Non-Textual Marking Systems in Ancient Egypt (and Elsewhere)

An introduction

Julia Budka, Frank Kammerzell & Sławomir Rzepka

Scope

Communication practice plays an essential role in defining cultural identities. In a society that has *Writing*, this particular *System of Graphic Information Processing* (SGIP) is likely to be one of the more prominent among its symbolic systems. Even so, it seems safe to claim that writing never shows up as the only kind of SGIP. Writing in Ancient Egypt is often considered one of the key elements of Pharaonic culture.[1] However, despite the omnipresent use of hieroglyphs and other writing systems, Ancient Egypt is not an exception from the rule when it comes to *Non-Textual Marking Systems* (NTMS), *Graphic Memory Aids* (GMA) or *Numerical Information Storage Systems* (NISS).[2] Pot marks, masons' marks, hallmarks, seals, tags – to mention just a few NTMS – are known from Egypt and Nubia throughout the ages.[3] Yet, influenced by the abundance of written sources from Egypt, researchers for a long time have not concentrated their attention to NTMS. Only recently more research is carried out in this field, but even so a thorough systematic investigation, considering among others the relationship between NTMS and *Writing*, is still needed. Throughout this volume, our hypothesis is that NTMS as an important means of communication practice should be considered as integral part of Ancient Egyptian culture and allows addressing aspects neglected when focusing only on written sources.

1 Examples of NTMS from Egypt

In general, *Non-Textual Marking Systems* directly link the particular object they mark with an individual, a group of persons, a workshop, an institution or a locality. They often serve as a sort of identifying mark or unique signature indicating ownership, actual or symbolic possession, authority, responsibility, affiliation, authorship, or producer.[4] The wide-ranging variety of possible NTMS, their use and frequency in Ancient Egypt are presented in this volume – a selection, based on the research conducted by the core team members of the Berlin-Warsaw research group will illustrate here some of the key aspects.

---

1 Cf., most recently, Assmann (2015: 97-103).
2 For a classification of different types of SGIP, see Kammerzell (2009).
3 See Andrássy, Budka & Kammerzell (2009); Haring & Kaper (2009).
4 Kammerzell (2009: 280-283).

1.1 Workmen's marks

Workmen's marks are one of the more prominent groups within NTMS and well attested in Pharaonic Egypt. A special case is New Kingdom Deir el-Medina (see Rzepka, Haring, Dorn, and Soliman, in this volume). What sometimes has been casually called "funny signs", a set of marks on several New Kingdom ostraca from Thebes, is now plausibly interpreted as the personal marks of workmen living in Deir el-Medina.[5] Instances from this set of marks also occur in large numbers among the graffiti scratched into the surface of rocks in Western Thebes by members of the Deir el-Medina community. Some of the so-called "funny signs" occur quite regularly in the vicinity of "normal", i.e. inscriptional graffiti of specific members of the workmen community. A statistical analysis of the co-occurence of particular "funny signs" and specific names in graffiti may result in identifying the owners of such personal markings. First results of this research project were published in 2009.[6] The analysis of the spatial distribution of "funny signs" graffiti presented in this volume was used to date their corpus (Rzepka, in this volume). It turned out that writing and personal marks systems could be used side by side in graffiti. This allowed for identifying a group of personal marks still in use during the Twenty-First Dynasty – a period when "funny signs" ostraca (well-known from the Eighteenth, Nineteenth and Twentieth Dynasties) were no longer attested.

Builders' marks have been recorded from a number of construction blocks of Ancient Egyptian stone buildings of various periods.[7] During the Old and Middle Kingdoms the marks often complement short notes in hieratic script which name the crews of workers responsible for the transport and final processing of the stones at the building sites. For picking the designations of a work crew, the names of those persons, institutions or places which had been the sender of the work force played an outstanding role. Previous research could show that there was indeed a connection between the names of the work crews and chosen symbols.[8]

