

The Mesoamerican Calendar

The codices of the so-called Borgia Group, which are named after the codex that is considered its finest example (see listing in the Appendix), offer an unadulterated window into ritual, divinatory, and calendrical knowledge as it was practiced in Mesoamerica before the arrival of the Europeans. Today, all pre-Hispanic religious manuscripts are housed in European collections, where they arrived in the first decades after the conquest as gifts and objects of curiosity for ecclesiastical and political dignitaries throughout the continent. It is unknown how many more manuscripts of this kind circulated in Mesoamerica. The extent of the deliberate physical destruction of Indigenous knowledge on the part of the friars cannot ultimately be quantified. Many other specimens may have been forgotten and destroyed over time once they were hidden to spare them from Spanish and missionary fury. Lack of provenance notwithstanding, it is quite remarkable that the few surviving manuscripts of the Borgia Group form a very consistent corpus in terms of both calendrics and iconography. Nowotny (1961) was the first to conduct a comprehensive study of the manuscripts as a whole based on calendrical concordances, upon which iconographic similarities are largely based. Colonial manuscripts that feature religious content, such as the Codices Borbonicus, Telleriano-Remensis, and Tudela, also focus on the Mesoamerican calendar and related iconography, although in a much simpler manner, which likely reflects the limited knowledge of ancient religion and calendrics on the part of the lay Indigenous informants who contributed to their creation. This chapter focuses on the Mesoamerican calendar, especially its different configurations, in the pre-Hispanic religious manuscripts. An in-depth analysis of the calendar's functioning and use is essential to gain an accurate understanding of the pictorials.

3.1. The *tonalpohualli*

The 260-day calendar is one of the diagnostic characteristics of Mesoamerican civilizations, as was first recognized by Kirchhoff (1943). The earliest archaeological record of it dates to the Formative Period in the sixth century BCE, and its use extends to the present, albeit restricted to Indigenous communities in southern Mexico and Guatemala. Mazatec diviners, as noted in previous chapters, no longer rely on the 260-day count, although German ethnologist Wilhelm Bauer (1908) documented the use of a twenty day-sign calendar in the region in the early twentieth century. Thus, in my field work, I could not account for the use of the 260-day count in divination. Instead, I largely relied on a study by Paul van den Akker (2018), a colleague from the Faculty of Archaeology at Leiden University, who conducted extensive field work in the Maya K'iche'

community of Momostenango. Paul's knowledge of the intricacies, functioning, and logic of the calendar, known as *chol q'ij* in K'iche', was gained through his training and collaboration with don Rigoberto Itzep Chanchavac, a K'iche' *ajq'ij* (diviner) from Momostenango.

Spanish friars extensively discussed the use and characteristics of the ancient Mexican calendar in their writings. Most notably, Bernardino de Sahagún (1950–1982, bk. 4) devoted an entire book of his great opus to “judicial astrology or art of divination.” Figure 3.1 is an illustration from the appendix at the end of the book, where Sahagún explains to the reader the table that the diviner, whom he refers to with the Nahuatl word *tonalpohuque*, used to count days and make prognostications. *Tonalpohuque* literally means “those who count the days,” from the words *tonal* (day) and *pohualli* (to count). *Tonalpohualli* is the word for calendar, as the “count of days.” The table combines twenty day signs (Fig. 3.2) and thirteen numerals, which are consecutively counted to yield a unique and fixed sequence of 260 days. Beginning on 1 Crocodile (Cipactli in Nahuatl), the count reaches 13 Reed (Acatl), at which point the numeral starts again from one with 1 Jaguar (Ocelotl), reaching 7 Flower (Xochitl), then 8 Crocodile. After 260 days, both the thirteen-day period and the twenty day signs return to the initial position of 1 Crocodile. It should be noted that, in contemporary communities such as Momostenango, where the tzolkin (as the *tonalpohualli* is known among Mayanists) remains in use, no fixed day functions as the first in the calendar; rather, the count seamlessly and endlessly continues. By contrast, in the ancient manuscripts, the count almost always appears to begin with day 1 Crocodile, although the diviner could easily start counting from any point in their chart.

In Sahagún's table, numerals are indicated with Arabic numbers, while Indigenous documents, such as the codices of the Borgia Group, utilize a dot for a unit to reach a maximum of thirteen dots. Although a complete and unequivocal date can only be given with a combination of a day sign and a number, numbers in the ancient manuscripts are often omitted and implicit in the progressive count of day signs. Dots are often used to indicate a period or lapse of time between signaled day signs. As also remarked by Mayanists (Aveni 2011), such a use of numbers in Mesoamerican calendrics indicates that intervals and lengths of time between events were at least as important as the time when the events occurred. Replacing dots with Arabic numerals, as Sahagún did in his table, erases this important aspect of Mesoamerican time reckoning and philosophy.

1 Acaatl	Cipactli	1	8	2	9	3	10	4	11	5	12	6	13	7
2 Acpatl	Quetzalcoatl	2	9	3	10	4	11	5	12	6	13	7	1	8
3 Calli	Coatl	3	10	4	11	5	12	6	13	7	1	8	2	9
4 Tzictli	Coatl	4	11	5	12	6	13	7	1	8	2	9	3	10
5 Acaatl	Coatl	5	12	6	13	7	1	8	2	9	3	10	4	11
6 Tzictli	Coatl	6	13	7	1	8	2	9	3	10	4	11	5	12
7 Calli	Coatl	7	1	8	2	9	3	10	4	11	5	12	6	13
8 Tzictli	Coatl	8	2	9	3	10	4	11	5	12	6	13	7	1
9 Acpatl	Coatl	9	3	10	4	11	5	12	6	13	7	1	8	2
10 Calli	Coatl	10	4	11	5	12	6	13	7	1	8	2	9	3
11 Tzictli	Coatl	11	5	12	6	13	7	1	8	2	9	3	10	4
12 Acpatl	Coatl	12	6	13	7	1	8	2	9	3	10	4	11	5
13 Calli	Coatl	13	7	1	8	2	9	3	10	4	11	5	12	6
1 Acpatl	Coatl	1	8	2	9	3	10	4	11	5	12	6	13	7
2 Acpatl	Coatl	2	9	3	10	4	11	5	12	6	13	7	1	8
3 Acpatl	Coatl	3	10	4	11	5	12	6	13	7	1	8	2	9
4 Calli	Coatl	4	11	5	12	6	13	7	1	8	2	9	3	10
5 Tzictli	Coatl	5	12	6	13	7	1	8	2	9	3	10	4	11
6 Acpatl	Coatl	6	13	7	1	8	2	9	3	10	4	11	5	12
7 Acpatl	Coatl	7	1	8	2	9	3	10	4	11	5	12	6	13
8 Calli	Coatl	8	2	9	3	10	4	11	5	12	6	13	7	1
9 Tzictli	Coatl	9	3	10	4	11	5	12	6	13	7	1	8	2
10 Acpatl	Coatl	10	4	11	5	12	6	13	7	1	8	2	9	3
11 Acpatl	Coatl	11	5	12	6	13	7	1	8	2	9	3	10	4
12 Calli	Coatl	12	6	13	7	1	8	2	9	3	10	4	11	5
13 Tzictli	Coatl	13	7	1	8	2	9	3	10	4	11	5	12	6

Figure 3.1. The tonalpohualli (count of days) according to Bernardino de Sahagún. *Historia general de las cosas de Nueva España*, vol. 1, bk. 4, f. 79v. Paso y Troncoso 1926.

Among contemporary Maya K'iche' diviners, it is generally understood that day signs, which are assigned a name, indicate the quality and character of the day, also referred to as *ajaw* (Lord), while numerals indicate the quantity or intensity of the day sign (Akker 2018, 32–38). To appreciate the relationship between day signs and numerals, one can read the rows of numbers in Figure 3.1, which are each assigned to one of the twenty day signs. While a sign recurs every twenty days, the numeral assigned to it waxes and wanes in intensity over the course of 260 days. If the day is 1 Crocodile, it will be 8 Crocodile after twenty days, 2 Crocodile after twenty more days, 9 Crocodile after sixty days, and so on. Periods dictate not only the quality of a day but also its intensity in a way that is not incremental but rather pendular.

