

“TONALISM”: NAME, SOUL, DESTINY AND IDENTITY DETERMINED BY THE 260-DAY CALENDAR IN MESOAMERICA

LARS KIRKHUSMO PHARO
Harvard University

ABSTRACT

In various Mesoamerican cultures, i.e. civilisations of Middle America, a calendar name is part of the antroponym. Besides having conventional personal names, both human beings and deities carry day-names from the 260-day calendar. In addition, world ages or world periods, periods of the traditional 365-day calendar and the 52-year calendar as well as the cardinal directions of the quadripartite world were categorised by day-names of the 260-day calendar. Thus not only human and divine beings but also space and time received designations from this calendar. Moreover, this onomastic practice of giving personal names from day signs of the 260-day calendar – called “tonalism” (from Nahuatl) – is related to the Mesoamerican concepts of destiny and to what is known in history of religions as the “freesoul”. Consequently, this anthropymic tradition provides identity to human, divine beings and spatial-temporal phenomena.

[1] INTRODUCTION

In various Mesoamerican cultures, antroponyms¹ consists of calendar names. Mesoamerica has been defined as a cultural-geographical region including the north-western, central and southern Mexico, Guatemala, Belize, and the western part of Honduras and El Salvador. In this area peoples – like the Aztecs, Olmecs, Zapotecs, Toltecs, Tlapanecs, Teotihuacanos, Tarascas, Otomís, Mixtecs, Maya etc. – lived in urban civilisations c. 1000 B.C. – 1521 A.D. Contacts existed between the different communities through migrations, pilgrimage, trade, diplomacy, war and conquest. Despite their particular traditions and languages, the numerous groups of people of Mesoamerica have several cultural and religious traits in common. Notwithstanding the Spanish conquest at the beginning of the 16th century, the languages, religions and cultures of millions of indigenous Mesoamerican peoples persist today.

[1] For antroponymic practises among the Nahua see [Lockhart \(1992, 117–130\)](#); among the Mixtecs (cf. [Terraciano 2001, 150–157](#)); among the Maya (see [Roys 1940](#); [Colas 2004](#)).

Besides having conventional personal names, both human beings and deities carry day names from the 260-day calendar – names, which have no relation to lineage or family or signify socio-political status. Manuscripts of the pre-Columbian period contain many examples of where an individual being is identified by his/her calendar name, represented by a logogram. Even world ages or world periods, the traditional 365-day calendar and the 52-year calendar as well as the quadripartite cardinal directions of the world had designations from one of the days of the 260-day calendar.

This naming practice is heavily linked to “identity”. How can the concept “identity” be defined? Otto Krogseth has suggested three general characteristics:

- (i) Continuity in time vs. change. A quality, condition or nature of absolute or essential sameness.
- (ii) A coherence where some fundamental aspects coordinate the person’s or object’s roles and functions.
- (iii) Individuality or personality. A person or an object comprises in itself, in substance or in selfhood, a specific character – and not something else. He, she or it holds a certain distinctiveness or uniqueness as compared to other beings and objects (Krogseth 1992, 100–103).

The day signs of the 260-day calendar naming human beings, deities, world ages or world periods provide the named entity a predestined fate. In addition, human beings obtain a substance – what historians of religions call a “freesoul” (a freesoul is a substance, which can leave the body during the lifetime of a being) – connected to the day of their birth according to the 260-day calendar. The phenomenon of name giving by use of the 260-day calendar is called “tonalism” (Nahuatl, *tonalli*).

In general, the name stays with the individual or phenomenon throughout their existence. It is accordingly intimately connected to and operates as a determinative factor of how the carrier or the name is perceived. This is even more emphasised when the concept of the calendar name is closely associated with destiny and a soul. Predestination and the soul constitute continuity, coherence, individuality, personality and uniqueness. As a consequence, the calendar name, which in itself is marker of exceptionality, conveys essential identity features.

[2] CALENDAR NAMES FROM THE 260-DAY DIVINATORY CALENDAR

Mesoamerican cultures shared a 260-day and a 365-day calendar, which together form a 52-year cycle called a Calendar Round. The traditional 260-day calendar and the 365-day calendar² are still used in various parts of Mesoamerica today.

[2] The temporal structure of the Mesoamerican 365-day calendar was, however, modified to the Catholic European liturgical 365-day calendar after the Spanish invasion.

They are employed by indigenous peoples in the highlands of Guatemala and in the states of Veracruz, Chiapas and Oaxaca, Mexico.³ The custom of naming people after day signs of this calendar has, however, gone out of practice in many cultures. But the Mixe of Oaxaca, Mexico applies the names, but probably not the numbers (Søren Wichmann, personal communication, 2007). Today people get names from Patron Saints, which is also based upon the calendar (albeit the 365-day calendar) since every day of the Catholic calendar is associated with a saint.

