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The symbolism of the number three in various forms of material culture in funerary architecture during the Old Kingdom[1]

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ABSTRACT

In various expressions of material culture examples not only of the use the number three but also of sub-units of three equal and mainly simple decorative themes employed in combination with another decorative theme can be observed. The conclusion of the study, which limits itself to the Old Kingdom, is that the most expressive example of the use of this sub-unit in architecture and decoration at first was to be found in the palace façade panelling on the exterior walls of early dynastic elite tombs. At the end of the First Dynasty this type of decoration disappeared almost completely from the exterior tomb walls, but this decorative theme continued to be used in some of the newly developed interior cruciform chapels. If the observation that the three types of niche used in the palace façade panelling can be directly linked with the false doors with one, two or three door jambs is combined with the chronological development of the number of those door jambs during the Old Kingdom, strong indications of a connection between the palace façade panelling and the true false door can be found. While the one-jamb false door disappears from the chapel in the course of the Old Kingdom, the two-jamb false door continues in use. A possible conclusion is that the original offering place in front of the panelled exterior wall is likely to have been a plain single or plain compound niche, and that the latter was, in a ritual sense, the most important of the two. In the course of the Old Kingdom the three-jamb false door is introduced, probably as a derivative of the great door niche, and this feature showed an increasing use during the rest of the Old Kingdom.

KEYWORDS

Old Kingdom – number symbolism – *serekh* – false door jambs – palace façade panelling – great *k3* door – tomb U-j – tomb Hor-Aha – architecture

رمزية الرقم ثلاثة من خلال أشكال مختلفة من الثقافة المادية فى العمارة الجنائزية خلال عصر الدولة القديمة

ليو روتين

ملخص

خلال التعبيرات المختلفة للثقافة المادية، يمكن ملاحظة أمثلة ليس فقط على استخدام الرقم ثلاثة، ولكن أيضاً لوحدات فرعية لثلاثة موضوعات زخرفية متساوية وبسيطة بشكل أساسى، حيث يتم استخدامها بشكل مركب مع موضوع زخرفى آخر. وتوصلت تلك الدراسة، التى تقتصر فقط على الدولة القديمة، إلى أن المثال الأكثر تعبيراً عن استخدام هذه الوحدة الفرعية، التى ظهرت بالعمارة والنقوش، ظهر لأول مرة من خلال تمثيل واجهة القصر، وهو الشكل الزخرفى الذى دائماً ما يعثر عليه بالجدران الخارجية لمقابر كبار موظفى الدولة بحقبة بداية الأسرات. وبنهاية الأسرة الأولى اختفى تقريباً هذا النوع من الزخرفة بالكامل

1 I would like to thank Mr. David Sexton (former literary editor, "Evening Standard", London) for going over my English; of course, mistakes of any kind are entirely of my hand.
This article is released posthumously with the family's consent.

من جدران المقابر الخارجية، إلا أنه استمر فى الاستخدام ببعض مقاصير القرابين الداخلية ذات التخطيط الصليبى، والتى بدأ تشييدها حديثاً. وإذا كانت الملاحظة التى تشير إلى أن الأنواع الثلاثة من النيشات المستخدمة فى تمثيل واجهة القصر يمكن ربطها مباشرة بالأبواب الوهمية ذات العتب الواحد أو العتبين أو الثلاثة، مع الأخذ فى الاعتبار التطور الزمنى لعدد أعتاب الأبواب الوهمية خلال عهد الدولة القديمة، فإن ذلك يكون مؤشراً قوياً على وجود صلة بين واجهة القصر والباب الوهمى الحقيقى. فبينما اختفى الباب الوهمى ذو العتب الواحد من مقاصير القرابين خلال عصر الدولة القديمة، استمر استخدام الباب الوهمى ذى العتبين. ويبقى الاستنتاج المحتمل لهذا التطور هو أن المكان الرئيسى لتقديم القربان أمام الجدار الخارجى للمقابر والمزخرف بتمثيل واجهة القصر من المحتمل أن يكون نيشاً وحيداً أو مركباً، ويعتبر الأخير من المنظور الطقسى أكثر أهمية. تم تشييد الباب الوهمى ذى الأعتاب الثلاثة لأول مرة خلال عصر الدولة القديمة، ربما كشكل من أشكال النيش ذى الباب الكبير، حيث أخذ هذا التطور فى الازدياد خلال الفترة المتبقية من عصر الدولة القديمة.

الكلمات الدالة

الدولة القديمة – رمزية الأرقام – سرخ – أعتاب الأبواب الوهمية – مناظر واجهة القصر – باب الكا العظيمة – مقبرة U-J – مقبرة حور عحا – العمارة

Fig. 1 Three types of royal tombs in the necropolis of Giza (photo L. Roeten)

As in many cultures, in ancient Egyptian daily life several numbers played a role in symbolism and magic. Apart from the culture-pervading importance of the number "two", so too did, to a lesser extent, the number "three" play an important role: examples can be found in several areas of cultural expression:[2] Examples in the material culture are not only the triads of gods (Wilkinson 1994: 131–133; Säve-Söderbergh 1977: 692),[3] and those of Menkaure (IV.5),[4] but also the triads and pseudo-groups of non-royal persons (Manuelian 2009). Further examples can be found in architecture (palace façade panelling). The number three also plays a role in the palace façade part of the *serekh*; a role which will be discussed later in this study together with the palace façade panelling in architecture. The symbolism of the number three was also present in non-material culture, of which examples are:

- The organization of the calendar (three seasons, the month of thirty days was divided in three weeks of ten days) (Traunecker 1980);
- An example in literature can be found in the fourth and the fifth story in Papyrus Westcar (P. Berlin 3033); in the story, it is told that Redjedet will give birth to three sons, who will later be kings.[5]
- In mythology there is the example of Isis, Osiris and their child Horus, and in a later period also Mut, Amun and Khonsu, their child; Atum, the creator god, who was one and became three.

Other examples in cultural expression can be cited, but the most prominent and extensive use of the number three is found in architecture where it is applied in certain aspects of funerary structures. Evidence of the use of the number in this field of cultural expression can be found from Early Dynastic times on. Some examples are:

In Umm el-Qaab, the early dynastic necropolis of Abydos, the tomb of Hor-Aha (I.1) (B10, B13–B16 and B19) consists of three large individual pits accompanied by eleven rows of three smaller graves, which were in contact neither with each other nor with the burial chamber (Stadelmann 1991b: 373–374).

An older example is tomb U-j in the same necropolis: there, as a first building stage, three rows of three rooms were built *against* the burial chamber, all of them directly connected, a layout that can be interpreted as the facsimile of a residence or palace (Dreyer 2011: figs. 14.2 and 14.3) (fig. 2).

In the earliest tombs of the First Dynasty the subterranean rooms around the burial chamber were arranged in rows of three, a layout that was abandoned in the second part of the dynasty (tab. 1).

2 The shared importance of the numbers two and three is visible in the pseudo-groups (Rzepka 1996: 335).

3 For the definition of material and non-material culture see https://www.cliffsnotes.com/study-guides/sociology/culture-and-societies/material-and-nonmaterial-culture. Accessed on 14th August 2020.

4 The spelling of the name of kings is according to Verner (2008).

5 Although these stories were placed in the Fourth Dynasty, the stories in the papyrus were apparently written in the Twelfth Dynasty (Simpson 1982: 744), although some evidence can be found that the story has a degree of truth in it (Verner 2015).

In the substructure of the southern tomb in the funerary complex of Djoser (III.2) both sides of three (false) entrances into the eternal residence of the king were constructed (Roeten 2020: fig. 5.1).

