Marking and writing in an Egyptian workmen's community

Haring, B.J.J.; Bodel, J.; Houston, S.

SEVEN

MARKING AND WRITING IN AN EGYPTIAN WORKMEN'S COMMUNITY

Ben Haring

INTRODUCTION

Writing can be considered an extremely successful, if not the most successful system of graphic communication invented by mankind. It has surely taken hold of the human mind in much of the modern world, and it has probably done so in variable proportions of human society ever since its invention in the late fourth millennium BCE. People have an urge to read and to decipher. When confronted with a cluster of strange graphic signs, observers acquainted with writing will immediately attempt to read, that is, to recognize graphs as representing familiar characters, and to make sense of graphic spatial ordering.[1] Such an attempt remains unsuccessful if the graphic system or the underlying language are insufficiently understood, and is certain to fail if the graphic system is not writing at all, that is, not based on human language. For writing is by no means the single system that works with ordered clusters of recurrent graphic signs. Non-linguistic sign systems abound, even within the graphic

* This chapter is based on the results of the research project "Symbolizing Identity. Identity Marks and Their Relation with Writing in the New Kingdom Egypt," which was conducted from May 2011 to August 2015 under the supervision of the author and with the support of the Netherlands Organization for Scientific Research (NWO). It included the PhD students Kyra van der Moezel and Daniel Soliman, whose theses were both accepted at Leiden University in September 2016 (van der Moezel 2016; Soliman 2016). The research team also included Olaf Kaper, Rob Demarée, Alex de Voogt, and Dirk de Vries. For a synthesis of the results, see Haring 2018. I wish to thank Helen Richardson-Hewitt for correcting my English.

domain; they are of many different types, and they existed long before writing was invented (see Kammerzell 2009 for a summary overview). The recurrent geometric signs found in the context of pictorial scenes in European Palaeolithic rock art present an example from a remote past (hence still poorly understood);[2] modern musical notation is an entirely different example. Scholarly discussion of these and other examples often reveals another shortcoming of the modern literate mind as well, which is to see such graphic sign systems as alternatives to writing, or more generally to classify them as "non-writing." By making writing the standard, either explicitly or subconsciously, and regarding other systems as deviations, we potentially miss much of their significance already.

The urge to read is not restricted to writing alone. The use of a visual code for communication requires consensus and common knowledge of the code, which explains why many systems of graphic signs have important characteristics in common with writing.[3] Notions such as "visual literacy" and "pictorial syntax" try to grasp these characteristics, and their wording betrays – again – that writing is the point of reference. They are used in, for instance, the tremendously stimulating book *The Domain of Images* by art historian James Elkins (1999: 23, 208, 212; see also Garipzanov 2015, and Chapter 9 in this volume, for the notion of "graphicacy"). Elkins divides the spectrum of visual communication into three categories: writing, picture and notation, the last applying to abstract devices that are neither written nor pictorial, such as layout, grids and diagrams.[4] Although the concepts and their definitions may seem at first sight to be contrastive, exclusive, even negative (picture and notation are not writing, notation is not writing and not picture), the author takes care to point out that they are always found in combination, and that none of them occurs in its "pure" form. Visual signs, in other words, are always a mix of at least two of these components. Commercial logos, for instance, often combine picture and writing, as if one is not considered complete without the other (Perrin 2013; Depauw 2009: 208–11).

There is in fact no written text that entirely lacks iconic or notational elements: a printed book does not necessarily have pictures, but its text is pictorial in having font type, perhaps calligraphy, and notational in having spatial organization of characters and lines. Reversely, a non-linguistic visual code may show fundamental or superficial similarities to writing and thus invite, even deceive, the "reading" human mind.

