The celestial Slinger: historic and ethnographic convergences in the Andean night sky[1]

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Runtu Chikchiy

In ancient times Maragua was a round lake. One day, a powerful lord (*un Inca*) came and, not happy because of the lake, took his *warak'a* or *honda,* a sling, and hit the walls of the lake in two points, thus causing the water to flow away and the land to dry out[2]. This man was enormous, *enorme*, and he was shining, *brillaba*; it is thanks to him that Maragua became the community that we know today, with rich black soil that yields abundant agricultural products.

The story tells the cosmogonic action of a powerful Inca who, according to the local people, gave birth to Maragua; this version competes and coexists with two further explanations of a meteorite hitting the earth and of an ancient volcano gone extinct. Local people are interested in discussing with tourists the plausible ideas regarding the origin and the actual shape of the crater; however, ultimately they seem to stick to what their *tatarabuelos* – the ancestors – had told them.

The sling is an important tool used today to control the herds of lamas and alpacas in the region of the *Salar de Uyuni* (Uyuni's sea salt), and people in Maragua refer to a *warak'a* as what the lama herders, *llameros*, used to carry with them when they arrived and resided in the crater during the month of July, after a trip from the regions of Macha and Culta[3]. The sling is still used by all lama herders and is also associated with confrontations and war[4]. I have been told that the so called *Cataristas* attacked the Spaniards, slinging stones against them in the attempt to free Tomas Catari, near Sucre[5].

Moreover, since pre-Hispanic times the sling has been associated with the Thunder god, called *Illa* or *Illapa*, a powerful deity which is linked

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to lightning, thunder, as well as rain, hail, and most of the atmospheric phenomena[6].

I had a demonstration that *Illapa* was one of the most powerful deities in the Andean pantheon when**,** at the end of March 2009, a terrible hailstorm hit the crater of Maragua and its northern vicinity. The egg-sized hail (*runtu chikchiy*) destroyed the crops of about 100 families, killed a few animals, and damaged several roofs. Despair followed: people were crying over the destruction of their wheat, corn, and pea fields.

In the aftermath of the disaster, discussions also concerned the extraordinary nature of the event: none of the elders of the community remembered anything similar ever happening in the past, apart from the drought of the 1980s whose effects had also caused serious damage.

Apparently, people had been instructed and educated about the ways to avoid, or at least diminish, the deadly effect of such storms and in particular lightning strikes, *el Rayo*, also known by their Quechua names, *Illa / Illapa*. Luckily enough, no one was killed that day, probably because people found shelter within their houses and did not venture outside. Nevertheless, *Illapa* did not spare the crops of many families and left them with nothing to cultivate for the next two months.

Although people were aware that such events could always happen and did not depend on their actions, I was told that *Illapa* had decided to punish the misbehavior of the people in Maragua. Such a condemnation was veiled and came from those sectors of the population, which, for different reasons, were not involved in the economic and tourist activities of the crater. A hostile condition involved Maragua and the nearby *ayllu* of Quilla Quilla, and specific reasons were given in order to interpret the rage of *Illapa.* The explanation/accusation concerned the style of life people in Maragua had adopted, such as deciding to build some lodges for housing tourists. Moreover, many of them had progressively abandoned the community to live in the nearby cities (mainly Sucre, but also Cochabamba) and people had adopted a general selfish attitude. Ultimately, *Illapa* punished those who had abandoned the traditional life-style and had stopped fulfilling their duties towards the supernatural agents, e.g. all the ritual observances which accompanied the year. Obviously, those close to the local union (*sindicato*) and in charge of the tourist lodges rejected these accusations; even the local *dirigentes* – the authorities – emphasized instead the natural causes of such events[7].

Whatever the case, the discussions and arguments around the responsibilities for an event intended as divine punishment left space for a unified response when, in the following weeks, the damage and subsequent shock changed the attitude that people had towards the sky. Fearing that *Illapa* could come back to complete what he had left unfinished, people

adopted the necessary counteractions as soon as they feared that another storm was about to come: many households started a fire and, by putting green grass on top of the fires, raised white smoke to the sky. In addition, those who had the chance fired fireworks, and dynamite explosions were echoed all over the place[8]. I was told that this would avoid the return of hail, for the dynamite would compete with the thunder and the white smoke would wipe out the threatening black clouds. Such initiatives were (or seemed to be) successful, as it never hailed again, and people assured me of the efficacy of the method.

However, besides fear, a deeper feeling was taking place: it seemed that most people wanted to regain the favor they had lost towards «*el dios*», and they increased the frequency with which and the circumstances when he was named and evoked.

Furthermore, widespread attention was paid to the signs coming from the sky – in particular, the stars – which were to guide the transition to the next agricultural year just a few weeks later. Finally, I was told that the attendance at the ceremony of good Friday, less than two weeks after the storm, was much higher than in previous years, and Santiago himself was highly revered during the mass at Corpus Christi, in its place on the side altar of the church.

Illapa, el Rayo

In Maragua and the surrounding areas, thunder is known as *Kurin*, whereas lightning is both called with the Spanish noun *Rayo* and the Quechua term *Illa.* The term *Illapa* also refers to the anthropomorphic version of both the thunder and the lightning as two manifestations of *Illapa* himself, the Thunder god. Gary Urton distinguishes a male *rayo – relámpago –*, which is innocuous as it shows up between the clouds, and the female *Rayo* itself, the one who kills (Urton 1981: 91-92).

Significantly, Tschopik (1951: 226) distinguishes, for the Puno Department of Peru, between the cloud-to-cloud lightning (*Waňa Kaxya*), and the cloud-to-earth lightning, called *Warawarani Kaxya*, 'star lightning', as to suggest a stellar origin for the lightning.

According to the XVII century chronicler Garcilaso de la Vega (1960: 50-51), *Illapa* had three related meanings for the Incas: thunder, electrical strikes, and the visible light.

Other related terminology includes: *Chikchi* for hail; *Para*, the Quechua word for pouring rain; *Ok'ay* or *K'uychi* for rainbow; clouds are *Phuyu*; *Wayra* is wind. They are all manifestations of and depend on *Illapa*.

In the highlands, *Illapa* refers both to the physical phenomenon and to the god of lightning and thunder. Moreover, it has been a central figure in

the Andean cult since pre-Hispanic times and the term *Illapa* exemplifies how climatological phenomena such as lightning and hail are anthropomorphized in contemporary highland cultures (Valderrama & Escalante 1977: 157).

We agree with Ade when he states that the awe that the lightning provokes and, more significantly, the direct impact it has on the lives and the economy of people are a strong justification for the diffusion and persistent cult of *Illapa* / Santiago (Ade 1983: 784).

Another chronicler, Polo de Ondegardo, writing in the middle of the XVI century, defined the three names of Lightning as father (*Chuki Illa*) and two sons (*Katuilla* and *Inti Illapa*) (in MacCormack 1991: 270); a similar statement was made by another chronicler, José de Acosta, who also defined the three deities as forming a trinity (Acosta 1962: 221). However, according to Sabine MacCormack, other chroniclers did not share the idea of the lightning god as a trinity; she argues that Acosta developed the lightning god as a trinity in accordance with his own Christian preconceptions and the alleged evil imitations of the holy trinity itself (MacCormack 1991: 270).

As for the imperial Cuzco, following Polo, Cobo, and Molina among others, Ziolkowski (1997) describes the formal state cult of *Chuki Illa Illapa*, when the Thunder was venerated together with *Viracocha* and *Inti*.

According to this author, the Inca Pachacuti Yamqui's initiation occurred when a thunderbolt thrown by the celestial slinger hit the spring of *Susurpuquio*; since then, the Inca assumed the characteristic of the celestial god and conducted wars of conquest by throwing gold stones to his enemies (Ziolkowski 1984)[9].

The main characteristic of the Thunder-god was his warrior attitude: Polo, but especially Cobo, provide us a description of the god in the sky whose main feature is that of a warrior. He has a sling in his right hand and a club in his left. His powerful aura is also shown by its shining clothes «which gave off the flashes of lightning when he swirled his swing, and the crack of this sling made the thunder» (Cobo 1990, ch. 7: 32). As we will see later, these features have a physical counterpart in the sky.

