

The Human Hand in Classic Maya Hieroglyphic Writing

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In an earlier essay a discussion was presented of left- and right-handedness in writing-painting contexts on painted, incised, and carved Classic Maya ceramic containers (cf. Boot 2003a). In an opening section entitled “Visualizing the Hand”, I referred in short to a series of hieroglyphic signs that depict or include the human hand. Hermann Beyer (1934) was the first researcher to describe the “hand” in Maya hieroglyphs, but the corpus with which he worked was much smaller than currently available. The present essay describes common as well as rare and unique hieroglyphic signs that depict or include the human hand (note 1). The different signs are presented and described in alphabetical order according to their currently accepted syllabic or logographic value within the international epigraphic community (e.g. Coe and Van Stone 2001; Kettunen and Helmke 2002; Montgomery 2002; compare to Justeson 1984 and Kurbjuhn 1989) (note 2). Any doubt regarding a certain sign value is expressed through an added query. In several cases, additional examples of how the sign is employed are included.

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A total of 45 different signs that depict or include the human hand will be illustrated and discussed below. The first column provides the syllabic or logographic value of the sign, the second (and sometimes third) column provide the so-called T-number, the number as allocated to a hieroglyphic sign by Thompson in his 1962 catalog (amendments follow Grube 1990: Anhang B). In some cases a Z-number is also provided, the number as allocated to a hieroglyphic sign by Zimmerman in his 1956 catalog (based only on hieroglyphic texts from the three codices).

cha	T668	Z169
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drawings by Nikolai Grube (a) & unknown artist (b)

The shape of T668 indicates that possibly a human fist served as the template of the sign. Either the left or right hand was used. Only the thumb remains included in the sign and the fingers are not visible; as such it is not clear which hand was originally employed (also see **JOM** and **k'a**).

The origin of the syllabic value **cha** for this sign currently is unknown. This syllabic value may have been derived in the following manner. Colonial Yucatec Maya has *chach* for “handful”; *chach* is also recorded as a numerical classifier for “handfuls (of thin rods, hair,

reed)" (Barrera Vásquez et al. 1980: 74). A process of acrophony, in which the closing consonant of a CVC item is dropped to derive a CV syllable, may have derived **cha** from **cha(ch)* if at one time this item would have been available to (one of) the languages belonging to the Ch'olan language group. It was one of these languages (possibly "Classic Ch'oltí") that developed the primary hieroglyphic sign inventory of Classic Maya writing (see Houston, Robertson, and Stuart 2000).

CHA'

T1086



drawing by John Montgomery

T1086 represents the celamorphic variant of the cardinal number "two" in the Classic Maya writing system (Thompson 1950: Figure 24, Nos. 8-11). Its most distinctive characteristic is the fist formed by a human hand that is employed as the headdress of the human or supernatural head. In this example (Piedras Negras, Panel 2) it is clearly the left hand that was used to form the fist. However, an example at Yula (Lintel 1: B1) shows a right hand fist.

As discussed above, T668 represented a human fist with the syllabic value **cha**. I suggested that possibly this value **cha** was derived through a process of acrophony from the linguistic item *chach* "handful". The fist as employed in the celamorphic variant of the cardinal number "two" may have a similar origin; it would explain the inclusion of the fist as the headdress and it would further substantiate the Classic Maya value **CHA'** for "two" instead of ***KA'** (the Casa Colorada inscription at Chichen Itza in Northern Yucatan employs the syllabic sign **ka** for the ordinal numeral "second"; *ka'* means "two; second, again" in the languages forming the Yucatecan language group) (note 3).

chi

T671

Z160



drawings by Avis Tulloch (a) & unknown artist (b)

T671 depicts an upwards C-shaped or nearly rounded hand, the thumb of which is shown on the left side. Thumb and index finger touch each other, while sometimes the middle finger and in rare cases even the ring finger are visible.

The earliest example of this hand sign may be found in the second glyph panel of Kaminaljuyu Stela 10 (dated to circa 400-200 B.C.) (note 4). It is possibly employed in a Preclassic spelling of the day name **chi[j]chan* (David Stuart, cited in Mora-Marín 2003: 8):



drawing by David Mora-Marín

T671 has the syllabic value **chi**, possibly having its origin in a hand-sign that referred to “deer”, *chij* in Classic Maya. The actual hand-sign may represent the antlers, a distinctive element of deer (compare to Barrera Vásquez 1981). Note for instance the **chi**-like antlers on Huk Si’ip “Seven Deer”, the “Lord of the Deer”, as illustrated on Dresden Codex 13C1. The T671 **chi** sign and the T796 **CHIJ DEER** sign substitute freely for each other in various contexts, for instance, in Primary Standard Sequences on ceramics as well as calendrical contexts as the eighth day (Colonial Yucatecan calendar *manik'*, Classic Maya calendar *chij*).

In this last context the sign for the Yucatecan day name *Manik'* occurs in the summarized copy of the Landa 1566 manuscript entitled “Relación de las cosas de Yucatán”:



drawing by one of the two unknown copyists of the Landa manuscript

As the details of the hand in this and the other examples show, it is the right hand that is depicted.

CHOK

T710



drawing by John Montgomery

This is one of the earliest examples of the hieroglyphic sign for **CHOK** “to throw; to scatter” (as found on a Early Classic celt, currently residing in a private European collection). This reading has been proposed mainly based on the frequent suffixing with the syllable **-ko**; note for instance present-day Ch’ol *chok* “to throw” (Aulie and Aulie 1978: 49).

The hand shows the nails of the fingers, while between the thumb and index finger some small round objects can be found (kernels or droplets, in hieroglyphic texts referred to as *ch'a[a]j* “droplets [of liquid]”).

The fact that the nails of the fingers are visible indicates that the left hand is depicted.

CH’AM (or K’AM)

T670 (included in T1030e)

Z161



drawings by Nikolai Grube (a), Avis Tulloch (b) & unknown artist (c)

T670 is a hieroglyphic sign used in several contexts. The logographic value for T670 depends on the hieroglyphic signs affixed to it (see **YAL**) (note 5). With the common T533 **’AJAW**

head placed on the flat hand and the optional subfix **ma** this sign is employed as **CH'AM** “to receive” (based on spellings **ch'a-T670[T533]** and **T670[T533]-ma**) or **K'AM** “to receive” (based on a substitution **k'a-ma** for **T670[T533]** at Temple XIX, bench text, Palenque).

In the examples above the opened hand, with the thumb up and the absence of visible nails on the fingers, illustrates a right hand. There are examples that illustrate the left hand (in those cases the nails are included).

HAB' (?)



drawing by unknown artist

This is the avian celamorphic variant of the calendrical period *haab'* (or «tun», 360 days) as contained in the Initial Series (Thompson 1950: Figure 27, Nos. 23-39), normally represented by T548 **HAB'** or T548[585] **HAB'[b'i]** (Thompson 1950: Figure 26, Nos. 33-40). It depicts a raptorial bird of some kind, the lower jaw of which is replaced by a small human hand. It is the right hand that is included.

HUL

T713var



drawing by Mark Van Stone

In the Early Classic there are some verb collocations that seem to include T181 **ja**, a sign that was not included in the pronunciation of the hieroglyphic sign. This hand represents the logographic value **HUL**, based on a substitution in a controlled context (Supplementary Series) with the spelling **hu-li-**. This reading is substantiated through a large number of examples in which **HUL** is suffixed with **-li**. The thumb is on the left side, the index finger points diagonally to the right; the remaining fingers are bent and cover part of the opened palm. This particular gesture of the hand and the positioning of the fingers indicate that the left hand is depicted.

JOM (?)

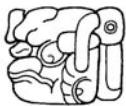
T672



drawing by Avis Tulloch

T672 **JOM** (or possibly just **jo**) depicts a human fist, of which only the thumb is still visible. It is frequently employed in the title *ch'ajo'om* “scatterer” (in spellings as **ch'a-JOM** and

ch'a-JOM-ma). The origin of the value **JOM** (or **jo**) at present is unknown. As in the case with T668 **cha** and T669 **k'a**, it is not clear if the left or the right hand was intended.

