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## **Of marks and meaning : a palaeographic, semiotic-cognitive, and comparative analysis of the identity marks from Deir el-Medina.**

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### **Citation**

Moezel, K. V. J. van der. (2016, September 7). *Of marks and meaning : a palaeographic, semiotic-cognitive, and comparative analysis of the identity marks from Deir el-Medina*. Retrieved from <https://hdl.handle.net/1887/42753>

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**Issue Date:** 2016-09-07

## THE FORMS OF THE MARKS

### 1 CLASSIFICATION

The first thing that is noticed when one looks at the identity marks from Deir el-Medina is that they contain forms that are known from hieroglyphic and/or hieratic script, and forms that are not part of the repertoire of these scripts. It has been remarked that this is a feature common to non-textual marking systems in general, and that a further common feature is seen in the subdivision of the marks not related to script into concrete forms, and abstract linear and geometric forms.<sup>1</sup> Similar classifications have been suggested for the builders' marks from the Old and Middle Kingdoms by Verner and Andrassy,<sup>2</sup> for the New Kingdom potmarks by Ditze,<sup>3</sup> but also for medieval European masons' marks,<sup>4</sup> identity marks used by nomadic tribes and families throughout Central Asia in ancient and modern times,<sup>5</sup> and the non-textual systems from Pre-Columbian Mesoamerica.<sup>6</sup> An initial working classification for the Deir el-Medina marks therefore also followed two main groups and two subdivisions:

- I Marks that are formally equivalent to characters from script and could carry phonetic value;
- II Marks that do not have phonetic equivalents in script and that include:
  - a. representations of concrete objects or beings;
  - b. abstract geometric forms.

It gradually appeared, however, that it was difficult to draw a sharp line between abstract and concrete forms, as well as between marks related to script and those not related to script. Because of the fact that hieroglyphs are also representations of concrete objects or beings, it was not in all cases clear whether hieroglyphs were always the model for the marks assigned to group I. This problem was already discussed by Haring with respect to the marks that represent pots and scorpions,<sup>7</sup> and it will also be reviewed with respect to those marks on pages 24-25 below. In this first section we discuss the marks assigned to groups I and II, after which we review the problem of blurred borders in section 2 below.

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<sup>1</sup> Haring in Haring & Kaper (eds.), *Pictograms or Pseudo Script?*, 3; Haring, 'On the Nature of the Workmen's Marks' in Andrassy et al. (eds.), *Non-Textual Marking Systems*, 123-124. See also Part III Comparative Analysis.

<sup>2</sup> Verner, *Baugraffiti der Ptahschepses-mastaba*, 163-176; Andrassy, 'Teammarken der Bauleute' in Haring & Kaper (eds.), *Pictograms or Pseudo Script?*, 5, 17.

<sup>3</sup> Ditze, 'Gedrückt – Geritzt – Gekratzt' in Pusch (ed.), *Die Keramik des Grabungsplatzes Q1 II*, 286.

<sup>4</sup> Janse & De Vries, *Werk en Merk*, 51-56; Van Belle, *Dictionnaire des Signes Lapidaires*, xiii-xv.

<sup>5</sup> Yatsenko, 'Problems and Study Methods of the Ancient and Early Medieval Iranian-speaking Peoples' Nishan-Signs' and 'Marks of the Ancient and Early Medieval Iranian-speaking Peoples of Iran' in Evans Pim, Yatsenko & Perrin (eds.), *Traditional Marking Systems*, 109-152; Boardman, 'Seals and Signs' in *ibid.*, 153-170.

<sup>6</sup> Boone, 'Writing and Recording Knowledge' in Boone & Mignolo (eds.), *Writing Without Words*, 3-26.

<sup>7</sup> Haring, 'On the Nature of the Workmen's Marks' in Andrassy et al. (eds.), *Non-Textual Marking Systems*, 129-132.

## a. Group I

### a.1 Codification

The marks that were assigned to group I bear formal resemblance to hieroglyphic, cursive hieroglyphic, pseudo hieroglyphic, or hieratic characters that have phonetic values in script. Internally the group follows codification according to Gardiner's sign list.<sup>8</sup> However, at the beginning of the project it was often uncertain whether marks that *resembled* characters from script also *behaved* as such in that they were endowed with phonetic values; therefore, we did not want to make the connection to Gardiner's list explicit. Thus, instead of using letters as in the codifications ꜥ 'F12', 𐎗 'Q1', 𐎑 'Q4', ꜥ 'M17' and so forth, we numbered the classes as a constant reminder to avoid direct equation of the non-textual marks with hieroglyphic signs: ꜥ I 06.012, 𐎗 I 16.001, 𐎑 I 16.004 and ꜥ I 12.017. The possibility of a connection is present, but full equation is prevented. This optical detachment from Gardiner's classes also provided us with more freedom to adapt the classes to the needs of the marking system. Thus, we removed superfluous distinctions present, for instance, in Gardiner's signs 𐎗 F23 and 𐎗 F24, or 𐎗 U6 and 𐎗 U7, which represent the same sign but in different orientations. In the classification of the marks different orientations are grouped under the same code, based on the semiotic theory that orientation is of no influence to the meaning of non-textual marks, because they contain their meaning within. That is, as opposed to linguistic signs their meaning does not depend on a 'reading' in a specific orientation or direction; they are recognizable and understood as individual entities in any orientation. A case in point are quarry or masons' marks on blocks of stone, which 'were very prone to be rotated many times'<sup>9</sup> before the stone was placed in its final position. Depauw therefore argues that 'Any kind of distinction based on orientation is therefore intrinsically improbable'.<sup>10</sup>

We also accommodated graphic variants of marks in subclasses under the code of their main mark. Thus, a variant of the mark 𐎗 in dynasties 19 and 20 shows a phonetic complement *s*: 𐎗𐎗. The former could now be coded I 06.031a and the latter I 06.031b. Similar cases are found with ꜥ I 06.012a and 𐎗 I 06.012b; with 𐎗 I 04.040a and 𐎗 I 04.040b; or with 𐎗 I 05.034a, 𐎗 I 05.034b and 𐎗 I 05.034c. Also classified under the main mark are double and triple occurrences of marks, which occur mainly with 𐎗 I 06.035a-d, 𐎗 I 18.034a-c and 𐎗 I 17.008a-b. Some of Gardiner's classes furthermore had to be rearranged, such as the several classes depicting pots and jars. Gardiner's pots and jars do not cover all the different forms and variants that are encountered in the marks. For instance, Gardiner accommodates a simple, plain jar under W22 (𐎗) and a jar with handles under W23 (𐎗), but where would we accommodate a jar with handles and water spouting out such as 𐎗? We also have long-necked and short-necked pots and jars with or without handles, and with or without spouting water. As it turned out that many forms of pots and jars were graphic variants of the same identity mark at least in dynasty 20, we decided to accommodate all variants either under I 22.014a-b (𐎗, 𐎗) or under I 22.022a-d (𐎗, 𐎗, 𐎗, 𐎗).

These and other modifications resulted in the classes I 01 to I 26 as shown in Table I1-1 below. The Table also includes a final class I 27, which is an addition specific to the classification of the marks. It

<sup>8</sup> As being the standard in Egyptology. Gardiner, *Egyptian Grammar*, 438-548.

<sup>9</sup> Depauw, 'The Semiotics of Quarry Marks' in Andrassy et al. (eds.), *Non-Textual Marking Systems*, 211.

<sup>10</sup> *Ibid.* The semiotic theory concerned is the theory of articulation: non-textual marks are generally thought to have first articulation only. See Part II, chapter 2 section 1.d.

accommodates group-writings that are not composed of a main mark with phonetic complements, but of two or more hieroglyphic or hieratic signs that have different phonetic values and together may convey a word or phrase, such as  *nb t3.w.y* (I 27.001),  *nb nfr* (I 27.002),  and  *jmn* (I 27.036a-b),  *jmj r pr(.w.y)-hd* (I 27.045) or  *wn nfr*. In some cases the groups may simply be more elaborate variants of marks consisting of single signs, which come close to linguistically written abbreviations of names. Thus,  *wn nfr* was a more elaborate variant of the mark  *wn* used by *Wn-nfr* (iii), and the marks  (interpreted as  *htp*) and  in dynasty 20 were both simultaneously used to refer to *Rš.w-ptr=f* (i). Davies tentatively suggested that *Rš.w-ptr=f* (i) was the grandson of *Nfr-htp* (ii).<sup>11</sup> If so, this would support the phonetic interpretation of the marks  and  as *htp* respectively *nfr-htp*.

The marks in class I 27 are internally organized according to component marks: from marks including  , to marks including  , to marks including  , to marks including  , to marks including  , and so forth. However, since new marks were still being added to the list at the moment this dissertation was finalized, this internal ordering remains a loose one; instead of revising the codes with every change, new marks were simply added to the end of the list.

At present, it is still not in all cases certain whether a mark which we attributed to group I was in fact endowed with phonetic value. Although in many cases this could be evidenced or at least made plausible, as will become clear in the following pages and especially in Table I3-1, there remain cases in which marks with hieroglyphic equivalents may simply represent objects or beings that are connected to the workmen in another than phonetic way. This problem, which is caused by the fact that hieroglyphic script is a picture script, will be elaborated upon further below as well as in section 2.

Two important remarks must be made with regard to Table I1-1. First, some of the codes are followed by one or more of the capital letters G, P, D or T. These codes indicate classes of marks that do not occur on ostraca, but only on Pottery, in Graffiti, on Domestic objects and/or on Tools. They are included in the Table as well as in the Paleography in section 3 (Tables I3-1 and I3-2), but throughout this dissertation we focus primarily on the ostraca. Only when the marks from other sources provide, or support, relevant data we will include them in the analysis.<sup>12</sup> Second, the reader will notice a degree of inconsistency in the appearance of the font-types used in the Table. This is due to the fact that until recently classes of marks were still being added. The last significant revision of the classification and the creation of font-types on the basis of those classes took place at the end of 2014. Classes that were added later, such as I 06.055 (), I 19.022 () and all classes with codes including P, G, D and/or T, are represented in the table by a facsimile that was not included in the font. For more information on the development of the facsimiles and the font-types, see section 3 below.

<sup>11</sup> Davies, *Who's who in Deir el-Medina*, 248.

<sup>12</sup> This is not only a matter of lack of time, but also marks that occur only on potsherds, in graffiti, on domestic objects or on tools are often very difficult to interpret as they lack the context of hieratic documentation, which does exist for the marks on ostraca.

Table I1-1 Marks from group I

| Code      | Mark | Code     | Mark | Code     | Mark | Code      | Mark |
|-----------|------|----------|------|----------|------|-----------|------|
| I 01.001  |      | I 06.030 | a    | I 12.015 |      | I 14.051  |      |
| I 01.002  |      |          | b    | I 12.017 | a    | I 15.001  | a    |
| I 01.019  |      | I 06.031 | a    |          | b    |           | b    |
| I 01.028  |      |          | b    | I 12.022 |      |           | c    |
| I 01.035G |      | I 06.035 | a    | I 12.023 |      | I 15.002P |      |
| I 01.040  |      |          | b    | I 12.034 |      | I 15.005  |      |
| I 01.121c |      |          | c    | I 12.040 |      | I 15.006  |      |
| I 03.001  |      |          | d    | I 13.001 |      | I 15.056G |      |
| I 03.019  |      | I 06.055 |      | I 13.002 |      | I 16.001  |      |
| I 04.002  |      | I 07.001 |      | I 13.005 |      | I 16.004  | a    |
| I 04.004  |      | I 07.005 |      | I 13.006 |      |           | b    |
| I 04.006  |      | I 07.017 |      | I 13.007 |      | I 16.005  |      |
| I 04.010  |      | I 07.026 |      | I 13.008 |      | I 17.004  | a    |
| I 04.021  |      | I 07.038 |      | I 13.012 |      |           | b    |
| I 04.028  |      | I 07.047 | a    | I 13.014 | a    | I 17.008  | a    |
| I 04.036  |      |          | b    |          | b    |           | b    |
| I 04.037  |      | I 07.063 |      | I 13.023 | a    | I 17.011  |      |
| I 04.040  | a    | I 08.006 |      |          | b    | I 17.012  |      |
|           | b    | I 08.007 |      |          | c    | I 17.014  |      |
| I 04.045  |      | I 08.016 |      |          | d    | I 17.019  |      |
| I 04.046  | a    | I 09.001 |      | I 13.025 |      | I 18.003  |      |
|           | b    | I 09.009 |      | I 13.026 |      | I 18.012  | a    |
| I 04.054  |      | I 09.010 |      | I 13.027 |      |           | b    |
| I 04.058  | a    | I 09.012 |      | I 13.028 |      | I 18.014  |      |
|           | b    | I 10.001 |      | I 13.035 | a    | I 18.023  |      |
| I 04.060  |      | I 11.001 |      |          | b    | I 18.028  |      |
| I 04.063  |      | I 11.002 |      | I 14.004 |      | I 18.033  |      |
| I 05.010  |      | I 11.019 | a    | I 14.006 |      | I 18.034  | a    |
| I 05.017  |      |          | b    | I 14.021 |      |           | b    |
| I 05.034  | a    | I 12.004 |      | I 14.024 |      |           | c    |
|           | a    | I 12.009 | a    | I 14.028 |      | I 18.038  |      |
|           | c    |          | b    | I 14.031 |      | I 18.040  | a    |
| I 06.012  | a    |          | c    | I 14.036 |      |           | b    |
|           | b    | I 12.013 |      | I 14.045 |      |           | c    |
| I 06.018  |      | I 12.014 | a    | I 14.049 | a    |           | d    |
| I 06.023  |      |          | bG   |          | b    | I 18.045  |      |

|           |   |  |             |   |  |           |   |  |            |   |  |
|-----------|---|--|-------------|---|--|-----------|---|--|------------|---|--|
| I 19.003  |   |  | I 22.011    |   |  | I 27.005P |   |  | I 27.029   |   |  |
| I 19.010  |   |  | I 22.014    | a |  | I 27.006  |   |  | I 27.031G  |   |  |
| I 19.018  |   |  |             | b |  | I 27.007  |   |  | I 27.032   |   |  |
| I 19.019  |   |  | I 22.017    |   |  | I 27.008  |   |  | I 27.033   |   |  |
| I 19.022  |   |  | I 22.022    | a |  | I 27.009  |   |  | I 27.034G  |   |  |
| I 19.032  |   |  |             | b |  | I 27.010  |   |  | I 27.035   |   |  |
| I 20.002  | a |  |             | c |  | I 27.011  |   |  | I 27.036   | a |  |
|           | b |  |             | d |  | I 27.012  |   |  |            | b |  |
|           | c |  | I 22.025    |   |  | I 27.013  |   |  | I 27.037   | a |  |
|           | d |  | I 22.037    |   |  | I 27.014  |   |  | I 27.037P  | b |  |
| I 20.006  |   |  | I 23.008    | a |  | I 27.015  |   |  | I 27.038   |   |  |
| I 20.015  |   |  |             | b |  | I 27.016  | a |  | I 27.039   |   |  |
| I 20.019  |   |  | I 24.001    | a |  |           | b |  | I 27.040   |   |  |
| I 20.021  |   |  |             | b |  | I 27.017  |   |  | I 27.041   |   |  |
| I 20.023  |   |  | I 24.003    |   |  | I 27.018P |   |  | I 27.042G  |   |  |
| I 20.037  |   |  | I 24.005    |   |  | I 27.019  | a |  | I 27.043   |   |  |
| I 21.004  |   |  | I 24.008    |   |  |           | b |  | I 27.044   |   |  |
| I 21.006  |   |  | I 26.009    |   |  | I 27.020  |   |  | I 27.045   |   |  |
| I 21.013  |   |  | I 26.015    |   |  | I 27.021  |   |  | I 27.046   |   |  |
| I 21.016  |   |  | I 26.026    |   |  | I 27.022  |   |  | I 27.047   |   |  |
| I 21.017  |   |  | I 27.001    | a |  | I 27.023  |   |  | I 27.048   |   |  |
| I 21.026  |   |  |             | b |  | I 27.024P |   |  | I 27.049GT |   |  |
| I 21.030  |   |  |             | c |  | I 27.025  |   |  | I 27.050   |   |  |
| I 22.001  |   |  | I 27.002    | a |  | I 27.026  | a |  | I 27.051   |   |  |
| I 22.004G |   |  |             | b |  |           | b |  | I 27.052   |   |  |
| I 22.009  |   |  | I 27.003GD  |   |  | I 27.027  |   |  | I 27.053   |   |  |
| I 22.010  |   |  | I 27.004GTD |   |  | I 27.028  |   |  |            |   |  |