Builders' marks as such are excellent examples to illustrate the complex relationship of NTMS to writing systems (see below): In case the builders' marks take the form of hieroglyphic, cursive hieroglyphic or hieratic signs, it is sometimes obvious that typical characters of place names or personal names had been chosen. Geometric signs not belonging to the hieroglyphic repertoire hamper an explanation of the specific marks considerably. At least some of the geometric marks appear as common elements in other NTMS, such as pot marks, brick marks, marks on tools and weapons. Obviously, not only one single NTMS existed besides the script, but various dynamic systems, which could resort to a broad and developing corpus of marks strongly influenced by the script. Some of the marks were used only once, others had been very popular for centuries all over the country. The actual meaning of the marks depended on the actual system they formed part of and on the given context, and we must face the possibility that a particular meaning was valid only during a certain time

5 Haring (2000, 2009a, 2009b); Haring & Soliman (2014).
6 Fronczak & Rzepka (2009: 159-178).
7 See, e.g. Depauw (2009: 205-213).
8 Arnold (1990: 19-22); Andrássy (2007, 2008, 2009).

span or in a certain organisation. This probably applies to all case studies discussed here and throughout the volume.

1.2 Pot marks

Seven contributions in this volume are dedicated to pot marks and illustrate that the use of NTMS on pottery vessels is not only a shared feature of the civilizations of the Ancient world in general, but also a very common practice in Ancient Egypt. The individual papers cover several millennia of pottery production, from Predynastic times to the Ptolemaic Period, and present site-specific approaches as well as diachronic overviews. Both the early and the more recent interpretation models for the function of pot marks in Egypt (see Engel, in this volume) are addressed, stressing that pot marks were probably multi-functional in use (cf. Bréand, Budka, Hartmann, and Rzeuska, in this volume). A current hypothesis substantiated by several authors is that, to interpret specific sets of pot marks, one must not ignore the context of the pottery: find spots, dates, shapes, and wares of the vessels as well as position of pot marks and, of course, motif diversity.[9] With respect to these questions, the up-to-date investigation of pot marks has much in common with research on other NTMS like builders' marks – maybe with the minor difference that there are more possible explanations for the meaning of pot marks than for marks on building blocks. Nevertheless, this volume offers several examples of Egyptian pot marks which seem to be clearly connected with the production process (see especially Bréand, and Hartmann, in this volume).

A study of material from outside Egypt illustrates both a methodologically sound approach and convincing results with regard to the function of pot marks: Glatz (2012) revisited Late Bronze Age Anatolian pot marks, conducted a contextual archaeological approach, always kept in mind significant regional differences and as a consequence was able to present fascinating insights into economic aspects and patterns of production.[10] This case study is of particular value for students of the Egyptian material, since Anatolian pot marks also were discussed in the literature with a focus on their possible interrelation with writing. Prefiring pot marks on Late Bronze Age vessels have been interpreted "as signs of the Luwian hieroglyphic script."[11] Similarly, for Egyptian Predynastic pot marks there is an ongoing debate on the significance of their formal resemblance with hieroglyphs (see Engel, in this volume).[12]

In rare cases – but attested from Egypt, Anatolia and elsewhere –, an individual pottery vessels was incised with more than one mark. Studying marking frequencies of vessels – and especially the ration between marked and unmarked pots – requires a complete archaeological record (with documentation of marked as well as unmarked vessels) but may offer clues for understanding work processes.[13] The case study of festival pottery from Abydos/Umm el-Qaab with a very high frequency of marked

9 Cf. Glatz (2012: 5).
10 Glatz (2012: 5-38).
11 Glatz (2012: 5).
12 See also Engel (2015).
13 Glatz (2012: 15-16).

offering vessels provides an example for the direct impact of the vessel function on the production process (see Budka, in this volume).

2 On the interrelations of NTMS and Writing

Several sets of NTMS are well suited to investigate the relationship between non-textual marks and signs of writing. One example is the corpus of marked faience tiles from the funerary complex of Netjerikhet (Djoser, Third Dynasty) (see Kuraszkiewicz, in this volume). Thousands of such rectangular tiles have been found *in situ* in the subterranean chapels as well as scattered within the funerary complex itself and in its vicinity. Some of them bear marks on their backs which, while looking like hieroglyphic signs in numerous cases, do not form any kind of text and differ from other producers' marks. Thus, hieroglyphic symbols are used without their primary linguistic property of corresponding with elements of spoken language (e.g., a sequence of consonants).

