

# Managing the strings of power: functions of the quipu in the Inca empire

Magdalena Setlak

Universidad Complutense de Madrid

## Quipus and *quipucamayoc*

«And treating their knots as letters, they chose historians and accountants, called *quipucamayoc*, which is 'he who is entrusted with the knots', to write down and preserve the tradition of their deeds by means of knots, cords and colored threads, using their stories and poems as an aid. This was the method of writing the Incas employed in their republic» (Garcilaso, 1991 [1609]: 347).

Inca Garcilaso de la Vega tells us that quipus constituted a «form of writing» among the Incas. When it comes to the question of whether or not some kind of writing existed in the Pre-Hispanic Andean world, since the 16<sup>th</sup> century the sources have adopted two contradictory positions. On the one hand, a number of chroniclers deny categorically the existence of writing among Pre-Hispanic Andean populations<sup>1</sup>. On the other hand, in several chronicles dating from the 16<sup>th</sup> and 17<sup>th</sup> centuries, we find parallels drawn between quipus, writing and books, and with the European written form, while the *quipucamayoc* are compared to scribes<sup>2</sup>. In this regard, while he denies the presence of writing among the indigenous population, Juan de Matienzo notes that quipus fulfilled the same functions: «There has not been found in this Kingdom, nor in the rest of the Indies, until now, use of letters, more than what they themselves call quipus, which are cords, containing many knots and cyphers, which for them are the same as our letters» (Matienzo, 1967 [1567]: 6).

---

<sup>1</sup> See, for example: Acosta, 1987 [1590]: 58, 401, 418; Betanzos, 1987 [1551]: 49, 119; Cieza de León, 2000a [1553]: 212; Calancha, 1975 [1638]: 165; Garcilaso, 1991 [1609]: 343; Molina, *El Almagrista*, 1968 [c.1552]: 72; Molina, 2010 [1575]: 42; Murua, 1987 [1590]: 56; Ondegardo, 1916 [1571]: 49; Las Casas, 1939 [1552-1561]: 156; Cabello Valboa, [1586]: 236.

<sup>2</sup> See, for example: Acosta, 1987 [1590]: 402, 418; Cieza de León, 2000b [1553]: 45; Cabello Valboa, 1951 [1586]: 239; Calancha, 1975 [1638]: 204; Cobo, 1956 [1653]: 143; Garcilaso, 1991 [1609]: 343; Murua, 1987 [1590]: 372.

For his part, the Mercedarian chronicler Martín de Murua tells us at first that «use of letters had not reached them, and of them they knew nothing» (Murua, 1987 [1590]: 353), but then goes on to say that quipus were, for the people of the Andes, a form of writing: «The Indians called these means of writing for the preservation of events quipus» (Murua, 1987 [1590]: 372). And Inca Garcilaso, despite calling quipus the Incas' «way of writing», states elsewhere in his work that «they had no letters» (Garcilaso, 1991 [1609]: 117, 343, 411), or that «they lacked writing» (Garcilaso, 1991 [1609]: 90). In fact, quite often the same authors, on different pages of their works, maintain that the indigenous population had not developed a system of writing, while expressing admiration for their use of the quipu and its semantic properties, and affirming that these instruments were a substitute for writing.

Because in Europe there existed no form of notation that resembled the quipu, the Spanish failed to fully understand its purpose and function, and nor were they entirely aware of the complexities of its structure, and how it was made. That is why, in colonial-era sources, quipus are referred to variously as the «strings», «threads», «knots», «cords», «strands», «records», «accounts», «account and reckoning» or «memories» of the «Indians». We know that quipus were composed of colored and knotted cords or threads. These were made from wool or cotton, or in some cases a combination of those two materials. The name “quipu” comes from the Quechua word for «knot». In his *Lexicon o vocabulario de la lengua general* (1560), Father Domingo de Santo Tomás includes the following entries: «*quippo*», which he defines as «any kind of knot»; and «*quippo camayoc*», which he translates as «accountant». In his *Vocabulario de la lengua general de todo el Peru llamada lengua qquichua, o del Inca* (1608) Diego González Holguín defines «*qquipu*» as «knot, or to count using knots» and «*qquipucamayok*» as «accountant who uses knots».

The chroniclers also, in their attempts to explain who the *quipucamayoc* were, often refer to them as «accountants»<sup>3</sup>. However, they also call them «historians»

---

<sup>3</sup> See, for example: Cieza de León, 2000b [1553]: 56; Collapiña, 1974 [1542]: 20; Las Casas, 1939 [1552-1561]: 136; Ondegardo, 1916 [1571]: 164; Molina, 2010 [1575]: 93; Murua, 1987 [1590]: 372, 373; Acosta, 1987 [1590]: 409; Molina, *El Almagrista*, 1968 [c.1552]: 72; Garcilaso, 1991 [1609]: 347; Guamán Poma de Ayala, 1993 [1615]: 361 [363]; Cobo, 1956 [1653]: 143).

(Collapiña, 1974 [1542]: 20; Garcilaso, 1991 [1609]: 347; Oliva, 1998 [1631]: 38; Cobo, 1956 [1653]: 143) or even «chroniclers» (Oliva, 1998 [1631]: 38, 39). At the same time, we also find comparisons of the *quipucamayoc* with the Spaniards' «scribes» (Cabello Valboa, 1951 [1586]: 239, 393; Acosta, 1987 [1590]: 402; Guamán Poma de Ayala, 1993 [1615]: 359 [361]; Cobo, 1956 [1653]: 143;), and they are also referred to as «secretaries» (Cabello Valboa, 1951 [1586]: 239, 393). These definitions, unrelated as they are to the role of an accountant, suggest that the duties of the *quipucamayoc* were not limited to the management of accounting data. In the words of Garcilaso, the *quipucamayoc* was «he who is entrusted with the knots» (Garcilaso, 1991 [1609]: 347). Those knots, however, could contain different types of information.

With regard to the tradition or use of the quipu, archaeological evidence has enabled us to determine that they were not only employed by the Incas, but also by the Huari. These two quipu traditions differ, however, in terms of their structure, and regarding their content comparisons remain impossible, given that the sources provide information on the use of those quipus encountered by the Spanish upon their arrival; namely, Inca quipus. In terms of their structure, Huari quipus are characterized by the way in which the upper part of the hanging cords is wrapped in bands of multicolored threads. These are known as «*canutos*», and the examples of Huari culture quipus that have been found are known as «*quipus de canuto*». The majority of these did not have knots and if these did feature on the suspended cords, it was always in the form of simple knots. This led Conklin to suggest that, in the quipus of the Middle Horizon, information was recorded chromatically; that is, via the colors wound into the suspended cords (Conklin, 1990: 21-38). Inca quipus, in contrast, did not possess «*canutos*», but they did contain a greater number and variety of knots, tied to the suspended cords.

Also, some of the suspended cords had subsidiary and/or sub-subsidary cords, with or without knots. Regarding the knots themselves, to this day the work published in 1923 by Leslie Leland Locke remains central to the study of quipus. Leland Locke identified three types of knot which, according to their position on the hanging cords, represented numerical values based on a decimal system. In this way, a simple knot

represented: a) units, whenever it was located in the row of knots furthest from the main cord; b) tens, if located on the second row from the bottom; c) hundreds, if it was positioned on the next row; and so on. The long knot —composed of between two and nine twists around the suspended cord- represented values between two and nine, while the 8-shaped knot indicated simple units (Leland Locke, 1923: 15).

Since that 1923 publication, quipus have tended to be studied as accounting tools or records. Thanks to contemporary studies, however, it has been possible to determine the existence of a greater variety of knots, not all of which coded only numerical information, meaning that in Tahuantinsuyo there existed both accounting quipus<sup>4</sup> and narrative quipus<sup>5</sup>, a feature which cannot be confirmed in the case of Huari quipus. It should be remembered, however, that Tahuantinsuyo did not constitute a break, but rather a continuation in the long cultural tradition of the Andean area. The Incas took advantage of several achievements made by previous cultures, including organizational models and technological advances. The quipu was merely one of those technologies adapted or, perhaps, reinvented by the Incas. It is striking to note that, according to the archaeological record, quipus were employed by two expansionist states or empires that emerged in the Pre-Hispanic Andes; the Huari empire and the Inca empire. And so, it would appear that, for the Pre-Hispanic societies that used these instruments, possessing the quipu meant possessing power. Indeed, use of the quipu facilitated the deployment of power on an unprecedented scale.

The Inca state known as Tahuantinsuyo, also sometimes referred to as the Inca empire, was the largest political organization to emerge in the Pre-Hispanic Americas<sup>6</sup>.

---

<sup>4</sup> By accounting quipus, we mean accounting records; that is, instruments used to record numerical information, but not to count. To conduct counting operations, the Incas employed a device known as a *yupana*.

<sup>5</sup> Today, in museums and private collections, there exist around one thousand quipus. Analysis conducted by the Harvard University Khipu Database Project has shown that around two-thirds of those quipus possess «standard» knots —those identified by Leland Locke (1923)— while the other third contain «anomalous» knots used to codify another type of data. See: Urton, 2005. Also, transcriptions of readings of quipus produced by colonial-era scribes confirm the existence of quipus with narrative content. See: Pärssinen & Kiviharju, 2004.

<sup>6</sup> It covered the present-day countries of Colombia (the southwestern part), Ecuador, Peru, Chile (as far as the Maule River), Bolivia (the highland zone) and Argentina (the north), incorporating, according to

In spite of the fact that it existed for less than a century<sup>7</sup>, from 1438 to 1532, no other empire in the Americas can compare to that of the Incas, in terms of territorial expansion and the size of the population incorporated into its state structures. We define empires as expansionist states, hegemonic and multiethnic, which achieve power and control over other states or political entities. The central authorities of ancient empires tended to focus on two main aims: ensuring the continued security of the central society, and the extraction of resources from annexed territories. To this end, according to D'Altroy, they resorted to persuasive and coercive methods in the form of military, political, economic and ideological actions (D'Altroy, 2015: 39). These are the four forms of power defined by Mann (1986), who maintains that societies are composed of multiple power networks that overlap and intersect.

According to Mann, the structure and history of societies should be studied in terms of the interrelationships between the four «sources of social power», which are: ideological, economic, military and political relations (1986: 1)<sup>8</sup>. At the same time, it is also necessary to bear in mind that the success and stability of empires do not depend only upon their ability to expand or maintain military power, but also upon their ability to record information and transmit it, quickly and efficiently, throughout the different levels of state or imperial structures. Indeed, the reliance on central authorities for writing, or some other type of record, can be summed up neatly in a phrase from Innis: «the sword and the pen worked together». Indisputably, written records, transmitted in a rapid and well-organized manner, were essential for imperial expansion, the exercise

---

different sources, between six and twelve million people. According to Rowe, by around 1525, in the Andean area there were approximately six million inhabitants (Rowe, 1946: 185); D'Altroy believes that the Incas ruled over some twelve million people (D'Altroy, 2015: 26).

<sup>7</sup> The date 1438 was proposed by John Rowe (1945), who established a chronology of the Inca rulers based on historical sources. The year 1438 was accepted as the year of the victory by the Incas over the Chancas, followed by the emergence of Tahuantinsuyo —in Quechua, the four parts or regions—, formed by Chinchaysuyo, to the north of Cuzco; Antisuyo, to the east; Collasuyo, to the south; and Cuntisuyo (Condesuyo), to the southwest. The Chancas attacked and besieged Cuzco during the reign of the eighth Inca, Viracocha. The sovereign, alarmed by the size of the Chanca army, fled the city with his son and heir, Inca Urco. Young Cusi Yupanqui, one of Viracocha's other sons, assumed command of the Inca troops and triumphed over the Chancas. Upon Inca Viracocha's return, Cusi Yupanqui was named as his successor, receiving the name Pachacuti Inca Yupanqui, «the reformer of the world», or «the world-changer». However, subsequent research has proposed an earlier date for the establishment and development of Tahuantinsuyo. See: Bauer, 1992; Julien, 2000; Covey, 2006.

<sup>8</sup> These sources of power constitute «overlapping networks of social interaction» and, at the same time, «organizations, institutional means of achieving human goals» (Mann, 1986: 2).

of power, and the extension of government (Innis, 1986: 7). Below, we will address how the rulers of Tahuantinsuyo were able to extend their power and control over ever-expanding populations, through the use of quipus as «the method of writing the Incas employed in their republic» (Garcilaso, 1991 [1609]: 347). To this end, we will explain the importance of the quipu in the organization and control of the population, and in the ideological, political-administrative, economic and military relations -clearly asymmetric- between the rulers and the inhabitants of the Inca empire.

### **1. The quipu and ideological power in Tahuantinsuyo**

In the sociological tradition, ideological power is derived from three sources. Firstly, in order to understand the world, we need categories and concepts of *meaning*. Those who monopolize this demand for meaning are able to exercise power. The second source comes in the form of *norms*, concepts in accordance with which individuals are expected to act in their social relations. A monopoly on norms offers a path to power (Mann, 1986: 22). The third source of ideological power is constituted by *ritual practices*, which enable power to be transmitted through song, dance, visual arts and rituals (Mann, 1986: 22, 23). In the case of Tahuantinsuyo, ideological power was essentially associated with three main spheres: 1) Inca myth-history and history; 2) religion, and 3) laws and rules of conduct. In each of these sources of Inca ideological power, the role of the quipu was essential.

### **The knots of Inca history and memory**

«In Peru there are no letters with which to preserve the memory of past events, not even the paintings that serve as letters in New Spain, but rather certain knotted strings of diverse colors».

(Zárate, 1965 [1555]: 11).

According to the account left to us by the chronicler Agustín de Zárate, in Pre-Hispanic Peru certain strings of different colors were used to record the memory of the past. In this regard, colonial sources provide abundant information concerning the content of Inca quipus and agree that, among the data recorded using these

instruments, historical data formed a part. Indeed, the Jesuit José de Acosta maintains that, thanks to the quipu, the Incas were able to account for the last four hundred years of their history<sup>9</sup>. The rest was lost or was «pure confusion» (Acosta, 1987 [1590]: 124, 125). According to Acosta, quipus «just like books can recount histories» (Acosta, 1987 [1590]: 402). Inca Garcilaso tells us that, using knots, indigenous people recalled the traditions of their forefathers. To this end, the Incas chose historians –whom they called *quipucamayoc*– to write and conserve, using cords and colors, «the tradition of their deeds» (Garcilaso, 1991 [1609]: 347).

For his part, the Jesuit Anello Oliva likened the *quipucamayoc* to chroniclers or historians, individuals who with their quipus «wrote down and noted the most memorable things that occurred» (Oliva, 1998 [1631]: 37-38). However, when speaking of Inca history recorded on the quipu, it should be remembered that in the Andean world, as Rostworowski has pointed out, there was no *historical* sense of events in the European sense. Nor did there exist the custom of faithful and chronological recording of events: quite the contrary, in fact custom called for the deliberate omission –in songs, paintings and quipus- of any event deemed unworthy of being remembered. This occurred, most notably, with the accession to the throne of a new ruler (Rostworowski, 1988: 103). According to Pease, the Incas were endowed with an historical image through the chroniclers, who recorded as history the stories they heard from the indigenous population; that is, their myths and rituals (Pease, 2009: 11). And so, certain historical events were forgotten or excluded deliberately, both in quipus and, subsequently, in the chronicles.

Instead, numerous mythical narratives –recorded on quipus- were incorporated into the chronicles as the history of the Incas. When it came to the organization of information, the chroniclers applied their Spanish method to the recording of Andean history of the period, organizing the chronology of Tahuantinsuyo according to the

---

<sup>9</sup> This is not a figure to be taken literally, given the absence of a notion of chronology among Pre-Hispanic Andean peoples.

biographies of its rulers, a total of thirteen Incas if we include Atahualpa<sup>10</sup>. Although several chronicles were based on the accounts of the *quipucamayoc*<sup>11</sup>, this does not mean that the quipus laid down memory and history in the way reflected in the writings of the Spaniards. It does demonstrate, however, that these instruments constituted a major source of Inca memory. As the Mercedarian chronicler Murua writes: «All the things of which we have news regarding the antiquity of this kingdom, are deduced from the quipus of the old Indians...» (Murua, 1987 [1590]: 442-443).

The written sources tell us that, with the rise to power of a new Inca, lavish ceremonies and festivals were held, during which the history of Tahuantinsuyo was presented and, through songs, the exploits of the previous Incas were extolled. This does not mean, however, that the organization of information —both in quipus and in songs based on quipus— was chronological or linear. Each ruler, upon ascending to the throne, chose a group of learned men whose task was to memorize the events of his rule, set them on quipus and, subsequently, compose songs for festivities, so that the sovereign would endure in the collective memory. The chronicler Pedro Cieza de León writes that each Inca chose three or four subjects, so that they «would guard in their memory» everything that occurred during their rule, and then write songs (Cieza de León, 2000b [1553]: 54)<sup>12</sup>.