## a.2 Development

### Dynasty 18

The marks from group I display an interesting development from sometimes crude marks with a form that is incorrect when compared to hieroglyphic signs in dynasty 18 to marks of a true hieratic form or in group-writing in later periods. The marks assigned to dynasty 18 are given in Table I1-2:

**Table I1-2 Marks from dynasty 18, group I**

| Code     | Mark | Code     | Mark | Code     | Mark | Code     | Mark |
|----------|------|----------|------|----------|------|----------|------|
| I 04.004 |      | I 12.009 | a    | I 14.031 |      | I 20.015 |      |
| I 04.021 |      |          | b    | I 14.049 | a    | I 20.037 |      |
| I 04.036 |      |          | c    | I 16.004 | a    | I 21.030 |      |
| I 04.037 |      | I 12.013 |      |          | b    | I 22.014 | a    |
| I 04.046 | a    | I 12.017 | a    | I 17.004 | a    | I 22.022 | a    |
|          | b    |          | b    | I 17.008 | a    |          | b    |
| I 04.058 | a    | I 12.034 |      | I 17.014 |      | I 23.008 | a    |
|          | b    | I 13.001 |      | I 18.012 | a    |          | b    |
| I 06.012 | a    | I 13.005 |      |          | b    | I 24.005 |      |
| I 06.031 | a    | I 13.006 |      | I 18.033 |      | I 26.009 |      |
| I 06.035 | a    | I 13.008 |      | I 18.034 | a    | I 26.026 |      |
| I 07.017 |      | I 13.012 |      | I 18.038 |      | I 27.001 | a    |
| I 07.038 |      | I 13.014 | a    | I 18.040 | a    |          | b    |
| I 08.007 |      | I 13.025 |      |          | b    |          | c    |
| I 09.001 |      | I 13.026 |      |          | c    |          |      |
| I 09.009 |      | I 13.028 |      |          | d    |          |      |
| I 10.001 |      | I 13.035 | a    | I 19.010 |      |          |      |
| I 11.001 |      | I 14.004 |      | I 20.006 |      |          |      |

In comparison to the marks from later periods the 18<sup>th</sup> dynasty corpus shows some particularities.<sup>13</sup> A first particularity is the fact that the 18<sup>th</sup> dynasty corpus contains relatively many marks that resemble mono-consonantal hieroglyphic signs. It concerns:

much lesser extent. An exception is , which is once dated to dynasties 18-19, once to dynasty 19, and thrice to dynasty 20. The earliest specimen, which is seen on ostrakon IFAO ONL 6638, is, in fact, uncertain; it may not be a workman's mark, and therewith  rather belongs to the later corpus of marks.

|                                                                                             | 18  | 18-19 | 19 | 20 | ?  |
|---------------------------------------------------------------------------------------------|-----|-------|----|----|----|
|  I 04.058a | 10x |       |    | 1x | 1x |
|  I 12.017b | 11x |       | 1x | 4x |    |
|  I 04.036  |     | 1x    | 1x | 3x |    |

If the marks that resemble mono-consonantal signs conveyed phonetic value, one could ask whether values such as *r*, *d/d̥*, *b*, *m*, *f*, *j*, *n* and *h* are specific enough to distinguish workmen's names. Unfortunately, we have no hieratic sources against which to check the names and phonetic values of the marks.<sup>16</sup> Yet, they may have been specific in a period when the community of Deir el-Medina was still relatively small; that is, when some 40 to 45 workmen and their families came to live there and the marking system did not yet have long history of use. Moreover, the fact that mono-consonantal signs could indeed be used as abbreviations specific to certain names is seen already in the geographic section of the Ramesseum Onomasticon from the late Middle Kingdom, where several place names are abbreviated by means of mono-consonantal signs, conveying the first sound of the name.<sup>17</sup> The fact that marks which resemble mono-consonantal signs, with the exception of , are no longer seen in dynasties 19 and 20 might be related to the continuing usage of marks in a growing community; more specific identity marks may have been needed or desired. In all cases, however, it remains unknown whether the marks indeed conveyed phonetic value, or whether they were selected and used on the basis of other reasons.

A second particularity of the 18<sup>th</sup> dynasty corpus is that variations in form and in orientation are relatively frequent. One example may be highlighted: . When its specimens from dynasty 18 in Table I3-2 are compared with the specimens from dynasties 19 and 20, the first thing one will notice is that the mark in dynasty 18 occurs 180° turned (or 'upside down') at least three times, while all 19<sup>th</sup> and 20<sup>th</sup> dynasty specimens occur consistently in the same orientation which the hieroglyphic equivalent  has in script. Graphic variants of  are  and . The first, , occurs thrice on ostraca from dynasty 18 and twice on ostraca from dynasty 20, but the 20<sup>th</sup> dynasty specimens are both in hieroglyphic orientation while two of the 18<sup>th</sup> dynasty specimens occur 180° turned. The second, , occurs four times on 19<sup>th</sup> dynasty ostraca, but also once on a potsherd from dynasty 18 and once on an undated potsherd. The latter shows the form , which by its 180° turn may tentatively be dated to dynasty 18, although there is one other turned specimen that dates to dynasty 19:  on ostrakon IFAO ONL 6477. On the basis of these data we can argue that variation in both form and orientation is encountered mainly in dynasty 18 and occasionally in dynasty 19, while the 20<sup>th</sup> dynasty ostraca generally display forms and orientations conform the hieroglyphic equivalent .<sup>18</sup> Similar conclusions can be drawn from a study of the classes of birds (I 07), lotus flowers (I 12.009), and reed leafs (I 12.017), which in dynasty 18 all show a variety

<sup>16</sup> No hieratic sources are known from dynasty 18.

<sup>17</sup> Gardiner, *Ancient Egyptian Onomastica*, plate II. See also chapter 2 of this Part I, section 2.b, fig. I2-11.

<sup>18</sup> Certainly, the 20<sup>th</sup> dynasty forms do show minor variations in form. These are discussed in Table I3-1.

of forms and orientations as against more uniform specimens and orientations in dynasty 20.<sup>19</sup> The development may reflect a growing influence of script on the marking system, at least in the graphic appearance of the marks.

Further particularities of the 18<sup>th</sup> dynasty corpus concern specific formal variations. To begin with, we encounter a graphic characteristic that is quite rare. It concerns the addition of horizontal lines to the marks  $\Upsilon$  and  $\text{𐀓}$ . Consider the specimens of  $\Upsilon$  in Table I3-2. Eight specimens, all dated to dynasty 18, display a horizontal line underneath: four on pottery ( $\text{𐀓}$ ,  $\text{𐀓}$ ,  $\text{𐀓}$ ,  $\text{𐀓}$ ) and four on ostraca ( $\text{𐀓}$ ,  $\text{𐀓}$ ,  $\text{𐀓}$ ,  $\text{𐀓}$ ).<sup>20</sup> Initially, we were not certain whether this line belonged to the mark and we decided to simply classify the specimens as  $\Upsilon$  I 16.004. However, reason to assume that the line may be part of the mark was the discovery of the form  $\text{𐀓}$  on ostrakon IFAO ONL 6298 during our visit to the *Institut Français d'Archéologie Orientale* in Cairo (IFAO) in 2014. Similar forms we identified on O.IFAO ONL 6354 and presumably also on O.IFAO C 1404. In all cases, a horizontal line is added which now crosses the mark. All three specimens date to dynasty 18, and were coded I 16.004b.

The exact relation between the marks  $\Upsilon$ ,  $\text{𐀓}$  and  $\text{𐀓}$  remains unclear. When the clusters in which they appear on the ostraca are compared, we come to the conclusion that they are very similar: all three marks occur particularly often with  $\text{𐀓}$ ,  $\text{𐀓}$  and  $\text{𐀓}$ . Therefore, they may be graphic variants. The marks furthermore do not occur on the same ostraca, except, however, for one instance. On O.IFAO ONL 6298 we see the forms presented in fig. I1-1a and b.



**Fig. I1-1a-b.** Specimens of I 16.004 on ostrakon IFAO ONL 6298.

The first specimen is somewhat problematic. It appears to have traces underneath, which may be understood as a horizontal line. Yet, the traces of paint also suggest that the vertical line runs all the way down, which could make this specimen another instance of I 16.004b. Double occurrences of marks do indeed occur in dynasty 18. However, there are two reasons to not immediately accept that this is the case here as well. First, the forms in fig. I1-1a-b differ very much in execution and in the relative position of the two horizontal lines, while in every other case of double occurrences in dynasty 18 the specimens are very close copies in form and execution. Second, when a mark is encountered twice on an 18<sup>th</sup> dynasty ostrakon the occurrences are usually placed one after the other, or at least in very close proximity, which is not the case here: the forms of fig. I1-1a-b occur on different sides of the bowl that ostrakon IFAO ONL 6298 is. All in all, the forms, the execution, and the relative position of the specimens in fig. I1-1a-b do not coincide with the usual forms, execution and relative position of double occurrences of marks in dynasty 18. A third option, then, is to consider the smudge of black paint underneath the mark as a horizontal black stroke. This interpretation is strengthened by the fact that another horizontal stroke in red appears below it. Similar black and red horizontal strokes, presumably a counting system perhaps to record the absence or presence of workmen, occur below the marks  $\text{𐀓}$  and  $\text{𐀓}$ , and above  $\text{𐀓}$  on the same object. In vertical position they occur with several other marks on the bowl. If we accept this option, we

<sup>19</sup> See the respective classes in Tables I3-1 and I3-2.

<sup>20</sup> Respectively the potsherds Bruyère Rap. 28 II 125 fig. 69 nr. 35 (2x), Nagel Céramique 134 DM 22.93 and SGP 2005 235; and the ostraca IFAO ONL 6260, IFAO ONL 6266, MMA 09.184.700, OWV 10.

have an occurrence of  $\text{𐤊}$  and one of  $\text{𐤊}$  on IFAO ONL 6298. From comparative analysis we learn that the addition of lines or other small elements to a mark could mean that there is a familial relation between the two persons who are identified by the marks: father and son, or brothers. This appears to be a universal practice, seen, for instance, in medieval European identity marks, and in Portuguese and Brazilian fishermen and herders' marks.<sup>21</sup> Could that also be the case here? Does the occurrence of both  $\text{𐤊}$  and  $\text{𐤊}$  on IFAO ONL 6298 indicate that a father was still a member of the crew at the moment his son joined as well?<sup>22</sup> Is, then, the mark with a horizontal cross line equivalent to the mark with a horizontal line *underneath*, or does this indicate another son or family member?

A similar situation we see with the mark  $\text{𐤊}$ . Although it is not encountered with a horizontal line underneath, there are three forms in which the mark is crossed by a number of one to three horizontal lines. Consider the marks I 18.040a-d in Table I3-2. In addition to  $\text{𐤊}$ , which occurs quite frequently in dynasty 18<sup>23</sup>, we find the 18<sup>th</sup> dynasty variants  $\text{𐤊}$ ,  $\text{𐤊}$  and  $\text{𐤊}$ . Again, the variants do not occur on the same ostraca except for one instance:  $\text{𐤊}$  and  $\text{𐤊}$  occur together on ostracon Cairo JE 96591. The ostracon depicts a line of 6 marks in succession:  $\text{𐤊}$ ,  $\text{𐤊}$ ,  $\text{𐤊}$ ,  $\text{𐤊}$ ,  $\text{𐤊}$  and  $\text{𐤊}$ . This strongly suggests that the two marks belonged to two different persons. The clusters in which the marks generally appear on the ostraca share some similar signs. Thus,  $\text{𐤊}$ ,  $\text{𐤊}$  and  $\text{𐤊}$  all occur in proximity to  $\text{𐤊}$ ; and  $\text{𐤊}$ ,  $\text{𐤊}$  and  $\text{𐤊}$  all occur in proximity to  $\text{𐤊}$ . But in fact, the occurrences of the marks  $\text{𐤊}$ ,  $\text{𐤊}$  and  $\text{𐤊}$  are too few (resp. once, twice, once) to be able to compare clusters with  $\text{𐤊}$  in detail. If we would again consider the possibility that the horizontal lines represent family members, do  $\text{𐤊}$ ,  $\text{𐤊}$  and  $\text{𐤊}$ , then, indicate the same family member of  $\text{𐤊}$ , or do they represent three different family members?

Of course, in both cases  $\text{𐤊}$  and  $\text{𐤊}$  it may be argued that the lines were simply added to distinguish the identity of two unrelated workmen who happened to use the same mark. However, an argument for family ties lies in the fact that in both cases the variants with lines are rare in relation to the frequent occurrences of  $\text{𐤊}$  and  $\text{𐤊}$  themselves; this may indicate that the horizontal lines were only a necessary distinction at the moment that fathers and sons worked together in the crew, after which the sons who continued would switch back to the original marks  $\text{𐤊}$  and  $\text{𐤊}$ . This remains mere speculation. As for the nature of the marks, both  $\text{𐤊}$  and  $\text{𐤊}$  occur as hieroglyphic signs, but the addition of the lines deforms them and turns them into non-linguistic marks; the variants are no longer equivalents to the hieroglyphic signs  $\text{𐤊}$  and  $\text{𐤊}$ . If without the additions there is still a chance that  $\text{𐤊}$  and  $\text{𐤊}$  are graphically and perhaps phonetically related to script, the deformations undo both graphic and phonetic connections. Does the fact that the additions could be made mean that these marks were, in dynasty 18 at least, never understood or meant as equivalents to linguistic signs? Whereas the inspiration for the mark  $\text{𐤊}$  could simply have been the plain object instead of the hieroglyph  $\text{𐤊}$ ,<sup>24</sup>  $\text{𐤊}$  may have been known purely as a form or powerful symbol occurring in texts on the walls of temples or tombs, while its full linguistic value remained unknown or was disregarded. As such, the marks could be deformed without serious consequences. It goes without saying that this suggestion concerns the 18<sup>th</sup> dynasty specimens only. In dynasties 19 and 20

<sup>21</sup> The system of passing on marks by means of additional lines is discussed in Part III, chapter 1, section 3.

<sup>22</sup> See also Soliman, *Of Marks and Men* (unpublished dissertation), chapter 2, section 2.6.3.