KALOM (?)**T1030l-m-n**

drawing by John Montgomery

The main sign of T1030l-m-n represents the head of an important divine entity, possibly a manifestation of the Palenque Triad god GI or the Classic god Chaahk. The logographic value of this sign is possibly **KALOM** with **TE'** as a suffix (based on certain substitutions as **ka-lo-ma-TE'**, **[KAL]ma-TE'**, **ka-KALOM?-TE'**, and **KALOM?-ma-TE'**). The most distinctive and crucial element contained in this hieroglyphic sign is the hand holding an ax; it is the left hand that holds the ax in the example illustrated here. In many iconographic narratives Chaahk wields his ax with his left hand (e.g. Kerr No. 0518, 1003) (note 6).

The title represented by this composite hieroglyphic sign was *kalo '[o]mte'*, a title with the possible meaning “opener (*kalo '[o]m-*) of the tree (-*te'*)”. It is the most important title ending in *-te'* “tree” in the Classic period (note other titles as *b'aahte'* “head or first tree” and *yajawte'* “[he is] lord of the tree”). The title *kalo '[o]mte'* only was carried by the most important Maya kings at sites such as Calakmul, Palenque, Tikal, and Yaxchilan. Towards the end of the Classic period kings from less important sites also came to carry this title.

There are a couple of examples of the *kalo '[o]mte'* in which it seems the carver has tried to include a right hand holding the ax.

ke**T220c-d****T711****Z162**

drawing by David Stuart

T220c-d/T711 **ke** is a hieroglyphic sign in which the thumb rests on the bottom, while the index finger points upwards or is slightly bent. The thumb and index finger can point to the left or the right. The version illustrated above, from Piedras Negras Panel 3, points to the left. It is employed in the following phrase:



drawing by David Stuart

This phrase can be transcribed **a-wi-na-ke-na** for *awinakeen* or *a-winak-een* “your (*a*-) servant (-*winak*-) I [am] (-*een*)”. This phrase was first deciphered and interpreted by David Stuart in 1999.

The hieroglyphic sign **ke** frequently is employed to spell the title *kele’em* “youngster, young man” in dedicatory texts in northwestern Yucatan (e.g. Xcalumkin) as well as in dedicatory texts on ceramic vessels (thumb on the lower right, positioned behind the spider monkey head) (compare to T1028c/Z162, its codex variants):



drawing by Yuriy Polyukhovich

The syllabic value **ke** of this hand sign may be explained through two entries in present-day Tzeltal; *keh* is a numerical classifier for “measure between knuckle of forefinger and thumb”, while *kehleh* is used for “span between thumb and knuckle of forefinger (numeral one only)” (Berlin 1968: 228). Again, a process of acrophony may have derived **ke** from *ke(h)*.

One of the earliest examples of this particular syllabic sign may occur in the partially surviving text on the Lake Güija plaque found in El Salvador, although the context in which this sign occurs is not clear:



drawing by Stephen Houston

As suggested by Houston and Amaroli (1988: 1) the plaque probably dates from the middle years of the Early Classic period, that is circa A.D. 416-465.

The particular hand gesture as contained in the T711 hieroglyphic sign as illustrated here is indicative of the right hand. Other examples (as at Piedras Negras) depict the left hand.

k'a

T669

Z166



drawings by Avis Tulloch (a) & Nikolai Grube (b) & unknown artist (c)

T669 also depicts a human fist of which only the thumb remains visible. The value of the syllabic sign is **k'a**, possibly derived from *k'ab'*, a nearly pan-Mayan gloss with the meaning “hand” (cf. Dienhart 1989: 311-314), but also with the meaning “fist, the hand closed” in Colonial Yucatec (Barrera Vásquez et al. 1980: 359). This sign survived as “k” in Landa’s alphabet (fol. 45r), but without the inclusion of the thumb to recognize it as a hand sign.

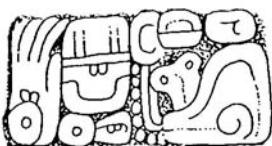
Again, in this case it is not clear if the left or the right hand was depicted (see **cha** and **JOM**).

K'AB' (?)

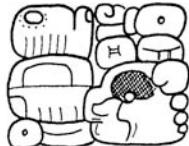


drawing by Kornelia Kurbjuhn, Diane Winters, and Francesca Caruso

This sign represents a flat raised human hand as for example in **mi** (1) (see below), but this hand sign has a different value (note the specific infix within the raised hand sign for **mi**). It is used in the nominal phrase of a ruler of Bonampak (panel of unknown provenance, private collection in Central America [exact location unknown]), while a ruler from the neighboring site of Saktz'i' is also named Kab' Chante' (panel of unknown provenance, Royal Museums of Art and History, Brussels, Belgium):



drawing by Kornelia Kurbjuhn,
Diane Winters, and Francesca Caruso



drawing by Christian Prager

The limited geographic distribution of these nominal phrases suggests that the raised human hand can be spelled by the syllabic pair **k'a-b'a** for *k'ab'*; in many Mayan languages the word for “hand” is *k'ab'* (cf. Dienhart 1989: 311-314). Recent epigraphic research by several epigraphers (e.g. Alexandre Safronov, Stanley Guenter) suggests that Bonampak and Saktz'i' have to be located close to each other in the same region (the actual location of Saktz'i' is still unknown). Kings of certain sites and regions sometimes had the same name (generally skipping one generation), while spellings of those names may differ only slightly (e.g. Ahku'ul Mo' Naahb' at Palenque, Yaxuun[?] B'ahlam at Yaxchilan).

Based on the slightly inwards bent fingers this raised hand sign may depict the left hand.

K'AB'A'



drawing by Lin Crocker

This sign incorporates a down-pointing open C-shaped hand with the thumb on the right and the fingers on the left. The C-shaped hand encapsulates a T521 sign. To my knowledge this particular hand sign only occurs once in the whole corpus and it can be found in the text on an Early Classic cache vessel lid, now part of a European private collection.

As Linda Schele has shown, this sign has the value **K'AB'A'** as it substitutes for T187 **K'AB'A' NAME**:



drawings by Lin Crocker (a) & Linda Schele (b)

The Early Classic example on the left is written '**u K'AB'A'**' in separate oval glyph cartouches, while the Late Classic example on Copan Altar S on the right is written '**u-K'AB'A'-a**' (note the inclusion of the T521 sign), both for *uk'ab'a'* “is its/his/her name”. The hand sign used here for **K'AB'A'** NAME clearly derived its value from the nearly pan-Mayan gloss *k'ab'* “hand, arm” (cf. Dienhart 1989: 311-314).

This unique sign depicts the right hand.

K'AL

T713a

Z163



drawings by Avis Tulloch (a), Nikolai Grube (b) & unknown artist (c)

T713a depicts a flat human hand with the thumb above resting on the stretched palm. It is probably the most commonly used sign that depicts the human hand. Based on recent epigraphic research most epigraphers would assign a logographic value **K'AL**, based on a substitution of T713a-ja and T713a-la-ja with **k'a-la-ja** at Chichen Itza (Las Monjas, Lintel 7: A1b-B1a, with T669 **k'a**) and **k'a-la-ja** on a Chochola style ceramic vessel of unknown provenance as well as the inscriptions at Xcalumkin, Campeche. The “flat hand” occurs in a variety of important calendrical and royal contexts, for instance:



drawings by John Montgomery

k'al- tuun

k'al- sakhu'un

k'al- hu'un

In the above three examples the verb root *k'al-* may mean “to wrap, to present” (*k'al- tuun* “to wrap stone [i.e. *tuun* period]”; *k'al- sakhu'un* “to present [the] white headband”; *k'al- hu'un* “to present [the] headband”). In these particular examples (all from Palenque), it is clearly the right hand that is depicted, as is shown by the upward thumb and the visibility of the fingernails. There are, however, a couple of Early Classic examples that seem to use T713a in another variation:



drawings by David Stuart

These two examples from the Tikal Marcador show the “flat hand” with the thumb up and resting on part of the open top surface of the palm of the hand. Additionally it can be seen that the fingers do not show the nails. In these two Early Classic examples the T713a “flat hand”, as indicated by its characteristics, depicts the left hand (for a discussion of the possible meaning of these two collocations, see Stuart 2002).

