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Amantecayotl Glyphs Revisited: Writing and Featherworking in the Florentine Codex

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Abstract
This article proposes a reading for all the glyphs infixed in the images which accompany the twenty-first chapter of Book 9 of the Florentine Codex, following the decipherment work initiated by Frances Berdan (2015). These images depict the process of featherworking during the early colonial period, expressing the names of the materials used by the feather artists or *amanteca*, their properties, as well as the actions involved in the manufacture of their artworks. The analysis of these glyphs shows that they constitute a sort of technical 'instruction manual', and possibly corresponded to one of the ways in which arts and crafts were transmitted among the indigenous people of Mexico during the sixteenth century, an era of strong transculturation. The analysis also reveals how strict phonocentric approaches in grammatology are insufficient to tackle the complexity of Aztec writing and to understand its communicative possibilities. Instead, we propose that, in these pages, images work together with logosyllabic glyphs, codifying 'embedded texts', as defined by Janet Berlo (1983), texts which had a degree of independence from those written in Spanish and even alphabetic Nahuatl, and hence can be considered as true pictographies, indigenous texts with the potential to decolonise our idea of writing.

Keywords: Florentine Codex • Aztec art • featherwork • Aztec writing • hieroglyphs • pictography

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1. Introduction

Sixteenth century Mexican featherwork has been recognised as one of the most complex and original expressions of the period, being a crucial medium for both pre-Hispanic and Christian art of the period (Russo 1998, 2002, 2014; Arroyo Urióstegui and Pérez Rentería 2009; Rivero Weber and Feest 2012; Russo, Wolf, and Fane, 2015; Kern 2018). Perhaps the pivotal role that featherworking played in the process of cross-cultural communication between the Amerindian and the European worlds (and beyond) lead this art to be explained in great detail in the Florentine Codex (1575–1577), the cultural 'encyclopedia' created by the Franciscan friar Bernardino de Sahagún and his indigenous students (Favrot Peterson and Terraciano 2019). As proposed by Kevin Terraciano (2010) and Diana Magaloni (2014: 3), the Florentine Codex can be said to comprise three texts: the Nahuatl alphabetic text, the Spanish alphabetic text, and a "pictorial" text; however, the latter is rather complex; it is not merely iconographic, but is characterised by the complex interaction between Aztec logosyllabic writing (Lacadena 2008; Whittaker 2021) and the images which those glyphs accompany.

In this article, we propose a detailed reading of all the logo-syllabic glyphs contained within the images of the twenty-first chapter of Book 9 ("The Merchants") of the Florentine Codex, titled "Here is told how those of Amantlan, the ornamenters, performed their task" (Sahagún 1959: 93–97), whose decipherment has been initially advanced by Frances Berdan (2015). Such signs could be considered as examples of what has been called 'codigo-phagic writing', i.e., a collection of discursive fragments in a context of cultural transformation and exchange (Viveros Espinosa 2020), as well as part of the transcultural process of '(re)education by images' shared by both pre-Hispanic and early colonial society (see Russo 1998: 65–69). We suggest that these images accompanied by written signs can be read as a true technical-craftsmanship 'instruction manual', where the combination of 'iconography' and logosyllabic glyphs worked in complex and unexpected ways, creating a true text that is sometimes parallel and sometimes original in relation to its counterpart in alphabetic Nahuatl.

A full and systematic reading of the whole corpus of logosyllabic glyphs in the Florentine Codex is still pending, although promising progress has been recently made by Gordon Whittaker (2021). However, the method used in this article takes into consideration but also distances itself from prior models, mainly those of Alfonso Lacadena (2008), and Whittaker himself (2018). One of the obstacles for the correct reading of these glyphs has been the idea that Aztec writing is a system of labels for names and calendar dates, which worked completely in isolation from the accompanying

'iconography'. We argue that these examples show that logo-syllabic glyphs worked in tandem with images in order to transmit complex sentences, which would support the idea of a 'picture writing', contradicting the idea of a strict phoneticist definition of writing (Daniels 2006), and thus siding with decolonial theories of writing (Battestini 1997: 24–25; Yan 2002).

Our main assumption is that only if we consider Mesoamerican images as vehicles for 'embedded texts' in the sense of Janet Berlo (1983), we can arrive at a correct reading for many of these glyphs, which in some cases have remained obscure until now. Thus, we will treat these images as 'pictographies', which could be defined as iconographic arrangements that transmitted variable texts in a top-down, semantic oriented fashion (cfr. Zamora Corona 2022); in particular, Mesoamerican pictographies have been suggested to be a "language" of sorts, which doesn't only represent objects and situations, but to transmit texts and meanings (Escalante Gonzalvo 2010: 19). In the case of Aztec writing, pictographies worked in tandem with logo-syllabic writing, whose function was to fix some crucial 'invariable' parts of the text, mostly names, but sometimes verbs, adverbs, and other kinds of words. The term *pictography*, understood in this way, can stimulate further thinking about the terms traditionally used in our understanding of the art of indigenous peoples of the Americas, such as image, iconography, and writing itself, as well as their relations.

However, before addressing the main topic of this article, some words are needed on a rather complex process of the making of feather art (*amantecayotl*) in Mexico during the sixteenth century, in order to provide a guide to the reader.

2. How Aztec featherworks were made: An overview

According to Pascal Mongne (2016: 89), as it happens in other indigenous cultures of the Americas, the Nahua *amantecah* three main featherworking techniques which they often combined, depending on the objects and ornaments being covered: tying, weaving and gluing. In the Florentine Codex two main techniques of feather art are taught: featherworks fixed with glue (*tzacutica*), also called 'feather mosaic', and featherworks fastened with cord and maguey thread (*mecatica, ichtica*), also known as 'knot-based featherwork' (Russo 1998: 72–73; Rivero Weber and Feest 2012: 47, 53).

