

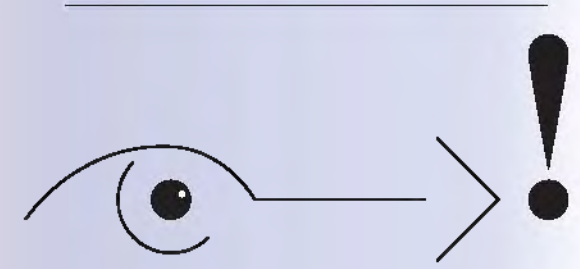
3 Hong Knog = tea shop

8 Maya text = sow

13 ISOTYPE 100 families

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51 . 2

Visible Language

the journal of
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Before there was reading there was seeing. *Visible Language* has been concerned with ideas that help define the unique role and properties of visual communication. A basic premise of the journal has been that created visual form is an autonomous system of expression that must be defined and explored on its own terms. Today more than ever people navigate the world and probe life's meaning through visual language. This journal is devoted to enhancing people's experience through the advancement of research and practice of visual communication.

If you are involved in creating or understanding visual communication in any field, we invite your participation in *Visible Language*. While our scope is broad, our disciplinary application is primarily design. Because sensory experience is foundational in design, research in design is often research in the experience of visual form: how it is made, why it is beautiful, how it functions to help people form meaning. Research from many disciplines sheds light on this experience: neuroscience, cognition, perception, psychology, education, communication, informatics, computer science, library science, linguistics. We welcome articles from these disciplines and more.

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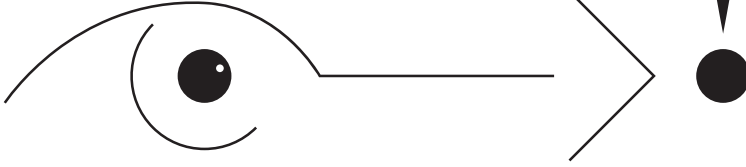
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51.2 Visible Language

the journal of
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special issue:

Symbols _ Icons _ Pictograms

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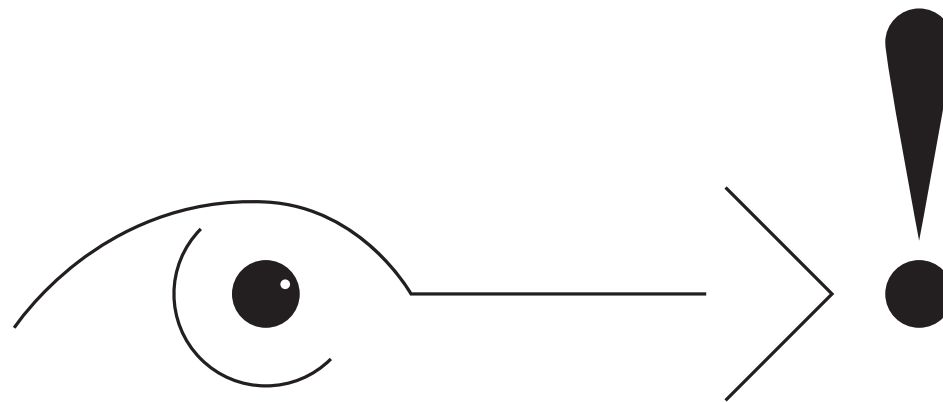
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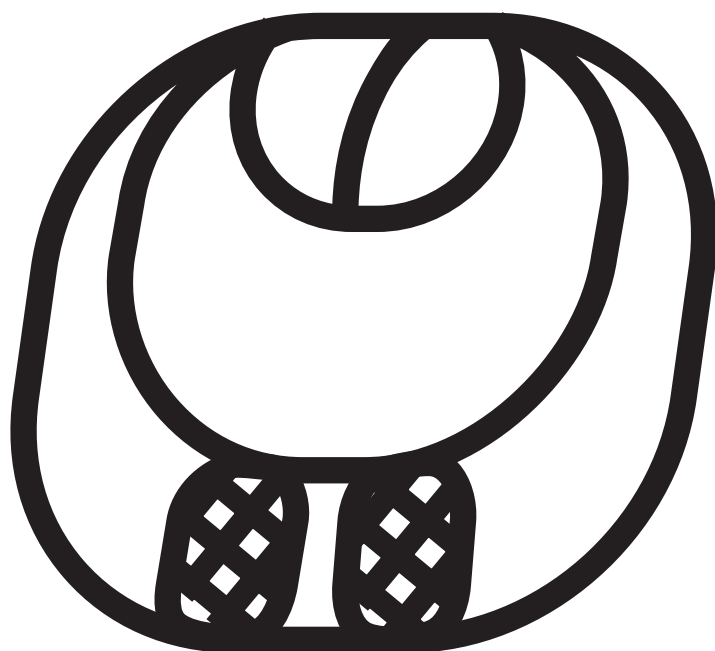
I noted in the previous issue, *Visible Language* 51.1, that people have communicated with visual symbols / icons / pictograms for thousands of years. To punctuate that point - four articles in these issues are on ancient Mesoamerican hieroglyphic communication systems: two in 51.1 "Tz'ihb 'write/paint': Multimodality in Maya glyphic texts" by Agnieszka Hamann, and "Signs of resistance: Iconography and semasiography in Otomi architectural decoration and manuscripts of the early colonial period" by David Charles Wright-Carr, and two in 51.2 "Metonymic and metaphoric series in the *Codex Borgia*, Plates 33-34" by Angélica Baena Ramírez, and "The Written Adornment: the many relations of text and image in Classic Maya visual culture" by Daniel Salazar Lama and Rogelio Valencia Rivera.

These papers were first given as presentations at the conference *Sign and Symbol in Egypt and Mesoamerica: Exploring the Interrelationships of Writing and Iconography* held June 30 -July 07, 2016 at the University of Warsaw, Warsaw, Poland. The aim of the conference was to address a question that has received little attention: how graphic communication systems - traditionally known as notation/numeration, iconography, and writing - relate to, interact with, and exert influence on each other. The focus was on the civilizations of Egypt and Mesoamerica that provide abundant evidence for the interplay of systems in books and on monuments. The conference also sought contributions relating to cultures and systems beyond the bounds of the focal area, such as Mesopotamia, Anatolia, India, and China.

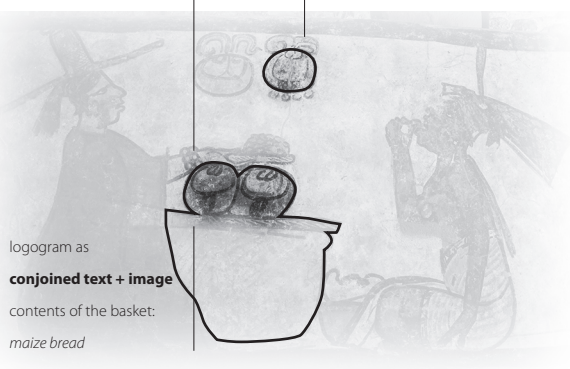
We appreciate the help of Katarzyna Mikulska, Daniel Tacacs, Gordon Whittaker, and conference organizers in bringing these papers to our attention and helping the authors prepare them for publication.

