

## Principles of the Oldest Egyptian Writing

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"The developers of writing there were surely more intelligent than the generality of their modern interpreters, and their enterprise was centrally important to the elites of which they were members."<sup>1</sup>

### Summary

Since the discovery and publication of tomb U-j, several studies have appeared on different topics of the Late Predynastic. Among them, an important group has focussed on the early writing and the possible significance of several signs. However, only a small number of scholars have published studies about the morphology and other linguistic features of the earliest Egyptian writing. The majority of them have insisted on the existence of the determinatives in that early age. In contrast with them, the main aim of the present paper is to determine the use of only two types of signs: logograms and phonograms. Our thesis will be supported by the more developed character of the determinatives, which are needed in a more complex stage of writing. That one only appeared with a major development of the phonograms (coincident with the reign of Iry Hor and Horus Ka), which can provoke several cases of homophony. In that context, the determinatives were invented to differentiate words.

### Introduction

Until the discovery and excavation of tomb U-j, there were only scarce pieces of evidence that pointed to the existence of a hieroglyphic system of writing prior to the latest kings of the Predynastic Period (Iry Hor and Horus Ka/Sekhen, 3250 BC).<sup>2</sup> That situation did not permit a proper analysis of the origin of the hieroglyphic system of writing. The general impression until 1980s was that Egyptian hieroglyphs appeared just before the First Dynasty and developed after the Unification – considered as a single event – during the reign of the first king of the First Dynasty, Narmer (around 3200 BC). Previously, different diffusionist theories on the origin of the State in Egypt appeared from the beginning of the 20<sup>th</sup> century and conditioned other aspects related with this period; among others, the origin of writing. Thus, many scholars hold that decisive principles of Egyptian writing came from Mesopotamia (imitating its principles or inspired by them), because of some similarities<sup>3</sup> and the earlier date of the latter.

However, the enormous quantity of writing material found at tomb U-j<sup>4</sup> together with the Gebel Tjauti tableau<sup>5</sup> opened new ways in the study of the origin of writing

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1 Baines (2004: 183).





2 For the chronology, cf. Hassan, Jiménez-Serrano & Tassie (2006).

3 Mainly, the coincident use of logographs and phonograms. However, phonograms in Egyptian can be mono or pluriconsonantal, while Mesopotamians are syllabic. Recently, Curto (2003) has again insisted on the "Mesopotamian Connection".

4 The writing material was published by Dreyer (1998).

in Egypt, mainly because it pushed back the appearance of writing in Egypt circa 100 years. Then, the origin of writing in Egypt coincided chronologically with Mesopotamian, which supports definitively the argument that the Egyptian writing had a local origin.<sup>6</sup> What cannot be confirmed is the place where it was created, although its rapid utilisation by the Abydenne elite points to that area or neighbouring territories.

### Forerunners of hieroglyphs

The oldest symbols that might be considered forerunners of hieroglyphs appeared drawn on potteries that might be dated from the 5<sup>th</sup> millennium BC. Among others, it is possible to recognise the later signs  (R8),<sup>7</sup>  (N25),<sup>8</sup>  (S3)<sup>9</sup> or  (R23).<sup>10</sup> However, as P. Vernus<sup>11</sup> pointed out, those must not be considered hieroglyphs because they probably had a symbolic meaning rather than a linguistic one. Even more, their significance might probably have been different to that seen at the beginning of the Dynastic period.

According to Vernus' point of view, to consider a figure as a linguistic sign three conditions should be observed:<sup>12</sup>

- a) It must be a known hieroglyphic sign or appear together with a sign that might be recognised as a sign of writing.
- b) It must follow a conventional system of representation
- c) It must have other parallels, obviously with sense.

Two other indications can be also added to the latter: a similar writing context (material or surface) and coincidences in the message with later inscriptions.

Therefore, until the present moment, there is no secure piece of writing evidence earlier than the period of Naqada IIIA1. This result does not mean that there is not any single piece of evidence that might be considered a precedent or an isolated example of writing, especially those dated to the precedent period (Naqada IID).<sup>13</sup> However, those might be interpreted with caution, mainly because of their grammatical isolation.<sup>14</sup>

Without any doubt some of the earliest examples might well be considered forerunners of hieroglyphs, because they represent the same thing. Moreover, it must be

5 A very interesting graffito, contemporary to tomb U-j, cf. the analysis by Friedman & Hendrickx with contributions by Darnell (2002: 10-19).

6 Among many other authors, cf. Vernus (2001: 28-29).

7 Petrie (1920: pl. XIV, n° 46).


8 Petrie (1920: pl. XXI, n° 46 K).

9 Wainwright (1923: pl. XX n° 3).

10 Randall-McIver *et alii* (1902: pl 8 n° 2).

11 (1993: 79-85); also Kahl (2001a: 124).

12 Vernus (1993: 81), with an example. Cf. also a later work of the same author, in which more arguments are developed, Vernus (2001).

13 Cf. Dreyer (1998: 87) mentioned three examples that might well be considered hieroglyphs, not only forerunners. One of them is very similar to two other ink inscriptions – found in the Abydenne tombs U-134 and U-547 – that are similar to the sign  *grh* (see below for the discussion) and dated to transitional period of Naqada IID-III A. Cf. also Kahl's (2001a: 123) discussion on some seal-impressions; also, Hartung (1998) and Vernus (2001: 16-17).

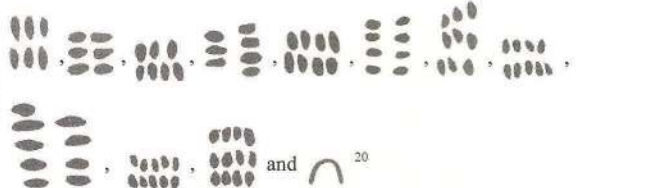

14 In this sense, Vernus (2001: 16-17).

remarked that it is possible to see a certain degree of conventionalisation of the design of certain signs. In other words, the design of some hieroglyphs had not changed basically since the Predynastic period. But, this assertion does not mean that those signs might be used with their (later) orthographic value, but their ritualistic or religious one. Thus, it is likely that the people familiarised with the representation of those signs were related – in some way – with the development of writing.

In this point, we believe that it is necessary to remember the main difference between an artistic drawing and a symbol; the latter is represented more simplistically than the former, because the most important thing is to be recognised and not the details. Due to this, symbols and pictograms are represented very schematically.<sup>15</sup>

The symbols found on different surfaces and items in the tomb U-j have been considered as writing without any doubt by all scholars: it must not be considered as pictographic writing because it combines logograms with phonograms; a combination of both allows a reading, not an interpretation. Even more, the presence of hieroglyphics used in later periods has permitted us to be sure that this writing was related with the Egyptian hieroglyphic system. However, different discrepancies have arisen on the meaning of them. In the present paper, some examples will be discussed below.