The first one was technically more complex (fig. 1). It involved the drafting of an image by a scribe-artist (*tlacuilo*) and its tracing over a sheet of rough bark paper (*cuauhamatl*), on which the work was done. To make the tracing, a translucent sheet of

cotton cloth was prepared on a straight maguey leaf, on which a layer of glue made with orchid bulbs was spread. Carded cotton was pressed on it repeatedly and left to dry, forming a thin, transparent sheet, which was peeled off and placed over the design of the *tlacuilo* to be traced. Later, this cotton fabric was pasted over a sheet of rough bark paper, which was carefully cut in order to be able to work with it.

Elsewhere, a sheet with the background of the image was prepared. This background was prepared with a mosaic technique, in which lower-quality, dyed feathers, were glued first. The model cut out and glued on a frame was adhered to the base, too, and afterwards 'exotic', expensive feathers were placed on top, that is, feathers whose colour was totally natural: roseate spoonbill for the reds, cotinga for the blues, quetzal for the greens, hummingbird for iridescent areas, eagle down for the whites, among an enormous variety and possibilities. Each of these feathers was carefully cut and placed to make the most of their luminosity and iridescence. The aesthetic qualities of featherworks which most attracted the public, both indigenous and European, were the palpability of the surfaces created in this way, the intensity of colours, and the changing perception of light when seeing the work from different angles (that is, with or without iridescence).

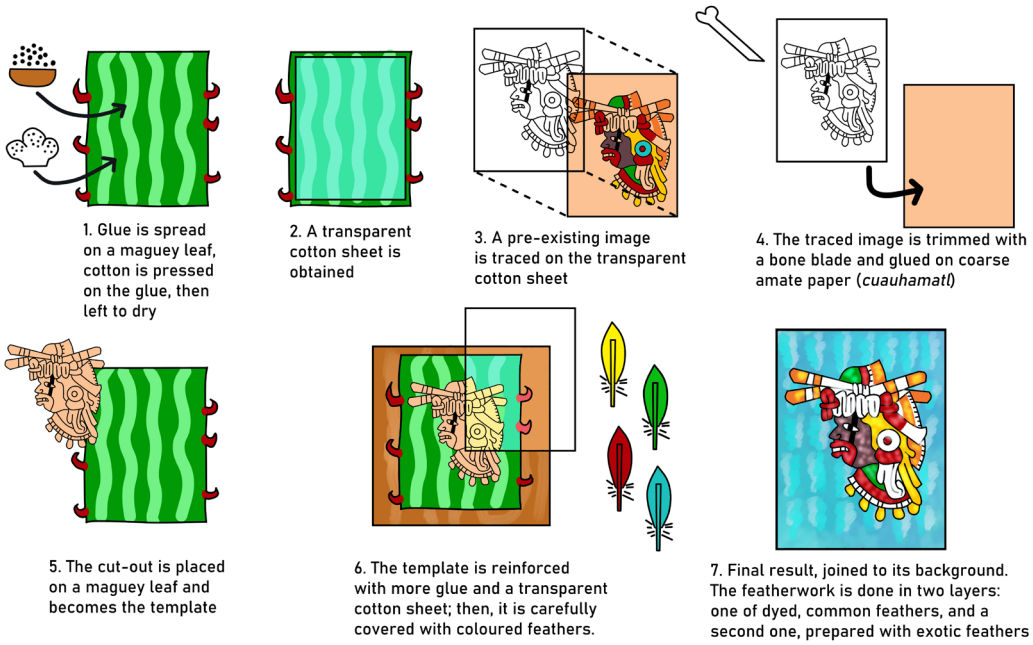


Fig.1: Alonso Zamora Corona, *Stages of Mexican feather mosaic*, drawing

The knot-based technique was seemingly simpler: feathers were 'sewn' by knotting their ends on a cane frame prepared with maguey fibre threads (*mecatl*), which was covered with a knotted framework itself; however, contemporary studies on surviving examples where this technique is extensively featured, such as the famous feather

headdress of the Weltmuseum in Vienna, reveal a number of sub-techniques and variations of knots on this procedure (Moreno Guzmán and Korn 2012: 68-72). The two techniques were often combined, as Russo has pointed out (1998: 73), as it is evident in masterpieces such as the Vienna *chimalli*, 'shield' (see Riedler 2015) and the aforementioned quetzal feather headdress, executed in the Apaneca style (*quetzalapanecayotl*). Likewise, many supports were used to make all kinds of featherwork objects such as wooden frames, leather 'shirts', metal bands, while other details could be added, like outlines and plaques made of gold (cfr. Moreno Guzmán and Korn 2012: 73-81). Having outlined two main processes of feather art making, what follows is an elaboration of the readings of glyphs inserted in the images in the corresponding folios of the Florentine Codex.

3.1 Reading *amantecayotl* glyphs: The featherworks fastened with glue

As mentioned, the decipherment on these glyphs was started by Frances Berdan, who first noticed the exquisite ways in which Aztec writing depicts materials, their qualities and characteristics (2015: 328). Nonetheless, as she observes, some of the glyphs still remain obscure. What we argue here is that the reading of some of these glyphs has eluded us because they have been considered in isolation, extricated from their pictorial and alphabetic context; that is, the messages they convey—which roughly correspond to the alphabetic commentaries in Nahuatl—are necessarily linked to them. Therefore, in this article we attempt to work out these glyphs in their full context, explaining them sequentially, grounding our readings in both the pictorial context and the accompanying alphabetic text. The system of transcription used is a mixture of Lacadena's (2008) and Whittaker's (2021) proposals, although dispensing of the use of parentheses in transliterations, and using italic capitals for shortly describing pictographic sequences (see Zamora Corona 2022).