The 260-day calendar consists of twenty day-names (sp. “veintena”) together with thirteen days with a coefficient (sp. “trecena”). Twenty twenty day-units multiplied with thirteen amounts to 260 days.⁴ The calendar had local names in the different languages in Mesoamerica but their meanings could be the same (Taube 1988, 180).

The sources of information about the Mesoamerican calendars and to the naming practices vary. Such sources include indigenous iconography, narrative visual sequential systems and logosyllabic (i.e. writing) inscriptions⁵, indigenous colonial accounts, descriptions by Spanish ethnographer missionaries of the colonial period and modern ethnography.

[3] In particular among the Mixe, but fundamental components persists among the Zapotecs, Chatinos, Mazatecs, Chinantecs and Mixtecs of Southern Mexico whereas in the highlands of Guatemala the calendar is used by the K'iche' but is also known by the Ixil, Akateko, Q'anjob'al, Mam, Popti and Chuj. Cf. the research project (and webpage) “Time and Identity” under the direction of Professor Dr. Maarten E.R.G.N. Jansen at Leiden University (<http://www.archaeology.leiden.edu/research/ancient-america/mexico/time-identity/>).

[4] Using names from a Maya language as an example, Sir Eric Thompson has summed up the mathematical foundation of this system as follows: ‘Since 13 and 20 have no common factor, it is obvious that the same combination of name and number will not recur until 260 days have elapsed. At each repetition of any name the attached number will be seven greater provided the sum is not in excess of 13; if the sum is greater than 13; that number has to be subtracted from it. The first day of the cycle was 1 Imix; accordingly, 20 days later Imix will repeat, but this time with the number 8 attached. At its next appearance the attached number will be 2 ($8 + 7 = 15$; $15 - 13 = 2$), so that the sequence of numbers attached to a given day name will run 1,8,2,9,3,10,4,11,5,12,6,13,7’ (Thompson 1978, 67).

[5] Interestingly there are not many examples of personal names from the 260-day calendar represented in the Maya and epi-Olmec inscriptions, whereas they abound in inscriptions of the Nahuas, Zapotecs and Mixtecs.

[3] THE NAMING CEREMONY AND SACRED VOCABULARY: DESTINY AND IDENTITY IN THE SELECTED DAY-NAME OF THE CALENDAR

The 260-day calendar had many functions but is first and foremost recognised in its application as a divinatory calendar.⁶

The Spanish ethnographer missionaries of the 16th century assert that the Aztecs⁷ employed the 260-day calendar (*tonalamatl*) as a divinatory in order to interpret the horoscope of a newborn child. This was executed with the purpose of giving the child its name and its "suerte" ("fate"; "destiny").

In his encyclopedic work about the Aztecs, *The Florentine Codex*, The Franciscan friar Bernardino de Sahagún (1499? –1590) outline in detail, in Nahuatl, a ceremony conducted at the time of a birth of a child where it was given its *tonalli* or calendar name. This is the day sign that was to predetermine the individual's destiny. The religious specialist, who held the necessary knowledge and training to practice this calendar, was designated as *tonalpouhqui* ("the one who is dedicated to the *tonalli*"). It was the *tonalpouhque* (Sahagún 1950–1982, 1957: Appendix to IV: 142) who found the sign the child was born under in order to identify its destiny in

[6] Why did people of Mesoamerica choose a cycle of 260 days for organising and systematising time within a calendar? Barbara Tedlock recapitulates some of the hypotheses that have been put forward by various scholars as follows:

- (i) The cycle was construed by a permutation of 13 and 20 since both are cardinal coefficients in Mesoamerica.
- (ii) The 260-calendar was applied to record observations of and to correlate various planetary cycles. The 260-day period is the interval between zenith transits of the sun near the latitude 15 north.
- (iii) A double of 260-days (520 days) is equal to three eclipses half-years.
- (iv) 260 days correspond to nine lunations; each consisting of slightly less than 29 days or the same number of months a woman is pregnant (Tedlock 1992, 93). Calendar specialists employed tables of the 260-day calendar in the Post-Classic Yucatec codices as almanacs. The 260-day period is close to the agricultural calendar in Mesoamerica (Milbrath 1999, 2; 12–15). Cf. Helga Larsen about ancient Copan (Larsen 1936). Milbrath deduce from this that the 260-day agricultural cycle and the cycle of human gestation were originally combined together (Milbrath 1999, 2). The 260-day cycle comprise agricultural rituals in Pre-Columbian Mesoamerica (Broda 1969, 52–54; Bricker & Miram 2002, 40–41). The 260-calendar is utilised as an agricultural calendar by the contemporary Ch'orti' (Girard 1960, 304–305; Girard 1962, 328–342) and by the Mopan of San Antonio in Belize (Thompson 1930, 41). The growth cycle of one of the corn plants in Guatemala is, according to Dennis Tedlock, 260 days. Thus, the K'iche' calendar specialist, Aj Q'in, call the 260-day calendar for 'the calendar of the earth' to distinguish it from the astronomic intervals like the year of the sun (Tedlock 1992, 206). Cf. also Barbara Tedlock (Tedlock 1992, 204–205).

