

The Intersection between Art, Non-Linguistic Symbol Systems, and Writing: The Case of the Wari, Tiwanaku, and Inka Iconographies

Tomi S. Melka and Robert M. Schoch

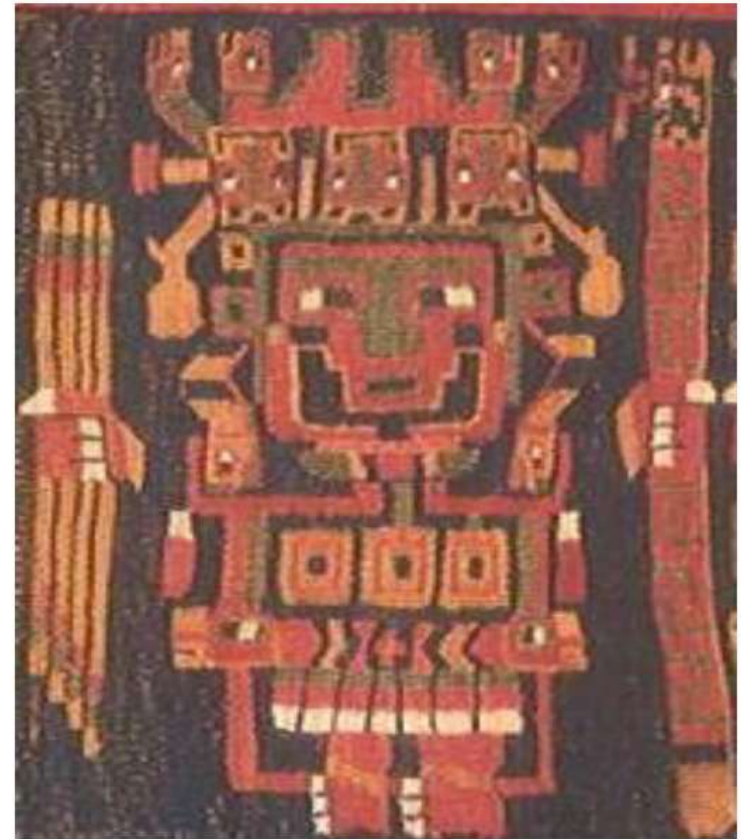
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Abstract: The present study focusses on iconographic aspects of Wari-Tiwanaku (who occupied portions of modern Perú, Bolivia, and Chile, *circa* 100 BCE to 1100 CE) artifacts. The hypothesis that the graphic Wari-Tiwanaku elements constituted a cogent semiotic system is explored. Many of the Wari-Tiwanaku elements reminisce (or evoke) the later classic Inka (*circa* late 15th to early 16th centuries CE) geometric-like / stylized *t'oaqapu* patterns which it has been argued formed a visual system based on mnemonic-like principles with possibly emerging logographic elements per various scholars. Selected models, fundamentally from a number of textile and pottery samples of the Wari (+ Wari-Tiwanaku) and Inka cultures, have been retrieved and subjected to iconographical and comparative analyses. The results vouch for the continuity of cultural patterns among these highland pre-European Andean states, separated temporally by hundreds of years, with the Inka having possibly adopted and refashioned an unspecified number of motifs in agreement with their ideological and aesthetic agenda.

Fragment of a tapestry tunic of early Tiwanaku style, *circa* 200–400 CE, Perú or Chile, camelid fiber, private collection (see Young-Sánchez 2004: 46–47), portraying a figure similar to the frontal figure of the Gateway of the Sun (Tiwanaku). The 'staff-bearer' figure was a "*leitmotiv*" in many of the compositions attested in various support materials during the Wari-Tiwanaku rule/s and sphere/s of influence, whether through metonymy or in full shape/s.



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Background:

It has been hypothesized that classic Inka (= Inqa / Inca) *t'oqapu* (= *tocapu* / *tokapu*; square units containing geometric shapes, patterns, or stylized images that were set in a band-like or grid-like structure) may constitute a pre-writing system or a liaison between pure semasiography and proto-writing (with emerging phonetic elements). The mainstream belief among scholars is that pre-European Inka did not have a writing system composed of physical signs able to fully express and represent speech. Nonetheless, scholarly estimates of notation systems of a numerical and non-numerical nature that existed in pre-European South America present them as being as efficient as phonetic scripts for various purposes (e.g., record keeping with *kipu* [= *quipu*]; cf. Urton and Brezine, 2009), their differences being part of a divergent “evolution” in the way of thinking and representation. An initial assessment of the Inka *t'oqapu* suggests that it was a visual system based on mnemonic-like principles with emerging logographic elements (Melka and Schoch, 2021). The classic Inka *t'oqapu* date to the Late Horizon period of the Andean cultures, circa 1476–1532/34 CE, and are best known from tapestry tunics and other textile objects as well as various non-textile artifacts such as pottery and masonry designs. The patterns observed necessarily reflect the mental lexicon of their creators.



An all-*t'oqapu* Inka tunic, Late Horizon; 1450–1540 CE; dimensions: 90.2 cm × 77.15 cm (35 1/2 in. × 30 3/8 in.); material: camelid fiber, cotton; inventory No. PC.B.518; cf. Dumbarton Oaks Research Library and Collection, Pre-Columbian Collection, Washington DC (2021).

Introduction to Inka (=Inqa) *t'oqapu* (= *t'oqapu*)



Description of *t'oqapu* (= *t'oqapu*): Small, multi-colored, square units set in a band- or grid-like structure, having mostly a recurring character and running lengthwise (horizontally and/or vertically) on the most common artifact: an Inqa-made or Inqa-inspired fine tapestry tunic, or on other support materials (such as wood, metal, ceramic, and masonry).

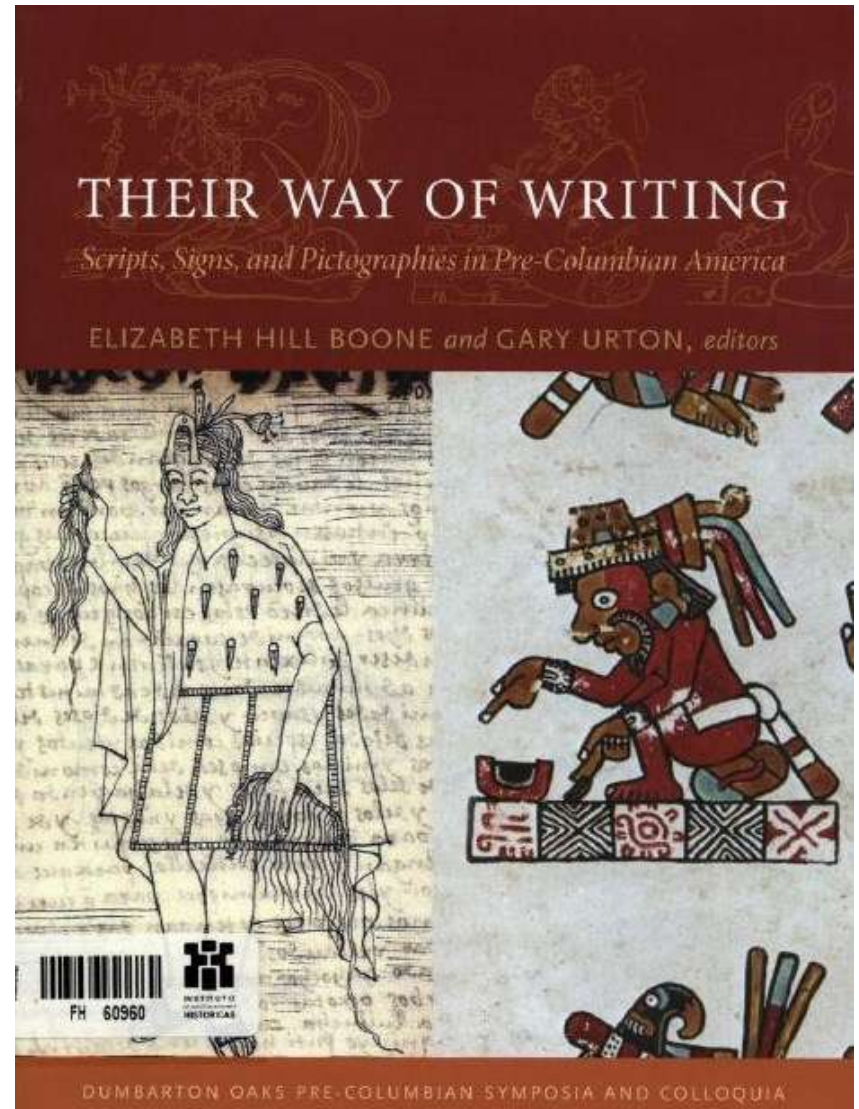


A closer look at tunics and other artifacts upholds the previous observation, and reveals a few additional details as reported over the decades (see Markham, 1969 [1910]: 122; Bankes, 1977: 172; Rowe, 1999 [1979]; Feltham, 1989: 57; Zuidema, 1991: 151; Delgado Pang, 1992: 291; Silverman, 1994: 13–14; Stone-Miller, 2002 [1995]: 212; Phipps, 1996: 153; Dransart, 1997: 159; Arellano, 1999: 257; Roussakis and Salazar, 1999: 276; Manrique P., 1999: 65; Frame, 2001: 132–135, 2007; Pillsbury, 2002; Cummins, 2002: Fig. 4.3, 2011; Quispe-Agnoli, 2002, 2006; Heckman, 2003: 49; Steele and Allen, 2004: 36–37; Stagnaro, 2005; Clados, 2007, 2020; Gentile Lafaille, 2008: 2; Williams, 2008: 48–50; Femenías, 2017; Beaulé, 2018: 19–20).

Introduction to Inka (=Inqa) *t'oqapu* (= *t'oqapu*)

An important reference:

Cummins, Thomas B. F. 2011. *Tocapu*: What Is It, What Does It Do, and Why Is It Not a Knot? In *Their Way of Writing: Scripts, Signs, and Pictographies in Pre-Columbian America*, edited by Elizabeth Hill Boone and Gary Urton. Washington D.C.: Dumbarton Oaks Research Library and Collection (Trustees for Harvard University). pp. 277–318.





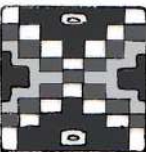
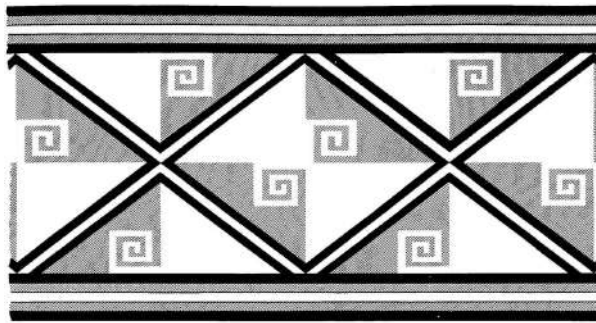
TOP: Fragment from the royal *unqu* held at Dumbarton Oaks, Washington DC (cf. Pasztory, 1998: 152–153, Fig. 111; Kelly, 2001: 44, 48, Figure 4; Pillsbury, 2002: 73, Fig. 7; Stone, 2007: 394); **LEFT bottom:** Section of a *qero* (= *kero*, drinking vessel) featuring *t'oqapu*-like motifs, B style (Museo de América, Madrid, inventory No. CEO7557; photo: M. Ziolkowski); see Ziolkowski (2009: 312, Figura 2); **RIGHT bottom:** section of a lingering wall of the *Temple of the Sun* at *Ollantaytambo* where “[...] only vestiges of the three stepped diamond shapes remain” (Hogue, 2006: 115, fig. 17).

In **architectonic samples**, models affined to *t'oqapu* are not absent; see e.g., Lehmann and Doering (1924: Collotype Plate 7); Paternosto (1996 [1989]: 140, Figure 20); D'Altroy (2005: 137, Plate 6.8); Hogue (2006: 115, fig. 18); Protzen (2018: 638).

Duccio Bonavia (1985 [1974]) collected data on several mural paintings related to the former Inca territory. It is significant that the Inca rendered paintings with an intense geometrical content similar to *t'oqapu*, e.g., at Huaca de la Centinela, Chincha Valley, Perú (Bonavia, 1985 [1974]: 157, Fig. 114) with *triangle*, *rhomboidal*, and *meander-like hook* patterns.

LEFT: An reconstruction drawing of a mural on the walls of an Inca (= Inca) structure as seen by the archaeologist and anthropologist John Howland Rowe in 1958. Inca style, Late Horizon (cf. Bonavia, 1985 [1974]: 157). The walls, part of the pyramid of Huaca de la Centinela, are located in the province of Chincha (Ica region, modern-day Perú).

RIGHT: An elaborate quadruple jambed niche at Iñaq Uyu (*Isla de la Luna*, Lake Titicaca, Bolivia) in Protzen (2018: 638, Figure 6.3.6); the upper section is reminiscent of the diamond-like (waist)band, a classical *t'oqapu* motif; photo by J-P. Protzen.

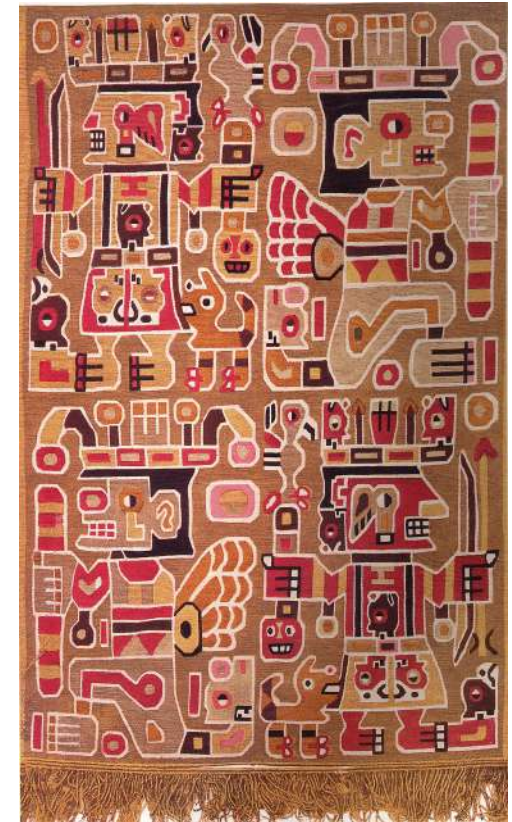


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Background, continued:

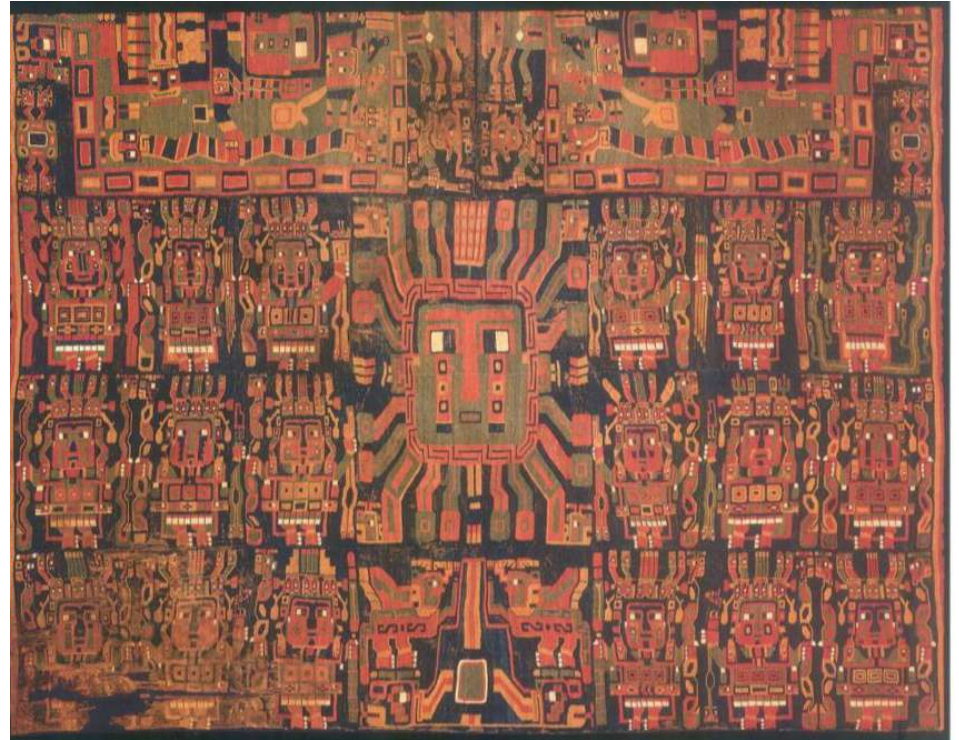
Predecessors of the Inka were the Middle Horizon Wari (= Huari), with significant influence *circa* 600 CE to 1100 CE in the northern and central region of modern Perú, and the Middle Horizon Tiwanaku (= Tiahuanaco / Tiahuanacu) of the Lake Titicaca region and south (extending into portions of modern Perú, Bolivia, and Chile), who originated *circa* first centuries BCE/CE and held significant political sway until *circa* 1000 CE (see Kolata, 1993; Schreiber, 2001; McEwan, 2005). Despite differences / rivalries, there was a mixing in some cases of the two cultures (= peer-polities) and thus one can refer to this collective as *Wari-Tiwanaku* (see Stierlin, 1984; Cook, 2004; Isbell, 2000; Williams León, 2001; the interrelation / interdependence *versus* competition between Wari and Tiwanaku polities is still a matter of contention, see Bergh, 1999, 2013). After the dissolution of the Wari and Tiwanaku, various traditions established by these empires continued and influenced later cultures, including the Inka (cf. Reid, 1986; Morris and Von Hagen, 1993; Hughes, 1995; D'Altroy and Schreiber, 2004).



Above: Fragment of a larger piece of a Wari-Tiwanaku tapestry weave, made of cotton and camelid fiber. Decoration of four stylized staff-bearing figures of which two are winged and two are wingless, and trophy heads, 600–900 CE, 34.5 × 22.5 cm; private collection (see Benavides 1999: Plate 6; 375; 408).

Left: Fragment of Wari tapestry tunic, Middle Horizon, 500–800 CE, camelid fiber, 92 × 55 cm, *Museum für Völkerkunde, München*, 58-1-1 (see Paternosto 2001: Plate 6).

The present investigation focusses on iconographic aspects typical of Wari-Tiwanaku artifacts, particularly tapestry tunics (cf. Stone-Miller, 1989 [1987], 1992; Bergh, 1999, 2013; Oakland Rodman and Fernández, 2000; Frame, 2001). The hypothesis that the graphic Wari-Tiwanaku elements, many of which are reminiscent of the later Inka *t'oqapu*, constituted a cogent semiotic system, one that the Inka *t'oqapu* patterns built upon, is explored. The Inka possibly adopted and refashioned an unspecified number of motifs in agreement with their ideological and aesthetic agenda. These motifs served to communicate messages of both a sacred and secular content (including what might now be referred to as political propaganda) during the Middle Horizon context as well as during the Late Horizon cultural context of the Inka. Importantly, given the time depth of the Wari-Tiwanaku tradition leading to the classical Inka, a period lasting a millennium, one can tentatively trace the development of geometricization of originally naturalistic patterns found on tapestry tunics and other artifacts, reaching eventually a high and admirable degree of abstraction (Paternosto, 1996 [1989]; Pasztory, 1998; Iriarte, 1999; Benavides, 1999: 355). Indeed, lacking predecessor motifs that are more naturalistic and thus recognizable (for instance, figures of humans, animals, or deities), some of the final abstractions at their culmination during the Inka Late Horizon would be virtually unrecognizable (see e.g., Kelly, 2001; Pillsbury, 2002; Stone, 2007, regarding the patterns on the royal *unqu* [tunic] held in the Bliss Collection at Dumbarton Oaks, Washington, DC).