Mike Zender

maize bread



logogram as

conjoined text.in this case, as part of
the name of a métier:*he/she of the maize bread*

logogram as

conjoined text + image

contents of the basket:

*maize bread***The Written Adornment:**

the many relations of text and image in

Classic Maya visual culture

Daniel Salazar Lama

— Rogelio Valencia Rivera

This article focuses on a complex and very common practice in the Mayan visual culture of the Classic period (250-600 AD): the integration of writing elements in images. This integration can be presented under many aspects and forms and fulfills several functions. The most important of them is to create a semantic complementation with the image, indicating what it is not able to express, such as anthroponyms (personal names) and place-names. In this text we also explore the many ways in which this assimilation takes place, and we propose clear and essential principles for the detection of assimilated text elements within the images. We also explore, albeit briefly, this same practice in other Mesoamerican visual cultures, with the intention of putting it into perspective and understanding it not as an isolated and exclusive practice of the Maya, but shared by many Mesoamerican groups over several centuries.

— *keywords**anthroponyms**place-names**pictorial assimilation**functional locus**embedded texts*

Introduction

One of the most striking features of Mayan writing is its use as part of the iconography employed to illustrate many of the scenes depicted in vases, friezes, paintings, stelae and all the various objects employed by the Maya to hold their artistic expressions and cultural imagery.

Writing might be used as part of the landscape, being held in the hand by the characters depicted, or portrayed as part of the headdresses of Mayan rulers, among many other possibilities. However, even if writing is integrated into the iconography, it does not lose its primary purpose, that of being used as a mechanism for the utterance of words and sounds.

Berlo (1983) defined three categories for textual sources in Mesoamerica: discrete texts, meaning normal independent texts, conjoined texts and images, and embedded texts. The last two categories are relevant to the matter of this paper. Conjoined texts and images refer to texts accompanying images where both maintain relative independence, and where the text can make direct references to the image, like names of its characters or short descriptions of its actions. Embedded texts include texts or script elements fused with the images themselves, and operate under the concept of "pictorial assimilation" established by Stone and Zender (2011, pp. 24-28). The analysis of the form in which the Maya employed this last category, embedded texts, is the main subject of this work. In Figure 1, both types of categories are illustrated.

Figure 1

Painting SE-S2¹ in Substructure I-4, Chi'k Nahb Acropolis, Calakmul (photograph by Rogelio Valencia).



Generally, when the text is embedded in the images, the use of writing implies name tagging (Mathews 1979; Houston and Taube 1987: 38-41) of rulers, gods, things, or places, but the location of the tag is integrated into the imagery of the scene, not as a separate entity, leaving it to the trained eye to discover it and apply its meaning to the whole composition.

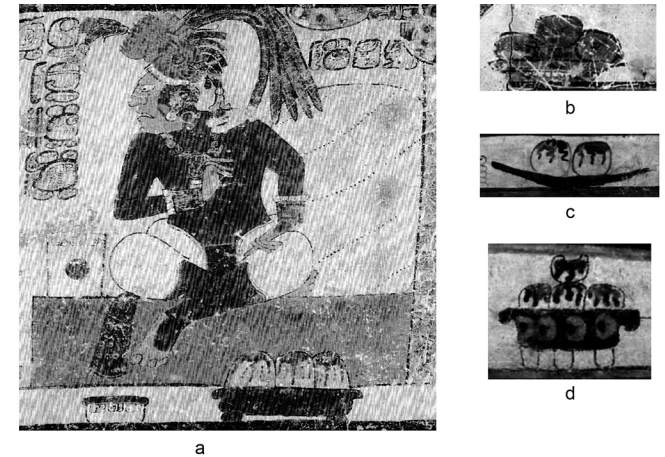
1. The nomenclature employed for the paintings is based on the one created by Carrasco and Cordeiro (2012: 12).

In Figure 1, the text on top of the image is a tag describing the whole scene. The text says: **AJ wa-WAJ-ji, aj waaj**, 'he/she of the maize bread', where we can appreciate the logogram **WAJ**, 'maize bread'. Yet we might also see the same logogram, duplicated, on top of the huge basket placed close to the woman offering food to the male character in front of her. In this case, the logogram is there to indicate the contents of the basket, and the produce the woman is offering, maize bread.

But the logogram is not the actual representation of the maize bread, as we have various examples from the Classic Period (McNeil 2010: 304; Rents-Budet 1994: 120) showing what they might have actually looked like (figure 2).

Figure 2

Examples of depictions of maize bread. a) K1599; b) K5353; c) K6059; d) K6418.



So we can be sure that in the example from Calakmul (figure 1), the logogram unambiguously shows the word waaj to indicate the products offered by the woman, using the logogram for the word that names them.

There are some other examples of the use of writing in iconography, which will not be dealt with in this work. In particular, those where an object is not partially, or completely substituted by a group of writing signs, but shows the presence of glyphs on it. These include the representation of elements that usually have writing on them, and might have been depicted simply as they were, such as, thrones, ceramic vases, architectural elements, codices, or clothing. These elements are generally represented containing pseudo-glyphs, instead of indicating the actual writing painted or engraved on them, probably due to a matter of scale (Valencia 2010).

We can see one example of this use of writing in iconography in Figure 2.a, where a vase with a large red dot is represented on top of the bench where the main character is seated, which contains painted glyphs on

2. All the references of the ceramic vases are given with the numbers assigned by Justin Kerr in his catalogues.

its rim. In the same figure, we have another example on the vase represented to the side of the plate with the maize bread, which also contains glyphs on its rim.

In other cases, logograms are not used as writing but to signal the material something is made out of. This use includes the logogram for designating shining things to indicate something that reflects light or that is made out of jade; the logogram **TE**, 'tree, wood', to mark things made out of wood; and the logogram **TUN**, 'stone', used to designate things made out of this material. The logograms used in this way were called "property qualifiers" by Stone and Zender (2011: 13), and are not the subject of this paper either.