THE DEIR EL-MEDINA MARKING SYSTEM

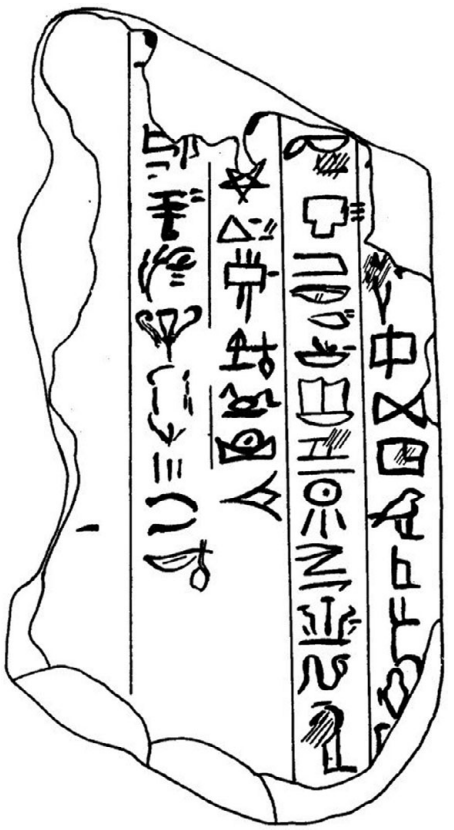
One specific type of graphic sign system, different from writing but closely related to it, is that of identity marks: graphic signs expressing the identity of individuals or groups for a variety of purposes, practical, cultural, religious, or

	Ramesside Period	
Dynasty XVIII 1539–1292	Dynasty XIX 1292–1191	Dynasty XX 1190–1077

7.1 Chronological table of the Egyptian New Kingdom, with years in BCE (from Hornung et al. 2006: 492–593). The starting (1539) and closing year (1077) are approximate.

7.2 Rows of marks on ostracon Cairo CG 24105, Eighteenth Dynasty, ca. 1400 BCE (limestone, 48 × 13 cm) (from Daressy 1902: pl. XVIII).

otherwise.[5] This chapter concentrates on one specific system of this type, the identity marks used within the community of royal necropolis workmen at Thebes during the Egyptian New Kingdom (ca. 1539–1077 BCE; Figure 7.1). These men constructed and decorated the royal tombs in the Valley of the Kings and the Valley of the Queens, and were housed with their families in a settlement nearby, nowadays an archaeological site called Deir el-Medina. The marking system itself was not writing, but was closely connected with it, and it was used in a society that had already known writing for almost two millennia. In fact, the marks discussed here very often take the form of hieroglyphs, and series of such marks arranged horizontally or vertically on fragments of pottery and limestone (ostraca) bear superficial resemblance to hieroglyphic texts (Figures 7.2 and 7.3). Thus, they could not fail to attract the attention of reading Egyptological minds from the moment they showed up in excavations and in museum collections, and were classified initially as hieroglyphic or cursive writing. They could not really be read as linguistic text, however, and until recently they tended to be discarded by some as "funny," "fantastic," even as "cabbalistic" signs. More productive approaches have also been taken. Already more than a century ago it was suspected that the signs stood for individual workmen, and that the dots or strokes sometimes accompanying them stood for the numbers of days the men had shown up for work (Daressy 1902: 64–65, who also called them "signes de fantaisie"). Alternative interpretations have also been suggested (e.g., as alphabetic signs), and throughout the



7.3 Columns of marks on ostracon Turin CG 57008 [Cat. 2169], Twentieth Dynasty, ca. 1150 BCE (limestone, 15 × 8.5 cm) (from López 1978: pl. 9).

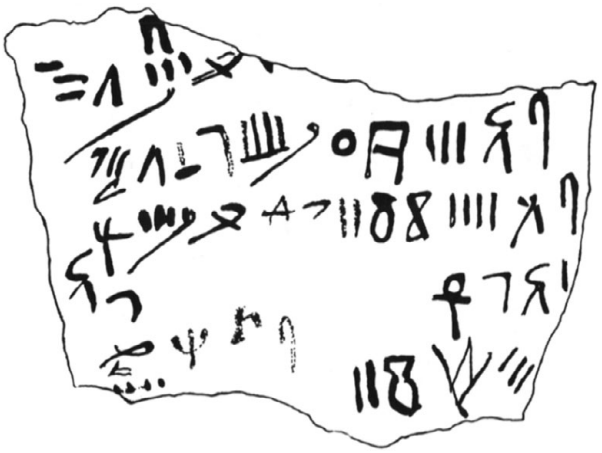
twentieth century scholars confronted with the material did not reach consensus (Haring 2018: 14–21).