Nowadays, as the field has also shown, lightning – e*l Rayo* – is considered the power of nature itself. Accordingly, it is associated with the timing of the rain, a crucial aspect for the success of the agricultural cycle and the welfare of animals, plants, and humans. Moreover, its actions are also related to the quantity of useful rain that each field receives every year, and the amount of rain directly relates to the abundance or scarcity of the products harvested. It is the balance that must be found between a hyper activity of the god, especially when it is associated with hail and violent winds and storms, and the opposite drought which likewise may

result in loss and deaths. Hail is a frequent accessory of thunderstorms and it is identified as the evil spirit of lightning or with divine displeasure (Valderrama & Escalante 1977). The rituals are aimed at achieving such balance, and people are committed in honoring the god but also in directing its actions.

Going back to the chronicles, from the time of the Incas, public rites were carried out in Cuzco twice a year; in July, according to Molina, sacrifices were made to *Chuquylla* so that he might bring rain but not hail[10]. In December, following Acosta, more rain was needed for the maturation of the crops, and during the ceremony around the solstice, called *Kapac Raymi,* three statues depicting *Illapa* were brought outside the *Coricancha* and lamas were sacrificed to them (Acosta 1962: 268). Furthermore, children with harelip, or born feet first, or simply twins, were all considered children of the thunder and sometimes sacrificed to the deity (Murúa 1922: 234; Guaman Poma 1980: 42; 121). Likewise, babies conceived during a thunderstorm were assumed to be children of the thunder (Cobo 1956 II: 224). The cult of *Illapa* had a physical counterpart in the *Coricancha* temple[11], as the chronicler Juan de Santa Cruz Pachacuti Yamqui (1995) described in his drawing: the *Rayo* is a zigzag figure on the upper left part of the drawing and has been mentioned, among others, by Bauer & Dearborn (1995).

Besides the state cult, many *huacas* all over the territories were dedicated to the *Rayo*. The literature, especially the one referring to the ethno historic and archival studies – *visitas*, *procesos* (visits, trials) –, hosts many cases of *huacas* dedicated to the *Rayo* (Duviols 2003; Platt *et al.* 2006; Cruz 2009).

Arriaga maintains that boulders and outcrops cleft by lightning were considered *Huacas* (Arriaga 1968: 231); similarly states that each family head (*cabeza de familia*) had a place where the shrine of the *Rayo* was found and where lamas were sacrificed (1923: 27). Finally, Baulenas i Pubill (2012: 334) writes of a widespread pre-Incaic cult of phenomena linked to the lightning, the thunder, and the rain.

"Tata Santiago, do not ride your horse in the sky"[12]

The pre-Hispanic cult of the Thunder god (*Chuqui illa / Catu Illa / Inti illapa*) was grafted into the form of Santiago around the beginning of the colonial period in America. In the ancient world, the biblical metaphor of the apostle James as the 'son of the thunder' (*boanerges*) was attributed because of the evangelical zeal of the saint. Subsequently, he became associated with the meteorological phenomena of thunder and lightning starting in the Middle Ages. In Spain, Santiago de Compostela became the main sanctuary of that time, and the saint happened to be depicted on a horse in the act

of killing Arabs (*matamoros*) during the reconquest. Soon after Santiago disembarked in America, his ability in persecuting the pagans was put to the service of the Spaniards, and in 1536 he suddenly appeared to help the soldiers during the uprising of Manco Inca, descending from the sky on a horse accompanied by the sound of thunder (Acosta 1962: 373).

The memory of the 1536 apparition of Santiago was still clear in Guaman Poma's mind, when he wrote the following piece, some 70 years after:

Señor Santiago de Galicia, apóstol de Jesucristo, en esta ora que estaua asercado los cristianos, hizo otro milagro Dios, muy grande, en la ciudad del Cuzco. Dizen que lo uieron a uista de ojos, que auajó el señor Sanctiago con un trueno muy grande. Como rrayo cayó del cielo a la fortalesa del *Ynga* llamado Sacsa Guaman, que es *pucara* del *Ynga* arriua de San Cristóbal. Y como cayó en tierra se espantaron los yndios y digeron que abía caýdo *yllapa*, trueno y rrayo del cielo, *caccha*[13], de los cristianos, fabor de cristianos. Y ancí auajó el señor Sanctiago a defender a los cristianos. Dizen que bino encima de un cauallo blanco, que trayýa el dicho caballo pluma, *suri*, y mucho cascabel enxaesado y el sancto todo armado con su rrodela y su uandera y su manta colorado y su espada desnuda y que uenía con gran destruyción y muerto muy muchos yndios y desbarató todo el serco de los yndios a los cristianos que auía ordenado *Mango Ynga* y que lleuaua el santo mucho rruydo y de ello se espantaron los yndios. Desto echó a huyr *Mango Ynga* y los demás capitanes y yndios y se fueron al pueblo de [Ollantay] Tanbo con sus capitanes y demás yndios los que pudieron. *Y desde entonses los yndios al rrayo les llama y le dize Sanctiago porque el sancto cayó en tierra como rrayo, yllapa, Santiago como los cristianos dauan boses, deziendo "Santiago". Y ací lo oyeron los yndios ynfieles y lo uieron al santo caer en tierra como rrayo.* Y ancí los yndios son testigos de uista del señor Sanctiago y se deue guardarse esta dicha fiesta del señor Santiago en este rreyno como pascua porque del milagro de Dios y del señor Santiago se ganó (Guaman Poma 1980: 405 [407], italics mine).

According to Guaman Poma's description, the apparition of Santiago helped the Spaniards to defeat the rebel *indios* led by Manco Inca (*Mango Ynga*), by descending from the sky armed with sword, in a red mantle, and riding a horse while at the same time cracking his lightning bolts on earth. Murúa also describes how the natives called the lightning (*el Rayo*) Santiago, as in the following passage:

[…] they also called the lightning Santiago, as they saw during the conquest of Cuzco the blessed apostle Santiago, the patron of our Spain, fighting against the indios, to the favour of the Spanish, with an inflamed sword, throwing many lightnings (Murúa 1986, bk. 2, ch. 28: 425)[14].

That the Spanish were seen carrying something competing with Thunder is also testified by the word with which the natives were calling the harquebuses the Spanish were holding – *Illapa* – because of the light and the

sound the weapon had, and of the deadly effect the balls (also from cannons) had on people (Bertonio 1984; Holguín 2007: 264). Cieza de León adds that Santiago was also the name for the harquebuses (Cieza de León 1880: 81)[15]. However, the apparition of Santiago was not limited to the battle which occurred near Cuzco in 1536. In Mexico, according to the historian Antonio de Remesal, Santiago embarked with the Spaniards headed toward the New World. There, in 1531, the saint fought against the *indios* with his horse and his sword (Remesal 1932, bk. 6, ch. 7: 303).

Therefore, *Tata Santiago* became the Thunder, he who causes lightning and thunders, and he is a horse rider who takes long rides at night and returns by daybreak to his niche in the church, as I was told in Maragua. Yet, the places where the lightning struck are reputed the locations where Santiago himself touches the earth, during his ride. Moreover, Tata Santiago is also reputed to protect against the mortal flashes, he is highly considered and has his own place in the church of Maragua. The symbolism around the Saint and the Thunder is also manifest during the feast dedicated to him, a celebration that takes place on July 25. On this day, blessings and wishes of well-being and reproduction are devoted to horses (and donkeys), and the ceremony includes a request for rain to Santiago. The link between Santiago / the Thunder / *Illapa* and the rain is the key element which will help us in identifying the constellation and in defining its functions.

The Andean night skies: an outline

To better frame the celestial *Lamero-Hondero* and its *Honda* in a celestial context, it is useful now to briefly outline the nature and functions of stars, asterisms and constellation in the region.

The Andean night sky is populated by a set of figures which are stellar in nature or dark silhouettes against the Milky Way background. Obviously, the visibility of certain asterisms and constellations varies according to the season. In the Andes, the austral summer (December to February) corresponds to the rainy season, whereas the winter months (June to August) have a prevalence of clear nights.

