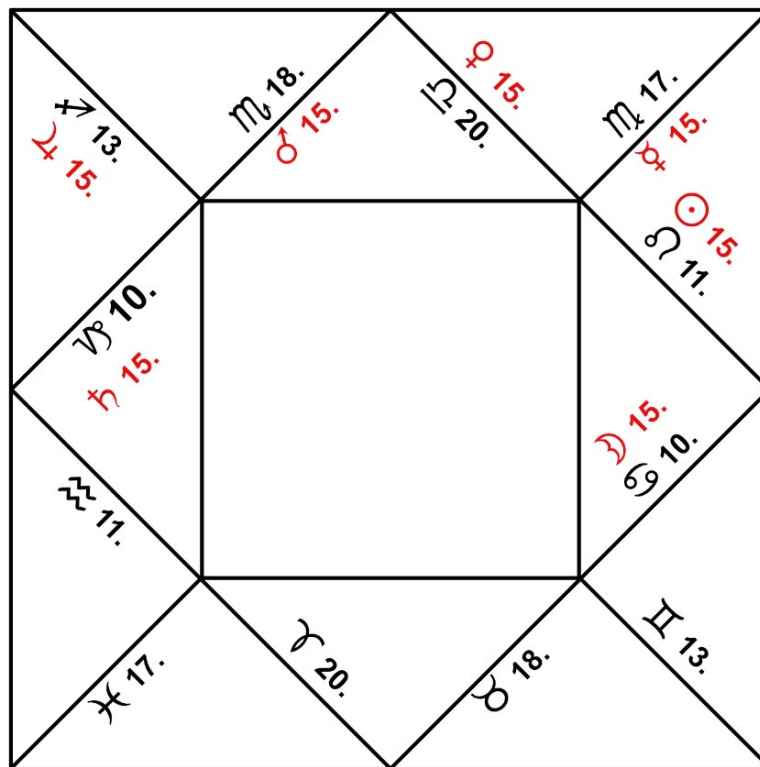
Relying once again upon the chart of the creation of the World, Martínez further concludes that Venus, as ruler of Taurus, will have more influence in this region than the Sun, the ruling planet of the other vertical sign, Leo. According to his rationale, Venus was in the tenth house and almost on the meridian of Mexico, a powerful placement for a planet. Furthermore, Venus had the

medio cielo en el meridiano de Mexico, teniendo dominio principal en al decima casa, è dignidade essencial en el ascendente, que fon los angulos principales, y tambien por que Tauro signo vertical desta region es casa diurna de Venus, parece ser este el planeta que com mas fuerça influye sus calidades en esta tierra, con participacion del Sol, por auerse hallado quando començò alumbrar el Mundo, segun algunos autores, em casa de Venus, y passar tambien su signo por los puntos verticales desta region, y assi parece, que el planeta que predomina en este Reyno, es Venus con participacion del Sol.” Martínez, 1606, 163-164.

²⁶ Since terrestrial latitude has as its celestial equivalent in declination this projection was straightforward. Note that in Figure 5 the signs in a lighter color are behind the those in darker tone, thus Taurus and Leo correspond to the same latitude/declination. This planetary correspondence is taken from the planetary rulerships of these signs, Taurus is being ruled by the planet Venus and Leo, by the Sun.

dignity of triplicity in the ascendant, Capricorn.²⁷ Accordingly, New Spain was ruled by Capricorn and Venus with the participation of the Sun. In this regard, Martínez's conclusions do not coincide completely with a single version of the *Thema Mundi* offered by his source, Giuntini. He appears to be offering an opinion of his own by selecting the angle values from d'Ailly but the planetary positions from some other source, since d'Ailly places Venus in Taurus and not Libra (Figure 4). His source for this is not clear, but other variations, such as those of Firmicus Maternus (Figure 3) and the "Arabs and Egyptians" mentioned by Giuntini, have Venus at fifteen degrees of Libra in close conjunction to the position of his computation of the midheaven at twenty degrees.²⁸

FIGURE 6
RECONSTRUCTION OF MARTÍNEZ CHART FOR MEXICO AND NEW SPAIN²⁹



Source: diagram by the author

27 Triplicities, in this sense, are a set of three planetary rulers which have domain over three signs of the same element and direction of space. Venus, together with Mars and the Moon have domain over the three signs of the element earth: Capricorn, the ascendant sign of New Spain, Virgo, and Taurus. See Ptolemy, 1940, 83-87; Burnett, Yamamoto and Yano, 2004, 25.

28 Giuntini presents the figures and opinions of different authors in his text (Giuntini, 1581, 659-661).

29 Since Martínez does not provide a figure or further details, I am assuming as house division the Rational Method (or Regiomontanus), used almost universally in the seventeenth century, and the traditional positions of the planets at 15° of their domiciles where Venus is positioned in Libra.

