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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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CONCLUSION

SUMMARY AND CONCLUSION

IN THE FOREGOING thesis we have studied the marking system from Deir el-Medina from three different perspectives. This has provided us with knowledge on the form and nature of the marks and the structure and workings of the system, not only as it functioned in Deir el-Medina, but also as a manifestation of the practice of marking as a universal phenomenon. Here follow a summary and conclusive remarks that provide an answer to the three main questions that were introduced in the Foreword to this thesis.

What is the form and graphic nature of the marking system?

In Part I we analyzed the formal composition of the marking system. We found that it contained marks of various natures, with various degrees of iconicity, or various degrees of concreteness or abstractness all being part of the same system. We proposed that the composition of the marking system could be explained in terms of the three domains that were put forward by Elkins in a Venn-diagram of visual communication, including signs of writing, pictures, and abstract geometric notation. These domains were introduced as supplying any form of visual communication. Every system is a mixed system; when all systems of visual communication are considered to contain elements from the three domains to greater or lesser extent, from some domains more than from others, then divergent forms of visual communication can be relatively defined and compared irrespective of traditional evolutionary notions. Among the Deir el-Medina identity marks we indeed found signs from hieroglyphic or hieratic writing, pictures of concrete objects or beings, and apparently geometric forms. Yet, we also found how fluently the domains run into each other, as signs of Writing in Egyptian script are also Pictures, and especially the geometric notations often appeared to be schematic Pictures or simplified linear signs of Writing (|•|, ⌘, †). Purely on the basis of an interpretation of forms in terms of the three domains we discerned a development, or a shift of emphasis in the composition of the marking system from the domains of Picture and Notation toward the domain of Writing taking place between dynasties 18 and 20. In the early workmen's community the system already contained marks from each of the three domains, but only 50% could be considered to have a graphic relation to script, while the other 50% was rather pictorial or geometric in appearance. In general, the marks display a large degree of variation in size, forms and orientation; that is, we see a large range of specimens that relate to one particular mark, or font-type. Among the specimens of one single mark we find, for instance, birds resembling ducks or geese in all kinds and measures, or lotus flowers of all sorts, differing in the form of the flower, the number of leaves and the length and orientation of the stem. A large degree of graphic variation in marks that are of a form which also occurs in hieroglyphic script may indicate that perhaps the sign from script was a source of inspiration, for instance as it was encountered on temple or tomb walls or when it was known as a cultural or religious symbol, but this inspiration was unlikely to be anything more than graphic. That is, whereas in the system of writing consistency and details are important to follow, because the addition or deletion of details makes different signs, the less standardized collection of forms among the 18th dynasty identity marks suggests that it was rather important to convey the *notion* of the object or being represented in the picture, instead of a standard sign with phonetic value. In dynasties 19 and 20 we see the number of marks with forms that also

occur in script increase. In dynasty 20, approximately 80% could be related to the domain of Writing, while approximately 20% could rather be located closer to the domains of Picture and Notation. Not only did marks of a form with an equivalent in hieroglyphic or hieratic script now dominate, they were also more uniform in size, form and orientation. The specimens show more graphic consistency and uniformity in details conform the hieroglyphic or hieratic characters which now appear to act as true *models* onto which the marks were formed. This may indicate that in addition to form they also lent the marks phonetic value. Although data for dynasty 18 are scarce in that we have no hieratic sources and hardly any matches between marks and workmen, it is at least clear that many more marks in dynasty 20 were related to linguistic script and also had a phonetic link to the name of their owners. This phonetic link is also clear in a kind of variation that we only see appearing among the specimens in dynasties 19 and 20: the addition of phonetic complements or group-writings which conveyed part of a workman's name or a word or phrase related to, for instance, his function or provenance. A phonetic link between mark and man was initially the key to the first decipherments of the marks dated to the reigns of Ramesses III and IV. That not all 20th dynasty marks of a hieroglyphic or hieratic form made use of phonetic value became clear from the examples of the pots and jars, and the scorpions. The specimens of these marks show again a large array of graphic variations in the addition or deletion of all sorts of details (one or two handles, spouting water, legs), which may indicate that the precise forms of their hieroglyphic equivalents were insignificant because the marks rather concerned the notion 'pot' and the notion 'scorpion'. This idea, suggested already by Haring in 2009, found support by the knowledge that the mark of the scorpion referred pictorially to the function of scorpion-controller rather than phonetically to the name or function of an individual workman. The degree of graphic variation may, then, serve as a measure that indicates the nature of the relation of a mark to linguistic script: the more uniform its specimens in size, form and orientation, the more likely it was graphically *as well as* phonetically inspired by, or modeled on script.