During the fieldwork, several constellations, figures, and single stars were identified:

– *Cabrillas*, 'the small goats', the Pleiades.
– *Guadalupe*, 'the [Virgin of] Guadalupe', the Hyades.
– *Mancera*, 'the plow', Orion's belt and sword.
– *Yotaleño*, '[person] from Yotala', a location south-east of Maragua, (*Lomajanchitu*, *Yampareño*, '[person] from Yampara', the region where Yotala is located), Canopus (α Carinae).
– *Warak'a* (*Honda*), 'the sling', first part of Scorpio, α, β, δ, ϖ, σ, and **τ** Scorpii.

– *Crucero* (*Calvario*), 'the Cross', The Southern Cross.
– *Jatun Cruz*, 'the great Cross', part of Scorpio, (υ, λ, ζ, μ, **ε** Scorpii, HD148703, HD149447).
– *Puna Piura*, 'the storage from the Puna', Great Magellanic Cloud.
– *Valli Piura*, 'the storage from the valleys', Small Magellanic cloud.
– *Llamañawi*, 'the eyes of the lama', α and β Centauri.
– *Kuntur* (*Mallku*, 'the condor'), Coal Sack.
– *Llama,* 'the lama', Dark Constellation.
– *Llamero*, 'the lama herder' (*Hondero*, 'the slinger'; *Tatalito*, 'the father'), Dark Constellation.
– *Llamita*, 'the baby lama', Dark Constellation.– *Mamalita*, 'the woman', Dark Constellation.
– *Perro*, 'the dog', Dark Constellation.
– *Lawayaku*, (*Mayu*, 'the river', the Milky Way).

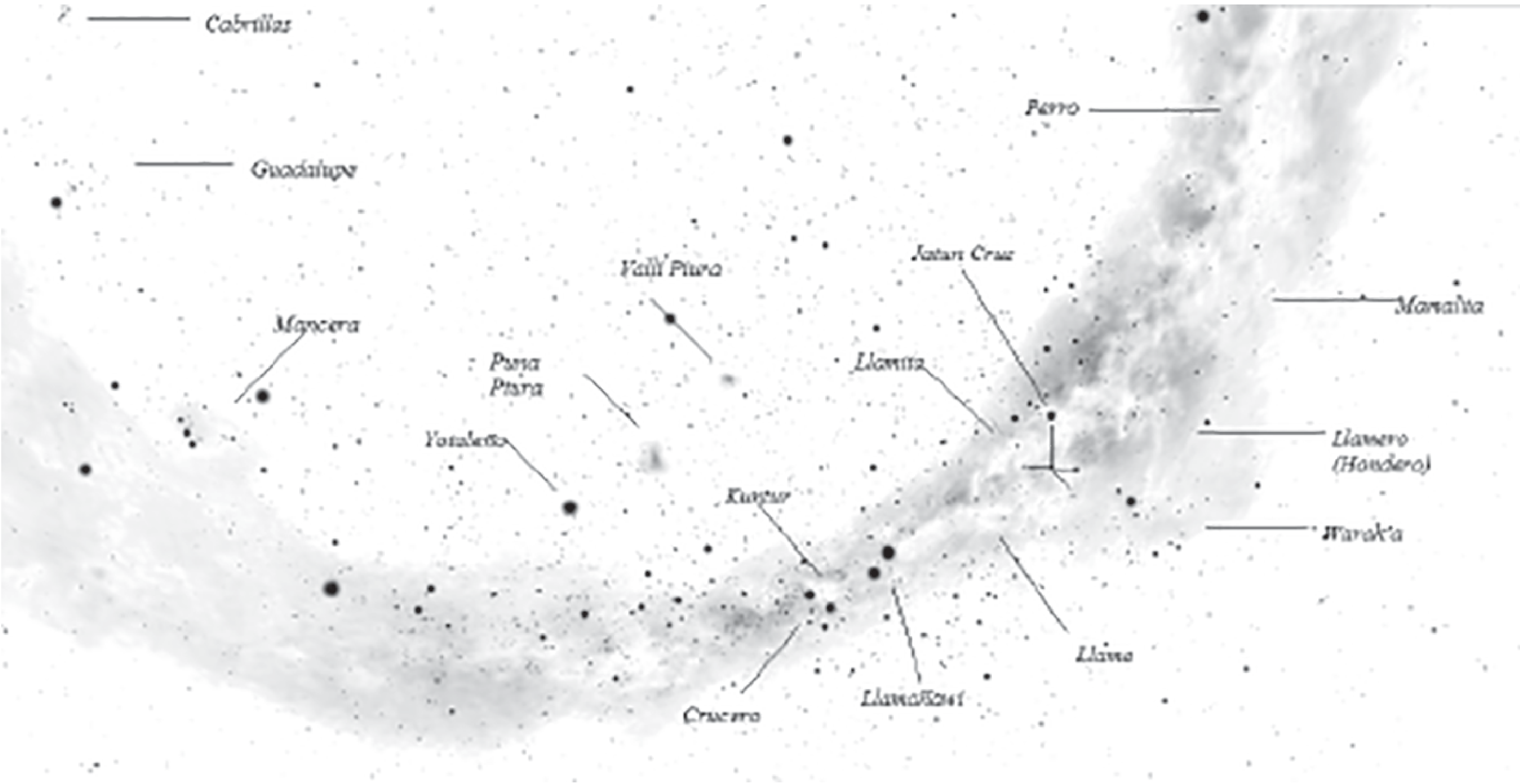
Other asterisms named by some informants remained unidentified: *Maqui Maqui*; *Maquingamita*; *Chillwiri*; *Totero*; *Tata Santiago*, 'father St. James'; *Ayela*; *K'empapi*.

At the beginning of winter in Maragua, and in the high valleys of Chuquisaca and Potosí, people are busy in the fields harvesting and storing crops, while at the same time forecasting the upcoming agricultural year through a set of rituals and actions which also involve stars and constellations. Moreover, the region of the high valleys in south-western Bolivia was the destination of lama caravans coming from the Puna (the highlands), in which salt and herbs were traded in the valleys with wheat, corn and other products.

The winter night sky reflects most of the activities on earth. The divination of the New Year holds a great importance, as it is crucial to people to have a good year in terms of rain and abundance of crops. In order to divine what the new year will bring, various asterisms are observed.

The Pleiades (*Cabrillas*), a single star, Canopus, called *Yotaleño* or *Yampareño*, and the Great and small Magellanic clouds (*Valli Piura* and *Puna Piura*), are observed in relation to the time of their first appearance (*Cabrillas* and *Yotaleño*), and to their brightness (all of them). In relation to the brightness of the stars, people interpret it in a range of ways: if the stars of the Pleiades are bright, then the year will be fine and the production good. On the other hand, if they appear weak, then a scarce production is expected. Other people refer to the brightness of the stars in a different way: if the Pleiades appear "big", then beans and corn should be planted in great numbers (the seeds are big); in case of the Pleiades being "small", weak, or faint, then wheat must be planted in greater amount (small seeds). Finally, if the Pleiades are "small",

FIGURE 1


Cabrillas
Guadalupe
Mancera
Perro
Jatun Cruz
Llamita
Kuntur
Crucero
Llama
Llamero
(Hondero)
Warak'a

little rain is expected. The same kind of divination occurs with the two Magellanic clouds: in general, if they are bright before sunrise, then the following year will be a good one; otherwise, if they are weak and only one is visible, then less production and less rain are expected[16].

The very same stars, together with other asterisms, constellations and single stars, are also observed to mark the time at night. The "eyes of the llama", for instance, are followed during the night to keep the time as it goes on. People in general are all very aware of the position of the celestial objects in relation to the local horizon, both the eastern and western one.

Another use of the stars refers to memory, myths, and knowledge. Within the Milky Way, called *Mayu*, the river which circulates water from the sky – on its way up – and back to earth when it sets, there are several dark silhouettes which recall animals and human beings in the act of moving across the sky.

A story that is widespread in the region tells of a caravan made of a man – the slinger (*Hondero*) with his sling (*Honda*) – followed by a llama with its lamb and, behind them, a woman (*Mamalita*). A dog (*Perrito*) closes the caravan. The whole set of dark silhouettes covers most part of the night sky and it is said to be the image of the caravans of lama traders from the highlands who visited during the winter months.