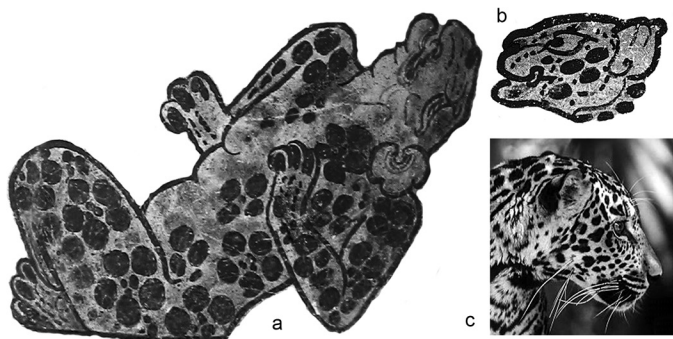
Writing and image in Mayan art

The principal characteristic that allowed the use of Mayan writing as adornment is its similarity with conventionalized iconic forms of the objects being named (*figure 3.c*) by logograms, syllabograms or a combination of both. Stone and Zender (2011: 11) indicate that Mayan hieroglyphs have an evident pictorial origin to mark this property of Mayan writing, where many of its signs show a high degree of iconicity.

For example, the logogram for the word 'jaguar', **BALAM**, is represented by the use of the head of this animal (*figure 3.b*), which is always similar to the representations of the head of the same feline in scenes where the whole body of the animal is depicted (*figure 3.a*). It is also known that full figure glyphs were used in Mayan writing, which would imply the possibility of using, not only the head, but the whole animal as the image associated with the logogram for **BALAM** in texts.

Figure 3

Use of the image of a jaguar in Mayan art and writing. a) Full body in iconography (K791); b) Head as a logogram (PC.M.L.C.p2.70³); c) Head of the actual animal (Getty Images).



3. The codes starting in PC, are images from the Dumbarton Oaks Library and Collections, Washington, DC.

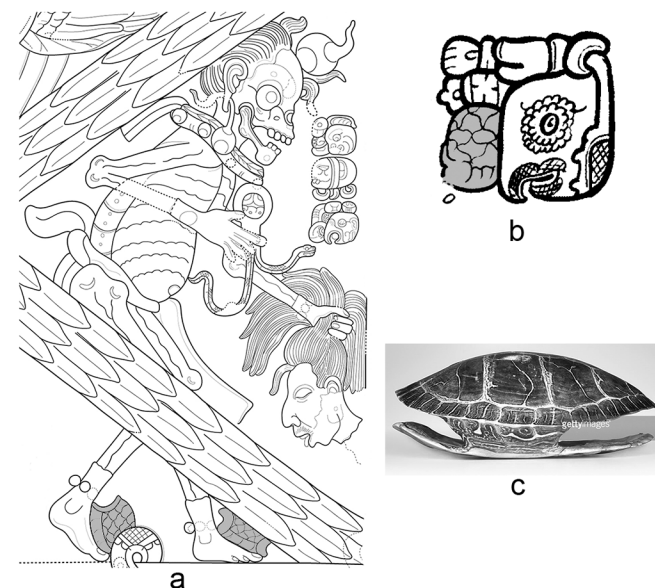
One is writing (*figure 3.b*), but the other is the conventionalized image for the animal being named (*figure 3.a*), and their similarity permits their interchange. This level of iconicity shared by both elements, logogram and image, would have permitted the substitution of the referential object being represented by both (*figure 3.c*).

Put another way, writing elements use the image of familiar objects pertaining to Mayan culture, and this permits interplay between word and image that was exploited by the Mayan scribes in certain conditions, which we will explore further in this paper.

In Figure 4, we have an example of this playful way of illustrating things. One of the characters in the 'Four Eras' stucco mural from Toniná is named Ahk Ok Chamiiy, written **a-OK-CHAM-ya** on the text tag close to its head. We can translate this name as 'Death with turtle feet'.

Figure 4

Use of the logogram **AK** (shaded gray) in writing and iconography. a) Tonina 'Four Eras' Stucco Mural (drawing by Daniel Salazar); b) The **AK** logogram in the name K'ihnich Ahkal Mo' Nahb, bench from Temple XIX, Palenque (drawing by David Stuart); c) Turtle's carapace, for comparison (Getty images).



Even though the name of the character is written phonetically on the name tag, we can see that in order to signal the special characteristic on this being, the Mayan artist added the logogram **AK**, *ahk*, 'turtle' (Zender 2005), to each of its feet, to produce the embedded text *ahk ok*, as foot is written *ok* in Classic Maya (*figure 4a*). We can compare the logogram on the foot of the death god with the one used to write the name of one of the lords of Palenque (*figure 4b*), K'ihnich Ahkal Mo' Nahb, on Temple XIX's bench (Stuart 2005), and we can see that they are the same (both shaded gray in *figure 4a* and *4b*).

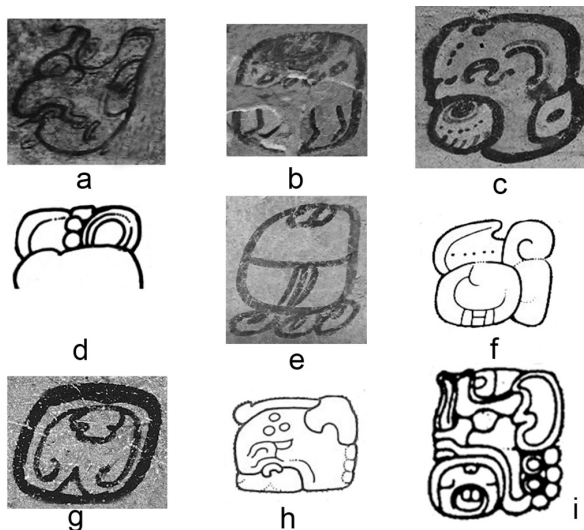
There might be some argument about the nature of the use of these logograms, claiming that they are being used semantically and not phonetically. It is true that there exist some examples of this semantic use of logograms. Take for example the creation of new logograms, using other logograms. In this case, an object was added to a previously created logogram, or two or more were combined, in order to create a new one. But in the process, the logograms used lose their sound equivalence, and they are only used semantically. Stuart (1995: 39) called these forms, 'representational logograms'.

In Figure 5 we can see some examples of this type of semantic behavior of the logograms.

Figure 5

Examples of representational logograms.

- a) **TI'**, 'mouth' (K1440); b) **HA'**, 'water' (Dzibilnocac Capstone 5, photograph Rogelio Valencia); c) **UK'**, 'to drink' (PC.M.LC.p2.147); d) **TI'**, 'mouth' (Copan Stela I, drawing Linda Schele); e) **WAJ**, 'maize bread' (Dzibilnocac Capstone 5, photograph Rogelio Valencia); f) **WE'**, 'to eat' (Yaxchilán Stela 35, Drawing Ian Graham); g) **WINIK**, 'man' (PC.M.LC.p2.70); h) **KOJ**, 'cougar' (Piedras Negras Stela 8, drawing Ian Graham); i) Vampire (Tikal Stela 5 Jones and Satterthwaite 1982: figure 6-7).