While the focus of this study are the glyphs of the twenty-first chapter of Book 9 of the Florentine Codex, it is necessary to begin with one glyph that belongs to the pictograph of the last paragraph of the preceding chapter (fig. 2). This particular glyph introduces one of two main methods for fastening the feathers: with glue (*tzacutica*); As for the method of tying with cords (*mecatica*), it is somewhat integrated into the scene through a bundle of thread lying in the ground, whereas the method of gluing is denoted by a 'floating' logographic glyph, which is formed by a gourd with glue and an orchid bulb. The latter was the main ingredient of *tzacutli* or *tzauhtli*, the glue used by the Aztec (cfr. González Tirado 2006), from the root *tzacu(a)*, 'to close, enclose' (Karttunen 1992: 311).

Pictography	Glyph	Reading
		**TZACU**, *tzacutli*, "glue"

Fig. 2: Florentine Codex, Bk. 9, fol. 63r.

The importance of this glyph mainly resides in its (partial) reappearance in the next chapter, where it is associated with another glyph that has hitherto eluded a reading. The pictography shows the making of the transparent cotton leaf, which will later help in the process of tracing the image: first, a straight leaf of maguey was sought; then, it was covered with glue, and carded cotton was pressed on it to create a thin layer that will become a sheet of transparent cotton. The pictograph must be read from the bottom part, where a bend (or 'poor quality') maguey leaf is, to the top, where the cotton is being pressed against the straight maguey leaf (fig. 3).

Pictography	Glyph	Reading
	 	**IX**, *ixtli*, "surface" **IX-TZACU-**SPREADING, PRESSING-**ICHCA**, *conixtzacuhuia, conixtzacumato [...] compapachoa in ichcatlapuchintli*

		"they put glue on the surface; with their hands they covered the surface with glue [...] they pressed down the carded cotton"

Text in alphabetic Nahuatl and English translation

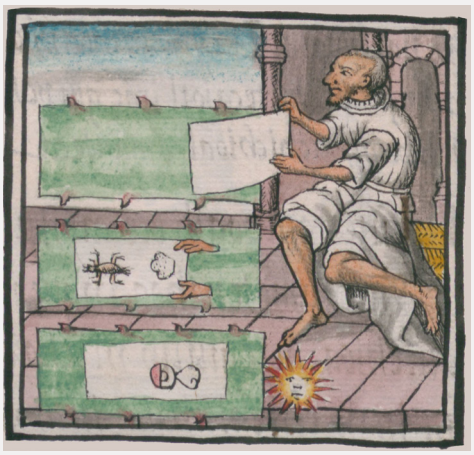
Quitemoa in cualli in ixpetzic, in ixtetzcaltic, in amo ixzahuayo, ihuan in pechtic, in amo copiltic, copichtic: ipan quihuapahua in ichcatl. Achto conixtzacuhuia, conixtzacumato: niman ic ipan conteca conzoa, compapachoa in ichcatlapuchintli: achto huel quipochina, cahana, quicanahua...

They sought a good [maguey leaf], of smooth, shiny surface, with no knobs; and even, not raised [or] depressed. On it they reinforced the cotton. First, they put glue on the surface; with their hands they covered the surface with glue. Then on this they laid, they stretched out, they pressed down the carded cotton. First, they carded it well; they stretched it repeatedly; they thinned it out… (Sahagún 1959: 93).

Fig. 3: Florentine Codex, Bk. 9, fol. 63v.

The first glyph has been already read by Berdan (2015: 328). It could be polysemic: the 'eye' glyph, **IX**, *ixtli*, alludes to the surface of the maguey leaf used for the work, described as 'shiny' (*ixpetztic*) and smooth (*ixtetzcaltic*). The second glyph, unread until now, is only understood when compared to the 'glue' glyph of the preceding section, as well as when considering the whole pictography and its accompanying alphabetic text. It is actually a verb, working together with the depiction of the artisan pressing the cotton on the leaf, in order to form the sentence: *conixtzacuhuia, conixtzacumato, niman ic ipan conteca conzoa, quinpachoa in ichcatl*, "First they put glue on the surface; with their hands they covered the surface with glue. Then on this they laid, they stretched out, they pressed down the carded cotton" (Sahagún 1959: 93). Only the initial verb is written in a logosyllabic fashion, whereas the rest of the sentence is represented by the iconography, which—by having an 'embedded text'—becomes a pictograph.

The next sequence depicts the process of drying of the transparent cotton sheet under the sun. The reading order of this sequence is not bottom–top; instead, the reading begins with the middle section, then follows the bottom section, and finally the uppermost one, as the accompanying alphabetic text reveals (fig. 4).

Pictography	Glyph	Reading
		**TOCA-AYAUH**-PRESSING, *Icuac in za iuhqui tocapeyotl, in za iuhqui ayahuitl, mepan compachoa*, "When this was just like a cobweb, like the mist, they pressed it down the maguey leaf"
		**TONA-IX-HUAQUI?,** *auh tonayan conmana, zan achi onixhuaqui,* "they set it out in the sun, only a little did the surface dry..."

