Monumentalizing ritual texts in Ancient Egyptian pyramids

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Abstract: The aim of this paper is to contribute to the discussion of the relationship between manuscript and epigraphic traditions in premodern cultures by addressing aspects of the monumentality of writing in the context of Ancient Egyptian tombs near the end of the third millennium BC (the late Old Kingdom). Ritual texts inscribed on the walls of subterranean chambers of kings' and queens' pyramids at Saqqara are known as 'The Pyramid Texts', the earliest known mortuary corpus of any civilization. The texts, which are inscribed in hieroglyphs, are carved, decorated, and painted in green. They are laid out in columns and cover surfaces up to three metres high in the main chambers and in the passages leading to the entrances of the pyramids. While the texts were performed during rituals and recorded in writing in contexts that are now lost, the carved hieroglyphic forms in the pyramids make it possible to glimpse the extent of manuscript culture and scribal practices of this period. The process of inscription involved not only reconfiguration from manuscript to wall, but also reinterpretation of the texts in terms of the spatial, architectural, and symbolical context of the tomb. This paper investigates the idea of monumentality in relation to the way these texts were reconfigured in the pyramids.

Keywords: Ancient Egypt, monumentality, Pyramid Texts, ritual texts, hieroglyphs, tomb

Introduction

Ritual texts inscribed on the walls of subterranean chambers of the pyramids of kings and queens in the necropolis of Saqqara are referred to as the 'Pyramid Texts', the earliest known mortuary corpus of any civilization. Dating from the end of the third millennium BC, they consist of hieroglyphic inscriptions carved in the burial chambers of the pyramids of kings and queens from the fifth, sixth, and eight Dynasties[1] (the late Old Kingdom; c. 2350–2100 BC). The walls of eleven pyramids that have so far been discovered, together with a few wooden coffins, represent the only surviving media of this period bearing this body of texts.

These texts were initially written on papyrus or leather rolls, now lost, and potentially on other media, such as potsherds or wooden boards (Baines 2004: 26). The texts were selected from a repertory intended for ritual performances, and the primary mode of their existence was oral. They were realized in an orchestrated fashion that involved not only spoken words, but also gestures, manipulation of ritual objects, choreographic movement in space, and no doubt interactions with other performers, as well as perhaps an audience. It is likely that some non-verbal information was also recorded in the manuscripts. An early Middle Kingdom papyrus from Saqqara records a ritual of linen offering, and its text is framed by small illustrations that seem to indicate different steps in the ritual (Leclant and Clerc 1987: 318).[2] However, there is no evidence of such compositions for the Old Kingdom, and it is likely that the recorded texts consisted mainly of the spoken utterances, while knowledge about the accompanying performances would have been transmitted orally.

These ritual texts have survived through their monumental counterparts inside the pyramids of the Old Kingdom. However, in antiquity they were transmitted mainly through manuscripts, not monumental inscriptions. The process of inscribing the pyramids' subterranean rooms involved transferring textual sources onto the tomb walls, moving from perishable and disposable media to lasting ones, as well as from textual records used as supports for ritual performances and for knowledge transfer to the decor of the tomb. The monumentalization of ritual texts into Pyramid Texts was not a direct reproduction of texts on walls. It involved significant modifications of the sources, from editing the content and the script to adapting the format, and it required reflection on how to incorporate them in the spatial, architectural, and symbolic context of the burial chambers of the pyramids.

The meaning of these texts has been interpreted in a variety of ways (esp. Allen 1994;

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[1] The seventh Dynasty is not mentioned, because there is no archaeological evidence.
[2] I am grateful to Philippe Collombert for allowing me to consult photographs of the unpublished MafS papyri.

Hays 2012; De Trafford 2007); in this paper I would like to contribute to the understanding of the tradition of inscribing pyramids from an emic perspective by emphasizing the interconnectedness of the carved Pyramid Texts and their manuscript counterparts and shedding light on how those involved interacted with manuscript sources to create the monumental decor.

Details of the inscribed texts show that they were not mechanically transposed from one medium to another but recontextualized in a highly charged environment—the tomb— which enhanced their primary function. To a certain extent, my analysis reconsiders the Pyramid Texts from the perspective of a textual 'chaîne opératoire'. Although this method developed primarily in archaeology, the definition of Pèrles Sellet (1993) can be applied to the monumentalization of writing as a 'succession of mental operations and technical gestures, in order to satisfy a need (immediate or not), according to a preexisting project'. This approach highlights both the stages of the process of inscription and the cognitive dimension, hinting at how Ancient Egyptians thought about their textual material, about its integration in the subterranean areas of pyramids, but also how they interacted with their writing system. In this paper, I focus on features of the carved texts that are suggestive of this process of transposition, in order to shed light on how various actors worked together to conceptualize and reconfigure diverse handwritten source materials into a largely homogeneous epigraphic ensemble.

Monumentality of writing

In reference to Ancient Egyptian writing, the term 'monumental' is often associated with large buildings related to commemorating the king, gods, or deceased individuals, but it also refers to a 'lapidary style' that was used on small-scale artefacts, such as royal maceheads (Baines 2007: 287–8). On Ancient Near Eastern seals cuneiform writing was used in an analogous context (Winter 2016: 216). The lapidary style consists of culturally determined modes of representation for iconographic and written elements, also circumscribed by constraints of decorum (Baines 2007: 15).

The category of monumental writing in Ancient Egypt usually refers to the style of epigraphic texts preserved in such structures: the hieroglyphic script. The hieroglyphic script was associated with monumental inscriptions throughout Ancient Egyptian history, while various styles of cursive hieroglyphs were used for non-monumental inscriptions, especially in ceremonial contexts. The hieratic script, used mainly for business and administrative activities, was so far removed from the hieroglyphic script that literacy in the monumental hieroglyphic script was less widespread than in its cursive equivalent (Baines 2007: 48–9).
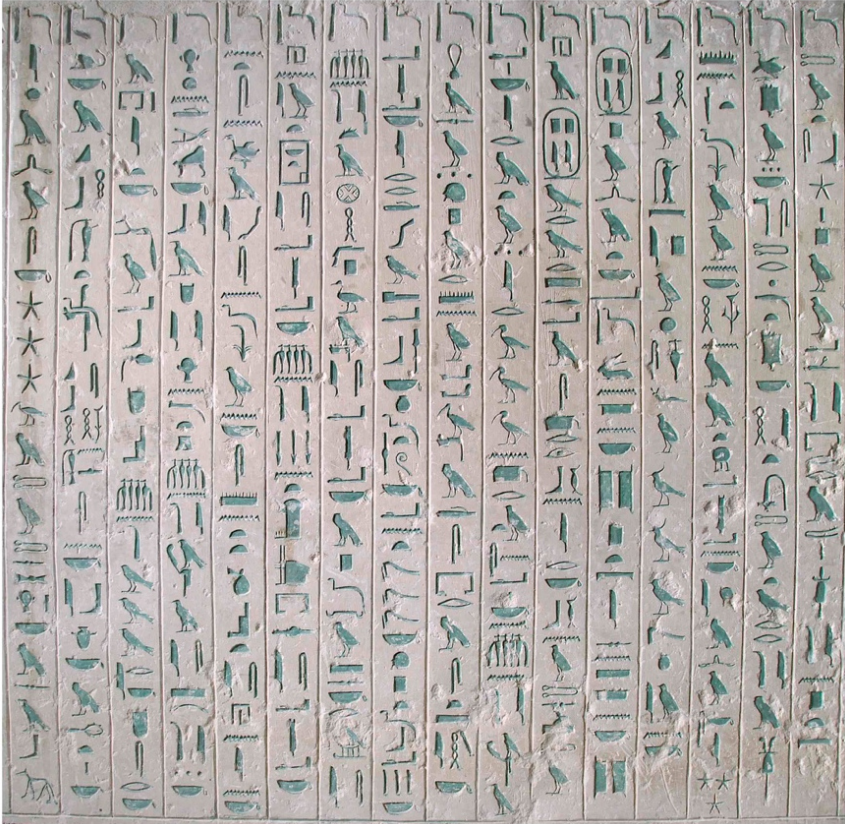
Fig. 1:   Pyramid Texts in the passage between the burial chamber and the antechamber in the pyramid of Pepy I. Photograph: © Mission archéologique franco-suisse de Saqqâra (MafS) 2006 (Jean-François Gout).