Cisneros' Critique

A decade later, the physician Diego de Cisneros (*fl.* 1618), discusses this matter again. Working in the city of Mexico like Martínez, Cisneros published the book *Sitio, naturaleza y propiedades de la ciudad de Mexico* in 1618, where he discusses Mexico's climate and land.³⁰ When addressing the region's astrological properties, Cisneros begins by discussing which stars are vertical to the city: those whose declination is the same as the city's latitude (19°13' north). He finds three stars that satisfy this condition: two in Taurus of fifth and fourth magnitude and of the nature of Venus, and another in Leo, of fourth magnitude and of the nature of Mars and the Sun.³¹

Then he proceeds to discuss the matter of the planets and signs that influence Mexico, but readily admits the difficulty of the task:

More difficult is the knowledge of what planets have domain over one city or kingdom and to which sign they are subjected so that from this knowledge, their influences can be judged and known the time when they receive larger or lesser changes from them.³²

Cisneros revisited Martínez's arguments, stating that they are commonly accepted and confirmed that he was the first to address this matter. However, he observed with concern that whoever is the first to put forward an idea has the greatest impact, but unfortunately, Martínez's proposal was full of errors. The first he addressed was the date and location of the chart of creation. This led him into a detailed debate on biblical chronology that extended over twenty pages. Only then did he address the astrological and mathematical errors. Even considering the main argument of the *Thema Mundi* as correct, there were many opinions on this chart. Other sources attributed the midheaven of Damascus as 15° of Aries, which would lead to 5° of Scorpio in Mexico's midheaven and 24° of Capricorn in the Ascendant. Additionally, he addressed the central problem of the correct value for the longitude of Mexico, which Cisneros considered to be 283° and not 269°. This resulted in a rectification of Martínez's numbers to a midheaven of 7° of Scorpio and an ascendant of 25° of Capricorn. However, if the midheaven of the Damascus chart were 15° of Aries, as Cisneros' other sources state, then the values would be 21° of Scorpio for the midheaven with 9° Aquarius rising. This would also invalidate Martínez's conclusions regarding Venus being the ruler of the region. Furthermore, Cisneros argues that even if Venus (as well as the Sun) should be considered since their signs of Taurus and Leo are vertical to Mexico, the same should apply to the other regions of the World where this is so. Yet, "experience and philosophy deny this".³³ Another methodological problem he points out is that this method could only be applied to regions in the torrid zone below 23° of latitude. None of the others could have a vertical sign for them. According to Cisneros, this demolished the evidence offered by Martínez through the Mars-Saturn conjunctions in Capricorn.

Cisneros also disagrees with Martínez regarding the temperament of the local people, being phlegmatic. He considered this temperament did not describe the common traits of the indigenous population and suggested them to be mainly sanguine.³⁴

³⁰ Cisneros, 1618. On Cisneros biography and work, see Rodríguez Sala 1994. On Cisneros's debate of Martínez's ideas, see also Lanuza Navarro, 2016.

³¹ Cisneros, 1618, 88v-90r.

³² 'Mas difficultad tiene conocer *que* Planetas tengan Dominio em vna Ciudad y Reyno, y à que Signo estén sujetos, para que deste conocimiento se juzguen sus influencias, y em que tiempos reciban mayores, ò menores alteraciones.' Cisneros, 1618, 90r.

³³ Cisneros, 1618, 104r.

³⁴ Cisneros, 1618, 112r-13r. The general idea in both authors seems to be that the natives of the New World have a moist complexion such as the land itself. However, they disagree on which moist temperament predominates, if the phlegmatic or the sanguine.

Despite his objections, Cisneros still considered that lunations, eclipses, and ingresses would be the appropriate factors to study the natural and political changes in the region of Mexico, whatever its sign or influential planet may be. He dedicates a greater part of his book to the complexion and specific properties of the land and the diseases of Mexico. Still, an overview of the doctrines in his book reveals that his application of medical astrology was quite the same as it would be practised in any European context. No new astrological ideas or concepts appear to have been included.³⁵

The positions of the two authors are quite revealing of the problem at hand. Enrico Martínez, on the one hand, attempts to solve the problem with astrological and astronomical reasoning. For this, he relied greatly upon the assumed astrological chart of the beginning of the world, the *Thema Mundi*. Many classical, medieval, and early modern authors connected this mythical moment and its chart to various canonical concepts of astrology, such as the houses and exaltations of the planets and the aspects.³⁶ Although the existence of a chart of creation raised a lot of problems and doubts, this scheme was more of a foundational blueprint for astrological doctrine than a real event. Thus, by relying on this concept, Martínez attempted to use the internal structure of the astrological principles as a foundation to base his methods for the New World. This was quite a clever solution from an astrological point of view despite the problems that this chart clearly raised, which the author fully knew. Although he presented this as an experimental idea, he moved forward by testing his Capricorn theory with the Mars-Saturn conjunctions.

Cisneros's concerns regarding this theory were quite solid. Needless to say, the existence of an hour and place for the moment of creation was quite problematic. However, his discussion of this matter was somewhat pedantic and missed the point of the *Thema Mundi* as a sort of archetypal model for the astrological canons. The matter of the correct value of longitude, nonetheless, is what dealt the final blow to Martínez's theory.

While Martínez made a working proposal and ran with it, Cisneros believed it was impossible to know what sign and planet influenced this region and preferred to continue using the standard methods without any speculative innovations. Cisneros was also concerned with the popularity of the association of New Spain to Capricorn and feared that it would be difficult to contradict it. He was apparently right on that point because, as shown below, the association of the sign of Capricorn with the New World became common in many astrological printed texts of the seventeenth century.