But, first, it is necessary to individualise most of the signs found in tomb U-j.<sup>16</sup> We agree with Dreyer and Vernus,<sup>17</sup> when they consider that signs found on the pots and on the labels were part of the same system of writing:

Numbers: <sup>18</sup> units from 6 to 12 <sup>19</sup>	
and hundreds	

15 Many authors cf. for example Gelb (1952 [1965]: chapter 3).



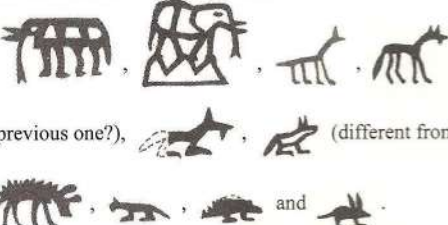
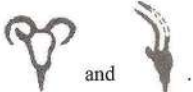
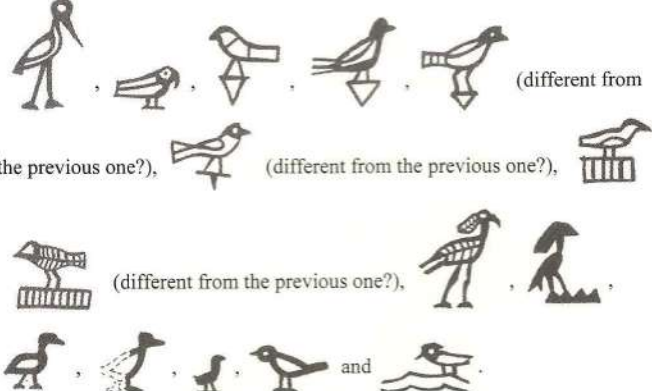


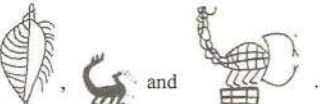
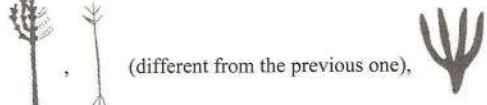
16 Individualised and explained by Dreyer (1998: 183-187). This author individualised each sign, although we have grouped some of them in a single one; for example, many of the signs that represent an elephant are considered just one sign. The reader will also notice that some signs are really compounded by two different signs; in those cases, the reason is because they represent just one word (in most cases a toponym). Thus, they must be considered just a single sign.



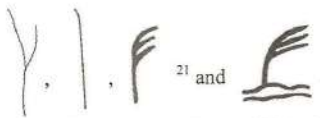

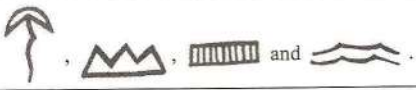
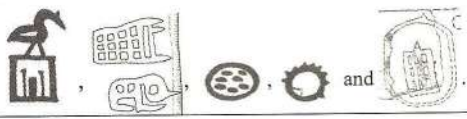
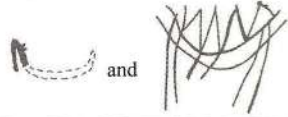


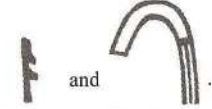
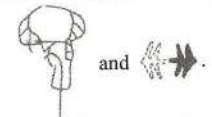
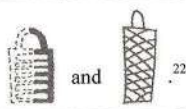
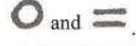
17 Vernus (2001: 17-19).

18 According to Dreyer (1998: 139-140) referred to square cubits of surface in textiles.

19 In the Dynastic times, the writing of numerals was based on the decimal system; cf. for example Allen (2000: 97). However, the inscriptions of two labels – Dreyer (1998: 140, Abb. 75, nos. 37, 38) – bear ten and twelve vertical strokes, probably indicating a different notational system. These cases might be explained because the numeral system of writing is not fully developed, indicating the early stage (more archaic) of the notational system.

20 Note that this sign is very similar to 𓆑V19, used to write *mdt* “stable”, cf. Gardiner (1957: 524) and also Dreyer (1998: 86).

Man	
Parts of the human body	
Mammals	 <p>(different from the previous one?), (different from the previous one?),</p>
Parts of mammals	
Birds	 <p>(different from the previous one?), (different from the previous one?), (different from the previous one?),</p>
Reptiles, etc.	
Fish	
Invertebrates	
Trees and plants	 <p>(different from the previous one), (different from the</p>

	<p>previous one?),  (different from the previous one?), </p> <p> <sup>21</sup> and </p>
Sky, earth, water	
Buildings and towns	
Ships	
Domestic furniture	
Dress	
Warfare	
Sacred emblems	
Building or Basket	 <sup>22</sup>
Unclassified	

21 Interpreted by Dreyer (1998: 47) as "Wedel"; but more probable, Vernus' (2001: 19) interpretation.

22 Both signs are considered the same by Vernus (2001: 18). This author proposes that this sign might be identified with  $\Delta$  (Y6).

In order to read and understand properly the short inscriptions found in tomb U-j, it is completely necessary to know the principles of this early writing and their possible significance. Although some meanings will be offered, the main aim of this paper is to focus on the principles.

As far as we know, after the discovery of tomb U-j, apart from Dreyer's monograph<sup>23</sup>, there has been only one deep study of the writing material carried out by one scholar, J. Kahl.<sup>24</sup> The absence of different studies probably lies in the difficulties that – at first glance – emerge from the analysis of the signs themselves, because some of them cannot be certainly identified. However, a deeper study shows that many other signs might be clearly recognised. From the latter examples, we will propose the main principles of the earliest Egyptian writing, in some cases far away from Kahl's thesis. But first, it is necessary to mention some basic concepts and to summarise the previous work.

### Searching for logograms and phonograms in the material evidence of tomb U-j

As is widely known, Egyptologists classify the hieroglyphs in three different types depending on their function in a word: phonograms, ideograms (also called logograms<sup>25</sup>) and determinatives. Those types can be distinguished in every period of ancient Egyptian history, until the last recorded inscription, written in demotic during the 5<sup>th</sup> century AD. Jochem Kahl<sup>26</sup> holds that the three types of signs (phonograms, logograms and determinatives) can be documented in the writing material from tomb U-j. However, this is not clear at all. As will be seen below, there is no problem with the identification of phonograms and logograms during the Naqada IIIA1 period, but the existence of determinatives might be questioned.<sup>27</sup>

#### a) Logograms

Kahl<sup>28</sup> clearly classified determinatives and logograms as semograms. The main difference between them is their association with other signs: logograms do not need the presence of phonograms – although might be used as phonetic complements (see below), while determinatives do always accompany other signs (phonograms or logograms). Thus, determinatives can be considered a sign functionally more sophisticated than logograms, because the former would be used in a more advanced level of writing. Effectively, logograms are just icons with a full signification and a fixed phonetic value, while determinatives do not have any phonetic value and act to specify the meaning of a word. That means that the written lexicon is wider and needs to differ-

23 Dreyer (1998).

24 Other studies, as Baines (2004), have not focussed on the specific material evidence and have dealt general aspects. Vernus (2001) corrected some of Dreyer's interpretations, but the former basically follows Dreyer's thesis.