The decipherment of an early Twentieth Dynasty ostracon inscribed with marks and additional notations was the decisive step towards understanding the system (Haring 2000), and after several years of collecting data and preliminary analysis a research project at Leiden University tackled the entire corpus of material, as a result of which the system is now understood reasonably well.[6] The research was especially concerned with the occurrence of marks on ostraca, a unique feature of this particular marking system.

Presently we know of over a thousand such ostraca of limestone and pottery. Most date to the second half of the New Kingdom, the Ramesside period (Nineteenth and Twentieth Dynasties, 1292–1070 BCE). Ramesside ostraca with marks often record the same type of information as is found in documentary hieratic ostraca: name lists, accounts and journal entries with respect to work, workmen and supplies. These documents can have very elaborate forms, in which marks are combined with signs referring to deliveries of commodities, and with numbers in hieratic (Figure 7.4). Hieratic documentary texts are lacking for the first half of the New Kingdom, the Eighteenth Dynasty, but it seems that the ostraca with marks, strokes and dots from that period are also records of work.

The marks likewise occur in the same community on pottery vessels and dishes, on textiles and on objects of daily use. In such contexts, they are probably to be understood as ownership marks, which is a universally attested use of identity marks. More similar to their use on ostraca is their occurrence in graffiti in the Theban mountains, either as single marks or in clusters, which seem to mark the presence of individuals for votive or other purposes. Like ostraca, graffiti with marks seem to be parallel to written (i.e., hieratic) graffiti. Taken together, the corpus of objects and places inscribed with necropolis workmen's identity marks runs into the thousands.

It is difficult to say why marks were so frequently used in the workmen's community, initially on pottery vessels, clothing and other possessions as



7.4 Ostracon Strasbourg H 13, Twentieth Dynasty, ca. 1160 BCE (pottery, 9 × 13.5 cm) (from Koenig 1997: pl. 6).

property marks, as well as on ostraca for administrative purposes; later also as votive inscriptions and graffiti. Pot marks – expressing ownership or other things – are very rare on New Kingdom pottery but exceedingly popular at Deir el-Medina (Aston 2009). The use of the same marks on ostraca (in horizontal rows, vertical columns, or unorganized clusters) and in votive graffiti has no parallels in Egyptian history; comparable phenomena in other cultures are rare and similar only to a limited extent.[7]

Thus, the Deir el-Medina marking system appears to be exceptional, not so much in its presence and morphology, but rather in the frequency and purposes of its applications. It is probably no coincidence that the workmen's community of Deir el-Medina is exceptional in other respects as well. One exceptional phenomenon that has struck Egyptologists is the presence and extent of literacy, as evidenced by massive numbers of hieratic texts on ostraca and papyri locally produced and discarded. Estimates of the proportion of fully literate members of the community range up to 40 per cent of the male adult population (Janssen 1992: 82). This is truly exceptional in a society where full literacy is thought never to have risen above 1 per cent prior to the Hellenistic period (Baines and Eyre 1983: 65–72; republished and updated in Baines 2007: 63–93, 172–74). One cannot help thinking that this circumstance must have had consequences for the local use of identity marks. It might even explain their popularity as a notation system closely related to writing. But why would such a system have been so popular, if writing was already abundantly present?

There is an even more serious problem with the explanation suggested above. The textual output of the community, and the literacy estimates based on it, are only there for the Ramesside period. As yet no locally produced hieratic texts are known to date from the Eighteenth Dynasty. There was