Whereas the lama and its lamb are dark figures mentioned since the colonial time (see below) and – together with other dark constellations for the Peruvian region – identified by Urton (1981), the slinger was not yet identified. As we will see below, what distinguishes the slinger from the other dark patches is its association with a stellar constellation, the sling itself, thus forming a figure double in nature, i.e. a constellation both dark and stellar.

The celestial *Hondero / Llamero* and his *Honda / Warak'a*

The nature of some Andean constellations was not recognized for a long time. Chroniclers from the XVII-XVIII century either ignored their nature or dismissed them as imaginative. Garcilaso de la Vega wrote in 1609:

> They fancied they saw the figure of an ewe with the body complete suckling a lamb in some dark patches spread over what astrologers call the Milky way. They tried to point it out to me saying: "Don't you see the head of the ewe? There is the lamb's head sucking; there are the bodies and their legs". But I could see nothing but the spots, which must have been for want of imagination on my part (Garcilaso 2006 bk. 2, ch. 23).

Another chronicler, José Acosta recognizes the existence of such dark constellations although he did not describe them:

I speak not only of the shining and resplendent parts [...] but much more for other dark and black spots that are in the sky. Because we really see in it things like spots, that are very noticeable, which I do not remember ever having seen in the heavens when I was in Europe, and here, in this other hemisphere, I have seen them very clearly. These spots are of the color and form of the eclipsed moon, and resemble it in their blackness and darkness. They travel fixed to the same stars and always of the same form and size (Acosta 1880 bk. 1: 19).

By gathering the accounts produced by the chroniclers and the ethnographic records collected during my fieldwork, I propose here the description and location of both the slinger and the sling, possibly the modern heirs of the pre-Hispanic *Illapa*, as described by the chroniclers. By recalling the quotes from the chroniclers, integrated now with specific astronomical references, we notice that it was Polo de Ondegardo who first provided us a description of the celestial Thunder god:

After Viracocha and the Sun, the third Huaca more venerated was that of the thunder, to which people were addressing with three names: *Chuquiilla*, *Catu illa*, *Intuillapa*, pretending that he is a man that is in the sky with a sling and a mace, and who is in charge for the rain, hail, and thunder, and for all those other things which are pertinent with the region of the air where clouds are made. This is a general Huaca for all the indians, to which they offer several sacrifices, and in Cuzco children were also offered to the sun (Polo de Ondegardo 1906, ch. 1: 225, translation and italics are mine).

Polo immediately highlights the importance of the Thunder in the rank of the Andean pantheon, as it was located close to Viracocha and the Sun itself[17]. The Thunder god is a man in the sky, holding a sling and a club. His warrior attitudes are evident; nevertheless, according to Polo the sling and the club are also responsible for all atmospheric phenomena, including rain, hail, thunder etc. The description Polo supplies is poor in details, and there are no helpful clues for grasping the nature and location of the celestial god.

Nevertheless, the Jesuit Bernabé Cobo adds crucial details useful for the identification of the constellation:

In accordance with the assumption stated above, the Indians searched for the second cause of the water that falls from the heavens, and as a result they came to share the opinion that it was the Thunder and that he oversaw providing them with water whenever he saw fit. After Viracocha and the sun, this god was ranked in third place, with respect to their worship. They imagined that he was a man who lived in the sky and that he was made up of stars, with a war club in his left hand and a sling in his right hand. He dressed in shining garments which gave off the flashes of lightning when he swirled his swing, and the crack of this sling made

the thunder, and he cracked his sling when he wanted it to rain. Moreover, they say that he passed a very large river in the middle of the sky. They indicated that this river was the white band we see down here called the Milky Way. Regarding this matter, they made up a great deal of foolishness that would be too detailed to include here. Anyway, they believed that from this river the Thunder drew the water that he would let fall down upon the earth. Since the Thunder was credited with the power to make it rain or hail, along with all the other things associated with the clouds and the realm of the sky where these imperfectly mixed bodies are formed, under the name of the Thunder or his adherents, they worshiped thunderbolts, lightning, rainbows, rain, hail, and even storms and whirlwinds. The Thunder had three names: the first and most important was *Chuqui Illa*, which means the radiance of gold; the second was *Catu Illa*, and the third *Inti Illapa*. They made a statue of mantles in the same manner as those of the Sun. It was said that the Thunder had a son and a brother, and this was explained by each one in any way he saw fit. These statues were placed in the Temple of the Sun, and each one was on its own altar. During the major festivals, all three were placed near Viracocha, right by the statues of the Sun (Cobo 1990, ch. 7: 32).

The Thunder god resides in the sky and it is made of stars, Cobo maintains. Moreover, he adds that the Thunder has a club in his left hand and a sling in the right one. The slinger is shining, a characteristic which can be associated to stars of different colors. Finally, Cobo mentions a particularity that is crucial in identifying the celestial slinger: it is being immersed into the celestial river, known in Quechua as *Mayu*.

We already noticed that the chroniclers did not understand that some of the Andean constellations were not necessarily made of stars, as we are used to seeing in western astronomy. Therefore, we can suppose that Cobo might have referred to a dark constellation as well as to a mixture of stars and dark interstellar clouds. It is this that we will aim to show later in this paper.

Regarding the information Cobo provided, we notice a striking correspondence with the information collected in the field regarding the *Hondero / Llamero* – the slinger – and the sling – *Honda* or *Warak'a* – as is it called in Quechua.

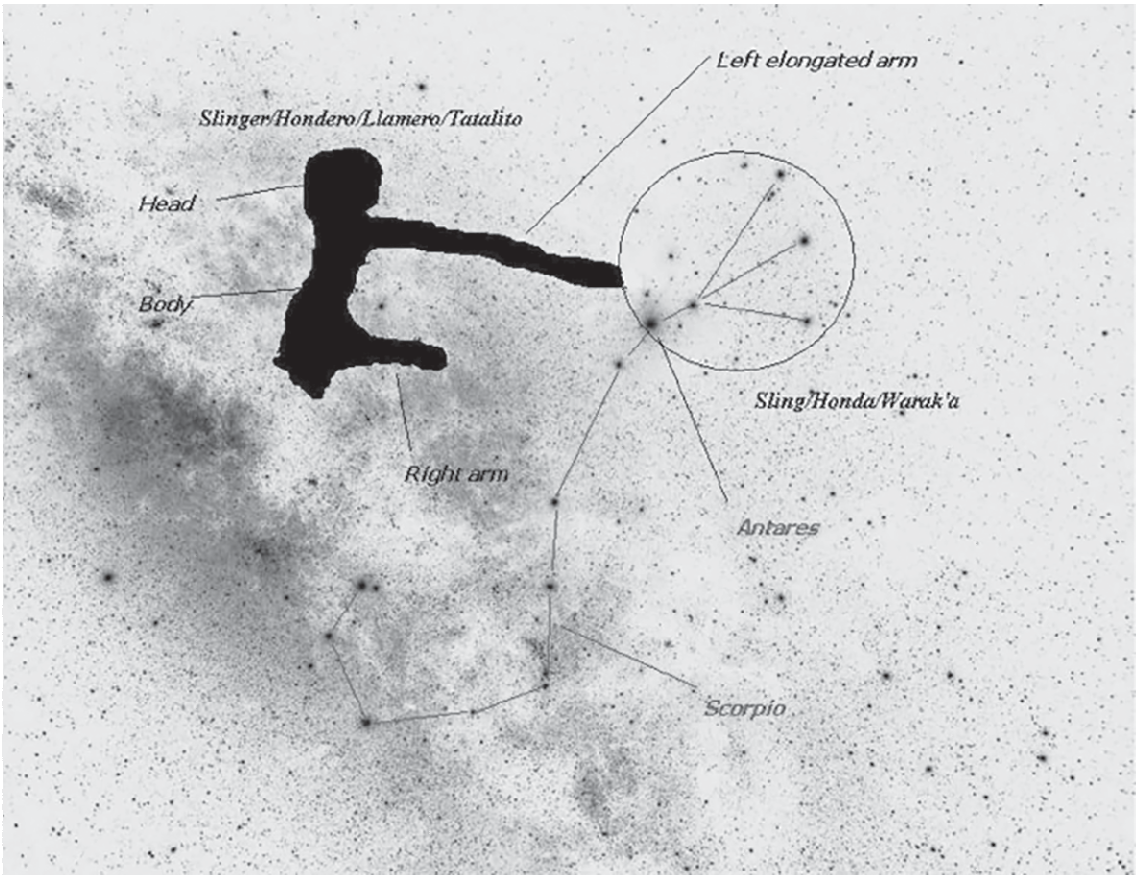
The *Llamero / Hondero* dark constellation found in Maragua and in the region of the Salar de Uyuni is formed by an area of dark interstellar clouds located in the southern Milky Way, midway between the western constellations of Scorpio and Sagittarius, and completely immersed in the clearest part of the Milky Way. It is a figure clearly recognizable in the sky, as it stands out against the stellar background[18]. The figure recalls that of a half human figure with his left arm completely elongated, and the right one bent to form an angle of about 90° in the pose of one holding a club or a hammer.