In the first example (figure 5a-c) we see the combination of the logograms **TI'**, 'mouth' and **HA'**, 'water', where the second is put into the mouth, represented by the first, to indicate the act of drinking, which produces the logogram for the word **UK'**, 'to drink'. In the second example (figure 5d-f) we see a very similar construction. Here again the scribe put the logogram **WAJ**, 'maize bread' inside the mouth represented by the logogram **TI'**, 'mouth', where it expresses the action of eating, to create the logogram **WE'**, 'to eat'. In the third example (figure 5g-i) we see the same idea at work, but in this case the logogram **WINIK**, 'man', is put into the mouth of two animals, a cat, to produce the logogram **KOJ**, 'cougar'⁴, which is a very aggressive feline, and a bat, to express the idea of a man-eating chiropteran. As we can see from all the examples, the location of a logogram inside the mouth provides the idea of eating or drinking, and permits actions or things related to this idea to be named.

4. Cougars are aggressive animals to humans (Beier 1991), while jaguars and other felines from Mesoamerica tolerate more human activity around their living zones.

Another example of the semantic use of logograms is the paired realization of the verb *tz'ak* in some inscriptions coming from Palenque (Knowlton 2002: 11-13; Riese 1984: 263-286; Stuart 2003). *Tz'ak* means 'to complete', and the Palenque realizations of this verb used combinations of logograms that were cultural complementary binaries, which together gave the idea of something complete, like *ek'-uh* (star-moon), *xib-ixik* (male-female), *waaj-ha'* (maize bread-water), *muyal-ha'al* (cloud-rain), *yax-k'an* (green-yellow), etc. Again, in these examples, the logograms are not used for their sound values, but for their meanings, to generate a new logogram.

Nevertheless, in the examples we are analyzing in this work, where the logograms are written along with the iconography, the main use of the logogram is phonetic, not semantic, as the phonetic realizations accompanying them clearly show.

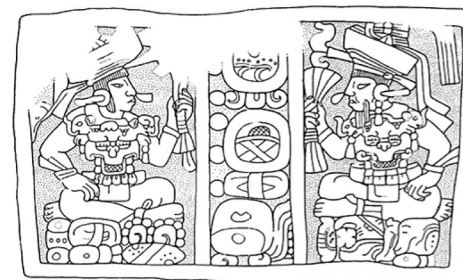
Adorning with writing

From a use centered on the description of material things, the Mayan artist soon realized that this iconographic artifact was much more useful when applied to abstract concepts and objects which were more difficult to illustrate graphically. This enabled the Mayan artists to start using tags to name abstract elements, such as rulers, gods, toponyms associated to locations, and abstract concepts (like measures for things or quantities), directly alongside the iconographic components or embedded in them.

One example of this idea could be appreciated on some of Copan's Altars, such as Altars L and Q, where the names of the various Copan lords depicted on them are transformed into the cushions they are sitting on (figure 6).

Figure 6

Examples of writing signs represented as cushions naming the lords sitting on them. Copan Altar L (drawing Barbara Fash).

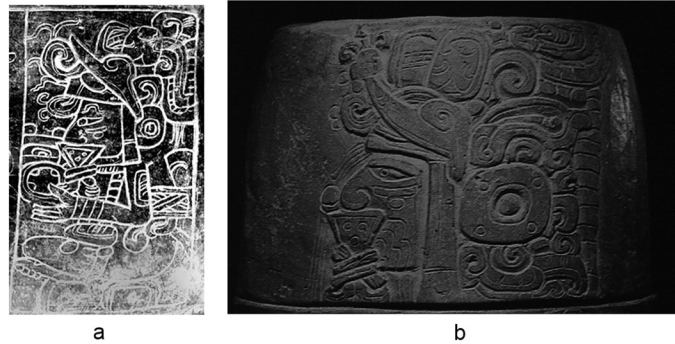


In this example, we can see the cushions uttering the names **u-ki-ti to-TOK'**, Ukit Tok', and **YAX-PAS yo-AT-ti**, Yax Pas[aj Chan] Yo[p]aat, the two lords of Copan the monument is dedicated to. The names are shaped into the seats of the lords and they express their names using both, logograms, and syllabograms.

Another way the names of rulers or other characters were included in the image depicting them was to place the hieroglyphs on their head-dresses (Zender 2014). This practice was extremely common, and was used not only to designate rulers, but also to name supernatural characters, such as God L or the one depicted on Figure 7.

Figure 7

Wak Chan? Winik. a) K3801; b) Unknown provenance Vase (Emmerich 1984: Figure 43).



In Figure 7 we can appreciate the depiction of a deity whose name has been included as part of his headdress and his face. We see two logograms, one that seems to be T617, and the logogram **WINIK** over his head, while the number six (*wak* in Classic Maya) is on his cheek in the form of a dot and a bar. The variant of T617 presents some unusual features, which might imply that this might be a simplified form of the logogram **CHAN**, as it also appears on Sky bands. It is also relevant to say that T617 never appears associated with a number, but numbered skies are part of Mayan cosmology and this deity might belong to the one with the number six assigned to it (Boot 2008, pp. 23-24, note 6; Schaefer 2012; Nielsen and Sellner Reunert 2015). So the name of this deity might be Wak Chan? Winik.

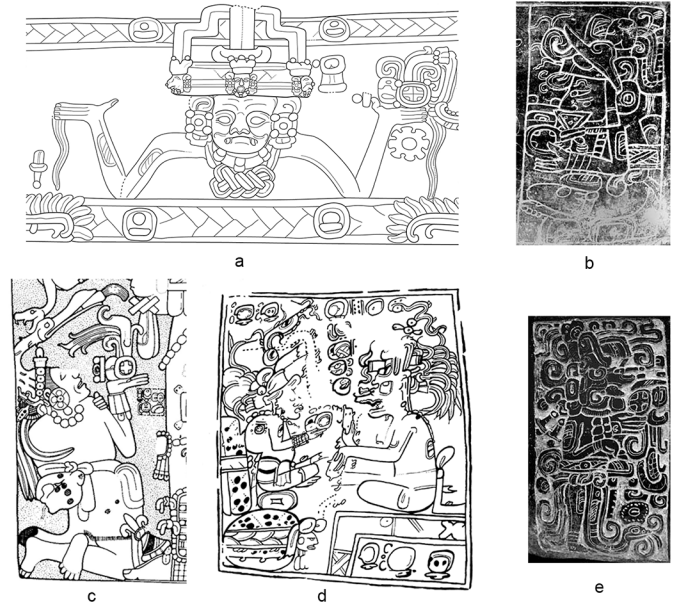
This interpretation agrees with the comments of Houston and Stuart (1998, pp. 83-85) about the fact that in Mayan art, the head (and the face) function as individual signifiers that contain emblematic devices that allude to personal identities. Moreover, Kelley (1982) has correctly observed this is a pan-Mesoamerican tradition with possible roots in Olmec art, as we see this same iconographic artifact in some monumental stone heads (for a detailed discussion see Houston 2004, pp. 295-296).