In later royal funerary architecture there were three types of tombs (the king's pyramid complex, the smaller queen's pyramid and the mastaba for lesser royalty) (fig.1).

The number three knows a limited use in non-royal tombs; an example thereof can be found in the mastaba of Ptahshepses at Abusir (Porter – Moss – Málek 1994: 340–342), where, in a direct line with the main entrance, a room without columns and with three niches in its western wall has been constructed (room 4) (Krejčí 2009: fig. 1.12). Another non-royal tomb with three niches (preceded by two rows of three columns) is that of Rashepses (date: V.L; Porter – Moss – Málek 1981: 494–496; Lepsius 1849–1859 Textband I: 166).[6]

As can be seen from these examples, the role of the number three in the funerary architecture is multifunctional, and is applied both in the internal and external design of the tombs. An example dated to the Predynastic Period is the already mentioned tomb U-j at Abydos (fig. 2). The original tomb consisted of the rooms 1 to 10, and is probably a facsimile of the palace of a local ruler; in this interpretation, the largest subsidiary room (room 6) can be seen as an open-air space with the other rooms lying around it. Rooms 11 and 12 are additions of a later date.

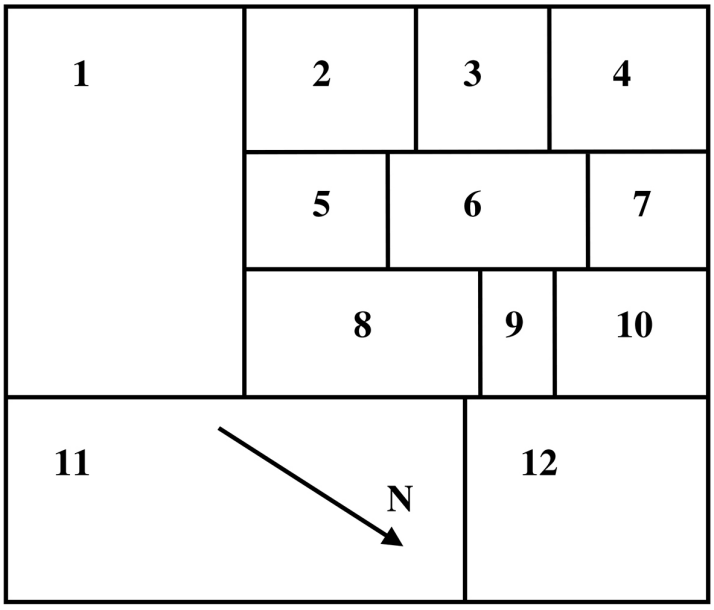

Fig. 2 Plan of tomb U-j at Abydos (drawing L. Roeten, schematically after Dreyer 1993: fig. 4)

Room 1 is probably the burial chamber because traces of a wooden coffin have been found in it, and the nine rooms to the east of the burial chamber not only are comparable with the model buildings at the northern side of tomb S 3357, but can also be seen as a precursor of the later tomb of Hor-Aha (I.1) (Abydos B10, B13–B16, B19).

6 Lepsius (1849–1859 Ergänzungsband: Bl. XLII) shows the decoration around the middle-niche; the offering bearers are directed toward that niche, which indicates that this was the main niche possibly with a statue standing in it.

In tomb U-j the open air space is surrounded by four combinations of three rooms (2–4, 4–10, 8– 10 and 2–8). If room 1 is combined with rooms 2 to 10, interpreted as three rows of three rooms (2–8, 3–9 and 4–10), the resemblance with the tomb of Hor-Aha is evident.

An example of somewhat later date is tomb S 3357 at Saqqara; this tomb has, north of the main superstructure, a subsidiary construction ("model-estate") in which three lines of dummy buildings can be distinguished, two of them consisting of three buildings while the line in the middle is formed by two buildings (Emery 1991: fig.17; Emery 1954: pls. LVII – LXVI; fig. 3 here). Due to the presence of three round forms that are most likely grain silos, the most southern of the "rooms" in the middle line can be interpreted as an open-air space, just like "room" 6 in tomb U-j. Based on the consideration that the corridors in the east and west building were not meant as entrances (Emery 1954: pls. LXIII and LXV), that the west building is shorter than the east building, and that the subsidiary construction is placed close to the northern side of the mastaba, it can be concluded that an opening directed to the west has been formed, which gives access to an open space in front of the northern wall of the superstructure.

The open space can be interpreted as a chapel on the northern side of the mastaba (Stadelmann 1991a: 29). Remnants of this chapel design can still be seen in the chapel against the northern side of the pyramid in the funerary complex of Djoser at Saqqara.[7] The direction of the opening to the west instead of to the east is possibly caused by a more difficult approach from the east side, due to the proximity of the escarpment.

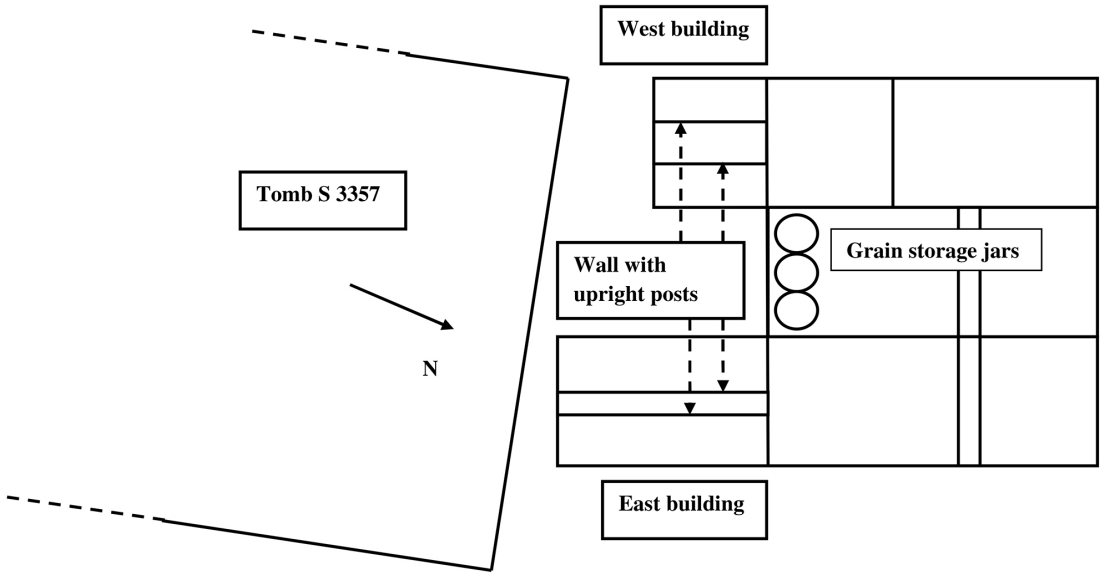

Fig. 3 Plan of the model building north of the mastaba S 3357 (Porter Moss 1981: 443–444, date: temporary Hor-Aha [I.1]) (drawing L. Roeten, schematically after Emery 1991: fig. 17)

7 Google maps: https://www.google.fr/maps/@29.8832366,31.219424,150 m/data=!3m1!1e3. Accessed on 14th August 2020. For a discussion of the place of the model-estate in relation to the tomb itself see S. Williams (http://www.digitalsaqqara.co.uk/main/the-boat-grave-and-model-estate-of-tomb--s3357/ Accessed on 14th August 2020.).

Tomb complex B10/15/19 at Abydos, which is described as belonging to the tomb of Hor-Aha (I.1), is in fact made up of three parts. The tomb has a group of 34 subsidiary graves, but the most important part of the tomb is the group of three large rectangular pits of which B10 is interpreted as the oldest (Kaiser – Dreyer 1982: 219). In a later stage of the construction two more pits of equal dimensions were added at the south-western side of B10.