25 On the use of the term 'logogram' instead of 'ideogram' by scholars, cf. Gelb (1952 [1965]: 106-107). Although Kahl (2001a) prefers 'logogram', the term 'ideogram' is widely extended in the Egyptological circle as is possible to observe in the recent work done by Allen (2000: 3).

26 Kahl (1991: 116-121).

27 Briefly commented by Baines (2004: 179).

28 Kahl (1994: 52).

entiate similar written words. Thus, logograms are considered by scholars the earliest step of proper writing in the development of a more complex system.

In the case of the written material evidence found at tomb U-j, the presence of logograms can be clearly detected in different inscriptions. As we will see below, the origin of many of them was probably early totems or fetishes of different territories and gods. This assertion is based on practical motives derived from the administrative use of early writing.<sup>29</sup> Then, it is likely that a major part of the first signs referred to totems or fetishes already known of different territories or communities.<sup>30</sup> The main difference is that from the Naqada IIIA1 they can fully be charged with orthographic values.

The function of totems or fetishes was strictly reduced to the representation of any territory, god(dess) or supernatural spirit. Then, they did not have any orthographic value, just iconic. As the concept of any god or any territory is the result of abstract thinking – as it is well known – those are the most difficult to represent. Thus, the easiest way of representing a territory or god(dess) would be using an object that would be known by a majority of people and then easily understandable. Obviously, the most visible presence of a territory or god(dess) was his (her) totem. As seen, different totems were used to represent communities or gods during the Predynastic period (*cf. supra*). In some cases, it is impossible to relate them to any particular area, god or goddess; however, there are some examples that can be clearly connected. In the next pages we will see some of them.

One of the clearest is the goddess *B3t*. The interpretation can be established from different representations of her fetish (mainly those dated to the Old Kingdom), which represented a human face with bovine ears and horns.<sup>31</sup> In several pots found in tomb U-j and the Gebel Tjauti inscription n° 1, similar depictions of that fetish appeared<sup>32</sup> (Figure 1). Differences between the Old Kingdom and the U-j representations are very small and might be seen as an evolution of the design of the fetish itself.<sup>33</sup> In this sense, the predynastic depictions present a feather drawn between the horns. That ornamental element is missing in the majority of the later representations.<sup>34</sup> However,

29 Although new necessities arose in the new Upper Egyptian State, among others a new instrument that helped in the administration, we do not support just a unique origin of writing, mainly because it will later have – for example – religious connotations. In this case, we want to call attention to the existing material evidence from U-j, whose most probable origin is the administration of the royal funerary goods.

30 Some of them might be seen in the seal-impressions found in the cemetery U and dated to the Naqada III period, *cf. Hartung* (1998).

31 *Cf. Fischer* (1962: 7)

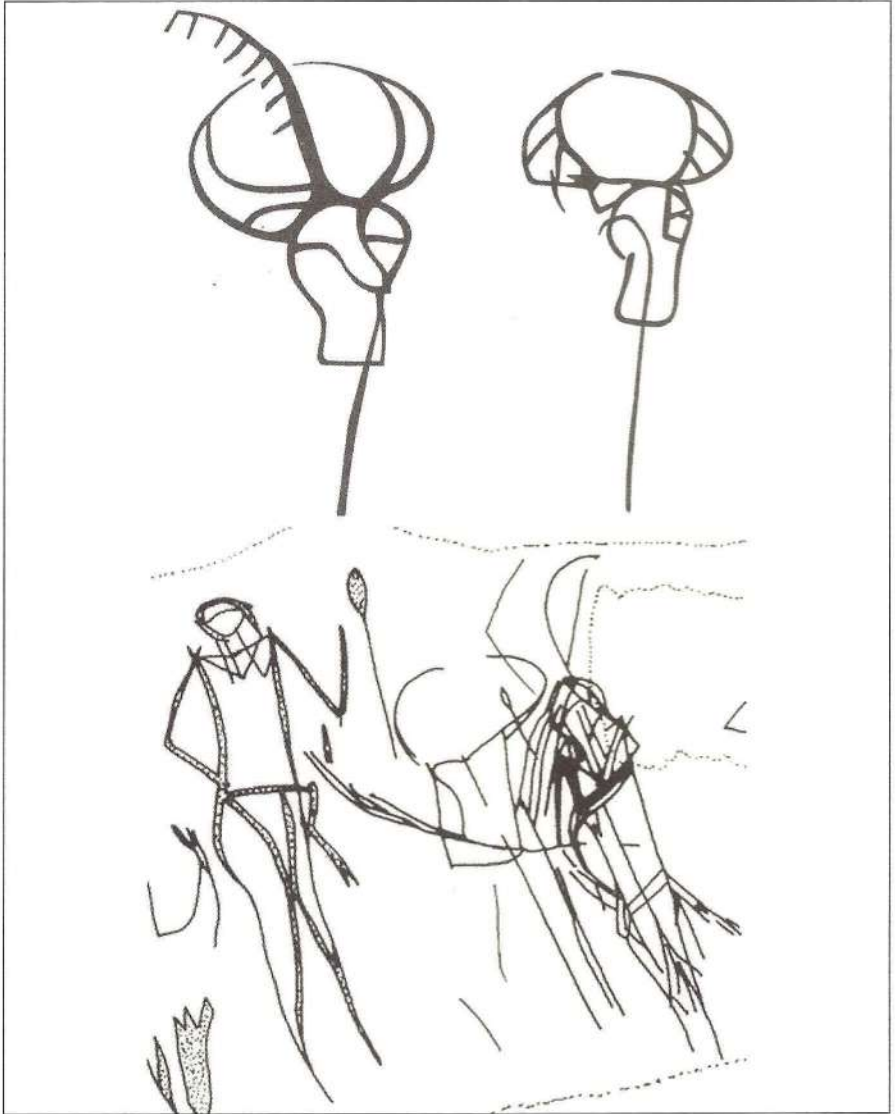
32 Dreyer (1998: 65-68, Abb. 45-46 & 48), who interpreted (pp. 85-86) as a name of a king. The Gebel Tjauti inscription was published by Darnell (2002: 10-19, pls. 9-11), and studied together with Friedman and Hendrickx.

33 The most visible is the case of the horns; thus, their design “become a stylized pair of long ropelike antennae terminating in graceful spirals”, *Fischer* (1962: 12). In this sense, it would be interesting to know if the sign  $\overline{\text{F45}}$  (F45), used as ideogram or determinative in different words such as “vulva” or “cow”, was taken in the iconographic evolution of Hathor and Bat.

34 There is a well-known example of the goddess Bat with a feather between the horns; it dates to the 4<sup>th</sup> Dynasty, *cf. Reisner* (1931: pl. 44). In this context, it is necessary to remember that feather between horns is a common ornament, as is possible to see in a parallel of the reign of Djer, specifically on a label, *cf. Petrie* (1901: pl. V n° 1) which, according to *Godron* (1958: 146-148), can be identified with the goddess *Šh3t-Hr*.

similarities between both fetishes make it evident that both represented the same thing.