Cieza de León also tells us that, following the death of each Inca, quipus and songs served to commemorate him. The *quipucamayoc* recounted before the new Inca all the events that had occurred during the rule of their predecessor and furnished him with an «account and reckoning», namely a quipu, of everything. Also, in Cuzco, solemn funeral ceremonies were organized in which the *quipucamayoc* narrated the life, customs, conquests and exploits of the Inca. Previously, a meeting of «the oldest of the

---

<sup>10</sup> The first seven Incas are considered «mythical» or «legendary», while the rest, beginning with Viracocha and Pachacuti, are considered «historical» Incas (Duviols, 1979: 67).

<sup>11</sup> In their works, several chroniclers affirm that the indigenous population read to them the historical content of their quipus. See: Collapiña, 1974 [1542]; Blas Valera, 1992 [c.1593-1597]; Cieza de León, 2000b [1553]: 56; Zárate, 1965 [1555]: 11; Matienzo, 1967 [1567]: 8, 9; Ondegardo, 1916 [1571]: 45; Murua, 1987 [1590]: 312, 313; Cabello Valboa, 1951 [1586]: 264, 291; Garcilaso, 1991 [1609]: 49; Guamán Poma de Ayala, 1993 [1615]: 367 [369]; Oliva, 1998 [1631]: 37, 38; Calancha, 1974 [1638]: 218.

<sup>12</sup> It should be remembered that in colonial-era texts the word «*memoria*» often refers to the quipu.



people» was held, in which these individuals debated the reign of the deceased Inca and decided whether or not it was worthy of being passed on through the collective memory, and which specific events were worthy of memorializing. Before the decision was taken, these elders listened to the *quipucamayoc*, who held a record of all the affairs related to the rule of the deceased Inca:

«They sent for the great *quipo camayos*, [who] knew how to account for the things that had happened in the kingdom, so that they could communicate them with other stories, having been chosen more for their rhetoric and skill with words, they knew how to recount in good order the things of the past» (Cieza de León, 2000b [1553]: 51).

Thus, the role of the *quipucamayoc* in the process of preserving the memory of the Inca rulers was central. The elders met to discuss wars, battles and provinces incorporated by the deceased Inca into Tahuantinsuyo. They confirmed that he had not lost any of the provinces his father had conquered and whether or not he had governed well. If the ruler was judged to have been weak and to have died «without increasing the dominion of his empire», they decided that «little memory» of him should remain (Cieza de León, 2000b [1553]: 52). In other words, they excluded him from the historical quipus. From the description of this process of deciding whether or not a ruler deserved to be remembered, it follows that the Inca historical quipus, rather than dates and events arranged in chronological order, contained names of provinces, territories, towns, ethnic groups or local chieftains incorporated into Tahuantinsuyo during the rule of each sovereign. This data, rather than being ordered chronologically, would be stored in quipus and read based upon subjective criteria that considered their relevance or prestige<sup>13</sup>. In addition, «historical quipus» would contain details of the administrative, economic and statistical data related to the rule of each Inca. In this way, his successors would be informed in detail of state affairs and an assessment could be made of the previous Inca's rule and the worthiness of his memory.

Once the official version of the deceased Inca's rule had been agreed, the *quipucamayoc* were summoned and ordered to compose official songs and record everything on their quipus, so that the Inca's legacy would be immortalized, as long as

---

<sup>13</sup> Such was the case of the conquests depicted in *Memoria de las provincias que conquistó Topa Ynga Yupangui*. See: Pärssinen & Kiviharju, 2004, and Pärssinen, 2018.

he had been deemed worthy of the honor (Cieza de León, 2000b [1553]: 52). And so, this history presented at all the major festivities and recorded in the quipus was, in its way, «consensual». The notion of an «officially agreed» history involved the «mythologizing» by the Incas of historical events<sup>14</sup>, through songs, quipus and painted boards, a process the opposite of that described by Pease as the «historization» of oral memory and myth, engaged in by the Spanish chroniclers.

Another example of establishing an «officially agreed» history through quipus and the use of the quipu to establish a consensus occurred during the reign of the ninth Inca, Pachacuti. According to the Pedro Sarmiento de Gamboa chronicle, Pachacuti summoned historians —that is, *quipucamayoc*— from all the provinces and questioned them regarding the «antiquity» of the Incas and the ethnic groups being incorporated into Tahuantinsuyo. Then, Pachacuti ordered the painting of the history of the empire on great boards, which he decided would be archived in the house of the sun<sup>15</sup>. Sarmiento tells us that the media employed to conserve Inca history and memory included songs, quipus and, in the time of Pachacuti, those painted boards (Sarmiento de Gamboa, 1988 [1572]: 48-49). And in the account left to us by Hernando de Santillán, we find a reference to two ways of conserving and transmitting Inca history and memory: songs and quipus:

«How they have memory of ancient things is through certain songs in which past events are related, and they learn from one another; and they also have the memory contained in their quipus, which are woolen cords of many colors, and by the number and form of the knots they place in these, they understand that which is to be remembered» (Santillán, 1986 [1563]: 103).

These two ways of remembering, preserving and teaching about the Andean past, would have involved the existence of two categories of knowledge regarding the past and its transmission. One form was accessible to, and perhaps even mandatory for, the entire population. When the people gathered during any festivity, through songs

---

<sup>14</sup> One example of this process is the myth of the *pururauca*. According to Inca tradition, the sun god came to Pachacuti's aid during the war against the Chancas, transforming rocks into *pururauca* — warriors— and ensuring the Inca victory. See: Pease, 2014: 53.

<sup>15</sup> María Rostworowski has suggested that both the painted boards and historical quipus were kept in a great archive known as Poquen Cancha (Rostworowski, 2011 [1953]: 187).

and oral traditions those present were instructed in the «official» version of history that the rulers wanted them to know. Access to the other form was restricted to those who knew how to read and make quipus and those who were close to the inner circles of power. Cieza de León includes in his chronicle information suggesting that quipus could be used for recording those versions of history officially sanctioned by the authorities in Cuzco. Under this system, only the rulers and those events deemed worthy of recollection were granted the right and privilege of enduring in the form of quipus and song. For example, because Inca Urco —the son and supposed heir of Inca Viracocha— had fled from Cuzco during the Chanca invasion, he was deemed unworthy of mention among the Inca rulers. Thus, the quipus «were silent» in this regard:

«The *orejones*, and even all the natives of these provinces, laughed at the deeds of this Inca Urco. Owing to his trifling nature, they preferred that he should not be looked upon as having enjoyed the dignity of the kingdom. Thus we see that in the narrative recorded in the quipus and traditions, which they have of the kings who reigned in Cuzco, they were silent regarding him, which is something I cannot do, for in fact, for good or ill, through vice or virtue, he did govern and command the kingdom for several days» (Cieza de León, 2000b [1553]: 140).

We see, therefore, that through the quipu the central authorities could control history, and even their society's origin myths<sup>16</sup>, because these, too, were preserved on those same instruments (Murua, 1987 [1590]: 373). Ideological control was also possible beyond the central quipus and representations safeguarded in Cuzco. There also existed local quipus and *quipucamayoc*-historians in the provinces. In his chronicle, Polo de Ondegardo mentions that each province had its own records of wars and victories (Ondegardo, 1916 [1571]: 51). And Inca Garcilaso tells us that «each province had its own accounts and knots with their histories and traditions» (Garcilaso, 1991 [1609]: 49).

When Garcilaso had decided he would write his chronicle, he contacted his fellow students and asked them to investigate the Inca conquests of their mothers' provinces. Assisted by their relatives, these individuals «took from their archives the

---

<sup>16</sup> Inca Pachacuti is considered a great reformer, who, among his other achievements, reformed Inca religion and instituted worship of the sun. Pease has suggested that the Inca origin myth was changed by Pachacuti after the war with the Chancas. According to this historian, the origin myth of the Cuzco area – featuring the Ayar brothers sent by Viracocha— was replaced by the myth telling of how Manco Capac and Mama Ocllo emerged from Lake Titicaca upon the command of the sun god (Pease, 2014: 45).

accounts they had of their histories» and sent them to him (Garcilaso, 1991 [1609]: 49). In this way, the chronicler confirms for us the existence of local quipu archives. He also mentions these in another part of his chronicle, when describing the duties of the *quipucamayoc*. Inca Garcilaso tells us that the local rulers went to the *quipucamayoc* in order to learn of past events in their lands (Garcilaso, 1991 [1609]: 347). This tells us that the *quipucamayoc*, as the guardians of these historical quipus, performed to a certain degree the duties of archivists, in addition to their role as historians.

Indeed, as the keepers of these archives, the *quipucamayoc* would have known how to locate and then to interpret any one of the bundles of colored threads they housed. This would imply that the Inca quipu code remained unchanged over a considerable period<sup>17</sup>. In this regard, Murua compares the *quipucamayoc* and the quipu archives to the Spanish scribes and their offices. This was where all the most important records were prepared and kept, for both the central and local authorities. In these archives, Inca rulers and officials could access information regarding rebellions, battles, natural disasters, and other events that had occurred in each region<sup>18</sup> (Murua, 1987 [1590]: 373).

While the local quipus constituted a source of information for the authorities in Cuzco, at the same time, as state officials the *quipucamayoc* were in a position to exercise a degree of influence over the content of these historical quipus. And it would appear that there were several state or central archives. As the Augustinian chronicler Cabello Valboa tells us: «there was a way of writing they called quipus, kept in houses filled to a greater degree than the offices of our secretaries and scribes, and these were understood only by the quipu *camayoc*» (Cabello Valboa, 1951 [1586]: 239). The most

---

<sup>17</sup> It is believed that significant changes in Inca quipus were not made during the existence of Tahuantinsuyo. The situation changed, however, during the colonial period, when quipus began to diverge and evolve independently in each region. For more information, see: Curatola Petrocchi & De la Puente Luna (eds.), 2013; Hyland, 2017; Hyland *et al.*, 2014; Setlak, 2018.

<sup>18</sup> The presence of small local archives is also confirmed in the *Visita hecha a la provincia de Chucuito*, although in this case they were administrative and tribute records from the Inca period. In Chucuito, the *caciques* and *principales* kept quipus from the Tahuantinsuyo era and, more than thirty years after the conquest, they knew how to read them in the presence of the *visitador* [“inspector”] (Diez de San Miguel, 1964 [1567]).

important archives would have been held in Cuzco, to which Inca officials would send copies or summaries of provincial quipus. In addition, archives that held state quipus of lesser importance would also have been established at Inca centers in the provinces.

And so, Inca history or memory and their origin myths were preserved in historical quipus. Their content, however, could be influenced by the Cuzco authorities, who decided on the events worth memorializing. In this way, quipus functioned as sources of «meaning», guiding Andean populations in their understanding of the world, in terms acceptable to the authorities in Cuzco. «Meaning», let us remember, is defined by Mann as one of the sources of ideological power.

When the Incas incorporated new territories into Tahuantinsuyo, it was necessary to bind them to the structures of the state. An ideological bond with recently annexed ethnic groups was established through two resources: myth-history —as we have just outlined— and religion.

### **Knotted colored cords and Inca ritual**

The main function of any ritual is communication and the transmission of messages through cultural symbols or codes. As we have already touched upon, Inca ritual was used to transmit messages to the participants, and it should be remembered that such rituals were highly political. Inca ceremonies and festivities, therefore, were not merely spaces destined for religiosity or the spread of sun worship. On the contrary, in these rituals religion was always laced with politics. Above all, rituals served to aid the negotiation of political relations between the Inca and his subjects, and between Tahuantinsuyo and subjugated ethnic groups.

Furthermore, in Inca society power was legitimized by religion. The Inca was the «child of the sun». Thus, documentary sources indicate that each decision of the Inca required the endorsement of the sun god, meaning that all activities and initiatives of any relevance required prior consultation with the forces of the divine (Curatola, 2008: 17). Indeed, Curatola emphasizes the role played by oracles in the legitimization of power, as centers for the gathering and processing of information, and for

communication (Curatola, 2008). In this regard, MacCormack maintains that a principal function of many oracular sanctuaries, located throughout the provinces of Tahuantinsuyo, was to legitimize the political power of the Incas (MacCormack, 1991: 59).

Regarding the role of quipus in Inca ritual and Andean religiosity, three areas can be distinguished in which the use of these instruments was of utmost importance, namely: the cult of the *huacas* [shrines], Cuzco's *ceque* system, and the Inca calendar. Clearly, these three components were interrelated, given that the cult of the *huacas* was governed by the ritual calendar, while the *huacas* of the Cuzco valley were articulated into the *ceque* system, which in its turn was bound up with the ritual calendar. The author believes, therefore, that the ritual use of quipus –as instruments that aided the deployment of ideological power- contributed to the legitimization and dissemination of the political power held by the rulers in Cuzco.

We know that the Incas tended to appropriate all the major provincial *huacas* in order to control them and, thereby, control the ethnic groups who venerated those sacred places<sup>19</sup>. Indeed, the *Manuscrito quechua de Huarochirí* contains an account of how all the *huacas* of the Inca empire were recorded on quipus. Through these instruments, the Incas were able to organize local worship and deliver corresponding offerings. Offerings were made in accordance with the indications contained in quipus, so that each sacred site received what was noted on the corresponding quipu:

«The Incas knew well all the *huacas* of every place. And to each *huaca* they ordered sent their gold and silver, in accordance with what was recorded in the quipus; they had delivered to all of them everywhere sacred silver, sacred gold [...] all those things they commanded to be given just as was indicated in the quipus» (Ávila, 1966 [1598]: 129)<sup>20</sup>.

---

<sup>19</sup> Such appropriation may have been military in nature, following the conquest of a territory, or achieved through ritual, as in the case of the *Capacocha*. Sacrifices performed during the *Capacocha* ritual created new *huacas*, as well as new sacred boundary stones between neighboring groups. In this way, the Incas appropriated the local ritual space, thereby binding local groups to the power of Cuzco (Sanhueza, 2005: 51; Schroedl, 2008: 24; Gentile, 1996). Also, Inca rulers exercised indirect power over all the sacred sites within Tahuantinsuyo, because the priests and *camayos* of each site were subordinate to the Huillac Umu, Cuzco's high priest. Thus, through the priests from each *huaca*, the Incas exercised indirect power over the inhabitants of the surrounding area.

<sup>20</sup> \**Choc uopo collq. sarpo. choctipsi colletipsi* (phrase which has defied translation).

This fragment —mentioning how the Incas sent offerings to every *huaca*, everywhere- suggests the existence of some kind of centralized register of *huacas*, clearly held in Cuzco. It is not known, however, if this was a single quipu with all the *huacas* of Tahuantinsuyo or, rather, several such devices. Most likely, there would have been a general quipu with all the *huacas*, and others that containing more precise information about what was offered at each. In the *Manuscrito quechua de Huarochirí*, we are told that gold and silver was delivered to them «as was indicated in the quipus», suggesting that in those instruments certain criteria were also set out regarding the manner in which religious rituals should be conducted. Thus, these knotted records would have served to ensure compliance with forms of worship, both imperial and local. Indeed, the author of the *Manuscrito de Huarochirí* provides an example of the control exercised at a local level using quipus. When the members of the community organized the giving of offerings to Lake Yansa —in order to ensure their water supply- all those who contributed an offering and those who had been absent were recorded on quipus:

«And all that they did give as an offering to the Yansa lake was collected by the *yañca*, who received it. He also took a llama and guinea pigs, and also *ticti*, every product or thing which could be used to worship, sacrifice and offer. And thus, when all had given their offerings and the account had been made, using quipus, of the number of absentees, the *yañca* began the adoration» (Ávila, 1966 [1598]: 181).

For his part, the priest and chronicler Cristóbal de Molina writes of the existence of *vilcacamayoc*<sup>21</sup>, responsible for all the *huacas* of Tahuantinsuyo. According to Molina, in Cuzco there were *vilcacamayoc-quipucamayoc* from the four *suyos* and they held the «account and reckoning» —that is, the quipus— of the sacred places in their respective regions. These *vilcacamayoc-quipucamayoc* kept a record of both the *huacas* and the offerings and sacrifices that were consecrated to each one. In addition, there were other *vilcacamayoc-quipucamayoc* among the provincial leadership and, apparently, others directly responsible for each of the *huacas* (Molina, 2010 [1575]: 93). There existed, therefore, a hierarchy of *vilcacamayoc-quipucamayoc* who were responsible for keeping records of every sacred place in the Inca empire and for ensuring compliance with

---

<sup>21</sup> *Villca* or *huacca* means «idol» (González Holguín, 1608); *camayoc* means «general official» or «master in some art» (Santo Tomás, 1560).

religious obligations. It is possible that this hierarchy may have been related to the decimal hierarchy<sup>22</sup>. Other chroniclers and «*visitadores de idolatrías*» [idolatry inspectors] also wrote of the existence of quipu records of *huacas*. Indeed, Polo de Ondegardo noted that, through the records the Incas had kept in Cuzco, he personally found and destroyed many *huacas* in the provinces of Chinchaysuyo and Collasuyo (Ondegardo, 1916 [1571]: 55).