Sahagún explained that intervals of thirteen days formed a block; this is usually referred to in Spanish as a *trecena*, which derives from the word for thirteen in Spanish (*trece*). The first day of the *trecena*, which is assigned the

numeral 1, functions as the ruler (usually referred to as “regent” in the literature) of the entire period. The first *trecena*, 1 Crocodile, is followed by 1 Jaguar, 1 Deer, 1 Flower, and so on until the twentieth *trecena*, 1 Rabbit, which completes the 260-day count with the day 13 Flower. The twenty *trecenas* of the tonalpohualli (13 × 20 = 260) constitute only one of the calendar’s possible partitions, but they are indeed an important one and usually referred to as *tonalamatl* (book of days; see Fig. 5.1, 5.2, and 6.7). This term is somewhat a misnomer because it specifically indicates the actual pictographic manuscript employed by the diviner, as *amatl* means “paper.” The depiction of the twenty *trecenas* is the only presentation of the tonalpohualli found in the ancient books (the Codices Borgia, pp. 61–70, and Vaticanus B, pp. 49–68) that shows striking iconographic similarities to its counterpart in colonial religious manuscripts (e.g., the Codices Borbonicus, pp. 3–20; Telleriano-Remensis, ff. 8r–24r; and Tudela, ff. 98v–124r). Continuity in iconography related to the *trecenas* from ancient to colonial times indicates the

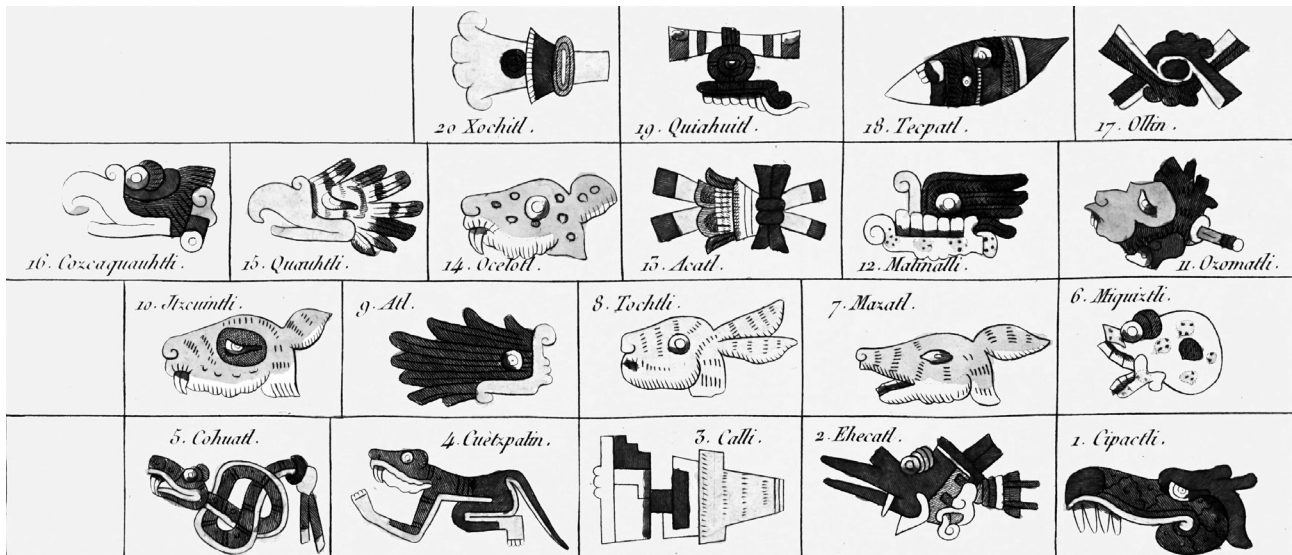


Figure 3.2. The twenty day signs according to the Codex Borgia, reading from bottom right to top left. Humboldt 1816–1824.

widespread use of this particular chronological division of the tonalpohualli in Mesoamerica for the prognostication of fate and destiny, which is indeed the topic of Sahagún’s fourth book of the Florentine Codex.

Beginning with Nowotny (1961), modern studies have focused on other possible divisions of the tonalpohualli that are uniquely found in pre-Hispanic manuscripts. This has given rise to important considerations on comparable iconography and content in the Borgia Group codices (e.g., Anders and Jansen 1993, Anders, Jansen, and Loo 1994, Boone 2007). The arithmetic of the 260-day calendar generates patterns in which numbers and periods of four and five are favored ($13 \times 4 \times 5 = 260$), aside from the basic twenty-trecena division ($13 \times 20 = 260$). Furthermore, the numbers four and five were symbolically attached to cardinal directions. In the case of a partition into four periods ($65 \times 4 = 260$), each period of sixty-five days was assigned to a cardinal direction, usually in the following order: east, north, west, and south. In the case of the fifty-two-day partition ($52 \times 5 = 260$), a fifth direction was added: the center. A complete count must be reached by the end of the specific periodization employed, as also seen in Sahagún’s table, to include every possible calendrical occurrence. Usually, a single theme, such as agricultural fertility, marriage, birth, travel, or pilgrimage, was treated in each periodization of the manuscript. A section that includes a single theme and periodization is sometimes referred to as an “almanac” (Boone 2007). After consulting with a diviner, the client would know how to take proper action according to the day of the planned activity or when a specific event occurred. Babies were assigned birth dates as names, and body parts were attached to specific day signs, which shows other possible uses of the tonalpohualli as depicted in the books consulted by diviners.

To exemplify the complex but coherent arrangements of the calendar and its images in the Borgia Group

manuscripts, I analyze pages 12–13 of the Codex Cospi (Fig. 3.3) in the following paragraphs. As explained by Nowotny (1961, § 16) and Anders, Jansen, and Loo (1994, 257–265), the two pages present four comparable scenes in which a character brings an offering to a temple. On each page, there are two gods, temples, and related offerings in contrasting colors; one is bright and yellow, while the other is dark and black. Inside each bright and yellow temple, there is a colorful bird singing a “flowery chant,” as indicated by the green and yellow volute emerging from its mouth. By contrast, in each dark temple sits an owl, a nocturnal predatory animal that emits a dark smoke. On the one hand, the two bright and yellow characters can be identified as gods or priests with the attributes of Tonatiuh, the sun god, and Cinteotl, the god of the harvest, on pages 12 and 13, respectively. The two dark characters, on the other hand, exhibit the iconography of Itzlacolihqui and Mictlantecuhtli, the god of the underworld, and are engaged in an act of self-sacrifice by perforating their ears. The offerings brought by the god-priests in their censers are also of an opposing nature: while the smoke emanating from the censers of the bright Tonatiuh and Cinteotl has attributes of flowers and jewels, Itzlacolihqui’s and Mictlantecuhtli’s offerings consist of stones and bones that emanate a heavy black smoke.

The calendar count of this quadripartite sequence assigns specific portions of the tonalpohualli to each god, temple, and offering by dividing the 260-day calendar into five blocks of thirteen days each. The thirteen-day period is not painted; rather, the diviner had to implicitly count it, evincing the correct partition upon reading the sequence of days on the left-hand side of the images. The first five days in the top left image, for example, are Crocodile, Reed, Serpent, Movement, and Water. A knowledgeable diviner would have known that the sequence is based on a consistent lapse of fifty-two days between each consecutive day depicted. Given that fifty-two is a multiple of thirteen, every day in that sequence has the same numeral, which