Nonetheless, cursive forms of hieroglyphs, which are usually associated with manuscript media (Parkinson 2010: 73), also occur in monumental settings (von Lieven 2007). Similarly, graffiti, which are often considered as subcategories of inscriptions, 'are not secondary to the monument: they produce the monument that is to be visited' (Ragazzoli et al. 2018: 9–10). Thus, perception of a monument and interaction with it by an individual or a collective audience are also constitutive in the relationship between writing and monumentality. In this way, the notion of 'monumentality' can be extended beyond the visual characteristics of the script, towards the 'meaning created by the relationship that is negotiated between object and person, and between object and the surrounding constellation of values and symbols in a culture' (Osborne 2014: 13).

The term 'monumentalization' is used to express a process resulting in a monumental style. It conveys the transposition from organic architectural elements—such as reed matting and wooden beams—to stone or other hard materials, and even whole structures, as epitomized by the earliest pyramid complex, that of king Djoser at the beginning of the Old Kingdom. When discussing the subterranean design of pyramids, the term is used to refer to the materialization of cosmographic spaces into stone architecture as 'a monumentalization of the king's passage and transformation through the netherworld' (Billing 2011: 54), as well as to express the authoritative status of the Pyramid Texts themselves.

The inscribed walls of the subterranean chambers of pyramids are indeed mesmerizing, impressing a visitor by the multitude of carefully carved hieroglyphs standing out in green colour from the white walls. The starry sky depicted on the ceiling-blocks and the imposing sarcophagus add to the dramatic effect produced by the written signs (see Fig. 12 at the end). The investment of labour and time in producing the thousands of hieroglyphic signs is enormous, but the monumentality of the inscriptions goes beyond a mere transposition of texts into hieroglyphs. These were not simply monumental adornment, but the result of a complex process of adaptation, where writing was completely embedded into the monument and not secondary to it.

As argued by Pascal Vernus (1996: 162), texts underwent various and repeated adaptations not only during their transmission but also when they were monumentalized. His term 'éditions monumentales' expresses the successive editorial manipulations that involve transposition into the hieroglyphic script, a lapidary support, and a more prestigious archaic language: the inscribed texts diverge from their manuscript sources through processes of adaptation to a monumental format. These processes varied from one period to another and from one genre of inscriptions to another. Here, the aim is to investigate the properties of writing—design, layout, arrangement of script and content—that are inherent to the texts and their context in order to shed light on the

intellectual and practical aspects of handling such material for the production of the inscriptions in the underground chambers.

Monumentalization involves a number of adaptations to make writing conform to the cultural rules and beliefs applying to a particular context. This process involved interaction with manuscript material—handwritten in ink on a papyrus or leather roll—and, through compilation and reconceptualization, its re-arrangement into a new textual programme for drafting, carving, and painting on the surface of a stone wall in an architectural setting. These modifications could change the sources to varying degrees, mimicking manuscript format on a stone wall—as in New Kingdom examples discussed below—or transforming it into a different textual ensemble—as in the Old Kingdom pyramids.

Theban tombs of the New Kingdom (c. 1500–1100 BC) exemplify how monumentalizing practice had shifted since the Old Kingdom. Royal tombs in the Valley of the Kings, or private tombs such as those of Nakhtmin (TT87: Guksch 1995; Lüscher 2013; Hussein 2017) or Djehuty (TT 11: Díaz-Iglesias Llanos 2018), seem to be closer in format to manuscripts than their forerunners. Their layout, sometimes including vignettes, cursive script, and the use of red ink to highlight words, reproduces features of manuscript design. Fig. 2 shows the almost exact similarity between the model inscribed on the ostraca (limestone flakes or potsherds) and the monumentalized text. The intermediate ostraca would not have diverged much from the source manuscripts, which were almost certainly written in cursive script. The modifications usually consist of 'minor rearrangement and orthographic variations in the form of split orthography, and sign conversion from hieratic to cursive hieroglyphs' (Hussein 2017: 307). Nonetheless, even in such cases of limited transposition, 'editorial changes were introduced by the copyist with a direct impact on the length, content, and written form' (Díaz-Iglesias Llanos 2018: 36).

A connection with the original manuscript is clearly visible in the tomb of Nakhtmin, where passages in the texts that were missing in the source are indicated with the phrase *gm wš* 'found destroyed' in red or black ink.[3] This may have to do with the age of a damaged or decayed source papyrus. The indication of gaps in the source text on the walls could emphasize the value of the ancient content and the precision of its transcription, validating the text's authority. A similar focus on the style of manuscript features occurs in the inscription of a New Kingdom afterlife composition, the Amduat, on tomb walls. There, the linear style of the script and iconography, also described as 'stroke-like', seems to be exclusively linked to a manuscript style (von Lieven 2007: 210). Thus, in the New Kingdom, the primacy of manuscript format as the point of departure for monumentalization seems to put more emphasis on the materiality of the source manuscript.

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[3] For further discussions about *gm wš* see Enmarch (2020: 46 n. 40); Eyre (2013: 336–7); Motte and Sojic (2020: 13–14). I am thankful to Roland Enmarch and Aurore Motte for sharing their papers prior to publication.

Ostracon
intermediate model

Tomb wall
Monumentalized version

Fig. 2:   Comparison of a section of the ostracon model: recto of Ostracon Guimet, Louvre E
22394 [oP4] (Lüscher 2013: pl. 2), and of the tomb wall of Nakhtmin, TT87 (Guksch 1995:
pl. 14). Note that the ostracon is much smaller than the tomb inscription (appr. 7
times smaller).

The processes through which such texts were included in the context of the tomb, their
intended effect, and their function likely evolved over time. By the New Kingdom, writ-
ing practices had advanced significantly in various domains, including literature. The
transmission and production of textual materials led copyists to develop scribal prac-
tices that displayed the authority and quality of the copied version, for instance with
the addition of a colophon (from the Middle Kingdom onwards; Ragazzoli 2019: 399–401).
In the inscription of Nakhtmin, the indication of the missing words, instead of filling in
the gaps, suggests an approach to manuscript that valued its materiality and antiquity
more than the message itself. Indication of missing words seems never to occur in the
Pyramid Texts. This absence may hint at the relative novelty of the style of textual pro-
duction, but perhaps also to the importance of the integrity of the ritual message for its
functionality in the context of the pyramid, where the Pyramid Texts are highly edited
and decontextualized from the materiality of source manuscripts.