Tapestry tunic of early Tiwanaku style, *circa* 200–400 CE, Perú or Chile, camelid fiber, private collection (see Young-Sánchez 2004: 46–47).

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Gateway of the Sun at Tiwanaku (Bolivia) *Circa* early first millennium CE.



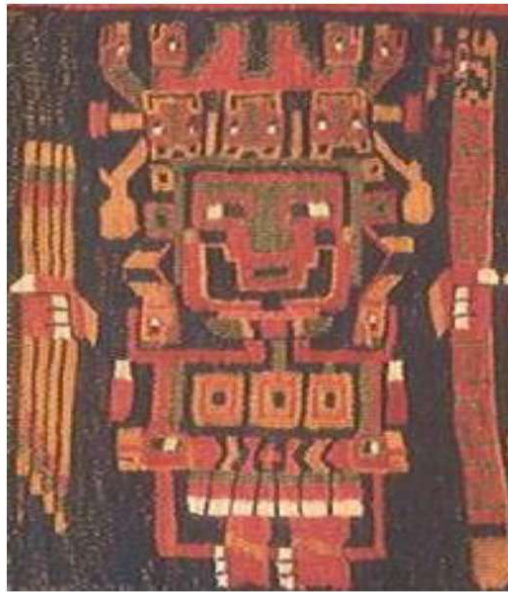
Staff-bearing figures from the frieze of Gateway of the Sun, Tiwanaku, modern-day Bolivia. Photo credit, see below. Drawings by Charles Wiener. 1880.



Sun god, central low relief of the monolithic Gate of the sun, Tiwanaku, drawing by Charles Wiener. 1880. Pérou et Bolivie – Récit de Voyage suivi d'Études Archéologiques et Ethnographiques et de Notes sur l'Écriture et les Langues des Populations Indiennes. Paris : Librairie Hachette; cf. Bergh (2017: 26, Figure 1b).

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(a)



(b)

(a) A figure similar to the frontal figure of the Gateway of the Sun (Tiwanaku) is portrayed in this fragment of tapestry tunic of early Tiwanaku style, *circa* 200–400 CE, Perú or Chile, camelid fiber, private collection (see Young-Sánchez 2004: 46–47).

(b) Pointers mark the eyes and face and staff in a fragment showing a recognizable ‘staff-bearer’ figure; see Stone-Miller (1994a: 117).

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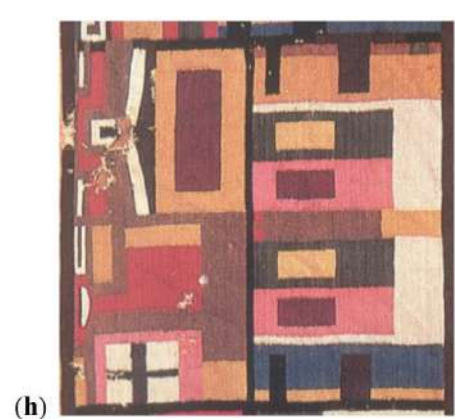
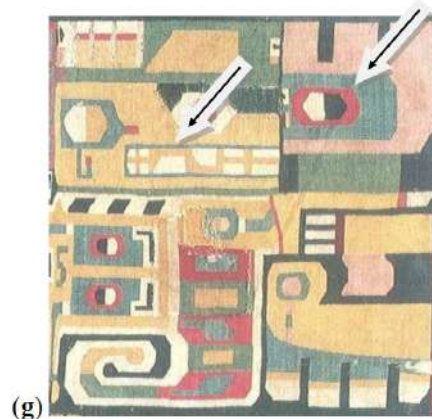
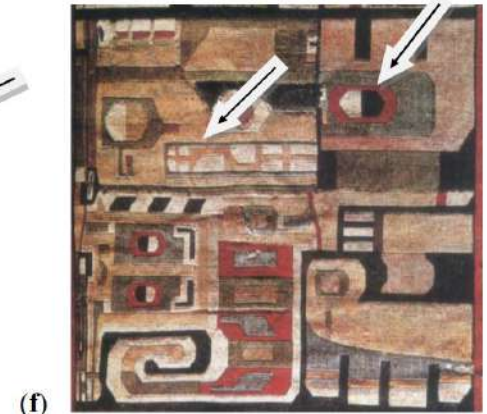
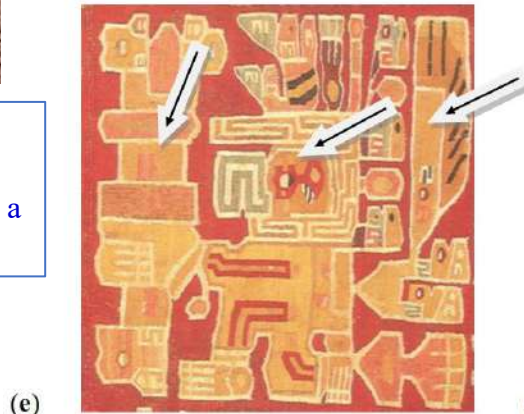
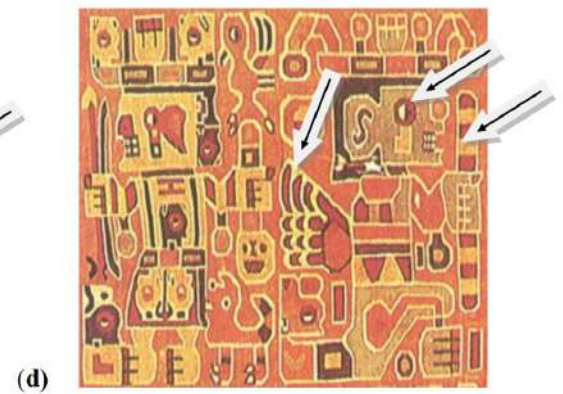
Staff-bearing
figures



Suggested
Progressive
Abstraction

[. . .] one can tentatively trace the development of
geometricization of originally naturalistic patterns found
on tapestry tunics and other artifacts, reaching eventually a
high and admirable degree of abstraction [. . .]

(c) Pointers mark the staff, eye, and wings of a still-natural depiction of a 'staff-bearer'; see Benavides (1999: Plate 6; 375; 408). (d) Pointers mark the wings, the bisected eye and the staff of a bird-man; see Benavides (1999: Plate 7; 377). (e) Pointers mark the staff, the stepped-beak and the split eye, and wings a bird-like figure; see Manrique P. (1999: Plate 13; 55). (f) Pointers mark the split eye and the teeth section in an abstracted feline creature; see Benavides (1999: Plate 11; 387). (g) A Wari tapestry tunic fragment from Peru, 600–1000 CE; see Pasztory (1998: 125); 500–800 CE; see Stone-Miller (1992: 344, Fig. 14). The tunic is made of camelid fiber and cotton, 40¾ × 20 inches (103.5 × 50.5 cm), and is held at the Metropolitan Museum of Art, New York. A staff-holding feline is identified sitting on its tail, being a color variant of (f). (h) The last image is part of the 'Lima Tapestry,' a Wari-Tiwanaku artifact made of camelid fiber and cotton, and stored in the collection of the *Museo Nacional de Antropología, Arqueología e Historia del Perú* (Inv. No. T.01650); see Benavides (1999: 355). Such a rendition appears to be the climax of the abstraction, where the subject itself, i.e., the primordial *staff-bearer*, has 'lost' against the artistic creation, made of bars and rectangles; see Stone-Miller (2002 [1995]: 146).



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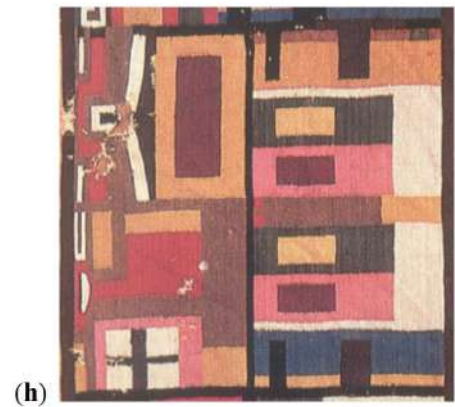
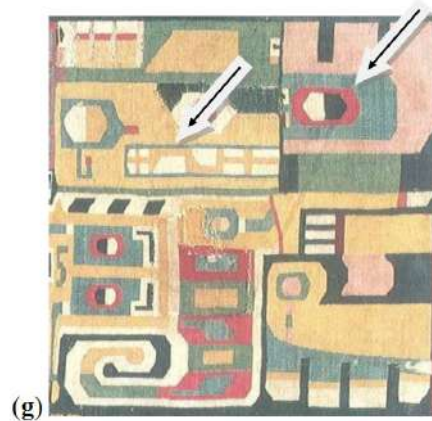
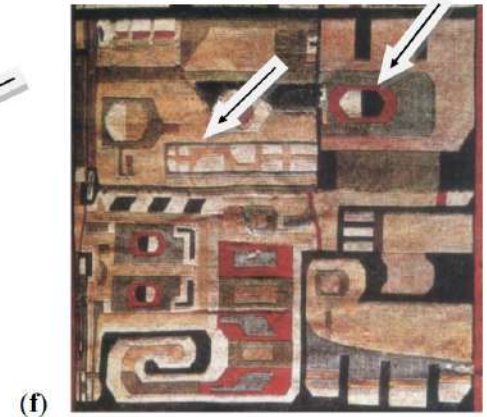
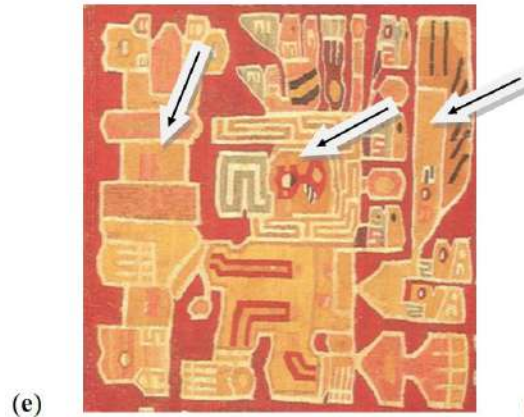
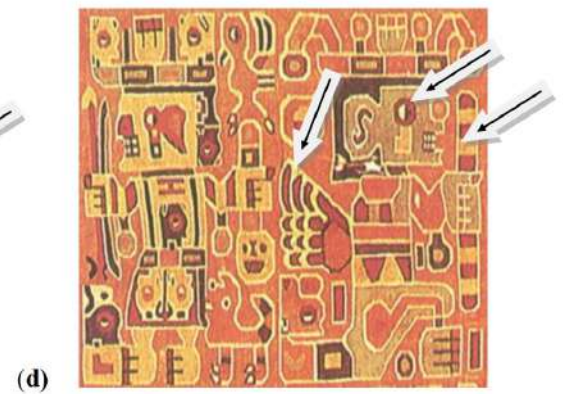
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Suggested Progressive Abstraction

Gayton (1978, 296; and see also Isbell, 2008, 736) notes,

“...the textile decoration of the Tihuanaco Huari style shows a change in the whole pictorial representation of the figures of the deities to an abstract style composed of fragmentary elements, distributed in rectangular divisions: principally eyes, nose and teeth. This disintegration of a total and coherent design is one of the most fascinating transformations in art”.

We agree that more work is needed to firmly establish chronological sequences. Thus far, in our assessment, the evidence indicates a general trend from naturalistic to progressively abstract depictions.



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Suggested Progressive Abstraction

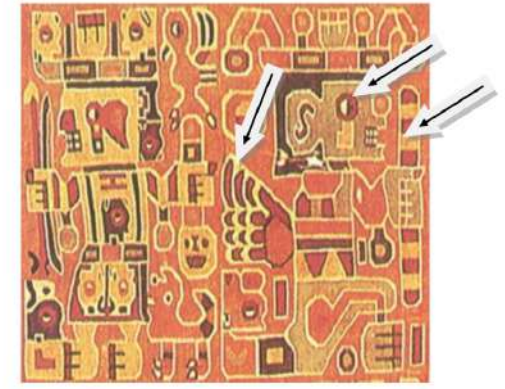
Bergh (2013: 183) comments,

“Why did they do it? There is no final answer but many believe that distortion [i.e., the process of abstraction; our note] is not iconographic – that is, it holds no symbolic or other meaning that can be interpreted. Rather, it is sheerly an esthetic contrivance perhaps undertaken to relieve tunic’s repetitive simplicity, to disguise and mystify their sacred imagery, or as a delightful intellectual exercise with form that endows the tunics with a pleasing rhythmic syncopation, and by providing a glimpse into the workings of a lively, playful intelligence, gives them a human approachability.

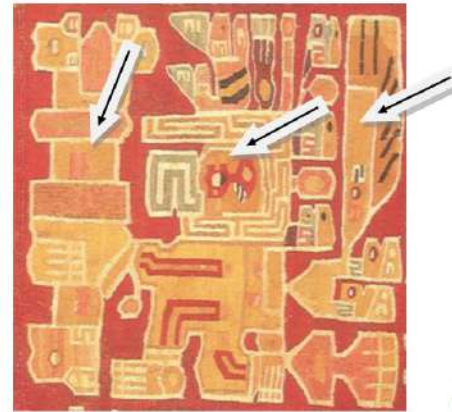
The so far unproven implication of some of these views is that distortion [i.e., the process of abstraction; our note] registers chronology, that its effects became more profound through time as [Wari; our note] weavers pushed the system to its extreme and logical conclusion... If the wellspring was purely artistic invention, however, it is much harder to say whether its goal was abstraction [the reductionist geometric-like process; our note], particularly in the sense that it is understood today in the West.”



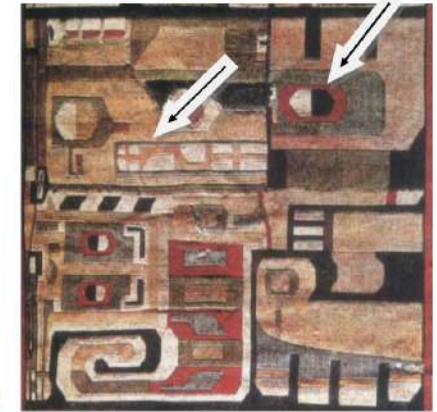
(c)



(d)



(e)



(f)



(g)



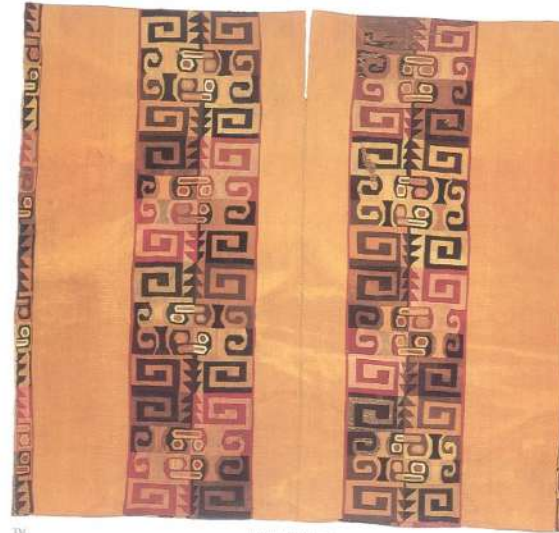
(h)

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Inka – Wari-Tiwanaku Connections

Wari tunics



(a)

(a) A Late Wari tunic 900–1100 CE, cotton and camelid fiber (Reg. number 91 533) is stored in *The Textile Museum in Washington* DC; see Benavides (1999: 395; Lamina 15 / Plate 15). (b) A Wari *unku* from the southern area, 500–1100 CE; see CCEM (2001: 456–457); Petit Palais (2006: 122). (c) A Wari-style *unku* of alpaca fiber, recovered from the far South Coast of Perú; ca. 800 CE (see Hughes 1995: 115).



(b)



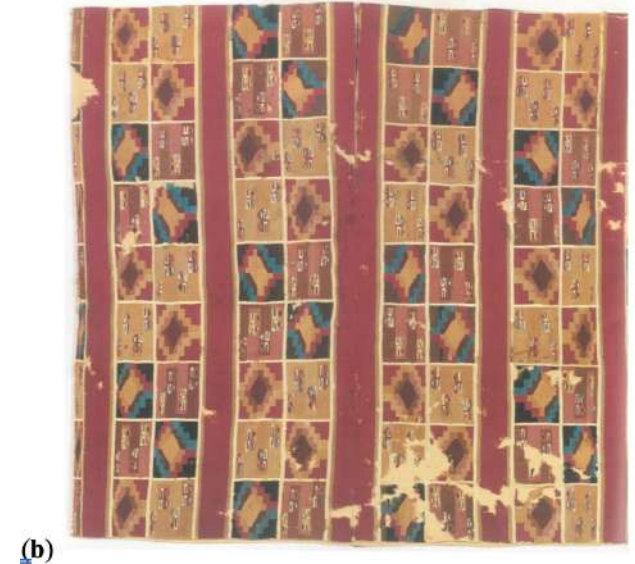
(c)

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Inka – Wari-Tiwanaku Connections

Wari tunics



(a) A Wari-influenced tunic, 700–850 CE, property of a private collector; see Frame (1999: Lámina 25a / Plate 25a, 339). (b) a Wari tapestry tunic of Middle Horizon, probably from South Coast 500–800 CE, found at *The Museum of Fine Arts*, Boston; see Stone-Miller (1994a: 101–103). (c) A tie-dyed tunic; *ca.* 50 BCE–200 CE; *provenance*: probably Arequipa area, Perú; *style*: early Nasca-related; *material*: camelid fiber; *technique*: plain weave; *dimensions*: 37 × 45 in. (94 × 114.3 cm); held in a private collection (see MetMuseum, 2021b). A similar *unku* (a), decorated with “lozenge” motifs, is reproduced also in Petit Palais (2006: 123).