As other examples of these two particular collocations show, the “left” flat hand and “right” flat hand represent the same value (cf. Stuart 2002: Figure 7). As such the T713a hand sign includes the representation of both hands.

k'ó

Z164



drawing by Linda Schele

This sign often depicts a down-pointing fist and in the Classic Maya writing system it is employed as the syllable **k'ó**, as first proposed by Linda Schele in 1992. In other examples the sign employed is not necessarily a down-pointing fist:



drawings by Linda Schele

In these examples from comparable “creation” contexts at Palenque (Tablet of the Cross) and Quirigua (Stela C) the sign for **k'ó** can be represented by the down-pointing fist or a flat hand (sign made by the right hand) comparable to the “hand-touching-earth” (see below). These “creation” phrases may read *ja[h]l-j-iiy k'o[j]b'a'* “revealed were (long ago) (the) hearth-stones” and *ja[h]l-aj k'o[j]b'a'* “revealed were (the) hearth-stones” (transliteration based on **'u-JAL-k'o-jo-b'a** spelling at Copan; note Colonial Yucatec Maya *k'ob'en* “kitchen, hearth; three stones that form the hearth”, cf. Barrera Vásquez et al. 1980: 406).

In regard to the syllabic value **k'ó** of this hand sign, note the present-day Tzeltal numerical classifier *k'oh* for “(enumeration of) knocks on objects, e.g. door, wood, etc.” (Berlin 1968: 202; compare to Tojolab'al *k'ojzin* “tocar, golpear”, Lenkersdorf 1979: 203). The instrument with which the knocks are made apparently is the human hand; the gesture of the hand is one easily recognizable for “knocking on” or “touching of” different surfaces. If correctly identified, again a process of acrophony would have derived **k'ó** from *k'o(h)*.

The Dresden Codex contains several examples of the sign for **k'ó**. One example is of interest here:



BW scan by the author

Dresden Codex 65B-68B contains an almanac in which Chaahk can be found in different locations, and with each location different auguries or prognostications as well as food offerings are associated. The above augury or prognostication can be transcribed as **k'o-WIL**. Its transliteration would be *k'owil*, which in Colonial Yucatec Maya is defined as an adjective with the meaning “lame, cripple” (Barrera Vásquez et al. 1980: 415). If correct, the days of the almanac on which Chaahk resides (the opening verb is still not deciphered) in the sky (*ta chan chaahk*) would lead to crippleness or lameness (other almanacs for instance lead to goodness, *yutzil* [Dresden 65B3], great rainfall, *chak ha'il* [Dresden 66B2], and abundance of drink and food, possibly *uk' [yetel] we'* [Dresden 67B3]).

In the examples of **k'o** from Palenque and Quirigua as presented above it can be seen that both the left and the right hand have been depicted.

mi (1)



drawing by John Montgomery

This hand sign depicts a flat raised hand. The examples found show the thumb on the left side of the raised hand, while the nails of the fingers are shown. There are, however, examples in which the sign is barely recognizable as a human hand. The origin of the value is still unknown; the sign is substituted by T173 **mi** (cf. Grube and Nahm 1990). This sign, employed as the syllabic sign **mi** (although a logographic value **MIH** might be favored, see below), depicts the right hand.

mi (2)



drawing by John Montgomery

This hieroglyphic sign is employed in a few calendrical contexts when a certain time period (e.g. *winikhaab'*, *haab'*, *winal/winik(il)*, *k'in*) is “completed”, the position identified by epigraphers with a “0” (cf. Thompson 1950: Figure 25, Nos. 37-45). It then substitutes for T173, a common sign with the value **mi**.

Besides this specific context, it also occurs in another calendrical context:



drawing by Merle Greene Robertson

This collocation as employed at Palenque (Palace Tablet), identified first by David Stuart in 1999, can be transcribed **sa-mi-ya** to spell *sa[']miiy* “earlier today” (he also noted a spelling **sa-a-mi-ya** in which T173 **mi** was employed). This hieroglyphic sign represents the syllabic value **mi**, although it is possible it actually represents the logographic value **MIH NO/NOTHING**. This possible celamorphic variant of the sign catalogued as **mi** (1) in this essay depicts a right hand placed over the lower jaw (note 7).

mi (3)

T807



drawing by Avis Tulloch

T807 includes a flat hand sign on which is placed a sign that in early research was described as a “shell” (this composite sign is commonly known as “shell-in-hand”). It is employed in several calendrical contexts when a time period (e.g. *winikhaab'*, *haab'*, *winal/winik(il)*, *k'in*) is “completed” (cf. Thompson 1950: Figure 25, Nos. 57-58), in transcription the position currently identified by epigraphers with “0”.

This composite sign has the value **mi** in non-calendrical contexts, as independently shown by Barbara MacLeod and Marc Zender in 2000 (based on spellings **ti-ma-ja** [Temple XVIII] and **u-ti-T807-wa** [Temple of the Inscriptions] at Palenque), and it includes the right hand (compare to **K'AL**). This hand sign may depict both the left and the right hand.

NAB'



drawing by the author

This hand sign is a rare sign only occurring in a small number of hieroglyphic texts (e.g. Kerr No. 1383). When used it is suffixed with T501 **b'a** and generally preceded by a numeral (e.g. Kerr No. 0635 and Kerr No. 1383). The sign depicts a C-shaped human hand which is opened or spread wide, the index finger on the left and the thumb on the right as if spanning a certain distance. In ballgame contexts this hand sign is substituted by other hand signs, for instance:

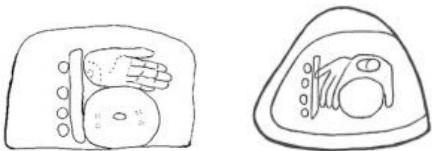


drawings by Christian Prager

The example at the center, as often placed on game balls in Maya ballgame iconography (with different prefixed numerals), spells **na-b'a** for *nab'*. This syllabic spelling lends credit to the decipherment of the other two hand signs as **NAB'**. As suggested by Christian Prager (1996) and others, the wide-opened hand seems to function as *nab'*, a gloss which in Colonial Yucatec Maya means “palm; count of palms, classifier for palms” (Barrera Vásquez et al. 1980: 545). Prager linked this particular meaning to a “count of palms” that the putative referee of the game may have kept as a score (several vessels depict a man holding a trumpet

shell making a “flat hand” gesture, cf. Kerr No. 2731, No. 3814, and No. 5435). Some researchers have suggested that the amount of palms or *nab'* may indicate the size of the game ball. The amount of palms would thus be a measure of the circumference of the ball (there would be “nine palm” balls, “twelve palm” balls, etc.). It also may have indicated the kind of ballgame played locally (cf. Tokovinine n.d.a, n.d.b).

Ceramics made in the so-called Chochola tradition or style illustrate a single ballplayer hitting a game ball with the hip. These game balls often contain hieroglyphic collocation, as can be seen in these two examples from Kerr No. 4684 and 5206:



drawings by Barbara Kerr

The collocations on these strangely formed game balls open with the numeral nine (Classic Maya *b'ahlun*), combined with a hand sign. In the first example (Kerr No. 4684) a flat left hand is suffixed with **-b'i**, possibly for *naab'* “palm” (long vowel in this case because of the **-b'i** suffix). In the second example (Kerr No. 5206) an opened, down-pointing C-shaped right hand encapsulates another glyptic sign of which no defining details survive.

These examples illustrate the range of hand signs that possibly were used for the logograph **NAB'** PALM.OF.HAND. Both hands could thus be employed in this sign (see “hand-in-ballgame”).

OCH

T218b/221a T666



drawing by the author

T221a depicts a fist, which, based on a concise set of substitutions, was deciphered first by David Stuart (1998) (original decipherment made in either 1988 or 1989). The value of the sign is **OCH** (or **'OCH**) and in most cases when the sign is employed it stands for the verb “to enter”. The sign depicts a fist with the thumb on the right side and the fingers bent inwards making them unvisible. In this case it is the left hand.

In Colonial Yucatec Maya *ok* means “fist with the hand closed” as well as “to enter” (Barrera Vásquez et al. 1980: 595; Stuart 1998: 388). Also note the entry *ok k'ab'* “fist with the hand closed” (Barrera Vásquez et al. 1980: 596). Final *-k* in Yucatecan languages would have been final *-ch* in Ch'olan languages if a phonological cognate item **och* “fist” existed that was used for its homonym *och* “to enter”.

It is the left hand that is depicted here, but there are a couple of examples that depict the right hand as a fist with the value **OCH** (T218b).



drawing by Avis Tulloch

T222 occurs in the nominal phrase of the sixteenth king of Copan, a king whose name is currently transliterated as Yaxpasaj Chanyopa(a)t. The sign T222 as cataloged by Thompson, as first shown by Lounsbury (1989: Table 6.2a), substitutes for T561[544]:526 SUN.AT. HORIZON/PAS and T602.25var.181. This last section is currently transcribed **pa-sa-ja** for *pasaj*, which means that T222 probably has a logographic value **PAS**. In this nominal phrase the part *-aj* is generally underspelled or abbreviated.