<sup>23</sup> 43.94% of the total occurrences of  $\text{𐤊}$  is dated to dynasty 18; only 27.27% of the total occurrences of  $\text{𐤊}$  is dated to dynasty 20. See Table I3-2.

<sup>24</sup> Which is even quite plausible as the occurrence of  $\text{𐤊}$  as a hieroglyphic sign with sound-value is rare, while the object was known and used on a daily basis.

we no longer see the addition of horizontal lines, and a graphic and perhaps phonetic connection of  $\text{𓂏}$  and  $\text{𓂐}$  to script is a possibility.

The last particularity of the 18<sup>th</sup> dynasty corpus to be emphasized here is the fact that several marks seem to indicate a low degree of literacy in that they appear to be crude or incorrect graphic variants of marks that in later periods have hieroglyphic equivalents. We already encountered some examples in  $\text{𓂏}$  and  $\text{𓂐}$  discussed above, but examples that show more consistent misrepresentations, making the misrepresentation the standard, are the following:  $\text{𓂑}$ , a crude form of  $\text{𓂒}$ ; forms such as  $\text{𓂓}$ , presumably representing  $\text{𓂔}$ ; and forms such as  $\text{𓂕}$ ,  $\text{𓂖}$ ,  $\text{𓂗}$  and  $\text{𓂘}$ , to be interpreted as  $\text{𓂙}$ . In many instances, the 18<sup>th</sup> dynasty marks are more abstract and geometric in appearance than the marks from later periods and their hieroglyphic counterparts. One particular example may be singled out: the mark  $\text{𓂚}$  with its variants  $\text{𓂛}$  and  $\text{𓂜}$ . It was initially interpreted as an abstract geometric form. However, after having collected all specimens, several of them seemed to display a transition toward the form of the hieroglyph  $\text{𓂝}$ , representing a collar. Two clear examples of specimens that can be related to that hieroglyph date to dynasty 18:  $\text{𓂚}$  (O.Cairo JE 72492) and  $\text{𓂚}$  (O.IFAO ONL 6266). After comparison of the marks  $\text{𓂚}$  I 18.012a and  $\text{𓂛}/\text{𓂜}/\text{𓂝}$  I 18.012b in Table I3-2 the following is suggested:<sup>25</sup> the main difference in form between the two marks is the fact that specimens of the latter show a curved line above and a horizontal line below that together make a semi-circular form with the curve upwards, precisely where specimens of I 18.012a show a semi-circle with the curve below. Specimens of I 18.012b have three to five vertical lines protruding downwards from the horizontal line whereas specimens of I 18.012a may show this (e.g. in the case of  $\text{𓂚}$  on O.IFAO ONL 6303) but usually have a square or triangular form that represents the pendant of the collar (i.e. in the case of 20<sup>th</sup> dynasty specimens; the 19<sup>th</sup> dynasty specimens have no pendant at all). Specimens of I 18.012b such as  $\text{𓂚}$ ,  $\text{𓂛}$ ,  $\text{𓂜}$  and  $\text{𓂝}$ ,<sup>26</sup> as also the specimens of I 18.012a on O.Ashmolean HO 1114 and O.IFAO ONL 631 ( $\text{𓂚}$  resp.  $\text{𓂛}$ ) may all said to be transitional forms that developed gradually from I 18.012b into I 18.012a in that they do not show a semi-circular form with a horizontal line below and curve above, but instead an almond-shaped form.<sup>27</sup> The alternative forms of I 18.012b occur only in dynasty 18, whereas the more developed forms continue into dynasties 19 and 20. It could be suggested that all specimens of I 18.012b and the two transitional forms of I 18.012a on O.Ashmolean HO 1114 and O.IFAO ONL 6316 were made by persons who only had a vague idea of the appearance of the hieroglyph  $\text{𓂝}$  without being familiar with its details and exact execution. The correct form was only vaguely approached, because the semi-circle with the horizontal line above and the curve below, which is the basis of the form of the hieroglyphic sign, was reversed. The makers of these specimens were therefore presumably not fully literate.

Perhaps a similar case could be suggested for the marks  $\text{𓂞}$  I 04.028 and  $\text{𓂞}$  II 025. The mark  $\text{𓂞}$  resembles the hieroglyph  $\text{𓂟}$   $k\bar{z}$ . It does not occur in dynasty 18, but it does occur four times on 19<sup>th</sup> dynasty ostraca, 12 times on ostraca dated to dynasty 19-20 and 105 times on ostraca dated to dynasty 20. The mark  $\text{𓂞}$  occurs 35 times on ostraca from dynasty 18, but not thereafter. We know that  $\text{𓂞}$  was

<sup>25</sup> The relation between specimens of the marks I 18.012a and I 18.012b is explained more elaborately in Table I3-1.

<sup>26</sup> Respectively ostraca Cairo JE 72450, IFAO ONL 6293, IFAO ONL 6405 and IFAO ONL 6588.

<sup>27</sup> Particularly telling is the fact that the mark I 18.012 occurs twice on the 18<sup>th</sup> dynasty ostrakon Ashmolean HO 1114, and we initially interpreted one of them as the hieroglyphic necklace ( $\text{𓂚}$ ), and the other as an abstract form of I 18.012b ( $\text{𓂛}$ ). The ostrakon contains four other marks that occur twice, and thus it is assumed that both  $\text{𓂚}$  and  $\text{𓂛}$  also represent the same mark, only the latter slightly better approaching the more correct form of the hieroglyph  $\text{𓂝}$ .

endowed with the phonetic value *k3* at least during the reigns of Ramesses III and IV, when it was used by *K3s3* (v/vi) and subsequently by his son *Pn-ḥnk.t* (iii).<sup>28</sup> Whether  was an early graphic variant of  I 04.028, because its specimens are generally turned 180° and none of them shows the protrusion in the middle which in some 19<sup>th</sup> and 20<sup>th</sup> dynasty specimens of  indicates the neck or shoulders in between both arms. However, it may be stressed that there is one specimen of  that shows the orientation of :  on ostrakon IFAO ONL 6509. This ostrakon is dated to dynasty 18 with certainty on account of its marks as well as on account of the sequence of marks, which coincides with the sequence seen on the 18<sup>th</sup> dynasty ostrakon IFAO OL 6788. Furthermore, the tradition of potmarks and builders' marks, which is discussed in the next chapter, shows several occurrences of the hieroglyph  in the same orientation as , always interpreted as . Similarly to what we have suggested for  and , we could argue that the person(s) who executed the specimens of  was, or were, faintly familiar with the hieroglyphic sign, which was perhaps seen on monuments or in tombs, but not with its details. The orientation may simply not have been considered significant, which indeed suits the semiotic nature of non-textual marks. In both cases, the inspiration for the marks may have been hieroglyphic script, but it is not likely that the nature of this inspiration was anything more than graphic.

All in all, the marks from group I that date to dynasty 18 do not bear witness to a high level of influence of script on the marking system, at least not in a phonetic sense. In a graphic way, signs from script may have been a source of inspiration.<sup>29</sup> Also, some forms may have been known and used as powerful symbols, such as , , ,  and , without these signs having been used to phonetically refer to a workman. They may simply have been a wish, or votive expression, for instance.

Yet, it must be mentioned that among the sometimes crude and incorrect marks of dynasty 18 there are certainly also correct and neatly executed marks ostraca which could in fact indicate some knowledge of script, or at least familiarity with hieroglyphic signs. Consider the ostraca in fig. II-2 on page 16. These ostraca show very recognizable and properly executed marks. They were probably all made by the same hand: compare especially the birds  and , but also the forms of ,  and .<sup>30</sup> The person in question, whether or not he was fully literate, was at least used to holding a brush and familiar with drawing hieroglyphic signs. The fact that he still executed mark II 025 as  is therefore conspicuous. It may indicate that, even if the hieroglyph  was initially the mark's graphic inspiration, it may not have been considered equivalent to it in value even by someone who appears to have had a greater knowledge of script than his contemporaries in dynasty 18.

In the lower line on OWV 10 we see a different hand that made larger signs in an untidy organization. For this style and format of the marks ostraca in dynasty 18 as compared to the marks ostraca from later times, see further below.

<sup>28</sup> Haring, 'Towards decoding the Workmen's Funny Signs', *GM* 178 (2000), 49-51. Soliman, *Of Marks and Men* (unpublished dissertation), chapter 3, section 3.2.2.

<sup>29</sup> In anticipation of chapter 2 we must remark that marking systems throughout Egypt from the Early Dynastic period onwards include marks that are at least graphically inspired by script. In the next chapter we argue that their corpora show similarities to the early marks in Deir el-Medina, which means that script may not have been the only source of graphic inspiration for the marks from group I; earlier marking systems may also have led to their selection and use in dynasty 18.

<sup>30</sup> Another ostrakon that belongs to this group is O.IFAO ONL 6316, but its marks are faded; see the database Symbolizing Identity, section 'Object', object number IFAO ONL 6316 for photographs.



Fig. I1-2 Neat handwriting in dynasty 18.

### Dynasty 19

In dynasty 19 the identity marks still display hieroglyphic forms, but they also begin to show cursive and hieratic forms. Furthermore, in addition to the mark , which continued to be used in dynasty 19, the number of group-writings increases. The marks that were used in dynasty 19 are presented in Table I1-3:

Table I1-3 Marks from dynasty 19, group I<sup>31</sup>

| Code                   | Mark | Code     | Mark | Code     | Mark | Code     | Mark |
|------------------------|------|----------|------|----------|------|----------|------|
| I 01.001               |      | I 04.054 |      | I 06.030 |      | I 07.005 |      |
| I 01.002               |      | I 05.034 | a    | I 06.031 | a    | I 07.026 |      |
| I 01.028 <sup>32</sup> |      |          | b    |          | b    | I 07.038 |      |
| I 04.006               |      | I 06.012 |      | I 06.035 | a    | I 07.047 | a    |
| I 04.010               |      | I 06.018 |      |          | b    | I 08.007 |      |
| I 04.028               |      | I 06.023 |      |          | c    | I 08.016 |      |
| I 04.036               |      | I 06.030 | a    | I 07.001 |      | I 10.001 |      |

<sup>31</sup> Some marks have been excluded, because they do not occur on ostraca, and are very rare on objects or in graffiti dated to dynasty 19-20. They can be found in Tables I3-1 and I3-2, but we will not include them in the discussion here.

<sup>32</sup> Only 3 occurrences in dynasty 19. The mark is especially known from dynasty 20 as belonging to *Kȝdr.t*. See Table I3-1.

<sup>33</sup> Only once in dynasty 19, on ostrakon IFAO ONL 6587, of which the context and interpretation remain unclear.

|                 |          |  |                 |          |  |                                  |          |  |                                |          |  |
|-----------------|----------|--|-----------------|----------|--|----------------------------------|----------|--|--------------------------------|----------|--|
| <b>I 11.002</b> |          |  | <b>I 15.001</b> | <b>c</b> |  | <b>I 21.013</b>                  |          |  | <b>I 27.011</b> <sup>34</sup>  |          |  |
| <b>I 12.004</b> |          |  | <b>I 15.005</b> |          |  | <b>I 21.026</b>                  |          |  | <b>I 27.012</b> <sup>35</sup>  |          |  |
| I 12.009        | a        |  | <b>I 15.006</b> |          |  | I 21.030                         |          |  | <b>I 27.013</b>                |          |  |
| <b>I 12.013</b> |          |  | I 16.004        |          |  | I 22.001                         |          |  | <b>I 27.013</b>                |          |  |
| <b>I 12.014</b> | <b>a</b> |  | <b>I 16.005</b> |          |  | <b>I 22.011</b>                  |          |  | <b>I 27.014</b>                |          |  |
|                 | <b>b</b> |  | I 17.004        | a        |  | <b>I 22.014</b>                  | <b>b</b> |  | <b>I 27.015</b>                |          |  |
| <b>I 12.015</b> |          |  |                 | <b>b</b> |  | I 22.022                         | a        |  | <b>I 27.017</b>                |          |  |
| I 12.017        | a        |  | I 17.008        | a        |  |                                  | b        |  | <b>I 27.019</b>                | <b>a</b> |  |
| I 12.034        |          |  | <b>I 17.011</b> |          |  | <b>I 22.025</b>                  |          |  |                                | <b>b</b> |  |
| <b>I 12.040</b> |          |  | <b>I 17.012</b> |          |  | <b>I 24.001</b>                  | <b>a</b> |  | I 27.020                       |          |  |
| I 13.001        |          |  | I 17.014        |          |  |                                  | <b>b</b> |  | <b>I 27.021</b>                |          |  |
| I 13.005        |          |  | I 18.012        | a        |  | <b>I 24.003</b>                  |          |  | <b>I 27.022</b>                |          |  |
| I 13.008        |          |  | <b>I 18.023</b> |          |  | I 24.005                         |          |  | <b>I 27.023</b>                |          |  |
| I 13.014        | a        |  | I 18.034        | a        |  | <b>I 24.008</b>                  |          |  | <b>I 27.025</b>                |          |  |
|                 | <b>b</b> |  |                 | <b>c</b> |  | I 26.009 <sup>36</sup>           |          |  | <b>I 27.026</b>                | <b>b</b> |  |
| I 13.028        |          |  | I 18.040        | a        |  | I 26.026                         |          |  | <b>I 27.027</b>                |          |  |
| <b>I 13.035</b> | <b>b</b> |  | <b>I 18.045</b> |          |  | I 27.001                         | a        |  | <b>I 27.028</b> <sup>37</sup>  |          |  |
| <b>I 14.006</b> |          |  | <b>I 19.010</b> |          |  |                                  | c        |  | <b>I 27.029</b>                |          |  |
| <b>I 14.028</b> |          |  | <b>I 19.032</b> |          |  | I 27.002                         | a        |  | <b>I 27.029</b>                |          |  |
| <b>I 14.036</b> |          |  | <b>I 20.002</b> | <b>b</b> |  |                                  | <b>b</b> |  | <b>I 27.031G</b> <sup>38</sup> |          |  |
| <b>I 14.045</b> |          |  |                 | <b>c</b> |  | <b>I 27.003GD</b> <sup>39</sup>  |          |  | <b>I 27.042G</b> <sup>40</sup> |          |  |
| I 14.049        | a        |  | I 20.006        |          |  | <b>I 27.004GTD</b> <sup>41</sup> |          |  | <b>I 27.052</b>                |          |  |
|                 | <b>b</b> |  | I 20.015        |          |  | <b>I 27.005P</b> <sup>42</sup>   |          |  |                                |          |  |
| <b>I 15.001</b> | <b>a</b> |  | <b>I 20.021</b> |          |  | <b>I 27008</b>                   |          |  |                                |          |  |
|                 | <b>b</b> |  | <b>I 20.023</b> |          |  | <b>I 27.009</b>                  |          |  |                                |          |  |

The marks that were newly introduced in dynasty 19 are presented in the Table in bold. We see that especially marks with phonetic complements and marks that are composed of two signs in group-writing differentiate the 19<sup>th</sup> dynasty corpus from the corpus in dynasty 18. Phonetic complements we see in /, /, /, / and /. Of these marks, both and occur in dynasty 18 without complements. Another mark that we know from dynasty 18 which gains a complement in later times is . The combination is not yet encountered on 19<sup>th</sup> dynasty ostraca, but it is seen twice in graffiti dated to

<sup>34</sup> Once, in graffiti 1748. Also once on pottery (dyn. 19-20).