Yet naming characters was not the only purpose of the use of writing as adornment. In Figure 7a, Wak Chan? Winik is carrying something in his hand. What looks like an object, is in fact a group of hieroglyphs. This same group of glyphs is usually shown in iconography in the hands not only of supernatural beings, but also humans (figure 8).

In this case, the glyphs do not express the name of the character, as we can clearly see that they are not being held by the same personage, so it should name something that is related to them all. The glyphs could be read as *wuk ik' k'an*, 'seven black yellow'. In order to understand what this tag

Figure 8

Wuk ik' k'an. a) Placeres frieze (drawing Daniel Salazar); b) Wak Chan? Winik (K3801); c) Machaquilá Stela 2 (drawing Ian Graham); d) Capstone UPenn Museum (drawing Simon Martin); e) K'awiil (K3801)



means, we will refer first to another diphrastic kenning that is similar to this one, *wuk yax k'an*, 'seven green yellow'.

The diphrastic kenning *yax-k'an* has the meaning of abundance and wealth (Hull 2012: 100-103), as could be verified by the references to this term included in Colonial dictionaries. Fray Thomas de Coto (1983) incorporates various entries for these two terms coupled in his Cakchikel dictionary, such as: 'Para significar prosperidad usan de este nombre *q'anal y raxal*' (1983: 29), '*Ah q'an ah rax*, estos nombres significan abundancia de bienes y riquezas, y que no falte cosa alguna, con abundancia de gusto y contento' (ibid. 67), '*q'anal raxal*, bienes de fortuna' (ibid. 68). As has been noted by Stuart (2005: 100) in reference to the combination of *yax-k'an* that appears as one of the options for the logogram **TZ'AK**, this diphrastic kenning is related to the whole cycle of the plant's growth, stating the dichotomy between ripe and unripe.

If we now turn to the diphrastic kenning *ik'-k'an*, we might infer that some similar idea relates these two terms. In Coto's dictionary we will find this entry associated with the term *q'ek*: 'ponerse alguna cosa negra dicen. Y esto es el cacao cuando lo asolean, o los plátanos que ponen a secar al sol, las vainillas, etc.' Coto (1983: 368). And regarding the term *q'an*: 'Usan también (esta palabra), por ponerse amarillas las frutas duraznos, peras, y de toda fruta que madura y sazona, aunque no tenga el color amarillo' (1983: 368).

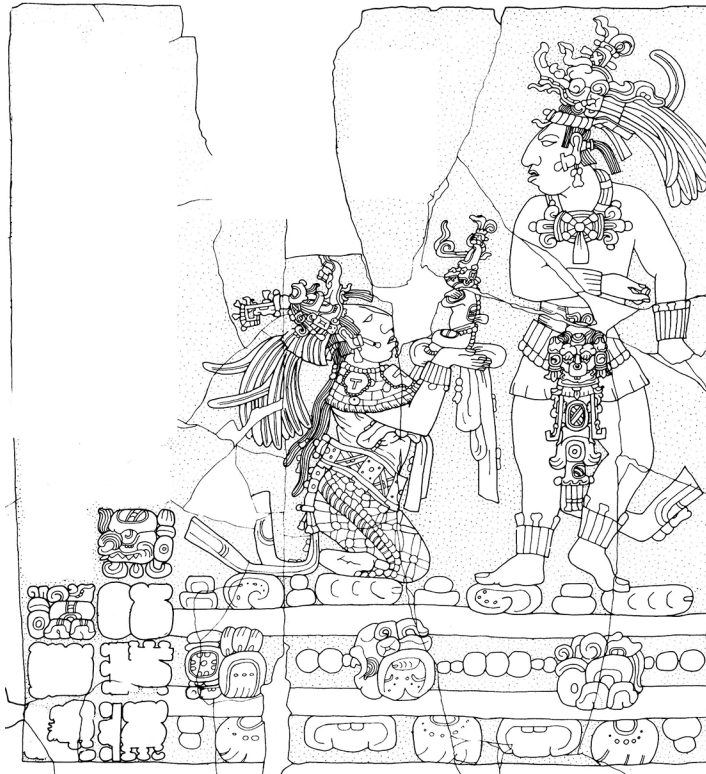
So both colours are equivalent terms for expressing the idea that some fruit is ripe, but in the case of the logogram **IK'**, this idea is related to fruits that turn black when they are ripe and ready to be consumed. Among these types of fruits we find one of the most important plants for the Maya, the cacao. Therefore, the combination of both terms in a diphrastic kenning helps to express the idea of a ripe fruit, and it might probably reflect the same connotation of highly valuable that the term *yax-k'an* has, as it

relates directly to cacao (Valencia 2016: 121-122). This implies the use of a synonymic diphraistic kenning (Craveri and Valencia 27-33), instead of the usual antagonistic, or binary one. This also indicates that the whole plant's ripening cycle is represented by three colours instead of only two, green, yellow and black.⁵

The last case we will present of the use of writing as adornment is the one where the glyphs integrated into the iconography help to identify the location where the action is taking place. In Figure 9, we can see the inscription from Temple XIV at Palenque. It depicts K'ihnich K'an B'ahlam dancing in a place that shows an aquatic iconographic complex, as we can see water logograms, shells, ripples of water, and the logograms that are related to aquatic plants (Kettunen y Helmke 2013, p. 28). Along with these images and logograms, some other glyphs have been included to clarify the precise location where the action is taking place.

Figure 9

anthroponyms, place-names, pictorial assimilation, functional locus, embedded texts (drawing Linda Schele).



To the left of the image, we have maintained the part of the text that indicates the location of the action. There we can read *uhti Sak ... nal*,

5. We would like to thank Davide Domenici for this suggestion.

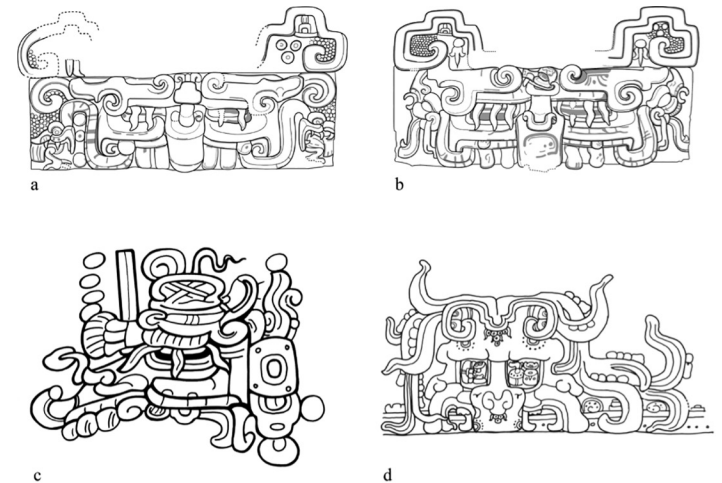
“at Sak ...nal”. We can see that the glyphic compound that names the place is also included in the iconography, under the feet of the Mayan lord. But directly below the female character, there is also another group of glyphs in the iconography, used by the artist to indicate the exact place where the scene is unfolding. These glyphs could be read as **TI' K'AK' NAB**, *ti' kahk' nahb*, ‘at the sea shore’⁶, that specify which watery space is illustrated in the image.