The hieroglyphic sign T222 contains two elements, one of which is a flat raised hand. The other element looks like a leaf of some sort. In Ch'ortí' the verb *pasi* means “to open or open up, break open, make an opening” (Wisdom 1950: 558). Tentatively, it might be possible that the scribes hinted at this particular verb root by including an opened and raised hand in the sign as well as an opened leaf.

The examples of T222 at Copan do not provide any clear indication if the left or the right hand was depicted.

PIK (?)



drawing by unknown artist

This hieroglyphic is the avian celamorphic variant of the calendrical period *pik* “b’ak’tuun” (or «baktun», 20 x 20 x 360 days). As contained in the Initial Series (Thompson 1950: Figure 27, Nos. 3-14), it substitutes for the regular T528.528:145d **PIK** (Thompson 1950: Figure 26, Nos. 15-23) and T528.528:103 **PIK-ki**.

This celamorphic variant depicts a raptorial bird of which the lower jaw has been replaced with a small human hand. Both the left and the right hand can be found incorporated in this sign.

PUK



drawing by Nikolai Grube

This rare sign, only occurring in “fire ritual” sequences as occasionally contained in Initial Series dates (cf. Grube 2000), depicts a down-pointing C-shaped opened hand, with the opening between thumb and index finger.

Based on rare examples with phonetic complementation, prefixed **pu** and postfixed **ki**, it was Nikolai Grube who in 1998 suggested a reading *puk* (*k'ahk'*) “to scatter (fire)”, a conclusion independently also reached by Christian Prager that same year. The hand as depicted in the above example from Yaxha is probably the right hand, the hand also used in the following example from Pusilha (note the “fire” sign attached to the bottom of the hand):



drawing by Nikolai Grube

As in this example the nails of the fingers are included, the identification of the right hand is more secure. In some detail the sign is very close to one of the signs for **NAB'**; possibly suffixed phonetic complements as well as context made a distinction between these hieroglyphic hand signs (**pu-PUK-ki** vs. **NAB'-b'a** and **NAB'-b'i**).

TZAK

T714

Z164



drawings by Nikolai Grube (a) & Avis Tulloch (b)

T714 depicts a human hand grasping a fish. The example on the left is one of the earliest examples known (Pearlman Shell). Based on a substitution **tza-ku** at Yaxchilan (Lintel 25: E1b), first identified by Nikolai Grube in 1989, this sign has the logographic value **TZAK**. Dos Caobas Stela 1 (Back: F4b) has a spelling **TZAK-ku**; the disharmonic spellings **TZAK-ku** and **tza-ku** for the noun suggest that *tza'hk* (note Tzeltal *tzahk*, see below) or *tza'k* would be the more correct Classic Maya transliteration. In Colonial Yucatec Maya the verb *tzak* means “count, enumeration of fish caught” as well as “to follow; to conjure”; as shown by Grube, in hieroglyphic texts it was used with the meaning “to take, to grab; to follow”. In a verbal context the synharmonic phonetic complement **-ka** can be found suggesting that the Classic Maya verb root was simply *tzak-*. In present-day Tzeltal *tzak* (original spelling «*¢ak*») is recorded as a numerical classifier with the meaning “catching in hand of small animal, fish”, while *tzahk* («*¢ahk*») is a numerical classifier with the meaning “times grabbed” (Berlin 1968: 223). The hand that grasps the fish is, as the specific details show, the left hand.

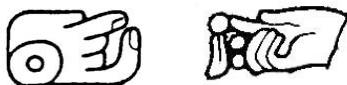
TZUTZ

T713b



drawings by Avis Tulloch (a) & Nikolai Grube (b)

T713b is a common main sign in the context of so-called period-endings. The thumb is above, while the index finger points straight or sometime diagonally to the right. The remaining finger are bent. The sign has the logographic value **TZUTZ** “to complete, to end, to terminate”, based on a substitution of the main sign with a syllabic spelling **tzu-tza-**, identified first by David Stuart on a stela from Lakamha. This particular hand is also included in the composite signs that represent the large calendrical periods known as *k'inchiltuun* and *kalab'tuun* (cf. Thompson 1950: Figure 26, Nos. 1-7). The specific characteristics of the human hand as depicted in the two examples above indicate that the left hand is depicted. However, there are other examples:



drawings by William R. Coe (a) & Ian Graham (b)

In these examples from Tikal (Stela 16: A3) and Naranjo (Hieroglyphic Stairway, Step X: U2a) it is clearly the right hand that has been depicted.

TZ'IB' (?)



BW scan by the author

Kerr No. 0772 contains a hieroglyphic text in which two collocations include a human hand holding a brush or quill pen (see “brush-in-hand”). This particular hand sign depicts the right hand; the brush or quill pen is guided by thumb and index finger, while the pen itself passes through the space between the index finger and the middle finger.

As suggested by several epigraphers, this sign probably has the value **TZ'IB'** “to write, to paint”; it is part of a title possibly spelled **'a-TZ'IB'?-b'a** for *a[j]tz'i[h]b'* “writer, painter”. Other examples of this title are spelled **'a-tz'i-b'a**. This particular hand sign is unique.

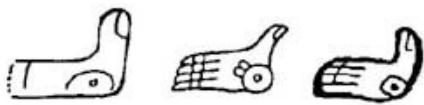
WINIKHAB' (?)



drawings by unknown artist

These are two examples of the avian celamorphic variant of the calendrical period *winikhaab'* “k'atuun” (or «katun», 20 x 360 days) as included in the Initial Series (Thompson 1950: Figure 27, Nos. 15-27). It substitutes for the regular T28:548 **WINIK?-HAB'** and T117.28:548 **wi-WINIK?-HAB'** (Thompson 1950: Figure 26, Nos. 24-32).

The possible raptorial bird has its lower jaw replaced by a human hand; in the examples known it is the right hand that has been incorporated into the sign (see note 6).



drawings by Nikolai Grube (a), Avis Tulloch (b) & unknown artist (c)

As could be seen above, the logographic value T670 depends on its affixes (see **CH'AM**). Prefixed with syllabic **ya** and sub- or infixes with syllabic **la** (or infixes with a different sign like T584) the sign T670 has the value **YAL**. The logographic value **YAL** may be derived from a reconstructed linguistic item **yalk'ab'*, which means “the children (*y-al*) of the hand (*k'ab'*)” or “the fingers” (cf. Dienhart 1989: 241-242). The straight and stretched-out fingers are the most prominent feature of this specific hieroglyphic hand sign.

Corroboration of the value **YAL** may be found in a set of ceramics on which **ya-la** and T670 substitute for each other (cf. Kerr No. 0521, **ya-la**; Kerr No. 1003, **ya-YAL-wa**; Kerr No. 1152, **YAL**; Kerr No. 1213, **ya-la-ja** [written **la-ya-ja**]; all providing different inflections of the verb *yal-* “to throw”). This sign is also commonly used in parentage statements to indicate descent from a woman (*y-al* “[it is] the child of mother [named] ...”), as this example from Caracol (Stela 16: B18) shows:



drawing by Carl Beertz

This particular example also shows that either the left or the right hand could be depicted. The fact that at Caracol the nails of the fingers are shown indicates that here the left hand is depicted (see **CH'AM**).



drawing by John Justeson

The Pomona Flare provides an Early Classic example of T710var **ye** (compare to Pearlman Shell); it is a hand pointing downwards similar to T710 **CHOK**, but no kernels or droplets are shown, while in many cases three fingers cross over the palm of the hand. The earliest example of this sign may occur in the second hieroglyphic panel on Kaminaljuyu Stela 10 (dated to circa 400-200 B.C.):



drawing by David Mora-Marín

The value **ye** is probably derived from the verb *ye'el*, which in the Ch'ol language means “to grab, to take with the hand” (Aulie and Aulie 1978: 142). A process of acrophony would have derived the value **ye** from *ye('el)*.

The particular gesture of the hands illustrated above indicate that the right hand is indicated. There are, however, some examples in which the left hand is employed:



drawings by Linda Schele

These collocations spell **ye[ma]-la** and **ye-ma-la**; they are part of the phrase Yemal K'uk' Witz "Descending Quetzal-bird Mountain", an important toponym at Palenque.