<sup>35</sup> Once as a graffiti (dyn. 19); twice on pottery (dyn. 19-20).

<sup>36</sup> Only five times on pottery.

<sup>37</sup> Only on two ostraca dated to dyn. 19-20.

<sup>38</sup> Only once in a graffiti dated to dynasty 19 among other identity marks on the pavement of the Hathor temple (Bruyère Rap. 35-40 IV, fasc. II pl. IX).

<sup>39</sup> Thrice in graffiti. Once more on a domestic object (dyn. 19-20).

<sup>40</sup> Thrice in graffiti dated to dynasty 19 among other identity marks on the pavement of the Hathor temple (Bruyère Rap. 35-40 IV, fasc. II pl. IX).

<sup>41</sup> Once, in graffiti 1748. Twice more in graffiti 1747 and 2722 (dyn. 19-20). Also on a tool and on a wooden comb (dyn. 19-20).

<sup>42</sup> Only once on pottery, but equivalent to the more frequent mark I 18.045.

dynasties 19-20 (Theban Graffiti 0660 and 2673). Yet, in both cases it cannot be indisputably interpreted as identity mark, for the combination may also belong to the remains of a now illegible text. The mark  is, then, only attested with certainty in dynasty 20.

All marks with phonetic complements occur less often than their variants without complements. The mark  occurs 11 times in dynasty 19 and is in three cases provided with a complement *d*: once on ostrakon IFAO ONL 1383 and twice on pottery.<sup>43</sup> The date of the ostrakon is, however, uncertain. The combination is truly hieratic in form. We initially thought that it was not an identity mark, but simply hieratic script reading *šd*. Yet, the group occurs immediately in front of ; the combination  and  does not make sense in writing. This shows how close the marks can be to writing: they can resemble it in every respect, yet make no sense when read linguistically. As marks,  and  do make sense in that they could refer to *Nb-nfr* (i) and his son *P3-šdw* (iv). This remains speculation since we neither know whether  was indeed used by someone named *Nb-nfr*, nor is the identity of  and  secured by other sources.<sup>44</sup> Another option is to consider *P3-šdw* (xvi) as the person referred to on ONL 1383. He is attested with  in dynasty 20.<sup>45</sup> This would, of course, change the date of IFAO ONL 1383 to dynasty 20. Although hieratic forms occur in both dynasties 19 and 20, as we will soon see, they are more frequent in dynasty 20 and such a date would thus fit ONL 1383 in style as well.<sup>46</sup>

The marks , ,  and  are certainly marks with complements that are to be dated in dynasty 19, but each is extremely infrequent:  occurs once,  occurs four times, and  twice. Both  and  show an ordering of the signs similar to the block-writings known from script. Instead of  *t*, one specimen of  shows a vertical stroke which functions to fill the space that is created in the lower left corner by combining  with  *p*:  (IFAO ONL 6218). The signs in the mark  are also combined in a group conform script, yet *wn* and *n* are not ligatured as seen in many hieratic examples. Specimens in which *wn* and *n*, even double *n*, are ligatured appear in dynasty 20 only.

There is one last mark that shows a phonetic complement, which is also a new introduction in dynasty 19. However, it differs from the previous marks in one respect: it is a ligature that had become standard in hieroglyphic writing, and conform hieroglyphic script, a variant without the complement is rarely, if at all attested in the marking system. It concerns . It occurs 25 times on 19<sup>th</sup> dynasty ostraca, which is 35.21% of its total amount of occurrences on ostraca in dynasties 19 and 20. This shows that in contrast to the previous marks with phonetic complements it was immediately well integrated in the marking system. A variant of the papyrus plant without complement *d* was tentatively identified on two ostraca from dynasties 19-20, on one undated ostrakon, on one potsherd from dynasties 19-20 and on one potsherd from dynasty 19, although the latter is damaged and might also be a specimen of . The inspiration and model for this mark was clearly the hieroglyphic ligature that was standard for the writing of *w3d*.

<sup>43</sup> Potsherds Austin Shard 1 and Bruyère Rap. 28 II 113, fig. 63 nr. 039. Once more on a potsherd dated to dynasties 19-20: Bruyère Rap. 48-51 pl. XVII, 102.

<sup>44</sup> That is, there is an indication in the comparison of marks ostrakon IFAO ONL 6536 with the hieratic ostrakon DeM 0713+OIC 17007 for the identity behind  being that of *P3-šdw* (xiv); both record wood deliveries by the same men, although the quantities do not coincide. The two hypotheses, the first about the user of  being *P3-šdw* (iv), and the second about the user of  being *P3-šdw* (xiv), are extremely speculative, and we cannot base on them any serious conclusions as regards the nature of the marks and their relation to each other.

<sup>45</sup> Cf. the remarks with  in Table I3-1.

<sup>46</sup> Another option for an interpretation of the combination of  with  is given below, in the context of the frequent addition of the sign *nfr* to marks that are also attested without it.

The addition of complements and the organization of signs in blocks conform hieroglyphic script suggests a greater influence of script on the marking system. We can also discern this in the style of the marks.

When we consult Table I3-2 in which all specimens of the marks are collected, we see that most of the marks that were used in dynasty 18 and continued to be present in the corpus of dynasty 19 maintain hieroglyphic forms. It concerns the marks , , , , , , , , , , , , , , , , , , , , , , , , , , , , , . Only some specimens of , ,  and  show cursive, pseudo-hieroglyphic or hieratic characteristics, while ,  and  generally show no hieroglyphic specimens at all (see Table I3-1 for details on the forms these marks). Of those marks that were newly introduced in dynasty 19 several still show hieroglyphic forms, for instance specimens of , , , , , , , , , , , , , , , , , , , , ,  and . But influence of cursive and hieratic script is to a larger extent present in specimens of , , , , , , , , , , , , , , , , , , , , , , , , , , , ,  and one specimen of .

A difficulty in defining the forms of the 19<sup>th</sup> dynasty marks that are assigned to group I is the fact that the degrees in which signs of Egyptian script are cursive or hieratic are not yet fully defined.<sup>47</sup> We have just mentioned the terms ‘hieroglyphic’, ‘cursive hieroglyphic’, ‘pseudo hieroglyphic’ and ‘hieratic’, but the marks and their specimens cannot in all cases be satisfactorily placed within one or the other category. Thus, all 19<sup>th</sup> dynasty specimens of  lack the details that indicate the pendant of the collar, which is a significant feature of both the hieroglyphic and hieratic equivalents; and none of the 19<sup>th</sup> dynasty specimens  shows the loaf as it is represented in its hieroglyphic or hieratic forms. The specimens that represent a boat show three variants, of which ‘a’ and ‘b’ ( resp. ) could be called hieroglyphic, but c () is neither hieroglyphic nor hieratic. An abstract geometric trend seems to be present in these specimens, which causes them to appear as simplified linear representations of ,  and . Such an abstract linear style is even better seen in the mark , which occurs 11 times on ostraca from dynasty 19, but is hardly seen thereafter. It is only by comparing two specimens of the mark , which occurs exclusively in dynasty 20, that we can suggest that  in dynasty 19 was a simplified linear representation of  in dynasty 20: compare the specimens  and  of  on ostrakon IFAO C 7586 respectively ostrakon IFAO ONL 6253. In the cases of ,  and  the abstract linear forms disappear after dynasty 19, while the form  remained to be used in dynasty 20.

Cursive forms have their first appearance in dynasty 19. A mark that is newly introduced is the  bird (I 07.047): we find the cursive form  on ostrakon Schaden 153. Another cursive form is  (I 07.001) on ostrakon Schaden 061, which also shows cursive forms for  (I 06.035a) and  (I 20.015). Pseudo hieroglyphic forms also begin to emerge in dynasty 19. The term pseudo hieroglyphic applies to those specimens that combine hieroglyphic and hieratic features.<sup>48</sup> This is especially seen in the specimens  (O.IFAO ONL 6215),  (O.Cairo JE 96334)<sup>49</sup> and in  on ostrakon IFAO ONL 6226: neither of them shows a full hieratic form. Three other specimens of  in dynasty 19 do show correct hieratic forms, but in Table I3-2 it can be seen that pseudo hieroglyphic forms remain present in dynasty 20, and are even more frequent (18 occurrences as against 14 of hieratic form). True hieratic forms in

<sup>47</sup> This problem is at the core of the long-term project *Altägyptische Kursivschriften* under the direction of prof. dr. Ursula Verhoeven of the Johannes-Gutenberg Universität Mainz. It is hoped that the digital palaeography which it aims to create will better define the various degrees of cursive scripts and that the identity marks and their development in relation to script can be better defined in relation to its results.

<sup>48</sup> Haring, ‘On the Nature of the Workmen’s Marks’ in Andrassy et al. (eds.), *Non-Textual Marking Systems*, 124.

<sup>49</sup> The interpretation of O.Cairo JE 96334 is not entirely clear. It appears to represent commodities with marks and day numbers. Another specimen of  on this ostrakon shows the hieroglyphic form .

dynasty 19 are found in the specimen  (I 01.002) on ostrakon Cairo JE 96336; in the specimen  (I 14.036) on ostrakon IFAO ONL 6518; in the specimen  (I 12.015) on ostrakon IFAO ONL 6570;<sup>50</sup> and in  (I 05.034b) on ostrakon IFAO ONL 6585.

The last mentioned ostrakon shows that one specimen of hieratic form does not automatically mean that the entire ostrakon is in hieratic style: it also includes specimens that are hieroglyphic in form, such as  and . Since all other specimens of the hare in dynasties 19 and 20 are hieratic in style, and all other specimens of  and  are hieroglyphic in style, this reveals something about the nature of the marks themselves rather than of the ostrakon: the hieroglyphic forms  and  were the inspirational sources for  respectively , while specifically the hieratic form of the hare was the inspirational source for that mark. The difference can be attributed to the complex form of the hieroglyphic hare, which is easier and faster to render in hieratic style.

There are more ostraca that show differences in style between the marks and other information they contain. Consider the ostraca Schaden 013 and Schaden 016 in the Database *Symbolizing Identity*. Both show marks primarily in hieroglyphic style, but they also include hieratic numbers and in the case of ostrakon Schaden 013 even the hieratic sign  for (w)*d3.t*, ‘remainder’. While the marks were apparently inspired by hieroglyphic script, there was at least some knowledge of hieratic as well.

A final note may be added on the group-writings of class I 27 which, except for , are all new introductions. Many of them can be read as workmen’s names. Thus, the group , which occurs only in dynasty 19, can be read as *R<sup>c</sup>-h<sub>tp</sub>*. Indeed, a workman named *P3-R<sup>c</sup>-h<sub>tp</sub>* (i) is known to have lived in dynasty 19.<sup>51</sup> There is reason to assume that he used the mark , because on the potsherd Bruyère Rap. 48-51, pl. XVI.040 it occurs together with the mark , which belonged to *Nfr-<sup>c</sup>3b.t* (i).<sup>52</sup> *Nfr-<sup>c</sup>3b.t* (i) was *P3-R<sup>c</sup>-h<sub>tp</sub>*’s brother in law.<sup>53</sup> Another 19<sup>th</sup> dynasty group, , can be read *nb R<sup>c</sup>*.<sup>54</sup> The mark may in fact have been used by *P3-R<sup>c</sup>-h<sub>tp</sub>*’s brother, the workman *Nb-R<sup>c</sup>* (i).<sup>55</sup> The mark  is also exclusive to dynasty 19 and can be read as *hry p<sub>d</sub>.t*. It may have belonged either to *P3-hry-p<sub>d</sub>.t* (i), *P3-hry-p<sub>d</sub>.t* (ii), or to *P3-hry-p<sub>d</sub>.t* (iii), who all lived in dynasty 19.<sup>56</sup> A final example is the group , *nfr rnp.t*. As a mark, it may have belonged to one of the *Nfr-rnp.t*’s of Deir el-Medina, perhaps *Nfr-rnp.t* (ii), who was a sculptor in dynasty 19: on ostrakon IFAO ONL 6338 the mark  appears with several others, as well as with the depiction of a chisel. The mark  has a history in 18<sup>th</sup> dynasty Deir el-Bahri, where it is seen in the temple of Hatshepsut oftentimes accompanied by a date or a short note.<sup>57</sup> Presumably, it had functioned as a team mark there,<sup>58</sup> but this is unlikely in the case of the personal identity marks in Deir el-Medina. In

<sup>50</sup> Tentatively dated to dynasties 19-20. It is accompanied by drawings of uncertain nature.

<sup>51</sup> Davies, *Who’s who at Deir el-Medina*, 149-151, 153.

<sup>52</sup> The mark  can be linked to *Nfr-<sup>c</sup>3b.t* (i) because it is attested as determinative following his name spelled out  or . See, for instance, his stela in the British Museum, BM EA 305. Compare also the potsherd Bruyère Rap. 48-51, 050 nr. 045 in the Database *Symbolizing Identity*.

<sup>53</sup> Davies, *Who’s who at Deir el-Medina*, chart 11.

<sup>54</sup> Encountered on ostraca Cairo JE 46861 and IFAO ONL 0233; furthermore on the potsherd Nagel, Céramique 145, K.2.137.

<sup>55</sup> For this brother, see Davies, *Who’s who at Deir el-Medina*, 153-154.

<sup>56</sup> *Ibid.*, 2, 9-10, 13, 153-154.

<sup>57</sup> Wiczorek, ‘Building Dipinti in the Temple of Hatshepsut. Documentation work, season 2007/2008’, *PAM* 20 (2008), 203-211; *Ibid.*, ‘Building Dipinti in the Temple of Hatshepsut. Preliminary Remarks, 2005/2006’ in Gawlikowski & Daszewski (eds.), *Polish Archaeology in the Mediterranean XVIII. Reports 2006*, 285-289.

<sup>58</sup> See chapter 2 for more information on team marks as well as on their connection to dates and notes.

all these group-writings the marks rather seem to have become abbreviations for personal names rather than non-textual identity marks without any linguistic affinity.

All in all, the marks from dynasty 19 show that script gradually gained influence on the marking system: not only in the addition of phonetic complements and the organization of signs in block-writing, but also in the introduction of cursive, pseudo hieroglyphic and hieratic forms which are true characters from script rather than the pictures hieroglyphic forms represent, as well as in the inclusion of group-writings as abbreviations of workmen's names. In comparison to the less standardized collection of forms and orientations seen in dynasty 18, it furthermore seems that the marking system gradually became more uniform, drawing on script, hieroglyphic as well as hieratic, to provide the growing number of the system's users with identity marks.

### *Dynasty 20*

This development pushed through in dynasty 20. The marks of the 20<sup>th</sup> dynasty corpus are given in Table I1-4. Those marks that were newly introduced, either in dynasty 20 or at an undetermined moment in dynasties 19-20, are presented in bold.