Notwithstanding this debate, and despite being very common for astrology books to list the association of signs to territories and cities, it is very rare to find any for the New World, the southern regions of Africa, or even Eastern territories like India, China, and Japan. This is especially odd in Portuguese and Spanish astrological publications, which could be assumed to have much more experience in these matters than any other European power.³⁷ The only exception is the Azores Islands, which have been known since the fourteenth century and were explored and colonized by the Portuguese in the first decades of the fifteenth century. In his *Reportorio del mundo particular* of 1584, Bartolomé Valentín (Pedro de la Hera y de la Vara) lists the Azores under the sign of Gemini.³⁸ However, associations have yet to be found for the Madeira and Canary Islands, settled and colonized in the early fifteenth century.

³⁵ Conversely, later authors such as Juan de Figueroa discuss some adaptations. See Ribeiro, 2023, 212-16.

³⁶ Firmicus Maternus explains the association of these concepts to the *Thema Mundi* and asserts that 'The divine wise men of old invented this birth chart of the universe so that it would be an example for astrologers to follow in the charts of men. "And so, from events which actually occurred in the history of mankind, the hypothetical birth chart of the universe was put together with allegorical meaning. It has been handed down to us as an example to follow in the charts of men. So that we may not seem to have left out anything we shall explain how it can be proved that man was created in the image of the universe". Maternus, 1975 [4th c. AD], 74.

³⁷ The Dutch astrological publications might also be a place to search for such data, unfortunately, it was not possible to carry this out at this time.

³⁸ Varra, 1584, f. 11v.

Calancha's Chorography

As to the signs of cities and regions, like other facets of New World astrology, little is discussed in this regard except by those practising it in the Southern Hemisphere. A good example is the work of the Augustinian Antonio de la Calancha (1584-1684), the *Corónica moralizada del orden de San Agustín en el Perú* (1639).³⁹ Among his various accounts of the Kingdom of Peru, he discussed the astrology of the region and the main cities. Interestingly, Calancha's motivation for this study was exactly the apparent lack of discussion among astrologers:

Seeing the little that is written and how admirably things could be written on the several stars of this sky of Peru, which the ancients did not know of because they lived in Europe and Asia. The moderns don't think about them, either because they don't see them or because they do not know them. Stating it straightforwardly, because some wish for it but don't understand it, and if some know, they prefer to use their time to count ten pesos than a hundred stars.⁴⁰

And there are parts of sky, groups of stars, that are not in the ephemeris nor have been touched with a quill by astrologers and sailors. I compared our stars of which those in Europe speak with those I observed in Lima, and I found absurdities and false information. I made two notebooks, one with the signs and planets that influence each province of this New World, from Newfoundland [Estitoland] to [the strait of] Magellan, naming the influences that they are inclined to, without departing a single point from Ptolemy and David Origanus, and placing the nations over which they predominate and what they produce according to their influences. The other [notebook] deals with the new images of stars and those which fall vertically in each city where my religion has a convent.⁴¹

Although these two notebooks referred to by Calancha were apparently lost, his published material is quite representative of this astrological work. Calancha used a similar rationale to the one by Martínez following Ptolemy and Origanus. He considered the stars vertical to the town and their attributes, but he also made associations of signs to the regions, which he does not always explain. He considered most of the present-day Peru and Chile region to be under signs of the elements air, Gemini, Libra, and Aquarius, possibly due to its temperate climate. He then combined the natures of these signs, stars, and related planets to explain certain characteristics of each region or town:

The stars vertical to Cusco are the stars that follow the three in the straight line of the Hydra, which is of fourth magnitude and of the nature of Venus; the star that precedes these three of the Hydra, which is of the fourth magnitude, and the nature of Venus, and it moves through the meridian of Cusco with twenty-nine degrees and fifty-two minutes of Leo. The star of the knee of Ophiuchus, which is of third magnitude and of the nature of Jupiter, moves through the meridian of Cusco with thirteen degrees and six minutes of Sagittarius. The signs predominating over Cusco are Gemini, Libra, and Aquarius, over whom Saturn, Jupiter, and Mercury have dominion. Saturn inclines them to superstitions, ceremonies, and rites regarding the dead; Jupiter to empire, magnificence, and greatness;

39 Calancha 1639. A second volume, assembled from his unfinished papers was published in 1653 adding details of other regions: Calancha, 1653. On Calancha and astrology see also Esguerra, 1999, 50-51; Brosseder, 2010, 147; Martínez, 2023.

40 "Viendo yo quan poco se escribe, i quanto admirable avia que escribir de varias estrellas de este cielo del Peru, que ni conocieron los antiguos por vivir en Europa i Asia, ni ponderan los modernos, ò Porque no las vèn, ò porque no las conocen, i diciendolo de una vez, porque sí unos lo desean no lo entienden, i si algunos saben, quieren mas ocupar el trabajo en contar diez pesos, que cien estrellas". Calancha, 1639, 49.