These examples, from a controlled substitution context in the inscriptions at Palenque, clearly show that both the left and the right hand were employed.

yo

T221b

T673



drawings by John Justeson (a), Nikolai Grube (b) & Avis Tulloch (c)

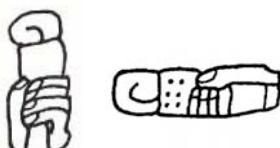
T221b/T673 **yo** depicts a fist or clenched hand with the thumb on the left side, with the fingers pressed tight, covering the palm of the hand. In hieroglyphic texts it frequently substitutes for T115 **yo**; that particular sign may have derived its syllabic value **yo** (through a process of acrophony) from an item *yop* with the meaning "leaf", as recently suggested by David Stuart.

In present-day Ch'ol the gloss *yotz'* can be found with the meaning "to press or hold tight with the hand" (Aulie and Aulie 1978: 143); in present-day Tzeltal the gloss *yom* can be found as a numerical classifier with the meaning "handful (of) sized bunches, non-bound" and "handfuls of flowers, grasses" (Berlin 1968: 238). Either of these items may explain the syllabic value **yo** of this hieroglyphic sign through a process of acrophony.

The particular characteristics of this hand indicate that the left hand is depicted. There are, however, rare examples at Xcalumkin (Column 4) and Chichen Itza (Las Monjas, Annex, Lintel) in which the right hand is depicted.

"atlatl-in-hand"

T361



drawings by P. Morales

T361 depicts a human hand holding an *atlatl* or spear-thrower. The sign is frequently used in the period of circa A.D. 378-400 at Tikal, Guatemala, as part of the nominal phrase "Spear-Thrower Owl". On occasion this particular logographic sign is prefixed with **ja** and postfixed

with **-ma**, indications that the Classic Maya gloss opened with *ja-* and terminated in *-Vm*. Recent suggestions include *jatz'am/jatz'o'om* “he who scourges” and *jal(a)b'om* “spear-thrower”, but none of these suggestions has found wide acceptance.

This hieroglyphic sign also occurs in short texts on several portable objects, among them an Early Classic jade ring and a polychrome stuccoed and painted blackware ceramic container (in both cases referring to a person named “Spear-Thrower Owl”, although different individuals may have been meant). This sign may be recorded at Chichen Itza in A.D. 832 as part of a toponym ending in *witz* “hill, mountain” (Temple of the Hieroglyphic Jambs, West Jamb: A8, *ta T361-?-witz* “at [?] hill, mountain”). If correct, it would be the latest recorded example (compare to Grube 1990: 104).

The examples of the “altatl-in-hand” sign at Tikal (both examples illustrated above are from the inscription on the Marcador from Group 6C-XVI at Tikal) indicate that both the left and the right hand were included in the sign.

“brush-in-hand”



BW scan by the author

Kerr No. 0772 contains a hieroglyphic text in which two collocations include a human hand holding a brush or quill pen (see **TZ'IB'**). This particular hand sign depicts the left hand, on the open palm of which the brush or quill pen can be found.

Its shape is very different from the hand sign as used for **TZ'IB'**, and although this is also a hand with a brush or quill pen the value of this sign is still unknown.

“flat hand”

T713var



BW scan by the author

This hand sign depicts a “flat hand” sign, as employed in a caption painted on the Altar de Sacrificios Vase. In large part it is similar to T713var. The examples on ceramics (e.g. Altar Vase, Kerr No. 8733) are somewhat different from the examples on monuments, although only eroded examples survive (e.g. Xultun Stela 5):



BW scan by the author



drawing by the author

The “flat hand” sign superfixed to TE’ seems to serve as a toponym in co-essence (*wayob’*) contexts on ceramics. Grube and Nahm (1994: 699) first noted the similarity of the HAND-TE’ collocation with examples in the Xultun inscriptions. While the sign shares many characteristics with T713a K’AL (see above), it is not clear if this logographic value can be applied to this sign as well. It may thus be a different sign, and as such it is presented here separate from T713a K’AL.

Although only a few examples are known, it seems that only the right hand is depicted.

“flints-in-hand”



drawing by Linda Schele

This rare sign can be found in the inscription of Tikal Altar V, a looted panel from the Bonampak area, and Kerr No. 1398. There might be additional examples. The sign depicts a human hand holding three oblong objects, possibly flints, as suggested by Nikolai Grube and Linda Schele (1994). The value of the sign at present is unknown.

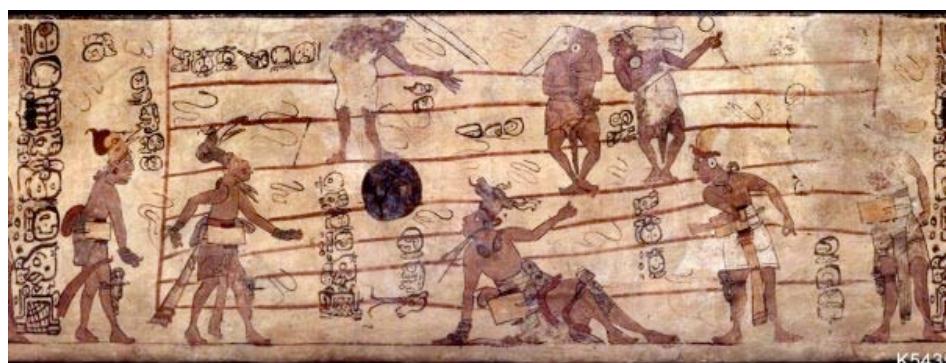
Details of the hand as included in this hieroglyphic sign indicates that the right hand has been depicted.

“hand-in-ballgame”



BW image of glyph on Kerr No. 5435

On Kerr No. 5435 a very rare flat hand sign can be found. This hieroglyphic hand sign apparently depicts a flat hand with the thumb on top, positioned parallel to the palm of the hand. The index finger points to the left, while the remaining fingers seem to be bent or are just shortened (or the index finger is elongated). Kerr No. 5435 illustrates a lively image from the Classic Maya ballgame:



A team of two players is depicted on the left, a team of three players (one on the ground) is depicted on the right. The background is formed by a staircase or reviewing stand (note the so-called “ballcourt-glyphs”, depicting a staircase to which a ball is attached, cf. Boot 1991). On the staircase or reviewing stand two men in typical white headdresses conversing among themselves can be found, as well as a figure stretching his left arm (note flat hand) while holding a shell in his right hand. He wears a similar white long headdress, flexed to the front. This may be a kind of referee, as noted by Christian Prager (1996: 2) with a possible name-tag just below his left arm (note the shell). The game played here is the hip ballgame ‘*por abajo*’ as described by Leyenaar (1978) (additionally note the clearly visible protective gloves on several of the players).

The rare hand sign can be found in the phrase written to the left of the possible referee or, as I would identify him, the count-keeper (see below). Of this particular hieroglyphic phrase three variations can be found on this ceramic vessel:



The first sequence (written from right to left) can be transcribed **5-la? K'IN-ni HAND** (T533 employed for **la** instead of T534), the second sequence (top to bottom) **8-la ni-K'IN HAND?**, and the third sequence (reversed, top to bottom) **5-la HAND**. All three phrases seem to be variations of a common phrase **NUMERAL-la (K'IN-ni) HAND**; the third sequence seems to indicate that **K'IN-ni** is an optional item.

If correctly identified, what could these phrases stand for? A tentative transliteration of these three phrases might be formulated as follows:

1. *ho[b]’ la[h] k'in k'ab’(?)* (**la** may thus be an underspelling or abbreviation of *lah*)
2. *waxak la[h] k'in k'ab’(?)*
3. *ho[b]’ la[h] k'ab’(?)*

In Colonial Yucatec Maya *lah* is defined as “palm to give by the hand, to touch or hit with the palm of the hand” while *lah k'ab'* is defined as “palm to give by the hand” (Barrera Vásquez et al. 1980: 431). The function of the optional item *k'in* is unknown at the moment (it may be an optional adjective modifying *k'ab'* “hand”). It may be suggested that these three particular phrases provide two specific stations in a “count of palms given by the hand”. Possibly a cognate item was available to the Ch'olan language group at the time of the Classic period (a possible present-day cognate item may be the Ch'orti' item *lahb'* “to applaude, to touch; palm of hand”, cf. Wisdom 1950: 511). Here follow my tentative translations:

1. “five palms given by the hand”
2. “eight palms given by the hand”
3. “five palms given by the hand”

The fact that the highest “count” is given greatest prominence (it is the vertical text column made out in large hieroglyphic collocations) may indicate that this was the final “count” (note the next collocations in the vertical text and the possible nominal of the first player of the team on the left, who may have made the final “score”; the first two collocations of this nominal phrase may be compared to the nominal phrase of the ballplayer on the right as depicted on the center ballcourt marker at Copan’s Ballcourt IIb). The one who indicates and thus keeps this “count of palms given by the hand” is the one holding the shell and stretching his left arm and showing a flat hand.