Text in alphabetic Nahuatl and English translation

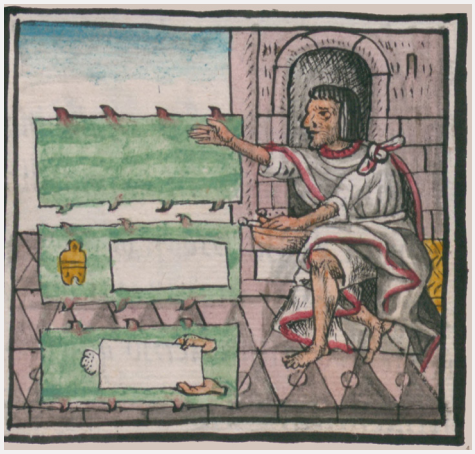
Icuac in za iuhqui tocapeyotl, in za iuhqui ayahuitl mepan compachoa: auh tonayan conmana, zan achi onixhuaqui...

When this was just like a cobweb, like the mist, they pressed it down upon the maguey leaf, and set it out in the sun. Only a little did the surface dry (Sahagún 1959: 93).

Fig. 4: Florentine Codex, Bk. 9, fol. 63v.

Berdan noticed that the 'spider' glyph in the middle section alluded to one of the characteristics of the cotton paper: to be like a very thin cobweb; she also noticed that the accompanying glyph depicted cotton (2015: 328). The bottom sequence refers to the drying of the paper under the sun (*tonayan*). As for the fourth glyph, Berdan identified one of its elements as a seed (*petzicatl*), and the whole sign as an allusion to the verb *onixpetzihui*, 'to make shiny' (Ibid.). While this is possible, there is no comparable glyph elsewhere to confirm this reading. Instead, we propose somewhat tentatively that this glyph has its counterpart in the Matrícula de Huexotzinco 886v, where a dried flower corresponds to the word *huaqui*, 'dry' (Thouvenot 2012). The following pictograph shows the spreading of a new layer of glue above the sheet, which was peeled off the maguey leaf once it was so dry that it 'crackled' (fig. 5).

Berdan read the 'bell' glyph as the syllabogram **yo**, proposing *oyohualli* and then deriving it to *ohuac*, the past for *huaqui*, 'to dry' (2015: 328). In reality, this glyph is motivated by the word *cacalachtli*, 'clay bell', and stands for the verb *ocacalachuac*, 'it crackled with dryness'. Although the bell is metallic, this material discrepancy is present also in *yoyotli*, 'wooden bell', the motivation for the **yo** syllabogram, usually depicted as a metallic bell, and does not affect the reading.

Pictography	Glyph	Reading
	 	**CACALACH**, *ocacalachuac*, "it crackled with its dryness" PEELING-**ICHCA-AMA**, *mocolehua in ichcamatl*, "the cotton paper was peeled off"

Text in alphabetic Nahuatl and English translation

In icuac onixhuac, oc ceppa conixtzacuhuia, ic onixpeti, ic onixtetzcahui, ic onix-petzihui in ichcatl. Auh in icuac ohuac, in ocacalachuac, niman ic mocolehua: icuac ipan ommozoa, onmomana in tlacuilolmachiyotl...

When the surface had dried, once again they spread glue on the surface, thereby making the surface of the cotton glossy, shiny. And when it had dried, when it crackled with its dryness, then it was peeled off. Then [the cotton] was spread, placed on the painted pattern... (Sahagún 1959: 93).

Fig. 5: Florentine Codex, Bk. 9, 63v.

The next sequence is rather complex (fig. 6): its reading starts from the uppermost part, then continues in the bottom, and it goes again up until the part where the coloured paper is represented. It depicts the tracing of the pattern pre-painted by the *tlacuilo* on the transparent cotton sheet, which was then glued to a rough sheet of bark paper (*cuauhamatl*), serving as the support for the featherwork. It is worth mentioning that the pattern on the uppermost part presents the image of a Christian saint, testimony to the transcultural negotiation process.

Pictography	Glyph	Reading
	   	**TLAZAL**, *tlazalli*, “mosaic, glue” **ICHCA**, *ichcatl*, “cotton” **CUAUH-AMA?**, *cuauhamatl*, “bark paper” **tlan-IX**, *tlani ixtli*, “beneath the surface”

Text in alphabetic Nahuatl and English translation

Ic ipan micuiloa, motlalinia, yehuatl ipan onmotztiuh in tlanipa oalneci tlacuilol-li. Auh in icuac omocencauh, in onohuian micuilo ichcatl, in atle omolcauh, in ixquich ic tlatlalilli machiyotl: niman ic ipan onmozaloa ce amatl, cuauhamatl, ic mocenehuapahua ic chicahua in ichcatlahuapanohualli...

On [the cotton] was painted, delineated, on it one went tracing, the painting which appeared from underneath. And when finished, when the cotton was painted all over, when nothing of all the completed pattern had been forgotten, then [the cotton] was glued on a piece of paper, coarse paper so that [this] reinforced cotton was completely strengthened, so that it was given support (Sahagún 1959, 93–94).

Fig. 6: Florentine Codex, Bk. 9, fol. 64v.

The comparison with a glyph from the Matrícula de Huexotzinco 668r reveals that the ‘mosaic’ glyph is read **TLAZAL**, ‘mosaic, glue’ (cfr. Thouvenot 2012), and the action depicted is the gluing of the cotton paper sheet (*ichcamatl*), which was pasted on a coarse sheet of bark paper (*cuauhamatl*), a reading we owe to Berdan (2015: 327): despite the usual value of **PAN/pan** for the ‘banner glyph’, we concur that a variant of the **AMA**, *amatl*, ‘paper’ glyph is the best solution here. The truly problematic element is the sequence ‘teeth-eye’. Berdan suggests *tlaniztli*, ‘sheen bone’ (Ibid.), but the problem is that the trimming process comes later. We propose to read it as *tlani ixtli*, ‘beneath the surface’, alluding to the pattern which appears under the transparent sheet of cotton paper. The closest alphabetic equivalent is in *tlanipa oalneci tlacuilolli*, ‘the painting that appeared beneath’.