41 "i a pedaços de cielo quadrillas de estrellas, que ni estan en Efemeridas, ni las an tocado con la pluma Astrologos, ni marineros. Cotejè las estrellas nuestras de que ablan los de Europa, con las que mirava desde Lima, i allè absurdos, encuentros i noticias falsas, ize dos quadernos, uno de los signos i planetas que influyen en cada Provincia deste nuevo mundo, desde Estitolandia, asta Magallanes, nombrando las influencias à que inclinan, sin apartarme un punto de Tolomeo i de David Origano, i poniendo las naciones sobre que predominan, i de lo mucho que obran parecido à sus influencias. El otro es de nuevas imagenes de estrellas i de las que caen verticalmente sobre cada pueblo, donde tiene Convento mi Religion". Calancha, 1639, 49.

and Mercury to wisdom and prudence, coveting profit and striking deals. All this that Ptolemy says was seen in Cusco and its surroundings since it was made the head of this empire and held together this powerful monarchy.⁴²

Calancha extended this rationale to several other towns of the Kingdom of Peru such as Trujillo (page 486), Guadalupe (page 548), Quito (page 680), Arequipa el Mar (page 685), Oropesa (page 722), Potosi (page 747), Villa de Valverde, Ica (pag. 755), Zaña (page 851), Pucarani (page 866), Guanuco (page 892), Tarija (page 904), Nasca (page 905), Cañete (page 906). However, his most complex account is that of Lima.⁴³ Here he provided more details such as the foundation chart of the city:

If an astrologer were to undertake the study of the stars to know from the signs and planets what they influenced in this city of Lima, which ones, and with what effects, he would say (according to the doctrine of Ptolemy, David Origanus, Garcaeus, and of Cardano) that from the hour and day when the city began to be built, may the predominant [sign] be deduced. This [will be done] chiefly from the ascending sign, and that the city of Lima was founded on a Monday, which was the day of the Moon, and the eighteenth of the month of January, and because it was between ten and eleven on that day, the ascendant was Pisces. In all, this region, Gemini predominates, as it is proven elsewhere.⁴⁴

His discourse is somewhat confusing regarding the dates he used, and some planetary positions are dubious and difficult to verify, since he did not offer any chart or even enough information to reconstruct one. In any case, he considered Pisces to be the sign of the city because this was the sign of the ascendant at its foundation. He also used the sign of the anti-meridian, which is the fourth house in an astrological chart representing cities and the land generally with Gemini on its cusp, as well as the position of the Moon, whose sign placement is not entirely clear, although he refers to the sign of Virgo. From the latter, he made several interesting considerations in the description of Lima. Using several sources he diligently cited, he recalled the canonical association of the Moon with the seventh house of an astrological chart, which signifies marriages, and thus, the people of Lima will be inclined towards marriage.⁴⁵ But because this house opposes the ascendant, they would be from different lands, and there would be little peace among the married. It would also be a city of open enemies, robbers, and fugitives (all topics falling under the seventh house), to which he added that there were in Lima many escaped slaves and hordes of thieves and that in the civil wars, all enemies were quite visible. He also stated that in the absence of a king, it would be ruled by a chief who would experience a mix of successes and disgrace, which he associates with Francisco Pizarro (1478-1541,) who rose to great fortune but died disastrously without

42 “Las estrellas verticales del Cuzco son la estrella que sigue a las tres, que estan en la linea recta dela Idria, es de quarta magnitud, i de naturaleza de Venus. La estrella que precede a las tres de la Idria es de quarta magnitud, i de naturaleza de Venus, i pasa por el meridiano del Cuzco con ventinueve grados i cinquenta i dos minutos de Leon. La estrella de la rodilla derecha de la Serpiente o Fiucio es de tercera magnitud, i de naturaleza de lupirer i pasa por el meridiano del Cuzco con treze grados i treynta i seys minutos de Sagitario. Los signos que predominan sobre el Cuzco son Geminis, Libra, i Aquario, aquien domina Saturno, Iupiter i Mercurio, Saturno les inclina a supersticiones, ceremonias i ritos en materia de muertos; Iupiter a inperio, magnificencia i grandeza; i Mercurio a sabiduria i prudencia, codiciando grangerias, i contratando comercios. Todo esto que dice Tolomeo se vido en el Cuzco i sus contornos, pues se izo cabeça deste Inperio, i fue el que sugetò esta poderosa Monarquia”. Calancha, 1639, 499.

43 Calancha, 1639, 240-242 (Book I, Chapter 38).

44 “Si un Astrólogo cogiera entre manos el studio de los Astros para sacar por los Signos i Planetas, lo que influian en esta ciudad de Lima, i quales eran, i con que efetos la predominavan, dixera (según la doctrina de Tolomeo, de David Origano, Garceo i de Cardano) que dela ora i dia en que se començò la ciudad se à de deducir el predominante, i mas principalmente del signo ascendente, i que si se fundo en Lunes la ciudad de Lima, era dia de la Luna, i que à diez i ocho del mes de Enero, i porque fue entre las diez i once del dia, era ascendente Piscis. A toda esta comarca como en otro lugar se prueba, predomina Geminis”. Calancha, 1639, 240.