This example illustrates that discriminating *Non-Textual Marking Systems* from other types of graphic information processing is sometimes challenging – and not necessarily always a question of either … or. As highlighted by Kammerzell, there is nothing which prevents the users of a certain graphic system from integrating elements of a dissimilar system or from combining several systems within a single document.[14] Therefore, characters of the hieroglyphic script may well be used (and were used) as parts of a NTMS.[15] In consequence, a detailed documentation of individual marks within a particular marking system – like for example the faience tiles – may also indirectly enrich our knowledge with respect to the hieroglyphic palaeography of a certain timespan (Kuraszkiewicz, in this volume).[16]

Another case study tackling the interrelation of NTMS and writing aimed at investigating the nature and origin of the hieroglyphic writing system. Hieroglyphic writing is a hybrid system which employed signs corresponding with single consonants or sequences of consonants (*phonograms*, like English X /ks/) besides meaningful signs denoting lexical units (*logograms*, like English 4 /fɔ:/ '1+1+1+1') or serving as a *classifier* (like ® 'registered trademark'). Most meaningful signs of the Hieroglyphic writing system (i.e. logograms and classifiers) are iconic and thus (prototypically) not arbitrary linguistic signs but rather pictorial signs with a lower degree of conventionalization. As a consequence, these were ideal for being incorporated into other *Systems of Graphic Information Processing*, which could be used without a thorough knowledge of how to write and read Ancient Egyptian. In many cases, iconic hieroglyphs can even be interpreted to a certain degree without necessarily mastering the specific language of the text and thus constituted an optimal resource for systems of a far-reaching usage beyond the always small circles of literate people – and even intercultural information processing.

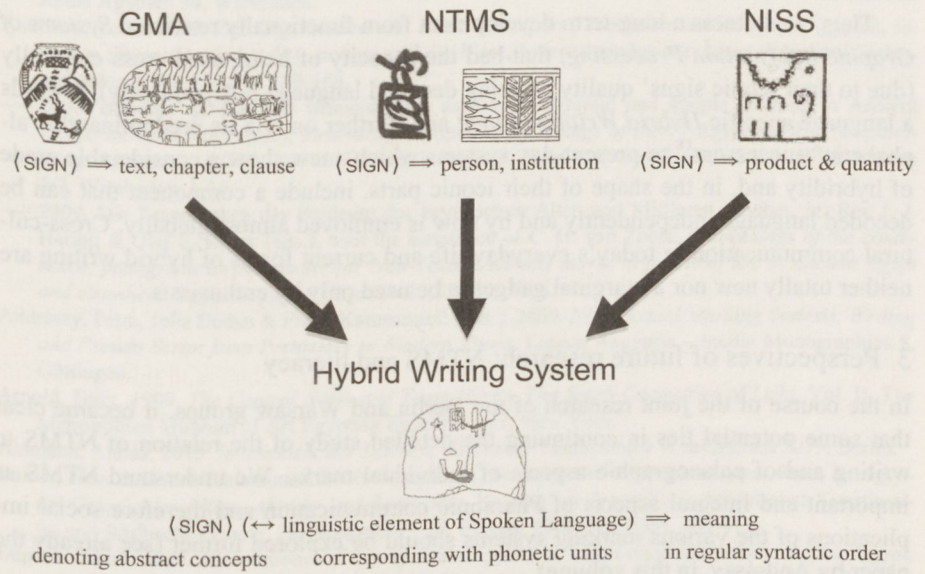
---

14 Cf. Kammerzell (2009: 282).

15 See also the above mentioned case study of Late Bronze Age Anatolian pot marks, Glatz (2012: 5-38).

16 In the case of the tiles from the Djoser complex, the palaeography of the Third Dynasty, see Kahl (1994); Schweitzer (2005).