The remaining two pictographies on folio 64r depict the process of cutting the reinforced cotton paper. The pattern was covered with glue and feathers, and trimmed with a bone blade over a cutting-board. Then, the cotton paper with the feathers was reinforced again and dried under the sun. Both pictographies contain glyphs that have already been presented, and thus shall be omitted. What follows is a pictography with a single logographic glyph (fig. 7). Its reading is somewhat perplexing, in no small part due to the complexity of the process depicted: in order to create a featherwork, a layer or 'bed' of common feathers (*macehualihuitl*), hardened in glue (*motzacuatza*) and dyed, was prepared. We can clearly see many of these feathers next to a 'glue' glyph. These feathers where trimmed with a bone blade (*omihuictli*). Then, this bedding was matched with precious feathers, which would become the background of the work proper. The pictography shows the artist matching the precious feathers of a bundle in his hand with a surface of dyed yellow feathers, as explained in the alphabetic text.

But what about the glyph itself? Berdan suggested reading *tlaniztli*, 'sheen bone'. However, the same glyph appears in folio 66r, where it is associated with the word *ixco*, 'in the surface'. The yellow dyed (*coztlapalli*) feather next to it appears in the text, and both are joined to form the phrase *ixco coztlapalli ihuitl,* 'on the surface of the yellow died feathers', although, admitedly, this phrase is to be found in the pictography only. The artist is thus depicting matching the precious feathers in his hand with the surface of dyed feathers.

Pictography	Glyph	Reading
		**IX-COZ-IHUI,** *ixco coztlapalli ihuitl*, "in the surface of yellow-dyed feathers"

Text in alphabetic Nahuatl and English translation

Tel achtopa oc noncua mepan zan oc centetl motequi, motzacoatza in ihuitl, motenehua tlatzacoatzalli: tzacutica mopiloa, motzacupiloa in ihuitl, zatepan

mepan mozaloa, omihuictica ommixpetzoa. Inin motenehua tlahuatzalli: zan oc moche in macehualihuitl, ca yehuatl huel quiyacana, quiyacatia inic yecahui ihuitlachihualli: Yehuatl achto tlapepechyotl, ipepech mochihua quimopepechtia, in ixquich tlazoihuitl, azo coztlapalli in motzacoatza (...) ipan mohuelitta, moyehecoa, monanamictia, in catlehuatl quimonamictiz, quimopepechtiz tlazoihuitl...

But first, quite apart, on a maguey leaf, the feathers had been cut, one by one; glue-hardened, one by one. They were known as the glue-hardened feathers. The feathers were suspended, dipped, in glue; later they were stuck to the maguey leaf; their surfaces were smoothed with the bone blade. This so-called glue-hardening was all of common feathers; for they came first of all, at the start, in order to accomplish the feather work. This, to begin with, became the basis, the bed, on which all the precious feathers were bedded. Perhaps yellow dyed ones were glue-hardened [...] They took note, they tried out, they matched whatsoever kind would harmonize, would serve as the basis for the precious feathers… (Sahagún 1959: 94)

Fig. 7: Florentine Codex, Bk. 9, 63v.

The following four pictographies (not shown here) depict a variety of precious feathers that had to be matched with common feathers. All have been accurately identified by Berdan (2015: 327). As it is usual in Aztec writing, feathers can work as logograms for the bird species they denote. The only exception to this pattern in that section is the glyph **XIUH-TOTO**, *xiuhtototl*, 'blue bird', which is presented in the bird's full body (fol. 64v, the lowermost pictography). The other two pictographies of the aforementioned series (fol. 65r) show the dyeing of feathers in a solution of natural pigments and alum, and the (previous) creation of the bed with common feathers.

Pictography	Glyph	Reading
		FLORAL PAINTING-**ix-XIP,** *azo xochitlacuilolli, azo quillacuilolli, anozo itla tlaixiptlayotl...* "Maybe a flower painting, maybe the painting of a plant, or of some image..."

Text in alphabetic Nahuatl and English translation

Auh in icuac centetl momana: huapaltontli ipan mozaloa ce amatl, oc ceppa ipan micuiloa in omocuicuic machiyotl, in tlacuicuitl omochiuh: yehuatl ipan yecahui in ihuitlachihualli, ipan mocenzaloa in ihuitl huapalli, azo xochitlacuilolli, azo quillacuilolli, anozo itla tlaixiptlayotl in mochihuaz, in zazo quenami tlamachtli, intla huel ittali...

And then a thin board was set out; a paper was glued on it; on this once again was painted the trimmed pattern, which had become the work design. On this was the feather work completed; on it all the feather base was glued, perhaps to be pictures of flowers, or of plants, or of some image which was to be made, of whatever design which was pleasing... (Sahagún 1959: 95).

Fig. 8: Florentine Codex, Bk. 9, fol. 65r.

The next pictography (fig. 8, see above) shows the drawing of a sacred image (*ixiptla*) which will be drawn above the bed of feathers (here, an image of a Christian saint, together with flowers). This was done on a drawing table. It should be noted that the combination of pictograms and logosyllabic writing conveyed full sentences here: the whole sequence, which shows a floral pattern and the image of a saint, has a clear textual parallel.