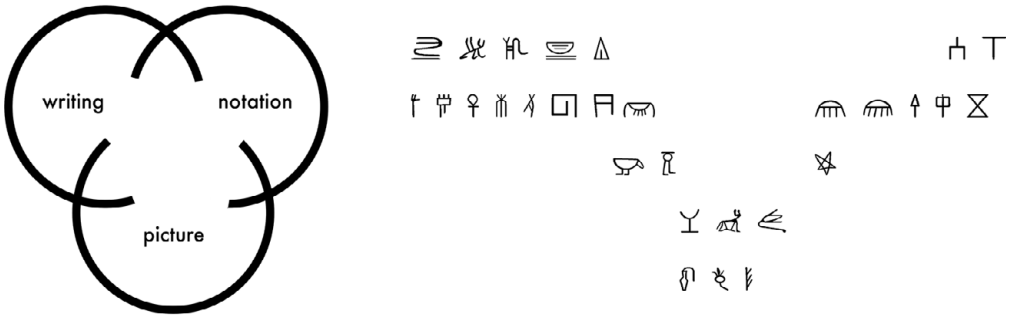
perhaps no locally based written administration at Deir el-Medina during that period, and local literacy was probably very poor (Haring 2014: 88–89; Soliman 2015). Yet pottery vessels and ostraca were locally inscribed with marks from the late fifteenth century BCE onwards at the latest, which means that this system of notation may have flourished in the quasi-absence of writing at the time. We will return to this apparent difference with respect to later, Ramesside practice after discussing the morphology and use of the marks.

THE MORPHOLOGY OF THE MARKS

In the previous section, the only type of marks mentioned was that inspired by hieroglyphic writing. Many marks are clearly modelled after hieroglyphs, some even after groups of hieroglyphs, and show distinctive shapes and details that set them apart from other pictorial signs in the same system. Very clear examples are , and in Figure 7.2; ,  ,  and  in Figure 7.3; and in Figure 7.4. With the incorporation of such marks the system followed a tradition that reached back for at least a thousand years (see below). Probably, the very iconicity of hieroglyphs made them eminently suitable for use as identity marks that could be recognized in an instant. Furthermore, in some cases where Ramesside written information allows us to identify owners of the marks, hieroglyphic signs seem to refer to the owners' names. Thus  , which as a hieroglyph had the phonetic value *jn*(*j*), was held by at least two persons called Inherkhau in the course of the Twentieth Dynasty, and  (phonetic *ms*) was held at some point by a workman called Mose (*Ms*).[8] The jackal sign  was held by a workman called Amennakht, who was nicknamed "The Jackal."[9] In this case, the reference was iconic rather than phonetic. Such phonetic and iconic references to the names of the marks' holders were far from consistent, since marks were usually passed on to other workmen after the death of their previous owners, or due to reorganizations of the team.

It is necessary here to point out that in Ancient Egypt hieroglyphs were used for monumental inscriptions only and do not represent the writing system that was current in society. The script used for administration, literature, religious texts, as well as for private business and correspondence, was hieratic. This script had originated as a cursive variant of hieroglyphs. In the course of Egyptian history, hieroglyphs and hieratic developed separately, the latter with a dramatic decrease of iconicity. This reduced iconicity explains why signs of hieratic inspiration are rarely found in Ancient Egyptian marking systems. Despite the massive production of hieratic texts in the workmen's community, the Deir el-Medina marking system includes only a few hieratic signs, and only so in the Ramesside period, especially in the Twentieth Dynasty (e.g.,  in Figure 7.3).

But the marking system also included other types of signs: iconic signs that were not inspired by hieroglyphs, and geometric (or abstract) marks. Such a



7.5 The written, pictorial and abstract marks discussed in this chapter arranged after James Elkins's classification model (diagram at the left from Elkins 1999: 85).

tripartite morphology is common with marking systems across cultures and throughout world history, and also brings us back to Elkins's division of visual communication into three components: writing, picture and notation (Haring 2009; 2018: 81–82, 106–07).[10] With "abstract" or "geometric" taking the place of "notation," this model can be adapted for the morphological classification of the Deir el-Medina marks (see Figure 7.5). Examples of pictorial signs that are probably not hieroglyphs are  and  in Figure 7.2;  and in Figure 7.3. The non-Egyptological reader as well as the Egyptologist may frown at this observation. Could these signs not be hieroglyphs? Theoretically they could, but the shapes of (a plant or branch?), (a jar with liquid issuing from it) and (star or pentagram) are not exactly those of frequent and standardized hieroglyphic signs. The star is normally rendered as in hieroglyphic writing, and this form is actually also attested as a locally held mark. The headrest is in fact known as a hieroglyph, but is extremely rare as such – it is used only in writings of the word *wrs* "headrest" – and hieroglyphic texts mentioning headrests are few. The actual object, on the other hand, was common in Egyptian households, and many have been retrieved at Deir el-Medina. Examples of abstract signs are , and in Figure 7.2; in Figure 7.3; and in Figure 7.4. These forms do not seem to refer to concrete objects or beings; nor are they those of hieroglyphic or hieratic signs.