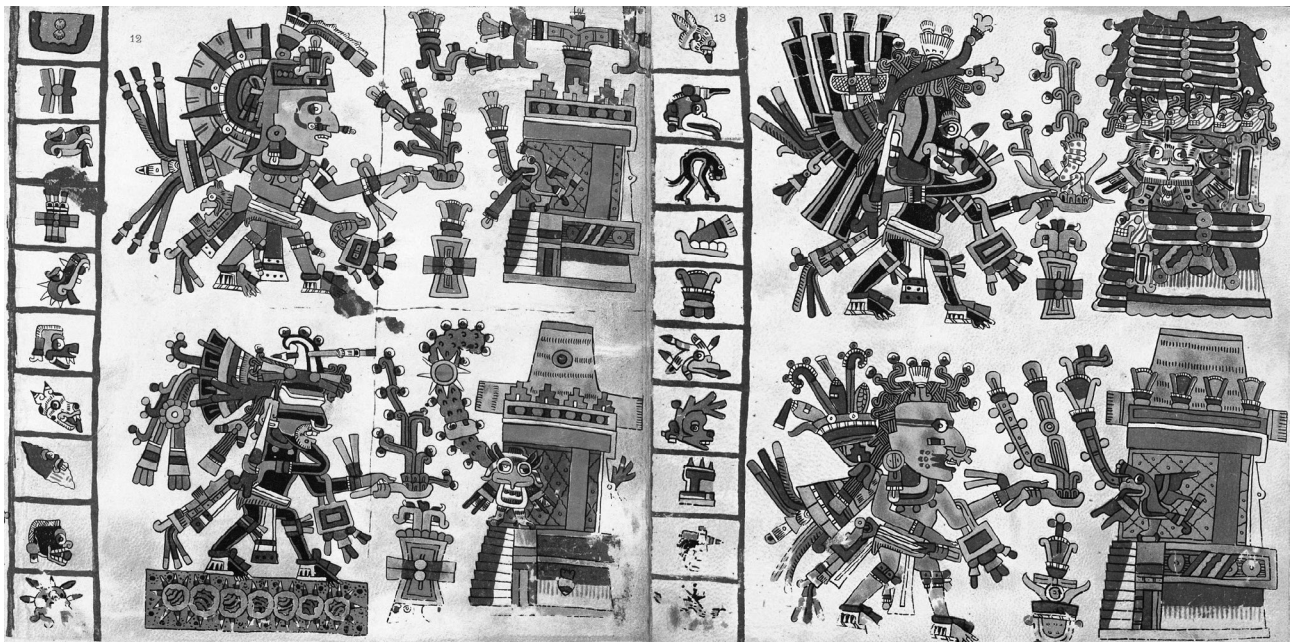


Figure 3.3. The sun and night temples officiated by four god-priests. Codex Cospi, pp. 12–13. Loubat 1898.

is the reason it was not explicitly written. The table underneath depicts the days Jaguar, Death, Flint, Dog, and Wind, each of which occurs thirteen days after the day sign in the same position above (i.e., 3 Jaguar occurs thirteen days after 3 Crocodile, and so on). The next table is on the bottom of page 13 and shows the day signs Deer, Rain, Monkey, House, and Eagle. The last block of trecenas is at the top of page 13 and depicts the day signs Flower, Grass, Lizard, Vulture, and Rabbit. When presented in this manner, the calendar can be read in different ways. For example, if the diviner reads one trecena in the first scene, such as 1 Crocodile, they could proceed to the next consecutive trecena that begins in the same position in the following scene (i.e., 1 Jaguar) or jump ahead fifty-two days in the following trecena of the same block (see also Boone 2007, 75–78, for an explanation of a similar partition of the tonalpohualli in the Codex Fejérváry-Mayer, pp. 33–34).

When iconography and calendrics are analyzed together, it becomes clear that the opposition between light and darkness and between life and death is dynamic. God-priests, their offerings, temples, and presiding birds are interchangeable, as the movement between them is circular rather than one-directional. Seasonality and the corresponding movement of the sun or other planets and stars were readily superimposed on the progressive count of days, and the dimensions of time and space could not be separated. The back-and-forth movement across time and space could also be performed in a different manner without necessarily following a specific spatial-temporal path. These complex presentations of the tonalpohualli are commonly found in pre-Hispanic manuscripts but rarely found in colonial religious documents, which only focus on the twenty trecenas, as previously mentioned.

3.2. The xihuitl

The simplified rendition of the tonalpohualli found in colonial sources has led scholars to believe that two calendars were in use in Postclassic central Mexico: the tonalpohualli, which consisted of twenty trecenas of thirteen days, and the *xihuitl* (“year” in Nahuatl), the solar or civic year that roughly corresponded to a cycle of 365 days. The latter is composed of so-called *veintenas*, eighteen periods of twenty days, which culminated in a festival from which the name of the *veintena* was derived (see Appendix). At the end of the eighteenth twenty-day period, five more days were counted; they were referred to as *nemontemi* (wasted days) because no ritual activities were performed. Thus, the total count reached 365 ($18 \times 20 + 5 = 365$), approximating the solar year. The *veintena* calendar is sometimes referred to as *cempoallapohualli* (count of twenty), although colonial sources rarely used this term (Bustamante García and Díaz Rubio 1983, Doesburg 1996, 106, Johansson 2005). The term “*cempoallapohualli*” hints at the mathematics of the Mesoamerican count, which employed a base-twenty numeral system.

Mexican scholar Díaz Álvarez (2009, 2013, 2018) recently challenged the assumption that two separate time reckoning systems were in use in late pre-Hispanic central Mexico, basing her critique on an examination of sixteenth- and seventeenth-century sources. She argued that the separation and indeed dichotomy between divinatory and historical time, tonalpohualli and *xihuitl*, largely corresponded to a Western understanding of time that not only operated at the time of conquest but still holds true today. The systematization of the Mexican solar calendar into *veintenas*, in Díaz’s view, was based on the

European monthly calendar, which forcefully applied the names of specific festivals (Atlcahualo, Tlacaxipehualiztli, Tozoztontli, etc.) to a sequence of twenty-day periods. Among others, Sahagún (1950–1982, bk. 4, appendix), in the chapter dedicated to the art of divination, emphatically asserted that the Nahuas employed two distinct calendrical systems. For the friar, the xihuitl was the only reliable and objective means of recording historical events and natural phenomena over the course of the solar year. By contrast, the tonalpohualli functioned only as a zodiac and was full of idolatrous misbeliefs created by the devil to deceive credulous people. In modern times, this once-Catholic view has become generally accepted, although stripped of its condemnatory overtones. The time of religion is considered the product of a historical and cultural construction, while the solar calendar is taken as factual and unconstrained by relativistic human projections. The increasingly sophisticated technology used to measure even the slightest movement of the sun or other celestial bodies further strengthens our trust in the mechanics of modern timekeeping, finally erasing any other alternatives to compute and conceive of the passing of time.

Although seldom recognized in the study of Late Postclassic central Mexican calendrical systems, there is a known partition of the 260-day calendar that greatly facilitates the counting of the veintenas and solar year within the tonalpohualli: the partition of the 260 days into four groups of five trecenas ($5 \times 13 = 65$; $65 \times 4 = 260$). The 65×4 table establishes the sequence of the so-called yearbearers, the days that gave the name of the solar year. Sahagún's table of the tonalpohualli (Fig. 3.1) provides an alphabetically written list of yearbearers used in Late Postclassic central Mexico (Reed, Flint, House, and Rabbit) in a column on the left, from 1 Reed (given as 1 Acatl) to 13 Rabbit (13 Tochtli). The Codex Borbonicus also provides a full list of fifty-two yearbearers on pages 21–22, beginning with 1 Rabbit on the lower left corner of page 21 (Fig. 1.3). Given the arithmetic of the tonalpohualli, while the day sign of the yearbearer always repeated in the same sequence of four days, the corresponding numeral increased one unit each year (year 1 Reed is followed by 2 Flint, 3 House, 4 Rabbit, 5 Reed, and so on). The days assigned to the position of yearbearers were ultimately arbitrary, but they were necessarily positioned five days apart in the tonalpohualli.

Furthermore (and perhaps more interestingly), the 65×4 table provided the sequence of the days of the veintenas over a four-year period. Each of the eighteen veintenas of a given solar year began with the same day and therefore followed the same sequence. For example, if the first day of the veintena was a day Crocodile, this meant that every veintena of that solar year would begin with Crocodile (albeit with a different numeral), which can be easily calculated by referring to the table provided by Sahagún and analyzed above (Fig. 3.1). As previously mentioned, every row gives the occurrence of the same day sign every twenty days; this indicates that the day would be 8 Crocodile twenty days after 1 Crocodile and 2 Crocodile after twenty more days. Given that there are only thirteen

numerals, certain veintenas, and their respective sequence of days, would repeat during a solar year. Over four years, if a veintena began with 1 Crocodile the first year, the veintena in the same position would begin with 2 Death the following year; 3 Monkey the next year; and finally, 4 Vulture the fourth year, before reverting to Crocodile, this time with the numeral 5. In matters pertaining to the solar year, a veintena in the same position meant that similar agricultural and seasonal phenomena and astronomical occurrences could be expected.