The final situation was a group composed of one burial chamber with two major magazines (which is comparable with tomb U-j after the second building phase). The second group consists of two tombs B13/14, which, based on their place next to the original burial chamber, could be queen's tombs (Reisner 1936: 39). The third group is a collection of small pits of nearly equal dimensions which are laid out in eleven rows of three following the line of the three main rooms. Although it is beyond the scope of this study to go further into the question of their purpose, in the light of the development of the employment of subsidiary graves in this necropolis, it is very likely that we are dealing with an early form of this type of burial.

The extensive use of the number three during the Early Dynastic Period can be clearly seen in the development of the mastabas on the escarpment of the northern part of the Saqqara necropolis. In these mastabas, apart from the decoration with a palace façade panelling composed of a form of the unit (see fig. 4), originally the magazines in the structure of the tomb were lined in rows of three.

This design still had some similarities with those of tomb U-j and the tomb of Hor-Aha (B10, B15, B19 and subsidiary tombs) in Abydos, but during the reign of Den (I.5) this preference was abandoned and a more varied type of magazine layout was introduced.[8]

Date	King	3-row structure	Partial 3-row structure	Random structure
I.1	Hor-Aha	S 3357		
I.2				
I.3	Djer	S 3471		
	Djer	S 2185		
I.4	Djet	S 3504		
	Djet	S 3503		
I.5	Den	S 3507		
	Den		S 3035	
	Den			S 3036
	Den			S 3506
I.6	Adjib			S 3038
	Adjib			S 3111
	Adjib			X
	Adjib			S 3338
I.7				
I.8	Qaa			S 3500
	Qaa			S 2105
	Qaa			S 3505

Tab. 1 The change in magazine lay-out during the First Dynasty

8 Apart from this change, the long reign of Den (I.5) saw several other architectonic changes: his tomb in the necropolis of Abydos is the first with a staircase leading to the burial chamber; it is the first to have a chapel with a serdab and possibly an offering place (see Stadelmann 1991b: 376).

THE UNIT IN (FUNERARY) ARCHITECTURE

The niches that were used for decorative purposes in architecture were the plain single and the plain compound niche (fig. 4). These basic decorative elements could be combined in units of three ("the basic unit" in fig. 4).

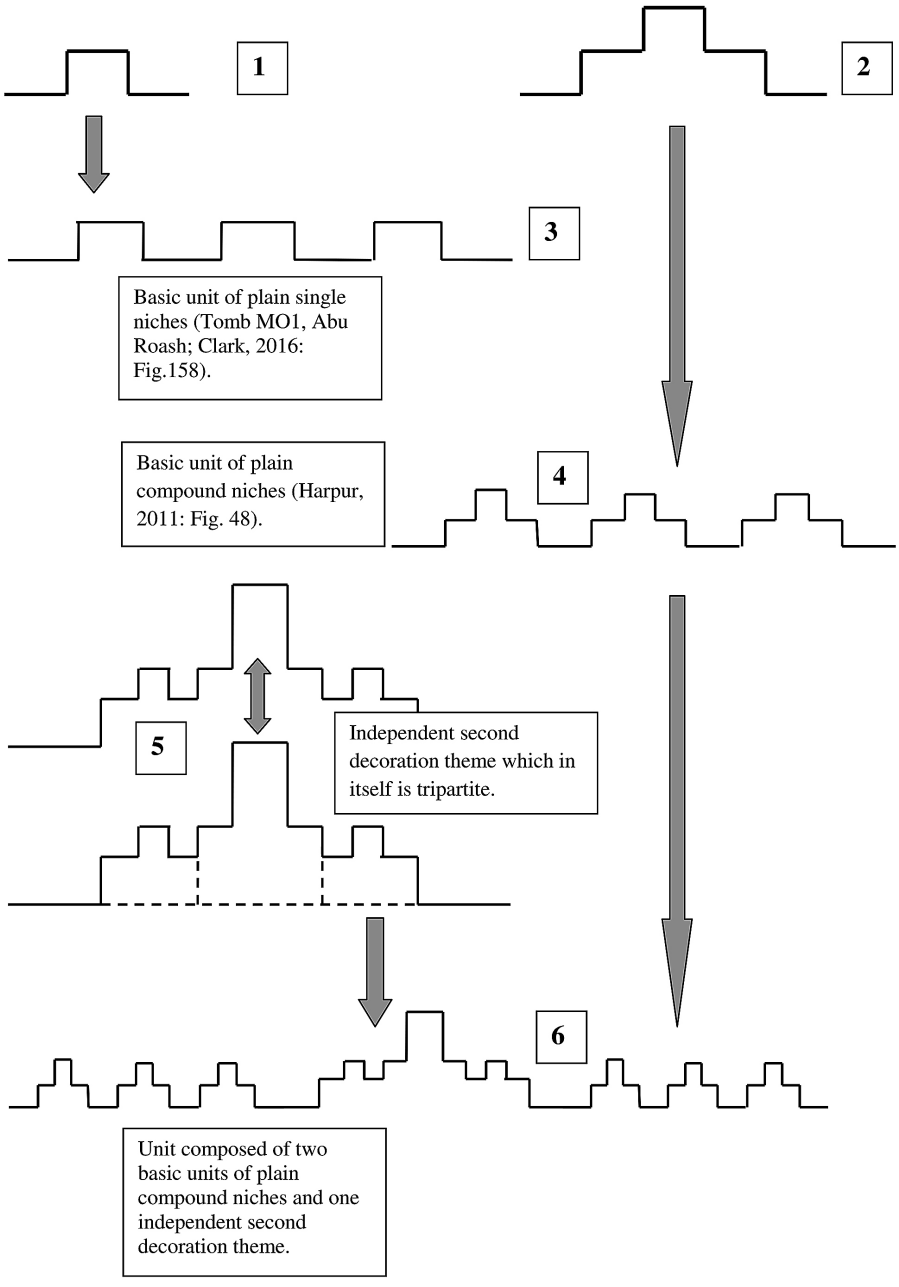

Fig. 4 The two types of niches and an example of a possible combination of two of them. 1 = Plain single niches (Tomb MO1, Abu Rawash; Clark 2016: Fig. 158); 2 = Plain compound niches (Harpur 2001: Fig. 48); 3 = Palace façade panelling of plain singles niches; 4 = Palace façade panelling of plain compound niches; 5 = Great *kȝ* door niche (Reisner 1936: Fig. 141); 6 = Great door niche flanked by palace façade panelling (Tomb QS 2405, Saqqara) (drawing L. Roeten)

This type of unit was not only employed in exterior funerary architecture, it was also occasionally used in the substructure of funerary complexes like that of Djoser (III.2), and in a later period on the walls of the burial chamber of the Pyramid of Unas (V.9).[9]

In fig. 4 two basic units, here composed of plain compound niches, are combined with another type of decorative theme (in fig. 4 the great *kȝ* door), thus forming a composite of three elements (the unit).

During the protodynastic and the Early Dynastic Period, this unit could be found on the exterior walls of tombs in the form of the palace façade panelling (an early example being the tomb of Neithhotep at Nagada which is dated to the first part of the First Dynasty). At the end of the Early Dynastic Period this form of exterior wall decoration almost completely disappeared there (Reisner 1934: 580; chart 1 here), only to reappear later in the interior of some cruciform chapels, where this type of panelling first came into use as a facsimile of the palace façade panelling of the exterior eastern wall of the mastaba (Reisner 1936: 263). Later this decoration was introduced as the *serekh* false door (Reisner 1936: fig. 169; Borchardt 1937: Bl. 8),[10] which could, combined with one or more true false doors, also be part of the decoration of the western wall of the chapel (Borchardt 1937: Bl. 9; Junker 1944: Abb. 69, Bl. XXXVa).