The classification given here remains a modern one. Although the division into three categories is valid for the Deir el-Medina system as much as for similar marking systems in other periods and cultures, it is sometimes difficult to assign individual marks to any of these categories. It is difficult, in other words, to draw precise borders between hieroglyphic/hieratic, pictorial and geometric signs. Obviously one major complication is that most hieroglyphs are highly iconic, and may therefore also be called "pictorial" or "concrete." Very often it is impossible to decide if the model for a certain mark was hieroglyphic or "merely" pictorial. The intuitive solution of the Egyptologist is to regard all marks with graphic equivalents

in hieroglyphic writing as inspired by hieroglyphs, but as the above example of the headrest shows, this may not always be the correct thing to do. The mark of Amennakht "The Jackal," also has a hieroglyphic equivalent, but monumental inscriptions including jackal signs are as rare as those mentioning headrests. These signs are highly specific, and therefore unlikely to have come to the attention of the makers of the corresponding marks by means of hieroglyphic texts. Nor would these makers have come across them in hieratic texts. Hieratic, being a script with minimal iconicity, had the specific signs for headrest and jackal replaced by generic signs for "woodwork" and "animal" respectively.

With abstract or geometric marks, also, it is not always possible to be certain. Some signs initially taken to be geometric by the Leiden research team later turned out to be stylized versions of signs otherwise showing a higher degree of iconicity.[11] A typical case is the mark rendered as  or , or with yet another number of vertical strokes at the bottom. No pictorial reference is immediately apparent in these graphs, unless it be to some sort of insect or invertebrate. After collecting more material in the course of the project, we realized that it is a graphic variant of , a mark clearly inspired by the hieroglyph for "gold" (*nbw*). The strange abstract variants are typically found in the Eighteenth Dynasty, during which local familiarity with writing was very limited. In the Ramesside period it gave way to the "correct" hieroglyphic shape, some rare occurrences of which are also known from earlier years, and thus helped the researchers to identify the "geometric" renderings of the same sign (Haring 2018: 33).[12]

Due to the above problems it is impossible to give precise percentages of marks of different categories within the system as a whole at a given point in time. Nonetheless, indications can be seen for an interesting historical shift in the relative proportions of graphic categories in the course of the New Kingdom. Taking the Egyptological, hieroglyphic-oriented approach, and considering marks that resemble hieroglyphic signs to be hieroglyphically inspired (thus including headrest and jackal), one observes that in Eighteenth Dynasty material there is approximately a fifty–fifty division between "hieroglyphic" and "non-hieroglyphic." By the middle of the Twentieth Dynasty, the percentage of "hieroglyphic" marks could be as high as 85 per cent. This shift betrays an increasing influence of writing in the workmen's community; it coincides with the growing production of hieratic texts on ostraca from the late Nineteenth Dynasty to the middle of the Twentieth (Haring 2003). Also, some Twentieth Dynasty ostraca inscribed with marks show a clear hieratic style or ductus, and thus demonstrate that their makers were familiar with writing. With the majority of ostraca with marks, however, this is not the case. Haring (2018: 227–36) discusses the graphic categories, their proportions and shifts.

In all likelihood, the origin of the system as used by the Deir el-Medina workmen is to be sought in the marking systems of monumental building projects of earlier periods, the Old and Middle Kingdoms. The marks of those periods, which are found on stone blocks of pyramids and temples, have a very similar graphic repertoire, in which hieroglyphic forms are prominent, and supplemented by pictorial and geometric signs (Haring 2018: 48–57; see also Andrássy 2009). A question that cannot be answered is whether already existing marks, or even an entire marking system, were brought to the Theban necropolis when royal tomb-building began there, or whether the marks or the system or both were newly developed there and then. Of course, the answer to this question very much depends on the answer to the question of where the necessary workforce came from. Unfortunately, textual documentation on the identity and organization of the earliest workmen involved in royal tomb-construction in the New Kingdom is lacking, and archaeological data for the period is frustratingly insufficient.[13] As suddenly as it appeared, so did the Deir el-Medina marking system abruptly disappear from history after almost four centuries. It is no longer attested for the period after royal tomb-building in Thebes came to a halt at the end of the New Kingdom.