The next pictography, the uppermost one on the folio 65v, shows the preparation of glue by children apprentices. It has been ommited here, since the only relevant glyph is the already explained 'glue' glyph.

The following two pictographies show the trimming of precious feathers with the bone blade (fig. 9). All the feathers have been correctly identified by Berdan (2015: 327). Hereafter, the pictographies and their glyphs are presented without the accompanying text.

The next sequence shows how the most precious feathers were individually placed with the help of the bone blade (fig. 10). It is rather complex, not only because the *ixco*, 'in the surface' glyph introduced above whose correct reading we can only deduce here, but because it seems to be the only case of an aesthetic effect ever named in an Amerindian writing: *xotlaliztli*, 'glow, flowering, burning'. It is simply named through the syllabogram **xo**, denoted by a 'severed foot' sign, providing us with the proper, indigenous name of the effect of iridescence which has been studied by Brendan McMahon (2021) and is unique to Aztec featherwork paintings.

Pictography	Glyph	Reading
	   	**TZANA**, *tzanatl,* “crow” **cha-CHAMOL,** *chamolin*, “scarlet parrot” **XIUH-HUITZ**, *xiuhuitzil*, “blue hummingbird” **TLE-HUITZ,** *tlehuiztil*, “fire hummingbird”

Fig. 9: Florentine Codex, Bk. 9, fol. 65v.

Pictography	Glyph	Reading
	  	**PAN**, *ipan*, “above” **xo**, *xotlaliztli,* “flowering, glow, burning” **IX-COZ-IHUI**, *ixco coztlapalli ihuitl,* “in the surface of yellow feathers”

Text in alphabetic Nahuatl and English translation

In ye izquican icac ihuiyo itlachieliz in iuhqui ic xotla, ic pepetzca monamictiuh, inic ommotectiuh tlapepechyotl, in ixquican icac tlahuatzalli omoteneuh, ipan

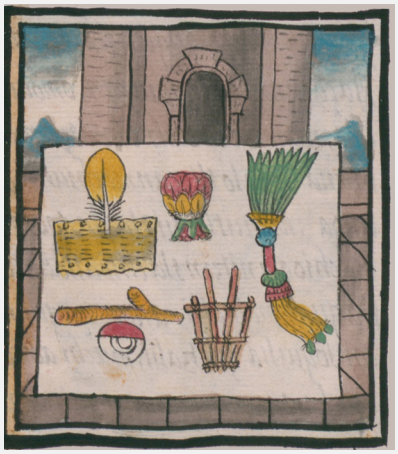
onmotztiuh in machiyotl, in iuhqui ic icuiliuhqui, in quezquitlamantli tlapalli ipan motta. In icuac ommozalo omihuictica tlahuatzalli: niman ixco onmoquetza in tlazoihuitl, motecpantiuh, mozalotiuh, omihuictica onmoquetztiuh...

One by one they went matching the [precious] feathers, each being placed in position according to its appearance, as it glowed, shimmered. The mentioned glue-hardened feathers formed the bed in all places. They continued consulting the pattern, how it was painted, noting the different colours appearing on it. When the glue-hardened feathers had been fastened down with the bone blade, then on its surface were set the precious feathers, going placed, glued in order, set in position by means of the bone blade... (Sahagún 1959: 96).

Fig. 10: Florentine Codex, Bk. 9, 63r.

3.2. The featherworks fastened with thread

The second technique described in the twenty-first chapter of Book 9, a bit less complex, is the featherworking that was fasted with thread. The text in alphabetic Nahuatl introduces it by presenting the kind of objects produced through it: leather armours covered by yellow feathers (*tozehuatl*), feathered gourd-bowls (*tlatecomayotl*), and fans made with quetzal feathers (*quetzalecacehuaztli*) (fig. 11). All these objects are clearly depicted in the accompanying pictography, and can work as logograms for their names. The problem is the sequence underneath, which presents an 'eye' glyph, a wooden stick (*cuahuitl*), and a framework (*colotli*). This sequence illustrates a particular sentence within the text, but the glyph **CUAUH**, *cuahuitl*, 'wood, tree, stick' must be read in a syllabic fashion to make sense out of it, constituting perhaps another example of the anomalous syllabic processes in Aztec writing that have been first noticed by Gordon Whittaker (2021).

Pictography	Glyph	Reading
		**TOZ-EHUA**, *tozehuatl*, "yellow parrot leather shirt"
		**IX-cua?-COLO,** *mixcuachhuia in colotli*, "the frame was covered"

Text in alphabetic Nahuatl and English translation

Auh in oc centlamantli tlachihualli, in zan mecatica, ichtica yecahui: Yehuatl in iuhqui ecacehuaztli, quetzalecacehuaztli, machoncotl, tlamamalli tlahuiztli, tozehuatl, etc. Niman ic tlapilolli, tlatecomayotl, tlateloloyotl, tlayacaca pilcacayotl, moch ic mohuelnextia, ic motlamamaca in ecacehuaztli. Auh inic ecahui achto molpia in colotli, zatepan mixcuachhuia ic chicahua...

But there was still another manner of work which was finished only with cord, with maguey thread. These were such as fans, quetzal feather fans, feathered bracelets for the upper arm, devices borne upon the back, yellow parrot feather shirts, etc.; then pendants, tufts of feathers, balls of feathers, tassels - all things with which the fans were beautified [and] laden. And to complete these, first a frame was bound together. Then it was covered over to strengthen it... (Sahagún 1959: 96).

Fig. 11: Florentine Codex, Bk. 9, 66r.