Figure 1: (Top) Reconstruction of the original representations of the goddess Bat found in tomb U-j, after Dreyer (1998: Abb. 45), together with (bottom) a scene of sacrifice presided by the same goddess, after Darnell (2002: pl. 11)




The existence of that goddess, whose name probably derives from the feminine form of the word *b3* “soul”,<sup>35</sup> is attested since the Naqada IID period.<sup>36</sup> Probably, her fetish

<sup>35</sup> Fischer (1962: 7).



and other representations<sup>37</sup> resumed all her major divine features: she was a cosmic divinity (she was represented with five stars) and at the same time was a bovine goddess, probably with similar attributes to Hathor.<sup>38</sup> Perhaps that dual character was reflected in the Pyramid Texts (§ 1096b): “Merenre is Bat, (with) her two faces.” Her importance at the beginning of the Egyptian State is evident since her fetish was used to represent the 7<sup>th</sup> Upper Egyptian nome, where Bat had her cult place, Hu.

Another example of logograms might be seen in ten labels that represent the *pr-wr*<sup>39</sup> (Figure 2). Although its later function will be as determinative,<sup>40</sup> in this early period it works as logogram. Ten labels from the U-j might be read *pr-wr*, the ceremonial area erected at Hierakonpolis.<sup>41</sup> In all of these representations, the logogram  is accompanied by the figure of an animal. Kahl<sup>42</sup> interpreted the latter as a representation of the god Seth. However, Seth’s temple was never called the *pr wr*.<sup>43</sup> Thus, we partially follow Dreyer’s interpretation;<sup>44</sup> he saw a kneeling elephant. If so, it would be possible to find a reading for that sign. In this sense, it is well known that, in the dynastic period, the sign of the elephant appears in words read as *3bw* “elephant, Elephantine”.<sup>45</sup> Then it would be possible that the elephant would be:

- A reference to a product donated from the *pr-wr*, specifically ivory of elephant. Then, the labels would say: *pr-wr 3bw*<sup>46</sup> “(From) the *pr-wr*, ivory”.
- A representation of a physical element that was part of the sacred area at that time. There are several examples dated to the Early Dynastic in which similar buildings appear together with statues of lions.<sup>47</sup> In this case, the *pr wr* might also refer to the house of the “great”, in this case describing the elephant.
- A phonetic complement read as *wr* “great”<sup>48</sup> and later lost.

36 Hartung (1998: 200-202) interpreted the figure as Hathor. However, after the parallel published by Arkell (1944, pl. 8-9), it is evident that it was a representation of the goddess Bat and not Hathor, cf. Fischer (1962: 11) and Hendrickx (2002: 310, Appendix H, n° 7).

37 Referenced by Hendrickx (2002: 310, Appendix H), plus the Gebel Tjauti Tableau –Darnell (2002: pl. 11) and a sherd found at Hierakonpolis –Hendrickx & Friedman (2003: 97-100).


38 In Fischer’s words (1962: 12): “I suspect that we have to do with a common substratum of ideas which lent the two goddesses [Bat and Hathor] a somewhat similar character, but do not believe that the similarity necessarily brought them together until many centuries had elapsed.”

39 Dreyer (1998: Abb. 77, n° 61-69 & X185), who interpreted the elephant depicted on these labels as the mention of a supposed king Elephant. However, Kahl (2003: 123, 125) recognised the building as the *pr-wr*.

40 Cf. Gardiner (1957: 494)


41 Based on the multiple representations of that temple, it has been possible to identify the *pr wr* with the archaeological remains found in Locality 29A at Hierakonpolis, cf. Friedman (1996).

42 Kahl (2001b).

43 The unique reference that we know of a temple of the god Seth in Ombos (Naqada) is that of the Pap. Harris I, 59, 4, where the  is mentioned.

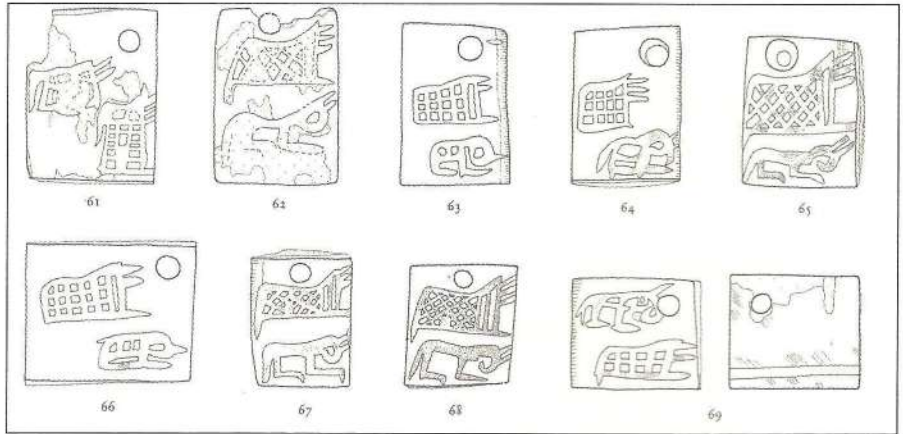
44 Dreyer (1998: 141). However, we do not think that the elephants depicted might be interpreted as the name of a king or a predynastic divinity.



45 *Wb.* I, p. 7 §§ 15, 18-19.

46 On the translation of *3bw* as ‘elephant’ or ‘tusk’, cf. *Wb.* I, 7 §§ 15-17. Cf. for example the determinative of Urk. I, 127 § 2,  *mzw3 3bw* “ivory tusk”.

47 Some examples in Kaplony (1963, III: Abb. 138-143, 144-146, 147-154, 156, 158-163, 167, 171).

48 Although there is no parallel of an elephant read as *wr* in ancient Egyptian, it might be used at the beginning to express this adjective due to obvious reasons. As said in a previous note, the original place of the *pr wr* was Hierakonpolis, where recent excavations have discovered the remains of

Figure 2: The *pr wr* represented on labels from the U-j, after Dreyer (1998: Abb. 77).

More logograms were used in other labels. One of the most common is the jabiru (or stork), which appears together with different signs (Figure 3): with an oryx head (n° 97), with a circle plus two horizontal lines (n° 100-102), with a seat (n° 103-104), with a bush or a tree (n° 105) and with the sign of Min.<sup>49</sup> In one of those, Dreyer<sup>50</sup> read the sign  (G29, the jabiru) as *b3* and  (Q1, the seat) as *st*, concluding that *b3* plus *st* was the toponym *B3st* 'Bubastis'. Although, the first glance it seems that this way of reading works, this system fails when is used to read the rest of the inscriptions which present the jabiru. It is not possible to find more known toponyms that begin with *b3*; even more, although the reading of some of the other signs is doubtful, there is a case that permits a clear reading: jabiru plus the sign of the god Min, then *b3 Mnw*. However, there is no toponym – as far we know – called this. However, if we take *b3* as 'soul',<sup>51</sup> then we read:

- N° 97 would be *b3 M3-ḥd*<sup>52</sup> 'the soul of Mahedje'.<sup>53</sup>
- N° 103-104: *b3 St* 'the soul of Isis'.
- N° 105: *b3 [nb.t] nh.t* 'the soul of [the mistress of] the sycamore'.<sup>54</sup>
- N° 106: *b3 Mnw*<sup>55</sup> 'the soul of Min'.

some elephants in the predynastic elite cemetery (Locality 6). The skeletons are dated to the earliest phases of the Naqada II period, which might indicate a long religious association between the elite of Hierakonpolis and the elephants, cf. Friedman (2004; esp. pp. 162-164), with more references. In this sense, it was previously noted – cf. Jiménez Serrano (2003: 122) – the possible relationship between the original shape of the *pr wr* and the shape of the elephant.