Ajq'ij (diviner) don Rigoberto Itzep Chanchavac from Momostenango still relies on the 65×4 table to establish the correct day of the Mam, as the yearbearer is known in Maya communities (Akker 2018, 60–61). He further noted that the steady numeral increase of the yearbearer through the years indicated an intensification of the quality of the regent day sign. The 65×4 calendar partition, although relatively infrequent in the Borgia Group manuscripts, is fairly common in the few surviving ancient Maya codices. Long (1923), Pharo (2014, 153–168), and Barrera Atuesta (2019) already remarked on this and considered the 65×4 table of the tzolkin as an arithmetic means of correlating astronomical and seasonal phenomena with the passing of the 260-day calendar. In Maya codices, the same calendar division is also employed in the calculation of the Venus cycle, as in the Codex Dresden (pp. 24, 46–50), with parallels in the Codices Borgia (pp. 53–54), Vaticanus B (pp. 80–84), and Cospi (pp. 9–11; Nowotny 1961, § 18, Anders, Jansen, and Loo 1994, 237–256, Boone 2007, 151–156). The tonalpohualli and the solar calendar of 365 days align every fifty-two years, beginning a new cycle. This means that every fifty-two years, the days of the tonalpohualli occupy the same position in the veintenas throughout the solar year. In turn, the Venus and solar cycles align roughly every eight years. Finally, the solar calendar, the Venus cycle, and the tonalpohualli return to the same position every 104 years (i.e., every other solar cycle of fifty-two years).

I believe that this partition was used by ancient diviners to establish the correct unfolding and sequence of the veintenas and corresponding ceremonies therein over a four-year period, according to the specific relationship established with day signs and numerals of the tonalpohualli. The 65×4 division explains the importance given in the sources to periods of four and eight years. In *Primeros Memoriales* (ff. 253v–254r), for example, the feast of Atamalqualiztli is discussed immediately after the eighteen veintenas and took place every eight years. This information, given in the alphabetic text, is presented as a series of eight turquoise circles in the upper part of the corresponding illustration. Following this same line of argument, the four blue dots placed in front of Chicomecoatl at the beginning of the celebration of Ochpaniztli on page 29 of the Codex Borbonicus (Fig. 4.12) can be interpreted as a festival that was conducted (or conducted in a particular manner) only every four years. Although it is only a detail, I believe that this clue is important because it indicates an understanding of the veintenas as not being fixed to the monthly calendar of later colonial sources but dependent on an internal

counting system that recognized the cyclical occurrence of certain dates every four years.

The 65×4 calendrical partition was typically found in pre-Hispanic religious manuscripts related to the prognostication of rain. This is the case for the Codex Borgia (pp. 27–28), with parallel sections in the Codex Vaticanus B (p. 69; Fig. 3.4), which depicts the four and five manifestations of Tlaloc, the rain god, and Fejérváry-Mayer (pp. 33–34, top; see the discussion in Boone 2007, 145–147). In the image from the Codex Vaticanus B, the god Tlaloc appears five times: once at the center and four times at the corners. Starting in the top right quadrant, which corresponds to the east, the dates given are 1 Reed (yearbearer) and 1 Crocodile, the first day of the calendar. Proceeding counterclockwise, the top left quadrant, which is associated with the north, provides the date of year 1 Flint and day 1 Death. Then, in the quadrant of the west, the date of year 1 House and day 1 Monkey are given. Finally, year 1 Rabbit and day 1 Vulture are given in the last quadrant, which corresponds to the south. The fact that day or year signs appear in conjunction with agricultural prognostications is unsurprising considering that seasons are tied to the passing of the solar year.

Among the Zapotecs of Oaxaca, four rain gods presided over the periods of the calendar and their prognostications

of rain. According to information found in the Codex Vaticanus A (f. 55v) and Juan de Córdova's *Arte en lengua zapoteca* on the Zapotec calendar, the year lasted 260 days. No clear day was set as the first; rather, days were continuously counted. The 260-day calendar was divided into four periods of sixty-five days, each governed by a "planet" (*planeta*) or rain god, known as *cocijo* in Zapotec (Córdova 1578, ff. 115v–116r), as seen in the example of the Codex Vaticanus B above.

A compelling pictorial representation of the dynamic between the solar calendar and the tonalpohualli (65×4 division and the twenty day signs) can be found in the Codex Borgia, pp. 39–40 (Fig. 3.5). It depicts a scene belonging to a larger ritual sequence in the manuscript's central section. The count begins with the horizontal and outstretched body of a crocodilian creature, from which two parallel series of day signs unroll on the left and right sides of the page until they close at the bottom, creating a square. The day signs are drawn only in black outline, a rare occurrence in pre-Hispanic manuscripts. Although badly eroded, they can be reconstructed (Nowotny 1961, § 21b, Anders et al. 1993, 224, Boone 2007, 198–199). On the right, the twenty day signs unfold according to their position in the tonalpohualli, from Crocodile to Flower. They are possibly counted twice for a total of forty days. On the left, the day signs are presented according to the

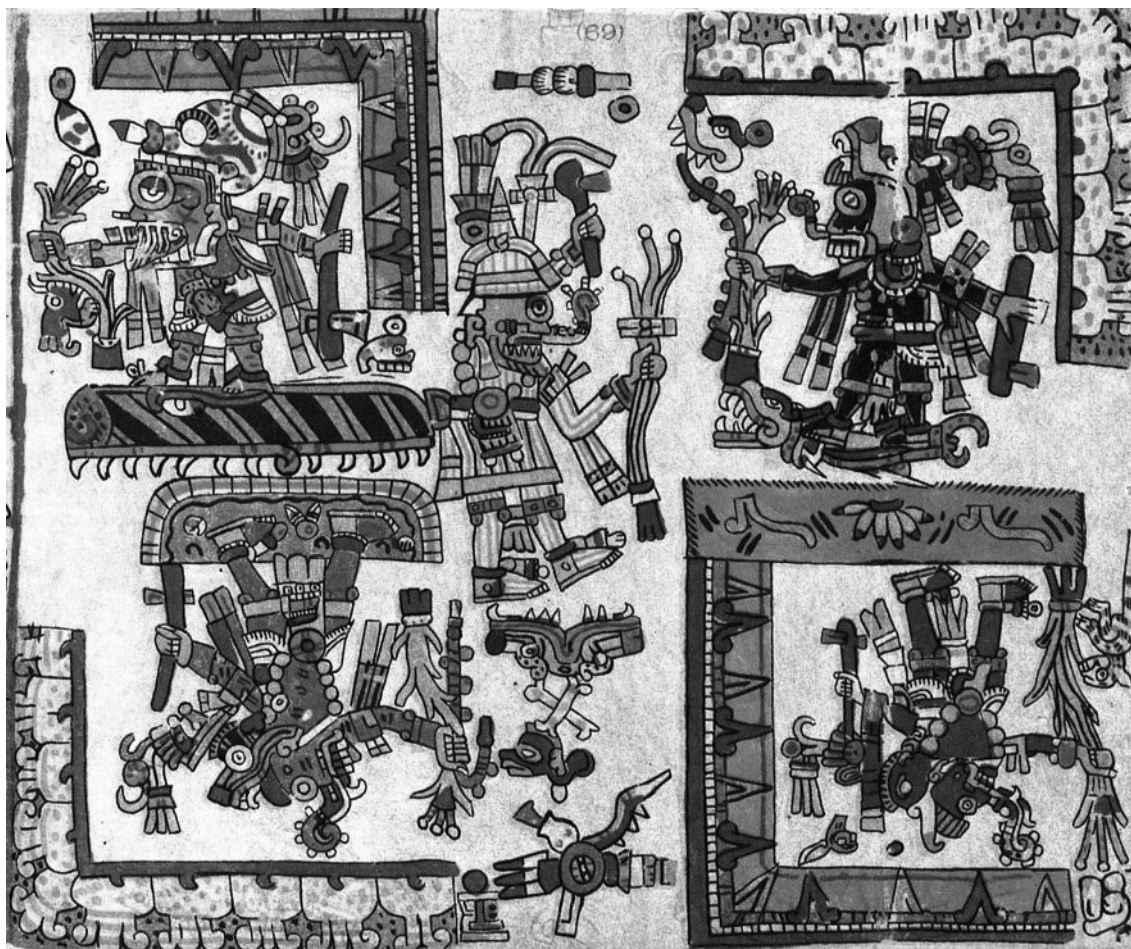


Figure 3.4. The five manifestations of Tlaloc. Codex Vaticanus B, p. 69. Loubat 1896.