THE PALACE FAÇADE PANELLING

This type of exterior wall design has already been found on the walls of tombs that can be dated to Dynasty 0 (= Nagada III = protodynastic) (Clark 2016: 380). It has also been found on funerary constructions that can be dated to the Early Dynastic Period such as the First Dynasty tombs on the escarpment of Saqqara and the Shunet el-Zebib (end Second Dynasty) at Abydos (Kemp 1991: pl. 2). A somewhat later example is the decoration on the southern (!) exterior wall of the tomb of queen Khentkaus (LG 100, Fourth Dynasty; Porter – Moss – Málek 1994: 288–289), a decoration which is a combination of a plain compound niche with three plain single niches at both sides (Lehner – Hawass 2017: photo on p. 285). The tomb of Nefermaat (date: IV.1; Porter – Moss 1968: 92–93) at Meydum had a palace façade panelling of type 4 in fig. 4 (Harpur 2001: fig. 48). Of a much later date is the decoration of the eastern façade of the rock-cut tomb of Kai (date: V.E–V.M; Porter – Moss – Málek 1994: 277; Hassan 1941: pl. XII), and of the mastaba of Iteti (date: V.L; Porter – Moss – Málek 1994: 193 and plan XXX; Curto 1963: pls. V and VI).

The palace façade panelling on the exterior walls was frequently employed until the end of the Second Dynasty, from which period on its use became less frequent, finally falling all but completely out of use from the Fourth Dynasty on (fig. 4).[11] During the reign of Khasekhemwy

9 https://www.google.com/search?q=burial+chamber+pyramid+unas & tbm=isch & source=univ & sa=X & ved=2ahUKEwjdqJOjs-fmAhXa8OAKHSdcCPoQsAR6BAgFEAE & biw=1024 & bih=697 #imgrc=IRs1U2dYACNyMM. Accessed on 14th August 2020.

10 George Andrew Reisner (1942: 380) proposes that the unit is the decorative composite that was later introduced in the chapel in the form of the *serekh* false door.

11 Further in this section it can be observed that the palace façade panelling was used in royal funerary architecture.

(II.10) the exterior chapel was "drawn" into the body of the mastaba in the form of a cruciform chapel, while the exterior continued in use, but now in a roofed-over form.[12]

Examples of the use of the decoration theme on interior walls can be divided into royal and non-royal: An early use of the decoration theme is in the chapel of the tomb of Hesire (tomb QS 2405; date: III.E; Porter – Moss – Málek 1981: 437–439; Quibell 1913: pl. 1);[13] of a somewhat later date is the decoration of the western wall of the cruciform chapels of Khabausokar and his wife Neferhotephathor (S 3073, date: III.M–IV.E; Porter – Moss – Málek 1981: 449–450; Reisner 1936: Figs. 158, 162). A late use can be observed in the following royal funerary constructions:

1. In the temple of the queen's pyramid III-a next to the pyramid of Menkaure (IV.5) two types of palace façade panelling have been used. The basic decoration of the northern and southern walls of the court (room 1) consisted of a unit composed of two basic units of plain single niches flanking a plain compound niche. The western wall of the antechamber of the T-form room (room 9) was decorated with one unit of type no. 6 of fig. 4 (Reisner 1931: plans IV and V). The same type of unit is used in the chapel of the temple of queen's pyramid III-c (room 6), while in the courtyard (room 3) the same unit has been placed as in room 1 of pyramid III-a (Reisner 1931: plan VI).
2. The walls of the courtyard of the valley temple of Menkaure (IV.5) are decorated with a palace façade panelling consisting of a combination of two basic units of plain single niches flanking a plain compound niche (Reisner 1931: plan VIII).

The above mentioned panelling is due to the use of mud-brick because the complex was hurriedly completed by his successor.

The western wall of the antechamber in the queen's pyramid III-a is identical with the same wall of the antechamber in the chapels of Hesire and Khabausokar, indicating a continuation of a conditional use of the decoration theme until late in the Fourth Dynasty (Quibell 1913: pl. I; Reisner 1936: fig. 158).[14]

From the early Third Dynasty royal funerary architecture was carried out in stone, while the non-royal funerary constructions continued to be built in mud brick. The consequence of this adoption of stone for royal architecture was that the palace façade panelling had to be employed in a simplified form (*e.g.* the enclosure walls of the funerary complexes of Djoser [III.2] and Sekhemkhet [III.3]) while in non-royal tombs the mud brick architecture, which could give rise to more complicated forms, remained in use. From the start of the Fourth Dynasty stone architecture was also employed in the construction of the non-royal mastabas around the pyramid of Khufu (IV.2). The consequence was that there too the interior and exterior palace façade panelling fell into disuse, although some remnants of the old tradition can still be encountered (a simplified and unfinished palace façade panelling on the eastern wall of mastaba G 5080, Seshemnefer II, date: V.6; Porter – Moss – Málek 1994: 146–148); the decoration of the western wall of the chapel in the tomb of Kaemheset (date: V(?); Porter – Moss – Málek

12 Both developments were clearly meant to protect decoration placed on the walls of the chapel.

13 This chapel can be interpreted as a cruciform chapel of the palace façade type with an extended western wall. Reisner (1934: 581) claims that the palace façade panelling in the chapel of this tomb is the result of a series of reconstructions, and is too early to be part of the development of the cruciform chapel with palace façade panelling.

14 It has to be remarked that all three funerary structures are made of mud brick.

1981: 499) consists of two great doors both flanked and separated by three sub-units of plain compound niches (Reisner 1936: fig. 169; Murray 1905: 5 and pl. III).[15]

In view of the dimensions of the tombs,[16] the observation that on some of these tombs the plain single niche or the plain compound niche is used as the sole basic element on the exterior walls and is repeated without any other type of element incorporated (plain simple niche: tomb MO1 at Abu Rawash, date: I.5; tomb D, el-Kab, date: IV.1; plain compound niche: tomb of Nefermaat at Meydum),[17] indicates that it is not likely that its use is determined by the economic power of the tomb owner.

In chart 1 the values of the percentages for each of the three niche types are shown and within the limits of reliability of the information, it can be concluded that throughout the period of use of the decoration theme a slight preference seems to exist for the plain double niche which could be an indication of its importance.[18] Furthermore it is evident that, despite