Recontextualization of the 'Pyramid Texts' from manuscript to wall

The features inherent in manuscript format, as opposed to those of the monumental
form, imply that several modifications were undertaken to adapt the text from one set-
ting to the other. In order to approach the changes that were made by these unknown
actors, I discuss the modifications that are likely to relate to each medium: manuscript,

intermediate model, and stone-wall surface. The three-phase presentation in Tab. 1 is inevitably reductive, because each phase may have involved several sub-stages. My aim here is to outline aspects that would be tightly linked to the medium and function of each phase so as to comprehend better the implications of moving from one to another.

The vertical axis in Tab. 1 lists features related to each medium used in the three-phase process. The modifications discussed are linked to the **aspect** (material, technique, and script), to the **format** (orientation, organization), and to the **content** (personalization, referentiality, abbreviation, and 'pharaonization'). The list of modifications is not exhaustive but situates the discussion of important changes relating to each phase. Each of these stages would have had particular features, and recontextualizing those features may help to understand how ritual texts were handled in order to be monumentalized in pyramids.

Each medium had specific rules of display in accordance with its purpose. Tab. 1 indicates changes occurring on those different media. **Manuscript** refers to the texts preserved in perishable forms in some sort of archival context. **Intermediate models** refer to the draft emerging from the selection and compilation of texts for carving in the tomb.[4] Finally, **stone inscription** refers to the carved texts, deriving from the adaptation of the drafts and recontextualized in the context of the tomb. This comparison of the status of the texts in each phase intends to approach the monumentalization of texts from an emic perspective by considering the changes that were made by the actors engaging with the written material at each stage.

Tab. 1: Three-phase process of transposition from manuscript to the walls of pyramids (terminology is explained below).

		Manuscript	Intermediate models	Stone inscription
Aspect	*Material*	Papyrus, leather rolls	Papyrus (but other media are also possible)	Stone walls
	Technique	Written in black and red ink	Written in black ink	Carved and painted in green

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[4] Another intermediate phase may have included preparing a working model for inscription in the tomb. This stage was accomplished differently from one pyramid to another and it may have involved more or fewer changes. However, I believe that the hieroglyphic style would have been adopted only on the spot, while a working model may have been written in more and less cursive styles. I do not analyse this stage in this paper.

		Manuscript	Intermediate models	Stone inscription
	Script	Cursive	Cursive	Modified hieroglyphs
Format	*Orientation of the writing*	Retrograde (signs facing against the direction of writing)	Prograde right-to-left (signs facing towards the direction of writing)	Prograde right-to-left or
	Layout	Titles, often horizontal, and paratextual markers	Removed	Removed
Content	*Personalization*	Generic reference to an individual	Name of the deceased	Name of the deceased
	Reference to the deceased (grammatical pronouns)	1st and 2nd person pronouns	3rd person pronoun	3rd person pronoun / royal cartouche
	Abbreviation	Use of abbreviated sentences	Fully spelled out?	Fully spelled out
	Pharaonization (cf. Bickel 2017)	Mix of spells for royal and non-royal recipients	Reconfiguration of the content for a royal recipient	Reconfiguration of the content for a royal recipient

Aspect

'Aspects' of the medium relate to the materiality of each support, the technique used to inscribe the texts, and the type of script employed. Manuscripts are likely to have consisted of papyrus rolls, but could also have included leather as well as writing boards (Baines 2004: 26; Cancik-Kirschbaum and Kahl 2018: 20–3). The intermediate model is likely to have been on a papyrus medium, because this would have been the most convenient material to handle and take to the site. Other possible types of support include potsherds and limestone flakes; a variety of materials could have been used at the same time (Baines 2012: 28–9; Parkinson 2019). The New Kingdom Theban tomb of Nakht-min mentioned above has produced ostraca bearing intermediate models for the transcription of the texts on the wall; but hardly any inscribed ostraca have been found in the pyramid complexes or on Old Kingdom sites in general (see Hussein 2017: 304–5). Limestone-flake ostraca are not common before the New Kingdom and are a feature of the Theban necropolis that has few parallels elsewhere (Pelegrin et al. 2016; Andreu-Lanoë and Pelegrin 2018). While there could have been other unidentified local writing practices, the amount of text to be inscribed on the walls would have required a large supply, so that papyrus rolls are a more likely medium (see also Kahl 1996: 70–2; Morales 2016b: 76). The writing support of the final inscription was the high-quality limestone blocks that were brought from the Turah quarry on the opposite side of the Nile, south of modern Cairo. A layer of gypsum, and sometimes of mortar, would have been applied to the walls to brighten and flatten the surface before hieroglyphs were carved and then painted in green.

The technique in the first and second phases involved writing in ink on papyrus; the third phase consisted of drafting in paint and then carving on stone walls. These different techniques imply practical and material changes. In the first two phases, the bodily movements required for copying from similar media, such as papyri, would be relatively small and limited to the eyes and hands, although the quality of the writing would have been more detailed in a final manuscript than in a draft. However, in order to inscribe the texts on the walls, the copyist would have to move physically from the top of the wall to the bottom, probably using a ladder or scaffolding. This would require a longer timespan and more pauses, during which the copyist would stop and look again at the wall and the model before resuming at the top of the following column, as well as at other junctures.

The papyri from the mortuary temple of Pepy I (Fig. 3; Papyrus MafS T2147) can perhaps each be identified with one of the first two phases—an original section of a manuscript and a section of a draft copy of a spell. It was discovered in a small sealed room and consists of two separate sheets pasted together back-to-back (Berger el-Naggar 2004: 89–90,

figs. 1–2; see also Baines 2007: 56–7). The date of the manuscripts, which were discovered as part of a late Middle Kingdom archive (c. 1800 BC), is uncertain (Parkinson 2009: 148 n. 25; on libraries and archives cf. Cancik-Kirschbaum and Kahl 2018: 108–23; Parkinson 2019). The two sides, both consisting of sheets half the height of a standard papyrus roll, do not seem to be of the same date. Nevertheless, their co-occurrence gives an insight into the possible layout of mortuary literature on papyri or other materials that were used as sources in the copying process. Antonio Morales (2016a: 177 n. 45) has argued that the two papyri could have become stuck to each other accidentally and Catherine Berger el-Naggar (2004: 86) has argued that they were glued together to consolidate side A, the older text. However, side A, with its hurried cursive style and layout as a prograde copy (signs facing towards the direction of reading) of spell 217 of the Pyramid Texts, could suggest that it had been used as a draft, perhaps even an intermediary model to inscribe the spell in a pyramid. The text is written continuously, and the number of signs in a column is similar to that found in a register corresponding to a horizontal section of decoration on a wall (inscribed pyramids have up to five such registers). The absence of a title also agrees with the hypothesis of side A being a draft. The rushed writing indicates a fast pace of work, a circumstance in which some miscopying—such as is found in pyramids—is easily conceivable. Thus, the older papyrus (labelled side A) may have been a draft used at some point in the process of copying a text from manuscript to pyramid. Some decades or more later, it would have been reused, pasted upside down to the back of side B to strengthen and protect a more recent text that was still being handled and used.