The *Honda / Warak'a* itself is a stellar asterism composed by the stars of the upper part of Scorpio. It is formed by α, β, δ, ϖ, σ, and τ *Scorpii*.

Antares, the alpha and brightest star of Scorpio, is located at the point where the elongated arm and hand of the slinger hold the sling, and as a star shows a color shifting from yellow to red depending on the local atmospheric conditions. The other stars of the slinger are white / blue.

The combination of the slinger and the sling is manifest in the sky and cannot be mistaken. In the Andean region of southern Bolivia, the slinger (*Hondero*, or *Llamero*) is always associated with the sling (*Honda*, or *Warak'a*). They are indicated and described together. In Maragua they are addressed with the names of *Llamero* and/or *Hondero,* as we already have mentioned. It is noteworthy to add here that a few informants mentioned the existence of the constellation of *Tata Santiago*; of these persons, however, only one indicated *Tata Santiago* as the actual *Hondero* visible in the night sky (see FIG. 2).

FIGURE 2



The *Llamero* and his *warak'a*, together with the *Llama / Llamita* and the *Crucero*, are the main asterisms of the Andean sky from March until Sep-

tember. The strong association between the lama herders and the animals is also linked to the sling itself, as it is the tool with which the herder controls the animals, directing their movements by throwing stones in the appropriate directions. This fact, together with the very name of the asterism, *Llamero / Hondero*, and its constant association with the *Warak'a / Honda*, confirms that the two stellar figures come together.

As for the identification of the slinger with the constellation described by Polo and Cobo, we first notice that the description quoted above mixes up the position of the sling and the club, as described in Cobo. In other words, Cobo put the sling on the right hand of the celestial thunder, whereas the club is on his left one. A misreading or a simple mistake of transcription can explain the difference.

More illuminating is the passage where Cobo writes of Thunder as passing through

> a very large river in the middle of the sky. They indicated that this river was the white band we see down here called the Milky Way [...] [T]hey believed that from this river the Thunder drew the water that he would let fall upon the earth (Cobo 1990: 32).

As we have already noted, the Slinger is immersed into the Milky Way, whereas the sling itself is in its vicinity. The two constellations are visible from early January (their heliacal rising) up to the end of October (the heliacal setting). This long period of visibility starts when the rainy season is at its peak in January and ends when the rain is expected to start in October. The maximum visibility is in the winter months that go from June to August.

Later, as the winter ends, the slinger and the sling approach the western horizon in a configuration which inspires the idea of the slinger in the act of aiming the sling towards the earth. The approach to the western horizon lasts from September until the end of October, when the two constellations are progressively immersed into the sun's glare. It is the time when the rainy season happens to start again.

In the field I was not able to record any commentary about the function of conveying rain attributed to this celestial figure: the Slinger and the Sling are used as time keepers at night and, apart from just one mention of the slinger as Tata Santiago, there was no other mention about them being linked to Thunder. This fact could be attributed to the influence of lama herders in naming the two constellations, which may have obliterated other names and meanings of the constellations[19]. Nevertheless, because the descriptions and positions of the two pairs Slinger / Sling and Thunder / Sling match, we believe that Polo and Cobo's mention refer to the same group of asterisms.

This opens a discussion about the function the Slinger and the Sling may have had in conveying water from the Milky Way towards the earth, thus fecundating it with precious water for the agricultural cycle. The hydraulic function of Thunder is justified in Cobo by the fact that Thunder is fully immersed in the *Mayu*, the celestial river, from where it draws the water later sent to earth. As we have noticed, the Slinger points his sling towards the earth just as it progressively anticipates its setting in the western sky, after sunset. Therefore, the sky configuration confirms the function the Slinger and the Sling have in bringing water to earth.

Here the chroniclers come in help to understand how this hydraulic function is achieved: as we have shown, both Polo and Cobo refer to Thunder as a man, a slinger, who is in the sky. Cobo adds that «the Indians searched for the second cause of water falling from the heavens, and as a result they came to share the opinion that it was the Thunder who was in charge to provide them with water whenever he saw fit». He also adds that «he cracked his sling when he wanted to rain» (Cobo 1990: 32). So, Thunder throws its lightning bolts towards the earth, thus providing water to fall on earth.

The hydraulic function that Thunder has can be fruitfully compared to that of the *Yacana*, in the Huarochirí manuscript (Salomon & Urioste 1991). The *Yacana* is the celestial lama, the central figure of the Andean sky in the region of Huarochirí, Peru, the character in charge of managing the water in the sky and on earth. According to this precious manuscript written in Quechua at the beginning of the XVII century, «in the middle of the night, when nobody is aware of it, the Yacana drinks all the water out of the ocean. If the Yacana failed to drink it, the waters would quickly drown the whole world» (Salomon & Urioste 1991: 133). The *Yacana* achieves the opposite function Thunder has, because, by drinking all the water out of the ocean, it prevents the water from flooding the earth. The celestial figures of the *Llamero* (Thunder) and the *Yacana* are the dominant figures of the Andean winter sky. Their maximum visibility occurs during the dry season, when they reach their maximum visibility and stay above the horizon the entire night. Later, when the austral spring approaches, the celestial lama, the Slinger, but also the whole winter Milky Way, start descending the sky, approaching the western horizon. This is the time of the year when the first rains are expected, a time when the water falls from the sky towards the earth. It may be that the *Yacana* prevents floods, a function directly achieved by Thunder, as it has been shown above. Although we are aware of the spatial and temporal distance between the coastal area in Peru and the high valleys of South Bolivia, I follow Salomon's thought of «broader Andean culture premises and tendencies» (1991: 5), which

in turn allow ethnographic comparisons between societies and groups beyond the boundaries of specific regional contexts.

However, Thunder shows another function that is worth including here, namely the fecundating function which links the mines with the falling of lightning and stars on earth.

It was still Cobo who first noticed that the *Colla* region was naturally exposed to lightning, due to its altitude; *Chuquisaca* (today, Sucre) had a reputation for its violent thunderstorms (Cobo 1956: 35); moreover, two mountains in its vicinity, *Sicasica* and *Churuquella*, were believed to be magnets which attracted the storms. The same destiny was attributed to Potosí, some 130 kilometers south-west of Sucre, as oral and written testimonies recount (Ade 1983).

At the same time, the region of Charca was reputed to be «*una pasta de plata y oro*» for its richness in mines of gold and silver, known not just during the Inca period but also earlier (Platt *et al.* 2006: 165). For instance, the mine of Porco, located today in the region of Potosí, hosted a cult whose origins probably precede the arrival of the Incas in the region (Platt *et al.* 2006: 168).

According to Platt & *alii*, the *huaca* in Porco was the main war *huaca* of the region, a place where, just as an oracle, the *huaca* 'spoke' and 'brought' the victory to its worshippers. The veneration had involved the whole area since pre-Inca times, and it had the function of developing a religious and spatial symbolism, uniting the Charca federations under the same cosmology (Platt *et al.* 2006: 169).

However, as in the case of the Inca Pachacuti Yamqui, the link war / thunder is also valid for the huacas linked to the mines. In Chaquí, located in the same region, the cult of lightning was testified by the existence of a stone cleft by lightning (*piedra del rayo*), located at the entrance of the mine (Cruz 2012). The Lightning itself, the authors say, was the source of fertility and could produce offspring through its prototypes *illa*, *mama*, *qunupa*, and *llallawa*, which all favored the "germination" of the mines and the fields, as well as that of flocks and people.