The shift from the domains of Picture and Notation toward the domain of Writing was not only seen in the forms of marks and specimens, but also in aspects such as the ordering of the marks on the ostraca: whereas in dynasty 18 we still saw apparently unorganized clusters of marks, they were increasingly ordered into lines or columns from left to right or top to bottom similar to hieroglyphic and hieratic script. Also in the addition of contextual information we see an increasing influence of script and a closer cooperation between the marking system and linguistic writing.

In Part I we also studied the origin of the marking system and the question how the marks were created or selected. It was clear from the onset that the marks from Deir el-Medina differed from earlier marking practices in that they were personal marks; that is, they were significant in referring to the individual whereas the earlier potmarks and builders' marks had been significant precisely in the opposite way, in referring to collective identity. While individuality in Egypt was expressed already since the Old Kingdom onwards, we have suggested that this particular expression of individual identity may have been part of a more general focus on the individual, starting according to Assmann already in the transition from the Middle to the New Kingdom in literature, but finding expression in religion, personal piety and art especially from the reigns of Thutmose III and Amenhotep II onwards. The personal marks from Qurna and the individual masons' marks from Amarna could have been part of the same trend. In other words, the personal nature of the Deir el-Medina identity marks in contrast

to the collective marks from earlier times may have originated only in the New Kingdom. Yet, the *idea* of using marks in general was already as old as the Early Dynastic period, and the Early Dynastic potmarks as well as the potmarks and the builders' marks from the Old, Middle and New Kingdoms may at least have formed a source of *graphic* inspiration. From the earliest potmarks onwards, the ancient Egyptian marking systems can all be compared in form and graphic nature in that they were all composed of marks drawn from the three domains. That is, the Early Dynastic potmarks, the potmarks from later times, the builders' marks from the Old, Middle and New Kingdoms, and the quarry and masons' marks from the New Kingdom onwards were all composed of forms from linguistic script, pictures of objects or beings, and geometric configurations. In particular the builders' marks from the Old and Middle Kingdoms show similarities to the corpus from Deir el-Medina. We have seen a recurrent sign repertoire that appears to have been used at sites from different times and places, yet each time in a particular context embedded within the geographic and temporal limits of a specific marking system. Several signs from this repertoire still appeared as builders' marks in the New Kingdom in the Asasif and at Deir el-Bahri. We considered it plausible that this sign repertoire inspired the earliest marks used in Deir el-Medina of which many are indeed similar. The workmen in the early community might have seen the builders' marks, or worked with them in other projects before the long-term construction works in the Valley of the Kings and the Valley of the Queens were initiated; the age-old and recurrent use of the builders' marks may have inspired their selection as identity marks in the early workmen's community. A clear change, however, was seen with the start of the Amarna period. The marks known from Amarna show few similarities to the marks used in pre-Amarna Deir el-Medina, in form as well as in manner and intensity of use. We concluded that, if indeed the workmen from Deir el-Medina moved to Amarna in the reign of Akhenaton, they apparently did not make use of the same marking system that had been current in Deir el-Medina. They would have continued the practice of using marks, but seemingly less intensively and on a smaller array of objects. After the Amarna period we see the number of different marks used in Deir el-Medina grow rapidly. Some forms might have been inspired by marks known from Amarna, as some new additions show graphic similarities to the marks on talatat blocks. They are, however, so few in number that we cannot draw conclusions from this. Henceforth, it rather seems that the marking system at Deir el-Medina began to lead its own life: increasingly more marks were needed to provide every workman with an identity mark, and these new creations seem to have had their origin purely within the Theban Necropolis, having been specifically created within the frame of the local system. A growing number of marks is increasingly difficult to remember: the most efficient way to achieve this is to create marks on the basis of a mnemonic aid such as a phonetic link between mark and the name of a workman. As such, we may perhaps explain the shift from pictorial and geometric marks to a growing influence of signs of writing. This idea is supported by the increasing presence and use of linguistic script in general from the second half of the 19th dynasty onwards, also in other private and administrative issues. Haring argued that people apparently found out how writing could offer advantages; why not make use of these advantages as *aide-mémoires* in the system of identity marks? The increasing presence and use of linguistic writing explain the greater affinity of the marking system to script.