Figure 3.5. Days attached to the body of a reptilian creature. Drawing by Agostino Aglio after Codex Borgia, pp. 39–40. The Trustees of the British Museum, London.

65 × 4 partition of the tonalpohualli. The sequence begins with Crocodile, Death, Monkey, and Vulture; it is then repeated, followed by Grass, Movement, Wind, and Deer, which are also repeated. The last readable days are Reed, Flint, House, and Rabbit. The sequence at the bottom of the scene is too badly eroded. However, the day sign Jaguar can be reconstructed; it belongs to what would be the missing sequence of Rain, Lizard, Water, and Jaguar.

According to Jansen and Pérez Jiménez (2017, 503), the two lines represent syntagmatic time on the right and paradigmatic time on the left. In this view (also expressed in Jansen 1988a and Jansen 1988b), syntagmatic relations, which correspond to the consecutive days of the tonalpohualli, are those of historical characters and their actions. By contrast, paradigmatic relations, expressed by the 65 × 4 recurrence of day signs, are those of religion and divination. This dichotomy parallels not only the distinction but also the profound interrelation between astronomical and natural phenomena, ceremonial action, and divination. In other words, the different uses of the calendar, which Jansen (1988a, 1988b) attributed to the genre of historico-

genealogical and divinatory pictography—the former syntagmatic, the latter paradigmatic—can be found here in a single religious text. The inextricable relationship between two separate counting systems also means that history is not simply a checklist of things past but rather a reckoning with the deeds of the ancestors to make sense of the present and find guidance for the future. As discussed in Chapter 1, connecting with the ancestors to gain knowledge and clarity on one's destiny is a central aspect of Mesoamerican ceremonial behavior and Mesoamerican religion more generally. The simultaneous presence of the tonalpohualli (count of days) and the cempoallapohualli (count of twenty) in a single image of the religious manuscripts also calls into question the accepted dichotomy between history and religion, facts and symbols that, as skillfully analyzed by Díaz Álvarez, still taints our view of Mesoamerican cultures.

The unique combination and progression of thirteen numerals and twenty day signs constituted the only means of counting the passing of individual days. The same system was indistinctly used in all pre-Hispanic

manuscripts, both the Borgia Group of religious content and the historico-genealogical Mixtec codices. For a Westerner who is accustomed to keeping track of days according to a fixed sequence of months in the solar calendar, the idea of counting a cycle of 365 days (the solar year) within a different cycle of 260 days may seem rather counterintuitive and exceedingly difficult to master. It should be noted, however, that no system for counting astronomical days and years is perfect, given that the Earth's rotation is not constant and that approximately six hours every year exceed the 365 days. Thus, periodic adjustments will always be required regardless of the counting system used.

3.3. The calendar and the festival cycle

The *veintena* calendar described in colonial sources compiled by the friars was primarily liturgical despite its agricultural and even astronomical underpinnings (Broda 1983, Broda 2004, Graulich 1999). Its ceremonies constitute one of the most important aspects of Nahua and Mesoamerican religion in both written and pictorial sources. The earliest document on the *veintena* cycle is possibly the Codex Borbonicus (pp. 23–37), followed by *Primeros Memoriales* (paragraphs 2A and 2B, ff. 250r–253v), the *Codices Telleriano-Remensis* (ff. 1r–7r) and *Vaticanus A* (ff. 42v–51r), and the manuscripts of the so-called Magliabechiano Group (Tudela, ff. 11–28; Magliabechiano, ff. 29–46; and *Ixtlilxochitl*, ff. 94–102). Among other friars, Sahagún (1950–1982, bk. 2) and Durán (1971) devoted a large part of their documentary efforts to the compilation of ceremonies during the eighteen *veintenas*. Despite the relative wealth of information on the *veintenas* in the sources, their timing and exact position within the solar year remain a matter of debate, as they are not unequivocally explained in the documentary record.

In early colonial sources such as the *Codices Telleriano-Remensis* and Tudela, for example, the attempt to correlate *veintenas*, solar months, and the Julian calendar led annotators to correct dates several times. The *Codex Telleriano-Remensis* (f. 7r) depicts the *nemontemi*, the remaining days at the end of the solar cycle, and contains a gloss that reads, “On February 29 the five dead days on which there was no sacrifice.” Although Quiñones Keber (1996, 151) believed that “29” was a mistake and that the correct day was the 19th, the painter and annotator may have made a conscious effort to come to terms with the final counting of the days of the year and related adjustments. The information may indicate the day added every four years to the end of February, as is customary in the Julian and Gregorian calendars. In the central part of the page, another annotator changed the number of *nemontemi* days from five to four, while another day was also pictorially added (Quiñones Keber 1995, 151). Is this inconsistency in the source purely attributable to a note-taking error, or does it indicate a deeper indeterminacy in the calendrical system itself?

The inexorable precision of the *tonalpohualli* finds an unsurmountable obstacle in the incommensurability of

the astronomical year. Despite Caso's (1967) efforts to fix the *veintenas* in the solar calendar, *veintenas* would significantly shift positions in only a matter of years without a periodic adjustment, which Caso (1967, 33, 48) himself believed was not possible in the *tonalpohualli*. It is well known that, among the Mayas, no adjustment was made to the *tzolkin*, the 260-day calendar (Thompson 1960, 121). The *uinal*, as the twenty-day period is called in Mayan, was used in both the Long Count and the *haab*, the solar year (Thompson 1960, 96–97, 143–144). In the former case, on the one hand, the *uinal* indicated the second position right after *kin* (day) in the progressive count since a fixed “day one.” In this instance, the position and use of the *uinal* conformed to the vigesimal Mesoamerican counting system (the second position in the decimal system is taken by the tens). In the solar calendar, on the other hand, the *uinal* indicates one of eighteen fixed twenty-day periods, which are each assigned a distinct name. In this case, the *uinal* functions in a manner similar to the months in the Gregorian calendar. In fact, in dates found on Maya monuments from the Classic period, the *uinal* is always accompanied by a numeral that indicates the day within the period. The inexorable accumulation of a delay in the position of the *uinal* within the *haab* is somewhat countered by the Long Count, which registered every elapsed day.

Understanding the counting of the solar year and the *veintena* calendar as part of the same calendrical system of the *tonalpohualli* may help resolve some lingering problems in the existing scholarship. While the counting proceeds steadfastly, actual celebrations (i.e., the festival cycle) may have adjusted to the concurrent passing of the individual days of the *tonalpohualli* or *tzolkin*. Akker (2018, 118–119) proposed that, among the Mayas, agricultural ceremonies and activities were indeed movable and not bound to the *uinal* of the *haab*, which are by necessity fixed. Contemporary K'iche' communities only celebrate certain seasonal and yearly feasts in a grand manner; most are only modestly observed. As a result, the burden of the cost and logistics of the entire ceremonial cycle in the region is shared among communities in the highlands through a rotational system. Astronomical phenomena are almost exclusively observed according to the Gregorian calendar, which is synced with the solar year thanks to the bissextile correction. The relationship between the calendar count, as a fixed system, and ceremonial events is flexible and fluctuates. In this respect (and to close the discussion of the Maya calendar system as it pertains to my work), it should be noted that the most accepted correlation between the Maya and Gregorian calendars, known as the Goodman–Martínez–Thompson (GMT) correlation, is indeed only a statistical median within a range of days (Klokočník et al. 2008, Gaspani 2013). While mathematical precision indicates a specific moment, the correlation is more accurately defined as a span of days that neighbor a specific point in time.

I argue that celebrations related to *veintena* periods, which were established through the vigesimal count and the

65 × 4 partition of the tonalpohualli, would slowly begin, peak, and eventually fade out in a manner that was fluid and allowed for concurrent celebrations and variations according to cultural and geographical differences. Variations could also occur within a single community, depending on the cults and priests involved. Festivals related to the veintenas could therefore overlap and stretch, peak and fade according to heightened moments dictated by the tonalpohualli. La Farge (1934, 115) noticed that among the highland Mayas of Guatemala, while the day was perceived as beginning at dusk, the day as a whole was understood as starting the following morning and including activities conducted in daylight. By contrast, periods such as the uinal or the haab were counted as beginning exactly at dusk, thus seemingly during the previous tzolkin day. This indicates that there were differences in the counting of days and periods. Tedlock (1983), for example, noted that in Momostenango, days and periods are perceived as slowly beginning and fading out rather than having a clear-cut beginning and ending (see also Akker 2018, ch. 2). Caso (1967, 53) suggested that the Mexica changed the day at noon rather than at midnight, a difference that could account for occasional mistakes in concordances. The information is provided, among others, by a gloss in the Codex Telleriano-Remensis (f. 48v).