[7] The Aztecs or Mexica as they called themselves was originally, in their own self-portrayals, a Nahuatl-speaking nomadic tribe. They founded the city of Tenochtitlan, today Mexico City, which became the capital of their short-lived empire in the northern and central part of Mexico from 1345 A.D. to 1521 A.D. The term "Aztec" derives from *aztecatl*, "person from Aztlán". Aztlán, which can be paraphrased as "the white place" or "the place of the herons" in Nahuatl, was the designation for their mythological place of origin. The name "Mexico" was given to the Aztecs by their patron deity, Huitzilopochtli, during their migration from Aztlán.

the *tonalamatl* (Sahagún 1950–1982, 1957: IV, 111–115; Sahagún 1950–1982, 1969: VI: 197–198). The manuscript that contained the *tonalpohualli*, i.e. the 260-day count, was named *tonalamatl* (“the book of *tonalli*”) in Nahuatl. The Dominican friar Diego Duran (1533 – 1588) writes:

“Thus, when a boy or a girl was born, the father or relatives of the baby immediately went to visit the astrologers, sorceres, or soothsayers, who were plentiful, begging them to state the destiny of the newborn boy or girl. The inquirer always carried with him offerings of food and drink. The astrologer and sorcerer-fortuneteller brought out the Book of the Horoscope, together with the calendar. Once the character of the day had been seen, prophecies were uttered, lots were cast, and a propitious or evil fate for the baby was determined by the consultation of a paper painted with all the gods they adored, each idol drawn in the square reserved for him” (Durán 1971, 398).

As noted, each individual received a *tonalli* from the calendar (*tonalpohualli*) that was decided by the calendar experts, *tonalpouhque*, according to the calendar sign he or she was born under. Hence, beside his/her ordinary name human beings and deities could be called for instance Ome Ehecatl (2 Ehecatl), Naui Ehecatl (4 Ehecatl), or Ce Atl (1 Atl), etc. of 260 possible day-names from the following list⁸:

[3.1] *The 260-calendar day names (tonalpohualli) in Nahuatl*

- (i) Ce Cipactli (1 Alligator)
- (ii) Ome Ehecatl (2 Wind).
- (iii) Yei Calli (3 House)
- (iv) Naui Cuetzpallin (4 Lizard).
- (v) Macuilli Coatl (5 Serpent).
- (vi) Chicuace Miquitztl (6 Death).
- (vii) Chicome Mazatl (7 Deer).
- (viii) Chicuei Tochtli (8 Rabbit).
- (ix) Chicunau Atl (9 Water).
- (x) Matlactli Itzcuintli (10 Dog).
- (xi) Matlactli once Ozomatli (11 Monkey).

[8] Note that only the, for the calendar names, relevant 13 numbers are translated into an indigenous language.

- (xii) Matlactli omome Malinalli (12 Grass).
- (xiii) Matlactli omei Acatl (13 Reed).
- (xiv) Ocelotl (Jaguar).
- (xv) Cuautli (Eagle).
- (xvi) Cozcaquautli (Vulture).
- (xvii) Ollin (Movement).
- (xviii) Tecpatl (Flint).
- (xix) Quiauitl (Rain).
- (xx) Xochitl (Flower).

The *Tonalli* was originally given to man by the dual deity (the masculine) *Ometecuhtli* and (the feminine) *Omecihuatl* according to the informants of Sahagúns in *Códice Matritense from Real Academia de Historia* (López 1988, 208).⁹ The day-name and soul was accordingly a sacred gift from the deities. The twenty day-names were associated with natural phenomena but had each a supernatural patron.

In Mixtec manuscripts the signs and numeral coefficients correspond to Nahuatl. It is intriguing that the Mixtecs of Oaxaca¹⁰, Mexico employed a sacred language – various versions are known from the different dialects – for the day signs and day numbers in their codices. Also the Mixe had an extraordinary vocabulary for the elements of their calendar (Smith 1973, 23–27; Lipp 1983, 203; Boone 2000, 4). In Nahuatl the day (or year) One Reed is rendered as *Ce Acatl* in the common vocabulary. The Mixtec did not employ the colloquial *Een Doo* but *Ca Huiyo* (Dahlgren 1954, 282–287; Smith 1973, 23–27; Boone 2000, 4).