In sum, to answer the question on the form and graphic nature of the marking system from Deir el-Medina, we can say that from the onset it contained marks of various forms and natures all accommodated within the same system of visual communication. The system was a composition of signs of writing, pictures and abstract geometric forms including schematic linear representations of objects or beings, or signs of writing. With the development of the system over the centuries the nature of this composition changed, placing emphasis more and more in the domain of Writing. This was possibly due to the growing number of marks the system came to collect over the centuries for which a mnemonic aid in the form of phonetic connections between mark and man may have been necessary in order for the system to remain an efficient form of communication.

What is the meaning of the marks and how do they convey meaning?

In Part II we took a closer look at the semiotic nature of the marking system and we studied the manners in which the marks conveyed meaning, for if we were indeed dealing with signs from writing, pictures and abstract geometric configurations, to what extent did they also convey meaning as such? To what extent was the semiosis between mark and workman phonetically or pictorially motivated, or was the connection unmotivated in that the marks were selected or assigned purely on the basis of convention? It was necessary to go through a number of selected semiotic theories to collect the tools we needed to develop a synthetic model that visualized how the marks convey meaning. From the dyadic theories of the sign we learned that the signifier and signified as sign-components, between which semiosis would take place and meaning is generated, are insufficient in any analysis and explanation of meaning. They do not take into account real-world referents to which signs, and in particular the marks from Deir el-Medina, ultimately refer. In order to analyze the marks in their social and historical context of use, and to study the actual 'identity' part in the identity marking system, we needed the workmen to actively take part as referents in the processes of semiosis. We thus soon realized that the basis of our model had to be triadic and the marks had to be analyzed as consisting of Peirce's representamen (form), interpretant (the sense made of the form), and referent (the workman in question). Nevertheless, we extracted useful aspects from the dyadic tradition, among which the idea of multiple layers or levels of meaning and the realization that the relation between the three sign-components can be characterized by the concepts of similarity and contiguity. The concept of similarity leads to metaphoric meaning because metaphor is based on similarity, its essence being understanding and experiencing one thing in terms of another to which it is considered similar. The concept of contiguity leads to metonymic meaning because metonymy is based on contiguity, its essence being to refer to something in terms of something else to which it is directly related or with which it is associated on the basis of a direct physical or causal connection. How the components of a sign relate to each other, and how they thus form a sign together depends on their degree of similarity and/or contiguity. We learned that signs as such can convey multiple layers of meaning which are generated by metaphorical and/or metonymical processes.

In the section on the triadic sign tradition we compared the processes of metaphor and metonymy with Peirce's three main sign functions: the symbolic, iconic and indexical modes of semiosis. These modes appeared to incorporate the processes of metaphor and metonymy. We argued that metonymic conveyance of meaning is based on the indexical sign function in that the representamen of a sign indicates the referent on the basis of a direct connection. Metaphoric

conveyance of meaning is based on the iconic sign function in that the representamen projects certain qualities and characteristics onto the referent because it is considered similar to it on the basis of a metaphoric pattern. We found that in the symbolic sign function the components of a sign are only related to each other on the basis of a convention that is agreed upon. A sign in this mode of semiosis may be conceived of as conveying literal meaning, because its representamen fulfills its function regardless of any similarity or contiguity with the referent. But when such a symbolic sign is used rhetorically in a particular context or for a particular purpose, it is no longer a pure symbol: it is, then, rather an indexical symbol or an iconic symbol in which the metaphoric and metonymic processes come into play again.

These tools – that is, the three sign components of representamen, interpretant and referent; the two tropes of metaphor and metonymy; and the three modes of symbolic, iconic and indexical semiosis – we included in a synthetic model in which we could visualize and explain the semiotic functioning of the Deir el-Medina identity marks along three trails that represented the domains of Writing (the phonetic trail), Picture (the pictorial trail) and Notation (the abstract geometric trail). This model accommodated different degrees of symbolic, iconic and indexical motivation precisely along its three trails as also in its multiple levels of semiosis. Once again in visual form, this was the model as proposed:

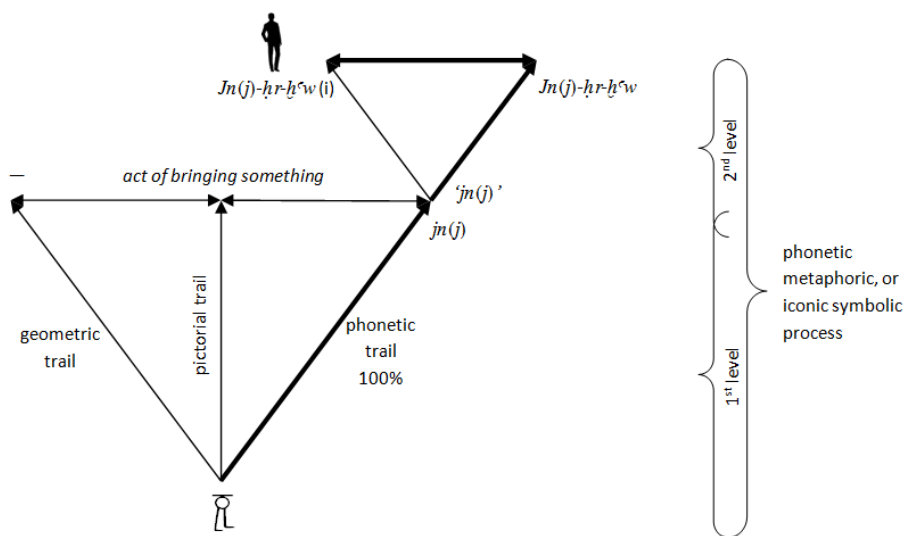


Fig. II2-49 (RPT) The synthetic model with *jn(j)* as example.

The ultimate semiosis of a mark analyzed in this model was the sum of its degree of symbolic, iconic and/or indexical motivation and the processes of metaphor and/or metonymy it made use of. After subjection of several marks to the model we found that they display a wealth of semantic creativity. Many marks, especially those from dynasty 20, the time from which we have most contextual information and matches with workmen, showed the conveyance of meaning simultaneously via multiple trails evoking more than one metaphoric and/or metonymic processes that connected mark to man. The metaphoric and/or metonymic processes were intimately related to deepen and enrich the meaning of the marks. Among the manners in which meaning was conveyed we found:

- Iconic symbols, which conveyed meaning as phonetic metaphors (Ḥ, pp. 185, 191-192);

- Symbolic icons, which conveyed meaning as phonetic animalistic metaphors (𐤀, pp. 185, 192-193);
- Indexical icons, which conveyed meaning as animalistic metaphors supported by a metonymic relation (𐤁, p. 186);
- Symbolic indices, which conveyed meaning as pictorial and phonetic metaphors supported by various metonymic relations (𐤂, 𐤃, 𐤄, 𐤅, pp. 193-194, 196-197, 186);
- Iconic indices, which conveyed meaning as a metonymy based on phonetic metaphor (suggested for 𐤆, pp. 195-196).

The marks thus appeared to be complex constructs of metaphor and metonymy especially along the pictorial and phonetic trails in simultaneously iconic, indexical and symbolic modes of semiosis. They are puzzles that attest semantic creativity, and as such they did not merely refer to the identity of the workmen, but also oftentimes revealed details about them such as origin, lineage, function and position.

A disadvantage of the model was that the multiple levels of meaning and their processes of semiosis were represented in a successive, linear, hierarchical manner, while a cognitive study on the organization and functioning of the human brain revealed that this brain does not work in a linear way. The linear representation does not reflect the manner in which meaning is processed in the brain. The brain is rather to be understood as a large, complex network in which many nodes are neurologically connected. They send information to other nodes which fire activation to again other nodes. We found that psycholinguistic studies had revealed that this activation of nodes takes place on the basis of metaphoric and metonymic associations that appeared to be similar to the modes of semiosis. This gave us sufficient reason to make use of a connectionist semantic network in which to accommodate the multilevel modes of semiosis. As such, we visualized them as less linear and hierarchical, and more realistic from a cognitive point of view. The representation of the semantic and phonetic knowledge connected to a workman's identity mark in the semantic network showed which nodes have potential to become activated, but it does not imply that one specific path needed to be followed to get from mark to man. The strength of connectionism networks lies in the fact that they visualize meaning through a pattern of activation distribution over many potential semantic and phonetic feature nodes in an non-hierarchical structure that approaches the nature of cognitive and neurological sensory processing in the human brain in that several processes can and do take place simultaneously.

The simultaneous relevance of different semiotic modes is precisely what explains the mixed nature of marking system. Barthes had already suggested this, explaining the presence of different degrees of motivation in sign systems by means of the 'waggle dance' of bees (pp. 142-143.), but it can now in fact be semiotically as well as cognitively evidenced. We argue that the simultaneous relevance of different semiotic modes, that is different degrees of motivation, is not a special feature of the Deir el-Medina marking system, but a feature of any system of signs in general. Even in a written text this mixture is found. But different systems may place emphasis on different modes, which makes every system a unique composition. As such, different systems of visual communication can be compared as full-fledged systems in their own right.