In the Matienzo chronicle, we find confirmation that, when Polo was the Cuzco magistrate, «he discovered all the *huacas* and idols the Indians had, and which they adored, through the quipus of the Incas and superstitions they practiced» (Matienzo, 1967 [1567]: 119). For his part, when describing the houses of the *acllas* –chosen women- Murua writes that those of the fourth house were singers and shepherdesses who, «with much accounting and reckoning», tended the livestock of the Inca that was destined for sacrifice» (Murua, 1987 [1590]: 393). The chronicler Juan de Betanzos tells us that Tupac Yupanqui, before he died, instructed his nephew Yamque Yupangue and his son Huayna Capac, to keep a reckoning through quipus of all the livestock destined for sacrifice in Cuzco. Both of these men became *quipucamayoc*-administrators, responsible for maintaining records of all the livestock destined for sacrifice and for the ongoing supervision of the local lords, ensuring the supply of animals for each festivity (Betanzos, 1987 [1551]: 176).

In this regard, *La Relación de las costumbres antiguas de los naturales del Piru*, attributed to the Jesuit Blas Valera, suggests that not only sacred sites and sacrifices, but also diverse details concerning Andean worship, were recorded on quipus. According to the author of the *Relación*, quipus were the primary source of knowledge about the Andean past and its beliefs, ancient gods, sacrifices, temples, *acllahuasi* and sacred sites (Blas Valera, 1992 [c.1593-1597]: 48, 54, 56). In the same way, the idolatry inspections show that the so-called extirpators of idolatry resorted to these instruments in order to obtain data regarding Andean religious practices, ceremonies and deities, confirming

---

<sup>22</sup> Julien proposed the existence of a network of *huacas* associated with decimal organization (Julien, 2002: 19).



that they contained this type of information. In fact, the Jesuit priest Pablo José de Arriaga called upon the indigenous population to prepare their quipus so that they could be quizzed about their *huacas*, *pacarinas*, *mallquis*, and those who presided over their ceremonies, festivities and acts of worship. The documentary sources clearly demonstrate that quipus were employed in worship. Also, several examples have been found at archaeological sites, in ceremonial or funerary contexts, indicating their association with Andean rituals<sup>23</sup>.

Aside from information on *huacas*, offerings, sacrifices and acts of worship, in the colonial-era sources we also find references to the use of quipus for calendrical purposes. Indeed, the chronicler Guamán Poma de Ayala speaks of «astrologers» who used quipus in relation to the cycles of sowing and harvesting (Guamán Poma de Ayala, 1993 [1615]: 260 [262]). Also, among the drawings contained in the *Nueva corónica y buen Gobierno*, there is one that shows an astrologer walking through the mountains with his staff in one hand and a quipu in the other. Another chronicler who refers to the use of quipus for calendrical purposes is Molina:

«They had these *quipus*, which are almost like the strings with which the old women pray in our own Spain; except that they are hanging strands, with which they kept count of the years, months and moons, to such a degree that no error was committed in a moon, year or month. However, their use was not so well organized until after Inca Yupanqui began to rule and conquer this land, since before his time the Incas had not expanded beyond the surroundings of Cuzco» (Molina, 2010 [1575]: 42).

Murua also recalls having witnessed the use of calendrical quipus during the colonial period. In the quipu-calendar seen by Murua, an indigenous person recorded all the Christian saints and feast days to be celebrated each month (Murua, 1987 [1590]: 376).

---

<sup>23</sup> Among the major *quipu* archives, one of the most remarkable was that located at the Pachacámac shrine, where 90 examples were found. More than 30 examples were found in funerary contexts at the Lake of Condors, while a further 30 quipus were discovered at Castillo de Huarmey. At Pachacámac and the Lake of Condors, Inca quipus were found, while those discovered at Castillo de Huarmey were Huari quipus.

The ritual calendar of the Cuzco valley was organized in accordance with the *ceque* system, composed of forty-one imaginary lines that radiated out from the Coricancha temple towards the four *suyos*. All the *huacas* surrounding Cuzco were ordered in accordance with these 41 *ceques* and divided among the four regions of the empire<sup>24</sup>. Each *ceque* contained a varying number of *huacas*, totaling 328 sacred sites (Zuidema, 1995 [1964]). Zuidema maintains that the memory of the past constructed by the Inca sovereigns possessed a religious value and reflected the social and religious hierarchy of Cuzco (Zuidema, 2005: 90). Thus, the Inca calendar would have been bound to the ten *panacas* or «royal *ayllus*», so that each *panaca* was responsible for the rituals during the month they were assigned (Zuidema, 2004: 278). In this way, each *panaca* was responsible for certain *ceques* and their respective *huacas*. This meant that the *ceque* system formed a fundamental component of the administrative, sociopolitical, ritual and calendrical organization of Cuzco. Zuidema also maintains that the *ceques* and *huacas* of the Cuzco valley were recorded on quipus, and that the Spaniards learned of both their existence and their distribution thanks to the *quipucamayoc* readings of quipus. In the Cobo chronicle, we find a list of Cuzco's *huacas*; however, this list originated in a treatise by the chronicler Polo de Ondegardo.

The list in the Cobo chronicle constitutes a kind of map of Cuzco's sacred sites. All these places, each *ceque* with its respective *huacas*, was recorded using a *quipu*. Each suspended quipu cord corresponded to a *ceque* and the knots represented the *huacas* (Zuidema, 2008: 103). In total, the system included 328 calendrical *huacas*. The *huacas* and *ceques* were counted clockwise, one *huaca* per day. The 37 days required to complete the solar year, and which were not included in the system, fell around May and coincided with the end of the agricultural cycle (Zuidema, 2008: 104). The *ceque* system could also be used to interpret an astral lunar calendar, composed of 12 months of  $27\frac{1}{3}$  days ( $12 \times 27\frac{1}{3} = 328$ ). Indeed, the lunar calendar is composed of 41 eight-day

---

<sup>24</sup> Three of the *suyos* (Chinchaysuyo, Antisuyo and Collasuyo) contained nine *ceques*, each of which was divided into three groups of three *ceques*. The three groups of *ceques* —in each *suyo*— were composed of lines called *Collana*, *Payan* and *Cayao*, respectively, and they formed a descending hierarchy. In Cuntisuyo, on the other hand, there were 14 *ceques*, which were divided into four groups of three — *Collana*, *Payan* and *Cayao*—, a *ceque* formed of two parts, one of which was *Collana* and the other *Cayao*, and a *Payan*. See: Zuidema, 1995 [1964].

weeks ( $41 \times 8 = 328$ ). And so, the *ceque* system was composed of 41 imaginary lines because, in this way, it was possible to combine elements of two different calculations: one of a solar nature —with 12 months of 30 or 31 days— and another of a lunar nature —with 41 weeks— (Zuidema, 2008: 106). The two calendars would have been recorded on quipus. According to Zuidema, in addition to a general quipu representing the *ceque* system, in Cuzco there would have been other quipus representing the solar calendar of 365 days ( $12 \times 30/31$ ) and the lunar calendar of 328 days ( $12 \times 27/28$ ) (Zuidema, 2008: 107). These quipus, therefore, would reflect not only the calendars, but also the social organization of the Cuzco valley.

In conclusion, the Incas employed quipus to record the ritual and social organization of Tahuantinsuyo. Their knotted records contained holy places, offerings, and the sacrifices each sacred site should receive. Through these practices, they were able to negotiate and establish relations with ethnic groups in different parts of the empire, and to disseminate their ideological power. At the same time, quipus were used to record the agricultural cycles, matters concerning planting and harvesting, as well as the Incas' observations of the sky. Through calendrical, astronomical and ritual quipus, the Incas were able to organize agricultural and ceremonial cycles, as well as to articulate relations with the different groups incorporated into Tahuantinsuyo.

It should be remembered that the purpose of Inca ceremonies was not purely religious, but rather consisted in reinforcing the identification of those groups incorporated into Tahuantinsuyo with the center of power in Cuzco (Ramírez, 2008; Julien, 2002; Schroedl, 2008). Clearly, quipus facilitated this aim. Religious, or ritual, and calendrical quipus were associated with two of the sources of ideological power expressed by Mann, namely: «ritual practices», because they constituted the basis for the organizing of acts of worship; and, through those rituals, in which the messages of rulers and priests were communicated, for groups within the Inca empire the world was explained and given «meaning».

### **The laws and codes of conduct recorded in quipus**

«All these ordinances, which were ordered to be kept with great rigor, were given by the Inca and placed on the knots of the cords we have already said they call *quipus*» (Murua, 1987 [1590]: 407).

In addition to Murua, other sources also suggest that quipus were used in Inca judicial organization and served to record their laws and codes of conduct. Given the normative nature that laws, ordinances and standards of conduct possess for every society, these would, unquestionably, have been associated with the ideological power exerted by the Incas over the population of Tahuantinsuyo and over those groups that were being incorporated into the empire. Quipus aided in the exercising of this power. Indeed, the Incas succeeded in regulating every sphere of their subjects' lives, and the laws they established were enforced rigorously. Inca law was derived from their belief system and, through Inca myth, it was intrinsically linked with religion and the person of the sovereign, as a divine representative. Before the rule of Pachacuti, there existed a legal organization based upon the customary norms in force among population groups (Pease, 1965: 39). The emergence of a state structure marked a turning point in the history of Inca law. The central government was responsible for the organization of society and, also, for judicial organization, through a group of state officials responsible for the administering of justice (Pease, 1965: 39, 40). Under the Inca legal system, crimes were defined by social «taboos», while the sanctioning power that punished any transgression was divine, and implemented through the state and the person of the Inca (Pease, 1965 and 1971).

Regarding the quipus employed within the Inca judicial system, Murua tells us that these instruments were the equivalent of legal codes and that they contained the ordinances of the empire and the norms to be followed (Murua, 1987 [1590]: 407). The sources show that quipus functioned as documents that we can divide into two groups. On the one hand, there were quipus that contained in their cords the decrees, ordinances and laws promulgated by each Inca. We will call these quipus «legal codes». Transferred onto several quipus, these would have been sent out from Cuzco to all the provinces, to the Inca officials who held positions at different levels within the state administration. They would then have been distributed on a hierarchical basis among all

the lower level officials and local leaders, to inform them of the norms applicable to their localities.

According to Murua, the laws were taught to the students of the *yachayhuasi*<sup>25</sup> during the third year of their studies. This was when a teacher «declared to them through the quipus the businesses pertaining to good government and authority, and the laws and obedience that were due to the Inca and his governors, and the punishments that were given to those who broke his mandates» (Murua, 1987 [1590]: 377). Murua lists several norms imposed by the Incas, which suggests that they were recorded on quipus (Murua, 1946 [1590]: 352-355). Also, according to this Mercedarian chronicler, the name of the city of Quito was derived from a corruption of the word «*quipu*». He tells us that the Inca Huayna Capac established the laws and statutes which all were obliged to follow, in great cords made of gold and silver, and that it was the Spanish who changed the name «*quipu*» to «*quito*» (Murua, 1987 [1590]: 521). For his part, the Jesuit Acosta mentions that Inca laws were recorded on colored knotted cords (Acosta, 1987 [1590]: 402), while Inca Garcilaso, citing Blas Valera, tells us that the laws were written in knots: «Which they wrote and assigned accordingly to the knots of the different colored threads that they had for their accounts» (Garcilaso, 1991 [1609]: 274). Betanzos, when speaking of the new laws instituted by Pachacuti, says that due to «the lack of letters» the Inca wrote them down in «long strings of accounts», and that subsequently he explained to the lords «the reckoning of the accounts» (Betanzos, 1987 [1551]: 119), as recorded on quipus. In addition to the quipu-codes, we must also speak of those quipus upon which knotted cords functioned as judicial «files». These were produced at all the lower levels where justice was administered. They functioned as judicial documents or files, in which information on offenders or criminals, the norms they violated or crimes they committed, as well as the sentences, sanctions, penalties or punishments imposed, were recorded. As in the case of the «codes», copies of these «files» would have been made; however, these would have circulated in the opposite direction, with one copy remaining in the community where the judgment was made,

---

<sup>25</sup> School in Cuzco where the sons of the Inca nobility and local lords studied. There, they learned about administration and government, about religion (*huacas* and idols), about quipus, and the official Inca language. According to Murua, this education lasted for four years.

kept by the sentencing official, and the other copy or copies being sent to higher levels of authority, for review by more senior officials.

In this regard, Garcilaso maintains that by the color of the thread and by the number of knots, the Incas indicated the laws that prohibited certain actions, as well as the penalties which were given to those who broke those norms and committed crimes. In the words of the chronicler: «by the color of the thread and by the number of the knots, they made known the law that prohibited some action or other, and the punishment given to whosoever broke said law» (Garcilaso, 1991 [1609]: 347). Murua tells us that, in addition to laws, crimes and punishments, testimonies were also recorded on quipus. In this regard, the Inca would send inspectors to the provinces to, among their other duties, review the administering of justice<sup>26</sup>. These inspectors recorded using the knotted cords of quipus the testimonies they gathered: «There were among them no signatures or stamps, only the questions put to the witnesses which they recorded in the quipus, which are cords, and these they sent, or took, to the Inca» (Murua, 1987 [1590]: 356). Garcilaso also tells us that quipus were used for a kind of report regarding the performing of judicial duties on the part of low-ranking officials:

«The way of providing these reports to the Inca and those of his Supreme Council was by knots in cords of different colors, which they read in the manner of cyphers. The knots of this or that color told of the crimes that had been punished. And certain threads of different colors, which were joined to the thickest cords, spoke of the punishments that had been given and the law which had been executed. And in this way they understood, for they had no letters» (Garcilaso, 1991 [1609]: 100).

Also, in the *Relación de los señores indios que sirvieron a Túpac Yupanqui y Huayna Cápac*, we find a mention of judges, who were among the inspectors sent by the Inca to the provinces. Each one of these judges resorted to quipus to record the data on investigated cases and «gave their information through their quipus with absolute clarity" (Anonymous, 1920: 69). Quipus were also used to record certain aspects of

---

<sup>26</sup> Justice in Tahuantinsuyo was administered by Inca officials and also, to a limited degree, by the heads of decimal units. These local leaders, however, could only pass judgment upon the neighbors in their communities in matters of minor importance, while more serious cases were heard by higher-ranking officials. Local leaders could not, therefore, issue the death penalty; this was the preserve of the *tucuyricuy*, or visiting judge, dispatched by the Inca. At the same time, local judges, known as *michoc*, would be authorized by governors to fulfill certain judicial functions.

inheritance rights. While Inca laws and norms concerning inheritance and succession differed significantly from those of the Spanish, on these instruments the people of the Andes recorded a kind of «testament». Indeed, the chronicler Cabello Valboa suggests that quipus played an important role in the process associated with the transfer of authority, both at a local and state level. Cabello Valboa tells us that, when Inca Huayna Capac's health worsened, he decided to prepare his testament «according to the custom among them», and that the Inca's last wishes were delivered into the safekeeping of a *quipucamayoc*. Following Huayna Capac's death, the *quipucamayoc* met with the «executors and administrators» to examine the quipus containing the deceased Inca's instructions. According to these quipus, the Inca named his son Ninancuyuchic as his successor. Also, Huayna Capac wanted his body taken to Cuzco (Cabello Valboa, 1951 [1586]: 393, 394). For his part, Murua writes that Huayna Capac recorded his final wishes on a quipu (Murua, 1987 [1590]: 140). And in the *Relación de los señores indios que sirvieron a Túpac Yupanqui y Huayna Cápac*, we learn that the indigenous lords also recorded a kind of testament in the knots of quipus. (Anonymous, 1920: 74).

Clearly, quipus were important when it came to instituting and executing the norms or laws established by the Incas. Additionally, we observe the vertical circulation of these court records. Both quipu-codes and quipu-*files* flowed between different hierarchical levels of officials. In Cuzco there may have existed a central registry of judicial documents recorded on quipus, as was the case for administrative and fiscal documents. In this way, laws recorded on quipu cords would have constituted for the Incas the third of the sources of ideological power included in Mann's classification; namely, «norms».