Studying in a wider perspective *Writing*, *Non-Textual Marking Systems*, *Graphic Memory Aids*, *Numerical Information Storage Systems*, etc. as distinctive (albeit interrelated) types of SGIPs may offer new insights into the history of writing. There is some reason to assume that the development of writing systems – at least as far as Egyptian hieroglyphs are concerned – was determined by somewhat antipodal processes, depending on whether we deal with an autochthonous creation (the emergence of the Egyptian script) or the appropriation of an already existing system (the development of the Western Alphabets) and its offsprings. The original emergence of Egyptian hieroglyphic writing may be characterized as a *fusion* of several already existing, more specialized, and, as for their potential of carrying information, more restricted SGIPs into a new system that enabled storing and transmitting information in a way analogous to a linguistic utterance. The major contributions seemingly came from (1) *Graphic Memory Aids*, which would have delivered the idea of graphically representing utterance-like information including reference to events, abstract entities, deictic categories like space and time etc., (2) *Non-Textual Marking Systems*, which often would have faced the necessity of encoding proper names and thus developed a set of non-iconic signs corresponding with phonetic units, and (3) *Numerical Information Storage Systems*, which would have been the first to employ rigid rules of syntctic sequencing.



The development of the Western Alphabet in its first stage is marked by a process of *reduction*: Only the core module of the hybrid Egyptian Writing System, a limited set of non-iconic elementary graphemes corresponding with single consonants, was adopted. This step resulted in an enormous simplification of the production process of written utterances without forfeiting the potential of jotting down any information which can be transmitted via Spoken Language. Nevertheless, there is some reason to judge purely alphabetic writing not entirely an efficiency increasing simplification but

also a reduction of functional options of more complex systems, and it seems that a hybrid Writing System like Egyptian hieroglyphs better suited the needs of complex information processing – in particular from the perspective of the recipients, and probably also with respect to our cognitive capabilities of information processing.

That this in some way has also been felt by the users of writing in Europe during the last 2000 years seems obvious from two circumstances: (1) Since long, there is a strong fascination for Egyptian hieroglyphs in the West, culminating in transferring Pharaonic monuments to Europe metropolises in Roman and Late Antique times, in reflecting about the power of hieroglyphs to serve as a universal means of communication in Renaissance and Baroque,[17] and in finally achieving the decipherment of the forgotten principles of the Egyptian writing system. (2) In the course of time, even scripts described as purely alphabetic have been showing a propensity to make use of more and more elements which do not correspond to speech sound – like blanks, punctuation marks, ciphers, abbreviations (to mention only some of them). This trend has reached a peak in the Modern and post-Modern era, when international traffic led to the appearance of universally readable pictographs and the computer keyboard provides a new superalphabet (Roy Harris). This, in spite of its name, does not consist of alphabetic characters alone but rather reflects and/or stimulates a concept of writing which has much more in common with its distant roots than most users are conscious of.

Thus, we witness a long-term development from functionally restricted *Systems of Graphic Information Processing*, that had the capacity of being used cross-culturally (due to their iconic signs' quality of being decoded language independently), towards a language specific *Hybrid Writing System* and, further on, via its predominantly "alphabetic" successors[18] to present-day systems which anew show a considerable grade of hybridity and, in the shape of their iconic parts, include a component that can be decoded language independently and by now is employed almost globally. Cross-cultural communication in today's everyday life and current forms of hybrid writing are neither totally new nor a marginal gadget to be used only by enthusiasts.

3 Perspectives of future research: NTMS and literacy

In the course of the joint research of the Berlin and Warsaw groups, it became clear that some potential lies in continuing the detailed study of the relation of NTMS to writing and of palaeographic aspects of individual marks. We understand NTMS as important and integral aspects of Pharaonic communication and therefore social implications of the various marking systems should be explored further (see already the paper by Andrássy, in this volume).

In various case studies, especially when analysing builders' marks, it becomes quite clear, that the markings had been produced and were understood by persons

17 See Hornung (1999: 93); Grimm (2000: 193-211); Baines & Whitehouse (2006: 405-415).

18 Prototypically alphabetic Writing Systems enable their users to decode (with various grades of precision) the phonetic form of the corresponding spoken utterance, but not the meaning language indepently.

with various degrees of a restricted literacy, and even by illiterates.[19] Thus, markings were not confined to the sphere of illiterates. They were not simply an alternative, a more primitive code of information for those, who were not able to read and write.