49 Dreyer (1998: Abb. 78, n° 97-106).

50 Dreyer (1998: 139).

51 As was suggested previously, Jiménez Serrano (2004a: 855). In addition, Fischer (1962: 11) affirmed that there was not doubt about the phonetic value of the jabiru as *b3*.

52 Also Kahl (2003: 126).

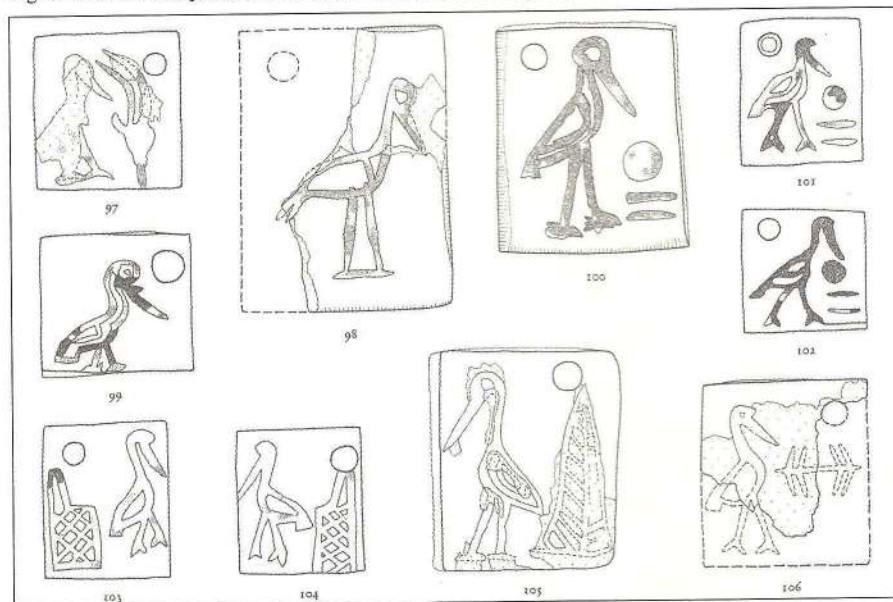
53 On this god and a parallel, cf. Kaplony (1963, I: 483), with references. The oryx might be identified with the later 16<sup>th</sup> Upper Egyptian nome, *Mḥt* (< *m3 ḥd* 'oryx'), probably a totem deified at that age.

54 There is an example of this epithet dated to the Early Dynastic Period, cf. Kaplony (1964: 986). It is impossible to confirm if in that early age this title would refer to the goddess Hathor.

It is impossible to confirm if in that moment the word *b3* might have had the same meaning and use as the later *ntr*. Probably, it was a way to refer to some divinities.<sup>56</sup>









The reading of the other labels (n° 100-102) is problematic. The circle might be read in several ways, it depends only on the sign that we interpret (there are plenty of circle-signs, but it is not sure that it could be one of the later ones).<sup>57</sup> In addition, there are also some problems on how to interpret the two lines below the circles. They might well refer to *ib.wj*, not Lower and Upper Egypt, but the east and the west, as Dreyer<sup>58</sup> has suggested.





Figure 3: Different representations of 'divine souls', after Dreyer (1998: Abb. 78).



All these readings would refer to funerary goods deposited in the royal tomb and whose origin would be the properties of the mentioned gods. It is easy to think that the presence of the written names of those gods would also give a magic protection to the tomb.

- 55 Previously, Dreyer (1998: 145). However, Kahl (2003: 124) read the sign  $\text{☉}$  (R23) as *Hm* 'Letopolis'. However, this toponym appears in all the inscriptions of the Old Kingdom with the determinative of town (cf. *Wb* III, 280 § 15). Here the sign  $\text{☉}$  is interpreted as *Mnw* due to the great importance of the cult of Min in the Late Predynastic period, cf. Kemp (2000). The proximity of Coptos (Min's worship place) to Abydos has to be taken into account; it is easier that a place (Coptos) might depend on a neighbouring town (Abydos) instead of a distant one (Letopolis).
- 56 A discussion of the topic in Hornung (1971: Chapter 2), where he analysed the word *b3w* in this context.
- 57 Dreyer (1998: 145) holds that it might be read *njw*, referring to an area around Abydos.
- 58 Dreyer (1998: 145). If so, a proper reading would be *3htj* ( $\text{☉}$ ). The main problem for the latter interpretation is that there are other examples in which appear three lines instead of two. However, cf. also Gardiner (1957: 488, specifically N23) who said "In Dyn. XI-XII  $\text{☉}$  or  $\text{☉}$  is found as det. of time, probably corrupted from  $\text{☉}$  as used in words for 'to-morrow' and 'yesterday' (...)". More examples in Goedicke (1988: 24b, 6 – Heqanachte, Reisner –).
















Still more logograms are found in other labels. In numbers 130-131 and 133-135<sup>59</sup> (Figure 4) a well known sign was represented:  (G25). Dreyer<sup>60</sup> read this sign as *j3hw* ‘Sonnenglanz, Licht’. Labels n<sup>o</sup>. 133-135 are more complicated than 130 and 131, because the sign  forms a group with other signs. Thus, it appears only with a representation of mountains or together with  (most probable an early reading of  *dw*). Both seem to represent the same and have been translated together with the sign  as ‘Berg der Helligkeit’ (Dreyer), a place that would refer to the East (where the sun rises every day). Kahl,<sup>61</sup> although with a different proposal for the group , which reads *dnjw*,<sup>62</sup> coincides basically with Dreyer’s interpretation. This view would be supported by another two labels that the same group  present, in this occasion accompanied by a sign interpreted by Dreyer as  (N3).<sup>63</sup> This sign is the logogram of the word *grh* ‘night’; thus, the group would be translated as ‘Berg der Dunkelheit’,<sup>64</sup> referring to the place where the sun hides.