[3.2] *The Mixtec 260-day calendar*

Here is an example of signs of calendar names from the 260-day calendar in an illustration from the Mixtec¹¹ (*Ñuu Savi*)-manuscript *Codex Zouche-Nuttall* (aka by the Mixtec name *Códice Tonindeye* according to the suggestion by Gabina Aurora

[9] “Because there on the twelfth level he lives, there lives the true god. And (in his form of) partner (masculine) *Ilhuicateotl* has the name *Ometecuhtli*; and his mate (feminine) is called *Omecihuatl*, *Ilhuicacihuatl*. This means they govern the twelve (levels), they rule over the heavens. They say that we men are created there, that our *tonalli* comes from there when it comes to rest (the infant in the mother’s womb), when there the infant falls in a drop. From there comes his *tonalli*, it penetrates inside him; *Ometecuhtli* sends it” (López 1988, 208).

[10] The Mixtecs call themselves *Ñuu Savi*, “people of the rain” or “the people belonging to the rain god”, ‘Mixtec’, which derives from Nahuatl *Mixtecatl*, means “Cloud People” (Whitcotton 1977, 23).

[11] Mixtec is a tonal language with high, mid and low tones, which probably explains the apparent identical words for different numerical coefficients (Smith 1973, 26).



FIGURE 1: Códice Zouche-Nuttall (page 27) (British Museum ADD.MSS 39671)

	Normal Vocabulary (Alvarado Dictionary)	Special Day-Sign Vocabular
1	Ee coo yechi	ca, co quevui (1 Alligator).
2	Vvui tachi	ca, co, cu chi (2 Wind).
3	Uni huahi	co cuau; mau (3 House).
4	Qmi, cumi (ti) yechi	qui q(ue) (4 Lizard).
5	Hoho coo	q yo (5 Serpent).
6	Iño ndeye, sihi	ñu na mahu(a) (6 Death).
7	Usa idzu, sacuaa	sa cuaa (7 Deer).
8	Una idzo	na sayu (8 Rabbit).
9	Ee nduta	q tuta (9 Water).
10	Usi ina	si hua (10 Dog).
11	Usi ee codzo	si i ñuu (11 Monkey).
12	Usi vvui yucu	ca cuañe (12 Grass).
13	Usi uni ndoo	si huiyo (13 Reed).
14	Cuiñe	huidzu (Jaguar).
15	Yaha	sa (Eagle).
16	(ti)sii	cuii (Vulture).
17	tnaa, nehe	qhi (Movement).
18	Yuchi	cusi (Flint).
19	Dzavui	co (Rain).
20	Ita	huaco (Flower).

FIGURE 2: (Dahlgren 1954, 282–287; Smith 1973, 23–27)

Pérez Jiménez and Maarten Jansen). Cf. the illustration to the far left in the middle for described scene. From the left we see Lord Eight Deer (Mixtec calendar name: *Naa Cuaa*) Jaguar Claw and Lady Thirteen Snake (Mixtec calendar name: *Si Yo*) Flowering Snake, portrayed in a wedding scene. The bowl of chocolate, which Lady Thirteen Snake offer Lord Eight Deer represent the wedding. The signs of the calendar name and personal name to Lord Eight Deer is illustrated under his seat. The signs of the calendar name to Lady Thirteen Snake are located in front of her. The headdress represents her personal name. The ceremony was celebrated in the year Thirteen Reed (1031 AD) on the day Twelve Snake, which is indicated by the signs placed down in the middle from left to right.

Consequently, Lord Eight Deer would be named *Naa Cuaa* after the day of the 260-day calendar he was born and not by the conventional number *una* (“eight”) and word for the animal *idzu* (“deer”).

The Mixe or Mije¹² of the southern part of Mexico had an extraordinary vocabulary for the calendar numbers but not for the calendar days (Lipp 1983, 203–205; Lipp 1991, 62–63; Duinmeijer 1997, 180–181).¹³

[3.3] *The Mixe 260-day calendar*

The names of the days in the calendar names are considered to be sacred and are thus reckoned by the K'iche' Maya in Momostenago of highland Guatemala as untranslatable.¹⁴ It is the sound of the day-name and the poetic sound play, paraonomasia, which are important, and not what they signify (Tedlock 1992, 107–108). For the Mixe it is rather an interpretation than a direct translation (Duinmeijer 1997, 182).