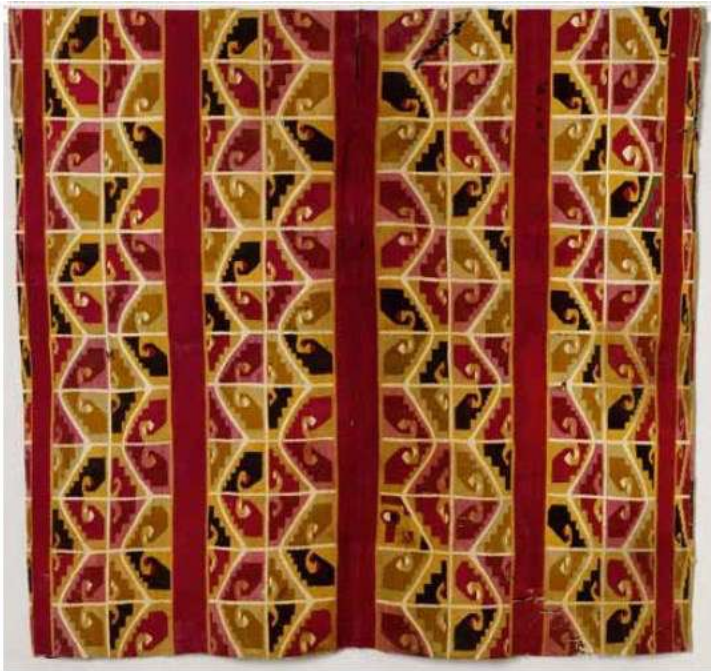


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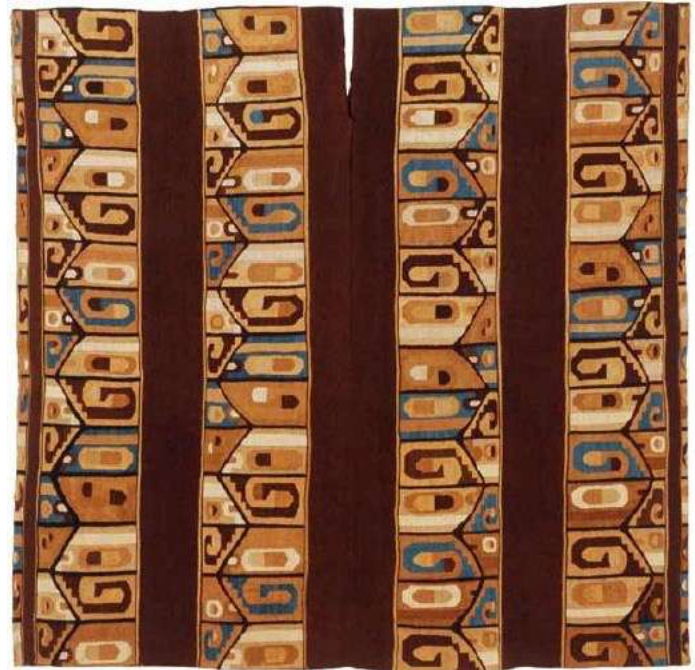
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Inka – Wari-Tiwanaku Connections

Wari tunics



View of the back of a Wari tunic. The garment features a paired-fret motif; Material: camelid fiber and cotton; Dimensions: 98 x 106 cm. *Staatliches Museum für Völkerkunde* (Munich, Germany); Inv. no.57-20-245 (NM 245); see Bergh (2013: 162, Figure 148).



Wari tunic with face-fret motif; Material: camelid fiber and cotton; Dimensions: 108.6 x 109.7 cm. *The Textile Museum*, Washington, DC (USA), acquired by George Hewitt Myers in 1941; Inv. no. 91.343; see Bergh (2013: 181, Figure 172).

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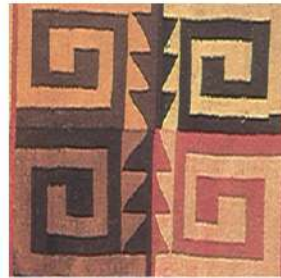
Iconographies

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Inka – Wari-Tiwanaku Connections

Wari: a, b

(a)



(b)

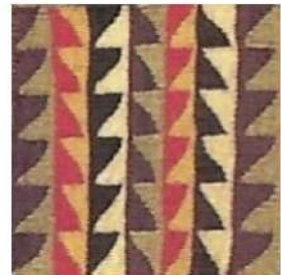


(c)



Inka: c, d, e, f

(d)



(e)



(f)



In this illustration, pattern (a) is cut off from the upper left front part of a Late Wari tunic 900–1100 CE, cotton and camelid fiber (Reg. 91 533), at *The Textile Museum in Washington*, DC; see Benavides (1999: 395; Lamina 15 / Plate 15). In contrast, pattern (b) is cut off from a Wari *unku*, from the southern area, 500–1100 CE; see CCEM (2001: 456–457); Petit Palais (2006: 122). *tokapu* patterns (c) and (d) are isolated from the front part of the *unku* found on the Island of Lake Titicaca and acquired by Adolph Bandelier in 1895. Purportedly mid-to late 16th century, this *unku* is held nowadays at the *American Museum of Natural History*, New York; see e.g., Lehmann and Doering (1924: Plate 158); Rowe Pollard (1978: 17); Phipps et al. (2004: 156–157). *Tokapu* (e), on the other hand, is isolated from the tunic of Bliss Collection at Dumbarton Oaks in Washington, DC; cf. Rowe (1999 [1979]: 642–647). *Tokapu* (f) is cut off from a Peruvian mantle of Late Inka to early Colonial period, about 1550 CE, made of camelid fiber. This mantle is held at *The Museum of Fine Arts*, Boston, Mass.; see Tuchscherer (1988: 37); Stone-Miller (1994a). In another extra context, Stone (2007: 402) reproduces the image of a Nazca tunic, 300–500 CE, bearing the “Greek key” (= “L-motif”), similar to the pattern (c) from the Dumbarton Oaks’ royal tunic. The similarities in the iconographic structure of these patterns distanced by some 500 or more years, are striking, with emphasis in the purported “Greek key” motif (complex or simplified); see (a), (b), (c), (e), (f), and the triangular serrations, aka “saw-teeth”; see (a), (b), (d). The continuity of tradition may be assumed in this sense, while discarding the idea that patterns are *accidental* outcomes. It seems that Inka or their direct descendants were not mere imitators of the earlier productions, rather than bent on merging and recreating the former cultural conventions (including textiles) at the benefit of their state ideology and mythology (see e.g., Bákula 2000 [1992]: 220).

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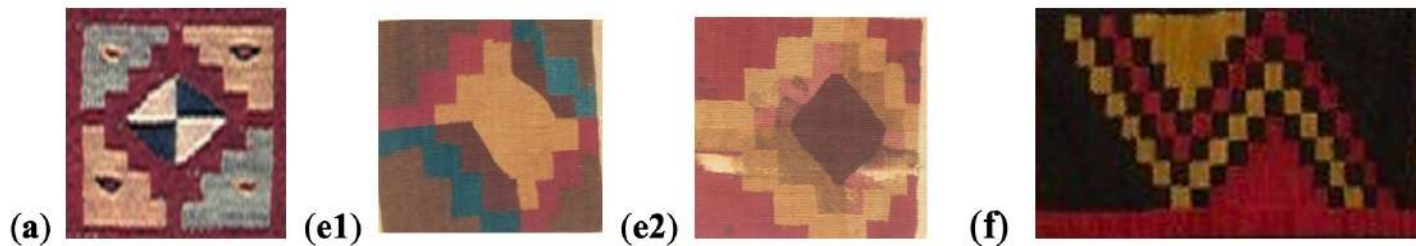
Tomi S. Melka and Robert M. Schoch

Inka – Wari-Tiwanaku Connections

Wari: d, e, f



Inka: a, b, c

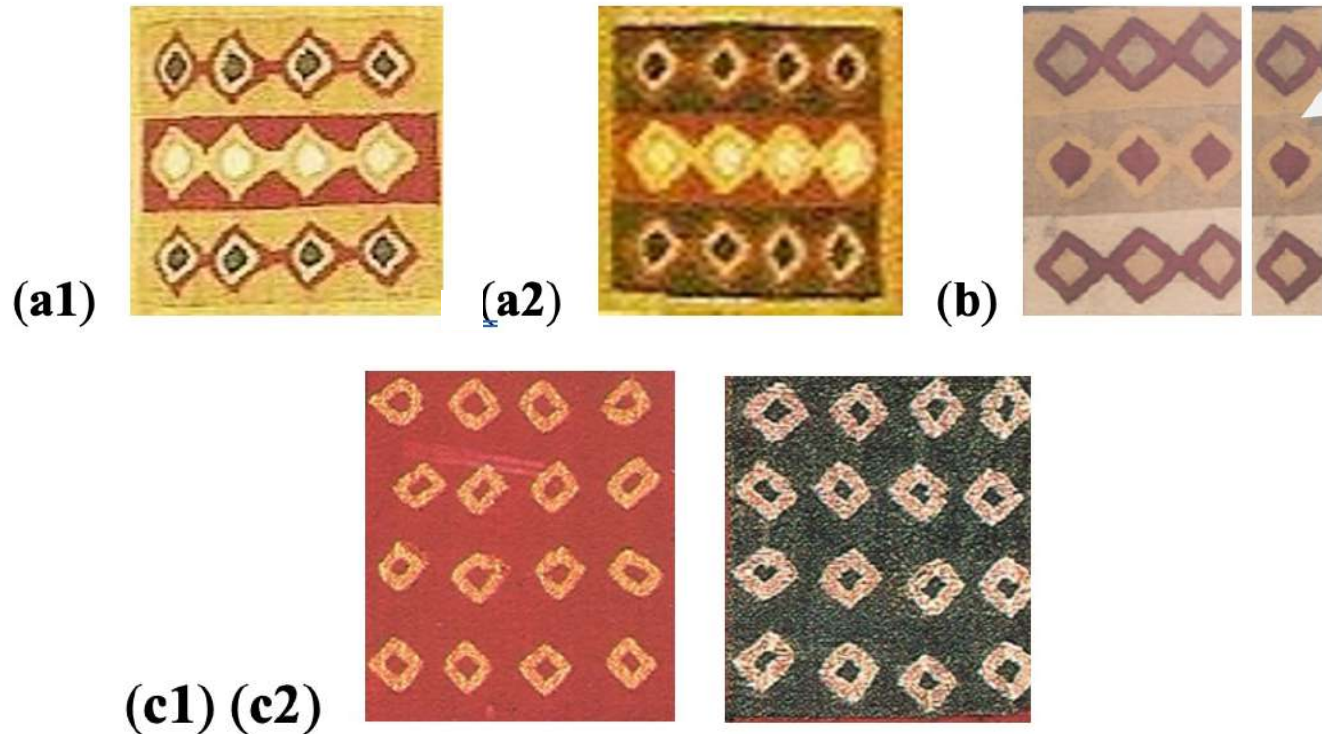


Tokapu (a) originates from the front part of a post-Inka *unku* said to have been found in Ancón, Perú, probably late 16th century, and held at *Staatliche Museen zu Berlin, Ethnologisches Museum*; cf. Arellano (1999: 258); Phipps et al. (2004: 167); Ramos Cárdenas (2005: 58–59); see Figure 48 (b). *Tokapu* (b) derives from the tunic of Bliss Collection at Dumbarton Oaks in Washington, DC; see Rowe (1999 [1979]: 642–647); Stone-Miller (2002 [1995]: 212; 2007: 386, 394); Phipps et al. (2004: 153–155). *Tokapu* (c) derives from the post-Inka *unku* deposited in the *American Museum of Natural History*, New York; see e.g., Lehmann and Doering (1924: Plate 158); Rowe Pollard (1978: 17); Phipps et al. (2004: 156–157). Patterns (d1 and d2, still discernible in the color format), viewed as plain color variants, derive from a Wari-Tiwanaku small rug made of cotton and wool (= camelid fiber), 600–900 CE; see Benavides (1999: 367, Lámina 4 / Plate 4; Leyendas / Captions: 408). The stepped-diamond patterns (e1, e2), plus variants, correspond to a Wari tapestry tunic of Middle Horizon, probably from South Coast 500–800 CE, found at *The Museum of Fine Arts*, Boston (see Stone-Miller 1994a: 101–103). The similar quadripartite configurations, the symmetrical perception, the use of colors in a contrastive fashion are noticed in some Wari-derived and Inka patterns. Furthermore, the clever combination of designs in the squares present in a banded tunic with luxuriant patterns; ca. 580–680 CE; Perú, probably Arequipa area, Nasca-related style (MetMuseum 2021a, and f) are reminiscent of a stepped-diamond *tokapu* of the Late Horizon period.

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Inka – Wari-Tiwanaku Connections



Wari: c

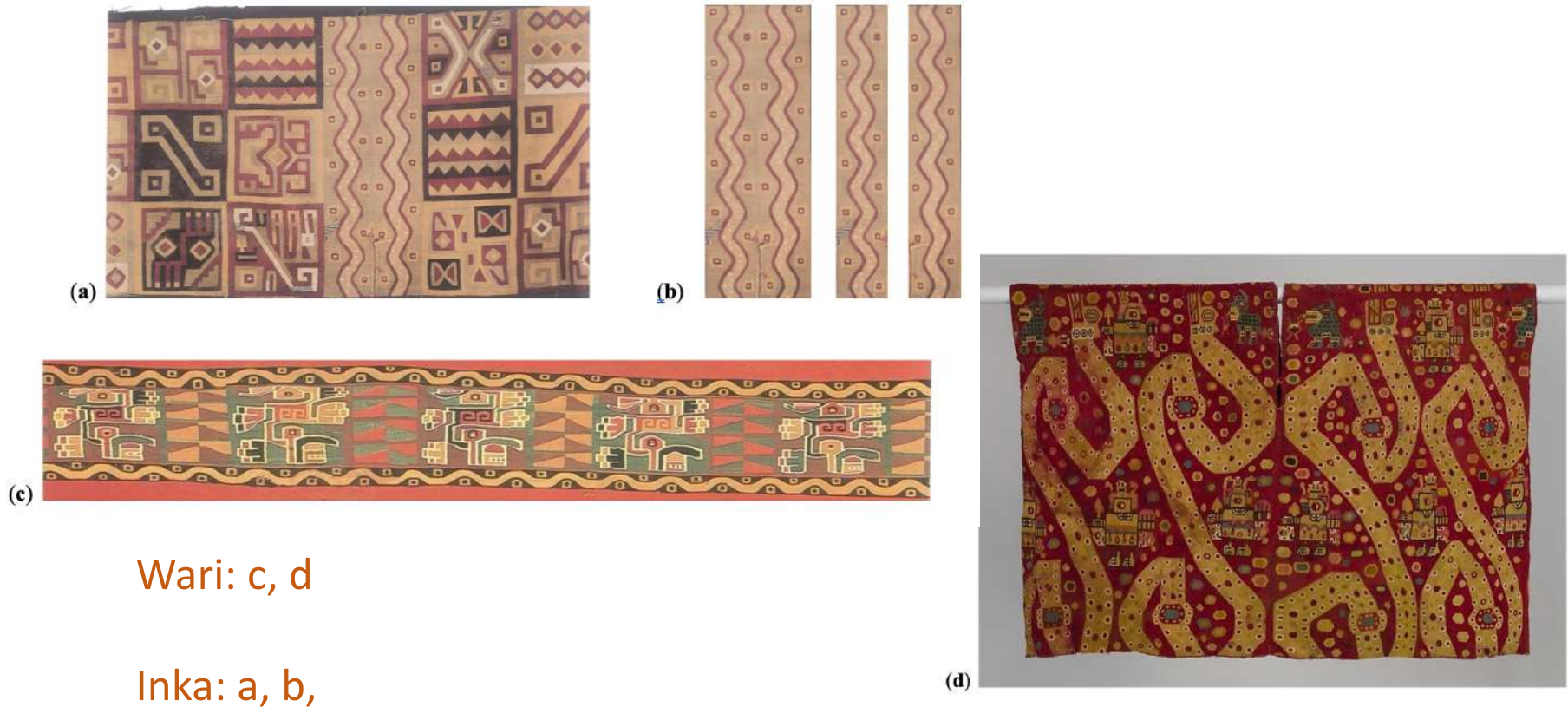
Inka: a, b,

Tokapu (a1) (a2) are isolated from the tunic of Bliss Collection at Dumbarton Oaks in Washington, DC; see Rowe (1999 [1979]: 642–647); Stone (2007: 386). *Tokapu* (b) is retrieved from a cotton-made Inka fragment of fabric. It currently resides at the *Centre de Documentació i Museu Tèxtil* (Terrassa, Catalonia), with catalog No. 157, CDMT 2573); see Solanilla i Demestre (1999: 254–255). Due to the fragmentary condition, the examined *tokapu* was reconstructed for technical purposes by affixing the conceivable missing portion. Design-patterns (c1, c2) are isolated from a colorful checkerboard Wari-influenced tunic; 700–850 CE, property of a private collector (see Frame 1999: Lámina 25a / Plate 25a, 339).

The Intersection between Art, Non-Linguistic Symbol Systems, and Writing: The Case of the Wari, Tiwanaku, and Inka Iconographies

Tomi S. Melka and Robert M. Schoch

Inka – Wari-Tiwanaku Connections



Wari: c, d

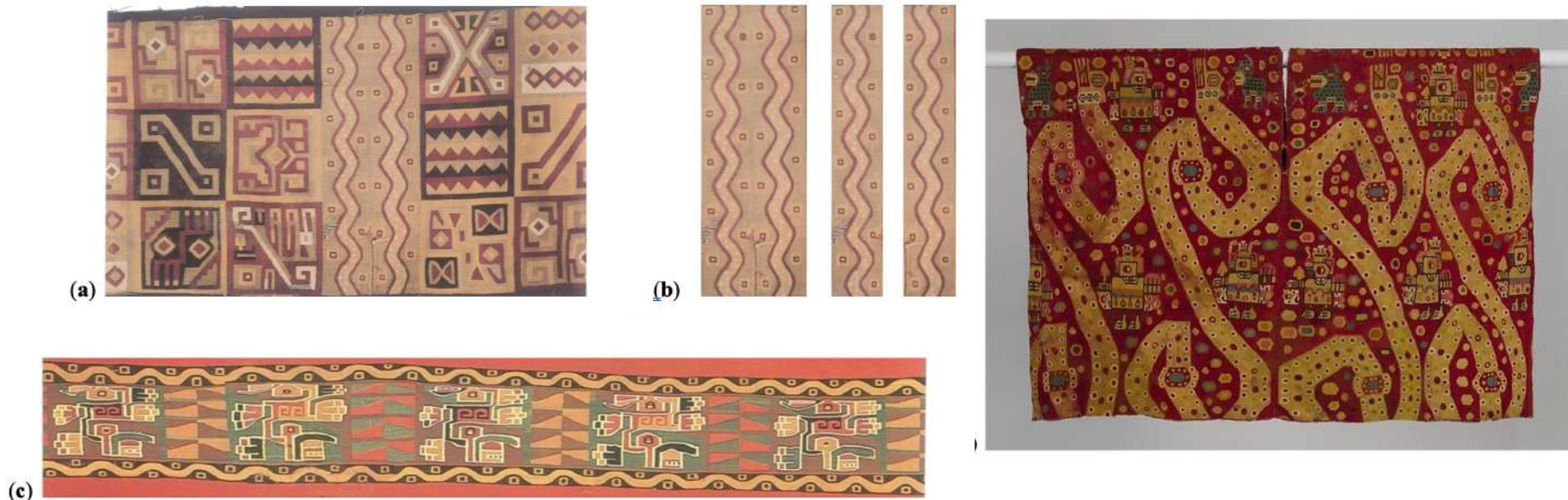
Inka: a, b,

A continuous meander-like motif (→ b), resembling a “two-eyed snake” is enfolded in the middle of an Inka fragment of fabric (→ a); see Solanilla i Demestre (1999: 254–255). The meander-like motif is also spotted alongside the modules of this fragment of a Nasca-Wari (c); ca. 700–850 CE, two-panel garment for a woman. The section under consideration (c) is originally set sideways and the tunic itself is preserved at *The Textile Museum* with inventory number 91 281; see Frame (1999: 333; Lámina 20 / Plate 20; 348). (d) The meander- / snake-like motif attains its full stature and representation as a lifelike design in a tunic with serpents; ca. 800–950 CE; South Highlands, Perú; Wari-related style; *Material*: camelid fiber, cotton; *Technique*: tapestry weave; *Dimensions*: 29 3/8 × 40 in. (74.6 × 101.6 cm); private collection (MetMuseum 2021c). The related commentary of MetMuseum (2021c) follows, “This tunic, though of typical Wari construction and color, is aberrant in both technique and design, perhaps as a result of a provincial influence. The snake design is unknown in other Wari-style tunics, but the small spotted cats and bird-headed figures can be found on a few other pieces. Areas of reweaving are present and the lower edge is missing, but the original effect of the design can still be seen”.