Side B, with its careful and neat signs and short columns, could be compared with papyri used by priests during rituals in a mortuary complex. Its script and layout resemble the style of a manuscript of the same general period which contains a ritual to be performed while moving around a mastaba (P. Ramesseum E: Gardiner 1955; British Museum EA 10753.2). The number of signs per column is slightly lower than in the recto of P. T2147, but other features are similar between the two. Evidence in the Old Kingdom archives from the pyramid temples of Abusir indicates that one individual involved in the daily ritual of circulating around the pyramid was responsible for taking the papyrus from the officiant, putting it back in a specific box, and sealing it. Confirmation that the seal had been applied to the box is mentioned in the archive (Posener-Kriéger 1976: 17–18). The absence of a specific name of the beneficiary of the ritual can be due to its being used in different parts of the funerary complex and through several generations. If it was used daily, it would have needed consolidating at some point. Thus, the older text on P. T2147 might be a draft or an intermediary model of limited purpose that could have been used later to consolidate a different papyrus.

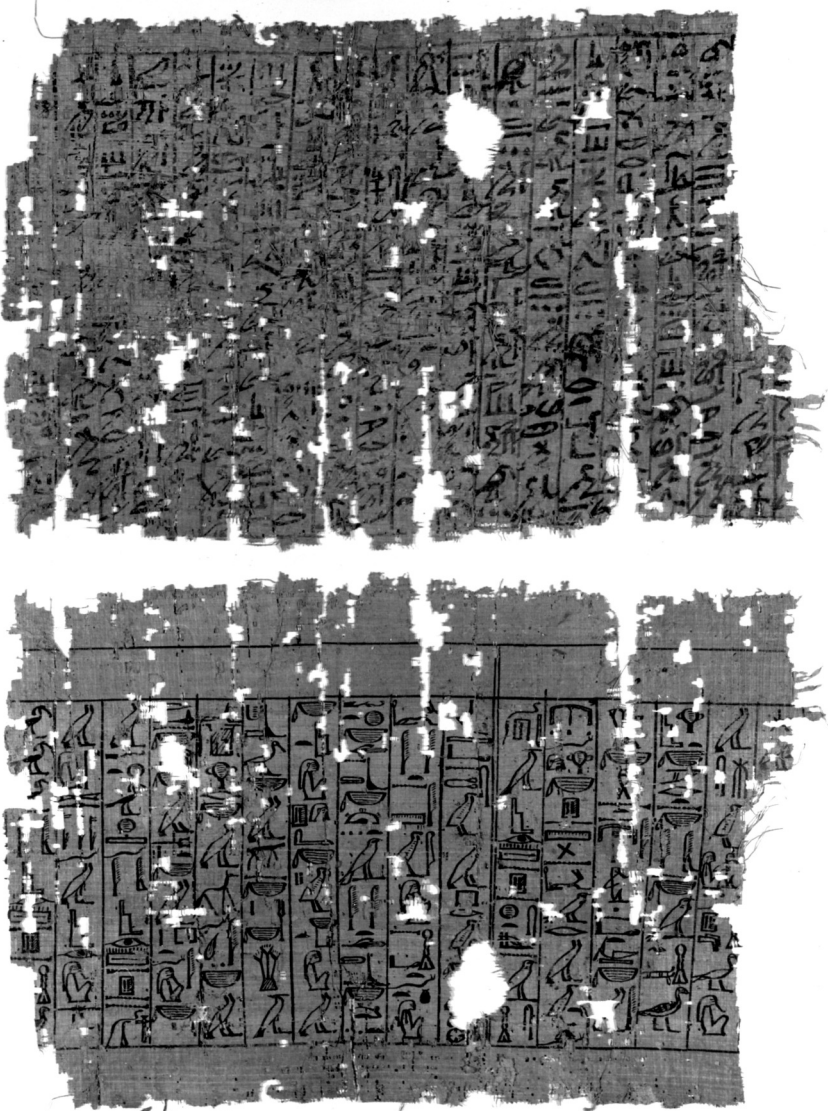Thus, the style of writing would have changed from neat cursive writing to a rapidly

Side A (above) and side B (below) of Papyrus MafS T2147 from the mortuary temple of Pepy I (Berger el-Naggar 2004: 89–90, figs. 1–2). © MafS.

copied draft between the manuscript and the intermediate model. Another intermediate phase may have included preparing a working model for inscription in the tomb, for the text would need to be copied in a neat cursive style, but the hieroglyph style would have been adapted only on the spot. In the first case, the use of ink would require the copyist to stop at regular intervals to dip the reed brush in the ink, or to switch colours from black to red (cf. Parkinson 2009: 90–112). The intermediate model may have consisted of a draft written more hastily, using only black ink. Its roughness could explain the presence of mistakes on the wall, which are often assumed to derive from mistransposing hieratic signs into hieroglyphs. Although there may also have been models inscribed in very detailed signs, mistakes in pyramids are often suggestive of transposition from a relatively cursive original (e.g. Jéquier 1933: 18–19; Mathieu 1996: 290; Hays 2012: 114, 469). Such mistakes could have been most easily made during the transcription from the intermediate model to the wall, or from a working model on the wall. The copying of texts into a form suitable for a working model in the context of a workshop (see Kahl 1996: 70) could explain mistakes, because the people involved in this copying would be less familiar with the content of such texts than those who compiled them.

The final stage was the inscription of the texts on the stone wall surfaces, where they were sketched in paint before being reviewed, corrected, carved, and painted. Traces on the walls show that this process involved drafting the texts first in cursive signs in red ink, then in black ink, then carving (Labrousse 1996: 126 n. 6, visible *in situ* in the pyramid of Ibi). The precise procedure may have varied between pyramids. Isabelle Pierre-Croisiau (personal communication), for example, suggests that red marks at the bottom of every tenth column in the corridor of the pyramid of Merenre could have helped with the laying-out of the text. In other areas different techniques were used: a copyist would inscribe between two and six neat signs in black ink at the base of a wall, then another copyist would fill the columns out with a quick sketch in red ink, covering the black signs at the bottom (Labrousse 1996: 127–8). This procedure would give the copyist a sense of the arrangement of the text in a register before he started to inscribe each column in full. A comparable division of labour is noticeable in the texts in the pyramid of queen Neith, where the person in charge of filling the hieroglyphs with paint often interpreted the carved signs wrongly; moreover, some of these had been misunderstood in the first sketch, so that errors had been made at two stages of the work (Jéquier 1933: 18).

Fig. 4 shows the sign of the owl 𓅓 in two different styles of cursive writing on papyrus P. T2147 and with two different levels of detail in the pyramid of Pepy I. The carved versions are in sunk relief, as is common in the subterranean areas of the pyramids, and are all painted in green. The sign on the left displays a significant effort in detailing features of the owl, that is, the eye, beak, and plumage. It is unclear whether the carving of the outline and the details were done by the same person. In any case, the process

of transposing every sign (there are many thousands of signs in the pyramid of Pepy I) would have required a tremendous effort, including knowledge, intellectual creativity, and artistic skills.