And so, we find that the presence of judicial «codes and «files» in the form of knots on quipus enabled the establishing and implementing of norms among the inhabitants of Tahuantinsuyo, indicating how they should behave in their social relations. At the same time, they enabled control over compliance with those same social or legal norms. Thus, quipus served as instruments that facilitated the propagation and execution of the norms issued by Cuzco and monopolized by the centralized authorities.

## **2. Quipus and the exercising of political power**

Political power is derived from centralized, institutionalized and territorialized regulations, governing different aspects of social relations. Mann speaks of centrally administered and territorially limited regulations and coercion; that is, state power (Mann 1986: 26). Political relations are associated with a particular area, the «center», while political power is exercised from the center outwards (Mann, 1986: 27). In the case of Tahuantinsuyo, we see centralization at an administrative, economic and even ideological level (as we have seen, memory, religion, and norms or laws were established by the center of power in Cuzco), which helped reinforce the political power of the Inca rulers. The centralization of power at all levels was made possible thanks to two administrative procedures imposed by, and coordinated from, the Inca capital; namely, the decimal system and repeated population censuses.

Territoriality was not perceived by the Incas in the European manner. For the Incas, control of territory was derived from control of human resources. Consequently, by deploying power and control over ethnic groups, incorporating them as labor into the imperial structure, at the same time the Incas were able to exercise power over the territories those groups inhabited. We know that this control over the population and their lands was achieved through population censuses and the hierarchical decimal organization of society. In turn, both these strategies were made possible by the widespread use of quipus within the Inca administration.

### **The decimal system**

«...as soon as the Incas had made themselves lords of a province, they caused the natives, who had previously been widely scattered, to live in communities, with an officer over every ten, another over every hundred, another over every thousand, another over every ten thousand, and an Inca governor over all, who reported on the administration every year [...] and all other details, with great minuteness» (Ondegardo, 1916 [1571]: 55, 56).



The decimal system was the organizing principle of Inca administration and of the society of Tahuantinsuyo, and it was expressed in the cords of quipus. Hence, each new ethnic group incorporated into the empire was immediately integrated into this hierarchical structure. As can be gathered from the above extract from the Polo de Ondegardo chronicle, following each conquest the Incas grouped the inhabitants of the area into decimal units, imposed upon them a new social structure, and established hierarchically subordinate leaders for each group of ten, of one hundred, one thousand and ten thousand inhabitants.

Among the officials of the decimal administrative system were: *hunu camayoc* (in charge of 10,000 families), *pisca huaranca camayoc* (in charge of 5000 families), *huaranca camayoc* (in charge of 1000 families), *pisca pachaca camayoc* (in charge of 500), *pachaca camayoc* (in charge of 100), *pisca chunca camayoc* (in charge of 50), and *chunca camayoc* (in charge of 10). The head of each decimal unit answered to his superiors and, through knotted records, they submitted the population data for their group. Some chroniclers attribute to Tupac Inca Yupanqui the creation of the decimal system<sup>27</sup>. Santillán tells us that Tupac Inca Yupanqui divided the territories of Tahuantinsuyo into provinces, called *guaman* -each with 40,000 inhabitants- and into smaller administrative units with their respective governors, known as *huno*, *huaranca* and *pachaca*. According to Santillán: «This Inca also made another division of his land for better accounting, and of every forty thousand neighbors he made a *guaman*, which means province, and in each one he placed a governor who resided there and was called Tocricoc, which means he who sees all» (Santillán, 1986 [1563]: 105).

Clearly, the decimal division of society was introduced in order to ensure a «better account». However, it was not just a matter of controlling the number of inhabitants in

---

<sup>27</sup> Santillán, 1986 [1563]: 105, Murua, 1987 [1590]: 95, *Relación de los señores indios que sirvieron a Túpac Yupanqui y Huayna Cápac* (Anónimo, 1920: 71), attribute to Tupac Yupanqui the introduction of the decimal system. However, it should be remembered that the territorial expansion of the Inca state reached its height during the rule of Tupac Yupanqui and of his father, Pachacuti. Therefore, we believe that the fact that Tupac Yupanqui installed the decimal system in the extensive territories incorporated into Tahuantinsuyo in that period does not mean that the same type of organization was not employed by the Incas before he came to power.

each region. Having accurate population censuses was, rather than a goal in itself, a means of achieving other goals in the economic, military, political and socio-cultural spheres. The division of the population into exact administrative units, set down in the cords of the quipu, facilitated above all access to the labor required for agricultural work, civil and military service, livestock and crafts, among other activities<sup>28</sup>. The author therefore believes that one of the main purposes of the decimal system -if not *the* main purpose- was to facilitate the processing of data contained on quipu cords which came from all corners of the empire. Undoubtedly, information meant power, and for the rulers in Cuzco the quipu was the source of that power. Those knotted cord records served as administrative documents, and they were used by all officials, flowing vertically throughout the hierarchy of power.

Certainly, not all the heads of decimal units were Cuzco-born officials<sup>29</sup>. In fact, the Incas left local chieftains as the heads of the lower orders of the decimal hierarchy. Thus, retaining some of their privileges, the local lords became minor leaders, subordinate to Cuzco's officials, in a kind of collaboration between their own communities and the officials of the centralized Inca administration. In this way, an extensive network of Inca officials exercised power over all the provinces of Tahuantinsuyo and, at the same time, received the support of the centralized power in Cuzco. The fact that a considerable variety of data was recorded on quipus at all levels of the decimal system suggests that the heads of each decimal unit —both Inca officials and local ethnic chieftains— operated according to a shared quipu code.

The author believes that the local chieftains and elites integrated into the decimal system or charged with exercising some other position within the Inca administration received instruction in Cuzco on how to construct quipus in accordance with Cuzco's conventions. The documentary sources tell us that all future imperial officials, Cuzco-born and local, received training at the *yachayhuasi*. The sons of the Inca nobility and the royal lineage, or *panacas*, received instruction in this Cuzco school,

---

<sup>28</sup> Modern research emphasizes the economic and military objectives of the decimal system, given that it served in the organization of *mita* and tax gathering. For more information, see: D'Altroy, 2003: 279; D'Altroy, 2018: 132, 133; Julien, 1988; Bravo, 1986: 110, 111; Rowe, 1946: 264.

<sup>29</sup> In fact, each decimal group was supervised by a *camayoc*, chief or leader. According to Bravo, the *camayoc*, from *pachaca* up, were granted the rank of state official (Bravo, 1986: 111).

alongside the sons of local elites; that is, the lords of conquered territories recognized for their loyalty to the Inca. According to Murua: «The Inca said, as his power and majesty grew, that the sons of the principals and the *orejones* who resided near him should be taught in his house» (Murua, 1987 [1590]: 376). In the Murua chronicle, we are also informed that, for at least two years during their studies, the students learned how to make and read quipus:

«and in the third year another teacher taught them to state in their *quipus* all business relating to good government and its authority, and the laws and obedience owed to the Inca and his governors, and the punishments that were given to those who broke their mandates. And in the fourth and final year, with another teacher they learned many ancient stories and events on those same cords and *quipus*, and of wars that occurred in the past and the guile of their Incas and captains, and how they conquered fortresses and defeated their enemies and all the most notable things that had occurred, so that they could know them by heart and relate them in conversation; and among themselves and the teachers they were called upon to recount and speak them from memory» (Murua, 1987 [1590]: 377).

Inca Garcilaso also provided an account of the school for Incas of royal blood and nobles from throughout the empire. Garcilaso cites Blas Valera, who attributes to Inca Roca the creation of the Cuzco school, and explains that, among the subjects studied, the students learned «to know through the knots the histories and to recount them» (Garcilaso, 1991 [1609]: 238). When the sons of the local elites returned to their places of origin, they would become the local chiefs, administrators and state officials, holding positions within the decimal administration and other positions in the provincial imperial infrastructure. They all knew how to make quipus, since they had received instruction in Cuzco. They would all have shared, therefore, the same codes.

Because information means power, the media and methods employed in the gathering, processing and transmitting of data were of enormous importance in the expansion and consolidation of Tahuantinsuyo. In this context, including the local chieftains in the decimal system and, at the same time, also in the information hierarchy -teaching them how to make and read quipus- enabled the central authorities to exercise power at the local level. The Cuzco authorities created an extensive network of Inca officials and local lords who kept an «account» of everything. In this regard, the testimony of Cristobal Xulca Condor, interviewed by the inspector Ortiz de Zúñiga during

his visit to the province of Huánuco, illustrates how the Incas ruled the Chupachos by dividing them into decimal units:

«the Inca ordered the principal *cacique* of the four *guarangas* to oversee the other *caciques* of each *guaranga*, and those of the *guarangas* to oversee those of the hundreds who were *pachacas*, and these *pachacas* the *chungas*, who are the overseers of ten Indians...» (Ortiz de Zúñiga, 1967 [1562]: F. 15v.)

Indeed, the local chieftains [*curacas*] were themselves obliged to provide Inca officials with all information regarding the residents of their respective communities. In their turn, these officials passed the data on to their superiors, thereby ensuring the flow of information through official state channels. In this way, the decimal system was employed as a procedure for systematizing information concerning human resources and, at the same time, the natural resources available to each administrative unit. The second procedure—inherently related to the decimal organization—was the transfer to quipus of quantitative tables and statistical data for each province, *guaranga*, *pachaca*, and so on. The recording of such data on quipus—of each decimal unit as well as a synthesis of sets of units—accorded great power to the rulers in Cuzco. It also provided them with effective tools for the demanding of labor and services from the subordinate population. In this way, the administrative decimal hierarchy constituted both a hierarchy of power and a hierarchy of information transmission and communication.

As Topic has pointed out, bureaucracies need communication between officials, as well as advanced information technology, to ensure the effective functioning of the administration, while the political economy and the information technology used are inextricably interwoven (Topic, 2013: 34), facilitating as they do the flow of information via the bureaucratic channels of the state. In Tahuantinsuyo, multiple (decimal) administrative demarcations were created, whose supervisors formed part of the information structure. Quipus were the technology employed by officials to record and process data for the state, making possible the functioning of Inca administration. Thus, the decimal system was reflected both in the administrative division of the Inca empire and in the strings of administrative quipus. As Garcilaso tells us: «The knots expressed

numbers in their several orders, as by units, tens, hundreds, thousands, tens of thousands. And very seldom or never did they pass the hundreds or thousands, because as each town had its own account -and each metropolis that of its district- the number of one or the other never rose to so many that it exceeded one hundred thousand» (Garcilaso, 1991 [1609]: 344, 345). Because «each town had its own account» and «each metropolis that of its district», the information flowing vertically through the bureaucratic channels of the state was a synthesis. This meant that the administrative centers did not receive data from each district regarding all the communities in the area (although the sources confirm that each district had its records), but rather a summary of data for a given region. Thus, there existed a hierarchy of information, transmitted via the summarized data contained in quipus, and a hierarchy of information channels through which data circulated in the form of quipus<sup>30</sup>.

Clearly, when conquering new territories, the Incas needed to integrate them into their power structure in order to effectively extend their control beyond the Cuzco valley and its immediate vicinity. They achieved this by creating new provinces —with their respective administrative centers— and regrouping inhabitants into decimal administrative units, while introducing the use of quipus as a fundamental tool of state bureaucracy. Through the system for the circulation and processing of data they created, the Incas were able to control ever-larger populations and administrative areas. It was the quipu censuses which formed the basis of that control.

### **Population censuses recorded on quipus**

«The Inca charged these *curacas* with raising and feeding the people, and keeping a record of those who were born and who died, and that an account was kept of all; because the Incas valued the knowledge of how many souls they had under their rule and government, and how many of each age, and by how many they multiplied» (Santillán, 1986 [1563]: 107).

---

<sup>30</sup> The examples of quipus found at Puruchuco show how information was summarized and passed through three levels of administrative hierarchies, from below upward, and vice versa. See: Urton & Brezine, 2007; Urton, 2017.

Undoubtedly, local *curacas* and *quipucamayoc* were the main sources of information for the central authorities. They were responsible for keeping records of the population and, periodically, they would send reports to the Inca officials. In this way, by collecting and recording all relevant population data using quipus, the Incas could organize workers into groups and manage the imperial economy. Through these local *curacas* and *quipucamayoc*, the rulers in Cuzco exercised indirect power over all the provinces. The quipu-censuses or quipu-registers, listing births, deaths and other population data, facilitated this task. They enabled the central authorities to plan and organize tax gathering and major imperial undertakings, such as the construction of roads, storehouses and administrative centers, or military campaigns.

There existed two types of quipu-censuses: central and local. The local quipu-censuses, which we might also term quipu-registers, given that they held the records of each community, were the responsibility of the community's local lords and *quipucamayoc*, who kept a register of all the community members. In addition to births and deaths, these quipus also contained more detailed population data. Some quipu-registers assigned each community member to a certain group according to their estimated age, gender and ability to work. The chronicler Guamán Poma de Ayala tells us that Inca officials divided people into ten age groups, called «streets» or «visits». There were ten streets for men and ten streets for women, divided according to their productivity, potential for carrying out certain tasks, and their usefulness to the state, and not according to their biological age<sup>31</sup>. Although the age ranges provided by Guamán Poma de Ayala cannot be taken literally, the classification by «streets» demonstrates the existence of a certain hierarchy of people within the administrative and economic structures of Tahuantinsuyo. This hierarchy was reflected in the cords of the census quipus. Firstly, the individual taxpayer was registered. Then came the other members of

---

<sup>31</sup> Age groups were not ordered by biological age or in a linear format –from children to the elderly, or vice versa. Instead, what was considered when it came to establishing designations was the amount of work that each individual could contribute to the state. Thus, in the first «street» or «visit» were young people –according to Guamán Poma de Ayala between 25 and 50 years— who were potentially the most productive workers. These were taxpayers, officials, local leaders or warriors. The other «streets» were composed of older persons and children, also divided into groups according to their usefulness when it came to lighter labor duties.

his family or *ayllu*, followed by data on *ayllus* and kinship relationships, which were also recorded on the strings of these quipus. The colonial-era transcriptions of quipu readings show that there were two ways of producing local censuses on these instruments. One, the most generalized, consisted of making quipus with categories — gender, age, occupation, ethnicity, district, and so on— and knotting the number of people belonging to each category on the corresponding cord<sup>32</sup>. In this way, one cord could contain taxpaying men, another the women of the community, another craftspeople, and so on. This would enable the recording, quickly and easily, of the sum of all community members, according to the category to which they belonged or the total number of people of each community, by their respective districts. Indeed, the *Quipu que dieron los caciques del número de indios que había en tiempo del ynga* — transcribed in the *Visita a Chucuito*— reflects this ordering of numerical information by categories, such as people, district and ethnicity (Diez de San Miguel, 1964 [1567]).<sup>33</sup> Colonial transcripts of quipus suggest, however, that it was also possible to record people's proper names<sup>34</sup>. This meant that the local quipu-censuses or quipu-registers could be much more precise and, in addition to general quipus with categories, there existed others which denoted each individual community member and their kinship ties. The quipus containing categories would be destined to provide numerical information for Inca officials -who were interested in the data set- while the more detailed quipus - denoting each community member- served as the basis for the distribution of tasks and obligations within each community. It seems probable, therefore, that the *Visita de los valles de Sonqo* transcribes readings of these quipu-censuses or quipu-registers containing the numbers of inhabitants<sup>35</sup>.

---

<sup>32</sup> These would have been ordered in a way resembling the ethnic categories proposed by Murra (2009 [1975]).

<sup>33</sup> In quipus the number of indigenous Aymara and indigenous Uros of each community in the province of Chucuito were recorded, according to their membership of one or other of the districts of Anansaya and Lurinsaya (Diez de San Miguel, 1964 [1567]: F. 30v.-F. 32r.).

<sup>34</sup> See transcriptions of quipu readings published in: Pärssinen & Kiviharju, 2004.

<sup>35</sup> Also, the quipus containing royal lineages would include proper names and kinship ties. The *quipucamayoc*-historians would have possessed lists of Inca governors. This type of quipu would have been read to Vaca de Castro. The *Relación de los quipucamayos a Vaca de Castro* is based on the reading of quipus (Collapiña, 1974 [1542]).