THE FUNCTION OF THE MARKS

The coexistence of the three graphic categories discussed in the previous section, and the vague borders between these categories, suggest that anything goes as far as the morphology of the marking system is concerned. But if anything goes, can the marks of the Deir el-Medina workmen really be said to represent a system? For that, we need to see what principles might possibly have guided and restrained the creation and use of the marks. And rules and restrictions were there to be sure.

The graphic variety of the marks, and the apparent freedom of workmen to use and create marks inspired by their own names or nicknames ( for Inherkhau,  for Mose,  for Amennakht "The Jackal," and many more), make it very unlikely that the marks were created and assigned by a central authority.[14] Indeed, there is no indication that royal necropolis supervisors (who appointed the workmen) were involved in establishing which marks were to be held by whom. It is clear, however, that the creation and transfer of marks were conditioned by two factors. One of these was the organization of the necropolis workforce. The marks were all connected with positions in the team of workmen, so that there could never be more different marks in use than the number of workmen active at any point in time, and no mark could be used at the same time by more than one man. Hierarchy also played a role. The necropolis scribes, and some of the chief

workmen as well, had marks referring to their positions:[15]  for the scribe (a hybrid graph inspired by the hieroglyphic and hieratic signs for "writing" and "scribe," *sš*), and for instance  for one or two chief workmen (a hieratic rendering of the bee, a royal emblem, possibly reflecting the chief workman's local status).

The other conditioning factor was family. Many marks were, in fact, passed on within the workmen's families, from father to son, or from grandfather to grandson. The first completely preserved line on ostracon Strasbourg H 13 includes  , a mark probably inspired by the hieroglyphic or hieratic sign for "sky" (Figure 7.4; see the next section for the type of ostracon). At the time the ostracon was made, it was held either by a workman called Neferhotep, or by his son Meryre.[16] Neither of these names seems to have been the inspiration for the mark; the sky sign in writing had the phonetic values *pt* and *hr*(*y*). The names Neferhotep and Meryre do not include these strings of consonants, nor do they contain any element semantically connected to "sky." It is possible that one of their ancestors already had the mark, and a name that was evoked by it, but this has not become apparent in the course of the Leiden research, and it is not necessarily to be assumed, since there were many marks that did not have any relation with the holders' names – the geometric ones in particular. The same family did have a mark that was related to the name of some of its members: the hoe  . It was inspired by a hieroglyph or a hieratic sign that phonetically read *mr*, and which was used, among others, in writing the proper name Meryre (*Mryr*ʿ). There were at least three men in the family who had this name; two of them are known to have held the mark . The earliest we know is Neferhotep's father, who must have been active in the late Nineteenth Dynasty. Probably, Neferhotep did not inherit his father's mark because the latter was still active as a workman when his son was also appointed. In such a situation, which occurred quite often among the workmen, the son had to take a different mark. How Neferhotep came by the sky sign we do not know. After his death, this mark was used by his younger son Meryre, while his older son Neferhotep took over the hoe from his grandfather Meryre. In such a way, the phonetic connection between a hieroglyphic/hieratic mark and the holder's name was lost. The connection was restored when Neferhotep left the mark to his son, who was again called Meryre.

Amennakht, "The Jackal," is a clear example of the same situation. Amennakht could not use the mark of his (still active) father Hay, which was an old family mark, the pomegranate  . It is for this reason that Amennakht had his own jackal mark , but he discarded that mark after the death of Hay, to adopt the family's pomegranate. Amennakht had all the more reason to do this, as he also inherited from his father the position of chief workman's deputy (Haring 2018: 209–11; Soliman 2016).