45 In astrology, the seventh house of marriage has as its co-significator the Moon.

progeny.⁴⁶ This is his most complete example of an astrological description of a city because he then continues with several interesting astrological associations, which he uses to describe the behaviour of the men and women born in Lima.

Further research is needed to assess how influential Calancha's text was among practitioners and students of astrology, especially outside the South American context. Given the lack of references and the common absence of astro-geographical references or debates on the American continent in astrological literature in the following decades, it was likely to have been very small.

Yet, this must have been a very active debate for the increasing number of South American practitioners. In his text on the comet of 1664, the cosmographer Francisco Ruiz Lozano (1607-1677) listed several regions of South America in the way they usually appear in treatises and this type of judgment. He offered no explanation or sources as if this were common knowledge:

Sagittarius dominates in Arabia Felix, Crete, Candia, Egypt, Spain, France, Flanders, and Portugal; also in these occidental parts, especially in the Kingdom of Chile, the cities of Valdivia, Osorno, Concepcion, Santiago, and others.⁴⁷

[...]

The sign of Leo, entirely traversed by this comet, has domain over Italy, Phoenicia, Chaldea, the Kingdom of Bohemia, part of Turkey, and in the great district of the Kingdom of Peru; and of the cities, in Lima, and the spaces of the interjacent coast, from Cabo de Pasados to Morro Moreno.⁴⁸

This suggests that outside of the printed word, debates had occurred, and conclusions were reached on which signs ruled each territory or city, of which, unfortunately, we have so far, no record. Even some years later, in his *Discurso Cometológico* on the great comet of 1680, the physician Joseph de Escobar Salmeron y Castro (c.1625-1684) referred to Capricorn as the “radical sign” over New Spain possibly following the initial suggestion by Martínez. This association, he stated, had been verified by the effects of the conjunctions, eclipses, and other phenomena in this sign despite the problems with the rationale involving the chart of creation.⁴⁹ Interestingly, he also seems to associate Virgo (or Pisces) with the Portuguese East Indies.⁵⁰

Beyond South America

Beyond the descriptions of the South American practitioners, the absence is not complete. Some rare but revealing accounts of the astrological associations for these regions are mentioned in mid-seventeenth-century English almanacs. By the middle decades of the seventeenth century, the political crisis in England allowed more freedom in the printing press. This allowed a flourishing of English astrological almanacs free of the limitations the Inquisition imposed in the Iberian context. This also coincided with the growing presence of the English as a power in global navigation and trade. The astrological almanacs reflected this new geographic, political, and social

⁴⁶ Calancha, 1639, 240.

⁴⁷ “Predomina Sagitario en la Arabia feliz, Creta, Candía, Egipto, España, Francia, Flandes y Portugal; también en estas partes occidentales, principalmente en el reino de Chile, ciudades de Valdivia, Osorno, Concepción, Santiago y otras” (f. 39v), published in Espinosa, 2019, 404-405.

⁴⁸ “El signo de León, que discurrió todo este cometa, predomina en la Italia, Fenicia, Caldea, el reino de Bohemia, parte de la Turquía, y en gran distrito de este reino del Perú; de las ciudades, en Lima, y los espacios de la costa interyacente, desde el cabo de Pasados hasta Morro Moreno” (f. 40r), published in Espinosa, 2019, 404-405.

⁴⁹ Salmeron y Castro, 1681, 17v-18r, 23r.

⁵⁰ Salmeron y Castro, 1681, f. 22v.

context.⁵¹ Thus, a survey of some of the publications of this period discloses some of the astrological associations used to make judgements on American territories, both South and North. Although, once more, no source is mentioned, Martínez's suggestion of Capricorn for the territories of New Spain seems to impact these associations even outside the Spanish-speaking world. The writings of the prolific astrologer William Lilly (1602-1681) are a good example, since he published regularly. In his almanacs, the most common reference is the West Indies, which are generally associated with the sign of Capricorn. Although his examples are not always clear, other references seem to associate both Central and North America with the element of earth. Thus, Barbados is associated with Taurus, and Saint Kitts and Virginia with Virgo, likely to have been due to its name.⁵² The sign of Capricorn is also given to Brazil, Guinea, and 'other hot parts of Africa'.⁵³ Lilly's student, Richard Edlyn (1631-1677), also linked Aquarius to "Amazonia", the northern interior region of Brazil associated with the Amazon River, perhaps coming directly or indirectly from Calancha's text.⁵⁴

Another interesting example of the application of astrology to the New World comes from another prolific almanac writer, John Gadbury (1627-1704). In 1673 and 1674, Gadbury published the *Jamaica almanack*, calculated for Jamaica, Barbados, and "other adjacent islands in the West Indies, under the dominion of His Majesty of Great Britain".⁵⁵