The reproductive aspect of *Illapa* is therefore testified by the fecundating capability of golden or silver nuggets, which were believed to be thrown into the ground by lightning or, as Urton shows, by a *ch'aska plata*, 'silver star', a term people in Misminay used to refer to shooting stars, after they hit the ground (Urton 1981: 92).

The link between an impregnating light and the brilliancy of metals, arms, and stars is also shown by the Aymara verb *llipikhatatha*, 'to shine', 'to flash', which Aymara people used to refer to the shine of smooth precious stones, or that of bright arms, or, finally, the brilliancy of the stars

(Platt *et al.* 2006: 169). Therefore, Platt & *alii* propose that «the sacred metal of *mamas* – just like the emission of bolts thrown by *Ch'uqui Illa* – accordingly represents the emission of the celestial thunder» (Platt *et al.* 2006: 170).

In the search for a visible counterpart of the lightning bolt, Ziolkowski – recalling the passage from Cobo when he describes the celestial Thunder gyrating and throwing the sling – hypothesizes that the projectile thrown by the celestial slinger corresponds to the planet Venus, in its evening apparition (Ziolkowski 1997: 61).

By relying on Guaman Poma's chronicle (Guaman Poma 1980 fol. 299 [301]: 272; 79: 62; 80: 63; 264 [266]: 238), where the chronicler associates Venus (*Lucero*) with both *Chaska Coyllur* and *Chuqui Ylla*, attributing the latter to Thunder, Ziolkowski proposes Venus as the projectile thrown to the ground (Ziolkowski 1997; Platt *et al.*2006).

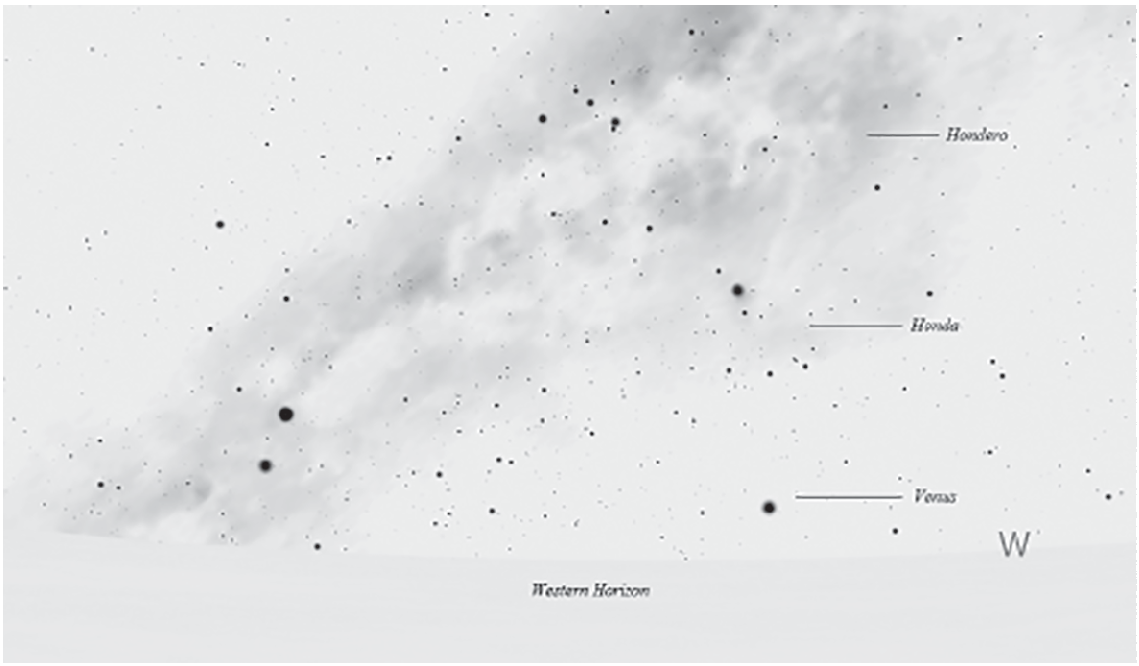
According to Ziolkowski, the two names refer respectively to Venus as morning (*Chaska Coyllur*) and evening star (*Chuqui Ylla*). Specifically, to justify the association of *Chuqui Yll*a with Venus as an evening star, Ziolkowski recalls the description of a *huaca* in the *ceque* system, precisely the third *huaca* of the eight *ceque* in the Chinchasuyu quarter (ch. 8: 3), where «the priests of *chucuilla* were saying that Thunder was bathing there» (Rowe 1982: 26).

Zuidema and Urton (1976) showed that 'to bathe' in Quechua means 'to set'; then, we can read the above passage as referring to *chucuilla* linked to the setting of Thunder.

It is noteworthy to highlight here that most of the passages mentioned by Ziolkowski refer to *Chuqui Ylla* and *Chasca Coyllur* as interchangeable rather than separated names for Venus. In fact, *Chaska Coyllur*, as even the ethnography has showed, refers to a generic brilliant star, whereas Venus, as morning star, is addressed as *Sotyay Chasca*, and the evening star as *Chisi Chasca*[20].

However, Ziolkowski's hypothesis confirms the spatial disposition that the Slinger and Venus have in relation to the western horizon. That is, for Venus to be thrown on earth, it has to be the evening star, when it sets up to three and a half hours after the sun. This would explain Venus as the "light" which fecundates the fields by bringing rain at the outset of the rainy season. Indeed, when the slinger points his sling towards the earth, it may happen that Venus (but also Jupiter) is the bolt itself. This is because the Sling points in the direction of the ecliptic, that is, the path of the sun, the moon, and the planets. When the slinger approaches the western horizon, if Venus is nearby, it may seem to be tossed towards the earth (see FIG. 3)

FIGURE 3



Once the bolt "hits" the ground – i.e., Venus sets – the expected rain arrives and the agricultural cycle starts again. In other words, its fecundative function is achieved.

On the other hand, if we want to look at a supposed cult of Venus, as Ziolkowski suggests, the data we have at our disposal are too fragmentary and do not help to work it out with the peculiar cycle that Venus shows, in relation to the earth yearly cycle. In fact, the very association Venus / slinger / west / rain, i.e. Venus appearing in the western horizon from September to November is not a phenomenon that happens on a yearly base. If we include Jupiter, another *Chaska Coyllur*, as the ethnography also suggests, we still have periods of the year when there is no brilliant star that could act as the fecundating projectile sent to earth[21].

Conclusive remarks

The fieldwork conducted in the Andean region of southwestern Bolivia witnessed astronomical knowledge shared by the farmers of the region. Bright and dark constellations are used as time-keeping at night and as indicators of the time for planting, harvesting and the rituals linked to the agricultural cycles. Amongst the asterisms and constellations known in the area, those which are immersed into the Milky Way are of interest to the farmers. The *Llamero / Hondero* and the *Honda/Warak'a*, together with

the Lama and its calf, are the most prominent summer night figures, as they are overhead at nighttime. Although the Lama and its baby were named in colonial times and identified some time later, the *Llamero* has not been associated with the *Warak'a* as a unique figure. Its peculiar nature, the combination of a dark constellation and a bright one, did not help in identifying and connecting the two asterisms. Moreover, the equivalence between the Inca constellation of *Illapa* and its *Honda* are unclear, as was as that between *Santiago* in his act of throwing lightning with the *Honda* and the contemporary *Llamero / Hondero* and the *Honda / Warak'a*.

By comparing the ethnographic evidence with the historic sources, we demonstrated a link between the Andean and colonial night sky figures and the contemporary ones. This method is not new, and it has led to the most important discoveries concerning Inca astronomy. Through the comparison between the ethnoastronomical findings and some relevant passages written by the chroniclers, we have been able to shed light on what the latter said by providing a "visual" reference to otherwise obscure passages.

Thus, Cobo and Polo's description of Thunder as a man in the sky who holds a club in one hand while gyrating the sling with the other found its visual counterpart in what the modern high-valley Bolivian peasants call The *Llamero*, or *Hondero*, he who leads a caravan of lamas in the sky with his *Warak'a*, or *Honda*.