This Classic Maya unprovenanced polychrome ceramic vessel, currently at The St. Louis Art Museum, may provide the very first indications of actual “scores” in the Maya ballgame; the narrative itself may provide an image of the “score” that led to the fifth “palm” (as this specific “palm given by the hand” is mentioned twice). This possible “score” was indicated by a “count of palms given by the hand”.

The hieroglyphic sign cataloged here is another hand sign crucial in the ballgame (see **NAB'**), but it is not clear which hand was depicted.

“hand-touching-earth”

T217b



drawing by Merle Greene Robertson

This hand sign, a flat hand touching the earth (see below), only occurs in the inscriptions at Palenque. As Floyd Lounsbury (1980) first suggested, this collocation seems to refer to a birth event through some kind of metaphor (“touching the earth”) as its substitutes for the regular birth verb *siy-* “to be born”. In present-day Ch’ol he found the expression *il(an)* or *q’uel pañamil* “to see (*il[an]*, *q’uel*) the world (*pañamil*)” as a term for “to be born”:



drawing by Merle Greene Robertson



drawing by David Stuart

As there are other spellings of this possible birth event, with T526 EARTH substituted by **ka-b’á** for *kab’* “earth, region, world”, this is a possible indication that *kab’* was part of the Classic period metaphorical expression. The syllabic or logographic value of this hand sign has eluded epigraphers.

It might be of interest to note that one of the examples of the hand sign for **k’o** depicted a flat hand (see above), much like the flat hand employed here. Colonial Yucatec Maya records the gloss *k’ohol* (stress on the first syllable) with the meaning “to bear, to give birth, to bring to light; birth” (Barrera Vásquez et al. 1980: 410). If correctly identified, the flat “hand-touching-earth” may be a cue to a lost Classic Maya metaphorical expression for “birth” that opens with *k’o(j)-* and possibly incorporates *-kab’* (perhaps *uk’oj(ol)kab’* or *u-k’oj(ol)-kab’* “[it is] his touch of the earth” or “[it is] his knock on the earth”, i.e. “[it is] his birth”) (note 8).

The specific characteristics of this particular hand touching the earth indicate that the right hand has been depicted.

“hi-hand”

T217d



drawing by unknown artist

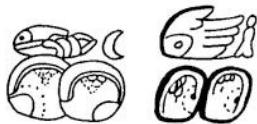
This is yet another hand sign that depicts the flat raised hand (see **K'AB'**, **mi**). It is found in a limited amount of Early Classic texts, probably all from an area that includes the sites Tikal and Uaxactun. Two of the examples are illustrated here (this hand sign is sometimes nicknamed “hi-hand” or “hi-ho hand”):



drawings by unknown artist(s)

In both examples the hand is clearly flat and stretched. Its possible logographic value remains undeciphered. The position of the thumb and fingers, the nails of which are visible, indicate that the left hand has been depicted.

“kalab’tuun”



drawings by unknown artist(s)

These collocations are two examples of the calendrical period nick-named “kalab’tuun” (or «calabtun», $20 \times 20 \times 20 \times 20 \times 360$ days) as sometimes contained in the Initial Series (e.g. Tikal Stela 10, Palenque House E) (Coe and Stone 2001: 48; Thompson 1950: Figure 26, Nos. 1-6). The hieroglyphic signs for this period include the hand with the value **TZUTZ** as discussed above. Its Classic Maya name is unknown (compare to “k’inchiltuun”). This hand sign depicts the left hand, but as **TZUTZ** is a sign that can be represented by both hands, this may also apply to the period “kalab’tuun”.

“k’inchiltuun”



drawing by unknown artist

This collocation is an example of a calendrical period nick-named “k’inchiltuun” (or «kinchiltun»), $20 \times 20 \times 20 \times 20 \times 20 \times 360$ as sometimes contained in the Initial Series or references to large calendrical periods outside the context of the Initial Series (Coe and Van Stone 2001: 48; Thompson 1950: Figure 27, No. 7). The hieroglyphic composite signs for this period include the hand also employed for **TZUTZ** as discussed above. The Classic Maya name of this period is still unknown (compare to “kalab’tuun”).

This hand sign depicts the left hand, but as **TZUTZ** is a sign that can be represented by both hands, this may also apply to the period “k’inchiltuun”.

“lord-of-the-night” (G7) T1086



drawing by John Montgomery

The sign cataloged as T1086 represents half of a rare variant of G7, one of the so-called “Lords of the Night” (as suggested by several epigraphers, including the present author, this series of nine gods may actually refer to a series of specific headdress ornaments). Most of the examples known of G7 do not include a human hand in the headdress of the portrait glyph (cf. Thompson 1950: Figure 34, Nos. 32-38). The hand included in the example illustrated (Piedras Negras, Panel 3: B4) is the left hand, in the form of a fist.

“piktuun”



drawing by unknown artist

This is the celamorphic variant of the calendrical period *piktuun* (or «pictun») in the Initial Series (Thompson 1950: Figure 27, Nos. 1-2; compare to Thompson 1950: Figure 26, Nos. 8-14); its original Classic Maya name is unknown, as the superfix T42 remains without a decipherment. The raptorial bird used in this composite sign has its lower jaw replaced with a human hand, in these particular cases the right hand. This avian celamorphic variant is very similar to the avian celamorphic variant of the *pik* “b’ak’tuun” period (see **PIK**) (note 9). As both hands were used in that composite sign, this may also apply to the “piktuun” period sign.

“stone-in-hand” A31 (Grube 1990: 126)



drawing by Nikolai Grube

This sign depicts a hand holding a stone. In recent years there have been several attempts at decipherment (Knowlton 1999 as *tok* “to burn; to take, to usurp; to defend”; Lopes n.d. as *jatz'* “to strike, to beat”), but at present none of these two decipherments seems to have been widely accepted. The sign is similar to T714 **TZAK** “fish-in-hand” and “torch-in-hand” (see below), and like these logographic signs the “stone-in-hand” depicts the left hand.

“torch-in-hand”



drawing by Stephen Houston

This unique sign is employed in the “fire ritual” sequence (see **PUK**) as contained in the Initial Series date painted in Room 1 (South Wall), Structure 1, Bonampak. The sign depicts a hand holding a torch. The possible logographic value of the hand holding a torch is still unknown. Like the hands included in the signs for **TZAK** and “stone-in-hand”, it is the left hand that is employed.

“x” (from Landa’s “alphabet”)



drawing by one of the two copyists of the Landa manuscript

Folio 45r of the copy of Diego de Landa’s 1566 “Relación de las Cosas de Yucatán” contains his so-called “a,b,c” or alphabet. Listed with the letter “x” is a down-pointing hand. In the past this hand sign was compared to the T710 “scattering hand”, here listed as **CHOK**. It was Victoria Bricker who proposed *xaw*, following a suggestion by Eleuterio Poot Yah who based his suggestion on the opening consonant “x” and the meaning of the Yucatec Maya verb root *xaw* “to mix (with the fingers), rummage, stir, and sift” (Bricker 1986: 138-139). Although a Classic Maya cognate sign has not been identified yet, this sign may have been a legitimate part of the Late Postclassic hieroglyphic sign inventory. Effectively, at present this is probably the latest Maya hieroglyphic hand sign recorded, illustrated by a Spanish scribe (copyist). It is not clear what the original meaning of the sign was, other than to render the sixteenth century Spanish sound /x/. With insufficient detail available, it is not clear which hand was depicted.

T1028d



BW scan by the author

T1028d occurs only once in the whole corpus of Maya hieroglyphic texts (Dresden Codex 21B1). The main sign is a female head into which a human hand is infix. The thumb of the hand is on the left, while thumb and fingers are raised. While the female head may represent the value *ix(ik)* “lady” (the prefix may direct to another value), the value of the infix human hand at present is unknown. The manner in which the fingernails are shown indicates that the right hand has been depicted.