Characters used as builders' marks on stone blocks show the same floating changes of shape between more or less hieroglyphic, cursive, and hieratic characters as graffiti do which had been produced by members of expeditions or visitors of prominent spots in the landscape.[20] Therefore, a palaeographic comparison of the relatively precisely dated builders' marks with graffiti of the same period may enhance the researchers' sign reservoir and palaeographic knowledge as well as their capacity to date handwritings, and might help to get more insight into the scribal education and the growing number of scribal schools.[21]

A better understanding of the interconnections between different marking systems, between marks and script, and between producers and users of signs requires a larger set of data, ideally throughout a well-defined timespan and from different sites. Pictorial databases might allow a ready comparison between the marks as abstract signs alone and actual handwritings with palaeographic features.

Bibliography

Ali, Mohammed S. 2002. *Hieratische Ritzinschriften aus Theben*, Göttinger Orientforschungen, IV. Reihe Ägypten 34, Wiesbaden.

Andrássy, Petra. 2007. Zur Organisation und Finanzierung von Tempelbauten im Alten Ägypten, in: Martin Fitzenreiter (ed.), *Das Heilige und die Ware*, Internetbeiträge zur Ägyptologie und Sudanarchäologie VII, London, 143-164.

— 2008. Builders' graffiti and administrative aspects of pyramid and temple building in Ancient Egypt, in: Rene Preys (ed.), *Structuring religion. Proceedings of the 7th Egyptological Tempeltagung, 28 Sept. – 1 Oct. 2005 in Leuven*, Königtum, Staat und Gesellschaft früher Hochkulturen 3/2, Wiesbaden, 1-16.

— 2009. Die Teammarken der Bauleute des ägyptischen Alten und Mittleren Reiches, in: Ben J. J. Haring & Olaf E. Kaper (eds.), with the assistance of C. H. van Zoest, *Proceedings of the conference: pictograms or pseudo script? Non-Textual identity marks in practical use in Ancient Egypt and elsewhere*, Egyptologische Uitgaven 25, Leiden, 5-48.

Andrássy, Petra, Julia Budka & Frank Kammerzell (eds.). 2009. *Non-Textual Marking Systems, Writing and Pseudo Script from Prehistory to Modern Times*, Lingua Aegyptia – Studia Monographica 8, Göttingen.

Arnold, Felix. 1990. *The Control Notes and Team Marks, The South Cemeteries of Lisht,* Vol. II, The Metropolitan Museum of Art Egyptian Expedition 23, New York.

Assmann, Aleida. 2015. *Im Dickicht der Zeichen*, Suhrkamp Taschenbuch Wissenschaft 2079, Berlin.

Baines, John & Helen Whitehouse. 2006. Ägyptische Hieroglyphen in der Kaiserstadt Rom, in: *Ägypten Griechenland Rom. Abwehr und Berührung,* Katalog zur Ausstellung, Städelsches Kunstinstitut und Städtische Galerie, 26. November – 26. Februar 2006, Frankfurt, 405-415.

Depauw, Mark. 2009. The semiotics of quarry marks applied to Late Period and Graeco-Roman Egypt, in: Petra Andrássy, Julia Budka & Frank Kammerzell (eds.), *Non-Textual Marking Systems, Writing and Pseudo Script from Prehistory to Modern Times*, Lingua Aegyptia – Studia Monographica 8, Göttingen, 205-213.

Enderwitz, Susanne & Rebecca Sauer (eds.). 2015. *Communication and Materiality, Written and Unwritten Communication in Pre-Modern Societies*, Berlin.

19 For case studies and a more general approach to the complexity of communication within premodern, largely illiterate societies see Enderwitz & Sauer (2015).