In the first edition of 1673, instead of making any consideration as to sign associations to these territories, which his contemporaries place under Capricorn or Taurus, Gadbury used a foundation chart for Jamaica. He considered not the chart of its discovery or colonization but the chart of the English conquest of the territory, which he considers occurred on 10 May 1655 at 3 hours p.m. (Figure 7). Thus, the chart of the English conquest stands in Gadbury's view as a sort of natal chart of the Jamaican territory, at least from an English point of view. He applied directions of the so-called *hylegiacal* points of the chart and even spoke on calculating longevity as it would be done for a natal chart.⁵⁶ Although there are references in the astrological literature to the duration of a kingdom or government, the methodology is not a direct transposition of the natal one. This becomes evident again in Gadbury's almanac of 1674, where after the traditional study of the ingress of Aries and of a lunation, he made an analysis of the year's revolution (sometimes referred to as an anniversary chart, or solar revolution) of the chart for the English rule of Jamaica. Again, a methodology only applied to nativities is transferred to a chart of a political event. Gadbury's almanacs provide, therefore, a good example of what seems to be a tendency of astrologers in the seventeenth century to use foundational charts of territories, cities, and governments, or even Jupiter-Saturn conjunctions using them as natal charts.⁵⁷ This approach does not appear in earlier almanacs and writings when judging the conditions of the year, or it is very rare. This change in methodology might result from the lack of an astrological doctrine regarding new territories, leading astrologers to experiment with new forms of forecasting while still following traditional rules. However, more research is required on the technical aspects of the astrological practice

51 For an extended discussion of the astrological practices and literature of this period, see Capp, 1979; Curry, 1989; 1991.

52 Lilly, 1668.

53 Lilly, 1662, [14].

54 Edlyn, 1664, 102. My thanks to Susan Ward for this data on Lilly and Edlyn.

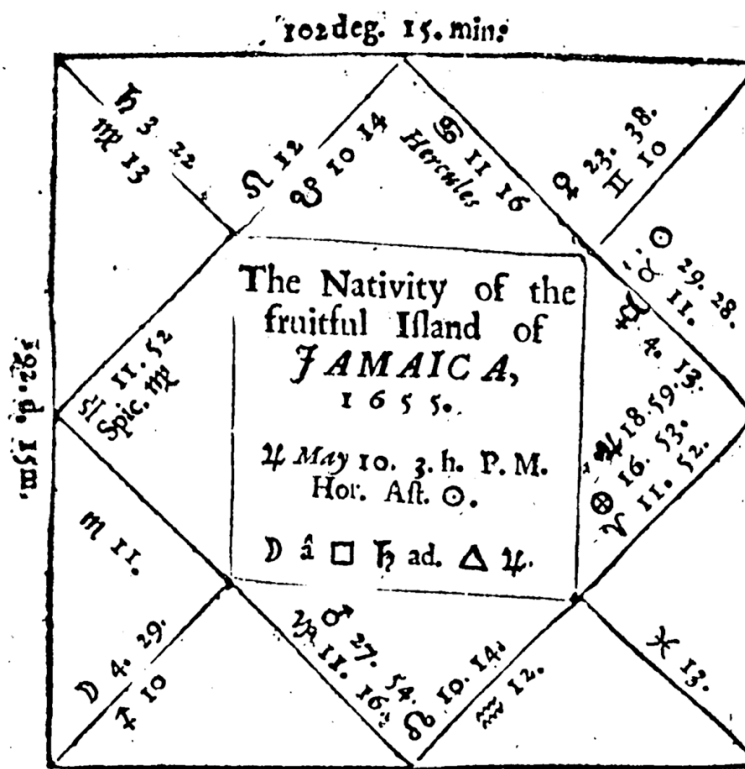
55 Gadbury, 1672; 1674.

56 The hylegiacal points are the Sun, the Moon, the Ascendant, Part of Fortune, and the degree of the pre-natal syzygy. They are used on matters of longevity, medicine, and to determine the main life events of a natal chart.

57 In his almanac for 1651, William Lilly explains this methodology which he applies to the current government: "I begin first with the Profectionall figure of this Parliament, Secondly with their Annuall Revolution, and having observed what is worth our observation in both chief Schemes, I shall proceed to the figure of the World, vulgarly called the Ingress of [the Sun] into [Aries]". Lilly, 1650.

of this period to properly understand the extent of these changes in practice, which is out of the scope of this paper.

FIGURE 7
NATIVITY OF JAMAICA, ACCORDING TO GADBURY



Source: Gadbury 1672.

Despite the use of new forms, it would be expected for these types of studies or references to sign associations to gradually become more common. Still, they are practically non-existent in the English almanacs of the second half of the century and even less so in those published in North America, which, for the most part, are just simple ephemerides with little to no astrological judgement. There are several possibilities for this absence. First, it must be considered that by the second half of the seventeenth century, there was a steady decline of astrology as an accepted form of knowledge. This could have invalidated further studies on the matter of astro-geographic associations. Secondly, the inherent difficulties and uncertainty of such associations might have led the new generation of astrologers to replace this methodology with what they considered to be more reliable or rational methods. Another contributing factor was likely the substitution of proper astrological almanacs with either simple calendars or with the satirical almanacs that became popular in the last decades of the seventeenth century.⁵⁸ This led to a rapid decline of the yearly forecasts, perhaps making the debate on astro-geographic associations less relevant.