**Table I1-4 Marks from dynasty 20, group I**

| Code             | Mark | Code                   | Mark | Code                         | Mark | Code            | Mark |
|------------------|------|------------------------|------|------------------------------|------|-----------------|------|
| I 01.001         |      | I 04.058               | a    | I 06.035                     | d    | I 12.009        | a    |
| I 01.002         |      | <b>I 04.060</b>        |      | <b>I 06.055</b>              |      | I 12.014        | a    |
| <b>I 01.019</b>  |      | <b>I 04.063</b>        |      | I 07.005                     |      |                 | bG   |
| I 01.028         |      | <b>I 05.010</b>        |      | I 07.026                     |      | I 12.014        | a    |
| <b>I 01.035G</b> |      | I 05.017 <sup>59</sup> |      | I 07.038 <sup>60</sup>       |      | I 12.017        | a    |
| <b>I 01.040</b>  |      | I 05.034               | a    | I 07.047                     | a    | <b>I 12.022</b> |      |
| <b>I 01.121c</b> |      |                        | b    |                              | b    | <b>I 12.023</b> |      |
| <b>I 03.001</b>  |      |                        | c    | <b>I 07.063</b>              |      | I 12.034        |      |
| <b>I 03.019</b>  |      | I 06.012               | a    | <b>I 08.006<sup>61</sup></b> |      | I 12.040        |      |
| <b>I 04.002</b>  |      |                        | b    | I 08.007                     |      | I 13.001        |      |
| I 04.004         |      | I 06.023               |      | I 08.016                     |      | <b>I 13.002</b> |      |
| I 04.010         |      | I 06.030               | a    | <b>I 09.012<sup>62</sup></b> |      | I 13.005        |      |
| I 04.028         |      |                        | b    | I 10.001                     |      | <b>I 13.007</b> |      |
| I 04.036         |      | I 06.031               | a    | I 11.001                     |      | I 13.008        |      |
| <b>I 04.040</b>  | a    |                        | b    | I 11.002                     |      | I 13.012        |      |
|                  | b    |                        | a    | <b>I 11.019</b>              | a    | I 13.014        | a    |
| <b>I 04.045</b>  |      |                        | b    |                              | b    |                 | b    |
| I 04.054         |      |                        | c    | I 12.004                     |      | <b>I 13.023</b> | a    |

<sup>59</sup> The mark occurs mainly in dynasty 20. There is one uncertain occurrence in dynasty 18. See the remarks in Table I3-1.

<sup>60</sup> The interpretation of the bird-form as a duck in dynasty 20 is uncertain; I 07.038 seems to be a mark exclusive to dynasty 18.

<sup>61</sup> Not dated. Only two occurrences somewhere in dynasties 19-20.

<sup>62</sup> One specimen, on ostrakon IFAO ONL 6473, might date earlier: the ostrakon is tentatively dated to dynasties 19-20.

|           |   |  |                         |   |  |                        |   |  |            |    |  |
|-----------|---|--|-------------------------|---|--|------------------------|---|--|------------|----|--|
| I 13.023  | b |  | I 17.019                |   |  | I 22.010               |   |  | I 27.018P  |    |  |
|           | c |  | I 18.003                |   |  | I 22.011               |   |  | I 27.019   | a  |  |
|           | d |  | I 18.012                | a |  | I 22.014               | a |  |            | b  |  |
| I 13.027  |   |  | I 18.014                |   |  |                        | b |  | I 27.020   |    |  |
| I 13.028  |   |  | I 18.023                |   |  | I 22.017               |   |  | I 27.021   |    |  |
| I 14.006  |   |  | I 18.028                |   |  | I 22.022               | a |  | I 27.023   |    |  |
| I 14.021  |   |  | I 18.034                | a |  |                        | b |  | I 27.024P  |    |  |
| I 14.024  |   |  |                         | b |  |                        | c |  | I 27.026   | a  |  |
| I 14.028  |   |  | I 18.040                | a |  |                        | d |  | I 27.028   |    |  |
| I 14.031  |   |  | I 18.045                |   |  | I 22.025               |   |  | I 27.029   |    |  |
| I 14.036  |   |  | I 19.003 <sup>63</sup>  |   |  | I 22.037               |   |  | I 27.030   |    |  |
| I 14.045  |   |  | I 19.010                |   |  | I 24.001               | a |  | I 27.032   |    |  |
| I 14.049  | a |  | I 19.018                |   |  |                        | b |  | I 27.033   |    |  |
|           | b |  | I 19.019                |   |  | I 24.003               |   |  | I 27.034G  |    |  |
| I 14.051  |   |  | I 19.022                |   |  | I 24.005               |   |  | I 27.035   |    |  |
| I 15.001  | a |  | I 19.032                |   |  | I 24.008               |   |  | I 27.036   | a  |  |
|           | b |  | I 20.002                | a |  | I 26.009 <sup>64</sup> |   |  |            | b  |  |
|           | c |  |                         | d |  | I 27.001               | a |  | I 27.037   | a  |  |
| I 15.002P |   |  | I 20.006                |   |  |                        | b |  | I 27.037P  | bG |  |
| I 15.005  |   |  | I 20.015                |   |  | I 27.002               | a |  | I 27.038   |    |  |
| I 15.006  |   |  | I 20.019                |   |  |                        | b |  | I 27.039   |    |  |
| I 15.056G |   |  | I 20.021                |   |  | I 27.004GTD            |   |  | I 27.040   |    |  |
| I 16.001  |   |  | I 20.037                |   |  | I 27.006               |   |  | I 27.043   |    |  |
| I 16.004  | a |  | I 21.004                |   |  | I 27.007               |   |  | I 27.044   | a  |  |
| I 16.005  |   |  | I 21.006                |   |  | I 27.008               |   |  | I 27.045   |    |  |
| I 17.004  | a |  | I 21.013                |   |  | I 27.009               |   |  | I 27.047   |    |  |
|           | b |  | I 21.016                |   |  | I 27.010               |   |  | I 27.049GT |    |  |
| I 17.008  | a |  | I 21.017                |   |  | I 27.011               |   |  | I 27.050   |    |  |
|           | b |  | I 21.026                |   |  | I 27.012               |   |  | I 27.051   |    |  |
| I 17.011  |   |  | I 21.030                |   |  | I 27.013               |   |  | I 27.052   |    |  |
| I 17.012  |   |  | I 22.004G <sup>65</sup> |   |  | I 27.016               | a |  | I 27.053   |    |  |
| I 17.014  |   |  | I 22.009                |   |  |                        | b |  |            |    |  |

The corpus from dynasty 20 shows more variation in classes of marks, especially in anthropomorphic figures and deities, in plants, buildings and in pots. Also, it includes a range of phonetic group-writings,

<sup>63</sup> Once only, and uncertain; see p. 32.

<sup>64</sup> Once in dynasty 20, but uncertain. The mark is rather specific for dynasty 18. In dynasty 19 it occurs five times on pottery.

<sup>65</sup> Only once in Theban Graffito 0077.

some of which occur only a few times and therefore seem to have been invented for specific workmen at the moment when necessary.<sup>66</sup> Others, especially those composed with the sign  (I 27.002b to I 27.013) are oftentimes also attested in singular form. They may be considered more elaborate abbreviations of workmen's names, such as   for *Nfr-ḥb.t*, otherwise attested with  (I 18.045); or   for *Wn-nfr* (iii), otherwise attested with  (I 05.034). The same might be suggested for  of *Nfr-rnp.t* (ii) and  (I 12.004), and for  of *Pz-Mn-nfr* and  (I 14.024). However, the addition of  is not always so easily explained, for instance in those cases where a link between 'nfr' and a workman's name cannot be made:   (I 27.003GD),   (I 27.004GTD),  (I 27.007) and  (I 27.013). The combination of  and  on ostrakon IFAO ONL 1383 that was mentioned above could be another example of the addition of  not related to the workman's name. Can the frequent addition of  in group-writings from dynasties 19 and 20 be otherwise explained? A tentative suggestion would be that  was added as an adjectival marker, emphasizing that the workman who was identified by means of the mark was 'tüchtig' or 'pflichtsgetreu'.<sup>67</sup> The duty rosters only appear in hieratic form in dynasty 20, but the practice of workmen on guard could be older than its first recordings. In fact, the 19<sup>th</sup> dynasty corpus of marks ostraca indicated as the Schaden ostraca appears to give the first recordings of duty rosters in marks.<sup>68</sup> For more details on the addition of  in individual cases, see the remarks in Table I3-1.

With regard to the 20<sup>th</sup> dynasty corpus in general, it is again conspicuous that those marks which we encounter already in dynasty 18 are generally found in hieroglyphic form. It concerns especially the marks  (04.036),  (04.058a),  (06.012a),<sup>69</sup>  (06.031a),  (06.035a),  (10.001),  (12.017a),  (13.005),  (13.008),  (13.012),<sup>70</sup>  (17.004a),<sup>71</sup>  (17.014) and  (24.005). Yet, in addition, we also find more influence of cursive and hieratic script on the forms and orientation of specimens in dynasty 20. Consider the specimens of  (I 13.028). Among them, five appear in hieroglyphic form (especially  on BTdK 565), but forms such as  on Cairo JE 72491 and  on IFAO ONL 6436 are rather cursive or hieratic, although none of the specimens shows the characteristic details and the exuberant arch which the rays of the rising sun can form in hieratic representations of .

Hieratic forms are also not clearly recognizable in the only two 20<sup>th</sup> dynasty specimens of  (I 14.031).<sup>72</sup> However, whereas the 18<sup>th</sup> dynasty specimens are consistently orientated vertically as in  on

<sup>66</sup> Examples are  (I 27.033),  (I 27.035),  (I 27.038),  (I 27.044),  (I 27.045),  (I 27.047),  (I 27.050) and  (I 27.053), if indeed all of them are workmen's identity marks. For details, see Table I3-1.

<sup>67</sup> WB II, 254.

<sup>68</sup> Soliman, *Of Marks and Men* (unpublished dissertation), chapter 5, section 5.3.2.2.

<sup>69</sup> The difference in hieroglyphic, cursive and hieratic forms of this mark cannot be clearly made on the occurrence of one isolated specimen, but compare the hieratic specimens in Möller II, nr. 148.

<sup>70</sup> Note the difference in orientation for this mark in dynasties 18 and 20. Cf. the remarks with I 13.012 in Table I3-1.

<sup>71</sup> Above was mentioned that the 19<sup>th</sup> dynasty specimens of this mark appear to indicate an abstract linear trend in that the form of the '+' is neither hieroglyphic nor hieratic. However, among the 20<sup>th</sup> dynasty specimens of this mark we do find some forms that approach the hieroglyphic form of  a little better; cf. those on the ostraca IFAO ONL 6537, 6549 and 6874 (although damaged, the top is clearly hieroglyphic).

<sup>72</sup> Which is also due to the fact that the sign  is very simple and hieratic forms do not differ considerably from hieroglyphic forms. See Möller II, nr. 364.

MMA 09.184.770, both 20<sup>th</sup> dynasty specimens are in horizontal orientation as seen in hieratic script.<sup>73</sup> Their forms are not clearly hieratic, but their orientation may reveal hieratic influence.

Among the 20<sup>th</sup> dynasty specimens of  (I 12.009a) we do see several forms that are cursive or clearly hieratic. Specimens such as  on ostrakon Ashmolean HO 1094, and similar forms on, among others, the ostraca Ashmolean HO 1095, Ashmolean HO 1250, Berlin P 10842, Berlin P 12625, BTdK 538 and Cairo JE 96328 clearly show a cursive scribal ductus, not only in the style of this specific mark, but in their overall style. In addition to  we find a more elaborate form of the lotus flower, for instance on ostrakon IFAO OL 170 (). Similar forms are found on the ostraca Ashmolean HO 0704, BM EA 50731, Cairo CG 25317 and Cairo CG 25325. They remind of hieratic examples in form (cf. Möller II, nr. 275), but also in orientation, which is consistently from right to left. In contrast, the flowers in dynasty 18 generally hang downwards.

Among the new introductions in dynasty 20 we find primarily cursive and hieratic forms. An example is the mark  with its variant  (I 04.040a-b). Most specimens are hieratic in form (e.g. O.Glasgow D 1925.80 and O. IFAO ONL 0310), but even those of which the style appears drawn rather than written (in particular those on O.München 398) still include a hieratic form for the complement *w*. They could be designated as pseudo-hieroglyphic in form. Hieratic forms we furthermore see in all variants of the hare (I 05.034a-c). The variant in which two phonetic complements *n* are added is exclusive to dynasty 20. In one example the complements occur in a true hieratic ligature with the hare:  on ostrakon BTdK 539. Curiously, this ostrakon shows another ligature of the hare with only one *n*: . In other combinations of the hare the signs are hieratic in style, but they are not ligatured; that is, they remain separate as in  on ostrakon BTdK 550. This might indicate that, although the signs were influenced by hieratic style, the mark in general was still considered a non-textual entity, not embedded in linguistic context.

Although not a new introduction, the mark  (I 07.047a) which is seen in hieroglyphic and cursive forms in dynasty 19 does show a curious transformation: all 20<sup>th</sup> dynasty specimens are hieratic (e.g.  on ostrakon Cairo JE 96647). We even find the variant , which shows the hieratic form of the *t3*-bird in group-writing with the complement *t* and a vertical stroke for *t3ty*, ‘vizier’. Another group-writings, that is in fact a new introduction and shows hieratic forms, is represented especially in the specimens  and  (I 27.036b) on the ostraca IFAO ONL 1371 and IFAO ONL 6185.

Yet, hieroglyphic forms remain present also in the marks that first appear in dynasty 20. Examples are several of the other specimens of  (I 27.036b), the mark  (I 27.045),<sup>74</sup> specimens of  (I 04.002), or specifically the specimen  (I 09.012) on ostrakon ARTP 99-027. Also, many specimens of  (I 11.019a) are hieroglyphic, or drawn or figural rather than written in style. Consider  and  on the ostraca IFAO OL 170 respectively ARTP 99-027. The reason may be that the mark has been attested for the scorpion-controller *Jmn-ms*: rather than referring to his name it referred pictorially to his function.<sup>75</sup> This may also explain the large degree of graphic variety that is seen among the specimens: some, such as  on ostrakon ARTP 99-027 and  on ostrakon IFAO OL 170, have four legs on each side of the body, while others such as  on ostrakon IFAO ONL 6250 only have two. The variation 

<sup>73</sup> See, for instance, the examples given by Möller II, nr. 364.

<sup>74</sup> See the remarks in Table I3-1.