This celestial figure has filled the temporal distance between Inca and contemporary astronomy, and, while it has undoubtedly acquired different meanings and functions, its main characteristics led us to its identification with the pre-Hispanic and colonial *Thunder* and *Santiago*. Moreover, thanks to the ethnoastronomical fieldwork, and specific knowledge of observational astronomy, we have been able to explain the otherwise obscure function of Thunder in fecundating the earth by throwing projectiles onto it.

People in the Andes, both in past and present times, had and have a vast knowledge of the night sky, a knowledge which embraces both the observational and the ritual aspects. Both the ancient Andean farmers and the "Inca astronomers" shared the same attitudes towards the night sky, as they were all very familiar with observational aspects and cultural readings.

Our permanence in the field has shown that contemporary peasants have a profound knowledge of those night figures in the sky, which are culturally relevant. We believe that such knowledge was also shared in the pre-Hispanic world, where a long-standing tradition of regional observations, beliefs and rituals about the night sky had the same epistemological relevance of an empire-inspired ritual in which rulers could allegedly

control their subjects by imposing events such as ceremonies, rituals, or simply regulating the planting and harvesting times.

In conclusion, as this case shows, our ethnographic findings shed light on a number of pre-Hispanic constellations thanks to careful and critical comparison with relevant primary sources; an example of how the ethnographic records and findings do play a relevant role in addressing astronomical research.

Notes

1. This article is the outcome of a fieldwork conducted in the department of Chuquisaqua, Bolivia, between October 2008 and July 2009. Originally intended to be part of a PhD thesis at the department of Social Anthropology at the University of St Andrews, its aim is to combine ethnoastronomical knowledge with historic and archaeological sources and materials. The methodology applied was that of sharing the daily duties with the local people with whom I became acquainted. The discussions were progressively centered on their ideas about the world as they knew it, the history of the place, the ancient times, and finally the stars and their meaning. The interviews were not structured and developed while taking long walks in the surrounding areas, something that people liked and where they showed more of a tendency "to talk" while in movement. Night interviews were centered on the stars while experiencing them, whereas discussions about agricultural practices developed during field work. I wish to thank prof. Tristan Platt for his encouragement and precious suggestions as well as prof. Alessandro Lupo for convincingly insisting in retaking part of the thesis and publishing it. Finally, I wish to thank the anonymous referees who helped to improve the text.

2. The community of Maragua is located within a natural depression – called Maragua itself – whose shape recalls that of a crater.

3. The last caravan of traders arrived in Maragua in the 90s. They were in great number and traded the products of the Puna – the Highlands – (especially herbs) with wheat and corn.

4. *Hondas* (slings) are still used in *tinkus* and *ch'ajwas* (Platt 2009).

5. On January 15th, 1781, several natives attacked the Spaniards on the pass of Chataquilla, near Sucre, attempting to free the native leader Tomas Catari, during his translation to La Plata (today, Sucre). Tomas Catari was a *caudillo* (local leader) who went against the new colonial system promoted by the Hapsburg dynasty in the Viceroyalty of Peru. He was executed by the Spaniards during the attempt for his rescue, thus generating further and violent warfare in the region (Serulnikov 1996).

6. The aspect linking the sling with *Illapa* will be considered in a later paragraph.

7. Conflicting cosmologies and world views as a political tool is an interesting aspect I came across while doing fieldwork. The so called traditional way of interacting with the supernatural world was a prerogative of the *ayllus*, whereas modern views were spread amongst those who were in charge at local, regional and national level.

8. For a similar report, see Valderrama & Escalante (1977: 44-45).

9. Ziólkowski, Mariusz, "La Piedra del Cielo: algunos aspectos de la educación e iniciación religiosa de los príncipes incas", in *Antropológica*, t. II, 2, Lima, 1984, quoted in Platt *et al.* (2006: 170).

10. «Y asimismo, [...] rogando [...] al trueno llamado *Chuquylla* para que enbiase sus aguas con que se criase y no enbiase graniço» (Molina 1989: 72).

11. The Coricancha, the central temple of the solar cult in Cuzco, and located in the town centre, is believed to have been the main astronomical 'observatory'; there, many deities were venerated (the sun, the moon, stars, but also the thunder, the rainbow, and Viracocha) (Bauer &Dearborn 1995: 6). Furthermore, the Coricancha was also the physical departing point of the system of lines (*ceques*) and shrines (*huacas*).

12. «*Santiago janikilla tatito caballumasa t'ijunakpanti alajpachana*». A prayer addressed to *Tata Santiago* by alpaca herders (Ade 1983: 784).

13. Onamatopoeic sound of lightning.

14. «También le llaman Santiago al rayo, por causa de haber visto la conquista del Cuzco al bienaventurado apóstol Santiago, patrón de nuestra España, pelear contra a los indios, y en favor de los españoles, con espada de fuego, que despedía de sì muchos rayos».

15. «*Yllapa* significa trueno ó relámpago; y así llaman los indios á los tiros de artilleria yllapa, por el estruendo que hace […]. Y tambien llamaban Santiago al tiro y al arcabuz, por la voz de los españoles al dispararlos» (Cieza de León 1880: 81).

16. Despite this vast assortment of ways of reading the stars, the response was quite homogeneous, whether the stars were bright or faint: almost everybody showed an optimistic view for next year. The stars were nice and bright, and so a good year of production was to be enjoyed. Not surprisingly, the most convinced were those whose fields had been damaged by the storm, showing no doubt that next year would provide much greater production.

17. See note 10.

18. The location of the Slinger is exactly where the nucleus of the Milky Way is located. This is the reason why the region is packed with stars and nebulae. The black silhouette of the Slinger stands out from it.

19. In the region that goes from south-west Chuquisaca to the Salar de Uyuni, the so called black constellations recall a lama caravan: the *Llamero* and his *Honda* (or *Warak'a*); the lama and its baby; behind the *Llamero*, a black figure called *Mamalita*, and behind her, the *Perro*. These constellations are immersed in the Milky Way and cover most of the Winter sky. We add here that the lama herders had and still have a strong influence on the farmers in Maragua and in the high-valley regions, as they are still vividly remembered and feared for their uncommon powers.

20. Lexicons: Holguín (2007), ethnography: Urton (1981).

21. If we consider a cycle of 32 years, the time Venus needs to reappear in front of the same stars and at the same time of night, then Venus as a projectile will be visible only 12 years out of 32. If we assume that even Jupiter could function as the projectile, then we notice that the other *Chaska Coyllur* adds three more years, for a total of 15 years with a *Chaska Coyllur* thrown to earth when rain is expected. It is worth adding here that out of the 32 years total, three of them will show two *Chaska Coyllur* being thrown by the slinger, i.e. Venus and Jupiter sharing the same celestial space.

References

Acosta, J. de 1880 (1590). *The natural & moral history of the Indies* / by Joseph de Acosta; reprinted from the English translated edition of Edward Grimeston, 1604; and edited, with notes and an introduction, by Clements R. Markham. London: Printed for the Hakluyt Society.