The system, however, survives in later writings. A century later, physician and astrologer Ebenezer Sibly (1751-1800) still offers listings with the correspondences of signs with territories and

⁵⁸ Capp 1979, 231-235, 276.

cities in his book, *A Complete Illustration of the Celestial Science of Astrology* (1788).⁵⁹ Although most of his material is a straightforward repetition of earlier sources, sometimes listing the same country or city under its Latin and English name, he includes two New World countries and three North American cities. America is placed under Gemini and Mexico under Capricorn, continuing the tradition set forth by Martínez. The city of New York is attributed to Cancer, Philadelphia to Leo, and Charles-Town (Charleston) to Libra.⁶⁰ Like in the case of Ruiz Lozano, this strongly suggests that this discussion circulated outside printing materials and that astrologers were still interested in continuing the tradition. However, as before, no sources are mentioned despite Sibly's material being visibly based on previous authors.

Yet, despite applying these associations in a traditional form on ingresses and eclipses, he is also continuing the trend of foundational charts as astrologers of the earlier century, such as Calancha, Lilly, and Gadbury. The best example is his discussion on the astrological chart of the independence of America from British rule, offering an illustrative plate (no.53) with the chart (Figure 8).⁶¹

FIGURE 8

SIBLY'S PLATE WITH THE CHART OF THE AMERICAN REVOLUTION



Source: Sibly, 1788, 1054-1055, plate no. 53.

⁵⁹ On Sibly and his work, see Sommers, 2018.

⁶⁰ Sibly, 1788, 101-103, 105. Sibly also associates North America to the Moon, and both North and South America to the Sun, a type of association less commonly found in astrological books.

⁶¹ Sibly, 1788, 1054-1055, plate no. 53.

Final Thoughts

Due to its pervasive presence in early modern culture and cosmology, astrology becomes a good example of the impact of maritime expansion on traditional knowledge. With the expansion of geographical information, new astrological rationales had to be developed to accommodate the astrological-geographical correspondences that underline the common and necessary judgements of weather, state of the year, and medical conditions. Thus, the exploration of new lands and continents was happening not only in the disciplines more commonly discussed historically, such as cartography, navigation, and natural history, but also in astrology. Although there are no specific historical studies on the astro-geography of the New World, for the early modern class of educated practitioners, which included cosmographers, physicians, as well as astrologers, this was an important practical problem which affected the efficiency of their craft. It becomes evident from the sources studied that this problem was being debated and tested in practice. Either devised from practical experience or by some transposition of traditional knowledge, a system of correspondences for the New World seems to have been created and put into practice by the mid-to-late seventeenth century. In the writings of this period, astrologers referred to the signs associated with the new territories without any apparent doubt and displayed confidence in such correspondences. Usually mentioned amidst a judgement of a comet or eclipse or listed, these sign-to-region associations are given without explanation.

Only Martinez and Calancha, working with a blank canvas, offered some clues to the rationale behind their proposals. What emerges from their writings is a fair attempt to adapt known and time-tested traditional methods to a new context. This is done quite cleverly either by using the ancient model of the *Thema Mundi*, which codified many of the principles of astrology, or by adapting methods usually applied to cometary judgements. Even if no agreement was reached among authors, the thought process reveals respect and trust in the astrological tradition paired with a deep knowledge of the foundational canons of astrology. This is quite evident in Martinez but not so much in Cisneros, who, despite presenting strong and valid counterarguments, does not seem to grasp the ingenuity of Martinez's suggestion. However, in later almanacs by Ruiz Lozano and Salmeron y Castro, this tradition is being used as expected in the discussion of comets, conjunctions, and eclipses. This means that despite the scarcity of documental evidence, this discussion produced some form of local tradition by which South American astrologers could provide the same type of medical, meteorological, and political forecast for the *virreynatos* as commonly practised in Europe. Understanding this practice and its impact requires a comprehensive study of the astrological content of South American almanacs, which has yet to be made.

Outside the Spanish publications, most printed works of the seventeenth century omit any astrological geographical associations for the New World. Perhaps there was still some uncertainty about the concepts and methodologies used. It is also unclear what level of influence the South American authors had, if any. Whatever the case, the current scarcity of sources does not allow a complete picture of the development or transmission of this knowledge. There seems to be a lack of a comprehensive astrological geography of the New World, such as the traditional correspondences found in European texts. Only a few territories are mentioned by British authors, mainly those under British rule. Furthermore, the search for these correspondences, as seen in Calancha's text, appears to have not survived the marginalization of astrology from the accepted sciences by the early eighteenth century, at least in print.

The writings of late seventeenth-century authors appear to present a change of focus in astrological practice. Practitioners were exploring and finding new forms of dealing with the lacunae in the tradition regarding the New World. These methodologies did not rely as much upon astrological geography. This seems to be exemplified in the progressive use of foundation charts of one sort or another for political prognostication, as demonstrated by Calancha's discussion of the foundation chart of Lima and in the astrological figure for the English conquest of Jamaica offered

by Gadbury in his almanac for Jamaica. The foundation of new cities was a novelty in the European context. Although many associations of cities with signs were attributed to foundation horoscopes, these had a mythical status given their antiquity and were, in most cases, speculative. They served to provide an ethnic, social, and political identity to the inhabitants of a town or region, offering an astrological rationale for their customs, history, and culture. Yet, in the case of the New World, the new inflow of foundational data combined with the lack of a tradition could also explain the apparent underdevelopment of this topic across the astrological literature of this period, leading astrologers to rely on alternative methodologies. Yet, astro-geography is still present in the writings of eighteenth-century astrologers such as Sibly, where its use is combined with foundational charts. However, in all cases, no explanation is given for the source of these attributions, and further research is required to attain a clearer view of this process. Figures 9 and 10 combine in a visual form the astro-geographical information provided by all the abovementioned sources, resulting in a first mapping of the astro-geographic attributions for the New World, including some data on the south regions of Africa.