In the same way, another example of toponyms embedded in the iconography occurs in a vase presented by Erik Boot (2008, Figure 1), which is painted in a style closely related to the Codex Style from the northern area of Petén (Guatemala) and the southern portion of Campeche (Mexico). In the image, the avian aspect of God D (Itzamn Nah Yax Kokaj Mut) stands over an enlarged bird head. According to Boot (2008, pp. 23-25) this bird's head is a glyphic representation of 6-SKY or **6-CHAN**, *wak chan*.⁷ This glyph is integrated into the image as an iconographic component, and functions together with the many sky bands in the scene to designate the specific location in which the characters are.

The use of toponyms embedded in the representation of places is common in witz masks, which depict mountain locations. Figure 10 shows glyphs integrated into the zoomorphic face or in the head of a mountain. The most common place to put a toponym is the forehead (*figure 10a, b*); but

Figure 10

Glyphic compounds in witz masks. a) witz mask 2 from Balamkú frieze; b) witz mask 3 from Balamkú frieze; c) witz from Tomb 2 murals, Río Azul; d) witz from Temple of the Foliated Cross' tablet, Palenque. a, b and c: Drawings by Daniel Salazar; d: drawing by Linda Schele.



6. Kettunen and Helmke (2013, pp. 28-29; Figure 10) suggest that in this case the TI' sign works as the locative particle *ti*, ‘in’. We consider that in this case, the logogram **TI'** uses its primary meaning, which is ‘mouth, edge, brink, border, rim’, clearly indicating that the place where the action is taking place is the sea shore, the border of the sea.

7. Boot (2008, pp. 23-25) mentions that the bird's head is a substitute for T561 CHAN, ‘sky’, in the hieroglyphic texts. In the eye of the bird is a small ax; this element is a diagnostic component in the head variant of number six.

other usual places are the top of the head (figure 10c) or inside the eyes (figure 10d). Together, glyphs and mask form a graphic representation of specific places with all their characteristics included, even their names.

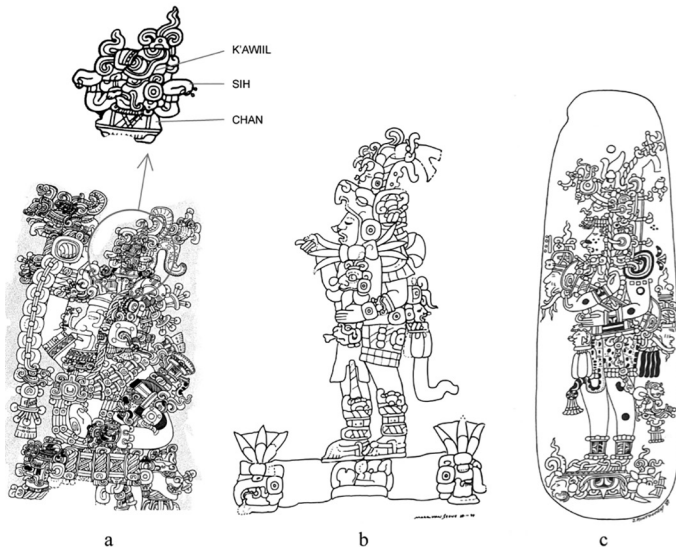
The functional locus

Even though the embedded text could be located anywhere inside the image, it was usually put in some very specific locations related to the main characters in the illustration. As we have seen in the previous examples, mountain masks employ three possible places to locate their toponymic glyphic compounds. Those locations became recurrent in the composition of imagery and made it easier for the knowledgeable viewer to look at the right place to search for textual information.

Another possible place to locate glyphs inside an image was the head of the characters represented in it, such as the example we have already seen of the deity Wak Chan? Winik, where his personal name is embedded in his headdress (in this case complemented with facial features). One of the clearest examples of this praxis comes from Tikal. Stela 31 (figure 11.a) represents the ruler Sihyaj Chan K'awiil with an elaborate headdress, which includes a glyph compound in the center. That set of hieroglyphs refers to his name in a perfect pictorial assimilation with the iconography around it.

Figure 11

Examples of functional locus. a) Detail of Stela 31, Tikal; b) Detail from the San Diego relief; c) Unprovenanced jade ax. a, c: drawings by J. Montgomery; b: Drawing by M. van Stone.



We have also seen that human characters appear with glyphic compounds in their hands, or examples where the text is embedded in the place they are located, such as the cushions the two Copán lords are comfortably seated on, or cases where the ruler stands over place names in some stelae, carving reliefs and jade axes. In Figures 11.b and 11.c, we see a reference to a toponym identified by another diphrastic kenning, *chan-che'n*, 'town, city' (Hull 2012: 105-107).

We call *functional locus*, the specific locations where the writing is put in relation to the rest of the elements in an iconographic composition. Salazar Lama (2014, p. 86) defines *functional locus*, as the zone in the image where some iconographic motifs (or in this case script elements) are located recurrently. Over time, this specific place in the composition presents an attached particular meaning and the motifs occupying that specific locus participate at the same functional level. Such is the case of the mountain's brow and occasionally the zone under the ruler's feet in the jade axes, or stelae, where both operate as a *functional locus* dedicated to toponyms, or the glyphic compounds shown in the hands of characters, where they function as offerings.

Theoretical approaches

Recently Werness-Rude & Spencer (2015, p. 56) have suggested that during the Classic Mayan period, image and writing had the potential to develop semantic complementation. In the examples already mentioned of script elements embedded in the images, we have tried to expose how this complementarity works to configure a complex system of visual communication. We think that in such a system the hieroglyphs specify and define what images could not display.

Taking this basic idea as a starting point, we propose that the function of text elements embedded in images is to promote and facilitate their denotative level. In this way, we follow Barthes (1986), Carrere & Saborit (2000, pp. 121-123) and Goodman (2010, pp. 19.21), and relate the denotative level with the recognition and correct detection of scene components.