Certainly, the central quipu-censuses would have been more generalized, emphasizing collective statistical data, ordered by categories. Cuzco would have received information from all the provinces, but only after those quipu-censuses had passed through the hands of an entire hierarchy of officials. And as they moved through the official Inca channels, they would have been summarized at each level. At the administrative centers, Inca officials would have processed data received in dozens or even hundreds of local quipus and then forwarded one or a few quipu-summaries to Cuzco. Once these censuses for each zone had been combined, complete information would have been sent to the central authorities regarding the demographic situation of the respective region or province. Obviously, these quipus did not contain individual names, although they may have contained the names of chieftains and ethnic groups, or place names.

Some colonial-era transcripts demonstrate that it was possible to establish this type of data using quipus. Indeed, *Memoria de las provincias que conquistó Topa Ynga Yupangui Padre de Guaina Capac Ynga con sus hermanos (Capac Ayllu 1569)* is an example of a quipu transcription containing both proper names and the names of ethnic groups and place names (see Pärssinen & Kiviharju, 2004: 93-98).

In order to maintain control over the population over the long term, centrally planned censuses were organized periodically. According to Murua, every five years the Inca sent governors and inspectors (*tucuyricuy*), who at the same time were *quipucamayoc*, to visit all the provinces and count their inhabitants, dividing them into «streets». In this way, the Cuzco authorities knew the number of inhabitants in each region and could manage the labor force. According to Murua, the *tucuyricuy-quipucamayoc* were responsible for the allocation of the tribute and services which each community had to provide for the Inca and the Coya (Murua, 1946 [1590]: 322). It is also clear from Murua's account that, every five years, indigenous people were reassigned to new age groups, wherever their condition or ability to work had changed. Newborns were added and those who had died were removed from the quipu-censuses. New quipu-censuses were produced and the data from these was transferred to the centralized records in Cuzco (Murua, 1987 [1590]: 400). The *Relación de los señores*



*indios que sirvieron a Túpac Yupanqui y Huayna Cápac* refers to how the Inca sent his inspectors to each province every three years, so that they could report on each local leader and the people under him (Anonymous, 1920: 72 and 73). According to Polo de Ondegardo, the local chieftains, «on their own account» reported each year to the Inca governors regarding those who had been born and those who had died, among other matters related to their community (Ondegardo, 1916 [1571]: 55, 56). Cieza de León suggests that the quipu-censuses were updated at the end of each year. The local lords were obliged to record the births and deaths from the year that was ending and, at the beginning of the following year, take their quipus to Cuzco so that the central authorities could organize their activities for the coming months:

«...in the time of the Inca kings, orders were given throughout all the towns and provinces of Peru, that the principal lords and their lieutenants should take note, each year, of the men and women who had died, and also of the births; for the assessment of tribute, and for the calculating of the number of men that could be called upon to serve as soldiers, and for the defense of villages, such information was needed. This was easily done, because each province, at the end of the year, was ordered to set down in the *quipus*, by means of knots, all the men who had died there in the year, as well as all those who were born. And at the beginning of the following year, the *quipus* were taken to Cuzco, where an account was made of the births and deaths throughout the empire. These returns were prepared with great care and accuracy, and without any fraud or deceit. When the returns had been completed, the lord and his officers knew what people were poor, the number of widows, whether they were able to pay tribute, how many men could be taken for soldiers, and many other facts that were considered among these people to be of great importance» (Cieza de León, 2000b [1553]: 76).

It seems likely that two methods were used to calculate the number of inhabitants of each region. On the one hand, the local chieftains would compile data from their jurisdiction periodically and take this information to Cuzco personally or, in what may have been a more common practice, they would deliver it recorded on quipus to higher officials within the decimal hierarchy, so that they could submit those quipus to the central authorities. In addition, there were undoubtedly inspectors, who would have been sent to the provinces from Cuzco, and been responsible for supervising the work of lower-ranking officials and local lords. They would also have been responsible for comparing the information contained in the quipu-census with the demographic reality of each area and community. Census inspections would also have been organized *ad hoc* under certain circumstances, or in order to achieve a specific aim. Betanzos

writes of how Inca Yupanqui sent «*orejones*» from Cuzco to visit the provinces and «bring him an account» of the unmarried young men and women in each village.

When the inspectors returned, based on the quipu-census data Inca Yupanqui ordered marriages to be arranged between young people from different provinces. He ordered his officials to marry the young men of one town to the girls of another, and in this way he created kinship ties and ensured peace between different regions (Betanzos, 1987 [1551]: 62). Betanzos writes that it was possible to record on census quipus if an individual was married, single or widowed. In another part of his chronicle, he also indicates that the orphans and poor were included in these records<sup>36</sup>. This chronicler also notes that when Huayna Capac traveled to visit towns and provinces near Cuzco, following festivities and sacrifices he always ordered that they bring him an account of the widows, orphans and the poor from each community. According to Betanzos, the Inca gave each of these essential goods for their sustenance (Betanzos, 1987 [1551]: 185-186).

Clearly, Inca officials, local lords and the *quipucamayoc* managed different types of quipu-censuses, through which they periodically gathered a considerable quantity of statistical information concerning the population of Tahuantinsuyo. A broad variety of quipu-censuses, however, does not imply a broad variety of codes. The circulation of information between Cuzco and the provinces —from the bottom up and vice versa— would appear to confirm that there existed a shared code used by officials at different levels of the Inca administration and by local lords. The quipu-censuses were made for the central authorities, who required them in order to control both human and natural resources. Thus, not all quipu-censuses contained exactly the same data. There were quipu-censuses with the number of inhabitants in each area, with the number of specialist workers in each town, those with children, young people, taxpayers and the elderly; and there were also quipus that contained inventories of livestock, or of the products and natural resources of a given area. And there can be no doubt that these censuses were extremely accurate. According to Murua, «they were done in such a way

---

<sup>36</sup> It should be remembered that in Quechua orphan and poor are synonymous. According to González Holguín (1608), *huaccha* means «poor and orphan».

that no one was missing from the quipus, and so they knew the people that there were in their kingdom» (Murua, 1946 [1590]: 327). Through the registering of all the inhabitants of Tahuantinsuyo in the quipu-census cords, Inca rulers were able to organize their Andean society and plan their imperial activities.

### **3. Quipus and economic power**

Economic power is derived from the satisfying of basic needs through the social organization of the extraction, transformation, distribution and consumption of goods. Groups that are capable of monopolizing control over production, distribution, exchange and consumption can achieve power over society (Mann, 1986: 24). With the expansion of Tahuantinsuyo, the central authorities of Cuzco saw the need to create an economic system that would facilitate the establishment of political and economic relations between the empire and local subjugated elites, the extraction of resources from conquered areas, and the maintaining of a network of state officials. Thus, their economy was based upon exploitation of the work and resources of subjugated peoples, and the ultimate aim was to continuously increase production (D'Altroy 2015: 320). The Incas managed to deploy their economic power and integrate all the populations of Tahuantinsuyo into their economic system through two institutions: resettlement and the *mita*, or labor tribute. For the operation of both of these, quipus were essential, in order to provide population data, as well as to establish quotas for *mita* and tribute, and to record them «in writing».

#### **Quipus for the organizing of *mitas* and resettlement**

«When the officials sent by the Incas made their inspection, they entered a province and ascertained, by means of the *quipus*, the number of men and women, of old and young. Then they took account of the mines of gold and silver, and, with so many thousands of Indians at work, the amount of what should be extracted was fixed. An order was given that such an amount should be delivered to the overseers» (Cieza de León, 2000b [1553]: 73).

As Cieza de León explains in his chronicle, in Tahuantinsuyo the assigning of *mita* or *corvé*, as well as the resettlement of colonies of *mitimaes*, was conducted based

upon the quipu-censuses or quipu-registers produced by Inca officials. It should be remembered that the constant mobility of Pre-Hispanic populations, in the search for resources, was one of the original characteristics of the Andean world. Indeed, *mita*, the tribute paid in labor which often involved the temporary resettlement of *mitayos*, existed in the Andean area centuries before the Inca expansion. It allowed ethnic groups to access different ecological zones and, therefore, a greater variety of resources<sup>37</sup>. However, it was the Incas who first adapted the Andean *mita* in order to administer Andean societies, on a previously unknown scale for both economic and military ends (Wachtel, 1980: 297). The permanent resettlement of colonies of *mitimaes* and the Inca policy of *mita* or *corvée*, defined the social context of the Andes during the period of Inca rule. Two institutions already described -that is, the decimal system and the quipu-based census- made possible resettlement and the operation of the *mita*. The assigning of *mitimae* and *mitimayo* quotas was recorded in the colored knotted cords of quipus used to document the number of individuals designated for permanent resettlement, or temporarily assigned to perform certain tasks, and the principal goal of the Inca *mita* policy was the organizing of labor in shifts<sup>38</sup>. The determining factor in establishing the *mitimayo* quotas was the number of family units, which was recorded in the quipu-censuses of the respective officials in each area. Local chieftains also had their local records, with the number of members in their group and the tasks to which they were assigned as part of their *mita* quota. In both the *Visita hecha a la provincia de Chucuito* (Diez de San Miguel, 1964 [1567]) and the *Visita a la provincia de León de Huánuco* (Ortiz de Zúñiga, 1967 [1562]), local leaders and officials read their quipus in order to provide the inspectors with data on the *mitimayos* of their provinces. When the inspector Ortiz de Zúñiga interviewed the leaders of the Chupachos, their senior leader, when asked

---

<sup>37</sup> Murra (2009 [1972], 2009 [1977]) introduced to Andean studies the concept of «vertical control of a maximum of ecological tiers», «nuclei», «peripheral islands» and «vertical archipelagos». «Vertical control of a maximum of ecological tiers» consisted of each ethnic group tending to control the broadest possible number of ecological zones, situated at different altitudes, in order to facilitate access to resources.

<sup>38</sup> The *mitayos* were destined to perform agricultural tasks, as well as a variety of construction activities in the extensive Inca infrastructure network. This meant that they built fortresses, administrative centers, roads, storehouses, way stations [*tambos*], bridges, etc. *Mitimayos* were also assigned to military service and were often sent on campaigns and to frontier zones in order to safeguard the integrity of the empire. A section of the *mitimayos* was also assigned to mineral extraction or quarrying duties, while others would work as shepherds, hunters or fishermen. There were also groups of *mitimayos* who served the Inca as state officials, as well as in roles such as porters, house servants, guards, guardians of mummies, way station personnel, or couriers [*chasquis*], etc.

«how many Indian officials of all trades were there in the four *guarangas*», answered that he could not say without first consulting the quipu, to ensure that he was not mistaken (Ortiz de Zúñiga, 1967 [1562]: f. 14r.). And, when asked about the indigenous population who worked in the coca leaf smallholdings, «he said that he did not recall how many Indians are divided among their *ayllus* and that he would consult that quipu and announce it, and that of the coca every three *mitas* gathered seventy baskets» (Ortiz de Zúñiga, 1967 [1562]: f. 14v.). We see, therefore, that data on the *mitimaes* and *mitimayos*, or payers of tribute, was recorded on quipus. Also, both these visits suggest that the *mitimaes* resettled in enclaves were counted and registered in quipu-censuses along with their kin. Thus, when the inspector Garci Diez de San Miguel asked why at the time of the visit there were not as many indigenous people as in the time of the Inca, one of the interviewees, Don Pedro de Cutinbo, «who had been governor of the province of Chucuito», responded:

«...when the said province was visited by the Inca, many *mitimae* Indians were inspected who were natives of this province and were in Cuzco and Ayaviri and Copacabana and in Chuquiabo and in many other parts as far as Quito, which is more than three hundred leagues from this province, and even Chile, because the Inca had dispatched them as *mitimaes*, and with all of these there were the twenty thousand Indians in the *quipu* recording the inspection, and from that *quipu* those *mitimaes* who were resettled remained where they were, and never again were they counted with those of this province» (Diez de San Miguel, 1964 [1567]: F. 85 r.).

We see, therefore, that both the populations of *mitimaes* and *mitayos*, as well as the tribute demanded, were recorded on at least two quipus, or two sets of quipus; one overseen by the Inca officials, and the other by the local leaders of each community. We will call the *mita* and resettlement records quipu-*corvée*. Also, from the colonial-era transcripts we learn that *mita* and tribute could be knotted on the same quipu. We will call the tribute records and those that contained both categories tax-quipus. Using both of these, Inca officials were able to render accounts to those who supervised them in the state hierarchy and, by contrasting the data from quipu-censuses and tax-quipus, they were in a position to monitor work rates in each province. At the same time, the community authorities possessed proof, recorded on the quipus they submitted, of their compliance with the duties they owed to the state, and over time were able to trace through their quipu archives all that they had contributed, and determine whether or

not rates had increased. In this regard, we find examples of such verification of *quipu* archives from the Inca period in two colonial-era inspections: *La visita hecha a la provincia de Chucuito* (1567) and *La visita a la provincia de León de Huánuco* (1562).

During both visits, local leaders, reading the quipus from the Inca period contained in the quipu archives they held for safekeeping in their homes, enumerated for the inspectors the number of inhabitants under Tahuantinsuyo and all that «they used to give to the Inca». Don Martin Cari, leader of the province of Chucuito, in the district of Anansaya, when asked how many people there had been in the whole of that province during the time of the Inca, answered that «he would look through the quipus and find out before commenting» (Diez de San Miguel, 1964 [1567]: f. 6v.). And when asked about the tribute they contributed during the time of the Inca, Martin Cari said that «in the time of the Inca the Indians gave no tribute to the *caciques* but the Inca's tribute was given to storehouses and from there what was deemed appropriate was given to the *caciques*» (Diez de San Miguel, 1964 [1567]: f. 10r.). Then, after explaining how the relationships of reciprocity between the Inca and the *caciques* from the community functioned, he stated that «he knew and understood what he declared because that is what he had been told by Don Alonso Conane, the deceased *quipocamayo*» (Diez de San Miguel, 1964 [1567]: f. 10v.). For his part, Martin Cusi, leader or *cacique* of the district of Urinsaya, also reported to the inspector after having checked the quipu archives from the Inca period. Asked about the number of Indians in the entire province during Inca rule, he replied that «he had no information in that regard because there had been a quipu but it had been lost, and in his house he had certain quipus and if one of them touched on this matter he would report» (Diez de San Miguel, 1964 [1567]: f. 13r.). And the governor of the province, Pedro Cutinbo, when asked about the number of people in the province during Inca rule, said that « he would look for the quipus and inform in that regard...» (Diez de San Miguel, 1964 [1567]: f. 17 v.).

We see, then, that the tax-quipus were closely bound up with the quipu-censuses and quipu-registers, since the allocation of *mita* and tribute was decided based upon

the information contained in the census records. Betanzos tells us that the Inca consulted the quipu-registers when managing labor and *mita* distribution (Betanzos, 1987 [1551]: 56). Garcilaso also emphasizes the role of knotted records in the organization of resettlement and *mitas*. Through their «accounting and reckoning», the Incas moved people, even populating previously uninhabited areas. Quipu-census analysis would have provided the basis for organizing these resettlements, the purpose of which was to exploit the natural resources of each area. So, these knotted records not only recorded the population density of the provinces, but also helped change their demographic composition and create colonies of *mitimaes*:

«From all those provinces they removed, according to their own accounting and reckoning, many Indians, and took them to the east (which is to the Antis) and to the west (which is the sea coast), in which regions there were great fertile valleys to bear corn and peppers and fruits, where before the Incas those lands and valleys had not been inhabited. They were abandoned like deserts, because the Indians had not known how or been able to make channels to water the fields» (Garcilaso, 1991 [1609]: 415).

Ethnohistorical sources clearly demonstrate that these knotted records – particularly the quipu-censuses, quipu-registers and quipu-*corvée*- were essential in the reorganization of the demographics of Tahuantinsuyo and in the establishing of labor projects designed to benefit the central authorities of Cuzco. They functioned in the manner of administrative and fiscal documents, facilitating the development of Inca economic policy. The complex nature of this system is also apparent. As we have already noted, quipu-registers were used to record names, while quipu-censuses contained place names and categories (trades, etc.). And using the quipu-*corvée*, in addition to names or other denominations for persons and groups, and the place names of resettlement locations, the Incas also codified the activities for each group of *mitayos* and the requirements for permanent or temporary resettlement. In order to maintain control of the *mitimayo* colonies and integrate them into the economic structure of the empire, the registers had to be updated constantly, requiring the circulation of information through highly efficient state communication channels.

### **Quipus for the organizing of tribute**

«Each ruler of a province was provided with accountants who were called *quipucamayocs*, and by these knots they kept account of what tribute was to be paid in the district, with respect to silver, gold, cloth, flocks, and even firewood and other minute details. And by the same *quipus* they could report to those who were commissioned to take the account at the end of a year, or of ten or twenty years, with such accuracy that not so much as a pair of sandals would be missing» (Cieza de León, 2000b [1553]: 56).