These examples indicate that there was no necessary agreement between different groups and communities on when a day or period started despite using the same calendar, the tonalpohualli. The sun, Venus, the moon, and all constellations move seamlessly through the sky, slowly rising and descending in the horizon. They do not appear and disappear in a moment. Their periodic movements are at odds with the day count, which require periodical adjustments in calculation. There are several clues in early colonial pictographic and alphabetic sources about the assimilation of a fluid festival cycle into a fixed system akin to the European monthly and liturgical calendar, which is tied to the solar year. In *Primeros Memoriales*, the veintenas of Atemoztli and Izcalli can be found in folios 252v and 253r, respectively. In both instances (Fig. 3.6), the upper part of the image is dominated by the main temple in the center. It is flanked on the left by a priest carrying a gourd and a tobacco pouch and wearing a turquoise diadem, and on the right by a woman drinking a foaming beverage from a cup. In the lower part of the image, four or five young boys and girls are also drinking from a cup while standing on *petates* (straw mats). The two images seem to represent the same ceremony, Pillahuana, which was celebrated every four years and involved children in the consumption of pulque (Doesburg 1996, 113–114).



Figure 3.6. Atemoztli and Izcalli (bottom), *Historia general de las cosas de Nueva España*. Patrimonio Nacional. Madrid, Real Biblioteca, II/3280, ff. 252v–253r.

However, according to the accompanying text on folio 253r, it was only during the latter *veintena* of *Izcalli* that *Pillahuana* was periodically observed. During *Atemoztli*, the cult was dedicated to the rain gods that resided in the mountains. The consumption of *pulque* is only mentioned in relation to the feast of *Atemoztli* in the Florentine Codex (Sahagún 1950–1982, bk. 1, ch. 21, bk. 2, ch. 35) but not as a primary aspect of the cult. In this regard, it may be noted that the Codex Magliabechiano (ff. 40v–41r) assigns the periodical celebration of *Pillahuana* to the *veintena* of *Tepeilhuitl*, the monthly celebration of the mountain rain gods of the central Mexican basin. Finally, four drops of water are visible in the upper right corner of the image related to *Atemoztli*. While they may have represented the name of the festival (which means “water falls”), the four blue drops could also signal a celebration that occurred every four years, as in the case of *Pillahuana*.

The similarities between the two scenes in *Primeros Memoriales* do not seem to be coincidental. In the original pagination, the illustrations of *Atemoztli* and *Izcalli* face each other at the bottom of two opposing pages. It is generally understood that the images were drafted before the text was added. Did the *tlacuilo* intend to draw attention to the similarities and correspondences between the rituals of the two *veintenas* that were not otherwise noted? Or was the painter creating similarities at the moment they drew the picture? It would appear that these early colonial images of the *veintenas* attempted to creatively systematize what was possibly a much more flexible and diverse ceremonial life than what friars were accustomed to in Europe and eventually imposed on Indigenous peoples in New Spain.

In the Florentine Codex, Sahagún dedicated a separate chapter to so-called movable feasts, at the end of the description of the eighteen *veintenas*. The last sentence in the chapter (Sahagún 1950–1982, bk. 2, ch. 19, 41) reads, “These movable feasts, in some years, displace the feasts of the calendar, as also happens in our calendar.” Sahagún’s statement suggests that there is perhaps a closer connection between the *veintenas* and the feasts dictated by the *tonalpohualli* than is usually acknowledged. It may also be that Sahagún, drawing on his long experience as a missionary in *Tepepulco*, reached a certain conclusion on the redaction of the *veintenas*, which he himself acknowledged created “spurious festivities” that could not be completely assimilated into the cycle.

The pictographic manuscripts known as the *Codices Tudela* (ff. 29r–30r; Fig. 7.10) and *Magliabechiano* (ff. 46r–48v) conclude the section on the eighteen *veintenas* with a representation of *Xochilhuitl* (Feast of the Flowers), which is identified in a gloss as “moving feast” (*fiesta extravagante*). Although the feast moves over the course of the solar year, the dates of *Chicome Xochitl* (7 Flower) and *Ce Xochitl* (1 Flower) assigned to the celebration of *Xochilhuitl* in the source occur twenty days apart; thus, they are a *veintena* and rightly placed after the presentation of the eighteen feasts of the solar calendar. This appears to have been another occurrence of a *veintena*-type festival

that was omitted from the monthly calendar invented by the friars and their Indigenous pupils.

Several scholars remarked on the patterning of the *veintena* festivities. Graulich (1986, 1999, 85–87) noted the parallelism of rituals performed during the *veintena* celebrations in the first half (from *Tlacaxipehualiztli* to *Xocotl Huetzi/Huey Micailhuitl*) and second half of the solar year (between *Ochpaniztli* and *Atlcahualo*). Kirchoff (1968) correlated historical and modern calendars throughout Mesoamerica and grouped the eighteen feasts into six simple celebrations and six double celebrations. The double celebrations are *Pachtontli* and *Huey Pachtli*, *Micailhuitontli* and *Huey Micailhuitl*, and *Tozoztli* and *Huey Tozoztontli*. They extended over a two-month period, according to different sources. More recently, Torres Cisneros (2011) remarked on the same pattern in the 260-day calendar in use among the Mixe of southern Oaxaca. These examples seem to indicate that different communities throughout Mesoamerica followed similar but somewhat adjustable patterns in their ceremonial lives rather than a fixed calendar of celebrations. Ultimately, this should be unsurprising considering the many ecological systems and lack of a unified religious or political authority in Mesoamerica.

3.4. The festival cycle in the southeastern Nahuatl region

Huautla de Jiménez and other towns in northeastern Oaxaca, home to the Mazatec, Popoloca, and Chinantec peoples, are the only communities in modern Mexico where an agricultural calendar akin to the *veintenas* is still known (Weitlaner 1936, Weitlaner and Weitlaner 1946, Carrera González and Doesburg 1996; see Appendix). Historically, the festival cycle has been documented in the region since the early colonial period. According to Fray Toribio de Benavente, also known as Motolinía (1971, ch. 25), who worked at the Franciscan mission in *Tehuacán*, a Nahuatl town in southern Puebla, the three neighboring towns of *Tehuacán*, *Coxcatlán*, and *Teotitlán* observed similar religious practices despite their different local tutelary gods. The friar (Motolinía 1971, ch. 16) also specifically mentioned the yearly celebrations of the *veintenas*, whose Nahuatl names differed slightly from the more commonly known ones in central Mexico. A few decades later, in the 1580s, the *Relación de Teutitlán del Camino* (Paso y Troncoso 1905, vol. 4, 213–231) stated that *veintena* ceremonies were performed in modern-day *Teotitlán de Flores Magón* and the surrounding area, including *Huautla*, which is mentioned in the same source as a dependency of *Teotitlán*. Both sources referred to the *veintenas* in Nahuatl, one of the languages spoken in the area, and listed the same names, as noted by Paso y Troncoso (1905, vol. 4, 217n1). This is particularly noteworthy because Motolinía’s account and the *Relación* were independently redacted roughly forty years apart. First, the friar learned first-hand narratives of historical deeds and pre-Hispanic religious customs during his time at the evangelical mission in the 1540s. Later, Spanish emissaries and local Indigenous officials compiled a

geographical census at the behest of the Crown in the latter part of the sixteenth century (Cline 1964).

Both sources noted the political importance of local priests in the kingdoms of the southern Nahuatl region, which may be partly due to a common ancestry that set them apart from the surrounding Mixtec, Mazatec, Popoloca, and Cuicatec peoples. According to several sources, Tehuacán, Teotitlán, and Coxcatlán were putatively founded by Nonoalca people from Tula in the modern state of Hidalgo. For example, the *Historia Tolteca-Chichimeca*, a manuscript from Cuauhtinchan in Puebla, relates the migration of Toltec groups to southern Mexico after the fall of Tula (Kirchhoff et al. 1989, 133–135, ff. 6–8). One of the leaders of the migrating group was Xelhua o Xelhuan, who eventually settled in the area of Tehuacán, Teotitlán, and Coxcatlán, encroaching on an ethnically diverse territory. Xelhua is also mentioned as the town's founder in the *Relación de Cuzcatlán* (Paso y Troncoso 1905, vol. 5, 47).