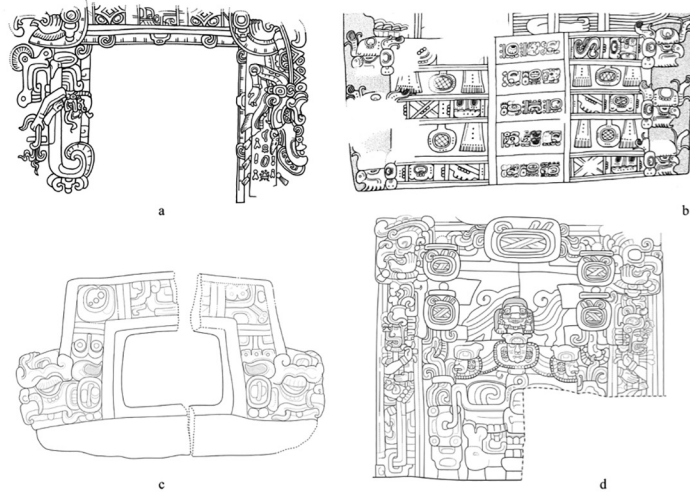
This interpretation of the function of embedded text elements makes sense when we consider that in Mayan art, the concept of portrait does not exist as it does in the traditional occidental way. In Stela 31 from Tikal (figure 11a) for example, the ruler Sihyaj Chan K'awiil has a standardized and schematic appearance shared with many other elite characters in early Mayan art examples, with no facial or corporal features that allude to personal identity. The only mechanism the viewer has to recognize the ruler is to look at his headdress and search for his anthroponym. The same idea operates in the other examples mentioned. In many cases the witz

masks represent generic mountain locations, but only by using associated toponyms do the images become clear and represent particular places.

In the monumental public art across the whole Mayan area, embedded script elements were common. In the so called “sky bands” (full of celestial motifs), for example, we have found two kinds of bird’s heads attached to the corners or in both extremes of a horizontal strip (figure 12.a, b, c), which we believe is another kind of *functional locus* recurring throughout the classical period. As we have proposed Valencia & Salazar Lama in press), these bird’s heads function as logograms and, can be read as **CHAN**, “sky”. One of the birds was illustrated with the jaw in the shape of a hand, and was in use during the early classical period, and a second one presented a mirror on its forehead, and was in use during the Late and Terminal Classic. Here, the function of the bird’s heads (together with the celestial symbols) is to show that the iconographic motif is the sky, reinforcing the nature of the space location.

Figure 12

Examples of bird’s heads attached to the ends of sky bands. a) Detail from the Margarita stucco relief; b) Detail from Stela 32, Naranjo; c) Sculpture from Moral-Reforma; d) Mask from Bayal building, Xultún. a, c y d: Drawings by Daniel Salazar; b: Drawing by Linda Schele.



This function can be corroborated in the stucco reliefs from the Bayal building at Xultún (figure 12.d). In this example, the horizontal sky band is hidden behind the tree branches. The **CHAN** bird is the only part of the sky band that is still visible, and the viewer can recognize with certainty that the scene is taking place in a celestial location, being represented by the bird’s head logogram occupying a particular *functional locus*.

The examples we have presented so far show that Mayan art is a highly denoted communication system. Carrera & Saborit (2000, pp. 79-81) designate these kinds of systems as hard coded (“código duro”). In such systems, the content and the values expressed are precisely segmented and the relationship between their components is stable. The result is a greater certainty in the communication process and the absence of polysemy or multiple interpretations.

Text and image integration through Mesoamerica

The idea of including text along with images was not only used by the Mayan artists, as it was a very common practice throughout Mesoamerica, because they were confronted with the same problematic, that of clearly indicating named elements in a composition, that could not be identified using their figurative characteristics exclusively.

Take for example the way Quetzaltheueyac and Ixcicoatl are represented in the document ‘Historia Tolteca-Chichimeca’ (figure 13). In some scenes, one of these two characters is depicted with a long feather coming out of his mouth, and the other with one of his feet turned into a serpent. Yet they are also shown with their respective name glyphic compounds attached to their head, and these two ways of denotation are mutually exclusive, as they are not used at the same time.

Figure 13

Quetzaltheueyac and Ixcicoatl in the document Historia Tolteca-Chichimeca. a) folio 7v; b) folio 16r; c) folio 2r. (all images from Kirchhoff et al. 1989).



In this case, the scribe makes a very clear distinction between name tagging, through the use of the glyphic compounds attached to the head of the character, and the writing embedded in the iconography, where the glyph for *coatl* is attached to the foot of Ixcicoatl, exactly as in the Mayan case for Ahk Ok Chamiiy in Tonina.

It is clear from these examples that the scribe uses these two possible ways for name-tagging interchangeably, as Ixcicoatl is not always represented with the snake replacing his foot, but with a normal human one and the glyphic compound attached to his head. The same happens to Quetzalhueyac, where the associated glyphic compound is a human head with a quetzal feather coming out of his mouth, however, he is always represented in this way. With him, the scribe never opted to use the glyphic compound along with the illustration, as they are too similar and both are located on the same *functional locus*, the head.

One interesting detail about the two characters is that their human representations are exactly alike, meaning that we cannot distinguish one from the other, except for the glyphic compound attached to their heads, or because logograms have been attached to their images. This means that the resource of embedding text in an image is used exactly for the same purposes the Maya use it, for name tagging.

A special case of the fusion between text and image are the emblem-like names employed in Teotihuacan art (Domenici 2016; Taube 2002, pp. 350), or its Mayan counterparts, such as the Rosalila and Margarita stucco reliefs (figure 14); or the recently analyzed examples from ceramic vases K1152 and K1647 (Stuart 2013).

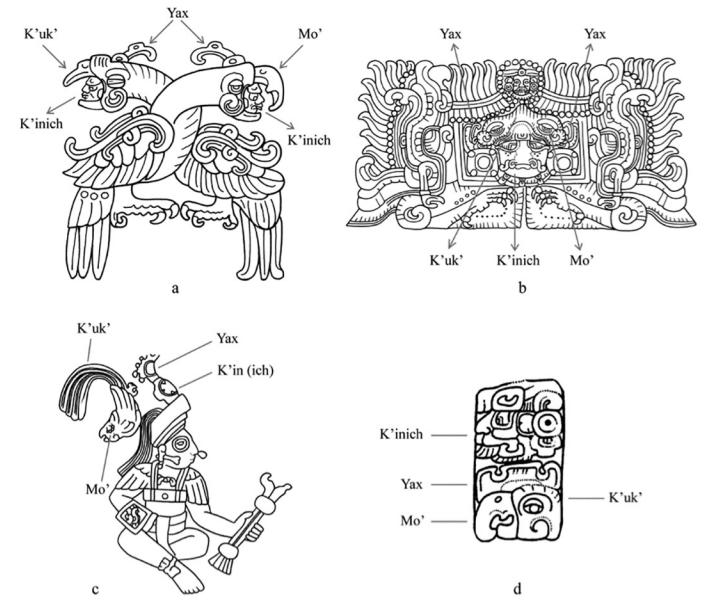
We consider an emblem-like name as an image that represents an anthroponym graphically, which in many cases serves as an identification icon. In Classic Mayan imagery this is a non-common device.