Adapting the cursive signs to outlined or detailed hieroglyphic form was not the only task involved in transposing the texts onto the walls. Signs were also adapted to a form that occurs extensively in the context of the pyramids in the Old Kingdom: the alteration of signs in a 'mutilated' form. Representation of the whole body of humans, deities, or some mammals was considered inappropriate for the context of the tomb and was altered in various ways. Signs can be reduced to one body part, such as ⳾ for 𓃒 in *smꜣ* 'wild bull', or 𓎛𓏤𓄿 for 𓎛𓏤𓀉 in *ḥms* 'to sit'. A sign could also be replaced by a different one that was considered more suitable to the context, it could be suppressed without being replaced, or a logographic sign could be replaced by phonetic writing (the fullest discussion remains Lacau 1913). This last practice is also attested in some specific contexts in non-royal tombs (Roth 2017).

These alterations imply a knowledge of rules of writing and pictorial representation in order to change creatively the orthography of a word or truncate awkward signs during the process of inscription. For instance, the determinative of the seated woman offering her breast to a child held on her lap in Fig. 5 is modified in different ways in different pyramids. The difficulty of truncating such a sign led to its being omitted or replaced by a generic stroke: 𓂝𓏤 instead of 𓂝𓀋 in one instance in the pyramid of Pepy I (*PT* 266, 359a). Cases where the hieroglyph has been reduced exhibit different ways of thinking about how to modify it. In the pyramid of Teti, the child is truncated, leaving only the mouth area and the breast. In the pyramid of Pepy I, one finds either the truncated sign of the mother without the child or a head suckling a breast. In Ibi, the mother is again omitted and the child is truncated leaving only the head and shoulders and the mother's breast.

Teti

Pepy I

Pepy I

Ibi

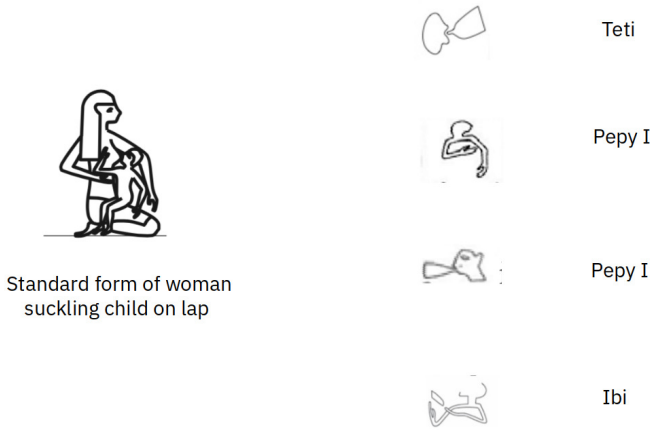Standard form of woman
suckling child on lap

Fig. 5:   Example of mutilated signs of the mother suckling a child as carved in different
pyramids.

The transformation from the intermediate model to carved hieroglyphs required alterations that do not occur in the New Kingdom tomb of Nakhtmin, because the script there remained cursive and it was not necessary to neutralize certain hieroglyphic signs symbolically. Such modifications of writing also vary between the pyramids and developed from using chiefly phonetic writing as a means to replace signs representing beings (humans and animals) to a systematic truncation leaving only the upper part of animate signs. In the pyramid of Pepy I, the addition of plaster in the middle of the body of animal signs such as the recumbent lion was intended to disjoint its form; painting only half of the sign was another means to counter its potential animation (Fig. 6). This recalls iconoclastic practices known from Egypt and many other cultures, such as the mutilation of statues or *damnatio memoriae*, the erasure of inscribed names of deities, as well as those of royal and non-royal individuals.

These modifications shed light on how Ancient Egyptians conceptualized language and writing in the liminal context of the pyramids' underground areas. Carving hieroglyphic signs involved the representation of writing in a 'divine' form (Baines 2007: 46). In the words of Nefermaat, a vizier of the Old Kingdom (4th dynasty, c. 2550 BC), the lapidary style also implied permanence: 'writing that cannot be erased' (Stauder-Porchet 2010: 155). Through the act of carving and through the iconicity of the script, the signs entered the physical realm with a mediality that may be compared to that of statues, which were ritually activated in order to embody the gods or deceased individuals. As noted by

Meskell, 'the term for sculptor was *he who keeps alive*, which underscores the significance of the image as a living materiality' (2004: 250). Inscriptions carved in liminal contexts such as tombs or temples, where they would have been ritually activated, were evidently thought to possess similar properties. This practice of mutilating signs in the script hints at how Ancient Egyptians perceived the materiality of writing, believing that truncating a sign or displaying half of it would counteract its agency. The neutralization of a sign impaired its representational properties, not its linguistic function; the agency of the words in the ritual message remained intact.

Fig. 6: Carved hieroglyphic sign from the pyramid of Pepy I of a recumbent lion with plaster in the centre of its body (left) and with green paint covering its forepart (right). Photograph: © MafS 2006 (Jean-François Gout).

This practice of truncating signs reached a peak in the subterranean areas of the Old Kingdom pyramids and is unlikely to have been transmitted through archives because it is tied to the monumental context and diverges from one pyramid to another. The difference between the writing of titles of queen Neith in her mortuary temple and in her burial chamber illustrates differences in the adaptation of written forms. Her title *zꜣt sm-swt* 'eldest daughter' is determined by a standing woman with a staff 𓋔𓏏 on the obelisk at the entrance of her mortuary complex (Jéquier 1933: 4, fig. 1). By contrast, the sign of the standing woman is truncated—leaving only the head, shoulders, arms and her staff—in the horizontal band around her sarcophagus in the underground chamber (Jéquier 1933: pl. xiv). This difference appears thus to relate to the context of the burial chamber containing the vulnerable body of the deceased. Some signs representing living beings could have been thought to harm the deceased in the afterlife, and modifying them could have ensured that they were neutralized (Lacau 1913: 2). A significant proportion of the modifications of hieroglyphs was undertaken on the spot, remaining sealed in the dark and inaccessible subterranean areas of the pyramids, so that knowledge of script and writing practices would not have been transmitted directly to other contexts.

Format

Format would have differed significantly between the three successive phases of production, all of which had their own functional requirements. As is known from other Old and Middle Kingdom manuscripts, the layout of the source manuscript would normally include one or more horizontal bands giving the title and the content of the text that was written in vertical columns below (cf. Fig. 3, side B). The headings and paratextual information, including the use of red ink for certain words, would be useful for organizing knowledge and helping consultation and identifying content (about paratextual signs in Old and Middle Kingdom texts see Enmarch 2020). Making a preparatory copy of a text for the textual programme of a pyramid involved removing paratextual elements—including headings, title, certain instructions, potential glosses, vignettes, colophon, words in red ink, indications of lacunas if any, and blank spaces—leaving only the main text.

The writing on religious manuscripts is usually retrograde (Posener-Kriéger 1973; Collombert 2011), that is, with signs facing against the direction of reading, but this orientation also sometimes occurs in inscriptions (cf. Simpson 2017). In pyramids of the Old Kingdom, the orientation of the writing had to be adapted to the context of the tomb in prograde, where the hieroglyphs are organized so that the direction they face is in accord with the direction of reading; deliberate examples of retrograde in pyramids are scarce (see Hays 2012: 113; Berger el-Naggar and Fraisse 2015). For instance, the signs on both papyri in Fig. 3 (side A and B) face to the right. However, side A is written in prograde and side B in retrograde. In the former, the texts read from right to left, but in the latter from left to right. In addition to this modification from retrograde to prograde, texts had to be arranged on the walls so as to face towards the head of the deceased in the sarcophagus, which was located along the west wall of the burial chamber, with the head at the north end. The signs on a given stretch of wall could thus face right or left. Texts on the north wall face left, while those on the south wall face right. In order to change the orientation of the inscribed text, the script could have been adapted directly on the walls or on a working model that had been specially prepared. The practice may have varied from one pyramid to another. A scribe would copy a retrograde text that read from left to right to make a text that read from right to left. The process of copying thus implies a movement of the eye opposite to that of the hand, which could easily lead to miscopying (one would tend to copy in the same direction as the source manuscript). Mistakes resulting from practical issues of this sort are also found on other media, such as inscribed coffins of the Middle Kingdom and New Kingdom papyri of the Book of the Dead (Lüscher 1998: 92–4, pl. 2).