Final Remarks

In Classic Maya hieroglyphic writing a large variety of signs is used depicting or including the human hand. This essay discussed forty-five such hieroglyphic signs.

In an earlier essay (cf. Boot 2003a), discussing left- and right-handedness in Classic Maya writing-painting contexts, handedness was defined as the hand with which one manipulated a writing or painting implement. In the appendix to that essay a table was included that contained sixty ceramic vessels that illustrate writers and/or painters. A total of forty-two scribes or painters held a writing or painting implement in their hands; eight of them were left-handed (19%), thirty-four of them were right-handed (81%). Although the census cannot be considered exhaustive as it only was concerned with painted, incised or carved ceramics illustrating scribes or painters in the Kerr Archive, these percentages are comparable to percentages of left- and right-handedness in the present.

The following table shows the number and percentage of hieroglyphic signs as included in this essay that depict the left hand, right hand, both hands (neutral), or unknown:

Left Hand	Right Hand	Both Hands	Unknown	Total
10 22.2%	12 26.7%	17 37.8%	6 13.3%	45 100%

This particular distribution shows that the Classic Maya did not have a high right hand bias in regard to the inclusion of the human hand as a glyptic sign. Hand use (and possibly hand preference) in this particular context only seems to have a small right hand bias (26.7%) compared to left hand signs (22.2%) (the difference is only two signs); signs that employ both hands (neutral) have a higher preference (37.8%), while a small percentage of signs remains unknown (13.3%). It is probable that artistic and aesthetic reasons may have been of influence in the selection of a certain hand; this would account for the high percentage of hand signs that depict both the left and the right hand for the same syllabic or logographic value. It should be noted that additional examples may change the present distribution.

The human hand is a versatile instrument and many different gestures of the hand are included in the hieroglyphic signs as discussed above. There is actually no other writing system invented by man that includes so many variations of the human hand. These different gestures resulted in different syllabic or logographic meanings, but there are also several very similar hand gestures that obtained different values (note the “flat hands” and “raised hands”). Different infixes contribute to identify the different values (note the signs that represent “fists”). A table of twenty-five signs in five categories follows here:

Table: Similar Hands Signs, Different Values

“Fists”	“Flat Hands”	“Raised Hands”	“C-Shaped Hands”	“Hands Holding ...”
Up			Up	Down
				
cha	K'AL	K'AB' (?)	chi	K'AB'A'
				
JOM (?)	mi	mi	NAB'	TZ'IB' (?)
				
k'a	NAB'	PAS (?)	PUK	“atlatl”
				
k'o	“flat hand”	“hi-hand”		“stone”
				
OCH	“hand-in-ballgame”	T1028d		“torch”
				
yo	“hand-touching-earth”			

Some of these hieroglyphic signs even may have evolved from an intricate and complex elite gestural language of which many of the hand signs, as contained in iconographic narratives on Classic Maya ceramics, recently were illustrated and discussed (cf. Ancona-Ha, Pérez de Lara, and Van Stone 2000) (note 10). At present the author is cataloging hand gestures on both ceramics and monuments.

To identify the origin of the syllabic or logographic value, some of the hieroglyphic signs that depict or include the human hand have been related, albeit tentatively, with specific linguistic items that define hand gestures or hand actions in a variety of Mayan languages. A process of acrophony, in which the closing consonant of a CVC item is dropped to derive a CV syllable, may have been responsible for certain syllabic values. Several possibilities were discussed, such as T668 **cha** from *chach*, T220c-d/T711 **ke** from *keh*, T669 **k'a** from *k'ab'*, T710var **ye** from *ye'el*, and T221b/T673 **yo** from *yotz'* or *yom*. Additionally a tentative decipherment was proposed of the “hand-touching-earth” birth metaphor at Palenque, based on the similarity of one of the hand signs for **k'o** with the “hand-touching-earth” sign. Possibly in Classic Maya

this metaphor was *uk'oj(ol)kab'* or *u-k'oj(ol)-kab'* “it is the touch of the earth”. Another tentative decipherment was presented of a sequence of hieroglyphic signs that included a flat hand that may refer to a possible score in the Maya ballgame as *la[h] (k'in) k'ab'* “palms given by the hand”.

There are some additional rare and unique (composite) signs that include the human hand (for instance T1028a and T1028b), but their distribution is too limited to provide a solid reading of the sign in question or to identify conclusively the kind of hand included in the sign. If more examples of these rare and unique (composite) signs become available, they will be included in a future version of this essay (note 11).

Further research may identify yet other hieroglyphic signs that include the human hand and thus may extend the present census as well as change the above table and its calculated distribution. If the so-called “head-variants” of many hieroglyphic signs are not taken into account, the human hand is the most diversely represented body part in Classic Maya writing.

Notes

1) The illustrations used in this essay are derived from a wide range of publications, most listed below. As this is not a catalog, most of the examples are generic examples without an identification of provenience. I have tried to identify the artists responsible for the drawings, but in some cases this was not possible (as the publications used did not identify the artist or in an introduction a list of artists was presented without separate credit to individual artists). I do not pretend that these are all the hand signs; note for instance Copan Stela P that seems to contain additional (singular) examples of hand signs of unknown value (although some are simply variants of signs discussed in this essay).

2) In this essay the following phonemic orthography will be employed: ', a, b', ch, ch', e, h, j, i, k, k', l, m, n, o, p, p', s, t, t', tz, tz', u, w, x, and y. In this orthography the /h/ represents a glottal aspirate or glottal voiced fricative (/h/ as in English “house”), while /j/ represents a velar aspirate or velar voiced fricative (/j/ as in Spanish “joya”). Tentative complex vowel reconstructions (-VV-, -V'V/-V'-, and -VWh-) follow the proposal of Houston, Stuart, and Robertson (1998), recently amended and extended by Lacadena and Wichmann (proposal summary in Kettunen and Helmke 2002). It has to be noted that recent epigraphic and linguistic research by linguists Terry Kaufman and John Justeson shows that disharmonic spellings do not contribute information on the quality of presumed complex vowel in the CVC root, but are a reflex of the most common -Vi suffix found with that particular noun or adjective (summarized by Barbara MacLeod, e-mail to the author, September 22, 2003). All reconstructions (i.e. transliterations) in this essay are but approximations of the original intended Classic Maya linguistic items (cf. Boot 2002: 6-7).

Spellings that do not conform to this tentative orthography are placed between double pointed or angular brackets. The occasional abbreviations CVC, CV, and V contain C for “consonant” and V for “vowel”.

3) In linguistic studies all reconstructed items are preceded by an asterisk (*).

4) Kaminaljuyu Stela 10 is generally dated to circa 400-200 B.C. In analyzing the two text panels as incised onto the monument, the style of the hieroglyphic signs clearly deviates in its outer appearance from the few surviving inscriptions at Kaminaljuyu (including the large glyphs on Stela 10 itself). Although difficult to prove at this moment, these text panels may have been added at a later date. If correct, it would explain the visual closeness of the signs for **chi** and **ye** with later examples, as well as the closeness between the SERPENT sign in the possible day sign **chi/j/chan* and the

ophidian celamorphic variant of the day sign Imix (the “Water Lily Serpent”) on an Early Classic ceramic vessel from Mundo Perdido, Tikal (Kerr No. 5618, column 1; cf. Boot 2003c: 7).

5) The signs infixes to T670 actually may serve as semantic determinatives to distinguish between **CH’AM/K’AM** (T533) on the one side and **YAL** (e.g. T584) on the other. Phonetic complements were additional aids in distinguishing and in the pronunciation of the sign.

6) A quick scan of iconographic narratives on Classic Maya ceramics revealed that the hand in which Chaahk holds his ax depends on which side of the center of the narrative he is depicted. If Chaahk is depicted on the left side, he faces to the right, holding a so-called hand-stone in his left hand while he wields his ax with his right hand (Kerr No. 0521, 1199, 1370, 1609, 1644 [named Yaxha’al Chaahk], 1768, 2207, 2208, 2722 [!], 3450, 4011 [named Yaxha’al Chaahk], 4013, 4385, 4486, 8680). If Chaahk is depicted on the right side, he faces left, holding a so-called hand-stone in his right hand while wielding the ax with his left hand (Kerr No. 1003, 1152 [named Yaxha’al Chaahk], 1201, 1223, 1250, 1336, 1815 [named Yaxha’al Chaahk], 2068, 2213, 2772 [!], 4056, 8608). In these narratives (nearly all variations of one specific theme), aesthetic reasons seem to dictate in which hand Chaahk wields his ax (but note Kerr No. 0759 that illustrates a narrative of two anthropomorphic figures each wielding an ax with the left hand; neither the positioning of the [upper] body nor the position of the figure within the narrative has effect on the hand holding the ax). In other narratives it simply depends on which side he faces toward; on Kerr No. 0518 he faces left, so Chaahk wields his ax with his left hand. The same is true in regard to Kerr No. 1197. This is also the case with the hieroglyphic sign **KALOM?**; the portrait faces left, thus the left hand wields the ax. The few possible cases in which the right hand might be included are possibly just artistic variations that deviate from the “mainstream”.