As seen above, Dreyer and Kahl do not agree in the reading of the sign . We do not either. From our point of view, the sign  must be read as *3h(t)* ‘horizon’, such as Kahl<sup>65</sup> originally did. Moreover, in the Late Old Kingdom, this word was written as   (cf. *Pyr.* § 585).<sup>66</sup> Thus, the whole text must be read as *Dw 3h(t)* (note the position of *dw* with respect to *3h(t)*) ‘The mountain of the Horizon’. On the location of this toponym, we follow Dreyer’s opinion on an early reference to the East (the place in the horizon where the sun rises). In this sense, this type of reference appears even in Old Egyptian.<sup>67</sup>

59 All of them in Dreyer (1998: Abb. 80).


60 Dreyer (1998: 139, see also 142).

61 Kahl (2001a: 119-121; 2003: 127).

62 Kahl (2001a: 120) holds that “The sign for *3w* is only once written with the mountain (N26 []), but twice with the mountain range (N25 []).” Although *dw* appears written with a different sign, it has to be taken into account that many signs of writing were not always fixed at that moment and it was easy to confuse  for . Probably, there would not be even a difference between those signs then, as it is possible to observe the same confusion even in Snefru’s reign, cf. the king’s domains in Fakhri (1954: pl. LIII, 579) -cf. also Vernus (2001:23)-. In those U-j labels, the sign  would work as a phonetic complement of  (even accepted by Kahl 2001a: 122; also Vernus 2001: 26-27) in order to avoid a confusion in the reading precisely between  and . Thus, the sign  was written before the sign  indicating the right reading. This interpretation is supported even with one example: in label 134, the sign  does not appear, confirming its redundant function. Kahl (*id.*) also sees a stroke in two of the labels that relates with the determinative of the word *dnjw* translated as “mountains, settled higher land at the desert edge and boundary”. However, the material evidence dated to the First Dynasty and read by him in the same way is too weak, because it is a partial representation (cf. *id.* fig. 19.1) and might be another sign (?). Moreover, in the Old Kingdom examples exposed by him there is no representation nor sign  nor ; he just gives a 19<sup>th</sup> Dynasty example (*id.* Fig. 19.6). Thus, we recommend Dreyer’s reading for  as *dw*.

63 Cf. with the hieratic sign , Möller (1909, 1: 29, n<sup>o</sup> 801) and overall Goedicke (1998: 24, 301 – Abusir, Funerary –).

64 Dreyer (1998: 139).

65 Kahl (1994: 523-524), with examples and references – at least – since the beginning of the First Dynasty. See also Helck (1987: 240), who reads the sign as *3h.tj* in .

66 Cf. also Kuentz (1920: 138-139).





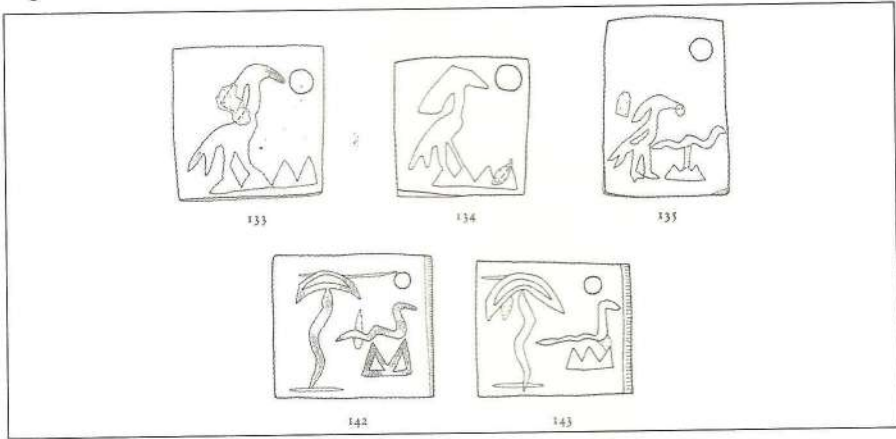

67 Cf. the toponym    *3htjw* (*Urk.* I, 128 § 16; 130 § 1). It is much later when the orthography of *3ht* is changed by the sign  (N27), Kuentz (1920: 140). The similarity of the terms *dw 3ht* and *3 3htjw* does not mean that both toponyms referred to the same place. In our opinion, we believe that both toponyms show how the Egyptians of the 4<sup>th</sup> and 3<sup>rd</sup> millennia build

Figure 4: Labels read as *dw 3ht* and *dw grh*


Other logograms are clearer: the jackal,<sup>68</sup> *Jnpw* or *Hntj-Jmntjw* (labels 71, 75-77), and the emmer (labels 74-77), *bdt* (?).<sup>69</sup>

From everything seen before, it is possible to emphasise some features of the earliest logograms. The origin of the logograms is diverse; the first group is the numerals. The second is formed by some evolved from artistic representations, mainly toponyms or buildings (i. e. *Pr wr*) or sacred objects (i. e. the belemnites, *Mnw*). Although they might be considered symbols, they are genuine signs because in many occasions they are accompanied other signs (phonograms), constructing a strictly written message. For example, labels 75-77 would be read: *bdt Jnpw/Hntj-Jmntjw* "emmer (from) Anubis/Khentimentiu".<sup>70</sup> In the latter example, we can see the third

their mental world in a similar way: the sun ruled the world. Thus, while *t3 3htjw* probably referred to a land situated in the Southeast of Nubia and it was named in this way in accordance with the place where Herkhuf was when he received the pygmy, *dw 3ht* would refer to a specific mountain in the Upper Egyptian Eastern Desert. For a Historicist interpretation, cf. Kuentz (1920: 143-147), who supported the idea that it was a real region placed in the East and South-East of Egypt. However, the *3ht* is a direction that must to be taken from the place of departure, and not a real region. Thus, Herkhuf informed that, if somebody wanted to arrive to the land where the pygmy comes from it is necessary to take the direction South-East, which includes all the Nubian regions (*Urk. I 128 § 14-129 § 1*): *dd.n.k r m3t.k tn wnt jn.n.k dng j33w ntr m t3-3htjw mrt dng jn(n) hmt(j)-ntr Wr-ddd-B3 m Pwnt m rk Jzzj* "You have said in this letter of yours (that) you have brought a pygmy (for) the god's dances from the land of the Horizon-dwellers, like the pygmy (that) the seal-bearer of the god Baur-Djeded brought from Punt in the time of Isesi".

68 Cf. the similarity between the label n° 71 with the 6<sup>th</sup> Dynasty hieratic sign , Möller (1909, 1: 12, n° 128), also Goedicke (1988: 9a, 128 -Sharuna). On the problems of identification of the jackal, cf. Vernus (2001: 23)



69 Cf. the similarity between labels 75-77 with the hieratic signs , Möller (1909, 1: 28, n° 298); more examples in Goedicke (1988: 23, 293 - Saqqara, Gebelein, Funerary -). However, Dreyer (1998: 85, 140) interprets them as 'Baum'.

70 It might refer to the lands of the gods Anubis or Khentimentiu or to the region of the jackal, later known as the 17<sup>th</sup> Upper Egyptian nome.

type of logograms, those that represent daily use objects: the emmer. Together with them, it would be necessary to consider as signs the real objects attached to the labels with a numeral.<sup>71</sup> Thus, the labels n° 103-104 would have to be read as: *X b3 St* “(Certain object) (from) goddess Isis”.<sup>72</sup> Then, a question arises, why is the offering written in the label in not all the cases? Probably, because of its visibility: in this case, the emmer was written in the label because the latter was attached probably to a recipient.