The Intersection between Art, Non-Linguistic Symbol Systems, and Writing: The Case of the Wari, Tiwanaku, and Inka Iconographies

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Inka – Wari-Tiwanaku Connections



We raise here the following questions: Do the Wari and Inka patterns stand for a message? Is there concomitant meaning in them, intended to be retrieved by the viewers? See in a general context, Bennett (1976: 180), Hofstadter (1999 [1979]: 166–167). A parenthesis needs to be made, however. For certain, we are not dealing with spontaneous, artistic experiments or practical jokes; cf. Serafini (1983). On the contrary, in view of the inherent properties of the Wari patterned visual space, e. g. strength of association between symbolic elements, in view of the recognized and enduring motifs across the modern and pre-modern Andes, e.g. the step fret, the diamond structure, the serial triangular serrations, to assume them as merely *ornamental*, or *nonsensical* and/or *bereft of any semantics* would be at best, uninformed, and at worse, pretentious.

Wari: c, d

Inka: a, b,

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At present, the Wari-Tiwanaku and Inka systems are thought to be largely mnemonic and semasiographic (cf. e.g., Gelb, 1963 [1952]; Sampson, 1985), though logographic elements may have found a way into such compositions. For this reason, it may be said that we are dealing here qualitatively with a different literacy model. There are distinct dangers regarding assigning values to symbols and iconographic representations of a long-extinct human community or culture. George Herbert Mead (1934) argued long ago that symbols can have arbitrary meanings within a certain society; if that society is extinct with no (or minimal) records or traditions surviving, then the meaning of a symbol, icon, or word may be lost.

Writing Among pre-European South American cultures?

The mainstream belief among scholars is that pre-European South American cultures did not have *writing systems* in the sense that such are conventionally perceived outside the Inqa area of control; to be precise, they did not have writing systems composed of *physical signs* able to fully *express* and *represent speech* (cf. Stierlin, 1984: 190–191; Franquemont, 1986: 81–82, 84; Mignolo, 1994: 234–237; J. H. Rowe, 1996: 463 in A. P. Rowe, and J. H. Rowe, 1996; Mitchell and Jaye, 1996: 16; Quispe-Agnoli, 2006).

Some scholars privilege *phonetic writing* as the climax of socio-cultural development, whereas “pictorial-like” and “logographic” forms / systems characterized as “partial” / “limited” / “emblematic” / or even “pseudo-” / “non-writing” are (“inherently”) related with less sophisticated and archaic human communities (aka *the oral societies*); cf. Boone (1996: 314). Although dealing specifically with the context of Mesoamerican scripts, the comments of Carlo Severi (2019) also apply to South America: “*The relationship between picture-writing and ‘real’ (phonetic) writing is usually understood in terms of a temporal sequence: picture-writings, regularly defined as rudimentary drawings used in oral traditions to represent basic ideas, are said to precede in time the invention of writing. They are also, very often, seen as unstable and unreliable means of storing knowledge. In studies devoted to the history of writing, it is often stated (Cohen 1958; Diringer 1937; Gelb 1952) that ‘true writing,’ once invented, is soon recognized as a better tool for recording and transmitting information. Consequently, the use of a writing system rapidly replaces old, rudimentary picture-writings and extends to cover the totality of a spoken language.*”



The possibility that these out-of-standard [tunic patterns are value-laden](#) (as they are meant to be intentional and interrelated) cannot be dismissed. The persistence in replicating such a dynamic in ordinary and high-quality manufactures suggests we are not witnessing some casual or rampant pastime. It would seem rather [a socially and mythologically-driven activity in accord with Inca logic](#), and the conception of time and space in their universe (cf. Estermann, 1998; Cummins, 2011). In this sense, the evidence encountered so far also calls upon concerted work, especially from art historians, anthropologists, textile experts, local informants, semioticians, professional designers, and linguists, so as to [verify or clarify their encoded meaning](#) (cf. Quispe-Agnoli, 2006; Cerrón-Palomino, 2008; Florio, 2013; Clados, 2020). Now, the fact that some *t'oqapu* motifs appear regularly, e.g., *the diamond waistband, the Inca key, the black-and-white checkerboard*, reveals not only their diffusion in Tawantinsuyu / Inqario, but also their simple “statement/s” and their high-frequency use in terms of significance and other conventions along this semiotic system.

A similar occurrence is noticed in other pre-industrial societies; Payne (1987: 55) in discussing the [heraldic practices](#) of the 13th to 15th centuries in England, mentions that some symbols were used extensively, “*The range of pictorial images was not large; but subjects like the symbolic lion, the eagle and the cross were popular*”.



***T'oqapu* in the Eyes of Modern Researchers**

[Possibly the same applies to the Wari and Tiwanaku Iconographies]

The proposals are structured along the following lines (1) and (2), letting us think that *t'oqapu* horizontal and vertical groupings were designed for a variety of purposes, retaining at any rate “[...] *critical cultural information*” (Pillsbury, 2006: 126).

Line (1) follows the hypothesis of *t'oqapu* as a visual, diagrammatic system of communication that, aside from aesthetic (or emotion-inducing) motivations, was used perhaps to send out diverse messages surpassing linguistic, ethnic, and spatial boundaries.

Line (2) follows the hypothesis of *t'oqapu* as some sort of “writing system”, basically of a logographic nature, in analogy with *logograms* found in other real-world known scripts.



Line (1) – *T'oquepu* as a visual, diagrammatic system of communication.
Below, the proposals / theories found in the literature can be placed into six (6) broad categories.

(a) *specific and/or mythical places of origin (= paqarina), locations, local distinctions, and ancestry.*

(b) *ethnic, political, and religious status, as indicator of social hierarchy, prestige and power.*

(c) *mythological ideas, heavenly origin, and cosmogony.*

(d) *royal functions, control, dominion, and war strategies.*

(e) *heraldic and calendric information.*

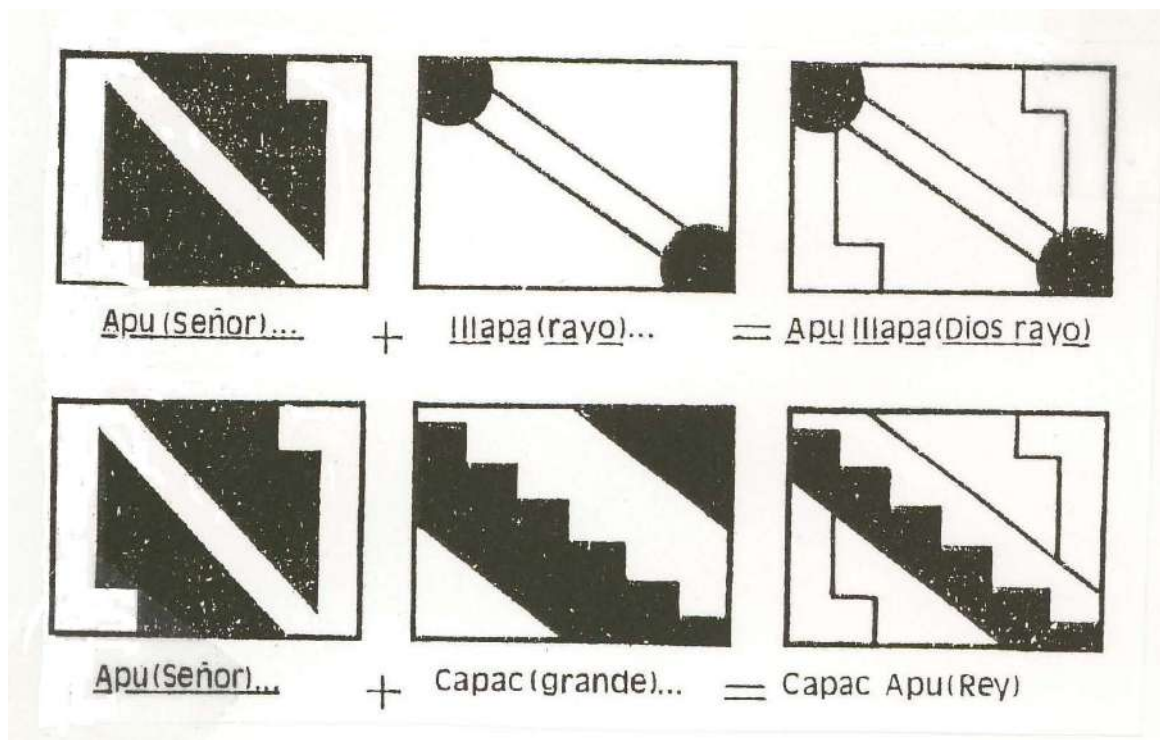
(f) *proposals regarding the connection between staple products (i.e., maize) and patterns in Inca textiles.*



Line (2) – *T'oquepu* Motifs Represent a Writing System

For instance, Victoria de la Jara (1975) pursued the “dualistic”-based methodology.

Making use of the principle of fusion (= “ligaturing” / compounding), de la Jara (1975: 47) offers:



“*Apu* (Señor [= Lord])” + “*Illapa* (rayo [= lightning]),” after recombination yields “*Apu Illapa* (Dios Rayo [= Lightning God])”.

“*Apu* (Señor [= Lord])” + “*Capac* (grande [= great]),” after recombination yields “*Capac Apu* (Rey [= King / Supreme Ruler])”.

The work of Victoria de la Jara (1967; 1970; 1975) paved the way for further interpretations / translations; see Barthel (1970, 1971); Totten (1985); Laurencich Minelli (1996); Burns Glynn (2002); Salcedo Salcedo (2007); Florio (2013), among others.



Photo of V. de la Jara, after American Museum of Natural History (2021).

Slide from: Melka, Tomi S., and Robert M. Schoch. 2021. “*T’oqapu* Patterns on Inca Textiles and Other Media: Do They Constitute a Writing System?” Presentation at the AWLL13-Online [Association for Written Language and Literacy] Conference, 21–23 October 2021.

For more discussion of this topic, see the appendix at the end of this set of slides:

Phonetic, logographic, semantic values of *t'oqapu*?

Illustrations of the Catalog of *t'oqapus* from Victoria de la Jara (1967).

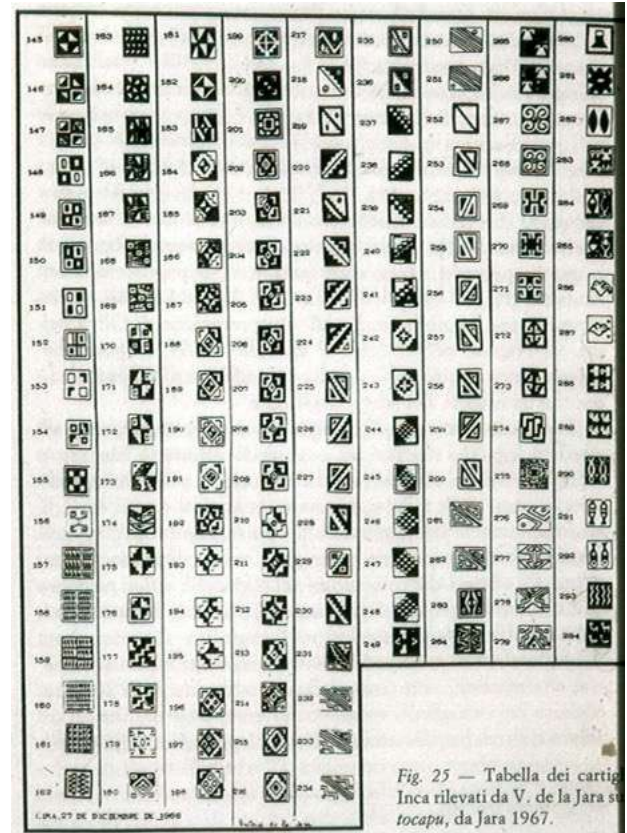
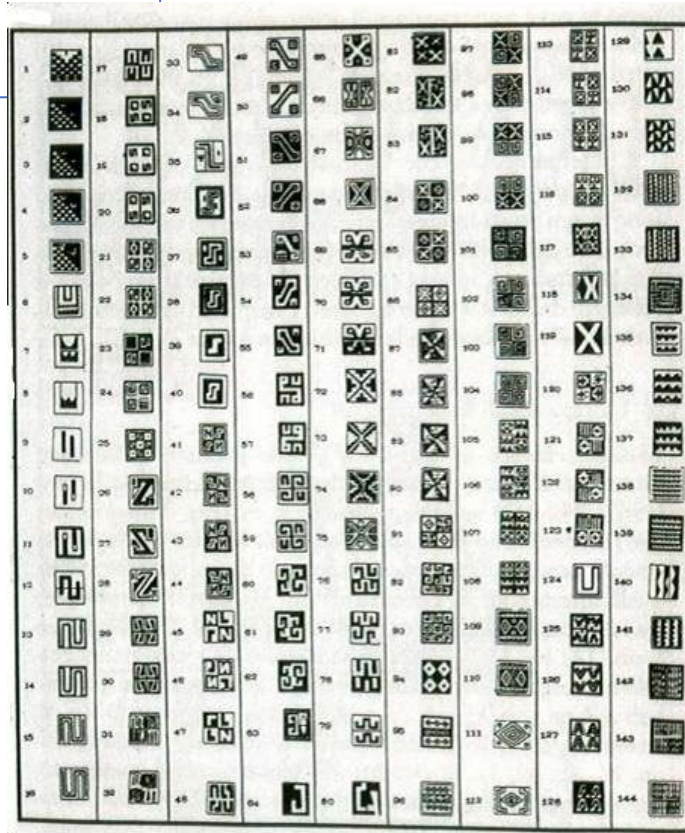


Photo of V. de la Jara, after American Museum of Natural History (2021).

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Writing Among pre-European South American cultures?

Many scholarly estimates of notation systems of a numerical and non-numerical nature that existed in pre-European South America present them as being as efficient as phonetic scripts or perhaps even more efficient, their differences being part of a divergent “evolution” [= developmental tendency] in the way of thinking and representation (cf. Métraux, 1963; Naville, 1966; Paternosto, 1996 [1989]: 171; Zuidema, 1991:151; Prada Ramírez, 1994; Boone and Mignolo, 1994; Phipps, 1996: 154; Sassoon and Gaur, 1997; Grube and Arellano Hoffmann, 2002: 51–52; D’Altroy, 2005 [2002]: 15–19; Cummins, 2002: 190; Quispe-Agnoli, 2002, 2005: 264–265, 2006, 2008: 133–135; Heckman, 2003: 41; Fedriani Martel and Tenorio Villalón, 2004; Salomon, 2004; Steele and Allen, 2004: 36–40; McEwen, 2006: 182–185; Kulmar 2008, 2010: 139; González and Bray, 2008: 1–4; Melka, 2010; Bergh, 2013; Severi, 2019; Clados 2020).

At present, these systems are thought to be *largely mnemonic-like* and *semasiographic* (Sampson, 1985), though emerging logograms cannot *a priori* be ruled out. For this reason, it may be said that we are dealing here qualitatively with a different *literary model* (Franquemont, 1986: 83; Boone and Mignolo, 1994; Quispe-Agnoli, 2006: 145–180), where the textile motifs (or *quipu*, for instance, in another context) did not articulate continuously the information in clear-cut words, but rather, they stood for the *real meaning* in view of their structure (= the “syntax” of concatenation of motifs / symbols), material, colors, and weaving processes applied in the whole practice.

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For more discussion
of this topic, see the
appendix at the end
of this set of slides:
Notes on the
Definition of
Writing.

Writing Among pre-European South American cultures?

In contrast to the hypothesis that most or all notation systems that existed in pre-European South America were *largely mnemonic*-like and *semasiographic*, some researchers propose that some of the South American graphic systems involved logo-syllabic coding, or whole / partial phonetic components; examples suggested include the cases of *quipu*, *t'ooqapu* geometric patterns, the Moche *Lima beans*, and the religious texts of the indigenous Aymara; cf. Ibarra Grasso (1953); V. de la Jara (1967, 1975); Barthel (1970, 1971); Totten (1985); Laurencich Minelli (1996); Burns Glynn (2002); Salcedo Salcedo (2007). If such claims are to be carried further in the serious scientific agenda, hard evidence should be searched for and properly documented (cf. Barthel, 1976: 27).

Mitchell and Jaye (1996: 16) address bluntly such suggestions by writing, “*The arguments and evidence of these authors, however, tend to be speculative and not very vigorous*”.

So, is it writing?

In our assessment, the Wari-Tiwanaku and Inka systems are largely mnemonic and semasiographic. Whether or not this is writing depends on one's definition of writing (as noted previously). If writing is conservatively defined as a direct symbolic record of the speech act, or ‘*visible speech*’ (DeFrancis, 1989), then these systems are apparently not writing. However, the story may not be so simple and involves the politics of definitions of writing.

What is Art?

Wari, Tiwanaku, and Inka Iconographies – are they art?

Beyond questions of how an ancient symbol system may develop, with progressive abstraction from naturalistic shapes, into a linguistic system and a form of writing (whether referred to as pre-writing or proto-writing; terms to be used without a subjective overburden of judgment values, as the level of sophistication of some such systems is extraordinary; cf. Gelb, 1963 [1952]; Daniels and Bright, 1996; Garrod, Fay, et al., 2007), the study of the Wari, Tiwanaku, and Inka iconographies is of more general interest in terms of art, language, and writing. Arguably the abstract visual art of these pre-European Andean cultures equaled (or even surpassed) the work of the Cubists, Expressionists, and other avant-garde artists of the late nineteenth and early twentieth centuries (cf. Golding, 1988 [1959]; Reid, 1986; Blotkamp, 1995 [1993]; Janssen and Joosten, 2002; Shiff, 2004; Hess and Grosenick, 2005; Aichele, 2006; Pasztory, 2010). Another line of study is analyses of similarities and differences among Wari-Tiwanaku iconographic elements, the Inka *t'iqapu*, and modern emojis and related symbols that have become part of modern visual, written, and digital communication (Melka and Schoch, 2021). Studies of these symbolic systems lead to such penetrating questions as *how a language conceptualized in iconographic terms becomes “art”?* and *what is art after all?*



Details from a tunic (*unku*); *Material*: camelid fibers; interlocking tapestry weave, Huari style; far South Coast and Chile; *ca.* 600–1000 CE; *Dimensions*: 43 cm × 63; see Hughes (1995: 121). The original ‘attendant,’ see figure to right, has been fractured (= deconstructed) and restored in square and rectangular-like blocks, adding up to a long-beaked avian figure holding a staff.