<sup>75</sup> Cf. Soliman, *Of Marks and Men* (unpublished dissertation), chapter 4, section 4.2.7; chapter 6, section 6.5.1. In Part II chapter 2 we argue that this is metonymic signification.

only has one leg on each side. There are furthermore differences in the orientation of the tail and body. It seems that it was only important to convey the notion of the animal rather than the specific form it had in script. The same can be argued for a large group of specimens that show a variety of pots and jars, some of which are encountered already in dynasty 18 while others are new introductions. None of the specimens shows signs of cursive or hieratic influence: their forms remain hieroglyphic or, rather, figural in style. Similar to the scorpions, the pots and jars were perhaps not related to script: they may simply have referred to the depicted objects. This idea is strengthened by the fact that none of the values that we can ascribe to the pots coincides with a workman's name. The existence of many varieties, in which pots may or may not have one or two handles, spout liquid, have a neck or an oblong bulbous body, while many of them occur in the same or comparable sequences, suggests that details were insignificant and a specific rendering of one pot did not distinguish it from others. In other words, all variants could simply have conveyed the notion 'pot', referring to the object. This, Haring said, is 'an important difference with respect to the hieroglyphic writing system, in which the addition of details like handles and pouring liquid make<sup>(sic)</sup> different signs.'<sup>76</sup>

There are, thus, among the marks from group I examples that upon closer examination may not have been related to, or inspired by script. The underlying problem that blurs the distinction is the pictorial nature of hieroglyphic script. In general, however, most marks in dynasty 20 do seem to be related to script in that they convey meaning on the basis of phonetic value. The marks ostraca also contain more contextual information in dynasty 20 than in earlier times, especially in the case of the duty rosters which give a list of days, workmen and products brought by members of the outside personnel, the *smd.t n bnr*. They allow comparison with hieratic duty lists, on the basis of which matches between workmen and marks can be secured. These matches show that a mark, whether hieroglyphic or hieratic in form, was oftentimes a phonetic abbreviation of a workman's name. Thus we have  for *Ms* (iv),  for *K3s3* (v/vi),  for *K3y-dr.t* (i),  for *Jmn-nht* (ix),  for *Wsh-nmt.t* (i),  for *Hnmw-ms* (i),  for *Wn-nfr* (iii),  for *Wsr-h3.t* (ii),  for *Hr* (ii),  for *S3-W3d.t* (ii) and so forth. With respect to those marks that have a match in dynasty 20 we may speculate about their users in earlier times. For instance, it has been mentioned that the mark  was used by *Rš.w-ptr=f* in dynasty 20. He may have been the grandson of *Nfr-htp* (ii) to whom the mark could originally have belonged. Another example is the mark , which could be read *nb-nfr*. It occurs eight times on ostraca in dynasty 19 and three times more in graffiti.<sup>77</sup> Although the mark is not attested for a person named *Nb-nfr* and no match exists for dynasty 19, it is attested in dynasty 20 for the workman *B3k-n-wrnr* (vii).<sup>78</sup> The name *B3k-n-wrnr* has no connection to the phonetic value *nb-nfr*, and therefore we may hypothesize that this man adopted the mark from a family member who used it before him in dynasty 19. Unfortunately, we do not know *B3k-n-wrnr*'s ancestors, but we do know that he had a son called *Nb-nfr*, who in turn had a son called *B3k-n-wrnr* (viii).<sup>79</sup> It is, then, possible that *B3k-n-wrnr* (vii) himself had a father called *Nb-nfr*, from whom he inherited the mark.

<sup>76</sup> Haring, 'On the Nature of the Workmen's Marks' in Andrassy et al. (eds.), *Non-Textual Marking Systems*, 131.

<sup>77</sup> The mark furthermore occurs 6 times on ostraca dated to dyn. 19-20, 3 times on pottery dated to dynasty 19-20, and 8 times in graffiti dated to dynasty 19-20. It is also frequent in dynasty 20 with 33 occurrences on ostraca and 2 in graffiti.

<sup>78</sup> On the ostraca Ashmolean HO 0068 and ARTP 99/27. O.Ashmolean HO 0068 contains a hieratic text that mentions *B3k-n-wrnr* and *Nfr-hr* on the obverse, and presents their marks on the reverse; O.ARTP 99/27 can be compared to the name list on ostrakon DeM 831.

<sup>79</sup> Davies, *Who's who at Deir el-Medina*, chart 47.

The mark  $\mathfrak{b}$  is very reminiscent of  $\mathfrak{b}$ , which also suggests a reading *nb-nfr*. Yet, it remains uncertain whether the two marks are variants used by the same workman, or whether the addition of an extra  $\mathfrak{b}$  in  $\mathfrak{b}$  functioned to distinguish two marks used by two different workmen. The mark  $\mathfrak{b}$  is attested only twice on ostraca from dynasty 19, and once more in a graffito. It is much more common in graffiti dated to dynasties 19-20 or to dynasty 20. Three 20<sup>th</sup> dynasty graffiti (Theban Graffiti 0292b, 3284 and 3295) show  $\mathfrak{b}$  in close proximity to the mark  $\mathfrak{b}$ . The latter belonged to *Pn-t3-wr.t* (vii), who happened to be a son of a man called *Nb-nfr* (vii).<sup>80</sup> If indeed  $\mathfrak{b}$  and  $\mathfrak{b}$  were variants of the same mark, we may theorize that the *Nb-nfr* whom we suggested was *B3k-n-wrnr*'s father was in fact *Nb-nfr* (vii), and *B3k-n-wrnr* was the older brother of *Pn-t3-wr.t*. Davies remarks that *Nb-nfr* (vii) was active in the crew at least in years 23-24 of Ramesses III,<sup>81</sup> therefore, the use of  $\mathfrak{b}$  and  $\mathfrak{b}$  in dynasty 19 must go back even earlier. Here, however, we lose track: the name *Nb-nfr* is not known among the ancestors of *Nb-nfr* (vii).<sup>82</sup>

All in all, the influence of script on the marking system seems to be clearly present in the marks from dynasty 20, not only in their forms and orientation inspired by hieroglyphic, cursive and hieratic characters, but also in their use of phonetic value. The marks ostraca with duty rosters in particular highlight a development that shows an even stronger increase of the system of writing on the marking system. This is a development not so much concerned with the nature of single marks and specimens, but with the marks ostraca themselves. Consider figure I1-3, a compilation of ostraca from dynasty 18. They show a variety of formats in which the ordering and size of the marks differs. Ostrakon IFAO OL 6788 we have seen above as an example of the neat handwriting in dynasty 18. It shows marks that are all of the same relative size, ordered in tidy lines. These are two characteristics which the marks share with writing: linearity in lines or columns has traditionally been considered a characteristic of writing,<sup>83</sup> and the importance of the relative size of signs was stressed by Goldwasser, who said that in writing all characters are 'let loose in a wonderland where a house is the same size as a snake, a child and a locust'.<sup>84</sup> If the marking system would be of pictorial nature, would one not rather expect that the two mountains ( $\mathfrak{M}$ ) are larger than the loaf ( $\mathfrak{A}$ ), and the bird ( $\mathfrak{b}$ ) at least somewhat bigger than the bird's paw ( $\mathfrak{p}$ )? There are several other ostraca in dynasty 18 that show similar neat lines with same size marks;<sup>85</sup> clearly, the system shared these characteristics with writing from its beginning onwards. Yet, this cannot be said for all 18<sup>th</sup> dynasty ostraca. Ostrakon OWV 10 shows an untidy line with rather coarse marks underneath the line drawn up by the neat hand. The marks are differently sized compared to those in the line above, as well as compared among each other: especially  $\mathfrak{b}$  (I 17.004a) and  $\mathfrak{b}$  (I 27.001b) on the far right are smaller in size than  $\mathfrak{b}$  (I 12.009a). Although minor, these differences give the line less the standardized appearance of writing than the line above. Even coarser and in untidy grouping are the marks on ostrakon Cairo JE 96603. The order in which the marks must be interpreted is not clear. The same problem concerns the ostraca Cairo JE 96631, CG 24106, and OWV 05.

<sup>80</sup> Davies, *Who's who at Deir el-Medina*, 228.

<sup>81</sup> *Ibid.*

<sup>82</sup> *Ibid.*, chart 8.

<sup>83</sup> Which it is, but not of writing alone. See the Introduction to this dissertation; Marcus in Jackson, *Moche Art and Visual Culture*, 84.

<sup>84</sup> Goldwasser, *From Icon to Metaphor*, 24.

<sup>85</sup> Examples include the ostraca Stockholm MM 14130, OWV 03 and Cairo JE 72490. Cf. fig. I1-2 and the Database *Symbolizing Identity*.



**Fig. II-3** Ostraca from dynasty 18.

The marks on the 18<sup>th</sup> dynasty ostraca are sometimes accompanied by dots and strokes, possibly a system for counting absence or presence, but not by any other sort of information. This gradually changes in later times. Fig. II-4 shows examples of marks ostraca dated to dynasty 19. Although we still find marks in horizontal lines such as on the ostraca Schaden 016 and Hawass, we also find them in columns as seen on the ostraca Schaden 001 and IFAO ONL 6347. We do, however, occasionally still encounter untidy orderings such as on ostracon Schaden 137.<sup>86</sup> Generally, the marks on the ostraca are all of the same relative size. We sometimes see the addition of hieratic or pseudo hieratic numerals, for instance on ostracon Cairo JE 96352, or of commodities as on ostracon IFAO ONL 6221. The latter shows the marks , , ,  and  accompanied by vessels and mats(?). The dots inside the vessels may be a numeral system. All in all, the marks become embedded in more encompassing, multi-informative records.



**Fig. II-4** Ostraca from dynasty 19.

Fig. II-5, finally, shows examples of marks ostraca dated to dynasty 20. Some are organized in neat lines,

<sup>86</sup> Vague lines may be discerned, but they are not straight lines and certainly do not give the impression of linguistic writing.

others in columns. Ostraca such as IFAO OL 170 even show tidy delineated columns such as those found on tomb and temple walls. Many of the 20<sup>th</sup> dynasty marks ostraca contain other information in addition to the marks, for instance a date indicated by means of the sign *s* for *s(w)*, hieratic numbers – although not the hieratic numbers one regularly finds with dates in written sources –, and products brought by members of the *smd.t*-personnel. The ostraca with most information, such as O.IFAO ONL 0300, O.Fitzwilliam EGA 6120.1942 and O.Ashmolean HO 1247, contain similar data as the hieratic duty rosters.<sup>87</sup> Most of them were drawn up by the same hand. The person in question embedded the marks in the records, notating them among abbreviated hieratic notations for date and products. The marks are all of the same size, not only as compared to each other, but also as compared to the other pieces of information. They fit right into the lines, in size and in style; there is no optical disturbance in ‘reading’ the lines from the date on the right to the end of the lines on the left; an orientation that is moreover consequently adhered to and that is conform to hieratic script. Optical disturbance was, for instance, still seen on ostracon Cairo JE 96352 from dynasty 19 (fig. II-4) where large spaces are left open between the marks and hieratic numbers. The 20<sup>th</sup> dynasty records were clearly drawn up by someone who was used to writing hieratic records, and he embedded the marks almost as if they were writing. That is, the marks as a system *are* not writing in that they still include abstract and concrete representations, and in that they do not convey meaning in combinations based on linguistic rules; yet, textual and non-textual elements cooperate in these records to an extent that has made the line between writing and non-writing very thin.



**Fig. II-5** Ostraca from dynasty 20.

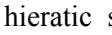
To sum up, a close look at the workmen’s identity marks that are allocated to group I creates the image of a growing *presence* of linguistic script and a growing *influence* of script on the marking system: in form, in orientation, and in contextual embedding. The question is now to what extent the marks that do not seem to be related to hieroglyphic or hieratic script confirm this image? What was their share and status in the marking system throughout the dynasties, and how did they develop?

<sup>87</sup> Haring, ‘Towards decoding the necropolis workmen’s funny signs’, *GM* 178 (2000), 45-58.

## *b. Group II*

### *b.1 Codification*

The marks that were assigned to group II are marks that do not have equivalent forms in hieroglyphic or hieratic script, or that may occasionally occur in script as pictorial, or semantic classifiers, but that have no phonetic value (examples are  and <sup>88</sup>). They appear to be either abstract-geometric in form, or they pictorially represent objects or beings. Initially, we simply collected these marks without internal organization under the codes II 001, II 002, II 003, and so forth. Since the corpus of marks was still growing and new marks were frequently added, we first needed to arrive at an overview before any form of classification could be suggested. At the end of 2014 we decided on a classification that was very loosely based on form. Roughly said, the classification runs from the double triangle, via marks with curved elements, to rectangular marks, to linear animal-like marks, to squares, to marks with a triangular element in them, to T-forms, to marks that contain full circles, to ‘ladder’-forms and to A-forms. However, in ongoing research it is inevitable that changes keep taking place. The most recent classification of the marks ascribed to group II is given in Table I1-5, but two remarks must be kept in mind:

- First, until recently new marks were still being added to the list.<sup>89</sup> They could not be fitted into the classification without rigorously adapting it. Rigorous adaptation of the classification, however, implied an adaptation of the coding system that we necessarily already incorporated in the dissertations. It was made a priority to finish the dissertations and to concern ourselves with changes in the corpus of marks at a later time. New marks were therefore simply included at the end of the list (in particular the marks II 048 to II 061G);
- Second, several marks were reinterpreted as being early forms of marks inspired by hieroglyphic or hieratic script. It concerns the mark  that was previously coded II 002, but that was discussed above as an early form of  I 18.012; the mark  that was previously coded II 013, but that is now considered an early form of  I 27.026; the mark  that was previously coded II 003, but is now considered to be a form of  I 04.046; and the mark  that was previously coded II 047, but is interpreted as a form of  and , I 15.001a-b. Again, in order not to make last-minute changes to the coding system, it was decided to leave such gaps open until a rigorous reorganization can be carried through.

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<sup>88</sup> WB IV, 86.15, *sb3*, ‘level’.

<sup>89</sup> That is, some were newly discovered, and others were uncertain as workmen’s identity marks, but were ultimately included on the basis of new finds or contextual information. Details are found in Table I3-1.

Table I1-5 Marks from group II

| Code   |   | Mark | Date   | Code   |   | Mark | Date   | Code   |   | Mark | Date       | Code    |   | Mark | Date   |
|--------|---|------|--------|--------|---|------|--------|--------|---|------|------------|---------|---|------|--------|
| II 001 | a | 𐤀    | 18-20  | II 014 | b | 𐤎    | 18     | II 030 |   | 𐤐    | 18-20      | II 045  |   | 𐤕    | 19-20  |
|        | b | 𐤁    | 18-20  | II 015 |   | 𐤏    | 18     | II 031 |   | 𐤑    | 18         | II 046  | a | 𐤖    | 19-20  |
| II 002 | - | -    | -      | II 016 |   | 𐤐    | 18     | II 032 |   | 𐤒    | 18-19      |         | b | 𐤗    | 19-20  |
| II 003 | - | -    | -      | II 017 | a | 𐤑    | 18, 19 | II 033 |   | 𐤓    | 18         | II 047  | - | -    | -      |
| II 004 |   | 𐤒    | 18     |        | b | 𐤓    | 18-20  | II 034 |   | 𐤔    | 18         | II 048  | a | 𐤘    | 18-20  |
| II 005 | a | 𐤔    | 18     | II 018 |   | 𐤔    | 18-20  | II 035 |   | 𐤕    | 18         |         | b | 𐤘    | 18     |
|        | b | 𐤕    | 18     | II 019 |   | 𐤕    | 19     | II 036 | a | 𐤖    | 18         | II 049  |   | 𐤙    | ?      |
|        | c | 𐤖    | 18     | II 020 |   | 𐤖    | 18, 19 |        | b | 𐤗    | 18, 19-20? | II 050  |   | 𐤚    | 20     |
| II 006 |   | 𐤗    | 18     | II 021 |   | 𐤗    | 18-20  |        | c | 𐤘    | 18         | II 051  |   | 𐤛    | 18, 20 |
| II 007 | a | 𐤘    | 18-20  | II 022 |   | 𐤘    | ?      | II 037 |   | 𐤙    | 18         | II 052  |   | 𐤜    | 20     |
|        | b | 𐤙    | 18     | II 023 |   | 𐤙    | 19     | II 038 | a | 𐤚    | 18         | II 053  |   | 𐤝    | 20     |
| II 008 |   | 𐤚    | 18-20  | II 024 | a | 𐤚    | 18     |        | b | 𐤛    | 18         | II 054  |   | 𐤞    | 20     |
| II 009 | a | 𐤛    | 18     |        | b | 𐤛    | 18     | II 039 |   | 𐤜    | 18-19      | II 055  |   | 𐤟    | 20     |
|        | b | 𐤜    | 18     |        | c | 𐤜    | 18     | II 040 |   | 𐤝    | 18-20      | II 056  |   | 𐤠    | 18     |
|        | c | 𐤝    | 18     | II 025 |   | 𐤝    | 18     | II 041 | a | 𐤞    | 18-20      | II 057  |   | 𐤡    | 20     |
|        | d | 𐤞    | 18     | II 026 |   | 𐤞    | 18     |        | b | 𐤟    | 19-20      | II 058  |   | 𐤢    | 20     |
| II 010 |   | 𐤟    | 18     | II 027 |   | 𐤟    | 18     | II 042 | a | 𐤠    | 19-20      | II 059  |   | 𐤣    | 19-20  |
| II 011 |   | 𐤠    | 18     | II 028 |   | 𐤠    | 18, 20 |        | b | 𐤡    | 19-20      | II 060  |   | 𐤤    | 19     |
| II 012 |   | 𐤡    | 18, 20 | II 029 | a | 𐤡    | 18-20  | II 043 |   | 𐤢    | 18-20      | II 061G |   | 𐤥    | 19-20  |
| II 013 | - | -    | -      |        | b | 𐤢    | 19-20  | II 044 | a | 𐤣    | 19-20      |         |   |      |        |
| II 014 | a | 𐤣    | 18     |        | c | 𐤣    | 18-20  |        | b | 𐤤    | 19-20      |         |   |      |        |