On the walls of the inscribed pyramids, some sections of texts are garbled and individ-

ual hieroglyphs face in the opposite direction to the inscription as a whole. The garbled sections result from the copying process and shed light on the materiality of reading. They indicate that the mistakes stem from an earlier stage of production and hint at the materiality of the manuscripts underlying the monumentalized texts. The example in Fig. 7 accounts for the arrangement of the garbled texts carved on the north wall of the pyramid of queen Wedjebteni. A reconstruction of the process of inscription shows that the middle section of the original was copied three times back and forth. The copyist intended to inscribe two spells, *PT* 217 followed by *PT* 553. However, after copying part of *PT* 217 in the correct order, he copied part of the same section again backwards. He then resumed in the expected order. This pattern exhibits three successive directions of copying, as shown diagrammatically in Fig. 7: he started reading the text in the correct direction from left to right (retrograde), but then read backwards from right to left (as if the text were prograde), and then resumed reading in retrograde. The reason for garbling the section in the middle lies in the difficulty of reading from left to right while writing from right to left.
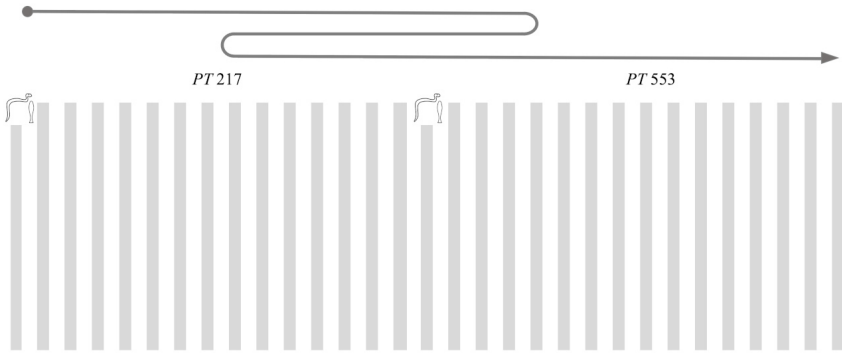

Fig. 7:   Reconstruction of the reading of Wedjebteni's retrograde original. (This figure does not indicate the exact number of columns, only the directionality of the copying process.)

Occurrences of miscopying like this one suggest that an intermediate model was used for inscribing the wall of the pyramid chamber and that the texts were not always checked as they were inscribed. Such examples also support the assumption that religious manuscripts were written in retrograde in the Old Kingdom and its aftermath. The process of copying would thus involve adapting a text written in retrograde on a manuscript to one written in prograde on an intermediate model. The prograde on the intermediate model might have been written with a single orientation, from right to left, and would have been adapted inside the burial chambers according to the layout of the wall on which it was inscribed.

Direct transposition of prograde text on the pyramid chamber wall may have led to mistakes that were not corrected, as in mistakes in sign orientation. In Fig. 8, from the pyramid of Ibi, six hieroglyphic signs retain the right-facing orientation of their intermediate source. The standardized hieroglyphs in the margins of the figure show the expected orientation. The example with 𓏭𓏭 was partially adapted by changing the orientation of the first sign 𓏤 into 𓃀. However, the reading order remains wrong, because the sign on the left should have been placed on the right. Similar mistakes of direction were also observed by Jean Leclant (1975: 142, col. 4; 17) in the passage between the burial chamber and the antechamber of the pyramid of Pepy I. The process of copying a text from a manuscript in a non-retrograde direction would thus require constant vigilance of the copyist.
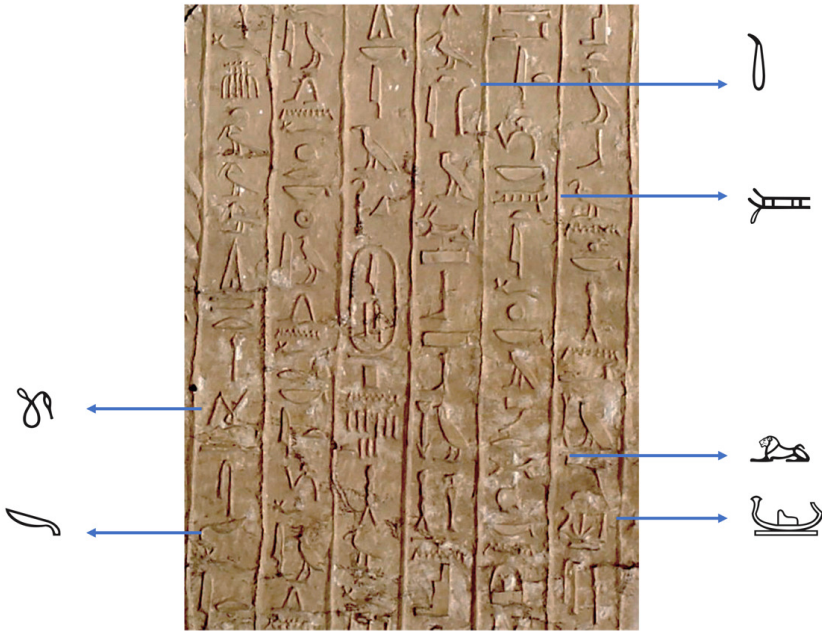

Fig. 8:   Signs inscribed in the wrong direction in the pyramid of Ibi. Photograph: © MafS 2016 (Christelle Alvarez).

Content

A number of studies, with forerunners going back to the 1930s (Sethe 1931; Ricke 1944; Schott 1950; Spiegel 1956, 1971), discuss how these ritual texts were arranged on the walls of the subterranean chambers, as well as the logic of their arrangement in pyramids and on other media such as wooden coffins (Altenmüller 1972; Baines 2004; Hays 2012; Morales 2013, 2016a; Mathieu 2017). These studies reveal how Ancient Egyptian authors and theologians used various approaches to adapt existing groups of texts according to the status and gender of the tomb owner, the function and symbolism of the tomb together with its architectural features, local ritual practices and, more pragmatically, the space available for inscription.