The hierarchical structure of Inca accounting was bound up inextricably with their decimal administrative organization. As Cieza de León tells us, every «ruler of a province» had *quipucamayoc*-accountants, responsible for collecting the tribute of each district and for preparing the corresponding documents. Tax-quipus were produced at all levels of the Tahuantinsuyo accounting hierarchy, and ethnohistorical sources have enabled us to identify the three main purposes of these records within the Inca tribute or tax system: 1) Establishing of tax burdens; 2) Control of compliance with tax obligations; 3) Distribution of the taxation rates among local leaders, at the community and district levels. In the first two cases, quipus circulated between the three levels of power; that is, central, provincial and local. In the third case, local or provincial quipus were interpreted at the local level and served as the basis for new local records.

For the establishment of tax rates imposed by the central authorities, the censuses maintained by local leaders and officials within the decimal hierarchy enabled the planning of the tax obligations for provinces spanning an entire fiscal period. The quipu-censuses assisted in the establishing of tribute quotas. Indeed, Acosta tells us that: «When something was ordered to be done or brought to the Inca, it was declared how much of that was the responsibility of each province, town and district, which was not in equal parts, but in quotas» (Acosta, 1987 [1590]: 409). According to the chronicler Cieza de León, it was the inspectors sent by the Incas to the provinces who, based on quipu-censuses, established the *mita* and tribute rates (Cieza de León, 2000b [1553]: 73). From the Betanzos chronicle we learn that compliance with tax obligations formed part of the power negotiations between the Inca and local lords, who in order to retain their position and privileges, were obliged to renew their bonds with the central authorities. To this end, they would travel to Cuzco with their quipu archives to submit



a report on all the resources and wealth available to them in their regions. Betanzos writes that the local leaders «ordered brought there the memory quipus that they had» and gave an account of the livestock, products, mines and other things they possessed. According to Betanzos, the Inca himself assigned the tribute rates and ordered that he be brought «many woolen cords of diverse colors, and bringing each *cacique* before him in the presence of those lords of Cuzco, and tying knots in those cords, he indicated to each one of them what he wanted to be brought and paid to him and to the city of Cuzco» (Betanzos, 1987 [1551]: 96).

Clearly, the exchange of tax documents recorded on quipus between the Inca and local lords indicates that both parties must have employed a shared codifying system. For his part, Inca Garcilaso suggests that, in addition to tribute rates and tax charges, it was possible to record on knotted cords information concerning labor. Garcilaso writes that if someone worked longer than they should, the time would be deducted from their obligation during the following year and «this was set down in their knots and accounts» (Garcilaso, 1991 [1609]: 285). We do not know, however, whether this information was encoded as calendrical data —months or days— or rendered as units of work, either provided and due.

In the control of compliance with tax obligations, the knotted quipu records were essential. In this regard, Cieza de León tells us that in each provincial administrative center there were *quipucamayoc* responsible for registering the tribute submitted by the inhabitants of each district. The *quipucamayoc* kept their accounting documents for years, so that, whenever they were required to verify the taxes collected in previous years, they could render accounts (Cieza de León, 2000b [1553]: 56). In another section of his work, Cieza de León writes that «the tribute that was paid to these leaders by the natives, as well as gold, silver and weapons, clothes and all other things, was delivered to the *camayos* who had charge of the quipus» (Cieza de León, 2000b [1553]: 79). At a provincial level, Inca officials kept a precise account of all the tribute they supervised, so that subsequently they could report to Cuzco. A part of the delivered goods was distributed to soldiers as they traveled during wartime, while the rest was taken to the

Inca capital. Every expenditure had to be justified in the accounts they managed, in the form of the tax-quipu. Furthermore, Cieza de León suggests that the Inca rulers themselves kept a kind of archive of tax records. In this way, their successors could know the tax rates and contributions of each province (Cieza de León, 2000b [1553]: 55). Citing Blas Valera, Garcilaso reports that the Incas appointed officials to control the proper functioning of the Inca economy, recording everything «by their own account and reckoning» (Garcilaso, 1991 [1609]: 280). Using quipus, from the bottom up, an account was kept of the tasks and taxes assigned. Accounting data circulated throughout the information hierarchy, from the *curacas* and *quipucamayoc* of villages, through all levels of the decimal hierarchy, as far as the Cuzco authorities. In effect, quipus served as fiscal documents, presented always to Inca officials along with the delivery of tribute paid by communities. To this end, state officials met periodically with local lords and accountants from each community, so that accounts could be rendered. The accuracy of the local knotted records was verified and it was confirmed that they matched the taxes delivered (Garcilaso, 1991 [1609]: 286, 287). Once the accounts had been completed, each party retained a copy of the quipus for their archives, and the officials sent a copy up the chain of command, or produced a summary in the form of a quipu-synthesis.

Finally, at the local level, the use of knotted records aided in the distribution of taxation rates among the communities in each region, as well as among the districts of each community. Indeed, the Jesuit Acosta confirms that redistribution among villages and districts, *ayllus* or kin groups, was conducted using quipus. With their «threads and knots», at a community level the *quipucamayoc* also gave to each «that which was due to each» (Acosta, 1987 [1590]: 409). Polo de Ondegardo tells us that the distribution of tax obligations among the *ayllus* and districts was made as equitably as possible. Once the obligation had been made known –Ondegardo refers to the making of clothing- the contribution of each district was recorded. And if one district provided more persons for the weaving of clothing than another, the following year the other would have to provide greater tribute, so that all work was distributed equally. To this end, says Ondegardo, they kept such a strict account «by their knots» that «no one was aggrieved» (Ondegardo, 1916 [1571]: 128, 129). Polo de Ondegardo also writes of how

taxation rates were divided among the three Uros districts. In this process, senior leaders met with the *quipucamayoc* and created an arrangement under which no district would feel aggrieved (Ondegardo, 1916 [1571]: 163,164). Once the distribution had been made, the senior leaders returned to their districts and «carried in their quipus and registers what was due from them» (Ondegardo, 1916 [1571]: 167).

Later, when the tribute owed to the Inca storehouses was delivered, everything that each community gave was recorded in the account, to ensure that the contribution was equitable: «and so that one might not have to contribute more of this tribute than another, accounts were kept by a kind of knots, called *quipu*, which were understood, and thus there was no fraud» (Cieza de León, 2000a [1553]: 301). Ultimately, the tax-quipus produced at a local level served as evidential documents confirming the fulfillment of tax obligations by each community. Archived by local lords and *quipucamayoc*, they could be used as proof of payment. Garcilaso tells us that the communities kept a strict control of everything they gave to state officials as tribute and: «they would set down using their knots all the tribute that they gave to the Inca each year, including each thing by its kind, sort and qualities» (Garcilaso, 1991 [1609]: 346). The two colonial-era inspections made in Chucuito and Huánuco also confirm that quipus were archived locally so that documents would be available demonstrating the payment of taxes and accurately recording rates. An example of the transcription of an Inca tax-quipu reading is found in the *Visita de la provincia de León de Huánuco* (1562), where the senior leader Paucor Guaman and other leaders enumerated for the inspector the taxpaying Indians who served the Inca (Ortiz de Zúñiga, 1964 [1562]: f. 167r.-168r.).

Also, periodic adjustments were made in tribute obligations, taking into account new demographic realities such as births, deaths and the incorporation of new territories. Consequently, the quipu system was required to reflect all these changes, on an ongoing basis, and the knotted records had to continue to flow efficiently between all administrative levels. In the case of quipu-censuses and tax-quipus, we certainly see a constant vertical flow between the three levels of government and power: central, provincial and local. Documents containing provisions to be executed were sent from

the Inca capital. Records were sent from the communities confirming compliance with assigned tax rates. Both types of quipu -central and local- were processed at provincial levels. At administrative centers, quotas established for each province by the Incas were distributed among local lords –recorded on the quipus produced in Cuzco- or the products paid by each tax unit were added, while the data from the local quipus of each community was summarized and sent up the chain of command.

The author believes that the *quipucamayoc* at state facilities were responsible for verifying that the quipu data submitted by the local lords coincided with the tribute that the communities had paid. That is why the chroniclers called them accountants, because they were the individuals who received the products, counted them, and then recorded the quantities of each on quipus. However, it would have been the high-ranking officials –individuals who also knew how to use quipus- who processed sets of data so that they could be sent to Cuzco. As high-ranking Inca officials, they would be responsible for producing reports on the resources and payments in a given territory. Regarding the content of these quipus for *mita* and tribute, no doubt they denoted economic activities and services provided to the Inca and the central authorities, such as planting fields, weaving, maintaining way stations [*tambos*], the extraction of gold, construction, the making of dyes, livestock herding, and the duties of porters.

They would also have codified the names of goods and products submitted, such as clothing, sandals, corn, quinoa, coca, corn beer [*chicha*], honey, gold, silver, pots, plates, and so on. Clearly, this was not merely a numerical record of tax data. On the contrary, the tax-quipus contained long lists of nouns and verbs. Furthermore, the quipu transcripts indicate that information was not recorded according to the number of taxpayers assigned to carry out certain tasks, but according to criteria associated with the importance of the services provided and goods delivered. Indeed, readings of quipus did not begin with the service to which the greatest number of taxpayers was assigned. Evidently, the ordering of the information encoded in the tax-quipus did not follow an ascending or descending numerical order, and instead it was the categories of tribute which determined the organization of each tax-quipu.

#### **4. Quipus and military power**

Military power is dependent upon the ability to mobilize large numbers of personnel from distant territories to facilitate the organization of both defense and offense. In wartime, a concentration of violent force is required, while in peacetime militaristic forms of social control may involve the supervision of forced labor, be it slave labor or *corvée*, for the building of monumental structures, cities, fortifications or communication networks. Forced labor may also be required in mines, plantations, or for the provision of services (Mann, 1986: 25, 26). In the Inca empire, conquest was not always achieved militarily. The pacification of new territories began with negotiations held with local lords. The Incas' aim was to incorporate them into the structures of Tahuantinsuyo and subject them to the political and economic administration of state officials, so that they could exploit their lands and natural resources. In return, chieftains received lavish gifts, wives from the Cuzco elite, and were ensured they would retain their status as local leaders. Only in cases where local fiefdoms opposed Cuzco domination did the Incas resort to military conquest. Also, Cuzco's power was expressed in the provinces through monumental architecture, such as the construction of administrative and ceremonial centers, storehouses, way stations, and the imperial road network (*Qhapaq Ñan*). All these monumental structures -built by local labor mobilized as *mitimayos*- contributed, in turn, to the organizing of military campaigns and new conquests. Below, we will address the role of quipus in the operating of the Inca army and the imperial power infrastructure.

#### **Knotted records of military campaigns**

Documentary sources enable us to identify four uses of the quipu for the purposes of military campaigns and warfare. Firstly, using knotted records the Incas took people from communities throughout every province of the Inca empire to serve in time of war. The quipu-registers and quipu-censuses were indispensable in the organizing of troops through the military aspect of the *mita*, which as we have seen was also managed using quipus. Secondly, the leaders of the Incas' armies benefited from the headcount made of their troops using quipus. This meant that they could plan and organize military activities. Thirdly, these instruments facilitated communication during campaigns of conquest, with information concerning the course of the war sent via quipus. Finally, the

provisioning of Inca armies was conducted using quipus. Ongoing control of the provisions in storehouses and way stations ensured an adequate supply of food and weapons for the soldiers in the field.

The Inca army was composed of two sections: one permanent and the other temporary. The former was made up of the Inca's high command and personal guards. The latter was made up of the peasants who were drafted under the military *mita* system, and who after completing their tour of duty returned to their *ayllus*. Peasants were drafted into the army according to their *ayllus*, and they did not mix. Ethnic groups fought under the command of their own *curacas* (Espinoza Soriano, 1987: 361, 362). In accordance with the decimal system and the population censuses recorded on quipus, from each village and district a given number of taxpayers were taken in order to serve during wartime (Cieza de León, 2000b [1553]: 76; Garcilaso, 1991 [1609]: 346). The two colonial-era inspections made in Chucuito and Huánuco have made it possible to analyze the quotas of menfolk called up by the Incas for their military campaigns, because these are recorded in the quipu transcriptions included in both inspections. In the *Visita a Chucuito*, we read that on the quipus submitted by local leaders, during the Inca period a total of 20,270 taxpayers were recorded as living in the province (Diez de San Miguel, 1964 [1567]: F. 104 r.).

Asked during the inspection about the tribute they gave to the Inca, local people declared that «there were all the Indians for war that were requested», and that for a war «against those of Tomebamba» they gave 6000 men (Diez de San Miguel, 1964 [1567]: F. 104 v.). This means that almost thirty percent of the indigenous taxpayers were incorporated into the Inca army on that occasion<sup>39</sup>. In contrast, during the *Visita a Huánuco*, the *cacique* Paucor Guaman, asked about the services that the province of the Chupachos provided for the Inca, declared that «they gave most to go with the person of the Inca to war, and for the hammocks five hundred Indians» (Ortiz de Zúñiga, 1967 [1562]: 307 [Sf. 168 r.]). Given that the Chupachos were composed of four *guarangas* (that is, 4000 taxpayers), this meant that a total of 12.5% were sent to war. In both cases,

---

<sup>39</sup> A calculation based on 20,000 taxpayers, corresponding to precisely 30% of taxpayers.

the military *mita* quotas were recorded on quipu cords. According to the testimony of the chronicler, the Inca himself «gave by his quipus the order» regarding the number of troops to be drafted. When the Inca decided to conquer new territories, first, he convened his council of four «*orejones*». Then, he met with all the captains of Cuzco to inform them of his plans and strategy, and: «he gave by his quipus the order concerning all that had to be done to start the war, prosecute it, and end it, and the people who would have to be joined, and the parts and places that would be entered, and where they were to go» (Murua, 1987 [1590]: 408).

Regarding the registering of men for war in the quipus, the Jesuit priest Oliva tells us that the *quipucamayoc* kept a count of all the soldiers—in this case of the army of Tupac Yupanqui— (Oliva, 1998 [1631]: 74). And in the account of the conquistador Hernando Pizarro we find confirmation of the keeping of army records using knotted records. When Pizarro left Pachacamac, at Bombón he met one of Atahualpa's captains, who told him that the Inca leader had many men and that he counted them using knots (Pizarro, 1968 [1533]: 129).

In the prosecution of campaigns communication was a key factor. The Incas' extensive road network, and their system of way stations and *chasquis*, were combined to facilitate the transmission of all kinds of data, including information related to their conquests. According to Garcilaso, the *chasquis* not only carried oral messages, but also messages encoded in quipus (Garcilaso, 1991 [1609]: 343). One of Guamán Poma de Ayala's most famous drawings shows a *chasqui* carrying a quipu which the chronicler has labeled as a «letter». For his part, Murua, when discussing the Incas' conquests in Chile and the origin of the city of Arica's name, suggests that his captains sent warnings to the Inca by means of knotted ropes. The captain Apocamac, returning to Cuzco, sent one of his brothers ahead with news for the ruler and: «As they did not know how to read or write, they used instead of writing their quipus, which, as we have said, are very elegant and well made, and in them they sent as many large knots as peoples who had been conquered, and in other small ones the number of conquered Indians, and in a black cord those who had died in the war» (Murua, 1987 [1590]: 546, 547). While the veracity of the account concerning the name of Arica may be disputed, other evidence

confirms that the course of military campaigns was recorded using quipus. The *Memoria de las prouinçias que conquistó Topa Ynga Yupangui padre de Guaina Capac Ynga con sus hermanos Amaro Topa Ynga y Topa Yupangui en la prouinçia de Chinchaysuyo y Collasuyo; y Andesuyo; y Condesuyo; hasta Quito Chile* (1569), a text based on a quipu reading, lists the territories conquered by Tupac Yupanqui (Pärssinen & Kiviharju, 2004: 93-96), indicating that by means of these instruments the place names or names of conquered ethnic groups could be encoded.

The importance of the quipu in the supplying of the armies that passed through the provinces of Tahuantinsuyo should not be underestimated. Inca military successes were due, to a considerable degree, to the excellent organization of their supply chain system. The development of infrastructure —roads, bridges, storehouses, way stations— through the large-scale mobilization of peasant labor (*mita*) made possible the rapid and efficient movement of large armed contingents. When troops used the Qhapaq Ñan, during their journey they did not lack shelter, food or provisions (Hyslop, 1984).