Ethnographic data from contemporary Maya cultures indicate that they conceive the numbers and the calendars to be deified.¹⁵ The association of the 13 numbers with deities of the 260-day calendar still survive among the Ixil (Maya). Not only the 13 numbers and 20 day-names are both seen as “sacred beings or deities who are worshiped and petitioned in prayer”. The 13 numbers, associated with the day, are called “The Thirteen Kings”. A calendar specialist in Nebaj told the ethnographer J. S. Lincoln: “The 20 day names are the Kings” (Lincoln 1942, 106–107). Contemporaneous Maya cultures, Ch'orti' and K'iche', regard the days as deities (Schultze Jena 1933; Goubaud Carrera 1935, 42; Girard 1966, 281; Tedlock 1992, 107). We know also from ethnographical investigations of Maya of the Highlands of Guatemala that the days were considered to be divine. La Farge and Byers and Lincoln report that the days were considered to be sacred living beings among the Jacalteco and Ixil (Lincoln 1942, 108; La Farge & Byers 1931, 172–173). There was a deification of the 13 numbers, the 20-day deities and mountains in prayer. They were “....worshipped and petitioned in prayer, together with the Holy Cross, God, Jesus Christ, the saints, the sun, the corn, and certain mountains and animals” (Lincoln 1942, 123–124). These calendar designations were accordingly not ordinary names but considered to have a particular religious value.

In many cases, the sources do not provide information about in what manner the individual was given his/her ordinary name, i.e. not calendar name. For the Mixtecs of Oaxaca, Mexico the conventional name was given to the child at the

[12] The word Mixe or Mije originates from Nahuatl. The Mixe apply the term Ayu:k, “word” or “language”, which is etymologically connected to *ha'y yu:k*, “people of the mountains” to identify themselves as a particular culture (Lipp 1983, 7; Lipp 1991, 1).

[13] The application of the thirteen calendar numbers is today restricted to villages of the lowland. Calendar numbers are close to ordinary numerals of the Zoque (Lipp 1983, 204; Duinmeijer 1997, 181–182). The Mixe calendar numbers might have become tabooed in everyday life and therefore only restricted to the 260-day calendar according to Søren Wichmann (Duinmeijer 1997, 181–182).

[14] For a discussion of the translations of the day names in Yucatec, Nahuatl and lowland Mixe cf. Wichmann (2000, 45–47).

[15] But also among other Mesoamerican peoples. For the Mixe cf. Lipp (1983).

Calendar numbers	Mixe numbers	Day names
1. Tu.m	tu'k	hukpi (root)
2. mac	meck	sa'a (wind)
3. tu:k	tukok or to.hk	how (palm)
4. makc	maktask	hu:'n (hard, solid resistant i.e. of tree or hb).
5. moks	mugo.sk	ca'an (serpent)
6. tuHt	tudu:k or tuhtti.k	?uh (earth, world)
7. kuy	westu:k	koy (rabbit)
8. tu.gut	tuktu:k	na:n (deer)
9. ta:s	tastu:k	ni'in (water, river)
10. maHK	mahk	ho'o (?)
11. ki'in	mahktu'k	hai.m (fine white ashes)
12. ki'is	mahkmeck	ti'ic (tooth)
13. pagac	mahktikok or maktu.hk	kep (reed)
14.		ka: (jaguar)
15.		hu.ik (tobacco)
16.		pa'
17.		?uhs (earthquake)
18.		tahp (covered up, darkening)
19.		miy (grass)
20.		hugi'n̄ (point [weaving])

FIGURE 3: The Mixe 260-day calendar (*si: tu'u* “road of days” or *si: may: y'g*, “to divine” or “to count the days”) (Lipp 1983, 203–205; Lipp 1991, 62–63).

age of seven by a religious specialist. But, how this name was determined has been not acknowledged (Smith 1973, 27–29).

The birth date of the 260-day calendar would decide the fate and the name of the newborn child. Consequently, the calendar sign determined the character, temperament and behaviour of the human being, e.g. the individual's identity. This phenomenon has been given the designation “tonalism”, after *tona*, *tonal* or *tonalli* (“day”; “sun”) in Nahuatl (López 1988). *Tonalli* constitute the *I-macehual*, “that which is granted to one, that which one deserves”, to the individual according to the Aztecs (López 1988, 213–214). Fray Toribio de Motolinía, a member of the first delegations of Franciscans who arrived in Mexico in 1524, describes this indigenous use of their 260-day calendar. It provided the child with a name on the seventh day after birth, which constituted either an animal or a plant. Various omens were also given (Motolinía 1971, 37). But Sahagún has observed that the calendar signs of the *tonalamatl* were either good or bad. Thus, there was not a

fixed practice of naming the child on the seventh day after birth. If the sign was good the child was given a ritual bath and thereafter a name. If the sign was from a bad day the *tonalpouhque* discarded it and the ceremonial bath was postponed until a more suitable date. In this way the *tonalpouhque* manipulated the name and destiny, and thereby the character and identity, by improving the *tonalli* of the child: *ipampa ic qujpatia in jtonal*, (“For in that way they remedied his fate;”) (Sahagún 1950–1982, 1957, IV: 30). The postponement was, however, restricted since the naming ritual had to take place within the 13-day period (*trecena*) the child was born (López 1988, 212). Moreover, since the predestination of the *fatum* after the day of birth was avoidable the significance of the calendar must accordingly not be overrated. The Aztecs also had a conception of human free will. Hence, men could either fulfill his destiny or destroy it (Sahagún 1950–1982, 1957, IV: 25).