Aside from the selection and ordering of spells, I discuss here specific elements of their content that had to be adapted. It is unlikely that master copies and intermediate models included references to the deceased's name (Fig. 3, Side B). Instead, such references could have the form *nsw*, generic 'king', or *mn pn*, '(this) someone', for a non-royal individual. Transposition onto the pyramid wall involved adding the name of the king, which required significantly more space than pronouns. The shift in the purpose of the texts from oral performance to a decontextualized inscription also required the pronouns to be adapted to the gender of the owner and from first to third person (Fig. 9). The change from 'I-text' to '(s)he-text' may derive from a need to clarify the connection between the beneficiary and the texts, because the agency of the ritualist is removed (Hays 2012: 136–75).
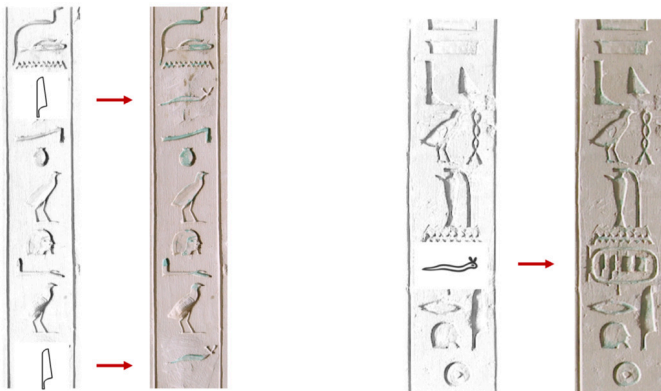

Fig. 9:   Corrections of pronouns and replacement by the cartouche in the pyramid of Pepy I. Photograph: © MafS 2006 (Jean-François Gout).

Although the generic referent could have been replaced on the spot with cartouches en-

closing the name of the king, other elements of the content required the attention of the copyist in the first stage, during the adaptation of the texts from source manuscripts to an intermediate model. For instance, paratextual information was probably removed at this stage (Baines 2004: 31; Hays 2012: 3). This process can be identified through a comparison of a spell, *PT* 357, that occurs in six pyramids, among which the introductory indication of the reciter and the aim of the spell—'recitation by Horus; an offering that Geb gives to the Osiris Pepy'—occurs only in the pyramid of Pepy I. Furthermore, this spell was inscribed in two different areas of the pyramid of Pepy I, but only one of these copies includes this paratextual information. It seems that including headings and title in monumental contexts became a common practice in the Middle Kingdom, especially on Coffin Texts Sethe (1931). Although some rare examples occur in Pyramid Texts (cf. *PT* 456 in Baines 1990: 11), evidence suggests that these would have already existed in manuscripts but were not included in the monumental version.

Other modifications relating to different formats have left traces on the inscribed walls. For instance, the paratextual element �⟩ *ts ph̲r* 'vice-versa' indicates that the spoken words should be uttered again in reverse order (Westendorf 1955; Motte and Sojic 2020: 17–18). This abbreviation was initially carved on the walls and then corrected by writing out the actual content of the clause. The first carving shows the abbreviated form 'this one has no hurt, that one has no injury, and vice versa'. It is then written in full, referring to the deceased with the second-person pronoun 'you', as 'this one has no hurt, that one has no injury and you have no injury, you have no hurt' (Fig. 10). The ritual performer would recite the whole sentence and probably not read out 'vice-versa'. However, in the context of the tomb decoration, the carved texts were intended to reflect the full spoken words recited by a ritualist, so that such abbreviations would be edited. This would require the attention of the copyist at some point between the initial assembly of material and the sketching of the texts on the walls. The example in Fig. 10 shows that the abbreviated form made it to the last phase of inscription in the pyramid of Wenis. Only during the process of carving was this noticed and amended. More than a hundred such corrections have been identified, indicating that the process of inscription in the pyramid of Wenis went through careful scrutiny (see Mathieu 1996 for an exhaustive list of mistakes).

The content of the text would also have been adapted to the context. Susanne Bickel (2017) labels this process 'pharaonization' to express the reconfiguration of spells for the royal recipient. These modifications would ensure that the king would be challenged as little as possible in his access to the afterlife. For instance, she argues that sections of the ferryman spell would have been amended by reducing the dialogue between the ferryman and the deceased to one question, while the non-royal deceased would face complex interrogations. Without the right answers, the deceased would risk being left
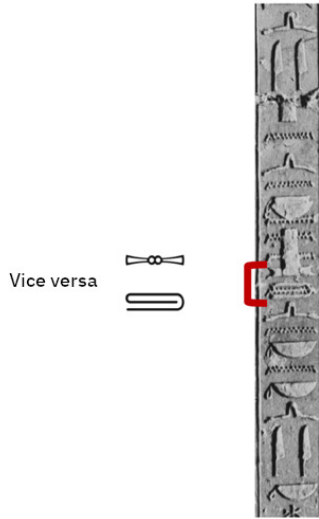
Correction of an abbreviated form *nj jj pn nj nkn pn ts phr* 'this one has no hurt, that one has no injury (and vice versa)' into its fully spelled-out form *nj jj pn nj nkn pn nj nkn.k nj jj.k* 'this one has no hurt, that one has no injury and you have no injury, (Unis), you have no hurt' in the pyramid of Wenis (image adapted from Piankoff 1968: pl. 40).

on the bank, unable to cross the river and hence unable to reach the Netherworld. Such a challenge would be lifted for the royal deceased, who would only need to request the boat, mirroring royal protocol on earth. Similar modifications are found in relation to the central concepts of the tribunal and judgement, where 'it was deemed necessary to explicitly and categorically refute the possibility of any accusation against the king' (Bickel 2017: 144). The spells would thus be carefully edited in order to remove any content that was inappropriate for a royal person.

From two-dimensional to three-dimensional contexts

The frame in which spells were inscribed consists of the introductory group ⌐ *ḏd-mdw* 'recitation' and a line that closes the column at the end of the spell. In the pyramids, the spells transcribed on the walls usually follow this convention, but ⌐ can also be added at the top of all the columns, irrespective of where spells begin or end. For instance, in Fig. 11 the group occurs at the top of the column and again in the middle of the fourth col-

umn from the left at the beginning of a spell. The sign indicating the end of a recitation in pyramids is usually ⌐□: a square on top of one side of the closing line.

The original context of both markers is in manuscripts, but the closing sign is usually a line or an arm with the palm of the hand facing down ⌐ (Parkinson 2010: 114–15); the line with the square ⌐□ never occurs in manuscripts, although it is visually a little similar.[5] The sign ⌐ seems to derive from the notation of a gesture used in performance, where the lowered arm indicated a pause or the end of a recitation. It can be found as the determinative of the verb 𓀐𓏏𓂽 'to cease, to pause', but it has no phonetic value at the end of Coffin Text spells. It occurs sometimes several times within one spell as the lowered arm, a line, or a double line, and may reflect reading guidelines indicating pausing at the end of a spell's subsections (cf. Buck and Gardiner 1935: *CT* II 281c, in particular in coffins BIL, BIC, and SIC). The reason for its prevalence in the corpus of the Coffin Texts may be that the inscriptions are closer to their source manuscripts than the Pyramid Texts.

In the monumental context, this sign would have been transformed, perhaps as a protective frame or a visual play, into the sign 𓉐 ḥwt, which refers to the word 𓉐𓏏𓉐 ḥwt 'estate, mansion', also 'tomb'. The content of a spell was thus written inside an enclosure 𓉐 enveloping the whole column or a larger section bearing the spell. This connection of a textual unit with an architectural structure can be compared to the European term *stanza*, Italian 'room', for a distinct section of verse (e.g. Parkinson 2010: 114–15).