Although very much inspired by writing, both in their morphology and in their use on ostraca, the marks represent a system that could be used by illiterate or semiliterate workmen. They were a limited set of distinctive signs, in which the difference between morphological categories (written, pictorial, geometric) was not of central importance as long as a sign could be recognized immediately as "the mark of NN." Thus they were suitable for use as property marks, and for clustering on ostraca. The style of the marks in Figure 7.2 betrays a hand without scribal training, as do many other ostraca of the Eighteenth Dynasty. Some of these are large chunks of limestone displaying equally large signs made with the thick brushes used for painting, not with scribal equipment, and discarded on the work spot in the Valley of the Kings. Although the style of marks on many Ramesside ostraca remains non-scribal, their layout and ductus is usually closer to written records (Figures 7.3 and 7.4). The marks and the accompanying signs (some borrowed from hieratic) are of the same size as written characters, and their thin lines indicate that the brushes used for them were those of scribes or draftsmen.

Such was the "visual literacy," or "graphicacy," shared by the necropolis workmen. They effectively show us that there is a world between "literate" and "illiterate." It is in fact better to speak of different grades of (semi)literacy, instead of literacy on the one hand and illiteracy or semiliteracy on the other. Too narrow a definition of literacy is problematic, especially if the writing systems involved include highly iconic ones, such as hieroglyphs. Instead, one might argue that the mastering of semasiographic systems, especially systems influenced by writing, is part of the wide spectrum of literacy (Haring 2018: 243).

THE MARKS AS PSEUDOSCRIPT

Ostracon Strasbourg H 13 (Figure 7.4) represents an advanced stage in the combination of marks and other types of signs on ostraca. This stage can actually be considered the culmination of a development that had already begun about 1450 BCE with the clustering of marks on ostraca, and the addition of strokes and dots (Figure 7.2). In the course of the Ramesside period, such ostraca became more and more complex.

Whereas simple groupings of marks in lines or columns remained common by way of "name lists," a specific genre developed that incorporated marks into lines that also included (pseudo)hieratic signs, especially numbers, and a select number of pictorial signs depicting, for instance, loaves, pots, fish and plants.[17] The latter signs stand for deliveries of rations of bread, beer, fish and vegetables to the workmen, while the numbers are for the quantities of these rations and

for the days on which they were delivered. Thus the first complete line on the Strasbourg ostracon reads, from right to left: "day 23  [mark of Neferhotep/Meryre],  [type of loaf]: 185, deficit: 16." This type of record emulates similar texts that are written out in hieratic, many hundreds of which have been preserved.

The combination of calendar dates and personal names in such texts reflects the workmen's roster of day duties, a leading principle in the administration of necropolis supplies (Haring 2015). The roster makes it possible to date many hieratic ostraca to precise years, months and days. Since the very same deliveries can sometimes be recognized on ostraca with marks and pseudohieratic signs, these ostraca can be dated precisely, too, and the workmen who held the marks at the time of the deliveries can be identified through the names in the corresponding hieratic texts. As the duty roster is repetitive, and the Strasbourg ostracon does not mention a regnal year, it cannot be dated more precisely than to several alternative years in the last decade of the reign of Ramesses III (that is, somewhere around 1160 BCE). Even so, it is possible to establish approximately which workmen held the marks ,  ,  and  at the time.

The combinations of marks and other signs on ostraca may justly be called pseudoscript: they emulate writing in their overall appearance; they use individual signs closely related to writing without being actual writing; and their individual entries have a fixed order of constituents, a pictorial and numerical syntax that closely resembles a linguistic one (given that identity marks are often inspired by written characters, one might even call the marks themselves pseudoscript, as is done by Elkins 1999: 143). The pseudo-written ostraca of the Twentieth Dynasty were probably produced by a very limited number of persons, who had some knowledge of hieratic writing, and developed their own code in order to keep track of deliveries to the necropolis workforce. They may have done this to support the written administration of the local scribes. The hieratic and pseudo-written duplicates, or near duplicates of entries mentioning the same deliveries suggest that the local pseudoscript records were preliminary notes to the hieratic administration. Thus, the estimated fully literate 40 per cent of Deir el-Medina's male adult population in the Twentieth Dynasty seem to have been assisted by semiliterate administrators, whose presence induces us to attach a wider meaning to the notion of literacy. Reflection on the remaining population, who marked their property with signs heavily influenced by writing, may make the meaning of literacy wider still (cognitive implications of the Deir el-Medina marks and their uses are discussed at length by van der Moezel 2016).