This does not entail that changes do not take place. We have seen the marking system from Deir el-Medina developing from a system in which the emphasis was spread over the domain of Writing and the domains of Picture and Notation with a ratio of 50:50, toward an integrated whole covering all domains with an emphasis in the domain of Writing. How this change could be interpreted with respect to the relation between the marking system and the contemporaneous system of linguistic writing was part of the third main question which received an answer in Part III.

How can the relation between marks and writing be defined?

In Part I we saw that the earliest use of marks was simultaneous to the earliest use of proto-hieroglyphic script on docketts and seal impressions in the Early Dynastic period. We have argued that both the marks and proto-hieroglyphic script presented two different co-evolutionary processes from their beginning onwards, following their own courses and developments. They were used for different purposes, and where the docketts and seal impressions turned to hieroglyphic and hieratic writing, the potmarks never adopted a linguistic structure and always retained marks of various natures in their graphic composition. In Part III we took a closer look at marking systems from other times and places and found that there were certain universal principles in formal composition, their multi-purpose nature, as well as in their manner of formal development throughout the generations. As regards the status of marking systems in relation to linguistic writing it appeared that most marking systems include from their beginning onwards marks that can be related to each of the domains of Writing, Picture and Notation. Where a system of linguistic writing develops as well, or comes to be deployed under cultural contact or administrative pressure, it influences the marking system and may, as we have seen, gain a large share in it. We suggested three hypotheses on the relation of marking systems to linguistic writing and the development and increasing presence of writing in society. The first, which entailed the traditional idea that marks are a primitive form of writing in that marking systems influence the formal development of a linguistic system appeared to be untenable. On the basis of the marking systems under study we have in fact no evidence of a marking system clearly predating a writing system and being the catalyst to its development. The second hypothesis, which claimed that marking systems and writing systems are not related and rather develop independently until contact between both is established or enforced, and the latter invades the former imbuing it with linguistic features, could be argued for the cases of Brazil and Portugal. The third hypothesis, however, which claimed that marking and writing systems draw from the same pool of representations that belong to the cultural repertoire and are available for use as the signs of systems of visual communication, appears to represent the most natural situation in which marking and writing systems develop. It is precisely what is seen in Egypt in the simultaneous appearance of potmarks and proto-writing. The pool of representations includes pictures of objects or beings that were inspired by the natural and domestic environment of a people, by celestial phenomena and the cultural and religious conceptual world, as well as by a range of universal geometric elementary forms from which more complicated compositions could be constructed. From this pool, marking systems and writing systems could equally draw, but from the moment they do so the marks and signs of writing are used in different structures, nonlinguistic respectively linguistic. Within these structures they follow their own courses. Marking and writing systems that develop as such are never in complete isolation: there is interaction which may cause a greater or lesser influence of linguistic writing onto the marking system. In Deir el-

Medina we saw that the interaction became stronger in the course of dynasties 18 to 20. Yet, no matter how strong the similarities between marks and writing are in the size, form and orientation of specimens, or the ordering of marks in lines or columns conform script, or the combination with phonetic complements and other linguistic contextual information, the marking system remained nonlinguistic in its formal composition and semiotic functioning – that is in its graphic and semiotic nature. Hieroglyphic and hieratic writing, on the other hand, remained linguistic in their formal composition and functioning.

In sum, we argue that the relation between marking systems and linguistic writing can be defined in terms of co-evolutionary processes that draw from the same pool of representations, but from the beginning onwards follow their own courses and developments, being used within their own particular contexts. In an answer to the question why, then, different systems of visual communication would have to develop and why one, being present and available for use, was not considered sufficient, we may argue that at least the marking system offered particular advantages in being more universally understood and in being universally applicable also in the absence of linguistic writing. Marking systems are furthermore more efficient in conveying several aspects of identity (including potentially information on origin, lineage, or profession) in a single form to be easily and quickly used on small surfaces and in daily administration. In other words, marks are efficient to use in time and space, they convey complex semantic concepts and messages in one single form, are understood by all members of a community, and are universally applicable as systems in their own right, existing independently also when linguistic writing is absent. As such, the marks function as necessary tools in society. It is therefore that we may credit Gottfried Wilhelm Leibniz, who was quoted at the beginning of this dissertation, as he already recognized that ‘in the process of reasoning, signs fulfill the function of useful and necessary tools since they serve as an ‘abbreviation’ of the more complex semantic concepts which they represent’.¹

¹ Gottfried Wilhelm Leibniz, paraphrased by Nöth, *Handbook of Semiotics*, 22.