Although it has been mentioned that non-linguistic marks are often subdivided according to concrete forms and abstract geometric forms, it was decided not to make such a distinction for the identity marks in group II. The reason is that it became increasingly uncertain whether indeed the marking system contained forms that were of pure abstract geometric nature. As in the cases of and there are several others of which we suspect that they are either early forms of hieroglyphically or hieratically inspired marks, or linear representations of concrete objects or beings. It has, for instance, already been mentioned that may be an early form of . Furthermore, may be a variant of ; and may all represent offering basins or altars; may be an early form of a papyrus plant; may represent a fan; could represent the sun, ; and both and may be hieroglyphic or hieratic forms of *p*, or represent the stool as an object. Even for and we will make suggestions further below. In other words, the border between abstract geometric and concrete forms, and consequently the border with forms inspired by hieroglyphic script,<sup>90</sup> became increasingly blurred as research progressed; increasingly fewer marks could be designated as abstract geometric in nature or origin. It was decided that an explicit distinction between the two subclasses would not add significantly to the classification or the interpretation of the marks; in fact, it would rather complicate matters as we

<sup>90</sup> As hieroglyphic forms are in nature and origin representations of concrete objects or beings.

would have to deal with a distinction in speculative degrees of concreteness and abstractness within a group of marks that is already relatively small: 57 classes of marks as compared to the 201 classes in group I. Thus, in addition to a group with marks that are almost certainly concrete in form, such as , , and , we would have to create groups for marks of which we suspect that they are concrete to decreasingly lesser extent such as , , or , until we would end up with a very small group of marks that are presumably purely abstract geometric, mainly forms such as  or ; yet, none of these groups would be based on evidence that supports their status as ‘concrete’, ‘less concrete’ or ‘abstract’. In order to avoid arriving at an explicit distinction in the concrete or abstract nature of marks that we would not be able to defend, all marks with presumably different degrees of concreteness or abstractness are included in group II. Certainly, the fact that Table II-5 does not contain distinctions does not mean that distinctions between concrete and abstract geometric forms are not at all present in the marking system. Degrees of concreteness and abstractness of individual cases are discussed in Table I3-1, if not in the following text.

### *b.2 Development*

Table II-5 shows that the majority of marks from group II dates to dynasty 18. A fairly small corpus dates to dynasty 19 and a corpus comparable in size dates to dynasty 20. The corpora from dynasty 18 and dynasties 19 and 20 differ in several respects with regard to form as well as frequency of the marks.

In dynasty 18 we encounter marks that are certainly part of the standard corpus of the time in that they are frequent and used recurrently and systematically in similar or closely comparable clusters. Many of them seem to represent a concrete object or being, or the notion of an object or being. This can be said for marks such as  (II 034, ‘mirror’) and  (II 039, ‘papyrus plant’?), but also for marks that at first sight may appear to be abstract geometric in nature. Reasons to assume otherwise are their sometimes fairly complex and specific forms, as well as the fact that in some cases many graphic variants exist. Similar to the pots and the jars, the variants may indicate that details were insignificant because the notion would be evident in the approximate form. If the marks were pure abstract geometric in nature, it would be more important to stick to one form, since no underlying notion would guide one to the correct interpretation and identification. It concerns especially the marks , ,  and ;  and ; ; and ,  and . The mark  with its variants  and  is an example as well: it has a fairly specific form with a number of details on one or both sides that may vary in number. The form of the ‘body’ varies as well in that it can be oval or diamond in shape. This, however, is probably due to the method of production: the oval forms having been drawn, the diamond shapes having been embroidered or incised. A further reason to assume that the mark represented a concrete object or being is that it occurs in the exact form of  as a builders’ mark in the pyramid of Amenemhat II at Dahshur.<sup>91</sup> There, we also see the variants  and . The possibility that the forms were linear abstractions of a concrete object or being is considered more likely than that they were purely abstract geometric inventions which occurred in exactly in the same form at two sites that were geographically and temporally far removed.<sup>92</sup> The question what the mark represents remains unanswered thus far. Suggestions concerned a kind of pot or a sandal, but neither one is irrefutable.<sup>93</sup>

<sup>91</sup> Arnold, *The Control Notes and Team Marks*, 161 (AII.8).

<sup>92</sup> For a discussion of builders’ marks and the question to what extent they may have been sources of inspiration for the marks from Deir el-Medina, see the next chapter.

<sup>93</sup> See the discussion in Table I3-1, as well as in Part II, chapter 3.

It is notable that most of the marks that could be interpreted as early, abstract linear variants of hieroglyphic signs, are found in the 18<sup>th</sup> dynasty corpus. Thus, in addition to  (II 025) we find  (I 004) exclusively in dynasty 18. A relation to  (I 17.008) could be suggested, although that mark occurs in correct hieroglyphic form on several 18<sup>th</sup> dynasty ostraca, among which UC 31988 where we also find . The mark  (II 010) as well is found in dynasty 18 only and may be considered a variant of  (I 13.001). The latter is already attested in dynasty 18, but the stroke underneath the lower horizontal line in  might perhaps be interpreted in similar manner as the horizontal lines crossing or underlining  (I 16.004a) and  (I 18.040), discussed above. The form  can hardly be taken as a variant of  (I 13.002), because  occurs only rarely in dynasty 20. Another example is the mark  (II 031), which occurs frequently in dynasty 18 but disappears thereafter. The form reminds of the mace  in hieroglyphic script. However, Haring noted that ‘one significant feature of both the hieroglyph and its hieratic equivalent – the top of the stick projecting from the macehead – is absent ... and so it is possible that this is not a mace, but a mark of the ‘abstract’ or ‘geometric’ category: a mere combination of a circle and vertical stroke.’<sup>94</sup> Another reason to interpret it as such is the fact that the actual hieroglyphic mace, also in later times, does not seem to be part of the main corpus of identity marks; it is encountered only once, in dynasty 20.

In addition to , almost all of the marks that are well-known from the 18<sup>th</sup> dynasty corpus had disappeared in dynasties 19-20: , , , , , , , , and  are no longer seen. The corpus that remained is notably different, not only in marks, but also in the frequency in which they occur. Thus, we encounter a variety of square forms in , , ,  and , but they are all very infrequent and their status as identity marks is very uncertain.<sup>95</sup> Furthermore, we see ,  and  from dynasty 18, but they occur only once or twice in dynasty 19. The mark  (II 023) is seen four times in dynasty 19, but it may in fact concern a variant of  (I 23.008b); yet, that mark occurs only in dynasty 18 and the clusters of marks in which  and  occur do not compare well. Lastly, dynasty 19 contains a group of marks among which are  (II 059),  (II 060) and  (II 061G). They appear to be figural, but their meaning escapes us and their overall interpretation as workmen’s identity marks is not secured.

The core group in dynasty 19 is formed by five classes of marks, the specimens of which are relatively frequent or become frequent in dynasty 20: notably  (II 042a) and its double variant  (II 042b), and in addition  (II 041a),  (II 041b),  (II 044a),  (II 044b),  (II 045),  (II 046a) and  (II 046b). Most of them can be interpreted as representations of concrete objects or beings. Thus, the specimens , ,  and  of  clearly show that the middle vertical line ends in a circle. This may have represented the weight at the end of the rope of a level, a tool that was used in construction work and as such perhaps formed a source of inspiration for selection among the identity marks.<sup>96</sup> The mark  and its variant  could represent the bouquets of flowers that were used in offering rituals depicted on temple walls, as well as in private funerary culture.<sup>97</sup> The mark  represents a pomegranate, especially seen in the specimen  on ostrakon Schaden 001. The marks  and  are less easy to interpret, but a

<sup>94</sup> Haring, ‘On the Nature of the Workmen’s Marks’ in Andrassy et al. (eds.), *Non-Textual Marking Systems*, 128.

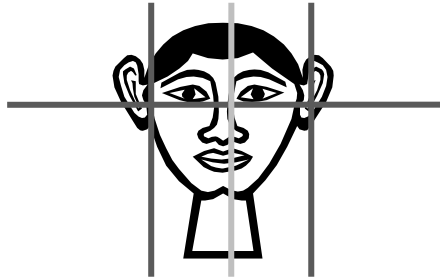
<sup>95</sup> See Table I3-1.

<sup>96</sup> See also p. 174 and fig. II2-40.

<sup>97</sup> Eaton, *Ancient Egyptian temple ritual*, 171ff. See, for instance, the reliefs in the courtyard of Ramesses II in the temple of Amun, Luxor, depicted in Part III, fig. III1-7. Dittmar, *Blumen und BlumensträÙe*, 33-37, Abb. 69, 73-77, 81, 85, 87 (StabstrauÙ).

suggestion can be made on the basis of the knowledge that the mark  $\text{𐀓𐀓}$  (I 27.012) can be ascribed to *Nfr-hr* (vi) in dynasty 20.<sup>98</sup> Because of the fact that the marks  $\text{𐀓}$  and  $\text{𐀓𐀓}$  alone were also used to refer to him,<sup>99</sup> it appears that  $\text{𐀓𐀓}$  can again be considered a more elaborate abbreviation of  $\text{𐀓}$  and  $\text{𐀓𐀓}$ . Could, then,  $\text{𐀓}$  respectively  $\text{𐀓𐀓}$  be interpreted as an extremely abstract sketch of the human face,  $\text{𐀓 hr}$ , forming the second component in the name *Nfr-hr*? Consider fig. II-6. The lines of the marks  $\text{𐀓}$  and  $\text{𐀓𐀓}$  could be considered the grid lines that indicate the most important facial features: the eyes, the ears or sides of the head, and in case of  $\text{𐀓𐀓}$  the mid- or nose-line. A mark that represents the human face as  $\text{𐀓}$  (I 04.002) is encountered in dynasty 20, but only 7 times as against a total of 99 occurrences of  $\text{𐀓}$  and  $\text{𐀓𐀓}$  in dynasties 19 and 20. Certainly,  $\text{𐀓}$  and  $\text{𐀓𐀓}$  are easier and quicker to draw than the face. Moreover, grid lines would not be an uncommon feature to the workmen; they were, after all, artisans.

An argument against equating  $\text{𐀓}$  and  $\text{𐀓𐀓}$  with the mark  $\text{𐀓}$  is, however, found on ostrakon IFAO C 7638. There, we find  $\text{𐀓𐀓}$  as the second mark in the rightmost column, while  $\text{𐀓}$  is found as the last mark in the leftmost column. A way out would be to consider  $\text{𐀓}/\text{𐀓𐀓}$  and  $\text{𐀓}$  as different identity marks that belonged to different workmen, yet both represented a human face: one in figural style and the other in abstract geometric style.



**Fig. II-6** The human face in grid lines, giving the marks  $\text{𐀓}$  and  $\text{𐀓𐀓}$ .

The marks  $\text{𐀓}$ ,  $\text{𐀓𐀓}$ ,  $\text{𐀓𐀓}$ ,  $\text{𐀓𐀓}$ ,  $\text{𐀓𐀓}$ ,  $\text{𐀓𐀓}$ ,  $\text{𐀓𐀓}$ ,  $\text{𐀓𐀓}$  and  $\text{𐀓𐀓}$  that dominate in dynasty 19 continue to dominate the corpus of group II in dynasty 20. In addition, dynasty 20 shows several specimens of  $\text{𐀓}$  (II 030) and  $\text{𐀓}$  (II 021). The latter, however, is predominantly found on pots as a pre-firing mark. That makes an interpretation of workman's identity mark unlikely and instead suggests an interpretation as potmark. The specimens, e.g.  $\text{𐀓}$  on BTdK K56, are very reminiscent of similar pre-firing potmarks found at Qantir.<sup>100</sup> They may relate to a specific workshop or potter. Finally, we find in dynasty 20 a group of marks that appear to be representations of concrete objects. It concerns  $\text{𐀓}$ ,  $\text{𐀓}$ ,  $\text{𐀓}$ ,  $\text{𐀓}$ ,  $\text{𐀓}$ ,  $\text{𐀓}$  and  $\text{𐀓}$ . They

<sup>98</sup> Cf. Soliman, *Of Marks and Men* (unpublished dissertation), chapter 3, section 3.2.2.

<sup>99</sup> Personal communication with Daniel Soliman. *Nfr-hr* occurs in many sources with duty rosters and the position of  $\text{𐀓}$  and  $\text{𐀓𐀓}$  on the marks ostraca compares well with his position in the hieratic sources.

<sup>100</sup> Ditzel, 'Gedrückt – Geritzt – Gekratzt' in Pusch (ed.), *Die Keramik des Grabungsplatzes Q1. Teil II*, 398-401. See also the next chapter, in which potmarks are discussed as a possible source of inspiration for the marks from Deir el-Medina.

occur in the context of the workmen's identity marks, yet may not in all cases be interpreted as such. Their meaning and interpretation escapes us.<sup>101</sup>

The reader may have noted that two marks have thus far been left out of the discussion. They stand out because they are universal:  $\Sigma$  (II 001) and  $\sqcap$  (II 029). Both are frequently attested in all periods, not only in Deir el-Medina as identity marks but, as we will see in chapter 2, also as potmarks since the Early Dynastic period and as builders' marks in the Old and Middle Kingdoms. The form of the mark  $\Sigma$  has been interpreted as the designation *ts.t* for 'team',<sup>102</sup> especially in the context of the Old Kingdom builders' marks. However, it is in those cases usually orientated horizontally in hieroglyphic form:  $\text{---}\text{---}$ . An indication for *ts.t* in Deir el-Medina is unlikely for at least three reasons: first, we are dealing with individual workmen and not with teams; second, the designation *ts.t* is not at all known from the written sources on the organization of work in the Theban Necropolis; and third, the identity mark II 001 is consistently orientated  $\Sigma$ , at least in dynasty 20, with only two examples of  $\bowtie$  in dynasty 18, and one in dynasties 19-20. The mark has a variant,  $\Sigma$ , which contains a vertical line that crosses the mark in the middle. This variant is consistently orientated  $\Sigma$  in dynasty 18, but often in horizontal position in dynasty 20. Perhaps this reflects that the mark had a different origin, but was conceptualized as  $\text{---}\text{---}$  *ts.t* in dynasty 20, the horizontal line being a crude designation of the knot in that sign? The variant  $\Sigma$ , however, remains dominant throughout the dynasties. Another suggestion was made by Pierre Grandet, who related the form  $\Sigma$  to the determinative of a folding stool (*'jsbw.t'*) as seen on the hieratic ostrakon IFAO ONL 1263.<sup>103</sup> Although such an association may indeed have arisen in dynasty 20, the hieratic determinative is unlikely to have been the source of inspiration for the forms  $\Sigma$  and  $\Sigma$  in dynasty 18. Nonetheless, the folding stool as an object was perhaps a source of inspiration. Although that suggestion would leave the crossing line in  $\Sigma$  unexplained, one could resort to the idea of familial derivation as suggested for  $\text{𓂏}$  and  $\text{𓂐}/\text{𓂑}/\text{𓂒}$ , a practice which in this case would continue into dynasty 20. It is, however, questionable whether the stool was also the source for  $\Sigma$  encountered as potmark at Early Dynastic Abu Roash or Abydos (see Table I2-1, chapter 2).