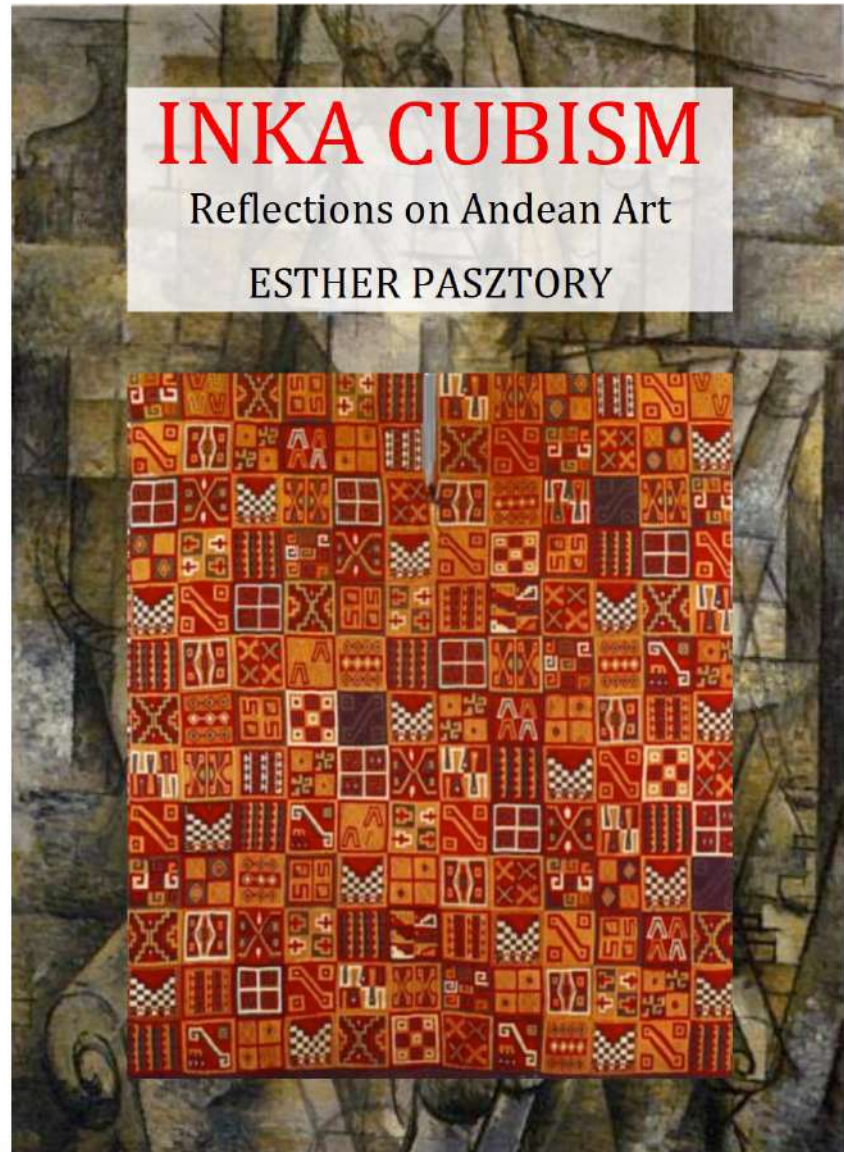
What is Art?

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Esther Pasztory, 2010.

*Inka Cubism:
Reflections on Andean Art.*

<http://www.columbia.edu/~ep9/Inka-Cubism.pdf>.



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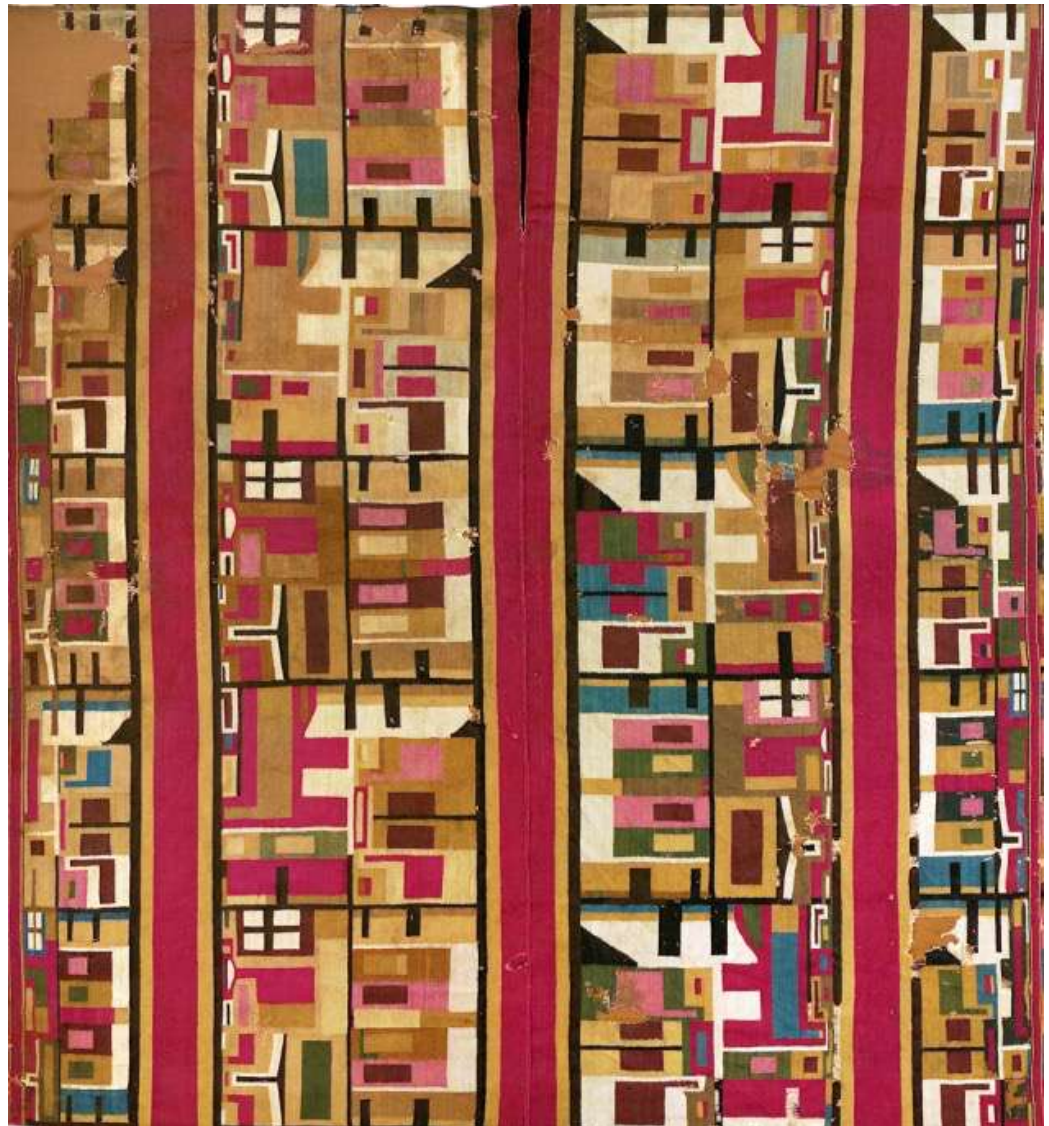
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The 'Lima Tapestry' (right) is a Middle Horizon Wari-Tiwanaku artifact; *Dimensions*: 100 × 92.3 cm; made of camelid fiber and cotton, and stored in the collection of the *Museo Nacional de Antropología, Arqueología e Historia del Perú* (T.01650); see Benavides (1999: 355); cf. Paternosto (1996 [1989]: 228; 1999: 10–11); Stone-Miller (2002 [1995]: 148, Figure 119); Bergh (2013: 182, Figure 174). It appears to be the culmination of the process of geometric formalism. The original zoomorphs / anthropomorphs — the staff-bearing creatures, known as “Staff God” and “profile attendants” — are rearranged in pure angular and rectangular shapes, producing a “masterfully abstract interpretation...” of the motif; see Stone-Miller (2002 [1995]: 148, Figure 119). One is tempted to think that the initial figure (cf. Figures 7–11) has “faded away” and yields an abstractionist and cubist-like modern painting of the 20th century; see Janssen and Joosten (2002); Aichele (2006). It comes to no surprise why the Wari tapestry geometric designs have gained notability and admiration in their own right among (the) modern researchers and artists. Pasztory (2010: 11-12) is very explicit in this context, “So it was that with the emergence of Cubism in the West, many Andean things became ‘beautiful’ and ‘interesting’ works of art. Subsequent developments in Western abstraction, especially Conceptual art of the second half of the twentieth century have brought out many hitherto unappreciated aspects of Andean art and culture.” [Underlining for emphasis added by the present authors.]

What is Art?

Wari, Tiwanaku, and Inka Iconographies – are they art?



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Illustrated here is an isolated square from a portion of a tapestry shirt, Wari, South coast, 650–800 CE, camelid fiber and cotton; 116.2 cm × 177.5 cm, B-496; see Lothrop et al. (1959 [1957]: Cat. No. 349; Conklin (1996: 379–380; Plate 104). While agreeing with Conklin (1996b) on the evidence of “[...] *the sophisticated and the abstract...*”, it is hardly believable that the weaver played down the theme of ‘*staff-bearer*’ by inserting a frenzied accumulation of geometric objects, as more than one person might think. The personal vision involved here went beyond the canon and produced a symbol whose apparent stillness and deconstruction conveys hieratic power, control, distinction, and pure tension. Considering the degree of abstraction in the imagery of this tunic, Conklin (1996: 379) ponders that it “[...] *would be late in the style sequence of Huari art.*”

What is Art?

Wari, Tiwanaku, and Inka Iconographies – are they art?



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Detail of a fragment of a larger Wari-Tiwanaku piece. Decoration with zoomorphic figures, in the guise of a jaguar-like creature gripping a staff, *ca.* 900–1100 CE, 102 × 90 cm. Nelson A. Rockefeller Collection, USA., photo Nicholas Murray; see Benavides (1999: Plate 11; 387; 409). A semi-trained eye may quickly distinguish the fangs of the creature.

What is Art?

Wari, Tiwanaku, and Inka Iconographies – are they art?



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Serial imagery in the Wari-Tiwanaku tapestries, that is, *the recurrence of modular designs* essentially swapping colors and symmetries, possibly emphasized prominent symbols, related to the cult personality (*staff-bearer / decapitator*) and cult objects (e.g., *step fret, step and volute combined*, or the *rhombus*). A similar technique is noticeable in Andy Warhol's portrayals of some high-profile personalities of the 20th century related to assertive power, wealth, or iconic sex appeal, that included Marilyn Monroe (1926 – 1962); Elvis Presley (1935 – 1977); Mao Zedong (1893 – 1976); Elizabeth Taylor (1932 – 2011), and others; see Reid (1986: 16–17). Despite the differences in the underlying motives of these cross-cultural creations, the end *per se* in both premises is possibly *mass-consumption*. Indeed, the Wari-Tiwanaku state ideologues laid emphasis through weaving on the cosmic / spatial order and divine forces (Stone 1989 [1987]: 193–196; Stone-Miller 2002 [1995]: 148), sanctioned or imposed all over their sphere of influence, whereas we may note that Warhol was engaged in a billboard-like propaganda of secular and materialistic symbols, intended to feed the minds of the public by proselytizing the pop culture (cf. Reid 1986: 16–17).

What is Art?

Wari, Tiwanaku, and Inka Iconographies – are they art?

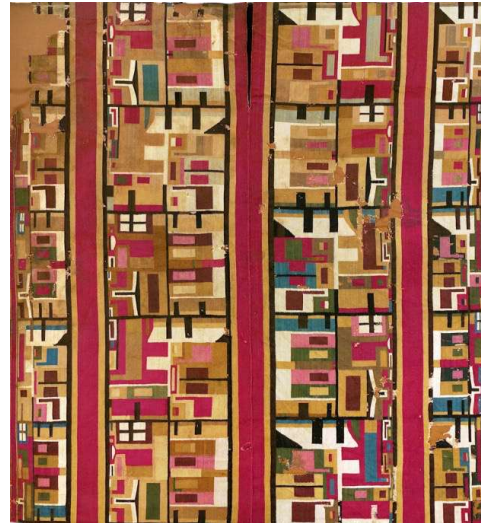
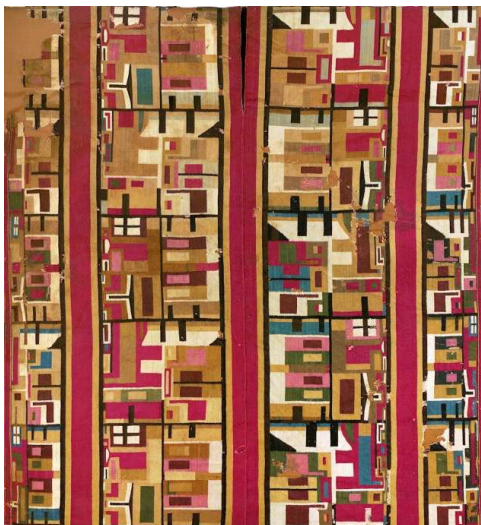


Image of *The Shot Marylins* (1964) of the American pop artist Andy Warhol (Wikipedia 2021; cf. also Shanes 2005: 43, Photo 34).

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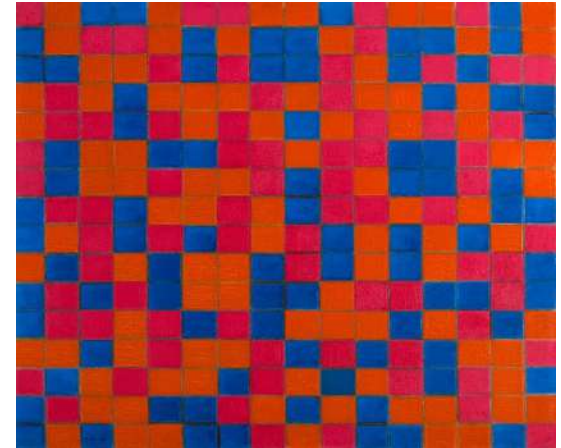
Some sober and crisp geometric features in the Middle Horizon tapestries are reminiscent of certain paintings of *avant-garde* artists of the stature of Piet Mondrian (1872 – 1944); Paul Klee (1879 – 1940); Joaquín Torres García (1874 – 1949); Barnett Newman (1905 – 1970); or Mark Rothko (1903 – 1970); see Reid (1986: 22); Blotkamp (1995); Conklin (1996: 378); Pasztory (1998: 125); Paternosto (1999: 15–16; Plate 4 and 5); Janssen and Joosten (2002); Schiff (2004: 45, 89); Hess and Grosenick (2005: 40–41, 72–73); Aichele (2006); for a critical view see Bergh (2013).



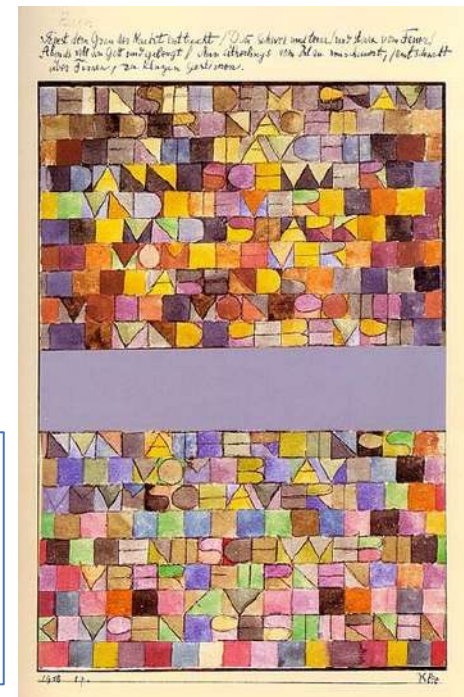
What is Art?

Wari, Tiwanaku, and Inka Iconographies – are they art?

A painting by Mondrian, “*Composition (Checkerboard, Dark Colours)*,” 1919, oil on canvas, 84 × 102 cm. Haags Gemeentemuseum, The Hague (see Blotkamp (1995 [1993]: 123; Plate 95; www.piet-mondrian.org, 2021), through the tints of blue, purple and red organized in a grid-like formation, bears some strange similarity to certain Wari or Inka tapestry tunics.



Paul Klee, *Einst dem Grau der Nacht enttaucht*, 1918 [Once Emerged from the Gray of Night, 1918]; see also Hamburger’s caption (2011: 252, Figure 3.), “Paul Klee, *Einst der Grau der Nacht enttaucht*, 1918. Watercolor, pen, and pencil on paper on cardboard, 22.6 × 15.8 cm. Zentrum Paul Klee, Bern. © 2010 Artists Rights Society (ARS), New York/VG Bild-Kunst, Bonn.” https://de.wikipedia.org/wiki/Datei:Paul_Klee,_Einst_dem_Grau_der_Nacht_enttaucht.jpg



For more discussion of this topic, see the appendix at the end of this set of slides:
What is Art?

A modern analogy to *t'oqapu* [and earlier Wari, Tiwanaku, and Inka Iconographies]?



Emoji images: From Alshenqeeti, p. 59, after Aldred (2014); <https://blazepress.com/2014/10/21-emoji-combinations-use-words-wont-quite-cut/>



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Flourishing Creativity & Literacy

Are Emojis Creating a New or Old Visual Language for New Generations? A Socio-semiotic Study

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“The increasing use of emojis, digital images that can represent a word or feeling in a text or email, and the fact that they can be **strung together to create a sentence** with real and full meaning raises the question of whether they are **creating a new language** amongst technologically savvy youth, or devaluing existing language. There is however a further depth to emoji usage as language, suggesting that they are in fact **returning language to an earlier stage of human communication**. Parallels between emojis and hieroglyphs and cuneiform can be seen which indicates the universality of visual communication forms, rather than written alphabetised language. There are also indications that **emojis may be cultural or gender-specific** [. . .]” (p. 56, blue highlights added).

The Intersection between Art, Non-Linguistic Symbol Systems, and Writing: The Case of the Wari, Tiwanaku, and Inka Iconographies

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Some Concluding Thoughts

A number of visual and structural coincidences that surpass the likelihood of *mere chance* are noticed among some Wari-Tiwanaku – or Wari-affiliated – and Inka iconographic patterns.