### **Knotted records for the administration of storehouses and way stations**

When troops marched through the provinces of Tahuantinsuyo, they were provided with goods deposited in storehouses and way stations, all of which was recorded on quipus (Murua, 1987 [1590]: 361; Betanzos, 1987 [1551]: 115). The chronicles attribute different functions to the network of storehouses and way stations, from supporting the officials of the central administration to redistributing goods among the population. However, emphasis is given to their use in the supplying of Inca troops on their way to war, or soldiers recently drafted in a given area under the military *mita*, so that they could join the empire's forces fully equipped and provisioned. Indeed, according to Murua this was the primary function of the storehouses where clothing and food supplies were kept (Murua, 1987 [1590]: 361). According to Cieza de León, the storehouses and way stations also served to supply Inca officials and governors, so that when they traveled through the provinces of the empire they would always have somewhere to sleep and eat. At both facilities, quipus were used to ensure «proper collection» and to guarantee stocks. Way stations and storehouses were provisioned by



nearby communities, and, according to Cieza de León «so that none would give more than others and everyone would pay their tribute, they had an account in the manner of knots, which they call *quipu*» (Cieza de León, 2000a [1553]: 301). Using quipus, control was exercised over the running of the entire infrastructure of Tahuantinsuyo.

To this end, from Cuzco inspectors were sent to verify the accounts of the *quipucamayoc* responsible for the storehouses (Cieza de León, 2000b [1553]: 192, 193). Through this procedure, the central authorities were kept informed concerning the provisions available in each area and could plan campaigns or deployments of large contingents. The chroniclers all agree that the functioning and efficiency of the Inca supply system were reliant upon the use of knotted records. These instruments, which we call accounting quipus, functioned like European ledgers and enabled the keeping of a precise record of stored goods. Each product that entered or left the storehouses was counted and registered on quipu cords. Hernando Pizarro observed that those responsible for the storehouses kept an account of goods delivered by the *curacas* of the regions, as well as of all the things provided to the Spanish. From his testimony, it is clear that expenditure and income were recorded on quipus in the manner of double entry ledgers: that is, with expenses on one quipu, and income on another.

In the words of Pizarro: « They count by knots in cords what each *cacique* has brought. And when they had to bring us firewood or livestock or corn or *chicha*, they would remove the knots from one part, and add knots in another part: in this way they keep a great account and reckoning of everything» (Pizarro, 1968 [1533]: 126). Murua also noted the precision with which data was maintained by those responsible for the storehouses, whom he called «leading persons» and «Indians of great account and reckoning». Their work consisted of continuously updating the record of provisions taken from the storehouses, so that resupplying operations could be organized and they would never lack foodstuffs or weapons for the troops deployed in the area. And in the event that a new military campaign was organized and taxpaying men in the region were mobilized, they could all be supplied for the journey from the storehouses of their own province. Clearly, the *quipucamayoc* played a crucial role in the proper functioning of these facilities: «These storehouses, which they call *colcas* and we would call barns,

were entrusted to leading persons and Indians of great account and reckoning, who kept an account of every expenditure by their quipus» (Murua, 1987 [1590]: 361). In this regard, the Dominican friar Bartolomé de las Casas lists the goods that were supplied to troops and confirms that every item was accounted for by the Incas using their quipus:

«All the corn, all the foods, all the clothes, the shoes, the weapons, the slings, the bows, the arrows, the clubs / the spears, the bucklers, and even the stones supplied to throw from the slings were accounted for; so that nothing was given, even if it was given and distributed to one hundred thousand soldiers, that was not first recorded, so that it was known when and how and how much and to whom» (Las Casas, 1939 [1552-61]: 136-137).

And in the *Relación de muchas cosas acaescidas en el Perú* we read that when troops were deployed via the royal highway, they rested at houses built for that purpose which were located along the route: «and there they provided them in order and accounted for, to each person their ordinary ration, men and their wives» (Molina, El Almagrista, 1968 [c.1552]: 69). The use of quipus in the administration of storehouses and way stations was so widespread and ingrained among the Andean population that, even in the 17<sup>th</sup> century, the Jesuit priest Bernabé Cobo reported: «They use still these quipus in the way stations to note what they sell to travelers, in the *mitas*, in the guarding of the shepherds' livestock, and in other business» (Cobo, 1956 [1653]: 143).

In conclusion, Inca military power was dependent upon their armies and the ability to mobilize huge contingents of soldiers for temporary service. This was made possible through the institution known as *mita*. At the same time, all this power was backed by imperial facilities built throughout the provinces, particularly the storehouses and way stations along the Qhapaq Ñan, which facilitated the movements of tens or hundreds of thousands of troops. The accounting quipu, quipu-censuses, quipu-*corvée* and tax-quipus contributed to this military power by facilitating the processing of data, both numerical and non-numerical. The accounting quipus would have contained both the number of soldiers and some information on their origin, or the *ayllu* to which they belonged. They would also have contained each division of the Inca army, locating each soldier within their structure. Also, the accounting quipus at the storehouses and way stations would have been used to record the names of all the products that entered and

left those facilities. They would also have recorded, albeit in a generalized manner, those who deposited the goods and those who were their beneficiaries. And they would note place names or the names of the communities or taxpaying *ayllus* of the area, and those of the army groups or officials who received the provisions -their names or positions- and the quantities of each product received.

### **The *quipucamayoc* and Inca writing by knots**

Throughout this study we have observed that there existed a wide-ranging network or hierarchy of *quipucamayoc*, who formed part of the power structures of Tahuantinsuyo. The author believes that all the *quipucamayoc* of the Inca empire were state officials, including those called by the chroniclers «community *quipucamayoc*», who would also have undergone training in Cuzco. The difference lay in the duties entrusted to each of the *yachaqkuna* (students) by Cuzco's central authorities. It should be remembered that in the *yachayhuasi* the sons of the Inca nobility studied alongside the sons of local elites<sup>40</sup>. Once they had completed their education, students from the provinces stayed for a time in Cuzco, working for the Inca administration. Later, some would return to their places of origin as Inca state officials, while others would remain in Cuzco (Moscovich, 2017: 291). Those who returned to their regions of origin would become local chieftains, administrators and state officials, holding positions within the decimal administration in the imperial infrastructure of the provinces. The sons of the Cuzco elite would certainly have remained in Cuzco, where they would be earmarked for senior positions within the imperial structure, or would become specialists dedicated, among other spheres, to religion and worship, work on calendars, astronomy, and the recording of myth and history.

Among the group of *yachaqkuna* (students) who remained in Cuzco would have been the sons of local lords assigned auxiliary tasks. They would have risen to become

---

<sup>40</sup> Administrative and ideological unification was achieved through instruction in Cuzco, but also through marriage. After conquering new groups, the Incas married the local lords to Cuzco-born *ñustas*, creating kinship ties with the provinces. In this way, the Incas unified their empire «under a single religious and administrative ideology» (Moscovich, 2017: 290). Both strategies created bonds of interdependence between Cuzco and the provinces, and in both strategies the use of quipus was important, according to documentary sources. It should be remembered that Betanzos writes of how, on occasion, marriages between young people from different provinces, calculated to ensure peace, were arranged based upon the census data contained in quipus (Betanzos, 1987 [1551]: 62).

«secretaries» to Cuzco's highest officials, including those who resided in the capital and those who inspected the imperial facilities in the provinces. All these individuals – imperial officials, specialists, local lords and «secretaries»— were *quipucamayoc*. The sources tell us that all state officials knew how to make quipus and were responsible for producing reports in the form of knotted records. Some of these –the officials within the decimal hierarchy, *curacas* and high-ranking Cuzco officials- would have been assisted by the *quipucamayoc*-secretaries. Clearly, therefore, the *quipucamayoc* did not constitute a group of knot specialists, *per se*; rather, there existed a whole range of posts and positions which required knowledge of how to work with quipus.

It is possible to divide all these posts and positions into three categories of *quipucamayoc*, although we must continue to bear in mind that the title *quipucamayoc* would have been added to that of the position held by an individual, rather than being perceived as a position in itself. And so, we find ourselves with *quipucamayoc*-officials, *quipucamayoc*-specialists and *quipucamayoc*-secretaries. The first of these categories would have included all the officials within the decimal hierarchy, including *curacas*, high-ranking Cuzco-born officials, and those Inca officials who undertook duties across the imperial infrastructure, for example those called by the chroniclers the accountants of administrative centers and storehouses. The second category, the *quipucamayoc*-specialists, would have included priests, *acllas*, specialists dedicated to calendars and astronomical observation, historians, some «judges» (those who did not form part of the decimal administration, such as the *michoc*), teachers, and other specialists. The third category, *quipucamayoc*-secretary, was composed of the sons of the local elites educated in Cuzco, but who could not aspire to lead their groups, since one of their brothers was destined to become the *curaca* of their people. As we have already mentioned, the *quipucamayoc*-secretaries performed auxiliary duties, accompanying the state officials and assisting them in record-keeping and the preparing of administrative, fiscal or judicial documents, in the form of quipus. Because the *quipucamayoc*-secretaries came from local elites, following their education in Cuzco they would be fluent in three languages: Quechua, the general and administrative Inca

language; Puquina, the secret language of the Inca<sup>41</sup>; and their native language. These auxiliary officials would then act as translators and interpreters of their native languages, as well as of their culture, traditions and forms of worship. Following this premise, each of the *quipucamayoc*-secretaries ought to have exercised their office within the territory of their ethnic group; however, if we maintain that under the government of Tahuantinsuyo standardized Cuzco-based quipu codes were employed, they would not have been required to translate quipus<sup>42</sup>. Also, it seems likely that these *quipucamayoc*-secretaries would have exercised some control over the community and its leaders, because they were state officials —albeit of lesser rank- and confirmed as such through an education received in Cuzco. They would have observed the labor of the local taxpayers and the organization of each group, producing knotted records concerning various aspects of each community. The sources show that three categories of *quipucamayoc* existed, each formed by officials and specialists with different ranks, levels and responsibilities, which is why the chroniclers refer to them variously as «accountants», «historians», «scribes», «secretaries», «astrologers», «philosophers», and so on.

There were different groups of *quipucamayoc*, who, according to the nature of their tasks within the Inca administration, specialized in specific areas of the bureaucracy. In this context, the highest-ranking *quipucamayoc* in Tahuantinsuyo would have been the Inca himself<sup>43</sup>. At the other end of the social pyramid were the *hatun*

---

<sup>41</sup> Traditionally, it is assumed that the original language of the Incas was Quechua. We now know that the Incas were not, originally, Quechua speakers, and nor was Aymara their first language, as has also been proposed. Recent studies have pointed to the possibility that Puquina, the language of the Colla, was the language spoken by the Incas' ancestors. Subsequently, the so-called mythical Incas would have adopted Aymara and, later, the so-called historical Incas would have adopted Quechua, a language they spread as the official tongue of Tahuantinsuyo, as the chroniclers confirm. See: Cerrón-Palomino, 2012; Cerrón-Palomino, 2010; Szemiński, 1998.

<sup>42</sup> Clearly, other individuals who were not of the nobility may have learned certain basic concepts by observing the *quipucamayoc* officials, perhaps even mimicking the quipu system in some kind of simplified manner, in order to keep personal records. These processes appear to have taken root after the conquest, when an enormous divergence emerged among colonial and republican quipus, as they evolved independently in each region (Setlak, 2018; Setlak & Zubieta, 2016).

<sup>43</sup> Murua, when writing of the origin of the place name Quito, explains that Inca Huayna Capac «made there [in the city] great cords of gold and silver, which the people called quipu, putting in these quipu great laws and ordinances» (Murua, 1987 [1590]: 521). Betanzos tells us that, when Inca Yupanqui assigned tax obligations personally, «he ordered that woolen cords of diverse colors be brought to him», and in those he set what each lord should pay in tribute (Betanzos, 1987 [1551]: 96).

*runa*, who had no knowledge of quipus or access to the institutionalized process of education. As Cobo writes, «there were persons delegated for this office» and not all of them «were versed in the quipus» (Cobo, 1956 [1653]: 143). On the same page of his chronicle, Cobo maintains that, among the *quipucamayoc*, some did not understand the records of others. It seems unlikely, however that this indicated the coexistence of local and imperial codes. Probably, the quipus, like Quechua, were disseminated by the Incas and, consequently, the code would have been unified until the colonial period<sup>44</sup>.

It appears, as supported by the archaeological record, that there existed different quipu models, but not different codes. In every language, literary, philosophical, or historical texts differ markedly from mathematical, astronomical, or other scientific texts. Returning to the Cobo chronicle, shortly after writing that the *quipucamayoc* understood only their own records, the chronicler specifies that: «There were different quipus for different kinds of things, such as for tribute, lands, ceremonies and all kinds of business of peace and war» (Cobo, 1956 [1653]: 143). He speaks, then, of the existence of different quipu models, rather than different codes or languages. Acosta also confirms the presence of various types of knotted records: «Since for different things such as war, government, tribute, ceremonies, lands, there were various quipus or strands» (Acosta, 1987 [1590]: 402).

And the inspector Vaca de Castro, who interviewed four *quipucamayoc* from Cuzco, confirmed that «they were many, and among all of them there was agreement in their quipus and accounts» (Collapiña, 1974 [1542]: 20). It would seem, therefore, that the *quipucamayoc* used the same code or quipu language, which was disseminated via the Incas' institutions, most notably the Cuzco school, together with the other teachings required for each post. And the fact that the leaders and the *quipucamayoc* of communities -according to the inspection of the province of Chucuito- could read the same quipus shows that these local *quipucamayoc* also knew the official code.

---

<sup>44</sup> Because quipus were associated with power, it does not seem likely that, in the face of Inca expansion, the Huari would have taught the entire conquered population to make them.

And so, each group or category of *quipucamayoc* present in all the provinces and communities was integrated into the Inca system of government and control and assisted the Cuzco rulers in the deployment of their power throughout the provinces. All answered to the central authorities, even the local historians or «archivists». Indeed, the Jesuit priest Oliva tells us that the «historians» and «chroniclers» were «appointed by the Kings and Lords of Peru» and that the Inca governors were «spread throughout different parts of the Kingdom» (Oliva, 1998 [1631]: 38).

Regarding the complexity of Inca quipus, we have seen already that there existed a considerable variety of models, and that a number of functions were fulfilled by these instruments and their contents, and we have identified the following categories of knotted records: 1) historical quipus, which contained Inca myths and history, the genealogy of their rulers and the songs that commemorated them; 2) religious quipus, in whose strings *huacas*, sacrifices and offerings were recorded; 3) calendrical and *ceque* quipus, recording religious cycles and the social organization of Cuzco, as well as agricultural cycles; 4) judicial quipus, among which we have identified three types of records: codes, files, and testaments; 5) local quipu-registers, containing detailed records of all the inhabitants of each community and district; 6) quipu-censuses, central records maintained by state authorities; 7) quipu-*corvée*, in which all the services provided as *mita* or *corvée* were recorded; 8) tax-quipus, used to record tax obligations and compliance, and which in many cases were combined with quipu-*corvée*; 9) quipu-accounts, containing all accounting records except those that recorded tribute and *mita*, such as, for example, the stocks held in storehouses and way stations, and what had been distributed; 10) quipu-maps, composed of place names or the names of ethnic groups, and reflecting, in some cases, Inca conquests during their military campaigns; 11) quipu-letters, the content of which we do not know, although certain references in the chronicles point to their existence.

The different types of quipu used by the Incas enabled them to firmly establish the foundations of their power and to organize the administrative, economic, religious and ideological structures of Tahuantinsuyo. At the same time, the use of these knotted records contributed to Inca expansion, both military and peacefully negotiated. Military

expansion was facilitated by the Incas' ability to amass and organize large armies, as well as to maintain a headcount of troops and provision them adequately, an essential aspect to any military endeavor. Peaceful expansion was also facilitated by quipus, because they constituted a medium through which accords and gifts exchanged with local lords could be recorded, as well as subsequent tax obligations and their fulfillment. They also contributed to the dissemination of Cuzco's ideology, expressed in its religion, myths and norms, and served as the means for training in and transmission of knowledge used to integrate local elites into the elite of Cuzco. Also, as we have shown, the quipu system assisted in the deployment of political, administrative, economic, ideological and military control over the inhabitants of all the provinces of Tahuantinsuyo.