In an intriguing passage in a book from the 16th century, Fray Juan de Córdova gives various reasons why marriages were dissolved among the Zapotecs of Oaxaca, Mexico. One of these was a combination of the names of the couple that would cause misfortune to them or their offspring (Whitcotton 1977, 146). We can surmise that these names were from the 260-day calendar. Clearly, the names or identities – the name deciding the individual’s character – played a significant role throughout the life of a human being. The *tonalli* is, however, probably more a faculty or an orientation that the human being can cultivate. In her experience with the modern K’iche’ of Highland Guatemala, Barbara Tedlock argue that there is no dualism of good versus bad days but more complex prophecies (Tedlock 1992, 97–99).

The *hombres-dios* (“man-god”) Toltec ruler Ce Acatl Topiltzin Quetzalcoatl (“One Reed Our Honourable Lord the Feathered Serpent”) of the city Tula or Tollan (“Place of Reeds”) in Hidalgo – located c. 80 kilometers north of Mexico City – represents a famous example of how a calendar name display a prophecy. The Toltec civilisation (c. 900 – c. 1200 AD) exercised a great influence on many later Mesoamerican cultures. The numerous mythological versions of his disappearance relate that Ce Acatl Topiltzin Quetzalcoatl some day would return according to his calendar name Ce Acatl (1 Reed). Many scholars has therefore hypothesised that the Aztec *tlatoani* (ruler) Motecuhzuma (II) believed that the later Spanish conquerer of the Aztec empire, Hernán Cortéz, was identical with the home coming Ce Acatl Topiltzin Quetzalcoatl because he arrived with his Spanish army in Mexico in 1519. This year correspond to the year Ce Acatl (1 Reed) of the Aztec 365-day and 52-year calendar, which got its name from the 260-day calendar. Ce Acatl represents the date the native prophets claimed that Ce Acatl Topiltzin Quetzalcoatl would return to Tenochtitlan (today Mexico City), the capital of the Aztec empire.

This lead us to the phenomen, that day names of the 260-calendar name the individual year of the Mesoamerican 365-day calendar – which had an entirely different structure than the European 365-day calendar – and of the 52-year calendar. These day names are called Year Bearers.

[4] THE NAMES AND IDENTITY OF THE YEAR BEARERS OF THE 365-DAY CALENDAR AND THE 52-YEAR CALENDAR CYCLE

The names of the 260-day calendar gave identity to other calendar or organised time systems.

I have already outlined the principle of the 260-day calendar. Let us briefly consider the temporal organisation and structure of the Mesoamerican 365-day calendar. This calendar, called *xihuitl* in Nahuatl, is quite similar to the solar year but reflects instead a vague year. The actual length of the solar year is 365.2422 days. The vague year or the traditional Mesoamerican 365-day calendar, without leap days, was a quarter of a day or about six hours short of the solar year. The Mesoamerican 365-day calendar has eighteen time units (Sp. *veintena*) of 20 days each. The last and nineteenth *veintena* of the year contain only five days. Eighteen multiplied with twenty plus five amounts to 365 days.

Many of the Mesoamerican calendars consist of series of interlinking cycles. Scholars call the largest cyclical calendar in Mesoamerica the Calendar Round of 52 vague years. The Calendar Round combines the two distinct but interlocking calendars of respectively 260 and 365 days. A permutation of the 260-day and the 365-day cycle form a period of 52 vague years since it will take 18,980 days for a juxtaposed date of the 260-day and the 365-day calendar to be repeated in the Calendar Round. A Calendar Round consists therefore of a 52 x 365 day or a 73 x 260-days cycle (94,900 days or 52 vague years) which can be compared to a European century for many indigenous people in Mesoamerica.¹⁶

In order to distinguish a 365-day calendar cycle from another in the 52-year calendar the people in Mesoamerica called every year after one of four particular days in the 260-day calendar for a “Year Bearer”.¹⁷ The Year Bearer is a designation for the transition from one 365-day year to another 365-day year in the 52-year cycle or Calendar Round. Not more than four days from the 260-day calendar can mathematically be a Year Bearer. Since 260 and 365 have 5 as a common mathematical factor, only every fifth date of the 260-day calendar can coincide with a date of the 365-day calendar and vice versa. Each Year Bearer increases every year until it reaches the number thirteen. It will then re-begin at number one. After 52 years will the same Year Bearer with an identical coefficient, again occur (Thompson 1978, 128; Taube 1988, 181–182). In this manner the Year Bear-

[16] The longest time count of the Aztec was one hundred and four years (*Huehuetiliztli*), which the Nahua called a “century” (Sp. “siglo”) according to Sahagún (Sahagún 1950–1982, 1957, V: 143).