The patterning and the structural relations in Wari, or Inka, iconographies may qualify for a *visual language*, and reflect a different way of communication based on relational thinking, without recourse to continuous spoken language (Boone 1994; González and Bray 2008: 1–4). Similarly, all the discussed symbolism was not created in an *ideological vacuum* (Chaplin 1994: 63–65), but rather reflects the dominant ideology of time, with the patterns working as a political and aesthetic instrument in achieving the goals Wari and Inka establishments had in their agendas.

The patterns, many of them enjoying a high level of artistry and labor intensity, were meaningful and intentional on conveying information about mythological and sacred themes (Stone-Miller 1994c; Conklin 1996a: 343; Bergh 1999), social standing and local or individual affiliation.

T'oqapu Patterns on Inka Textiles and Other Media, and earlier Wari and Inka Iconographies: Do They Constitute a Writing System?

We do not yet know (an initial assessment yields a visual system based on mnemonic-like principles, and possibly of emerging logographic elements or a stereotypical use of a number of morphemes).

Note: This area is a huge field of study in terms of time that needs to be invested, financial assets allocated, and cooperation coordinated among various agents / specialists of different disciplines (archaeologists, anthropologists, ethnographers, linguists, computer scientists, art historians, designers, museum curators, private collectors, governmental bodies, and so on). More work is warranted in many directions.

Selected Bibliography (Full set of references cited available upon request from the authors.)

- Aichele, Kathryn Porter. 2006. *Paul Klee, Poet / Painter*. Studies in German Literature Linguistics and Culture. Rochester, New York / Woodbridge, Suffolk, UK: Camden House.
- Ángeles, Rommel and Denise Pozzi-Escot. 2000. Textiles del Horizonte Medio: Las Evidencias de Huaca Malena, Valle de Asia. In *Huari y Tiwanaku: Modelo VS. Evidencias*. Primera Parte. Edited by Peter Kaulicke and William H. Isbell. Boletín de Arqueología, N°. 4. Lima: PUCP (Pontificia Universidad Católica de Perú). pp. 401–424.
- Arellano, Carmen. 1999. Quipu y Tocapu: Sistemas de Comunicación Inca. In *Los Incas: Arte y Símbolos*. Colección Arte y Tesoros del Perú. Edited by Franklin Pease, G.A. et al. Lima: Banco de Crédito del Perú. pp. 215–262
- Benavides, Mario. 1999. “Tejidos Wari / Wari Textiles,” in *Tejidos Milenarios del Perú / Ancient Peruvian Textiles*. Created and Directed by José Antonio de Lavallo and Rosario de Lavallo de Cárdenas. Colección APU. Lima: Integra AFP, Wiese Ætna, Compañía de Seguros. pp. 353–411.
- Bergh, Susan. 1999. *Pattern and Paradigm in Middle Horizon Tapestry Tunics*. PhD Dissertation. Graduate School of Art and Sciences. Columbia University of New York. <http://academiccommons.columbia.edu/item/ac:112775> (accessed 21 December 2009).
- Bergh, Susan E. 2013. Tapestry-woven Tunics. In *Wari: Lords of the ancient Andes*, edited by Susan E. Bergh. Introduction by Luis G. Lumbreras. London: Thames & Hudson / Cleveland, OH: The Cleveland Museum of Art.
- Bergh, Susan E. 2017. Middle Horizon Textiles from Berlin’s Ethnological Museum. In *Pre-Columbian Textiles in the Ethnological Museum in Berlin*, edited by Lena Bjerregaard. Image Editing by Torben Huss. Lincoln, Nebraska: Zea Books. pp. 25–31.
- Blotkamp, Carel. 1995 [1993]. *Mondrian: The Art of Destruction*. Translated from the Dutch by Barbara Potter Fasting. New York: Harry N. Abrams, Inc.
- Boone, Elizabeth Hill and Walter D. Mignolo. (Eds.) *Writing without Words: Alternative Literacies in Mesoamerica and the Andes*. Durham and London: Duke University Press.
- Bonavia, Duccio. 2000 [1992]. The Origins of the Incas and the Chanca Question. In *The Inca World: The Development of Pre-Columbian Peru A.D. 1000–1534*, (translated by Andrew Ellis, James Bishop and Angelica Mercurio Ciampi from the original *I Regni Preincaici e il Mondo Inca*). Edited by Laura Laurencich Minelli. Norman: University of Oklahoma Press. pp. 133–141.
- Bray, Tamara L. 2000. Inca Iconography: The Art of Empire in the Andes. *RES: Journal of Anthropology and Aesthetics* (A Joint Publication of the Peabody Museum of Archaeology and Ethnology and the Harvard Art Museum), 38: 169–178.
- Cerrón-Palomino, Rodolfo. 2008. *Voces del Ande. Ensayos sobre Onomástica Andina*. Colección Estudios Andinos 3, dirigida por Marco Curatola Petrocchi. Lima: Fondo Editorial de la Pontificia Universidad Católica del Perú.

Selected Bibliography, *continued*.

- Clados, Christiane. 2020. On the Iconic Nature of Tocapus and Other Framed Motif Units. In *Indigenous Graphic Communication Systems: A Theoretical Approach* (Section 3. Reconnoitering the Periphery). Edited by Jerome A. Offner and Katarzyna Mikulksa. Boulder, Co.: University Press of Colorado. pp. 233–256.
- Cook, Anita G. 1994. *Wari y Tiwanaku: entre el Estilo y la Imagen*. Lima: Fondo Editorial de la Pontificia Universidad Católica del Perú.
- Cook, Anita G. 2004. “Wari and Art Society,” in *Andean Archaeology*. Edited by Helaine Silverman. Malden, Massachusetts / Oxford: Blackwell Publishing, Ltd. pp. 146–166.
- Cummins, Thomas B. F. 2002. *Toasts with the Inca: Andean Abstraction and Colonial Images on Quero Vessels*. Ann Arbor: The University of Michigan Press.
- Cummins, Thomas B. F. 2011. *Tocapu*: What Is It, What Does It Do, and Why Is It Not a Knot? In *Their Way of Writing: Scripts, Signs, and Pictographies in Pre-Columbian America*, edited by Elizabeth Hill Boone and Gary Urton. Washington D.C.: Dumbarton Oaks Research Library and Collection (Trustees for Harvard University). pp. 277–318.
- D’Altroy, Terence N. and Katharina J. Schreiber. 2004. “Andean Empires,” in *Andean Archaeology*. Edited by Helaine Silverman. New York: Blackwell. pp. 255–279.
- Daniels, Peter T., William Bright (Eds.). 1996. *The World’s Writing Systems*. Oxford / New York: Oxford University Press.
- Dumbarton Oaks Research Library and Collections, Pre-Columbian Collection, Washington D.C. 2021. Provincial Tunic; Inka Provincial, Late Horizon; 1450–1540 CE <http://museum.doaks.org/objects-1/info?query=Portfolios%20%3D%20%222639%22&sort=0&page=9> (accessed 6 October 2021).
- Frame, Mary. 2001. “Beyond the Image: The Dimensions of Pattern in Ancient Andean Textiles,” in *Abstraction: The Amerindian Paradigm*. Edited by César Paternosto. pp. 113–215. Brussels: The Société des Expositions du Palais des Beaux-Arts de Bruxelles / Vereniging voor Tentoonstellingen van het Paleis voor Schone Kunsten Brussel in association with IVAM Institut Valencià d’Art Modern.
- Garrod, Simon, Nicolas Fay, John Leed, Jon Oberlander, and Tracy Macleod. 2007. Foundations of Representation: Where Might Graphical Symbol Systems Come From? *Cognitive Science* (Cognitive Science Society), 31: 961–987. <https://doi.org/10.1080/03640210701703659> (accessed 2 October 2021).
- Gayton, Ann. 1978. Significado Cultural de los Textiles Peruanos: Producción, Función y Estética. In *Tecnología Andina* (Fuentes e Investigaciones para la Historia del Perú, 4) by Instituto de Estudios Peruanos, IEP and Instituto de Investigación Tecnológica Industrial y de Normas Técnicas, ITINTEC, Eds. Lima: IEP, ITINTEC. pp. 269–297.

Selected Bibliography, *continued*.

Gelb, Ignace J. 1963 [1952]. *A Study of Writing*. (2nd ed.). Chicago: University of Chicago Press.

Gentile L., Margarita E. 2008. El Tocado 285: Consideraciones acerca de la Llamada “*Escritura Incaica*.” *ARKEOS: Revista Electrónica de Arqueología*, PUCP. (Pontificia Universidad Católica de Perú), 3(2): 1–17. <http://revistas.pucp.edu.pe/arkeos/content/view/191/1/> (accessed 30 September 2008).

Golding, John. 1988 [1959]. *Cubism: A History and an Analysis, 1907–1914*. Harvard, Mass.: Belknap Press of Harvard University Press.

González, Paola and Tamara L. Bray. 2008. Introducción: Lenguajes Visuales de los Incas / Introduction: Visual Languages of the Inca. In *Lenguajes Visuales de los Incas*. Edited by Paola González Carvajal and Tamara L. Bray. British Archaeological Reports (BAR) International Series, 1848. Oxford, London: Archaeopress. pp. 1–11.

Grube, Nikolai, and Carmen Arellano Hoffman. 2002. Escritura y Literalidad en Mesoamérica y en la Región Andina: una Comparación. (traducción de Ingrid Adam). In *Libros y Escritura de Tradición Indígena: Ensayos sobre los Códices Prehispánicos y Coloniales de México*. Edited by Carmen Arellano Hoffmann, Peer Schmidt and Xavier Noguez. Toluca, México: El Colegio Mexiquense, A.C. / Universidad Católica de Eichstätt. pp. 27–72.

Harrison, Regina. 1989. *Signs, Songs, and Memory in the Andes: Translating Quechua Language and Culture*. Austin: University of Texas Press.

Hess, Barbara, and Uta Grosenick. 2005. *Abstract Expressionism*. Köln: Taschen GmbH.

Hughes, Paul. 1995. *Time Warps: Ancient Andean Textiles*. London: Fine Textile Art.

Iriarte, Isabel. 1999. “Túnicas Wari / Huari Tunics,” in *Tejidos Milenarios del Perú / Ancient Peruvian Textiles*. Created and Directed by José Antonio de Lavalley and Rosario de Lavalley de Cárdenas. Colección APU. Lima: Integra AFP, Wiese Ætna, Compañía de Seguros. pp. 413–421.

Isbell, William H. 2000. “Repensando el Horizonte Medio: El Caso de Conchopata, Ayacucho, Perú,” in *Huari y Tiwanaku: Modelo VS. Evidencias*. Primera Parte. Edited by Peter Kaulicke and William H. Isbell. Boletín de Arqueología, N° 4. Lima: PUCP (Pontificia Universidad Católica de Perú). pp. 9–68.

Isbell, William H. 2008. Wari and Tiwanaku: International Identities in the Central Andean Middle Horizon. Chapter 37.” In *Handbook of South American Archaeology*. Edited by Helain Silverman and William H. Isbell. pp. 731–759. New York: Springer Science + Business Media, LLC.

Janssen, Hans and Joop M. Joosten. 2002. *Mondrian: The Path to Abstraction, 1892–1914*. Zwolle: Waanders Publishers / Fort Worth, Texas: Kimbell Art Museum / Paris: Réunion des Musées Nationaux.

Selected Bibliography, *continued*.

Jara, Victoria de la. 1967. Vers le Déchiffrement des Écritures Anciennes du Pérou. *Science, Progrès, La Nature* (Dunod, Paris), 3387: 241–247.

Kaulicke, Peter. 2000. La Sombra de Pachacamac: Huari en la Costa Central. In *Huari y Tiwanaku: Modelo VS. Evidencias*. Primera Parte. Edited by Peter Kaulicke and William H. Isbell. Boletín de Arqueología, N°. 4. Lima: PUCP, (Pontificia Universidad Católica de Perú). pp. 313–359.

Kelly, Samantha. 2001. The Body and Its Manifestation in the Andean World: Corporeality, Simulacrum, and Image. *Athanor*, XIX: 43–50.
<https://artsandculture.google.com/asset/athanor-19-florida-state-university-museum-of-fine-arts-publishing/4gGhm5LNu0ZdBw> (accessed 6 October 2021).

Kolata, Alan L. 1993. *The Tiwanaku: Portrait of an Andean Civilization*. Cambridge, Massachusetts / Oxford: Blackwell.

Larco Hoyle, Rafael. 1966. *Perú*. ARCHAEOLOGIA MVNDI. Colección dirigida por Jean Marcadé. Barcelona: Editorial Juventud S.A.

Lehmann, Walter and Heinrich Doering. 1924. *The Art of Old Peru*. London: Ernest Benn, Limited.

Makowski, Krsztof. 2001. Los Personajes Frontales de Báculos en la Iconografía Tiahuanaco y Huari: ¿Tema o Convención? In *Huari y Tiwanaku: Modelos VS. Evidencias*. Segunda Parte. Edited by William H. Isbell and Peter Kaulicke. Boletín de Arqueología N°.5. Lima: PUCP (Pontificia Universidad Católica de Perú). pp. 337–373.

McEwan, Gordon F. 2005. “Conclusion: The Functions of Pikillacta,” in *Pikillacta: The Wari Empire in Cuzco*. Edited by Gordon F. McEwan. Iowa City: University of Iowa Press. pp. 147–165.

Mead, George Herbert. 1934. *Mind, Self, and Society: From the Standpoint of a Social Behaviorist*. Chicago: University of Chicago Press.

Melka, Tomi S., and Robert M. Schoch. 2021. “*T’oqapu* Patterns on Inqa Textiles and Other Media: Do They Constitute a Writing System?” Presentation at the AWLL13-Online [Association for Written Language and Literacy] Conference, 21–23 October 2021, organized by David Mora-Marín (University of North Carolina, USA), *On the systematic nature of writing systems*. Symposium: *Writing systems of the Americas*. Abstract of presentation available at: <http://faculty-sgs.tama.ac.jp/terry/awll/WS/13/2021-ProgrammeAbstracts.pdf> (accessed 27 December 2021); full paper based on the presentation *in preparation*; overview of the conference available at: <http://faculty-sgs.tama.ac.jp/terry/awll/WS/13/2021-HP.html> (accessed 27 December 2021).

Morris, Craig, and Adriana Von Hagen. 1993. *The Inca Empire and Its Andean Origins*. New York: Abbeville Press

Selected Bibliography, *continued*.

Oakland Rodman, Amy, and Arabel Fernández. 2000. "Los Tejidos Huari y Tiwanaku: Comparaciones y Contextos," in *Huari y Tiwanaku: Modelo VS. Evidencias*. Primera Parte. Edited by Peter Kaulicke and William H. Isbell. *Boletín de Arqueología*, N°. 4. Lima: PUCP (Pontificia Universidad Católica de Perú). pp. 119–130.

Pasztesy, Esther. 1990/1991. "Still Invisible: The Problem of the Aesthetics of Abstraction for Pre-Columbian Art and Its Implications for Other Cultures." *RES: Anthropology and Aesthetics*, 1990/1991, No. 19/20 (1990/1991), pp. 104–136.

Pasztesy, Esther. 1998. *Pre-Columbian Art*. Cambridge, United Kingdom: Cambridge University Press.

Pasztesy, Esther. 2010. *Inka Cubism: Reflections on Andean Art*. <http://www.columbia.edu/~ep9/Inka-Cubism.pdf> (accessed 18 March 2022).

Paternosto, César. 1996 [1989]. *The Stone and the Thread: Andean Roots of Abstract Art*. Translated by Esther Allen from *Piedra Abstracta. La Escultura Inca: Una Visión Contemporánea*. Austin: University of Texas Press.

Paternosto, César (Ed.). 2001. *Abstraction: The Amerindian Paradigm*. Brussels: The Société des Expositions du Palais des Beaux-Arts de Bruxelles / Vereniging voor Tentoonstellingen van het Paleis voor Schone Kunsten Brussel in association with IVAM Institut Valencià d'Art Modern.

Phipps, Elena, Johanna Hecht and Cristina Martín (Eds.). 2004. *The Colonial Andes: Tapestries and Silverwork, 1530–1830*. New York: The Metropolitan Museum of Art – New Haven and London: Yale University Press.

Pillsbury, Joanne. 2002. Inka Unku: Strategy and Design in Colonial Peru. *Cleveland Studies in the History of Art* (Published by Cleveland Museum of Art), 7: 68–103. <http://www.jstor.org/stable/20079720> (accessed 7 October 2021).

Reid, James W. 1986. *Textile Masterpieces of Ancient Peru. With 77 Illustrations in Full Color*. New York: Dover Publications, Inc.

Rogers, Henry 2005. *Writing Systems: A Linguistic Approach*. Oxford, UK: Blackwell Publishing.

Rowe, John Howland. 1999 [1979]. Standardization in Inca Tapestry Tunics. In *Tejidos Milenarios del Perú / Ancient Peruvian Textiles*. Created and Directed by José Antonio de Lavalley and Rosario de Lavalley de Cárdenas. Colección APU. Lima: Integra AFP, Wiese Ætna, Compañía de Seguros. pp. 571–629. Formerly published in "The Junius B. Bird Pre-Columbian Textile Conference," 1979. Edited by Ann Pollard Rowe, Elizabeth P. Benson and Anne Louise Schaffer, pp. 239–264. Washington DC: The Textile Museum and Dumbarton Oaks.

Selected Bibliography, *continued*.

Rowe Pollard, Ann. 1978. Technical Features of Inca Tapestry Tunics. *The Textile Museum Journal*, 17: 5–28.

Sampson, Geoffrey. 1985. *Writing Systems: A Linguistic Introduction*. Stanford, California: Stanford University Press.

Schreiber, Katharina. 2001. “The Wari Empire of Middle Horizon Peru: The Epistemological Challenge of Documenting an Empire without Documentary Evidence,” in *Empires: Perspectives from Archaeology and History*. Edited by Susan E. Alcock, Terence N. D’Altroy, Kathleen D. Morrison, and Carla M. Sinopoli. Cambridge, United Kingdom: Cambridge University Press. pp. 70–92.

Severi, Carlo. 2019. Their Way of Memorizing Mesoamerican Writings and Native American Picture-writings. *RES: Anthropology and aesthetics*, 71/72, pp. 312–324.

Shiff, Richard. 2004. “To Create Oneself,” in *Barnett Newman: A Catalogue Raisonné*. Edited by Ellyn Childs Allison. New York: The Barnett Newman Foundation / New Haven and London: Yale University Press. pp. 2–116.

Solanilla i Demestre, Victòria. 1999. *Tèxtils Precolombins de Col·leccions Públiques Catalanes*. Corpus Antiquitatum Americanensium, Union Académique Internationale. Barcelona: Institut d’Estudis Catalans.

Sproat, Richard W. 2000. *A Computational Theory of Writing Systems*. Stanford: Cambridge University Press.

Stierlin, Henri. 1984. *Art of the Incas and its Origins*. Translated from the French by Betty and Peter Ross. New York: Rizzoli International Publications, Inc.

Stone, Rebecca R. 1989 [1987]. *Technique and Form in Huari-style Tapestry Tunics: the Andean Artist, A.D. 500–800*. PhD dissertation. Yale University, 1987. Volume 1. Text. Volume 3. Appendices. Ann Arbor, Michigan: University Microfilms International (UMI: Dissertation Information Service). [Volume 2. Figures. Not Available.]