According to the *Relación de Teutitlán del Camino* (Paso y Troncoso 1905, vol. 4, 220), three main priests ruled over the towns' religious and civic duties: Teuctlamacaz (lord-priest, from *teuctli* or lord and *tlamacaz* or priest in Nahuatl), Ecatlamacaz (wind-priest, from *ecatl* or wind and *tlamacaz*), and Tetzatlamacaz (omen-priest, from

tetzahuitl or omen and *tlamacaz*). While Teuctlamacaz seems to imply some type of political authority given the term *teuctli* (lord), Ecatlamacaz and Tetzatlamacaz presumably involved more strictly religious duties, such as seasonal or weather-related ceremonies in the case of the Ecatlamacaz and oracular practices in the case of the Tetzatlamacaz. Furthermore, the wind-priest and the omen-priest may have been the temple priests for the two main gods worshiped in town, Teyztapali and Coatl, which are also mentioned in the *Relación* (Paso y Troncoso 1905, vol. 4, 217). As indicated by its name, Teyztapali was likely a god and image of a slab stone akin to the god Iztapal Totec (Paso y Troncoso 1905, vol. 4, 217n2, Codex Telleriano-Remensis, f. 22v), while Coatl may refer to Quetzalcoatl as a manifestation of the wind god.

The two temples and their respective cults—one dedicated to divination and administered by the Tetzatlamacaz and the other to the seasonal rituals of the Ecatlamacaz—created a complementary and dynamic opposition, similar to the one between Tezcatlipoca and Quetzalcoatl found in the Codex Borbonicus (p. 22) and discussed in Section 1.2. The *Relación* also explains that these priests were celibate and regularly fasted, self-sacrificed, and lived in seclusion at their temples. Motolinía (1971, ch. 25) complements the information provided by the later source as follows:



Figure 3.7. New Fire altar, Tehuacán Viejo, Puebla. Photo by Alessia Frassani.

In these three provinces I am telling you about [Tehuacán, Teotitlán, and Cozcatlán], the ministers of the temples and everybody in their houses fasted eighty days every year. They also observed fast and lent before the celebration of their devil, especially those priests, by eating only maize bread, water, and salt. One lent lasted ten days, while others were of twenty or forty days, and others were of eighty days, such as the one for Panquetzaliztli in Mexico ... These priests were also called “fire bearers,” because they threw incense and coal on the fire three times during the day and three times during the night ... The fast was not observed everywhere; rather, each province did it for their own gods according to their own devotion and customs. In some towns in these provinces, the devil had its own dedicated priests who were always keeping a vigil and prayed, fasted, and sacrificed themselves, and this full-time occupation lasted four years, and the priests were indeed young men who fasted for four years ... [In their temples,] they did not eat fruit, honey, or any other sweet; only every twenty days they were allowed to eat that, because that was like Sunday for us. They stayed awake, taking turns in pairs while the other two slept; they spent the night singing to the devil many songs and regularly drawing blood from different parts of their bodies ... every twenty days, they did that. If I am not mistaken, they counted eighteen times eighty, because they did not count five days of the year, but only eighteen months of twenty days each. (Translation by author)

The friar mentions the veintena calendar in use among the southern Puebla priesthood and the ceremony of Panquetzaliztli in relation to day counting, especially the twenty-day count (leading to regular intervals of twenty, forty, or eighty days), night ceremonies, and vision quest (fasts, wakes, and self-sacrifices). All these aspects are seemingly inseparable. The friar concludes that priests from the southern region of Tehuacán, Teotitlán, and

Coxcatlán were highly sought after for their divining powers, even by the Mexica ruler Motecuhzoma in Tenochtitlan. In the recently excavated site of Tehuacán Viejo (Fig. 3.7), an altar features a stepped decoration that is strikingly similar to the New Fire altar depicted in the Codex Borbonicus (p. 34; Fig. 4.8). The temple and altar in the manuscript were likely those located in Iztapalapa on the hill known as Huixachtecatl, Cerro de la Estrella, where the “fire bearers” lit the New Fire during Panquetzaliztli. The presence of a New Fire altar in Tehuacán is another proof of the widespread adoption of the same ceremony by different groups throughout Mesomerica, as indicated by Motolinía.

A three-part illustration from the Codex Mendoza aptly demonstrates how intertwined self-sacrifice, night ceremonies, and skywatching were in ancient Mexico. Folio 63r of the Codex Mendoza (Fig. 3.8) depicts the “nighttime activities of the head priests,” as explained on the previous page facing the drawing. The night setting of the three activities is indicated by the round gray patch on the top central part of the page. The dark night sky is brightened by the stars, which are depicted as eyes with a red eyelid. In the first scene on the left, a priest walks forward holding a smoking censer in one hand and a bag containing copal (incense) in the other. He is also carrying a gourd on his back that, according to the gloss, contains “poison” that he will use to self-sacrifice. The potion was likely concocted with a mind-altering substance used in night ceremonies. Behind the priest walks a novice carrying branches that will be used to create an altar in the woods, where the ceremony will take place. The next scene shows a priest seated on a straw mat and playing a *teponaztli*, a horizontal drum that, according to the gloss, was played by the priest at night. Finally, on the right, another priest is engaged in skywatching, as indicated by the star-eye symbol moving from his eyes towards the sky. The gloss specifies that the priest did so to keep track of the time. Illustrations in the Codex Mendoza are rather



Figure 3.8. Three head priests performing their duties. Codex Mendoza, f. 63r. Bodleian Library, Oxford.

descriptive and do not display the rich iconography of religious manuscripts.

During the second half of the sixteenth century, Augustinian historian Jerónimo Román y Zamora (1897) compiled a history of world civilizations, including the Indigenous peoples of the Americas, by collating information from several primary sources. Describing the many acts of penitence and self-sacrifice performed by the priests of Tehuacán, Teotitlán, and Coxcatlán following Motolinía’s account, he also wrote about the importance of the cult of Venus in the region, second only in importance to that of the sun (Román y Zamora 1897, bk. 1, ch. XV). According to Román y Zamora, it was believed that Quetzalcoatl transformed into Venus when he died; therefore, great attention was paid to counting the days on which the planet appeared and disappeared in the sky. Appropriate rituals were celebrated, especially at the moment of Venus’s reappearance. Although Román y Zamora did not mention it, it is likely that the cult of Quetzalcoatl as Venus, known

as Tlahuizcalpantecuhtli, revolved around the observation of the planet’s appearance at the summit of the volcano Citlaltepētēl (known in Spanish as Pico de Orizaba), which is the highest peak in Mexico. According to both colonial and modern lore, Quetzalcoatl turned into ashes and disappeared from the top of this mountain (Arroniz 1867, 66–67, Medellín Zenil 1962, Levine 2014, 179–180). The Nahuatl name of the peak means “star mountain,” a reference to the Venus star.