In the Copan Acropolis we find two paradigmatic examples that illustrate this concept perfectly: The Margarita and Rosalila stucco reliefs (figure 14.a, b). Both images are configured from different elements that together make up the name of the dynastic founder, K'inich Yax K'uk Mo' (Brave/Fiery/Hot Green Quetzal Macaw) in a graphic manner (Stuart 2004).

In these two examples the logogram **YAX** and logographic references to a macaw (*mo'*) and a quetzal (*k'uk'*), merge with the K'inich (solar deity) face to configure the name of the ruler. In the Margarita relief, the macaw and the quetzal are shown in full body version, with the sun god inside their mouths and the **YAX** over the head; in contrast, in the Rosalila example, both birds are shown only with diagnostic iconographic features (in a *pars pro toto* principle) fused in the headdress worn by the sun god,

Figure 14

Copan's emblem-like name examples. a) Margarita stucco relief (detail); b) Rosalila stucco Relief (west wall); c) K'inich Yax K'uk Mo' in Altar Q; d) The name of the ruler in Motmot Marker. Illustrations: a, b: Daniel Salazar; c: Linda Schele; d: Barbara Fash.



with **YAX** elements flanking it.⁸ Some similarly fused elements are present on the headdress of K'inich Yax K'uk Mo' on Altar Q (figure 14.c) and forming his name in the text of the Motmot ballgame marker (figure 14.d).

As Nielsen (2003, pp. 227-229) has proposed, the reading order of the elements in the king's emblem-like names is far from explicit, and the images are basically iconographic in nature. However, we consider that these images make no sense as scenes, but acquire a full meaning when seen as graphic emblematic representations of Copan's first king's anthroponym.

Nielsen also suggests that the size of these emblematic devices – occupying great portions of the building's facades – is rare in Mayan art, and mentions that the way in which the two birds cross their necks is also extremely uncommon in Mayan art. Nielsen notes (2003, p. 228) that similar entwined feathered serpents appear in the Teotihuacan-style vessels in the Tikal's Problematic Deposit 50, and two twisted birds occur in the so-called "Maguery Blodletting Mural" from Teotihuacan, probably referring to names or titles in an emblematic writing system as well.

With this evidence, we agree with Taube when he suggests that Margarita, and by extension the Rosalila reliefs as well, are an "intentional allusion to Teotihuacan style mural texts" (Taube 2000, p. 29), as recent research indicates (Domenici 2016) the Teotihuacan writing system gave a high priority to these emblematic forms of writing names, alongside other forms of writing more similar to the Mayan one (Taube 2000, 2011).

Two more examples of emblem-like names come from two so-called Codex Style vessels (figure 15.a, b), and in both cases they seem to be related to Yukno'm Yich'aak K'ahk', ruler of Calakmul from 686 to 697 CE. Stuart (2013) has convincingly shown that the main figure in these two vessels is a compound showing jaguar paws and fire scrolling elements. The two

8. According to the example of the ruler's name from the Motmot Marker (figure 13d), it is

possible that the frontal section in the headdress in the Rosalila relief (now lost), was originally a macaw's (*Mo'*) beak.

Figure 15.

Examples of emblem-like glyphic compounds with the name of Yukno'm Yich'aak K'ahk'. a) Rollout of K1552; b) Rollout of 1647; c) Name variations of the Calakmul ruler Yukno'm Yich'aak K'ahk'. Drawing by Simon Martin, taken from Stuart (2013, Figure 3).



elements mentioned simply spell **ICH'AAK** (jaguar paw) and **K'AHK'** (fire), for Yich'aak K'ahk' (Claw of Fire), as we see in the name variants of this same king (figure 14c). Again, the whole compound in these vessels is presented in a pseudo-Teotihuacan style.

Final remarks

The evidence presented so far might give us the impression that iconography can be read, because it usually embeds texts in the images. But this is a misleading assumption, because the Mesoamerican artists only employed this resource in certain specific circumstances.

For Mesoamerican cultures, the separation of these two systems for encoding information seems a bit thin in some cases, with the clear exception of the Maya, but we should realize that our better understanding of their writing system sets them apart.

Especially problematic is the Teotihuacan case, where the emblem system for expressing names is completely figurative, yet we might also keep in mind that the Mayan writing system might become emblematic when full figure glyphs are employed for writing, or when the Mayan artist wanted to emulate the way in which a Teotihuacan artist would have written a name.

Figure 16.

Examples of images created with alphabetic characters. a) British Library, Harley 647, f. 9r; b) British Library, Add. 21160-31, f. 181v.



The assumption that iconography could be read is misguided, as we see from our own writing experience. Text and image had a clear separation in ancient Mesoamerican cultures, the same as they do in our own culture. Moreover, in alphabetic cultural traditions there have been some attempts to intermix text and image, as can be seen in the examples in Figure 16.

In Figure 16.a we have an example of a ninth century copy of a text written by Cicero called *Aratea*, a work of astronomy (British Library, Harley 647, f. 9r). The text includes a depiction of various constellations that are described by Cicero, but the images depicting the constellations are made out of written words, coming from another text written by Hyginus, called the *Astronomica*. The hare shown in the illustration is the depiction of Orion, because it shows the animal preferred as a prize by the hunter.

In Figure 16.b we have an image from f. 181v, from the British Library, Add. 21160-31, which includes some Torah documents⁹. Dating from the second half of 13th century, this document from Germany, written in Hebrew and Aramaic, uses letters from the Hebrew alphabet to form the silhouette of a rider and his horse. As we can see from these examples, the possible misunderstanding between text and image is not possible as the iconic distance between them is very large and we are used to differentiating them, as we still have some cultural contexts that let us do so.

In the case of the Mesoamerican cultures, we can affirm that the embedding of text only occurred in certain conditions and with a clear objective. So far, we have been able to determine that text embedding was only used to name things that were difficult to identify using iconographic means alone. The identification of particular people requires the presence of specific features that might narrow down the possible options to choose from. With regards to people, for example, the portraits of K'inich Hanab Pak'al and Yukno'm Ch'e'n have been detected, among a few others, as examples where the Mayan artists tried to be realistic.

9. The documents included are: Pentateuch with Targum Onkelos (ff. 1-273), Haftarat (ff. 274-297v), and Five Scrolls (Hamesh megillot; ff. 298-318), Job ch. 1-31:2 (ff. 318v-329v), with masorah magna and parva (aka 'Yonah Pentateuch').

The ingenious use of the iconic value of writing by the Maya, helped them clarify the nature of some of the elements included in their iconography, but also helped them emphasize some particular meaning in cases where the element depicted could be misinterpreted or wrongfully analyzed. And they achieved all of this, whilst beautifully integrating the text into the images where they were supposed to be read.

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