Acosta, J. de 1962 (1590). *Historia natural y moral de las Indias: en que se tratan de las cosas notabiles del cielo, elementos, metales, plantes y animales dellas, y los ritos, y ceremonias, leyes y gobierno de los indios* / compuesto por Joseph

de Acosta; edición preparada por Edmundo O'Gorman. México: Fondo de Cultura Económica.
Ade, D. W. G. 1983. Lightning in the Folklife and Religion of the Central Andes. *Anthropos*, 78 (5/6): 770-788.
Arriaga, P. J. de 1968 (1621). *The extirpation of idolatry in Peru*, transl. & ed. L. Clark Keating. Lexington: University Press of Kentucky.
Bauer, B. S. & D. S. P. Dearborn 1995. *Astronomy and empire in the ancient Andes: The cultural origins of Inca sky watching*. Austin: University of Texas Press.
Baulenas i Pubill, A. 2012. La divinidad Illapa en el panteón imperial incaico. *Investigaciones Sociales*, 16 (28): 333-341.
Bertonio, L. 1984 (1612). *Vocabulario de la lengua aymara*. Cochabamba: Centro de Estudios de la Realidad Económica y Social.
Cieza de León, P. 1880 (1553). *La crónica del Perú*. Madrid: Imp. de Manuel Gines Hernández.
Cobo, B. 1956 (1653). *Historia del Nuevo Mundo*, ed. F. Mateos, 2 Vols. Madrid: Atlas.
Cobo, B. 1990 (1653). *Inca religion and customs*, transl. & ed. Roland Hamilton. Austin: University of Texas Press.
Cruz, P. 2009. Huacas olvidadas y cerros santos: Apuntes metodológicos sobre la cartografía sagrada en los Andes del sur de Bolivia. *Estudios atacameños*, 38: 55-74.
Cruz, P. 2012. El mundo se explica al andar. Consideraciones en torno a la sacralización del paisaje en los Andes del sur de Bolivia (Potosí, Chuquisaca). *Indiana*, 29: 221-251.
Duviols, P. 2003 (1986). *Procesos y visitas de idolatrías: Cajatambo, siglo XVII*. Lima: Pontificia Universidad Católica del Perú-Instituto Francés de Estudios Andinos.
Garcilaso de la Vega, el Inca 2006 (1609). *Royal commentaries of the Incas and general history of Peru / Garcilaso de la Vega, El Inca*; translated by Harold V. Livermore; edited, with an introduction by Karen Spalding. Indianapolis, Ind.: Hackett Pub. Co.
Guaman Poma de Ayala, F. 1980 (1615). *El primer nueva Corónica y Buen Gobierno.* Copenaghen: Det Kongelige Bibliotek. *The Guaman Poma Website*: http://www.kb.dk/permalink/2006/poma/info/en/frontpage.htm, last accessed 12/10/2017.
Hernández Príncipe, R. 1923 (1622) Mitología Andina. *Inca*, 1: 25-68.
Holguín, D. G. 2007 (1608). *Vocabulario de la Lengua General de todo el Perú llamada Lengua Qquichua, o del Inca*. Lima: Francisco del Canto [digital version consulted on: http://www.illa-a.org/cd/diccionarios/VocabvlarioQqichua-DeHolguin.pdf, last accessed 12/10/2017].
MacCormack, S. 1991. *Religion in the Andes: Vision and imagination in early colonial Peru*. Princeton: Princeton University Press.
Molina, C. de & C. De Albornoz 1989. *Fábulas y mitos de los Incas*. Madrid: Historia 16.
Murúa, M. de 1922 (1616). *Historia de los Incas, reyes del Perú*. Lima: Sanmartí y Ca.

Murúa, M. de 1986 (1613). *Historia general del Perú*. Madrid: Historia 16.

Platt, T. 2009. Review of music and the poetics of production in the Bolivian Andes – by Henry Stobart. *Journal of the Royal Anthropological Institute*, 15 (1): 208-209.

Platt, T. 2010. Desde la perspectiva de la isla. Guerra y transformación en un archipiélago vertical andino: Macha (Norte de Potosí, Bolivia). *Chungará*, 42 (1): 297-324.

Platt, T., Bouysse-Cassagne, T. & O. Harris 2006. *Qaraqara-Charka. Mallku, Inka y Rey en la provincia de Charcas (siglos XV-XVII). Historia antropológica de una confederación aymara*. La Paz: Instituto Francés de Estudios Andinos-Plural editores-University of St. Andrews-University of London-Inter American Foundation-Fundación Cultural del Banco Central de Bolivia.

Polo de Ondegardo y Zárate 1906 (1585). Los errores y supersticiones de los indios, sacados del tratado y aueriguación que hizo el licenciado Polo. *Revista Histórica*, 1: 207-231.

Remesal, A. de 1932 (1620). *Historia general de las Indias Occidentales, y particular de la gobernación de Chiapa y Guatemala*, 4 Vols. Madrid: Tipografía Nacional.

Rowe, J. H. 1982. "Inca policies and institutions relating to the cultural unification of the empire", in G. A. Collier, R. Rosaldo & J. D. Wirth (eds.), *The Inca and Aztec States, 1400-1800: Anthropology and history*, pp. 93-118. New York: Academic Press.

Salomon, F. & G. L. Urioste 1991. *The Huarochiri manuscript: A testament of ancient and Colonial Andean religion*. Austin: University of Texas Press.

Santa Cruz Pachacuti Yamqui Salcamayhua, Juan de 1993 (1613). *Relación de antiguedades deste Reyno del Piru / Joan de Santa Cruz Pachacuti Yamqui Salcamaygua*; estudio etnohistórico y lingüístico de Pierre Duviols y César Itier. Lima: Institut Francais d'Etudes Andines; Cusco: Centro de Estudios Regionales Andinos "Bartolome de Las Casas".

Serulnikov, S. 1996. Disputed images of colonialism: Spanish rule and indian subversion in Northern Potosí, 1777-1780. *The Hispanic American Historical Review*, 76 (2): 189-226.

Tschopik, H. 1951. *The Aymara of Chucuito, Peru*. New York: The American Museum of Natural History.

Urton, G. 1981. *At the crossroad of the earth and the sky. An Andean cosmology*. Austin: University of Texas Press.

Valderrama Fernández, R. & C. Escalante Gutiérrez 1977. *Gregorio Condori Mammani. Autobiografía*. Cusco: Centro de Estudios Rurales Andinos "Bartolomé de las Casas".

Ziolkowski, M. S. 1997. *La guerra de los wawqis: los objetivos y los mecanismos de la rivalidad dentro de la élite inka, siglos XV-XVI*. Quito: Abya-Yala.

Zuidema, R. T. & G. Urton 1976. La constelación de la llama en los Andes peruanos. *Allpanchis Phuturinqa*, 9: 59-119.

Abstract

The article shows how ethnoastronomical research in the Andean region of Bolivia can be resourcefully compared to the ethnohistoric sources with the aim of identifying the nature and function of two important Andean constellations. Illapa / Santiago *is, according to several XVI-XVII century chroniclers, a character of the Inca pantheon represented as a man residing in the sky, armed with a sling and throwing bolts. These characteristics are found in the* Llamero / Hondero *constellation and in the nearby* Honda / Warak'a*, constellations known today in the Andean region. The* Llamero / Hondero *constellation is one of the most prominent figures in the Andean night sky, immersed in the* Mayu*, the Milky Way. The former is a dark constellation whereas the latter is made of stars. The comparison with the descriptions of the chroniclers confirms the equivalence between the* Llamero / Hondero *and the Inca and colonial* Illapa / Santiago.
A further comparison between the visibility and the spatial disposition of the asterisms confirms the hypothesis about the function they had in conveying rain to earth. This aspect is also apparent in the association of the god with the mines, in the act of throwing lightning and bolts towards and under the ground, in so making the fields fertile.

Key words: Bolivia, Ethnoastronomy, Chroniclers, *Illapa*.

Riassunto

Il presente articolo mostra come una ricerca etnoastronomica nella zona andina boliviana possa efficacemente essere associata alle fonti etnostoriche con il fine di identificare la natura e la funzione di due importanti costellazioni andine. Illapa / Santiago *è, secondo alcuni cronisti del XVI-XVII secolo, una figura del pantheon inca raffigurato come un uomo residente in cielo, armato di fionda, con cui egli lancia saette. Queste caratteristiche si ritrovano nella costellazione dello* Llamero / Hondero *e nella vicina* Honda / Warak'a*, asterismi noti oggi nella regione andina. Lo* Llamero / Hondero *è una delle costellazioni più prominenti del cielo andino, immerso nel fiume* Mayu*, la Via Lattea. Questa coppia di costellazioni è di natura oscura la prima, e stellare la seconda. Il confronto con la descrizione dei cronisti conferma l'equivalenza tra lo* Llamero *e l'*Illapa / Santiago *inca e coloniale.*
Un ulteriore confronto tra la visibilità e la disposizione spaziale degli asterismi conferma alcune ipotesi sulla funzione idraulica e fecondatrice della divinità collegate alle figure celesti. Così, Illapa ebbe una funzione fecondante in relazione alla sua capacità di convogliare pioggia sulla terra.

Parole chiave: Bolivia, etnoastronomia, cronisti, *Illapa*.

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