The mark  $\sqcap$  has also received multiple interpretations, from soul-house to the form of funerary constructions, basins, pools, and harbours.<sup>104</sup> Goldwasser related the form to the *bet*-grapheme in Proto-Sinaitic script from the time of Amenemhet III and IV.<sup>105</sup> This grapheme, seen for instance in Sinai inscriptions 359 and 346a, differs from the hieroglyphic, cursive or hieratic forms for the Egyptian sign *pr* which represents a house and is used to write the word 'house'. Following Hamilton, Goldwasser rather suggests a connection to the soul-houses which were 'common in the Middle Kingdom' and 'certainly

<sup>101</sup> That is,  $\text{𓂏}$  resembles a broom, but speculation ends here. The form  $\text{𓂐}$  resembles a necklace, but we do not know whether it indeed represented a necklace and, if so, if it is in any way related to the marks I18.012a and b ( $\text{𓂐}$ ,  $\text{𓂑}$ ). The form  $\text{𓂒}$  occurs only once and resembles the hieratic sign seen in Theban Graffito 1224:  $\text{𓂒}$ , which Ali interprets as a Middle Hieratic form of  $\text{𓂒}$  (Möller I, nr. 33). See Ali, *Hieratische Ritzinschriften aus Theben*, 95. Yet, it also reminds of Möller I-III, nr. 524 ( $\text{𓂒}$ ). Both  $\text{𓂒}$  (I 01.001) and  $\text{𓂒}$  (I 21.004), however, occur only once as workmen's marks in dynasty 20.

<sup>102</sup> WB V, 402.

<sup>103</sup> Pierre Grandet on 'Quelques ostraca de l'IFAO' during the conference Deir el-Medina and the Theban Necropolis in Contact, 27-29 octobre 2014, Université de Liège.

<sup>104</sup> Bomann, *The Private Chapel in Ancient Egypt*, chapter 7.

<sup>105</sup> Goldwasser, 'Canaanites Reading Hieroglyphs II. The Invention of the Alphabet in Sinai', *Egypt and the Levant* XVI (2006), 143, 145-146.

appropriate to the social environment of the miners' of Canaanitic origin in Serabit el-Khadim.<sup>106</sup> She argues that this representation in the *bet*-grapheme is a 'clear example of the mixture, in one grapheme' of two referents: one taken from written hieroglyphic forms and another taken from a 'real life' object.<sup>107</sup> As such, the grapheme forms the bridge between the concept 'house' and the concept 'soul-house' as a specific type. The concept 'soul-house' may also be understood as a type of offering table,<sup>108</sup> and as such is related to specific types of offering altars or basins shaped in the form . Such altars and basins are particularly a feature of the New Kingdom:<sup>109</sup> several have been found at the villages of Amarna and Deir el-Medina, as well as at Deir el-Bahri, and they are depicted in tomb paintings in the Theban Necropolis.<sup>110</sup> Curiously, two different identity marks of this shape were in use in dynasty 18:  and  (with graphic variants  and ). The fact that they cannot be equated appears from their fairly frequent occurrence on the same ostraca, for instance on O.KV 10002, O.IFAO ONL 6340 and O.IFAO ONL 6316. The form  disappeared after dynasty 18 while  remained in use.

All in all, a development parallel to the increase of marks from group I in dynasties 19 and 20 is seen in the decrease of marks from group II. Whereas in dynasty 18, 56 of the approximately 111 marks in total<sup>111</sup> could be argued to belong to group II (i.e. 50.45%), the numbers for dynasties 19 and 20 are 33 out of 141 in total (23.40%), respectively 36 out of 203 in total (17.73%). Moreover, the marks from group II in dynasty 18 are well-known and were recurrently used in similar clusters, while the marks from group II in dynasties 19 and 20 are all very infrequent and uncertain, with the exception of 'the big five': , , , ,  and . This supports the idea of a growing influence of hieroglyphic and hieratic script on the marking system in the course of dynasties 19 and 20: in the repertoire of marks, and in their style, orientation and contextual embedding. The result is consistent with Haring's conclusions on the growing number and formalization of texts in general at the end of dynasty 19 and in the first half of dynasty 20. It seems indeed that 'people had discovered that' writing 'offered advantages', or could serve as '*aide-mémoire*'.<sup>112</sup> The marking system may have formed itself more and more in accordance with linguistic script, because it had to function in a growing community: whereas a limited number of approximately 40 to 45 marks that functioned to identify workmen in the earliest community in dynasty 18 could quite be easily remembered, it became increasingly difficult to remember which workman used which mark in a system that was continually and intensively used by succeeding generations in an ever changing community for over several hundreds of years. The recourse to signs from script that phonetically linked a workman to his mark may have been a mnemonic aid when the number of users of the system and the records of their work increased.

<sup>106</sup> Goldwasser, 'Canaanites Reading Hieroglyphs II. The Invention of the Alphabet in Sinai', *Egypt and the Levant* XVI (2006), 145.

<sup>107</sup> *Ibid.*, 146.

<sup>108</sup> *Ibid.*, 146, referring to Žába (1974).

<sup>109</sup> Bomann, *The Private Chapel in Ancient Egypt*, chapter 7.

<sup>110</sup> *Ibid.*, 107. The T-shaped basins found at Deir el-Bahri and Deir el-Medina were found in connection with funerary gardens. For altars, see also Weiss, 'Personal Religious Practice', *JEA* 95 (2009), 206 with note 114.

<sup>111</sup> The marks in Table II-2 and those from dynasty 18 in Table II-5.

<sup>112</sup> Haring, 'From Oral Practice to Written Record in Ramesside Deir el-Medina', *JESHO* 46/3 (2003), 266.

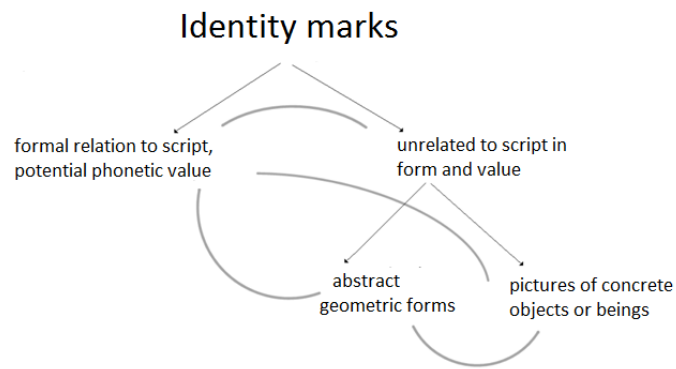
## 2 THE PROBLEM OF BLURRED BORDERS

The description we have given of the marks as being divided in groups I and II may initially be convenient and helpful in describing and gaining an overview of the corpus in its totality. However, it soon leads to problems, some of which we have already encountered. The problems can be summarized as follows:

- There is uncertainty as to whether marks of hieroglyphic form convey phonetic sound, especially in dynasty 18 when marks may only approximate the forms of hieroglyphic signs. The degree of uncertainty is larger for marks with hieroglyphic forms than for marks with hieratic forms as the latter show at least knowledge of script, and therefore presumably make use of it. Yet, even in hieratic cases there is the possibility that only the form was used to convey the notion depicted in the hieroglyphic equivalent. The problem that underlies this uncertainty is the fact that hieroglyphic script, and in derivation hieratic script as well, is pictorial in nature;
- As such, group I may contain marks that may look like signs from script, but that are unrelated to it in their origin. Examples were the scorpions and the pots and jars with all their graphic variations. They did not originate in a standardized, specific graphic representation that was used in script, but rather found inspiration in the notion of the object or animal itself. In conveying merely this notion, details that were standardized in script were insignificant; a pot is a pot, whether with or without handles;
- There is further uncertainty as to whether marks of a concrete form do or do not refer to phonetic words in the language, especially in the cases of , , ,  and . The first four may be encountered as pictorial signifiers, and may therefore relate to linguistic concepts such as 'level', 'pomegranate' and 'mirror'; the latter may be 'k3';
- Finally, there is uncertainty as to whether 'abstract' marks are in fact abstract.

The classes are therefore far from defined. Although it is a universally encountered classification, the distinction between groups I and II is made purely on the basis of a modern interpretation of forms. Closer examination reveals that marks as well as single specimens may cut across borders. We are dealing with degrees of abstractness or concreteness, or *degrees of iconicity*, present in the execution of marks from both groups I and II. These degrees of iconicity may, moreover, change over time: were the forms , ,  and  considered abstract geometric in dynasties 18 and 19, or was their pictorial nature recognized? Perhaps a phonetic value was even attached to them if this pictorial nature was related to a particular sound-pattern?

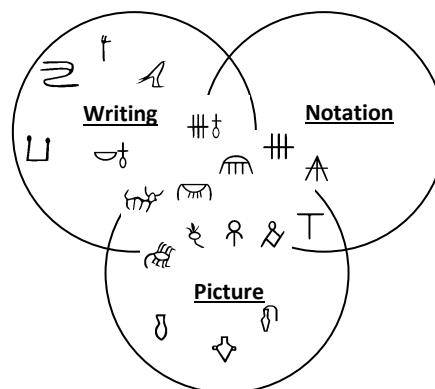
Thus, can we in fact draw a line, first, between concrete and abstract forms and, second, between forms related to script and forms not related to script? In doing so, we actually lapse into traditional perspectives on 'writing' and 'visual communication'. Recall fig. 0-2 from the Introduction, here presented in adapted form:



**Fig. 11-7** The universal classification of marking systems in traditional perspectives.

We need a more fluent representation that allows transitions and overlapping classes in which marks and single specimens can be considered ‘more or less concrete’, ‘more or less abstract’, ‘more or less inspired by script’; a model that furthermore allows to accommodate the development of the marking system as it was described above; a model, such as the one proposed by James Elkins.

#### The Venn Diagram of Visual Communication



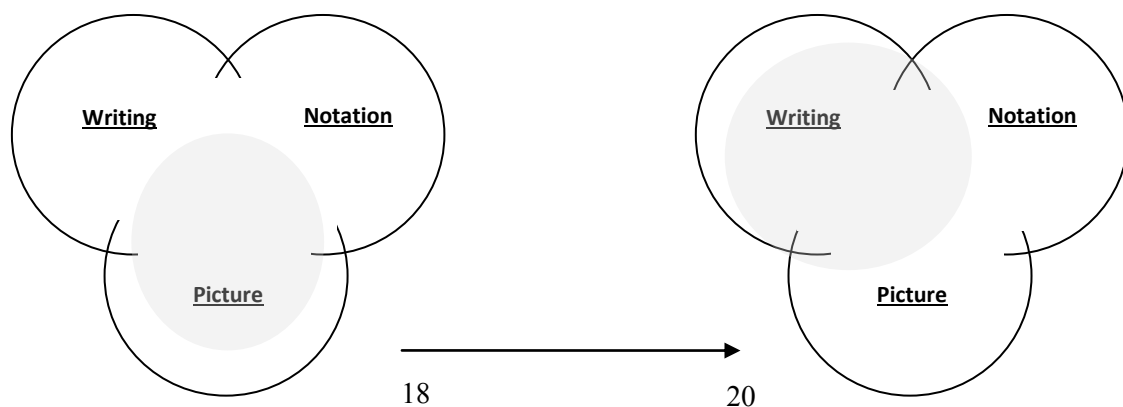
**Fig. 11-8** The Venn-diagram of visual communication as proposed by James Elkins. Elkins, *The Domain of Images*, 85-86.

The model by Elkins appears to be a convenient tool to represent the flexibility in the nature and origin of the marks if we understand the domains as follows:

- The domain of Writing contributes where marks have a form that is related to script and convey meaning on the basis of phonetic value. It contains especially marks from dynasty 20 such as 𒍪, 𒍫, 𒍬, 𒍭 and 𒍮. Yet, it is open toward the other domains and may therefore also relate to ‘fuzzy members’ such as 𒍯, which may be located more toward the domain of picture in that it is uncertain whether the mark conveyed phonetic value, and 𒍰 which may be located more toward the domain of notation in that it is neither a sign from script, nor a pictorial representation, but rather an abstract notation of the pictorial 𒍱;

- The domain of Picture contributes where marks represent a concrete object or being, whether or not they convey phonetic sound. Those marks that prove to convey sound but that are of hieroglyphic or pictorial form, such as , are located closer to the domain of Writing; those marks that prove not to convey sound but are pictorial in form, such as the pots and jars, are located toward the core of the domain; and those marks that prove not to convey sound and in their pictorial nature approach a geometric abstraction, such as  or  are located more toward the domain of Notation. Marks such as  and  may, similarly to , be located in the domain of Picture in possible overlap with the domain of Writing;
- The domain of Notation contributes where marks are of a form that is neither known from script, nor known as a pictorial representation. Rather, it concerns other forms of notation that have, to modern eyes at least, an abstract appearance. Marks such as  and  may be tentatively located toward the middle overlap in that they might be a schematic representation of a phonetic hieroglyph from script. In the variant  it is even closer to the domain of Writing. A mark such as  may be tentatively located toward the domain of Picture in that it is possibly a semantic classifier in the word   ,<sup>113</sup> and could thus have pictorial value.

It is crucial to leave the borders between the domains open. Each domain, then, contributes to the nature of the marking system as a whole, but the degree of each domain's contribution may vary over time. Without anchoring the marks, we can say that the corpus from dynasty 18 with its relatively large portion of pictorial and abstract marks in addition to forms that may be hieroglyphic in nature is spread over the domain of Picture, fanning out to the domain of Writing on the one hand and the domain of Notation on the other. The corpora of dynasties 19 and 20 shift further toward the domain of Writing, but stay in touch with the domains of Picture and Notation. In a visual representation:



**Fig. I1-9** The changing nature of the marking system over time, represented as a shift of emphasis with regard to the contributing domains.

This remains, however, an approximation to a classification of the marks, which is to a large extent still based on form as we do not know precisely how most of the marks were used. We may recognize in their specimens aspects from a domain of Writing, a domain of Picture and a domain of Notation, but how did

<sup>113</sup> WB IV, 86.

the marks convey meaning? To answer this question, we must submit the marks to meticulous semiotic study, which we will do in Part II. For now, the model as presented in figs. II-8 and 9 is offered as a consideration in overcoming the problem of representing blurred borders. Instead of ignoring them, these blurred borders must be recognized, for it is not in the distinct classes of a classification that we find the nature and origin of the workmen's identities marks; it is rather in the transformations and the overlapping areas that the nature of the system is defined, synchronically per time-frame as well as diachronically over time.