The following pictography, the uppermost one on the folio 66v (omitted here), is a clear equivalent to its alphabetic text, which describes how featherwork covered with quetzal feathers was created: the quills of such precious feathers were reinforced with pieces of cane, then bound with maguey thread tied in such a way as to provide fastening places.

The next pictography is probably the most complex in the whole chapter (fig. 12), and likely one of the most difficult in the Florentine Codex itself. It is comprised by three elements (from right to left in relation to the viewer): a mysterious looking compound of the signs 'hand' (*maitl*), 'eye' (*ixtli*), 'feather' (*ihuitl*), and 'hand' again. The next compound shows three quetzal feathers, one of which is prefixed by the syllabogram **mo**, motivated by a trap (*montli*). Finally, there are three feathers, bound by their bases. Only by careful comparison with the alphabetic text can we arrive to a satisfactory reading:

Pictography	Glyph	Reading
		**ILPI-QUETZAL**, *melilpia quetzalichtica,* "the quetzal feather was bound with agave fibre"

mo-QUETZAL, *inic momana in quetzalli*... "and as the quetzal feathers were placed..."

ma-IHUI-ma-TLACHI(A), *momahuictia, (...) in ompa momaihmati, in ompa motecpichotiuh ihuitl itlachixca mochihua*
"They (the feathers) were shaken with the hand, (to see) if, there, the feathers were properly set, if, there, they were gathered, (if) the feathers were what he looked for."

Text in alphabetic Nahuatl and English translation

In icuac omohuipan, niman ic mohuicoloa melhuicoloa, melilpia quetzalichtica, inic huel mocenmana, mocentema mocenquixtia quetzalli, inic amo xexelihuiz, momoyahuaz, ic huel onmocentecpichoa monentechmana. Auh inic momana quetzalli, ihuan in ye muchi ihuitl tlahuipantli nenecoc momahuictia, quitoz nequi in ompa momaihmati, in ompa motecpichotiuh ihuitl itlachixca mochihua.

And when they were arranged in order, then nooses were applied; they were provided at the midpoints; they were bound at the middle with fine maguey fibre, so that the quetzal feathers could be set in order, assembled, gathered together; so that they would not spread [or] scatter; so that they could be gathered, be pressed, together. And as the quetzal feathers were placed, and indeed all the feathers arranged in order, they were shaken back and forth in the hand. That is to say, if, there, the feathers were properly set-if, there, they were gathered -they were what he looked for... (Sahagún 1959: 96–97).

Fig. 12: Florentine Codex, Bk. 9, 66v.

In these examples we can see that Aztec writing transcends its presumed function of a mere system of labels. It expresses verbs, actions, and complex ideas, often with

the help of an 'iconography' which, by virtue of having 'embedded texts' within it, becomes 'pictography'. If we grasp how apparently 'iconographic' elements codified sentences and words, then this complicated set of glyphs suddenly makes sense: once the quetzal feathers were bound (*ilpia*) and set (*momana*), they were stroked with the hand (*momahuictia*) to see (*tlachia*) if they were aptly (*maihmati*) disposed.

The next pictography is omitted. The following one, depicting the sewing of a netted framework, is interesting, for it presents more kinds of feathers, explicitly named:

Pictography	Glyph	Reading
		**tzin-MECA-QUETZAL-POZTEC**, *onmotzinmecapachotiuh quetzalpoztec*, "quetzal feathers cut and reinforced at their quills with thread"
		**CUAUH-ZAQUAN**, *cuauhmoloctli ihuan zacuan,* "eagle down and troupial"
		**TLAUH-QUECHOL**, *tlauhquechol*, "red spoonbill"

Text in alphabetic Nahuatl and English translation

In icuac omohuuipan, omohuicolo, niman ic itech onmitzommana in colotli, zan moch iuh mochihua in ihuitl in itlatlatocio mochihua in itzintlachihuallo: intla cuauhmoloctli, anozo zaquan contoquilia quetzalli, muchi achto mochiyotia mohuipana, mohuicoloa zatepan ipan onmitzontiuh in colotli, onmotzinmecapachotiuh, onmomecatoctitiuh: Ic ye no cuele contoquilia in quetzalpoztec tlahuipantli: auh niman ic tlauhquechol, ixquamul mochihua, iztac ihuitl molonqui ic onmotzinpachoa much achto mohuipana, zatepan colotitech ommiitzontiuh, za much iuh yecahui, in oc cequi tlahuiztli ic mochihua

When they were in order, provided with nooses, then they were sewn to the frame. So was done to all the feathers; a covering was given them in the making of their bases. If eagle down or troupial came next after the quetzal feathers, they were at first provided maguey thread, placed in order, provided a noose; then they went to be sewn on to the frame, pressed, reinforced at their bases with cord, so that they followed the interrupted sequence of quetzal feathers. And then red spoonbill formed the border covered at the bottom with white, soft feathers. All were first set in order; then they went sewn on the frame. All were so completed; the rest of the devices were thus made (Sahagún 1959: 97)

Fig. 13: Florentine Codex, Bk. 9, fol. 67r.

The next pictography, the middle one on the folio 67r, is not shown here. It depicts the finished frame covered with feathers, as well as other products, like shields. It also starts the description of the making of wooden sculptures covered with feathers, an artform which, regrettably, has no surviving examples. They were formed with wooden 'skeletons' (*omiyotl*) made with dried cornstalks or paper strips covered by cornstalk dust, reinforced with glue.

The final pictography shows how these figures were fashioned (fig. 14). In a similar way to what is shown in figure 12, this pictography is fairly complex, because it depicts whole sentences, with verbs. Also, the *omihuictli* or bone blade, the faithful tool of the *amanteca*, is presented in the act of cutting feathers. With this last pictography, the description of the *amantecayotl* process is completed.