As a common feature, it is important to note that these earliest logograms did not indicate their own specific reading with the stroke, as it will be common later.<sup>73</sup>

Therefore, it is likely that some of the religious symbols used with an iconic value before the Naqada III period (*cf. supra*) acquired their orthographic significance short before the time of the ruler buried at tomb U-j. The other logograms probably appeared as a necessity of the new writing: numerals, some toponyms and daily use objects. The second one would represent a characteristic that might individualise the place, such a main building (label n° 158), or perhaps it was a translation of the name: labels 44 and X183 (represented also in the palette of the cities).

## b) Phonograms

In general terms, a system of writing based just on logograms would have worked, with more or less problems. However, as Gelb<sup>74</sup> commented “To create and memorize thousands of signs for thousands of words and names existing in a language and to invent new signs for newly acquired words and names is so impracticable that either a logographic writing can be used as a limited system only or it must find new ways to overcome the difficulties in order to develop into a useful system.” Then, it was necessary to simplify the system. The solution was to give to a sign a phonetic value independent of the meaning which the sign had originally. In that moment, the phonograms appeared together with the rebus principle (written symbols borrowed to represent new words with the same sounds regardless of what these symbols originally mean). Although phonograms require an evolved system of writing, they are possible to see in the writing material evidence found at tomb U-j.

So far, it has been impossible to know if phonograms appeared simultaneously, shortly after or much later than logograms.






Following the traditional classification of the phonograms, they can be divided depending on the number of consonants and weak consonants into uniconsonantal (also called unilateral), biconsonantal (bilateral) and triconsonantal (trilateral). In the previous analysis of the labels, it has been possible to see at least one example of every kind of phonograms:

71 S. Houston's remark to Baines (2004: 165).

72 It is impossible to confirm if in that moment the royal throne (*St*) was already considered a goddess with her own personality – as it will be seen later – or we are just at the beginning of the deification of a real and royal (and then magic) object.

73 Baines (2004: 180).

74 Gelb (1952 [1965]: 193).



- Uniconsonantal:  *d*, working as a phonetic complement (see above),  *j*  
“reed” (?).<sup>75</sup>
- Biconsonantal:  *bʒ*.
- Triconsonantal:  *ʒh(t)*,  *grh*.

About them, Baines<sup>76</sup> has suggested that “Uniconsonantal signs could write brief elements like prepositions, as well as being in principle universally applicable, while triconsonantal signs were linked to particular lexical roots. Since homophonous roots are fairly common in Egyptian – no doubt often distinguished in speech by vowels and syllable pattern – linking triconsonantal signs to roots was advantageous for clarity in reading (homophony was not as prevalent as in Sumerian or Chinese). Biconsonantal signs, the largest category of phonemic signs, were probably derived by rebus from biconsonantal roots. They were used much more widely than triconsonantal signs in the orthography of words unrelated to the root from which their consonantal values derived, but their application was not universal, and unlike uniconsonantal and triconsonantal signs, an appreciable number of them are homophones.”

### The absence of determinatives in the oldest Egyptian writing

In general terms, it can be assumed that the determinatives were invented when there might be a confusion of reading due to a case of homophony. In later cases of Egyptian hieroglyphs, they might be also used to mark the end of some words and thus making the reading easier. That places the system of writing in a very sophisticated layer, which implies an extended use of it in different fields of daily life.

In the previous pages, it has been mentioned that the first attempts to reconstruct the principles of the earliest Egyptian writing detected the existence of determinatives (*cf. supra*). Dreyer<sup>77</sup> was the first one who identified some determinatives in the writing material evidence from tomb U-j. The same idea was shared by Kahl,<sup>78</sup> who also held that determinatives can be found in the inscriptions from tomb U-j. In this sense, the latter author considers that the representation of an elephant standing on hills displayed on six labels<sup>79</sup> might be divided into two different signs, the elephant and the hills. However, we believe that both signs – originally different – become in that moment a unique sign that, effectively, was created to write *ʒbw* ‘Elephantine’.<sup>80</sup> In fact, there are many examples of later hieroglyphs that are considered a sign and are composed by two or more signs.<sup>81</sup> In most of the cases, those hieroglyphs have a different reading from their originals.

75 U-j labels 146-150, in Dreyer (1998: Abb. 80). Cf. the hieratic forms of  in Goedicke (1988: 21a, 282 – Saqqara, Gebelein, Abusir –). On the sign represented in label 149 emerges the question of if this sign is different to the others and represented a precedent of  *shjtj*.

76 Baines (2004: 178).

77 Dreyer (1998: 139, 181).

78 Kahl (2001a: 118).



79 Dreyer (1998: Abb. 76, 53-56, 59-60).




80 More details for the identification in Jiménez-Serrano (2004a). However, at that moment, we believed that N25 was effectively a determinative.

81 Cf. several examples dated to the Early Dynastic period, Kahl (1994).

Against our interpretation, two labels might be presented that display a crested ibis standing on hills.<sup>82</sup> Again, there is a coincidence on the sign of hills. However, as seen before, they probably refer to the place already studied of *Dw 3ht*, as in the case of Elephantine. Moreover, it is possible to mention two different cases in which at least two signs were grouped and functioned as a single sign, as in the example of the elephant standing on hills:

- A sign of a fortified town with a building (?) in its interior<sup>83</sup> and very likely used as one sign to refer to a specific town, fortress or domain.<sup>84</sup> Thus, it must be considered just a sign.
- There are three labels<sup>85</sup> that display a bird over a building. Dreyer<sup>86</sup> considered that it was formed by two different signs, the bird and the building. However, it is clear that the bird is a totem placed in the top of a building and both must work as a single sign.

Thus, the presence in some signs of the hills (N25, , or a similar sign) does not mean that it is a determinative of the first sign, an elephant or a crested ibis; on the contrary, we are before single signs. In the case of Elephantine, the hills do not work as a determinative because – as it is well known –, that place was an island and if it had to display a determinative that would be the sign  (N18) or something similar, as it is possible to see in later examples (*Pyr.* § 1781).<sup>87</sup> It is probably, from the 4<sup>th</sup> Dynasty when the hills are considered a determinative, coinciding with a more common use of this type of sign.<sup>88</sup>

Egyptian writing in its long history is full of examples of new signs created from two (or more) different signs. However, nobody considers them two signs, but just one. One of the most known is  (G7). It was composed of two signs:  (G5) and  (R12). This sign appeared shortly before the First Dynasty,<sup>89</sup> confirming that this practice is a feature of Egyptian writing.

One thing more: it is possible to find some traces of a later use or absence of determinatives. As Fischer<sup>90</sup> detected, it is very unusual to find determinatives in common words or in the names of the gods during the Early Dynastic period.<sup>91</sup>

82 Dreyer (1998: Abb. 80, 133-134).

83 Dreyer (1998: Abb. 81, 158).

84 For a discussion on this label with similar examples, cf. Dreyer (1998: 144).

85 Dreyer (1998: Abb. 80, 127-129, plus another one found before the discovery of tomb U-j and classified as X188).

86 Dreyer (1998: 184, 186). This author (*id.* pp. 139, 142) and some years later Kahl (2003: 122) read this sign as *Dw 3ht*. However, Jiménez-Serrano (2002: 54-57; 2003: 108-109; cf. more specifically, 2006) has interpreted as the city temple of Hierakonpolis.