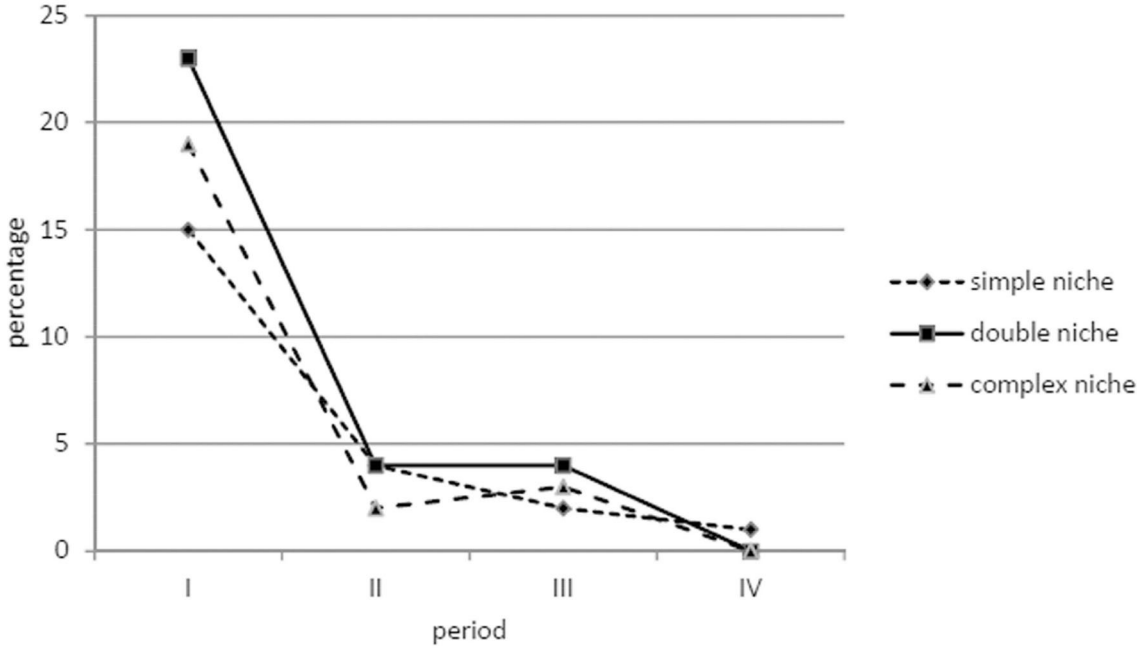

Chart 1 The chronological development of the palace façade panelling on tomb walls (the values for the three niche types separately represented)

15 This decoration not only resembles markedly the palace façade part of the *serekh* of Djet (I.4), but also the decoration of the sarcophagus of Rawer (Porter – Moss – Málek 1994: 242; Donadoni Roveri 1969: 126, pl. XXIII [1]).

16 MO1 *ca.* 170 m², tomb D 427 m² and Nefermaat Meydum 8160 m².

17 Plain simple niche: Clark (2016: fig. 158, catalogue nos. 345, 346); Quibell (1898: 3–4); plain compound niche: Harpur (2001: fig. 48).

18 The diagram of chart 1 is determined in the following way: In Table 1 of the article of Hendrickx (2001) three types of niches are recognised: the simple plain niche, the double plain niche and the complex niche, whereby in one tomb several types of niches can be used. Every tomb in the table has been given an approximate date in a period ranging from the First Dynasty to the Fourth Dynasty. Per period the total of niches is determined and for the three values the percentage is calculated.

the small differences, the overall chronological development of the three types of niches can be considered to be identical. Already in the First Dynasty the use of this type of ornament diminished markedly, and the decoration was increasingly confined to the now mainly interior chapel. During the Second and the Third Dynasty the decreasing tendency on the exterior walls continued, although at a much slower rate; finally its use became exceedingly rare, but it was never completely abandoned.

In the period after the almost complete disappearance of the palace façade panelling, this type of decoration was placed on the western wall of the now interior chapel.[19]

THE EARLY CRUCIFORM CHAPEL WITH PALACE FAÇADE PANELLING

As discussed above, the preference for the basic unit and the unit can be used to propose a possible order of placement of the wooden boards in the chapel of Hesire (tomb QS 2405; date: III.E; Porter – Moss – Málek 1981: 437–439).

The excavation report of this tomb mentions an antechamber followed by a corridor chapel with a wooden roof protecting the painted decoration on both the eastern and the western walls of the chapel. The western wall had been constructed in the form of a palace façade panelling.

The western wall of the antechamber is decorated with a unit consisting of a complex niche (Reisner's great *k3* door or great door) with at both sides a basic unit of three plain compound niches. The middle part of the great door niche has been converted into a real entrance giving access to the chapel itself.

The western wall of the latter consists of a combination of units each made of two basic units of three plain compound niches flanking a compound niche of the great door type (Reisner 1936: fig. 166). In the middle compound niche a wooden board with a text in (painted) relief and a depiction of the tomb owner were placed (Quibell 1913: pl. I).[20]

The archaeological remnants of the western wall of the chapel of this tomb indicate that there are eleven of these complex niches, while only five wooden stelae have been recovered *in situ* by August Mariette and another one by James Edward Quibell (Borchardt 1937: pls. 25–27; Quibell 1913: pl. VII [3]). The archaeological context in and around the other niches as described by Quibell was such that in every one of these niches a stele would have been placed (Quibell 1913: 4).[21] On each of the six stelae that have been excavated a depiction of the tomb owner had been carved, five of them showing the tomb owner standing and the sixth depicting the tomb owner sitting at an offering table with an offering list in front of him (Borchardt 1937: pl. 25 [1426]), leading to the assumption that only two types of stelae were used.

19 This is an indication that in fact the western wall of the chapel originally was the protected exterior eastern wall of the tomb.

20 Reisner (1934: 581) calls the palace façade panelling of the western wall of the corridor chapel accidental because it would be the result of a series of reconstructions of the tomb, although he does not give arguments for this. These wooden boards with relief decoration would be the oldest known relief decoration together with the stele on the northern door jamb of the chapel in the tomb of Hetepi (Bárta *et al.* 2010; Bárta 2011: 117).

21 Here it is also reported that the five stelae that had been removed by Mariette stood in the five southern niches, the sixth stele was decayed and the stele in the eleventh niche had been removed by him, while of the other five he had found the decayed remains.

On all the recovered stelae the tomb owner is oriented to the right, so it can be assumed that such was the case for the rest of them too. Unfortunately it cannot be determined anymore in which of the niches the stele with the offering table scene had been placed.

Based on the description given by Quibell, the panel with the offering table scene was originally placed in one of the first five niches counted from the south. As has already been discussed, the design of the palace façade in this chapel appears to be based on a preference for three elements in a group (the unit) and this would lead to a possible placement of the panel with the offering table scene in the fourth niche from the south.[22] This may be combined with the consideration that in the course of the Second Dynasty the exterior eastern wall of the tomb lost all of its panelling except two special "panels" that remained.

Based on this it can be hypothesized that in this tomb, where the palace façade panelling was still present but now on an interior wall that could be interpreted as an exterior wall, the two niches that had a special significance must have been present too.

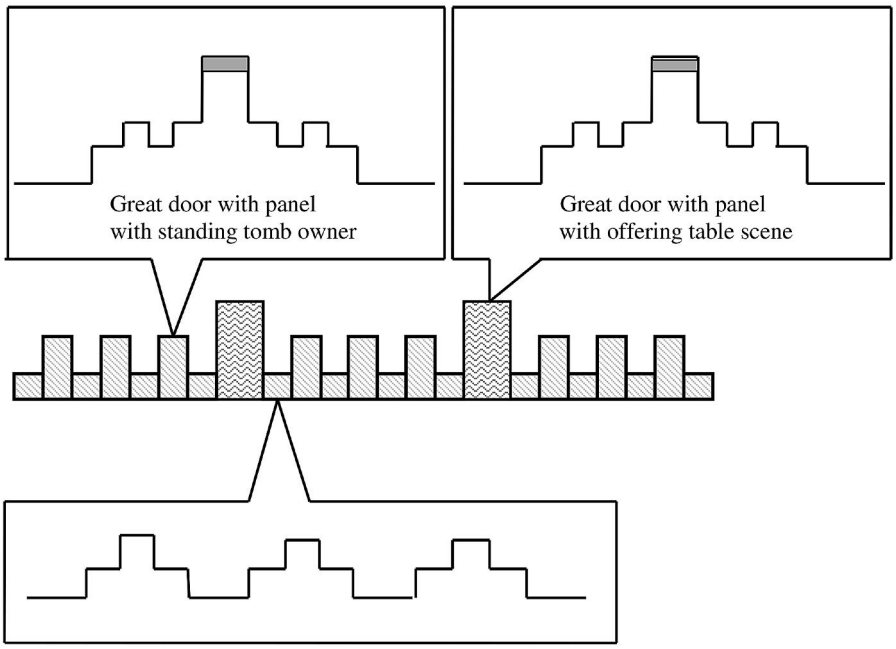

Fig. 5 A reconstruction of the western chapel wall of the tomb of Hesire (drawing L. Roeten)

If this consideration is introduced in the schematic western wall of the chapel in fig. 5 there must have been a second niche with a panel with the offering table scene. In this figure it is evident that the proposed place of the second niche gives a symmetrical design of which every aspect is based on groups of three elements, while the two main offering niches concept has been adhered to (Roeten 2020: Chapter VII).