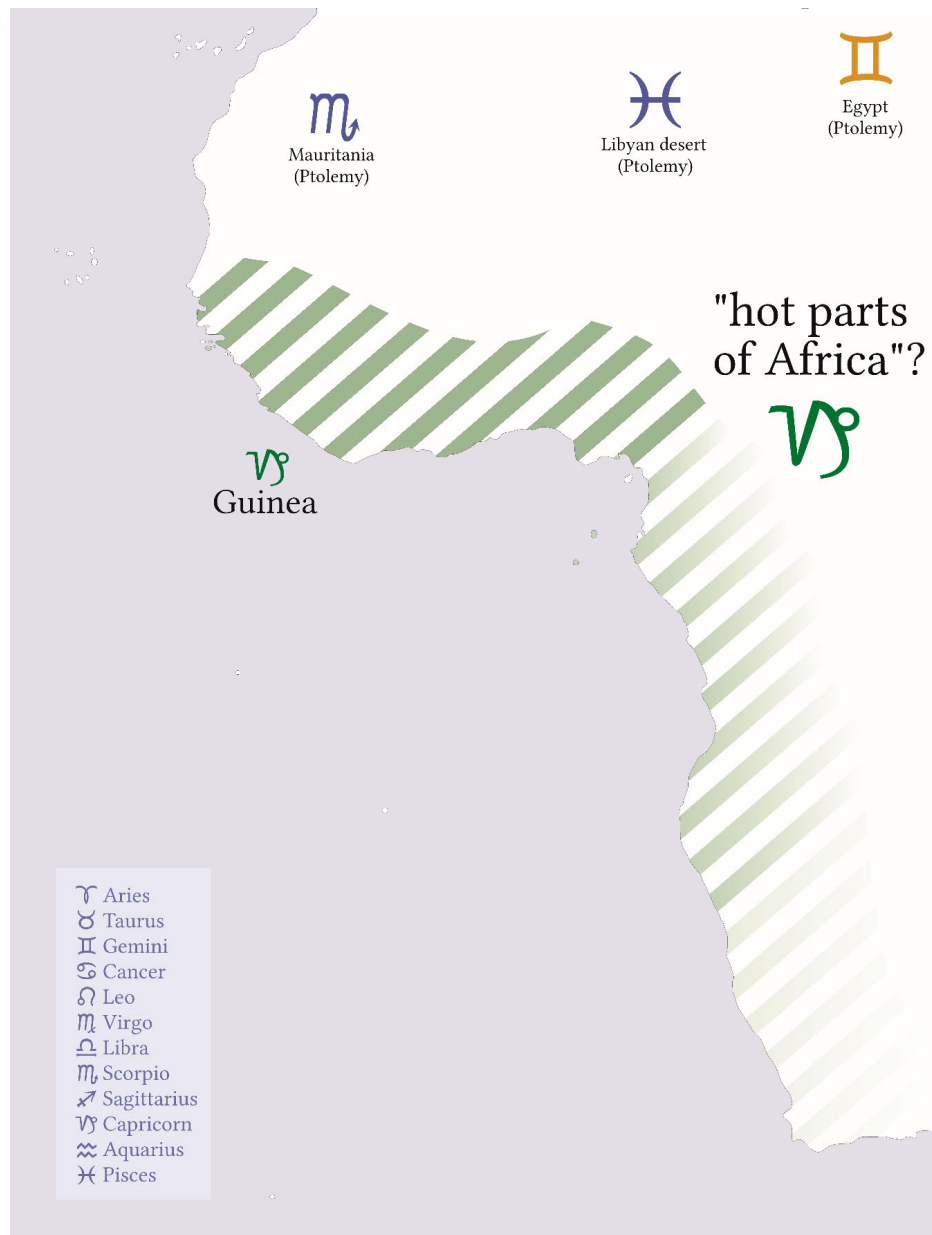
Regarding the sixteenth and seventeenth centuries, more materials will certainly emerge with a systematic study of printed and manuscript sources for this period, especially those in Portuguese, Spanish, Dutch, and English. However, the existing evidence presented here in this first approach to the topic shows astrological geography to be a good example of a process of adapting and transforming traditional practices to account for the new and unprecedented challenges catalysed by early modern globalization.

FIGURE 9
SIGN ATTRIBUTIONS FOR THE AMERICAN CONTINENT



Source: diagram by the author

FIGURE 10
SIGN ATTRIBUTIONS FOR TROPICAL AFRICA



Source: diagram by the author

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