Finally, we can affirm that quipus constituted the Incas' «way of writing». Unquestionably, these instruments performed for Inca society functions comparable or equivalent to those of the early writing systems employed by ancient civilizations in other parts of the world. In his comparative study 'Understanding Early Civilizations', Trigger distinguishes between writing and semasiography, identifying them as two different types of recording systems<sup>45</sup>. Trigger attributes three main functions to all early recording systems: 1) commemoration of kings and their exploits -as in the case of Egypt from the late Pre-Dynastic period, or of Mayan inscriptions; 2) administrative function, which appears with the emergence of Sumerian writing in Mesopotamia; and; 3) religious purposes, such as the earliest Chinese texts, in the form of inscriptions on oracle bones associated with divination (Trigger, 2003: 587). The majority of quipus fulfilled administrative functions, particularly the quipu-censuses, quipu-registers, tax-quipus, quipu-accounts and judicial quipus. Historical quipus served to commemorate Inca rulers, while religious and calendrical quipus were used for religious and ritual purposes. We see, therefore, that quipus fulfilled a role in all the essential areas related to the functioning of Tahuantinsuyo, as the Incas' «way of writing». And let us also remember that one of the main purposes of writing is to facilitate the transmission of messages through time and space. Clearly, as this study has shown, Inca quipus fulfilled that role. Let us end with the words of the Augustinian chronicler Antonio de la

---

<sup>45</sup> Unlike Sampson, who includes semasiography in his definition of writing, while at the same time dividing writing systems into two groups: glottographic and semasiographic. See: Sampson, 1985.



Calancha: «That which in Peru they call quipus were the writing, archives and memorials of these Indians» (Calancha, 1974 [1638]: 204).

## Bibliography

- Acosta, José de (1987 [1590]). *Historia natural y moral de las Indias*. Madrid: Historia 16.
- Anónimo (1920). *Relación de los señores indios que sirvieron a Túpac Yupanqui y Huayna Cápac*: Horacio H. Urteaga, *Informaciones sobre el antiguo Perú (Crónicas de 1533 a 1575)*. Lima: Imprenta y Librería Sanmartí.
- Arriaga, Pablo José de (1999 [1621]). *La extirpación de la idolatría en el Pirú*. Cuzco: Centro de Estudios Regionales Andinos Bartolomé de las Casas.
- Ávila, Francisco de (1966 [1598]). *Dioses y hombres de Huarochirí. Narración quechua recogida por Francisco de Ávila*. Lima: Instituto de Estudios Peruanos.
- Bauer, Brian (1992). *The Development of the Inca State*. Austin: University of Texas Press.
- Betanzos, Juan de (1987 [1551]). *Suma y narración de los incas*. Madrid: Atlas.
- Bravo Guerreira, Concepción (1986). *El tiempo de los incas*. Madrid: Alhambra Editorial.
- Cabello Valboa, Miguel (1951 [1586]). *Miscelánea antártica. Una historia del Perú antiguo*. Lima: Universidad Nacional Mayor de San Marcos.
- Calancha, Antonio de la (1974-1981 [1638]). *Crónica moralizada del Orden de San Agustín en el Perú*. Lima: Universidad Nacional Mayor de San Marcos.
- Casas, Bartolomé de las (1939 [1552-1561]). *Las antiguas gentes del Perú*. Lima: Librería e Imprenta Gil.
- Cerrón-Palomino, Rodolfo (2010). «Contactos y desplazamientos lingüísticos en los Andes centro-sureños: el puquina, el aimara y el quechua». *Boletín de Arqueología PUCP*, (14): 255-282.
- (2012). *Las lenguas de los incas: el puquina, el aimara y el quechua*. Frankfurt: PL Academic Research.
- Cieza de León, Pedro (2000a [1553]). *La crónica del Perú*. Las Rozas (Madrid): Dastin.
- (2000b [1553]). *El señorío de los Incas*. Las Rozas (Madrid): Dastin.
- Cobo, Bernabé (1956 [1653]). *Historia del Nuevo Mundo*. Biblioteca de Autores Españoles. Madrid: Ediciones Atlas.
- Collapiña, Supno y otros quipucamayos (1974 [1542]). *Relación de la descendencia, gobierno y conquista de los incas*. Lima: Biblioteca Universitaria.
- Conklin, William (1990). «El sistema informativo de los quipus del Horizonte Medio»: Mackey et al, *Quipu y yupana. Colección de escritos*. Lima: Concytec.
- Covey, R. Alan (2006). «Chronology, Succession, and Sovereignty: The Politics of Inka Historiography and its Modern Interpretation». *Comparative Studies in Society and History*. 48 (1): 169-199.
- Curatola Petrocchi, Marco (2008). «La función de los oráculos en el Imperio inca»: *Adivinación y oráculo en el mundo andino*, Marco Curatola Petrocchi & Mariusz Ziółkowski, editores, pp. 15-69. Lima: Pontificia Universidad Católica del Perú (PUCP), Instituto Francés de Estudios Andinos (IFEA).
- Curatola Petrocchi, Marco & Puente Luna, José Carlos de la (eds.) (2013). *El quipu colonial. Estudios y materiales*. Lima: Pontificia Universidad Católica del Perú.
- D'Altroy, Terence N. (2003). *Los incas*. Barcelona: Editorial Ariel.

- — — (2015). *El poder provincial en el imperio inka*. Lima: Banco Central de Reserva del Perú (BCR), Instituto de Estudios Peruanos (IEP).
- — — (2018) «El régimen fiscal inca». *Economía*, vol. XLI, (81): 125-164.
- Diez de San Miguel, Garcí (1964 [1567]). *Visita hecha a la provincia de Chucuito por Garcí Díez de San Miguel en el año 1567*. Lima: Casa de la Cultura del Perú.
- Duviols, Pierre (1979). «La dinastía de los incas, ¿monarquía o diarquía? Argumentos heurísticos a favor de una tesis estructuralista». *Journal de la Société des américanistes*. Tomo LXVI. París, pp. 67-83.
- Espinoza Soriano, Waldemar (1987). *Los incas. Economía, sociedad y estado en la era del Tahuantinsuyo*. Lima: Amaru Editores.
- Garcilaso de la Vega, Inca (1991 [1609]). *Comentarios Reales de los Incas*. Ciudad de México: Fondo de Cultura Económica.
- Gentile, Margarita (1996). «Dimensión sociopolítica y religiosa de la ‘capacocha’ del cerro Aconcagua». *Bulletin de l’Institut Français d’Études Andines*, 25 (1): 43-90.
- González Holguín, Diego (1989 [1608]). *Vocabulario de la lengua general de todo el Perú llamada lengua quichua o del Inca*. Lima: Universidad Nacional Mayor de San Marcos.
- Guamán Poma de Ayala, Felipe (1993 [1615]). *Primer nueva corónica y buen gobierno*. Ciudad de México: Fondo de Cultura Económica.
- Hyland, Sabine (2017). «Writing with Twisted Cords. The Inscriptive Capacity of Andean Khipus», *Current Anthropology*, 58 (3): 412-419.
- Hyland, Sabine; Ware, Gene A. y Clark, Madison (2014). «Knot direction in a khipu / alphabetic text from the Central Andes», *Latin American Antiquity* 25(2): 189-197.
- Hyslop, John (1984). *The Inka Road System*. Orlando: Academic Press.
- Innis, Harold A. (1986). *Empire and communication*. Victoria: Press Porcepic.
- Julien, Catherine (1988). «How Inca Decimal Administration Worked», *Ethnohistory*, 35 (3): 257-279.
- — — (2000). *Reading Inca History*. Iowa: University of Iowa Press.
- — — (2002). «Identidad y filiación por suyu en el Imperio incaico». *Boletín de Arqueología PUCP*, (6): 11-22.
- Locke, L. Leland (1923). *The ancient quipu or Peruvian knot record*. New York: The American Museum of Natural History.
- MacCormack, Sabine (1991). *Religion in the Andes. Vision and Imagination in Early Colonial Peru*. Princeton, New Jersey: Princeton University Press.
- Mann, Michael (1986). *The sources of social power. Volume I: A history of power from the beginning to A.D. 1760*. Cambridge: Cambridge University Press.
- Matienzo, Juan de (1967 [1567]). *Gobierno del Perú*. París y Lima: Ministère de Affaires Étrangères / Instituto Francés de Estudios Andinos (IFEA).
- Molina, Cristóbal de (2010 [1575]). *Relación de las fábulas y ritos de los incas*. Madrid: Vervuert-Iberoamericana.
- Molina, Cristóbal de, El Almagrista [en realidad Bartolomé de Segovia] (1968 [c.1552]). *Relación de muchas cosas acaescidas en el Perú: Crónicas Peruanas de Interés Indígena*, Biblioteca de Autores Españoles, pp. 57-95. Madrid: Ediciones Atlas.
- Moscovich, Viviana Ruth (2017). «Khipu, T’uqapu y Qillqa y la historia de los Incas: El concepto de lo sagrado en el mundo andino antiguo: espacios y elementos pan-

- regionales*, Alden Yépez, Viviana Moscovich & César Astuhuamán, editores. Quito: Centro de Publicaciones PUCE.
- Murra, John (2002 [1972]). «El control vertical de un máximo de pisos ecológicos en la economía de las sociedades andinas»: *El mundo andino: población, medio ambiente y economía*. Lima: Pontificia Universidad Católica del Perú (PUCP) e Instituto de Estudios Peruanos (IEP), pp. 85-125.
- (2002 [1975]). «Las etnocategorías de un khipu estatal»: *El mundo andino: población, medio ambiente y economía*. Lima: Pontificia Universidad Católica del Perú (PUCP) / Instituto de Estudios Peruanos (IEP), pp. 248-260.
- (2002 [1977]). «Los límites y las limitaciones del ‘archipiélago vertical’ en los Andes»: *El mundo andino: población, medio ambiente y economía*. Lima: Pontificia Universidad Católica del Perú (PUCP) / Instituto de Estudios Peruanos (IEP), pp. 126-131.
- Murua, Martín de (1946 [1590]). *Historia del origen y genealogía real de los reyes incas del Perú*. Madrid: Imp. C. Bermejo.
- (1987 [1590]). *Historia general del Perú*. Manuel Ballesteros, editor, Madrid: Historia 16.
- Oliva, Giovanni Anello (1998 [1631]). *Historia del reino y provincias del Perú y vidas de los varones insignes de la Compañía de Jesús*. Lima: Pontificia Universidad Católica del Perú.
- Ondegardo, Polo de (1916 [1571]). *Informaciones acerca de la religión y gobierno de los incas*. Lima: Imprenta y Librería Sanmartí.
- Ortiz de Zúñiga, Iñigo (1967 [1562]). *Visita de la provincia de León de Huánuco en 1562*. Ed. John Murra. Huánuco: Universidad Nacional Hermilio Valdizán.
- Pärssinen, Martti (2018). «Memoria de las provincias que conquistó Topa Ynga Yupanguí por Capac ayllu y la expansión inca hacia la Amazonía: reciprocidad, alianzas y poder»: María de los Ángeles Muñoz, ed., *Interpretando huellas: arqueología, etnohistoria y etnografía de los Andes y sus tierras bajas*, pp. 305-325. Cochabamba, Bolivia: Grupo editorial Kipus.
- Pärssinen, Martti; Kiviharju, Jukka (2004). *Textos andinos. Corpus de textos khipu incaicos y coloniales*. Madrid: Instituto Iberoamericano de Finlandia y Universidad Complutense de Madrid.
- Pease G. Y., Franklin (1965). «El derecho y la aparición del Estado inca». *Derecho PUCP*, (24), 36-45.
- (1971). «Aproximación al delito entre los incas». *Derecho PUCP*, (29), 52-62.
- (2009). *Los incas*. Lima: Fondo Editorial PUCP.
- (2014). *El dios creador andino*. Lima: Ministerio de Cultura.
- Pizarro, Hernando (1968 [1533]). *Carta de Hernando Pizarro a la Audiencia de Santo Domingo*, 23 de noviembre de 1533: Biblioteca Peruana. Primera Serie. Tomo I. Lima: Editores Técnicos Asociados.
- Ramírez, Susan Elizabeth (2008) «Negociando el imperio: el Estado inca como culto», *Bulletin de l'Institut, Français d'Études Andines* 37 (1): 5-18.
- Rostworowski, María (2011 [1953]). *Obras completas I. Pachacutec Inca Yupanqui*. Lima: Instituto de Estudios Peruanos.
- (1988). *Estructuras andinas del poder. Ideología religiosa y política*. Lima: Instituto de Estudios Peruanos.

- Rowe, John H. (1945). «Absolute chronology in the Andean Area». *American Antiquity*. 10 (3): 265-284.
- (1946). «Inca culture at the time of Spanish conquest»: *Handbook of South American Indians*, Julian H. Steward, editor, Vol. 2. Washington, D.C.: Smithsonian Institution, pp. 183-330.
- Sampson, Geoffrey (1985). *Writing Systems: A Linguistic Introduction*. Stanford: Stanford University Press.
- Sanhueza, Cecilia (2005). «Espacio y tiempo en los límites del mundo. Los incas en el despoblado de Atacama». *Boletín del Museo Chileno de Arte Precolombino* 10 (2): 51-77.
- Santillán, Hernando de (1986 [1563]). «Relación del origen, descendencia, política y gobierno de los Incas»: Biblioteca de Autores Españoles, *Crónicas peruanas de interés indígena*, Francisco Esteve Barba, editor. Madrid: Ediciones Atlas.
- Santo Tomás, Domingo de (1951 [1560]). *Lexicón o vocabulario de la lengua general del Perú*. Edición facsimilar publicada, con un prólogo, por Raúl Porras Barrenechea. Lima: Universidad Nacional Mayor de San Marcos.
- Sarmiento de Gamboa, Pedro (1988 [1572]). *Historia de los incas*. Madrid: Miraguano, D. L.
- Schroedl, Annette (2008). «La Capacocha como ritual político. Negociaciones en torno al poder entre Cuzco y los curacas». *Bulletin de l'Institut Français d'Études Andines*. 37 (1): 19-27.
- Setlak, Magdalena (2018). «Entre la idolatría y la evangelización. Los quipus en la religiosidad andina»: *Escrituras silenciadas. Heterodoxias y disidencias en la península Ibérica y América*, José F. Forniés Casals, Paulina Numhauser & Moisés Orfali, editores, pp. 113-132. Alcalá de Henares: Universidad de Alcalá de Henares.
- Setlak, Magdalena & Zubieta Núñez, Filomeno (2016). «La noción de camino en los hilos. Una aproximación a los quipus funerarios de Cuspón», *Anales del Museo Nacional de Antropología*. Madrid, nro. XVIII: 96-108.
- Szemiński, Jan (1998). «Del idioma propio de los incas cuzqueños y de su pertenencia lingüística». *Histórica*, 22 (1): 135-168.
- Topic, John R. (2013). «De «audiencias» a archivos: hacia una comprensión del cambio en los sistemas de registro de la información en los Andes»: *El quipu colonial. Estudios y materiales*. Marco Curatola Petrocchi y José Carlos de la Puente Luna, editores. Lima: Pontificia Universidad Católica del Perú.
- Trigger, Bruce G. (2003). *Understanding Early Civilizations. A Comparative Study*. Cambridge: Cambridge University Press.
- Urton, Gary (2005). *Signos del khipu inca. Código binario*. Cuzco: Centro Bartolomé de las Casas.
- (2017). *Inka History in Knots. Reading khipus as primary sources*. Austin: University of Texas Press.
- Urton Gary & Brezine, Carrie J. (2007). «Information Control in the Palace of Puruchuco»: *Variations in the expression of Inca Power: a symposium at Dumbarton Oaks, 18 and 19 October 1997*. Richard Burger, Craig Morris y Ramiro Matos Mar, ed., Washington, D. C.: Dumbarton Oaks Research Library and Collection.

- Valera, Blas (1992 [c.1593-1597]). *Relación de las costumbres antiguas de los naturales del Pirú*: Henrique Urbano & Ana Sánchez, ed. *Antigüedades del Perú*. Madrid: Historia 16.
- Visita de los valles de Sonqo en los yunka de coca de La Paz [1568-1570]* (1991 [1568-1570]). John V. Murra, editor. Madrid: Instituto de Cooperación Iberoamericana.
- Wachtel, Nathan (1980) «Les *mitimas* de la vallée de Cochabamba. La politique de colonisation de Huayna Capac». *Journal de la Société des Américanistes* 67: 297-324.
- Zárate, Agustín de (1965 [1555]). *Historia del descubrimiento y conquista del Perú*. Buenos Aires: Universidad de Buenos Aires.
- Zuidema, R. Tom (1995 [1964]). *El sistema de ceques del Cuzco. La organización social de la capital de los incas*. Lima: Pontificia Universidad Católica del Perú.
- (2004). «La identidad de las diez panacas en el Cuzco incaico», *Boletín de Arqueología PUCP* (8): 277-287.
- (2005). «La religión inca»: *Religiones andinas*, edición de Manuel M. Marzal. Enciclopedia Iberoamericana de Religiones. Madrid: Editorial Trotta.
- (2008). «El sistema de *ceques* como computadora»: *Lenguajes visuales de los incas*. Paola González Carvajal & Tamara L. Bray, ed. Oxford: BAR International Series 1848.