A similar practice was almost universal for inscribing the names of the king: the royal personal name never merges into the flow of the text. It is isolated within the cartouche-sign 𓍷, which represents a looped and knotted cord, or within the *serekh* 𓊹, which represents a rectangular enclosure seen in plan combined with a niched façade seen in elevation. Such framings are also employed for iconographic elements, such as scenes with deities or kings, which are represented in a cosmological frame 𓉐 , consisting of the hieroglyph of the sky 𓇯 separated from the earth 𓇾 by two *wꜣs*-scepters 𓌙 associated with power and support. This frame is a schematic representation of the Egyptian cosmos; thus, each sacred scene was enclosed within a symbolic microcosm.

The typical two-dimensional cosmological frame 𓉐 was also adapted to three-dimensional architectural structures, such as temples (e.g. The White Chapel of Senwosret I: Lacau and Chevrier 1956: pl. 9). The elements of a temple and its iconography delineate a sacred and mythical space, within which the god can inhabit the statues and reliefs during the day. The temple materializes a microcosm of the ordered world, with the vegetation rendered in the form of the columns, while the ceiling bears

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[5]   The earliest evidence of this sign is in New Kingdom papyri (cf. Parkinson (2002: 114). For a discussion of signs used as text dividers, including the signs mentioned here, see Enmarch (2020: 47–9).

celestial or astronomical representations. The cosmographical symbolism of the temple evokes 'a primeval swamp' (Baines 1976: 12), which relates to the mythological event of the creation of the universe that was marked by the emergence of a mound out of the water.
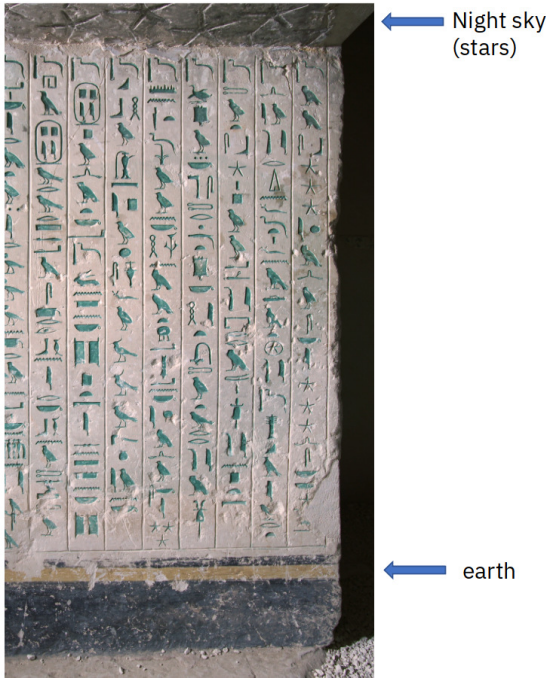

Section of the passage between the antechamber and the burial chamber in the pyramid of Pepy I. Photograph: © MafS 2006 (Jean-François Gout).

This cosmological framing can also apply to the subterranean areas of the pyramid, where the ceiling is covered with a carved and painted starry sky, the ground is marked by a yellow or orange horizontal band at the bottom of the walls, and the columns of text painted in green evoke the vegetation stretching up from the ground (Fig. 11). The sarcophagus, which is located at the western end of the burial chamber, is surrounded by walls decorated with motifs representing the *serekh*-enclosure. This motif delineates an enclosed space, protecting the body of the king and also perhaps symbolizing a protection of the identity of the deceased—as the *serekh* around the name—in the midst of the vegetation.

This symbolism—the sarcophagus in a swamp in the open air—recalls a mythical event: the revivification of the first dead ruler, the god Osiris, who was killed in primeval times.

According to the myth, the god was tricked by his brother Seth to lie in a coffin, which was then sealed and thrown into the Nile. His sister and wife, the goddess Isis, then found the coffin in the marshes and performed rituals in order to bring her husband back to life (Guilhou 1998; Smith 2008). The burial chamber could thus be seen as evoking a liminal space, where the texts participate in the recreation of a mythical moment of the revivification of Osiris. The deceased is included in this mythical setting and addressed as 'Osiris NN' in a reenactment of the primeval revival of the god.
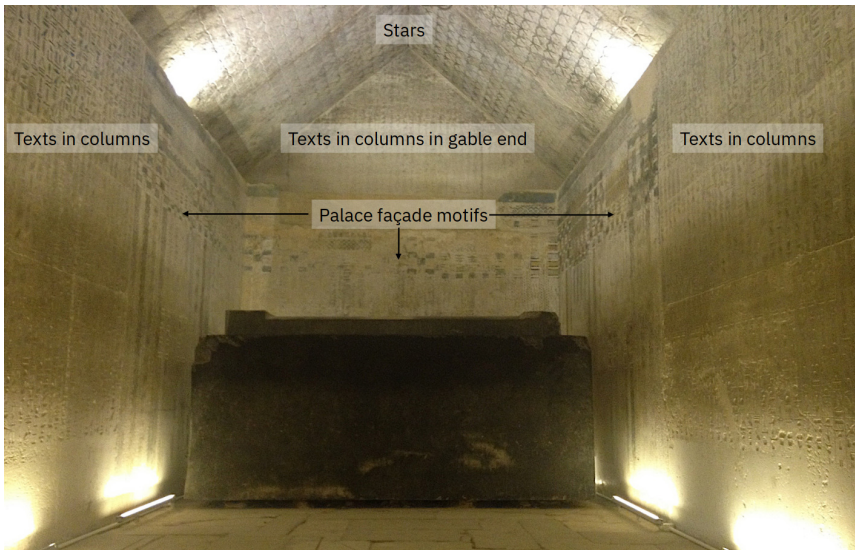
Fig. 12: Burial chamber of the pyramid of Wenis with view of the sarcophagus. Photograph: © MafS (Christelle Alvarez).

Conclusion

The Pyramid Texts are the outcome of a complex, multi-layered process of selection and adaptation of textual material previously recorded in manuscripts. The transfer of the textual material in pyramids derived from several stages of adaptation, from manuscripts to intermediate models, and from intermediate models or working models to the stone walls. The reconfiguration from two-dimensional support to the three-dimensional cosmological decor further encompasses many layers of reconfiguration and symbolization, from visual aspects to format, content, and function. Although the execution seems less thorough in the latest pyramids (such as those of Wedjebteni or Ibi), the approach to the manuscripts and the process of adapting them were based on a

common understanding of how texts should be inscribed in pyramids. It shows how the Pyramid Texts have a format that is specific to their location and purpose, which was reproduced for about two hundred years in at least eleven inscribed pyramids.

The Pyramid Texts are monumental not only because they occur on a monument and have been thoroughly drawn, carved, and painted on stone in a much larger format than on the original support. The inscriptions' functions were not limited to that of ornament, but gained dimensionality in their monumental setting. The status of writing changed from passive recording in archival settings or visual aids for the ritualist's recitations to an active agent of the rituals. The architecture and decor created a liminal environment that may evoke the revival of the first deceased, Osiris, in primeval times. The writing embedded in this cosmological decor ensured the continuity of ritual recitations on behalf of the deceased king.

Despite being sealed underground, the writing was also integrated into the architectural setting of the entire pyramid complex. The pyramid complex, a marker of the deceased king's royal power, identity, and dwelling, was aimed at ensuring his permanence on earth and beyond through commemoration and through ritual continuity. The monumentality of the Pyramid Texts ultimately emerges from the effort of transforming the handwritten source materials into a homogenous epigraphic ensemble, far removed from the materiality of papyrus and leather rolls, which function resonates within the whole monumental complex above ground.

Acknowledgements

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