22 This preference for units of three identical items is already visible in the wall of Shunet el-Zebib at Abydos where a unit of three plain single niches is followed by one plain compound niche.

The tomb of Khabausokar and his wife Neferhotephathor (date: III.M–IV.E; Porter – Moss – Málek 1981: 449–450) had a corridor chapel with 24 plain compound niches of the great door type that were accompanied at both sides by a unit of three small plain compound niches (Bárta 2010: fig. 2. 7. 1; Reisner 1936: 267–269, Figs. 158, 162). Two of these plain compound niches (nos. 2 and 18) are the entrances into the T-form chapels of the tomb owner and of his wife.[23] The western wall of each of these chapels consists of an offering place flanked by two basic units of three plain single niches.

THE NUMBER THREE IN THE PALACE FAÇADE PANELLING PART OF THE *SEREKH*

The palace façade panelling as the facsimile of an entrance has found its way into the *serekh,* a theme that was meant as a marker of the presence of the king (Somaglino – Tallet 2015: 126), but that could also mark his involvement and that could be placed on several items of material culture: in seal impressions (Petrie 1900: pl. XIV), in petroglyphs (Williams *et al.* 2016–2017: fig. 6), on utensils like stone or ceramic pottery (Brink 2001), on toilet articles like combs (King Djet [I.4], Cairo JE 47176), in jewellery (King Djer [I.3]; Cairo JE 35054; Petrie 1907: pl. III),[24] the presence of a *serekh* is rare on the palettes that are known to us, an example being the Narmer palette (Cairo CG 14716).

The decoration under the part of the *serekh* that is meant for the name of the king and which depicts entrances flanked by bastions is commonly seen as part of the entrance of the royal palace (Kemp 1991: 38; fig. 6 here). The excavation at Hieraconpolis of what is called the royal palace gives an example of two bastions flanking an entrance (Friedman – Bussmann 2017: fig. 3).

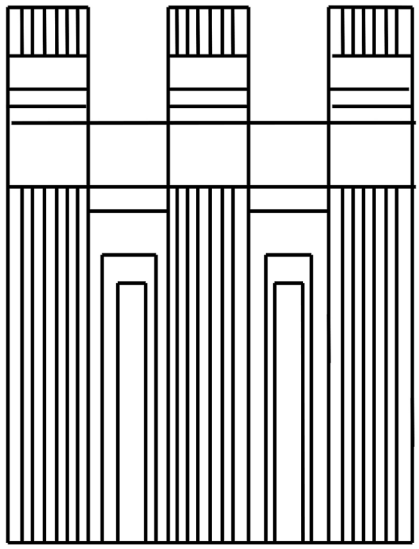

Fig. 6 The *serekh* part of the stele of Djet (I.4) (Louvre, E 11007) (schematically, drawing L. Roeten)

23 Stevenson Smith (1962: 16–17) claims that the form of the chapel is a transition between the chapel of Hesire and the cruciform chapel which became dominant in the time of the reign of Sneferu (IV.1), and which did not have the palace façade panelling anymore. During this period the palace façade panelling could still be placed around the entrance of the chapel (Harpur 2001: fig. 184).

24 The bracelet is clearly not of royal origin because the "stones" are made of earthenware and the *serekh* is executed in a less pronounced way.

Often the *serekh* has been executed carelessly and quickly, the entrances being rendered as scratches, and it is just used as a marker for goods from *e.g.* a royal dominion,[25] in which case there is no rule about the number of "entrances" that are depicted and the unit was meaningless here.

However, there are examples that must have been meant for royal use, and that were made with great artistic skill; an example being the *serekh* on the stele of Djet (I.4; Louvre, E 11007; fig. 6); other examples are the stelae of Djer (I.3), Semerchet (I.7), Qaa (I.8), Raneb (II.2; MMA 60.144) and Peribsen (II.5; British Museum, EA 35597).

Although in royal use it appears customary to depict three bastions with two entrances in between, even there the number three in the *serekh* is not binding, because the stela of Djer has three entrances and four bastions, as is also the case for the decoration of the stones that make up one of the bracelets found in his tomb. Though the choice of three entrances appears to be limited to this king (Cairo, JE 35054; EES glass negative AB-RT. NEG II.005), even during this reign the *serekh* could be executed with two entrances and three bastions (Somaglino – Tallet 2015: fig. 11).

THE PALACE FAÇADE ON COFFINS AND SARCOPHAGI

Mostly the sarcophagus is understood as the stone representation of the box for the dead body, while a box made of other materials (wood, papyrus stems) is usually called a coffin.

Because the box was originally seen as the house of the deceased, the palace façade panelling is used on both sarcophagi and coffins in order to stress their residence aspect.[26] Consequently as early as the protodynastic period some coffins were designed to show the idea of the deceased living in it by depicting ports and windows (Petrie 1913: pl. XXVIII; Donadoni Roveri 1969: pl. VIII/1). However, the decoration of the boxes of the Predynastic and Early Dynastic Period show no preference for either the basic unit or the unit.

The sarcophagi of members of the highest echelons of society were richly decorated; an example is the now lost sarcophagus of Menkaure (IV.5), which showed four bastions and three entrances on its long side.

The sarcophagi of the later part of the Old Kingdom could be decorated with simple slits of which sometimes the two at both ends of the eastern (long) sarcophagus wall were depicted as entrances without any reference to the number three (Donadoni Roveri 1969: 124, pl. XXVIII/2).[27] Other sarcophagi had one or more entrances on their walls and in these the basic unit played a role,[28] and this was certainly the case with entrances that were flanked by three niches which were crowned with a twinned papyrus head (Donadoni Roveri 1969: pl.

25 http://xoomer.virgilio.it/francescoraf/hesyra/Dynoserekhs.htm. Accessed on 14th August 2020.

26 Lauer (1976: 88) states that the palace façade panelling is only the continuous repetition of palace doors placed between two bastions and not the representation of the façade of a royal palace.

27 The placement of the two doors of type 2 on the eastern wall can be interpreted as the two offering places on the exterior wall of the tomb (also see Lepsius 1849–1859 Tafelwerke I: 30).

28 Donadoni Roveri (1969: 76–78) distinguishes three types of palace façade panelling: Type 1 (the door flanked by three niches; Donadoni Roveri 1969: pl. XXV), Type 2 (the door is narrower than in type; Donadoni Roveri 1969: pl. XXVIII/1), Type 3 (the door is a narrow slit, of which several are placed next to each other, thus covering the whole wall, sometimes at the ends of the wall doors of type 2 are placed; Donadoni Roveri 1969: pl. XXVIII/2).

XXIV). Yet the depiction of doors on these boxes was not an absolute necessity because coffins and sarcophagi have been found that were not decorated at all (Donadoni Roveri 1969: pl. XIX). On wooden coffins the entrances were painted either on the outside or on the inside and often the entrance was emphasized by incorporating a double-leaved door in it (Taylor 1989: figs. 13, 14), although some stone sarcophagi show the same feature too.[29] The conclusion is that the depiction of the basic unit or the unit, in whatever form, could be present, but was not essential.