87 For all the graphies of Elephantine in the Old Kingdom, cf. Jiménez-Serrano (2004a: 852-853), with references.

88 Cf. Metjen's inscription, *Urk.* I, pp. 1-7. On the increase of the use of determinatives since the end of the 3<sup>rd</sup> Dynasty and the beginning of the 4<sup>th</sup> Dynasty, cf. Fischer (1989: 71).

89 Kahl (1994: 515), with references.

90 Fischer (1989: 64).

91 The main reason is because firstly the totems of different gods were used as logograms for them (beginning of Naqada III period), indicating the transition between the symbol and the sign, and secondly because, after the major development of the phonograms (first half of the First Dynasty) that probably coincided with the first written records of certain gods, such as Ptah. In this sense, it



We have already mentioned that the creation of the determinatives was a solution to avoid the confusion derived from homophony. Egyptian writing at the time of the ruler of tomb U-j was formed by a few dozen words, which produced a small probability of homophony. Then, the use of determinatives was useless. Moreover, in the case of the inscriptions found at tomb U-j, the texts were so short that the existence of determinatives to mark the end of the words was useless.

### From icons to signs

As seen, the origin of many signs was the already known iconic and ritual world of Egyptians. To represent complex concepts they used in some cases their fetishes. That permits us to establish a clear evolution between the iconic representation – without orthographic value – and writing. At the beginning, the predynastic representations – as pictographic – might be interpreted by anybody, although obviously the real message might coincide or not. That is the case of the unepigraphic depictions in some palettes or knife handles, for example. In other words, those iconic representations have a message, but it cannot be properly understood by a person if he was not previously informed about the specific message represented. In fact, there was a message, but one that could not be understood by everyone.

The necessities of the new born State at Abydos needed a more capable system of communication that permitted keeping information understandable in the future; that was probably one of the reasons for creating an established code of communication and record. In this context, in a specific moment at the end of Naqada II or the beginning of Naqada III, a group of people decided to take one step more: to give a phonetic value to the icons, individualising concepts very different to those that the figures originally represented (rebus principle). From that moment, the possible combinations increase spectacularly. In addition, the number of signs also increased which permitted the composition of new words and also the first cases of homophony. This new problem was solved later adding a sign, which specified the real meaning of the word. That sign had no sound, but a morphological function. Current scholars classify that kind of signs as determinatives. From that moment, Egyptian writing was useful for different types of documents, not only for administrative and royal purposes, but also others more elaborate.

### The first steps of Egyptian writing

As seen in the previous pages, the number of pieces of writing evidence from the first clear testimonial of the U-j to the end of the Early Dynastic period is not very high. However, that group has enabled us to create a possible sequence of the first steps in

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is necessary to remember the coincidence with the first definite attestation of that god on a travertine bowl from tomb 231 at Tarkhan, which is dated to the middle of the First Dynasty, Petrie *et alii* (1913: 12, 22, pls. III n° 1, XXXVII, n° 81). In this case, the name of the god was written with phonograms and his determinative:



the long path of the birth and the development of hieroglyph writing. In different papers, J. Kahl and J. Baines have distinguished diverse phases in the composition of the first Egyptian writing.

Concerning the appearance of writing, currently, most scholars place it in a period between the end of the Naqada II period and the beginning of Naqada IIIA.<sup>92</sup> Nevertheless, the new born system of writing was not created as a closed system, but as a dynamic one. Thus, it is obvious that the earliest system of writing found at tomb U-j was very simple and it underwent some processes of changes in its composition and principles during the successive periods. In the present paper, we will take Kahl's<sup>93</sup> reconstruction of the different phases in which some *reforms* (Baines) of hieroglyphic writing were carried out:


- Origin of the writing, not long before the tomb U-j.
- Reign of Sekhen/Ka-Den, development of all functions of hieroglyphs and the syllabary.
- The end of the II Dynasty to the reign of Netjerikhet

In this reconstruction of the different stages observed in Egyptian writing, one change derived from our proposal has not been taken into account. It concerns the logograms that originally referred to a specific word and later worked as a determinative, detailing the meaning of a word. We will mention a paradigmatic sign, the *pr wr*. As seen above, the *pr wr* was originally one of the primitive temples of Hierakonpolis. However, later it will be also used as determinative of Upper Egyptian temples in general. That was necessary in order to avoid the multiplication of specific logograms referring to every temple of Upper Egypt. That process would not be possible without the development of the phonograms. With them, it was only necessary to write phonetically the name of the temple and to add the determinative.<sup>94</sup> However, this process was not very fast and permitted the design of Late Predynastic and Early Dynastic temples,<sup>95</sup> such as  (the temple of Herishef), preserved in a label<sup>96</sup> and mentioned also in the Palermo Stone.<sup>97</sup>

In fact, it was the combination of the three types of signs (logograms, phonograms and determinatives) which opened unexpected and varied possibilities to Egyptian writing: from the bureaucratic world, which produced administrative texts, to the religious sphere, with different mythological and ritual texts, from literary texts to

92 For Dreyer (1998) and Kahl (1994: 156-161), writing was created in the Naqada IIc period. However, more recent interpretations point to the beginning of Naqada III, Kahl (2003) and Baines (2004: 154, 167).

93 Kahl (1994: 161-163; 2001a: 119-121, 124-126), followed with small differences by Baines (2004: 164-165).

94 A similar process happened with the sign  *pr nw*, which originally would represent the main temple of Buto. However, soon it was used as determinative of Lower Egyptian temples, as it is possible to see in the *pr nzw* (another temple of Buto).

95 There are several examples, cf. Kahl (1994: 658 § o18, 659 § o21, 660 §§ o24, o27, 662 § o31), with references. Cf. also Kaplony (1963, III: Abb. 37, 38), Petrie (1901: pl. X, 2), discussed by Jiménez Serrano (2002: 53-57).

96 Petrie (1901: pl. VII, 8).

97 On the identification of this temple and its parallels, cf. Jiménez Serrano (2004b: 40, 84-85).

biographies, from the royal annals to the satiric inscriptions of the workers of Deir el-Medina.

Writing is the major source of information for Ancient Egypt and a privilege that not many scholars of other ancient cultures might enjoy. In the oldest Egyptian writing found at U-j, the bases of all the writing were mostly established. Signs could be logograms or phonograms. Since that moment, only some additions were needed during its long history; the first one, the invention of the determinatives. That happened shortly before the First Dynasty (Iry Hor and Horus Ka) and as a consequence of a major development of the phonograms. It is not coincidental that those definitive changes took place during the last stages of the first Egyptian Unification. The interaction and the influence between the political sphere and the intellectual capability of the “winners” are waiting for a deeper evaluation. There are only two clear consequences: since that moment, neither the principles of the Egyptian hieroglyphs would change, nor would Egypt be the same.

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