Selected Bibliography, *continued*.

Stone, Rebecca Rollins. 2007. ““And All Theirs Different from His’: The Dumbarton Oaks Royal Inka Tunic in Context,” in *Variations in the Expression of Inka Power: A Symposium at Dumbarton Oaks, 18 and 19 October 1997*. Edited by Richard L. Burger, Craig Morris, and Ramiro Matos Mendieta. Washington DC: Dumbarton Oaks Research Library and Collection. pp. 385–422.

Stone-Miller, Rebecca. 1992. “Camelids and Chaos in Huari and Tiwanaku Textiles,” in *The Ancient Americas: Art from Sacred Landscapes*. General Editor Richard F. Townsend. Chicago: the Art Institute of Chicago / Munich: Prestel Verlag. pp. 335–345.

Urton, Gary, and Carrie Brezine. 2009. *The Khipu Database Project*. <http://khipukamayuq.fas.harvard.edu/> (accessed January 15, 2010).

Williams León, Carlos. 2001. “Urbanismo, Arquitectura y Construcción en los Waris, un Ensayo Explicativo,” in *WARI: Arte Precolombino Peruano*. Edited by Centro Cultural El Monte, pp. 59–98. Colección América, Sevilla: Fundación El Monte.

Young-Sánchez, Margaret. 2004. Tapestry Tunic. In *Tiwanaku: Ancestors of the Inca*. Edited by Margaret Young-Sánchez. Lincoln: University of Nebraska Press and the Denver Art Museum. pp. 46–49.

The Intersection between Art, Non-Linguistic Symbol Systems, and Writing: The Case of the Wari, Tiwanaku, and Inka Iconographies

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Appendix: Phonetic, logographic, semantic values of *t'oqapu*?

No clear one-to-one correspondence is demonstrated conclusively (see Harrison, 1989, 60), meaning, the precise semantic or phonetic values assigned to the full inventory of *t'oqapu*, still elude today's research. Arguably a *t'oqapu* here and there can be interpreted; temporary and some plausible solutions can be offered, but the premises on which the whole system was built are not completely within our grasp currently (see Paternosto, 1996 [1989], 169). By "*premises*" we refer to the oral and institutional context in which the *t'oqapu* system was conceived and applied.

In an unknown symbolic or writing system, or in an encrypted cipher, *telltale regularities* (Poundstone, 1988), cohesion, and frequency distributions are primarily exploited by analysts conversant with epigraphy, cryptanalysis, and statistics.

Yet, such regularities or irregularities are very idiosyncratic in the case of the remaining *t'oqapu* samples, producing every so often disparate, spontaneous patterns, suggestive of thematic changes, or otherwise, unrestrained linear repetitions (Rowe Pollard, 1978, 5; Paternosto, 1996 [1989], 170; Rowe Pollard and Rowe, 1996, 463). One way of working out the difficulty is by analyzing iconographically the tokens, and checking if their likelihood of occurrence is dependent on, or independent from other contextual tokens. To this effect, we may track down *subtle* or *major* semantic differences by studying the degrees of association between *t'oqapu* occurrences in the largest possible corpus. Thus, by inspecting which *t'oqapu* motif "attracts" or "repels" which in more than one environment, enables us to confirm if they are (a) essentially grammar-oriented; (b) if linguistic features are highly marginal; (c), or in a last instance, they are nil (being otherwise fully visual- / mnemonic-oriented). Quantification is desirable in the sense that it may tell us how frequent a geometrical "unit" or "structure" must be to count as a discrete *t'oqapu* motif. In view of this, multivariate tables collating the data may facilitate insights as to the intimate nature of the examined phenomenon. Therein, the approach may greatly benefit from the use of computer technology.

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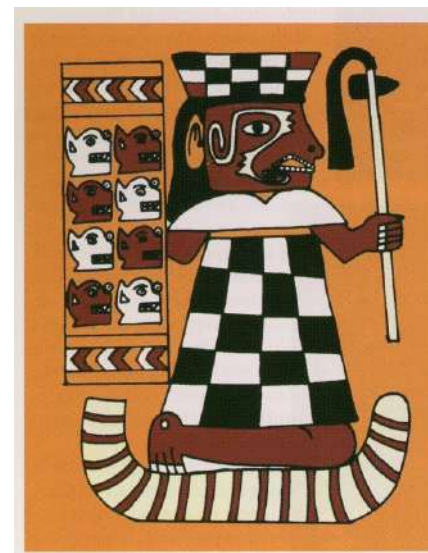
Appendix: Phonetic, logographic, semantic values of *t'oqapu*? Selected examples.

Rowe Pollard (1978: 7); Anton (1987 [1984]: 194); Roussakis and Salazar (1999: 280); Steele and Allen (2004: 36–37); Quispe-Agnoli (2006: 182); and Finley Hughes 2010: 169–170) consider the *black-and-white checker-board motif* to have been used in costumes by the military and/or administrators. Phipps et al. (2004: 142) think of the “checkerboard” tunics as “[...] *symbols of Inca administration*”, and a “[...] *manifestation of... loyalty to the sovereign*”. Rebecca Stone-Miller (1994a: 172) in turn, suggested that this particular motif – minute versions of which are also evident as one of the *t'oqapu* patterns in the royal *unqu* of the Bliss Collection at Dumbarton Oaks –, “[...] *in one form or another, played a special role in the ruler's entourage and in the army*”. Her suggestion is apparently anchored in two chronicles, that of Francisco de Xérez in 1534, and the other one, being that of Guamán Poma de Ayala. Ann Rowe Pollard and John H. Rowe (1996: 461) in their turn would rigorously agree in one point, “*Only one of the t'oqapu patterns on this tunic is a recognizable depiction of something. Pattern 1 is a picture of another Inca tunic woven in the standard Black and White Checkerboard pattern*”. Anton (1987 [1984]: 194) comments that “*The chequerboard pattern [checker-board motif; our note] in Plate 182 was the badge of exceptional warriors or high-ranking commanders*”. (Note: Francisco de Xerez (1534) authored *Verdadera Relación de la Conquista del Perú*.)

This illustration depicts “*pattern 1*” in Rowe Pollard and Rowe (1996: 461), or “*t'oqapu 1*” in de la Jara's index-list (1967: 242). This pattern is retrieved from the front part of the Bliss Collection's *unqu* at Dumbarton Oaks, Washington D.C. (Phipps et al., 2004: 153–155). If we unfold front and back of such a “*black-and-white checkerboard*” tunic and display it in a horizontal manner, a big stepped-diamond pattern is visible. The key concept of this motif is conversely visualized as a separate *t'oqapu* unit in the Inqa inventory design and fashion.



The reconstructed design of an armed Wari warrior wearing a checker-board tunic. The male figure, drawn on a piece of ceramic, is equipped with an axe and a shield covered with large feline heads, and appears to be crossing a lake in a *tatora*-like boat (Ochatoma and Cabrera, 2000: Figure 10b).

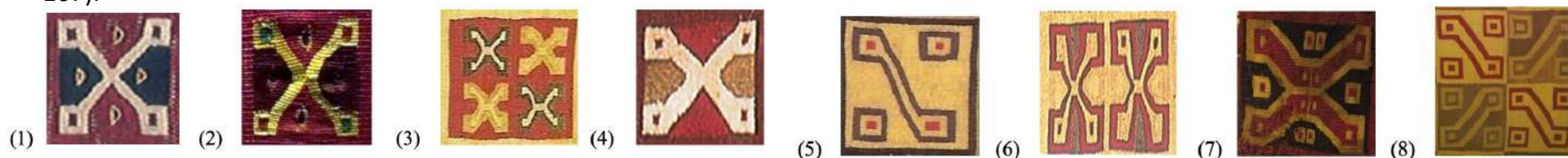


The Intersection between Art, Non-Linguistic Symbol Systems, and Writing: The Case of the Wari, Tiwanaku, and Inka Iconographies

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Appendix: Phonetic, logographic, semantic values of *t'oqapu*? Selected examples.

T'oqapu No. 65, alias “*croix traversée*” [double-slashed cross] (see de la Jara, 1967, 241, and the compiled index-list “1–294” in V. de la Jara, 1967, 242–243) after the chronicler Martín de Murúa (1616) *Historia General del Perú*; cf. also Thomas B. Cummins and Barbara Anderson, Eds., 2008), was an attribute of the last Inqa authority Atawallpa, captured and put to death by the Spanish conquistadores. This specific *t'oqapu* appears six times in the waistband of an *unqu* (probably of the late 16th century), published in Phipps et al. (2004, 167).

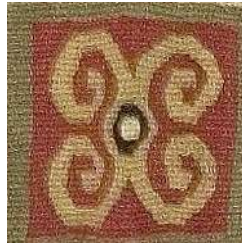


In this figure, *t'oqapu* (1), or # 65 in de la Jara's index-list “1–294,” resembling a “double-slashed cross” with four quasi-mini-lozenges, is salvaged from the front part of an *unqu* said to have been found in Ancón, Perú. The artifact is kept to this day at *Staatliche Museen zu Berlin, Ethnologisches Museum* (de la Jara, 1967: 244; Arellano, 1999: 258; Phipps et al., 2004: 167; Ramos Cárdenas, 2005: 58–59). *T'oqapu* (2) is part of an Inqa tunic's waistband, found at *Museo Arqueológico de Cuzco* (Museo Inka), Perú (de la Jara (1967: 244, Fig. 4, upper band). Iconographically, (2) is the same realization as *t'oqapu* (1). Subsequently, *t'oqapu* (3), a grouping of four juxtaposed “double-slashed crosses”, is salvaged from the front part of the Bliss Collection's *unqu* at Dumbarton Oaks; see Phipps et al. (2004: 153–155). *T'oqapu* (4), a single double-slashed cross, despite coming from a post-Inqa shroud found at *The Museum of Fine Arts*, Boston (Massachusetts), is markedly similar to Inqa-era *t'oqapu* (1) and (2). *T'oqapu* unit (5), in turn, is recovered from the front part of the *unqu* purchased by A. Bandelier (1895). Nowadays, the artifact is deposited at the American Museum of Natural History, New York (Rowe Pollard, 1978: 17; Phipps et al., 2004: 156–157). The backward slash-form *t'oqapu* if merged crosswise with a “forward slash”-like *t'oqapu* seems to generate the “slashed cross” (1) and (2). Research is tempted to consider the token in question as *adjustable* or better said, as a *core productive element* in the set of the *t'oqapu* system. Unit (6) belongs also to the Bliss Collection's *unqu* at Dumbarton Oaks, Washington D.C., and is shaped in a pair-forming structure: a “double-slashed” cross configured side-by-side. As the observations go, duplication of the “core element” (5) is more than plausible in its structure. Pattern (7) is retrieved from a piece of an auctioned Inqa tunic, 1450–1530 CE (see H. A. Galleries, 1999–2010). The whole “crossed” pattern in the condensed *t'oqapu* unit (7) results from the arranged sum of four similar “slashes”, as seen in (8). In fact, image (8) corresponds to four *t'oqapu* units, in line with the “core element” (5). The Inqa designers / weavers were familiar with the (re)combinatorial properties of the geometrical shapes, employing them resourcefully so as to expand the number of the basic motifs. To prove this point, more analysis and deconstructions of complex *t'oqapu* patterns are required over a significant number of samples. Subsequently, the measured and collated data may be organized in numerically labelled grids of statistical graphics, should one aspire to do so.

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Gentile Lafaille (2008: 8–12) sets forth multi-referential “readings” about the *t'oqapu* No. 285 (in keeping with V. de la Jara’s 1967: 242–243, index 1-294; see also *t'oqapu* No. 267 and No. 268 in the same source). Given the case, it is difficult to say how much realistic and how much conjectural is Gentile Lafaille’s (2008) approach regarding this *t'oqapu*, styled after a “*fleur-de-lis*” shape (Figure 25). Such a move may be attended by significant risks if not tested and confirmed effectively in the greatest possible corpus of *t'oqapu*. Her three suggestions attempt to shed light on the alleged meaning of the *t'oqapu*.

1) “*Resumiendo esta primera aproximación tenemos que, en la época preincaica, un dibujo similar al tocapu 285 formó parte de los mensajes dirigidos a una divinidad que era un viento que soplaba desde el sudoeste, y que se hacía presente cuando se necesitaba agua para regar*” [Summing up the first approach, we may instill that in the pre-Inca era, a similar drawing to *tocapu* 285 was part of the messages addressed to a deity in the shape of a wind blowing from the southwest, materializing itself when water was needed].

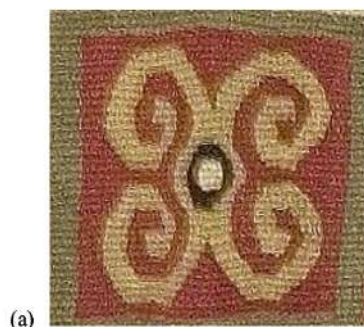
2) “*Resumiendo la segunda aproximación tenemos entonces que los personajes que muestran sobre el pecho una versión del tocapu 285 representarían a los especialistas en temas agropecuarios y sus rituales, pero no se sabe si eran seres humanos, divinos o semidivinos*” [Summing up the second approach, we may instill that the individuals displaying over the chest a version of *tocapu* 285 would stand for the experts in agricultural and livestock subjects and their rituals, but it is unknown if they were human beings, divine or half-divine].

3) “*Resumiendo esta tercera propuesta tenemos que el felino está representado sintéticamente en el tocapu 285...*” [Summing up this third proposal, we obtain the feline synthetically represented in the *tocapu* 285...].

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Appendix: Phonetic, logographic, semantic values of *t'oqapu*? Selected examples.



(a)



(b)



(c)



(d)

Let us consider that *t'oqapu* # 285 (a) resembles a *fleur-de-lis* motif. The shape occurs several times in a frontal horizontal band of *t'oqapu* in the *unqu* retrieved from the ruins of Pachacamac temple in 1780, and later added to *Museo de América*, Madrid (Taullard, 1949: Lámina [Plate] 3; Rowe, 1999 [1979]: 640–641; MAM, 2010a). The isolated *t'oqapu* deriving from this specific *unqu* of Late Horizon (inventory No. 14501) is made of cotton and camelid fiber. The motif is part of an original photograph of Joaquín Otero Úbeda, Museo de América, Madrid (MAM, 2010a). The “*fleur-de-lis*” was a common theme in the Middle Horizon, corresponding with the rise and fall of the Wari state (*ca.* 600 – *ca.* 1100 CE; cf. Benavides, 1999: 398), which pre-dates the Inqa by hundreds of years. Figure b portrays a double spout “Middle Horizon I” bottle, 600–800 CE, of *Atarco* style, featuring a sizeable “*fleur-de-lis*” shape (cf. CCEM, 2001: 424–425). In Figure c we see a decorated “Plaque” made of an alloy of gold and silver pertaining to the Wari, Middle Horizon 650–800 CE; dimensions 7.9 cm × 18 cm × 0.07 cm (3 1/8 in. × 7 1/16 in.); inventory No. PC.B.473; cf. Dumbarton Oaks Research Library and Collections, Pre-Columbian Collection, Washington DC (2021). It is interesting to observe that the *fleur-de-lis* motif occurs in different support materials, be they fabric, ceramic, or metal. (d) The “*fleur-de-lis*”-like design is similarly attested on the upper section of a textile Panel fragment with a checkerboard pattern (Dallas Museum of Art, 2021a). Date: (Late Horizon) 1460–1532 CE; Material: Camelid fiber; Dimensions: 17 ½ × 17 ½ (44.45 × 44.45 cm); Object number: 1976.W.2138; Credit line: Dallas Museum of Art. The Nora and John Wise Collection, gift of Mr. and Mrs. Jake L. Hamon, the Eugene McDermott Family, Mr. and Mrs. Algur H. Meadows and the Meadows Foundation, Incorporated, and Mr. and Mrs. John D. Murchison. © Image Courtesy Dallas Museum of Art.

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What is Writing? – an important digression.

In *A Study of Writing*, Gelb characterizes writing as, “*a system of human intercommunications by means of conventional visible marks*”. (Gelb, 1963 [1952]: 12)

Gelb (ibid.: 190) suggested that *phonography* is the stage of representation in which writing expresses language, while *semasiography* (colloquially, “writing” using symbols, signs, or pictures) is an earlier, less developed stage in which *pictures* (aka *pictographic representations*) convey meaning.

The key issue regarding Gelb’s definition is that the system must be *conventional*; the signs must be understood in the same way by all users and not need the intervention of the “writer” to interpret the message. One can argue that this approach rules out things such as *cave paintings*, in which the creator may use conventional signs but does not necessarily follow rules that are understood in the same way by all people – but if the cave painter’s audience did consistently understand the conventions and rules, would it / should it be considered writing?

Appendix: Notes on the Definition of Writing.

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What is Writing?

Additional views:

“[Writing’s] essential service is to objectify speech, to provide language with a material correlative, a set of visible signs”. (Goody, 1968: 1)

“What is writing? To ‘write’ might be defined, at a first approximation, as: to communicate relatively specific ideas by means of permanent, visible marks”. (Sampson, 1985: 26)

Powell (2009: 54), *“Because writing is use of conventional signs in a conventional system as instruments in mental processes, writing is a form of thinking. Certain kinds of writing enable certain kinds of thinking”.*

In either definition (Sampson, Powell), there is some perceived ambiguity as we may deem entirely possible to remove *writing* from the conservative context of recording spoken language. After all, various mnemonic devices resort to permanent, visible marks, conventional signs, and they reflect the mental processes of their creators, similar to the logo-syllabic or alphabetic systems.

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What is Writing?

What is the relationship between speech and writing?

Daniels (1996: 3), “[...] *writing is defined as a system of more or less permanent marks used to represent an utterance [= speech] in such a way that it can be recovered more or less exactly without the intervention of the utterer.*”

What may be considered the conventional or conservative standpoint holds that *writing* must be tied to the human spoken language. “Writing is a direct symbolic record of the speech act, or ‘*visible speech*’” (after John DeFrancis, 1989).

Rogers (2005: 2), “*We can define writing as the use of graphic marks to represent specific linguistic utterances. The purpose of a definition is to distinguish a term from other things*” [= non-linguistic types of communication].

However, we should consider that writing in “*early stages*” did not record continuous and explicit oral communication / utterances all through the signs made use of; cf. Egypt, Mesopotamia, or Mesoamerica. The fact renders *problematic* the exacting definitions. A “solution” in this context is offered by Peter Damerow (2006 [1999]), introducing the term *proto-writing* to describe the systems that display “*weak connections to oral language*” or are connected with the “nascent” stages of writing. This is not to suggest that *proto-writing* is in some way inferior or primitive; it is simply more dependent on the reader being aware of the context of the document, and having the ability to fill in the missing information.

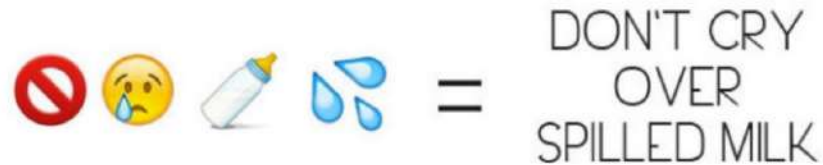
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What is Writing? Writing *versus* Proto-writing?