The Codex Cospi (p. 10; Fig. 3.9) depicts two scenes that are part of the so-called “attacks of Venus,” a calendrical table that established omens related to the periodic appearance of the planet in the night sky (Nowotny 1961, § 18, Boone 2007, 151–155). In the top image, Quetzalcoatl as Tlahuizcalpantecuhtli pierces a mountain with his spear. The mountain appears to be bleeding, water springs from its foot, and a tree sprouts from the top. The peak of the mountain is white, which indicates that it is snow-capped. Although there are a few other peaks with

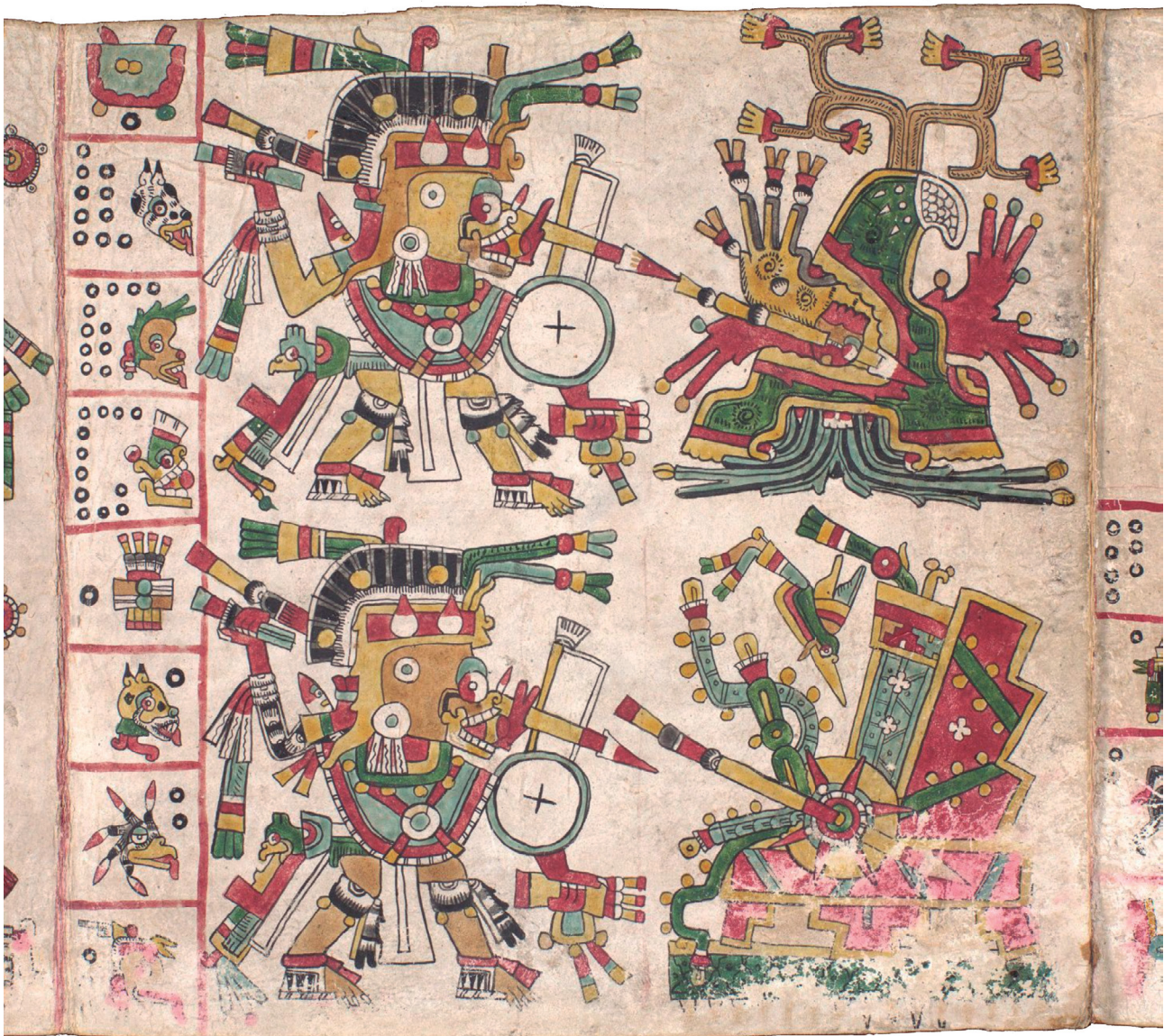


Figure 3.9. The attacks of Venus. Codex Cospi, p. 10. Ms. 4093, Biblioteca Universitaria di Bologna.

perennial glaciers in central Mexico (e.g., the Popocatepetl in Puebla and the Matlalcueye or La Malinche in Tlaxcala), the Citlaltepētēl seems to be the most likely identification for the mountain in the Codex Cospi, given that the Venus cult is the subject of the pages. If this is indeed the case, the Codex Cospi would hail from a community in the southeastern Nahuatl region where the Citlaltepētēl is not only visible but also venerated.

The colonial accounts attested that celestial phenomena, such as the solar and Venerian cycles, were tied to specific cults under the auspices of specialized local priests, who were known even outside the region. In turn, the observation of astronomical phenomena was fundamentally tied to considerations regarding meteorological and agricultural events throughout the solar year and over the course of several years. Therefore, it is unsurprising that *veintenas* (i.e., solar celebrations) were also observed in a region known for its precise astronomical knowledge.

Finally, both the calendar and shamanic practices were recorded in the Mazateca in the early twentieth century. Wilhelm Bauer (1908, 858) referred to the importance of what he called an “animal cult” in the Mazateca, which seemingly involved not only the belief that men and women could transform into animals but also devotion to specific animals in church or town hall altars. Local *caciques* were responsible for the maintenance of the cult, upon which the well-being of the community depended. Bauer (1908, 865) also referred to the existence of the Mesoamerican calendar in the region, although his information was unclear. In fact, the anthropologist mentioned the twenty day signs, which he believed were all related to animals. However, he stated that there were thirteen “months,” which indicates that he may have conflated and confused the thirteen numerals of the *tonalpohualli* with the eighteen twenty-day months of the solar year, a calendar still known in many towns of the Mazateca, including Huautla.

The specific information regarding ritual and religious customs in the southeastern Nahuatl region from the pre-Hispanic period to the present confirms the existence of broad cultural continuity within the so-called Mixteca-Puebla horizon (Nicholson 1966, Nicholson 1982) and Eastern Nahuatl region of Puebla and Tlaxcala (Pohl 2003, Pohl 2007). Archaeological data indicates that the Tehuacán Valley is one of the areas where some religious manuscripts may have originated (Chadwick and McNeish 1967, Sisson and Lilly 1994, Álvarez Icaza 2018). Indeed, the only religious manuscript whose provenience is known, the Codex Porfirio Díaz or Tututepetongo (pp. 43–33), hails from the town of the same name in the Cuicatec region of Oaxaca, neighboring the Mazateca (Anders and Jansen 1994, 267–296, Doesburg 2001).

Modern Mazatec practices are part of this broad archaeological and historical context and highlight the importance of the visionary aspect of the *veintenas*'

ceremonies, including skywatching and day counting. The following chapters consider iconography and calendrics, images, and time keeping as intertwined phenomena in the ancient religious manuscripts, as Mesoamerican priests would not separate knowledge about time (the past, present, and future) from their religious experiences.

The Ceremonial Cycle in Colonial Sources and the Ancient Books

The preceding chapters established the importance of calendrical knowledge and night ceremonies among the activities that the Mesoamerican priesthood was supposed to master. In Chapter 3, on the *tonalpohualli*, it was argued that the so-called *veintenas* constituted a liturgical calendar based on a specific partition of the *tonalpohualli* (65×4), which, while approximating the solar year, was eventually drastically refashioned during the colonial period according to Spanish missionaries' ideas. Earlier in Chapter 2, modern and historical Nahuatl and Mazatec chants clarified the primordial roles that ritual and lived experience played in the process of knowledge acquisition in Mesoamerica. This chapter explains that both calendrics and rituals played an essential role in the reinterpretation of the yearly ceremonial cycle in the ancient and colonial painted books.

4.1. Teotleco

Chjon na'ná nda'nitsian, jñe
Our mother woman, water of the center (or marketplace), you are

Chjon na'ná, josin fana ntjao'na
Our mother woman, like our blowing wind

Chjon na'ná, josin nginde, jñe
Our mother woman, like underground, you are

Chjon xaa kamai, jñe
Woman who turns into a jaguar, you are

Chjon ná xa kamai, jñe
Our mother woman, who turns into a jaguar, you are

Chjon xon ndijin, jñe
Woman charcoal-stained paper, you are

Chjóon ná xon ndijin, jñe, tso
Our woman charcoal-stained paper, you are, says

María Sabina (Wasson and Wasson 1957a, side 2, band 1)
(https://youtu.be/_KQwV3JixyI)
Transcription and translation by Santiago Cortés Martínez and Alessia Frassani

This short excerpt from a chant by María Sabina offers an insightful starting point for understanding some scenes from the *veintena* ceremonies. The *chjon chjine* claims to be like water, wind, and earth—three major natural forces. She quickly moves through different realms, much like the speaker in the chants collected by Alarcón and Sahagún (discussed in Section 2.3). The last two verses refer to perforated stencils and charcoal stamps that women use to embroider textiles, chiefly *huipiles* (female garments; Fig. 4.1). Women use stencils to leave small charcoal dots



Figure 4.1. Mazatec huipil with stencil. Museo Nacional de Antropología, Mexico City. Photo by Javier García.