The palace façade part of the *serekh* of Djet (I.4) not only resembles markedly the decoration of the sarcophagus of Rawer (Porter – Moss – Málek 1994: 242; Donadoni Roveri 1969: 126, pl. XXIII/1), but also the architecture of the enclosure walls of the pyramids of Djoser (III.2; Lauer 1976: fig. 96) and Sekhemkhet (III.3; Lauer 1976: fig. 9).

This strengthens the idea that the palace façade panelling, part of which first served as a door through which the tomb owner could reach the offerings, gradually changed into a decoration theme that could be used as a marker for the residence of the tomb owner.

ABOUT THE NUMBER OF JAMBS OF THE FALSE DOOR

From the summary given by Silvia Wiebach (1981: 29–34) about the development that ultimately gave rise to the (true) false door, it can be presumed that its most probable precursor was the palace façade panelling as found on the exterior walls of the Early Dynastic mastabas. This panelling employed three types of niche: the plain simple, and compound niche, to form the basic units, and the great door niche to form the unit together with the basic units (fig. 7).

In fig. 7 the false door is interpreted as a direct derivative from the niches that were used in the palace façade panelling, which is possible because the niches did not change their number of jambs, they simply became shallower. Concerning this aspect of the false door two items can be studied:

- The chronological development of the number of jambs of the false door.
- The determination of a possible connection between the number of jambs and the surface of the tomb (in the study at hand this surface is used as a criterion to measure the economic "power" of the tomb owner) (Roeten 2016).

Preliminary considerations are:

1. The number of jambs is given per half of the false door.
2. Catalogues are made of the tombs containing false doors, and where possible a known or measurable surface is given,[30] although the latter is not a prerequisite.
3. Only tombs situated in the necropoleis of Giza and Saqqara are included in the study.[31]

29 The sarcophagus of queen Meresankh II (Boston Museum of Fine Arts, no. 27.441a–b).

30 If in the excavation report plans are given with a specification of the scale, these are used to determine the surface of the tomb. The plans of some tombs have a complexity that makes the result of the calculation less reliable. This is no problem within the scope of this study because the ultimate result is just indicative.

31 Although the cemetery of Abusir can be considered as a part of the necropolis of Saqqara, it is not included due to the relatively small number of tombs that provide data that are relevant for this study.

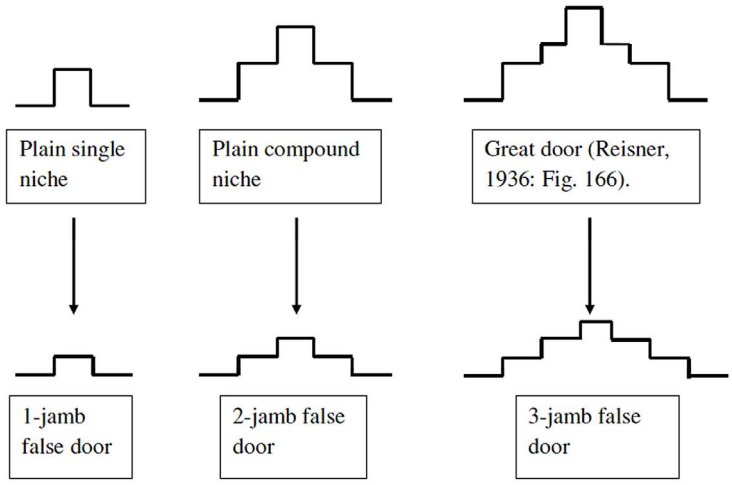

Fig. 7 The niches used in palace façade panelling and the false doors derived from them (drawing L. Roeten)

4. If a false door is surrounded by a torus moulding and a cavetto cornice and the whole is taken up in a portico of two jambs and an architrave with texts, then only the part within the torus moulding is interpreted as the false door (Junker 1950: Abb. 40).
5. A *serekh* false door is not included because it is not considered as a false door in the sense of this part of the study.
6. If the tomb is rock-cut the surface of the inner rooms will be stated; the values given by Peter Jánosi (2005: 457, table M) will be used when available.
7. Tombs that are dated V–VI or the equivalents of the "V or later", are not included in the catalogues; neither are false doors of which the origin is unknown or uncertain. A date "V.M or later" is included in the catalogue with the date "V.M-V.L".
8. If the false door is monolithic and has been placed somewhat deeper in the wall, the part of the wall right next to the false door is counted as a jamb (Reisner 1942: fig. 198). The number of door jambs depends on the way the false door has been constructed (Reisner 1942: 372).
9. Due to the excavation history of the necropolis of Saqqara, for a large number of tombs the surface of the monument could not be determined or was not given in the excavation reports.

THE CHRONOLOGICAL DEVELOPMENT OF THE NUMBER OF JAMBS

The time periods in the catalogue for Giza and Saqqara (tab. 2 and 3) are taken as dynasties IV, V.E, V.M, V.L, VI.E and VI.L. The number of doors per group is expressed as a percentage of the total number of items in the period.[32]

32 If a tomb has two types of false door, the tomb is counted twice in the total. For period IV in tab. 2 the calculation is as follows: the number of tombs in the period is 16 (+ 1 for Nefer) = 17, the number of tombs with a one-jamb false door is 7, thus giving 41%.

Dynasty	Name	Porter – Moss – Málek 1994	Surface (m²)	No. Jambs	Date
IV	Hemiunu	122–123	1424	2	IV.E
IV	Wepemnefert	57	994	1	IV.E
IV	Khentka	74–75	546	1	IV.E
IV	Nefertyabt	59–60	493	2	IV.M
IV	Jabtet	134	212	2	IV.M/L
IV	Wonshet	139	260	2	IV.M/L
IV	Seshatsekhentiu	74	450	1	IV.M/L
IV	Nefer	72–74	357	1,2	IV.M/L
IV	Akhi	137	216	2	IV.L
IV	G 2140	77	241	1	IV.L
IV	G 2220	83	1265	1	IV.L
IV	G 4430	128	235	2	IV.L
IV	Nebemakhet	230–232	89	2	IV.L
IV	Khufukhaef	188–190	476	2	IV
IV	Meresankh [III]	197–199	64	1	IV
IV	Harzedef	191	612	2	IV
V.E	Merib	71–72	308	1	IV.L-V.E
V.E	Nensezerkai	72	138	1	IV.L-V.E
V.E	Kaunesut	274–275	314	2	IV.L-V.E
V.E	Bunufer	256	52	1	IV.L-V.E
V.E	Sekemkare	233–234	56	2	IV.L-V.E
V.E	Rekhetre	249–250	364	1	IV.L-V.E
V.E	Person	48–49	---	1	V.E
V.E	Seshethotep	149–150	325	1	V.E
V.E	Seshemnefer [I]	142–143	435	2	V.E
V.E	Kanefer	77–78	241	2	V.E
V.E	Kanenesut [I]	78–79	247	1	V.E
V.E	Kapunesut (Kai)	135	65	1	V.E
V.M	Nesutnefer	143–144	38	1	V.E-V.M
V.M	Thenti	141–142	---	1	V.E-V.M
V.M	Pehenptah	158	207	2	V.M
V.M	Ptahsezefa	285	97	1	V.M-V.L
V.M	Neferbauptah	169–170	294	2	V.M-V.L
V.M	Wepemnefert	281–282	475	2	V.M-V.L
V.M	Nefer	258–259	---	2	V.M-V.L