Robinson (2009: 4), “We can call them ‘proto-writing’: permanent visible marks capable of partial / specialized communication. Some scholars limit proto-writing to the earliest forms of writing, but in this book the term is applied much more widely. Thus there are endless varieties of proto-writing.”

Are modern emojis a form of “proto-writing”?



Other scholars may be inclined to make a note of the fact that there is no such thing as *proto-writing*. If the so-called proto-writing includes confirmed phonetic units even to a small degree (say, rebus-like devices) then it is *writing*, conservatively (or not) speaking.

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What is Writing?

What is the relationship between speech and writing?

The different approach is represented Elizabeth Hill Boone (among others); as Boone (2000: 29) writes, *“Writing is not merely a type of notational system, but an entire cultural category. It has been used to distinguish literate people from preliterates, people with history from those without, and even civilized people from barbarians or primitives.... Given these meanings, how can we deny that the Aztecs and Mixtecs had writing?”*

“As an Aztec specialist, I argue for a broader... definition of writing, one that embraces nonverbal systems. Several of my colleagues, people whom I respect and whose opinions I trust, ask me why we need to do this, when such a broadening blurs the important distinction between phonetic writing and other forms” (Boone 2000: 29).

The key idea of Boone is to develop a co-“evolutionary” model of writing, in which phonetic and “pictorial” / “pictographic” / “non-linguistic” systems are taken to be developmentally equivalent and in a “hybrid” mode, each functioning to fulfill the need to communicate with an audience who may not speak the same language or may have inconsistent literacy skills.

Earlier, Boone (1996: 314) – regarding the broad definition of writing – was aware however that “[...], the distinction between writing and non-writing carries, unconsciously or not, certain value judgments that raise phonetic writing above other forms of communication”.

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What is the relationship between speech and writing?

Sproat (2000: 202) asks, “*Should non-glottographic systems [=semasiographic systems, after Gelb’s designation] be considered writing? On the face of it this would appear to be purely a matter of definition, and hardly worth arguing about*”.

Although one could acquiesce to personal preferences /or/ misgivings at this point, Sproat (2000: 203) after examining the mapping between written and spoken form in two hundred pages, concludes, “...*presumably one could restrict the term ‘writing’ to glottographic representational systems [= linguistic systems], and use a separate term to denote forms of symbolic representation.*”

A number of scholars of non-Western subject-matter are proponents of a reassessment of writing as recorded speech. Albertine Gaur, in *History of Writing* (1987) argues for a functional concept of writing defined as any form of “*information storage*” that properly fulfills its purpose for the society that implements it. This role is adequately carried out, Gaur proposes, by mnemonic devices, winter counts, knotted cords, or the alphabet. “Evolutionary” approaches to non-alphabetic information systems may be uninformative, and instead, approaches that treat scripts individually as complex and contextually developed devices may better answer questions regarding their function (Gaur 2000: 3).

Boone (1996: 313) notes “[...] *situations where language writing does not effectively serve a culture or a group within it and the members develop alternative forms of graphic communication to serve their record-keeping needs*”.

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What is the relationship between speech and writing?

A possible example of a *contextually developed system* is the classic script of Rapa Nui (Easter Island) known as *rongorongo*. No matter how much we may learn about this “early script”... or even if, by some twist of luck, the ancient *rongorongo* glyphic sequences were to be fully decoded (= we make complete sense of them), it would be most likely impossible to use the ancient glyphs without significant additions or modifications to discuss the nuances of cryptocurrencies or the optimal placement of geostationary satellites. The Neolithic society of Rapa Nui was apparently primarily concerned with hymns to their deities, with list-like records, magic charms, ritualistic and prayer formulas, topics of war and fertility, and so forth.



Section from the Santiago Staff
showing *rongorongo* glyphs.

[https://commons.wikimedia.org/wiki/File:Rongorongo_I_Santiago_Staff_\(color\).jpg](https://commons.wikimedia.org/wiki/File:Rongorongo_I_Santiago_Staff_(color).jpg)

John DeFrancis (1989), in his book *Visible Speech: The Diverse Oneness of Writing Systems*, suggests that full writing be defined as a “*system of graphic symbols that can be used to convey any and all thought*”. Herein, *any and all thought* regarding “cryptocurrencies” and “geostationary satellites” cannot be conveyed via the pre-missionary *rongorongo* glyphs. However, neither “cryptocurrencies” nor “geostationary satellites” can be discussed using the classical Latin of the first century CE without additions to the Latin. So, does this mean that neither classical Latin nor *rongorongo* are full writing? Indeed, arguably, until the proper terms are conceived, many “thoughts” cannot be expressed in any known language or writing.

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Writing Among pre-European South American cultures?

The mainstream belief among scholars is that pre-European South American cultures did not have *writing systems* in the sense that such are conventionally perceived outside the Inqa area of control; to be precise, they did not have writing systems composed of *physical signs* able to fully *express* and *represent speech* (cf. Stierlin, 1984: 190–191; Franquemont, 1986: 81–82, 84; Mignolo, 1994: 234–237; J. H. Rowe, 1996: 463 in A. P. Rowe, and J. H. Rowe, 1996; Mitchell and Jaye, 1996: 16; Quispe-Agnoli, 2006).

Some scholars privilege *phonetic writing* as the climax of socio-cultural development, whereas “pictorial-like” and “logographic” forms characterized as “partial” / “limited” / “emblematic” / or even “pseudo-” / “non-writing” are (“inherently”) related with less sophisticated and archaic human communities (aka *the oral societies*); cf. Boone (1996: 314). Although dealing specifically with the context of Mesoamerican scripts, the comments of Carlo Severi (2019) also apply to South America: “*The relationship between picture-writing and ‘real’ (phonetic) writing is usually understood in terms of a temporal sequence: picture-writings, regularly defined as rudimentary drawings used in oral traditions to represent basic ideas, are said to precede in time the invention of writing. They are also, very often, seen as unstable and unreliable means of storing knowledge. In studies devoted to the history of writing, it is often stated (Cohen 1958; Diringer 1937; Gelb 1952) that ‘true writing,’ once invented, is soon recognized as a better tool for recording and transmitting information. Consequently, the use of a writing system rapidly replaces old, rudimentary picture-writings and extends to cover the totality of a spoken language.*”

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Many scholarly estimates of notation systems of a numerical and non-numerical nature that existed in pre-European South America present them as being as efficient as phonetic scripts or perhaps even more efficient, their differences being part of a divergent “evolution” [= developmental tendency] in the way of thinking and representation (cf. Métraux, 1963; Naville, 1966; Paternosto, 1996 [1989]: 171; Zuidema, 1991:151; Prada Ramírez, 1994; Boone and Mignolo, 1994; Phipps, 1996: 154; Sassoon and Gaur, 1997; Grube and Arellano Hoffmann, 2002: 51–52; D’Altroy, 2005 [2002]: 15–19; Cummins, 2002: 190; Quispe-Agnoli, 2002, 2005: 264–265, 2006, 2008: 133–135; Heckman, 2003: 41; Fedriani Martel and Tenorio Villalón, 2004; Salomon, 2004; Steele and Allen, 2004: 36–40; McEwen, 2006: 182–185; Kulmar 2008, 2010: 139; González and Bray, 2008: 1–4; Melka, 2010; Bergh, 2013; Severi, 2019; Clados 2020).

At present, these systems are thought to be *largely mnemonic*-like and *semasiographic* (Sampson, 1985), although logographic elements cannot *a priori* be ruled out. For this reason, it may be said that we are dealing here qualitatively with a different *literary model* (Franquemont, 1986: 83; Boone and Mignolo, 1994; Quispe-Agnoli, 2006: 145–180), where the textile motifs (or *quipu*, for instance, in another context) did not articulate continuously the information in clear-cut words, but rather, they stood for the *real meaning* in view of their structure (= the “syntax” of concatenation of motifs / symbols), material, colors, and weaving processes applied in the whole practice.

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Writing Among pre-European South American cultures?

In contrast to the hypothesis that most or all notation systems that existed in pre-European South America were *largely mnemonic-like* and *semasiographic*, some researchers propose that some of the South American graphic systems involved logo-syllabic coding, or whole / partial phonetic components; examples suggested include the cases of *quipu*, *t'ooqapu* geometric patterns, the Moche *Lima beans*, and the religious texts of the indigenous Aymara; cf. Ibarra Grasso (1953); V. de la Jara (1967, 1975); Barthel (1970, 1971); Totten (1985); Laurencich Minelli (1996); Burns Glynn (2002); Salcedo Salcedo (2007). If such claims are to be carried further in the serious scientific agenda, hard evidence should be searched for and properly documented (cf. Barthel, 1976: 27).

Mitchell and Jaye (1996: 16) address bluntly such suggestions by writing, “*The arguments and evidence of these authors, however, tend to be speculative and not very vigorous*”.

So, is it writing?

In our assessment, the Wari-Tiwanaku and Inka systems are largely mnemonic and semasiographic. Whether or not this is writing depends on one's definition of writing (as noted previously). If writing is conservatively defined as a direct symbolic record of the speech act, or ‘*visible speech*’ (DeFrancis, 1989), then these systems are apparently not writing. However, the story may not be so simple and involves the politics of definitions of writing.

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Writing Among pre-European South American cultures?

Politics of definitions of writing.

The politics of defining writing as ‘*recorded speech*’ are intensely loaded, primarily because linguistic anthropologists have interpreted the presence of writing as a prestigious marker of cultural and intellectual advancement (Saussure 1916/1966:24-26). In fact, evolutionary models of societal development hold phonetic writing, the “technology of the intellect” (Goody 2000), as the primary innovation that distinguishes civilization from barbarism (Gelb 1963:190-192; Houston 2004:3; Trigger 2004:40; Marcus 1992:17; Coe 1992:13; Robertson 2004:20).

For Gelb (1963:190), phonography is the stage of representation in which writing expresses language, while semasiography is an earlier, less developed stage in which pictures convey meaning. Stephen Houston (2004:3) writing systems are heralded as “momentous steps in representation that implicate, in structured fashion, sound, meaning, and sight” (Houston 2004:3). For Joyce Marcus (1992:17) writing has “*a correspondence to spoken language, which allows us to distinguish it from complex iconography.*” For Trigger (2004:67), the evolutionary study of script ‘development’ toward full phoneticism offers a method for examining broader cultural and material development, as “*Writing is more symbolic than most tools and more technologically driven than expressive art.*”

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Politics of definitions of writing.

Other scholars have initiated a cautious migration away from evolutionary models and find space for interpretive play within the semasiographic category. British linguist Geoffrey Sampson (1985:27) characterizes writing broadly as the use of permanent marks to communicate ideas in a conventional manner. Writing systems, for Sampson, are divisible into two groups: glottographic, or representations of speech, and semasiographic, or symbolic, codified, and iconic representations that operate outside of speech and communicate meaning directly through their structure (Sampson 1985:29; Boone 1994:14-15). Sampson refrains from categorizing semasiographic marks as either 'true' or 'false' writing, and allows the reader to make this determination. Albertine Gaur argues in her *History of Writing* (1987) for a functional concept of writing defined as any form of 'information storage' that properly fulfills its purpose for the society that implements it.

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Maya hieroglyphs contain the highest concentration of phoneticism among ancient American graphic systems. As a result, epigraphers of Maya script often adhere to conservative standards for assessing the presence of writing. Michael Coe begins his book *Breaking the Maya Code* (1992:13) with the admonition, “*Writing is speech put in visible form, in such a way that any reader instructed in its conventions can reconstruct the vocal message.*” Coe’s definition of writing evidences a larger phenomenon rooted in nineteenth-century evolutionary studies in which scholars draw parallels between the Classic Maya and the ‘Golden Age of the Greece’. Through this lens, all ancient American cultures prior to or other than the Maya are unproductively taken to represent an underdeveloped stage of Maya perfection, and later cultures are likened to the devolved Romans.

The Intersection between Art, Non-Linguistic Symbol Systems, and Writing: The Case of the Wari, Tiwanaku, and Inka Iconographies

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Writing Among pre-European South American cultures?

Politics of definitions of writing.

Elizabeth Hill Boone (1994, 2009) leads the most extensive reevaluation of existing models for assessing literacy in Mesoamerica (and by extension, elsewhere) and puts forth a revised definition of writing that is not exclusively tied to speech. The broader goals of her proposal are to overturn traditional evolutionary models and to develop a co-evolutionary model of writing in which phonetic and pictorial systems are taken to be developmentally equivalent, each functioning to fulfill the need to communicate with an audience who may not speak the same language or may have inconsistent literacy skills. Boone points out that an evolutionary model in which knowledge and thought are “best” represented alphabetically is based upon narrow western views of how knowledge is transmitted. In fact, with little attentiveness to their complexities we regularly utilize a variety of non-alphabetic graphic methods to convey sophisticated information, including maps, mathematical formulas, pictorial symbols, and musical scores. In accordance with Boone, Houston (2004) proposes a method of contextualizing writing systems based upon their usage. He divides writing systems into those that are ‘closed,’ or applied in isolation, and those that are ‘open,’ or used in near-constant interaction with diverse cultures (Houston 2004:275). Perhaps in response to the requirements of polyglot elites and cross-linguistic contact (Houston 2004:278), open scripts such as those used at Teotihuacan and Tenochtitlán consist of higher percentage of pictorial or emblematic elements (Taube 2000; Lacadena 2008). In contrast, closed texts such as those of the Maya are proportionally more phonetic. As no ‘progression’ over time from ‘open’ to ‘closed’ system occurred in Mesoamerica, Houston’s model undermines the evolutionary models in which pictorial systems are taken to be less complex forms of phonetic texts.

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Appendix: What is Art?

We can consider how the Europeans / North Americans conceptualize / rationalize Art?

Ancient South Americans (or other pre-industrial people) had different notions regarding the concept of Art.

It is worthwhile to quote Esther Pasztory (*Inka Cubism: Reflections on Andean Art*. 2010: 10).

Although the book is about “art” in the vernacular meaning of the term, it is understood that the concept of art is a Western concept and does not correlate with anything Andean. Over the years, scholars, collectors, dealers, museum curators, and others selected objects that, from the Western point of view, exhibited superior form and craftsmanship and fitted within Western styles of art. Although anthropologists designate all objects as “material culture,” they have tended to accept the “art” designations created by the art world. As I discussed in *Thinking with Things*, there is no indwelling quality in objects that make them “art” – individuals and societies decide what is art for their own reasons. For my purposes, art objects are things made or found that seem to have communicated on a visual or cognitive level among ancient Americans as well as with us.

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What is Art? “Perceptual” Naturalistic Art *versus* “Conceptual” Abstract Art

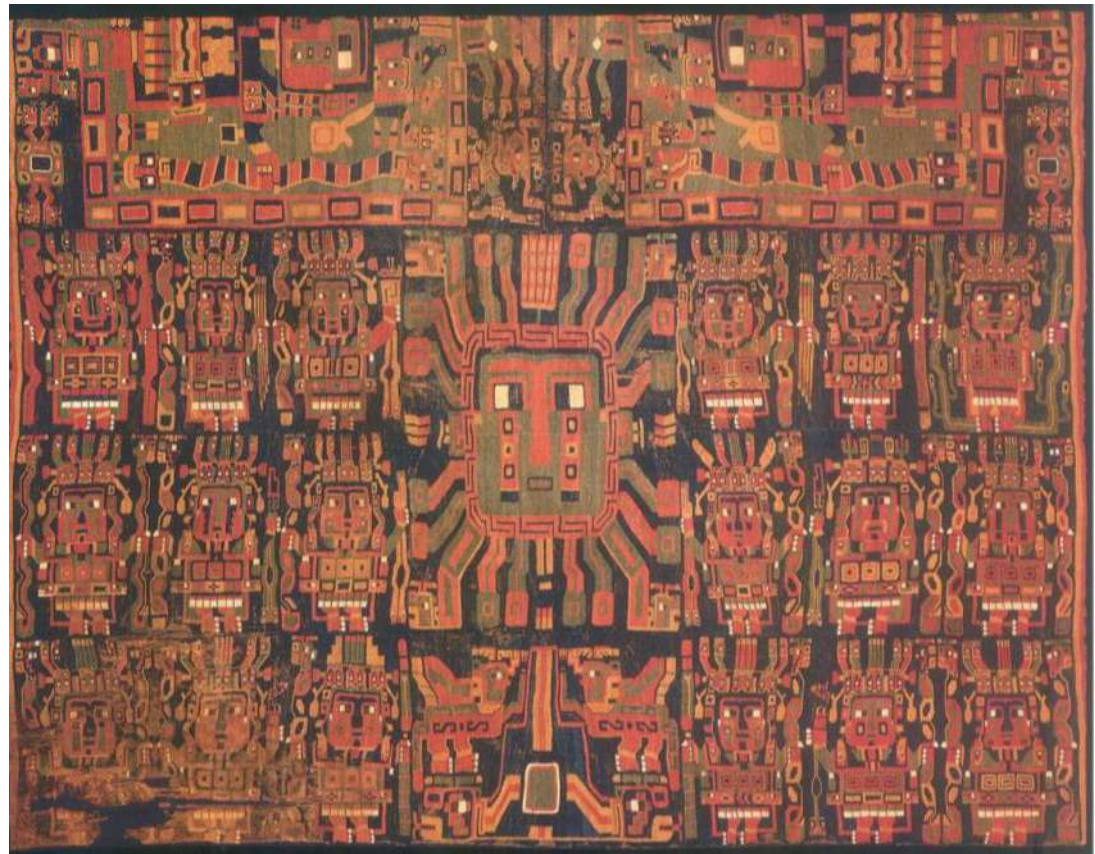
It in an earlier work, Esther Pasztory (1990/1991: 110) pointed out the biases involved in some of the standard Western distinctions made regarding art of different peoples and cultures:

Major unspoken distinctions are made between the abstractions of Western and so-called primitive peoples. For the modern artist an important aspect of abstraction is the reaction against the naturalistic classical tradition. In the case of Picasso in particular, there is proof in his early career that he could work in a naturalistic vein. Yet the assumption is that Eskimo artists, for example, cannot produce a realistic image, that abstraction alone is accessible to them. In other words, for the modern artist abstraction is a choice, but for the non-Western artist it is a given. Moreover, for the modernist artist abstraction is a great achievement, while for the non-Western artist it is merely an inadequate attempt at representation. This point of view has been expressed most forcefully by Gombrich (1960) who argued that "conceptual" abstract art predates the development of "perceptual" naturalistic art, and that the creation of abstraction is easy and comes naturally, while the development of realism is a slow and difficult process comparable to the successive discoveries in Western science. Although Gombrich has been refuted by Bryson (1983) and others, his developmental model is still the dominant one.

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Thank you for your interest in our work.



Tapestry tunic of early Tiwanaku style, *circa* 200–400 CE, Perú or Chile, camelid fiber, private collection (see Young-Sánchez 2004: 46–47).