7) It might be of interest to note that in Colonial Yucatec Maya *noh* means “right (hand)” (compare to Dienhart 1989: 524), while *noʃ'ojch* is glossed as “(lower) jaw; beard and jaw together” and *noch b'ak* as “jaw bone” (Barrera Vásquez et al. 1980: 572). Although these linguistic items may explain the occurrence of the right hand (*noh*) on the lower jaw (*noʃ'ojch*), they do not contribute to an explanation of the value **mi** of the sign itself (nor the occasional inclusion of the left hand). The hand on the lower jaw of the avian celamorphic variants of the calendrical periods “*piktun*”, *pik*, *winikhaab'*, and *haab'* may have a similar origin (but note the use of both the left and right hand in the avian celamorphic variant of *pik*).

8) The Colonial Yucatec Maya root *k'oh-* has an intermediate *-h-* instead of a *-j-*; while early dictionaries make a distinction between the two as an opening consonant («*h rezia*» vs. «*h simple*», cf. Ciudad Real 1984: fol. 170r-202v, fol. 202v-209v), they do not make such a distinction between the two as an intermediate consonant. A spelling **k'o-jo** on an unprovenanced panel and at Copan indicates that in the Classic period the root was *k'oj-*. For an in-depth study on the probable /h-j/ distinction in Classic Maya, see Grube n.d.

9) Although tentative, the raptorial bird that substitutes for the regular main signs of the periods “*piktun*”, *pik*, and *winikhaab'* may be the Great Horned Owl (*Bubo virginianus mayensis*), in Classic Maya known as *huxlajuun chan(al)* *kuy* “Thirteen Heavenly Owl” (cf. Boot 2003b). Its characteristic “ears” are visible in several of the avian celamorphic variants of the period *pik*. Additionally it should be noted that there are two examples in which the *pik* main sign is substituted by T561var SKY or *chan*, an important element of the bird’s indigenous name (it would actually explain the usage of T561var SKY for the *pik* or “*b'ak'tuun*” period).

10) During the Classic period there may have been an intricate and complex gestural language that was used by the elite to manually communicate among themselves or with the divine in specific social, economic, and religious contexts in which normal speech or vocal communication was difficult or forbidden (note sign languages in Northern Australia) or to stress and articulate normal speech or vocal communication (note the situational and emotional use of Italian hand signs). Such a codified

gestural or manual language could even transcend the related but slightly different languages normally spoken by the geographically diverse Maya elites (compare to the gestural language developed among several Plains Indian tribes in native North America, each speaking either related or even different languages). Signs from this gestural language may have entered Classic Maya writing, as these manual signs were common referents among the elite throughout the Maya area (on the origin of gestural and vocalized or spoken language, see Corballis 1999). It was Wurth who at one time suggested a link between gesture and pictorial or pictographic writing in his discussion of the development of writing in human history; written signs, as he suggested, were often the fixation of manual gestures (cf. Vygotsky 1978 [1930]). Many of the Classic Maya hieroglyphic signs that depict or incorporate the human hand may be such fixations of manual gestures with clear linguistic referents. Important Maya gestural signs have survived into the present, for instance in the Achi community of Cubulco, Baja Verapaz, Guatemala. Here specialized manual signs are (were?) used in the context of the moon calendar (cf. Neuenschwander 1981).

When compared to other writing systems Classic Maya writing contains the largest collection of hand signs in Mesoamerica. For example, the earlier neighboring so-called La Mojarra or Tuxtla script only seems to contain four recognizable but conventionalized hand signs (cf. Kaufman and Justeson 2001; drawings by George Stuart):



147 pu



149+42 ne



149+50 LOSE/TOKOY



150 SPRINKLE/WIK

In Zapotec writing there are at least four or five different and very naturalistic hand signs (drawings by Mark Orsen):



“hand showing palm”



“double hands”



“hand taking shell(?)”



“hand holding rattle/atlatl”

In the rest of the world not many writing systems contain the human hand in such a diverse set of gestures and assigned values as Classic Maya writing. For example, in early Chinese writing (on Shang period bronze vessels, circa 14th century B.C.) the hand already is very abstract, and in different signs the human hand (e.g. ← → “hand and arrow”) “looks” the same. In Egyptian hieroglyphic writing there are five highly conventionalized signs that depict the human hand (e.g. ⌂ /d/, “/d/ as in dog”), while seventeen or eighteen signs depict a human arm with a hand (e.g. ⌂ /a/, “/a/ as in car”; about six or seven signs are derived from this particular sign). In Indus or Harappan writing there do not seem to be any signs that represented the human hand (although there are signs that depict a headless human body of which one arm holds a bow-and-arrow, a rope, or a [fishing] net).

In the case of cuneiform writing the following three signs are of importance here (in cuneiform writing signs were abstracted and conventionalized, including rotation, in a simple or complex wedge design probably in one language, after which they were adapted by other languages [sometimes unrelated to the original language that developed the signs], either with the original values attached or assigned with [additional] new values and meaning):



“pictographic form”



“early cuneiform”



“Late Assyrian form”

/shu/

“hand”

(Sumerian value + meaning)

(Proto-)Sinaitic writing (ca. 1700-1300 B.C.) contains one sign referred to as “palm of hand” (/^י/kup/ or /kappu/), probably derived from a hieroglyphic hand sign (of a different value) that was part of an earlier ca. thirty-sign Egyptian “alphabet” devised ca. 2000 B.C. The original Egyptian signs received new western Semitic values, generally based on what the original sign depicted. The Sinaitic alphabet was adapted by other western Semitic writing systems (ca. 1300-900 B.C.) and evolved through a process of abstract conventionalization (including rotation) to Phoenician /K/ (ca. 1050-300 B.C.), Greek /kappa/ (ca. 800 B.C.-present), and eventually to our Latin /k/ (ca. 700 B.C.-present).

11) There is at least one additional “flat hand” sign. It occurs in the Dresden Codex. There are two collocations that may shed light on its value:



CDR-36C2-A2



CDR-38C1-A2

The first collocation can be transcribed **b'u-lo-T77-nn**, the second collocation can be transcribed **b'u-lo-FLAT.HAND-b'e?**. The context seems to be identical, Chaahk standing in a cenote in water, while *b'ul* in Colonial Yucatec Maya means “to submerge in water” (Barrera Vásquez et al. 1980: 69); if so, the T77-nn and the FLAT.HAND-b'e? sign should lead to the same linguistic item. The unknown long-beaked or snouted animal sign on page 36C2-A2 may be the codical variant of a Classic Maya bird-like sign, tentatively identified as **b'e** (note spellings *ye-BIRD-ta* for *y-eb'eht(?)* “[he is] the messenger [of ...]”, for instance in Captions 1 and 3, Room 1, Structure 1, Bonampak). If the footprint as **b'e?** is the correct reading, it might function in part as a phonetic complement to the “flat hand” sign as **K'AB'-b'e?** (for *k'ab'-e'*, hand/arm-TOPIC.MARKER). If correct, T77 (and its variants) should read **k'a** (or **K'A'**) to provide the sequence **k'a/K'A'-b'e** for *k'ab'-e'* to mirror the sequence **K'AB'-b'e?** for *k'ab'-e'*. A Chama style ceramic vessel, cataloged as Kerr No. 6290, has the vessel type collocation seemingly written as **yu-FLAT.HAND-b'i**:



This example may strengthen the **K'AB'** value of this particular “flat hand” and militate against the recent proposal of the syllabic value **k'i** for the T77 substitution set. It has to be noted that Justin Kerr informed me in March 2001 that this vessel may have been repainted, as other vessels in this particular collection (the vessel is part of the Kislak collection) seem to have repainted or retouched, although it was not known to Kerr if the hieroglyphic text suffered this fate.

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