[17] Landa call this for a “Dominical Day” (Tozzer 1941, 135–137).

er of the 260-day calendar named and accordingly gave identity to every 365-day year in the 52-year calendar cycle.

[5] THE NAMES AND IDENTITY OF THE FOUR CARDINAL DIRECTIONS

Days of the 260-day calendar named and gave identity to quadripartite space or the four cardinal directions of the world.

We have seen that a Calendar Round was completed when the four Year Bearers of the 365-day calendar each had ruled 13 vague years. The Aztecs perceived the 52-year cycle as comprising four 13-year cycles in one great 52-year cycle. The Spanish ethnographer missionaries Fray Toribio de Benavente Motolinía, Fray Diego Duran and Fray Bernardino de Sahagún writes that the 13 number cycle was repeated four times, generating 52 uniquely named years in a 52-year calendar cycle ($4 \times 13 = 52$), which can be divided into four 13-year quarters. A round circle or calendar wheel of 52 years was divided into four parts. Every part, which represented a cardinal direction, contained thirteen years ([Durán 1971](#), 389–391). The 52-year cycle subdivided into four periods of thirteen years contained the four Year Bearers:

- (i) Tochtli (Rabbit)
- (ii) Acatl (Reed)
- (iii) Tecpatl (Flint)
- (iv) Calli (House)

The year of the 52-year computation received its identity from the name (YB) of the 260-day calendar. The 52-year cycle began with Ce Tochtli (1 Rabbit) where the number one proceeded through thirteen four times (of the four Year Bearers) until the return of same date. The 52-year cycle was divided into the four quarters, *tlapilli*, began respectively with the date of the four Year Bearers, Ce Tochtli (1 Rabbit), Ce Acatl (1 Reed), Ce Tecpatl (1 Flint) and Ce Calli (1 House). Tochtli (Rabbit) was oriented toward the south, Acatl (Reed) to the east, Tecpatl (Flint) was associated with the north, and Calli (House) with the west. Each cardinal direction was ruled for thirteen years.¹⁸ Hence we get this spatial-temporal order of the 52-year calendar:

- (i) Tochtli (Rabbit) of the south

[18] See Illustration of Plate 20 of a Calendar Wheel in book VII of *The Florentine Codex* of the four cardinal directions and the 52-year cycle ([Sahagún 1950–1982](#), 1953, VII). A depiction of 52-year cycle with the four year-bearer signs associated with the four cardinal points is also illustrated in *Codex Aubin* ([Read 1998](#), 93).

- (ii) Acatl (Reed) of the east
- (iii) Tecpatl (Flint) of the north
- (iv) Calli (House) of the west¹⁹

Space, the cardinal directions, and time accordingly received designations and thus identity from the 260-day calendar. These day-names of the 260-day calendar defined the quadripartite world in a spatial-temporal naming system.

[6] NAMES, DESTINY AND IDENTITY OF THE AZTEC FIVE WORLD AGES

We have seen that the calendar sign determined the destiny of an individual. A prophecy of the end of the world was also decided by the 260-day calendar.

A general agreement exists among scholars that the Aztecs had a notion of five world ages. The sequence of the five world ages (“Suns”) in Aztec religion each has a distinctive set of characteristics and hence identities represented by names of the 260-day calendar. These were respectively terminated by a particular cataclysmic destruction and its inhabitants were either destroyed or transformed into another form (Elzey 1976, 117–118). The majority of the sources give each world age the names Nahui Ocelotl (“4 Jaguar”), Nahui Ehecatl (“4 Wind”), Nahui Quiahuitl (“4 Rain”), Nahui Atl (“4 Water”) and Nahui Ollin (“4 Movement”). The following five world ages or world eras in a chronological or linear order can be identified as:

- (i) Nahui Ocelotl (“4 Jaguar”).
- (ii) Nahui Ehecatl (“4 Wind”).
- (iii) Nahui Quiahuitl (“4 Rain”).
- (iv) Nahui Atl (“4 Water”).
- (v) Nahui Ollin (“4 Movement”).

Each world age was named after a date in the 260-day cycle and associated with and presided over by a particular deity and a particular group of beings that were either exterminated or transformed into different kinds of beings in the first four creations. These were the dates on which the Suns or worlds were terminated. The world that we are now living in will end on the date Nahui Ollin

(“4 Movement”). *Ollin* in this context refers to a world-devastating earthquake. Earthquakes are quite common in Central Mexico. Thus the names from the 260-day calendar of the Five Suns refer to the quality of the world age and the way its inhabitants will be demolished.