20 Ali (2002: 12).

21 Cf. Goedicke (1988); Peden (2001: 289).

Engel, Eva-Maria. 2015. Schrift oder Marke? Ein neuer Ansatz zur Lesung der Ritzmarken der Frühzeit, in: Hans Amstutz, Andreas Dorn, Matthias Müller, Miriam Ronsdorf & Sami Uljas (eds.), *Fuzzy boundaries. Festschrift für Antonio Loprieno*, Bd. I, Hamburg, 55-70.

Fronczak, Maria & Sławomir Rzepka. 2009. "Funny signs" in Theban rock graffiti, in: Petra Andrássy, Julia Budka & Frank Kammerzell (eds.), *Non-Textual Marking Systems, Writing and Pseudo Script from Prehistory to Modern Times*, Lingua Aegyptia – Studia Monographica 8, Göttingen, 159-178.

Glatz, Claudia. 2012. Bearing the marks of control? Reassessing pot marks in Late Bronze Age Anatolia, in: *American Journal of Archaeology* 116, 5-38.

Goedicke, Hans. 1988. *Old Hieratic paleography*, Baltimore.

Grimm, Alfred. 2000. Hierogrammatismus oder Die Welt als Hieroglyphe. Eine kosmologische Allegorese des Athanasius Kircher, in: Wilfried Seipel (ed.), *Ägyptomanie. Europäische Ägyptenimagination von der Antike bis heute*, Schriften des Kunsthistorischen Museums 3, Wien 2000, 193-211.

Haring, Ben J.J. 2000. Towards decoding the necropolis workmen's funny signs, in: *Göttinger Miszellen* 178, 45-58.

—— 2009a. Workmen's marks on ostraca from the Theban necropolis: a progress report, in: Ben J.J. Haring & Olaf E. Kaper (eds.), *Pictograms or pseudo script? Non-textual identity marks in practical use in Ancient Egypt and elsewhere. Proceedings of a confrence in Leiden, 19-20 December 2006*, Egyptologische Uitgaven 25, Leiden & Leuven, 143-167.

—— 2009b. On the nature of workmen's marks of the Royal Necropolis Administration in the New Kingdom, in: Petra Andrássy, Julia Budka & Frank Kammerzell (eds.), *Non-Textual Marking Systems, Writing and Pseudo Script from Prehistory to Modern Times*, Lingua Aegyptia – Studia Monographica 8, Göttingen, 123-135.

Haring, Ben J.J. & Olaf E. Kaper (eds.), with the assistance of Carolien H. van Zoest. 2009. *Proceedings of the conference: Pictograms or pseudo script? Non-textual identity marks in practical use in Ancient Egypt and elsewhere*, Egyptologische Uitgaven 25, Leiden.

Haring, Ben J.J. & Daniel Soliman. 2014. Reading Twentieth Dynasty ostraca with workmen's marks, in: Ben J.J. Haring, Olaf E. Kaper & René van Walsem (eds.), *The workman's progress. Studies in the village of Deir el-Medina and other documents from Western Thebes in honour of Rob Demarée*, Egyptologische Uitgaven 28, Leiden & Leuven, 73-93.

Hornung, Erik. 2003. *Das geheime Wissen der Ägypter und sein Einfluss auf das Abendland*, München.

Kahl, Jochem. 1994. *Das System der ägyptischen Hieroglyphenschrift in der 0.-3.Dynastie*, Göttinger Orientforschungen Reihe 4, Ägypten, 29, Wiesbaden.

Kammerzell, Frank. 2009. Defining and describing non-textual marking systems, in: Petra Andrássy, Julia Budka & Frank Kammerzell (eds.), *Non-Textual Marking Systems, Writing and Pseudo Script from Prehistory to Modern Times*, Lingua Aegyptia – Studia Monographica 8, Göttingen, 277-308.

Peden, Alexander J. 2001. *The graffiti of pharaonic Egypt. Scope and roles of informal writing (c. 3100 – 334 B.C.)*, Probleme der Ägyptologie 17, Leiden, Boston & Köln.

Schweitzer, Simon D. 2005. *Schrift und Sprache der 4. Dynastie*, Menes, Studien zur Kultur und Sprache der ägyptischen Frühzeit und des Alten Reiches 3, Wiesbaden.