But how is the popularity of the same marks in the Eighteenth Dynasty to be explained? As was pointed out earlier in this chapter, literacy at

Deir el-Medina was probably low at the beginning of the New Kingdom. The style of the marks on most Eighteenth-Dynasty ostraca shows that the makers were little familiar with writing. For most of the workmen, the hieroglyphs on the walls of the royal tombs were probably the only writing they saw. These hieroglyphs were drafted by specialists, who were perhaps not even locals, and finished in painting and chiselling by the local workforce. In addition, the workmen were probably familiar with one or more existing systems of identity marks used elsewhere in monumental building, and among these marks were many inspired by writing. Such indirect ways of contact with writing explain the much more limited impact writing had on the early marking system of Deir el-Medina. They do not explain, however, why the system was so exceptionally popular here, both for marking property and for the production of administrative records on ostraca. One might speculate that in the absence of local hieratic writing, the need was felt for an alternative notation system for administrative purposes, and that the system developed was a local adaptation and extension of older systems of builders' marks. Whatever its precise background may have been, the marking system prohibits us from regarding the early Deir el-Medina workmen as entirely illiterate. Literacy comes in different sorts and degrees, and the mastering of a semasiographic system that is closely related to writing certainly has a place within the literate spectrum.

NOTES

1 For "graphic" one may also read "material," since writing and other sign systems can be material as well as (or instead of) visual, such as three-dimensional tokens, or braille.
2 As currently understood, these signs are not linguistic, and have no discernible syntax (see Sauvet et al. 1977; von Petzinger and Nowell 2014: 42 ff.).
3 As is made clear admirably by Roy Harris's notion of integrative semiology, which emphasizes principal similarities between writing and other sign systems, and the integration of these systems. According to Harris (1995), these may all be called "writing," with a distinction made between glottic and non-glottic writing.
4 Elkins (1999: 85) adapts Nelson Goodman's concept of notation. Picture and notation are both possible components of semasiography, or graphic, non-written sign systems (Elkins 1999: 120–42, 169–70).
5 A very broad range of marking systems is discussed in Pim et al. (2010). In recent years, Egyptological research on marking systems has resulted in a number of comparative volumes, see Haring and Kaper (2009), Andrássy et al. (2009), Budka et al. (2015), Haring et al. (2018).
6 The research project "Symbolizing Identity. Identity Marks and Their Relation with Writing in the New Kingdom Egypt"; see the note at the beginning of this chapter.
7 Masons' marks of medieval and early modern Europe seem to constitute the closest parallel; these were used for contexts such as votive inscriptions, and could be incorporated into written agreements involving individual masons (see Haring 2018: 60–80).
8 The reader is reminded that Egyptian hieroglyphic writing is consonantal only, and that the vocalizations "Inherkhau" and "Mose" are artificial.

9 A striking parallel, as a "speaking sign," to the wolf mark of the Roman brickmaker M. Rutilius Lupus; see Bodel, Chapter 8 in this volume.
10 The sign corpora presented with the papers in Haring and Kaper (2009) also testify to the universal morphological aspects of different marking systems.
11 A similar problem is presented by geometric signs in prehistoric European rock art (see Sauvet et al. 1977; von Petzinger and Nowell 2014: 42 ff.).
12 Such identifications are possible mainly by comparing similar clusters of marks on different ostraca.
13 So far it is even uncertain which royal tomb was the earliest one to be made in the Valley of the Kings (see Haring 2014).
14 A strikingly similar observation has been made with respect to medieval masons' marks (Pringle 1981; see also Haring 2018: 76–77).
15 The scribes and chief workmen together were the local supervisors of the workmen. On a higher level, royal tomb-building was supervised directly by some of the highest state functionaries: the vizier, the overseer of the royal treasury and royal butlers (Bierbrier 1982; Lesko 1994).
16 These persons are numbered Neferhotep (xi) and Meryre (vi) in Deir el-Medina prosopography (Davies 1999).
17 It is significant that the composers of these ostraca used hieratic numerical notation instead of series of strokes (tallying). There are, however, also ostraca on which single signs are accompanied by long series of strokes and nothing else. Probably related to these are ostraca with strokes only, which tend to be absent from catalogues of ostraca that focus on textual categories.