Pictography	Glyph	Reading
		**PAPALO-OMI-CUAUH-TEX-**COVER**,** *papalotl momiyotia in ohuacuahuitl, zatepan pani mohuaquauhtexotia...* "The butterfly is given a skeleton made with dried maize stalk [...] the outside was covered with pulverized maize stalk…"

xi-PETZ, *xipetzihui*, “to polish”

OMI-CUT**-IHUI,** *zan ic in omihuictli ommotectiuh in ihuitl*, “with the bone blade alone the feathers were cut”

Text in alphabetic Nahuatl and English translation

Auh intla yoyoli, yoyoliton motlali: achto moxima in equimitl, in tzonpancuahuitl, ic momiyotia. Aun intla zan yoyoli, in iuhqui cuetzpalton, anozo cincocopi, anozo papalotl, yehuatl momiyotia in ohuacuahuitl, anozo amatlapilintli, zatepan pani mohuacuauhtexotia, tzacutica tlapopolli in ohuacuauhtextli ic mopepechoa in amatlapilintli, zatepan michiqui, motezohuiya, ic moyectlalia, ic xipetzihui: Auh zatepan pani mochcahuia ipan ommicuiloa, in oncan motlatlamachituh, inic mopepechotiuh ihuitl: itech mana in quenami motlayehecalhuia yoyoli, in quenami ic mocuicuilo. Aquenman ommocahua in tepoztlateconi, ihuan in omihuictli, zan ic ommotectiuh in ihuitl...

And if some animal, a small animal, were to be made, first was carved colorín wood to make its skeleton. But if it were only a small creature like a small lizard, or a dragonfly, or a butterfly, this was given a skeleton of dried maize stalk, or strips of paper; then the outside was covered with pulverized maize stalk made into a dough with glue. The powdered maize stalk thus formed a covering over the strips of paper. Then it was scraped, it was rubbed, with a piece of porous, volcanic stone, by which it was made handsome, smooth. And then, on the surface, it was covered with a lining of cotton on which was the design, the design to be worked, so that it served as a basis for the feathers. On this was placed whatsoever insect was to be tried, whatsoever was to be designed. Never were the copper knife and bone blade omitted. With them alone the feathers were cut... (Sahagún 1959: 97).

Fig. 14: Florentine Codex, Bk. 9, fol. 67r.

4. Concluding remarks

As the folios of the twenty-first chapter of Book 9 of the Florentine Codex presented here have exemplified repeatedly, images in Aztec art were not simple iconographic depictions with no relationship to language. Instead, they worked along with logosyllabic signs to convey complex texts. Therefore, decipherment should not be made in isolation from the *pictographic* context. The reason for this is that the function of logosyllabic signs in Aztec writing was ancillary to that of pictography, and sometimes they did not make sense without it. In the case of the Florentine Codex, this is relatively easy to ascertain, because there are accompanying alphabetic texts, whereas in other manuscripts careful cross-referencing is needed (cfr. Zamora Corona 2022). Thus, as mentioned in the introduction, a critical decolonial approach to the idea of writing is necessary.

Concerning the significance of these pictographies for the history of art, the aforementioned pages of the Florentine Codex are likely one of the most complex extant visual examples of indigenous picto-logosyllabic texts on artistic-technical processes, and an example of writing as visual art (Savkic Sebek and Velásquez García 2021). Their existence naturally raises the question of whether similar texts were used by the Aztec before the contact with Europeans, which remains open; they certainly were produced in a context of transculturation (Russo 2014) and of increasing appraisal of native featherworking in the Transatlantic world of the sixteenth century (McMahon 2021: 32–24). Regarding the ways in which pre-Hispanic Aztec artists worked, in the description of the aviary of Moctezuma (*totocalli* or 'house of birds') in Book 8 of the Florentine Codex, it is mentioned that in that place different artists were lodged, reproducing the forms of animals, while the *amanteca*, presumably, used their feathers: "There *majordomos* kept all the various birds-eagles, red spoonbills, trupials, yellow parrots, parakeets, large parrots, pheasants. And there all the various artisans did their work: the gold and silversmiths, the copper-smiths, the feather workers, the painters, cutters of stones, workers in green stone mosaic, carvers of wood" (Sahagún 1979: 45). Thus, it is not impossible to consider that the technical sophistication of Aztec art was codified by their writing system, since inklings of the use of glyphs to classify plant species are present elsewhere, for example, in the *Libellus de Medicinalibus Indorum Herbis* (Viveros Espinosa 2020).

In conclusion, we propose that these images correspond to indigenous models of knowledge transmission and communication that are in need of further study; as Cuauhtémoc Medina observed while commenting Magaloni's: "the images in the Florentine Codex and in other indigenous documents that were apparently created according to European drawing conventions would be vehicles of a production and expression framed in a native, dissident and clandestine epistemology" (Medina

2014: xi). Hence, the need, as Cuauhtémoc Medina remarks, to question the dominant role that alphabetic documents have as sources in regards to indigenous productions, in which images were equally as important as the written word (logosyllabic in their case), and vehicles of oral expressions (Medina 2014: ix). Like the use of pictographies in the planification of wars (Sahagún 1979: 51), legal processes (Díaz del Castillo 2014: 352), and commerce (Valadés 2013: 381), these pictographic texts were probable aids to matters more practical than the more famous historical and calendrical codices; they also approach us to the world of indigenous aesthetics. Thus, we hope that this contribution will help in the expanding of our understanding of the roles and modes of writing among indigenous societies in the Americas to further a decolonial understanding of art history.

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