[19] *Matlactli omome calli* (“13 House”), the sign of the west, was the last sign of the four thirteen periods (Sahagún 1950–1982, 1953, VII: 21).

[7] NAME, FREESOUL (TONALLI) AND IDENTITY

The term *tonalli* refers to a freesoul or a shadow without shape (Sp. “sombre”) (López 1988, 204–205).²⁰ George Foster writes that:

“The *tonalli* originally seems to have been a sort of soul, or at least a spiritual essence, because should the individual lose his *tonalli* he sickened, and if it were not returned, he died” (Foster 1944, 94–95).

This phenomenon associated with the traditional 260-day calendar has been recognised among the contemporary K’iche’ of Highland Guatemala. Every day has its face, identity or character of the 260-day calendar, *rajilábal k’ij*, which influence events. A person’s good fortune or destiny is named *uwäch uk’ij* (“the face of one’s day” or “one’s character”, i.e. the personality or character of a human being). Any day imparts the *uwäch uk’ij* to a child born on that day (Tedlock 1992, 110). It is decided by the birthday in the 260-day calendar. *Uwäch uk’ij* can leave the body when the individual dreams and meets other people’s *uwäch uk’ij* (Tedlock 1992, 315). It represents therefore a *tonalli* or a free soul.

Hernando Ruiz de Alarcón is the first known ethnographer missionary – if we do not count the dictionary by Molina – who outlines this phenomenon in *Treatise on the Heathen Superstitions that today live among the Indians native to this New Spain* (1629) (Andrews and Hassig in Alarcón 1984, 45; 313, note 6). Ruiz de Alarcón, describes the *tonalli* as a substance, a freesoul that lived in the body but could leave it. But where in the body of the human being was the *tonalli* located? Sahagún relates that the *nahualli*²¹ could be passified in his/her human form by being scalped. His reputation and day sign (*tonalli*) became thus destroyed (Sahagún 1950–1982, 1957, IV: 102). This represented a weakness for the supernatural *nahualli* since his/her extranormal power was in the hair (*tonalli*). The *nahualli* could only save him or herself by taking an object from the person who had captured him or her (Sahagún 1950–1982, 1957, IV: 43).

The freesoul and name ideology had medical implications. The patient was diagnosed by the Nahua *ticitl* (“doctor”) as one who lacks a *tonalli* or destiny (Sp. “fortuna”) and accordingly a name (Alarcón 1984, 161). He or she will not recover until his or her *tonalli* has reappeared (*oquicauh itonal*, “his/her *tonal* has abandoned him/her”) (Hassig and Andrews in Alarcón 1984, 361, note 9). There were (also female) *tetonaltique* (*tetonaltih*, “one who provides a person a *tonal*”) or *tet-*

[20] López Austin defines the lexem *tonal* or *tonalli* as:

‘a. Solar irradiation; b. solar warmth; c. summer; d. day; e. day sign; f. divine influence; g. a person’s destiny due to the day of his birth; h. animistic entity that can either spontaneously or accidentally leave a person and that relates him to the rest of the universe; i. something that is destined or belongs to a certain person. It was also called TOTONAL, using the possessive of the first person plural’ (López 1988, 297).

[21] A *nahualli* refer in this context to a religious specialist who can transform him or herself to an animal or a natural phenomenon.

onalmacanih ("tonal-givers"), i.e. specialised doctors who located the lost *tonal* of the patient (Hassig and Andrews in Alarcón 1984, 247; 380). They could in various healing-ceremonies bring the *tonalli*, and accordingly the name, back to the patient (Alarcón 1984, 161).

[8] NAMING PRACTICES AND IDENTITY OF HUMANS, DIVINE BEINGS AND SPATIO-TEMPORAL SYSTEMS

Naming practices of the 260-day calendar gave identity to humans, deities, world ages, the 365-calendar, the 52-year calendar and quadripartite space of the world, i.e. the cardinal directions of the Mesoamerican spatial-temporal system. The phenomenon of naming human beings and deities has been categorised as "tonalism". Moreover, the *tonalli*-concept constitutes a predestined fate and a freesoul (a definite shape that can be lost, which also implies could happen to the name) connected to a day-sign of the 260-day calendar. The day-name is in this manner associated with the character, personality, destiny and accordingly identity of a being or phenomenon.

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AUTHOR CONTACT INFORMATION

Lars Kirkhusmo Pharo
 Moses Mesoamerican Archive
 Harvard University
 11 Divinity Avenue
 Cambridge, MA 02138
 USA
l.k.pharo@gmail.com