Dynasty	Name	Porter – Moss – Málek 1994	Surface (m²)	No. Jambs	Date
V.M	Nikauhor	236–237	76	3	V.M-V.L
V.M	Itisen	252–253	239	2	V.M-V.L
V.M	Inkaf	248	190	1	V.M-V.L
V.M	Nekhetka	240	216	1	V.M-V.L
V.M	Nikauhor	236–237	---	3	V.M-V.L
V.L	Seshemnefer [III]	153–154	302	1	V.L
V.L	Sethu	135–136	---	1	V.L
V.L	Rawer [II]	162–163	109	2	V.L
V.L	Khenit	162	36	3	V.L
V.L	Mersuankh	269–270	19	2	V.L
V.L	Nimaatre	282–284	99	2, 3	V.L
V.L	Khuwiwer	254–256	87	3	V.L
V.L	Khufuankh	129–130	226	2	V.L
V.L	Penmeru	82–83	---	2	V.L
V.L	Senedjemib Mehi	87–89	---	3	V.L
V.L	Neferhotep	286–287	---	2	V.L
V.L	Neferwent	269	36	2	V
V.L	Washdua	288	---	2	V
V.L	Duare	287–288	---	2	V
V.L	Nefertnesut	281	44	2	V
V.L	Nikauhathor	247	171	2	V
V.L	Kakhernesut	271	---	2	V
V.L	Kednas	281	27	1	V
V.L	Thesti	257	15	1	V
V.L	Kameni	260	95	1	V
V.L	Niankhhathor	286	25	2	V
VI.E	Nefer [I]	137–138	44	2	V.L-VI.E
VI.E	Niuty	133	109	2, 3	V.L-VI.E
VI.E	Nikaukhnum	118	56	2	V.L-VI.E
VI.E	Sedaug	52–53	37	1	V.L-VI.E
VI.E	Sehotpu	222	105	3	V.L-VI.E
VI.E	Niankhre	223	123	2	V.L-VI.E
VI.E	Seshemnefer [IV]	223–226	---	2	V.L-VI.E
VI.E	Akhtihotep	284	---	2	V.L-VI.E
VI.E	Ireru	280	84	2	V.L-VI.E

Dynasty	Name	Porter – Moss – Málek 1994	Surface (m²)	No. Jambs	Date
VI.E	Shepseskafankh	272	33	2	V.L-VI.E
VI.E	Sekhemankhptah	272	6	1, 2	V.L-VI.E
VI.E	Washptah	280	174	2	V.L-VI.E
VI.E	Kajhersetef	262	120	2	V.L-VI.E
VI.E	Ankhemsaf	246	20	2	V.L-VI.E
VI.E	Khent	279	16	2	V.L-VI.E
VI.E	Kar	251	22	2	V.L-VI.E
VI.E	Idu [I]	165	114	2	VI.E
VI.E	Kajherptah	166–167	141	3	VI.E
VI.L	Seneb	101–103	52	2	VI.L
VI.L	Kahif	76	54	2	VI.L
VI.L	Djednefert	77	8	3	VI.L
VI.L	Ity	134	134	3	VI.L
VI.L	Idu	185–186	---	2	VI.L
VI	Ihy	159	---	2	VI
VI	Hetepheres	227–228	---	2	VI
VI	Kaemankh	131–133	60	1	VI
VI	Itjuw	103	100	1	VI
VI	Njankhhathor	118	57	3	VI
VI	Hetepheres	227–228	16	2	VI
VI	Ptahhotep	228	94	3	VI
VI	Khnemu	121	20	2	VI
VI	Rawer	265	8	2	VI
VI	Dag	271	40	1, 2	VI
VI	Minu	140	28	3	VI
VI	Kenkas [II]	152	32	2	VI
VI	Setka	160–161	193	2	VI
VI	Ptahhotep	160–161	114	3	VI
VI	Seshemu	260	56	2	VI
VI	Kadebhen	276–277	75	2	VI
VI	Khnumhotep	164–165	43	3	VI
VI	Irenptah	250–251	41	2	VI
VI	Ity	167	149	2	VI
VI	Menhebu	168	90	2	VI
VI	Khuy	120	29	2	VI

Dynasty	Name	Porter – Moss – Málek 1994	Surface (m²)	No. Jambs	Date
VI	Shepsesakhti	260	17	2	VI
VI	Khesef [I]	106	68	1	VI
VI	Ankhhaf	257	---	2	VI
VI	Seshemu	260	57	2	VI
VI	Nisankhakhti	258	52	3	VI
VI	Ankhtef	275	54	2	VI
VI	Nisusankh	220	93	2	VI
VI	Semaankh	251	64	2	VI
VI	Heneni	222	76	2	VI
VI	Khenu	261	27	2	VI
VI	Thereru	278	15	1	VI
VI	Remenuka	261	9	2	VI
VI	Njankhkhnum	247–248	35	2	VI
VI	Ity	258	5	1	VI
VI	Ifi	250	5	2	VI
VI	Seshemnefer	238–239	---	3	VI

Tab. 2 Giza: number of false door jambs

Dynasty	Name	Porter – Moss – Málek 1981	Surface (m²)	No. Jambs	Date
IV	Thenti	482	---	1	IV.M-IV.L
IV	Werkaptah	491	---	2	IV.M-IV.L
IV	Shery	490	---	1	IV
V.E	Jjzefa	579	---	2	V.E
V.E	Person	577–578	---	2	V.E
V.E	Niankhsekhmet	482–483	---	3	V.E
V.E	Washptah	456	---	2	V.E
V.M	Ti	450	---	1	V.E-V.M
V.M	Nenkheftka	580	---	2	V.E-V.M
V.M	Senenuankh	582	---	1	V.E-V.M
V.M	Senezemib	451	---	1	V.M
V.M	Tepemankh [II]	483–484	---	2	V.M
V.M	Niankhkhnum and Khnumhotep	641–644	---	1	V.M
V.M	Kaemnefert	467–468	---	2	V.M
V.M	Raneferefankh	585	---	2	V.M

Dynasty	Name	Porter – Moss – Málek 1981	Surface (m²)	No. Jambs	Date
V.M	Nikaure	581	---	2	V.M
V.M	Ty	468–479	1169	2	V.M
V.M	Hemmin	483	---	2	V.M
V.M	Ptahshepses	464	800	2	V.M-V.L
V.M	Ptahuser	456	---	3	V.M-V.L
V.M	Ptahhotep	462–463	---	2	V.M-V.L
V.M	Kai	479	569	2	V.M-V.L
V.M	Zefau	466	---	2	V.M-V.L
V.M	Sekhemankhptah	454–455	---	2	V.M-V.L
V.M	Khabauptah	453–454	85	2	V.M-V.L
V.M	Nufer, Kaha	639–641	---	2	V.M-V.L
V.M	Nekhtsas	689	---	2	V.M-V.L
V.L	Neteruser	485	---	2	V.L
V.L	Ankhmaka	481	---	2	V.L
V.L	Ptahhotep [I]	596–598	376	3	V.L
V.L	Ptahhotep [II]	600–605	478	2	V.L
V.L	Sehetepu [II]	---	---	2	V.L
V.L	Meresankh	488	---	2	V.L
V.L	Isesiankh	489	---	2	V.L
V.L	Kapure	455	---	3	V.L
V.L	Ankhmare	455	---	2	V.L
V.L	Kaiemsenu	---	---	1, 2	V.L
V.L	Khamererptah	481	---	3	V
VI.E	Remeryptah	465	---	2	V.L-VI.E
VI.E	Ankhkakai	458	---	2	V.L-VI.E
VI.E	Snefrunufer [II]	468	---	2	V.L-VI.E
VI.E	Sopduhotep	481–482	259	1	V.L-VI.E
VI.E	Irukaptah	639	---	1	V.L-VI.E
VI.E	Sekhemka	465	239	2	V.L-VI.E
VI.E	Tepemankh [I]	483	---	2	V.L-VI.E
VI.E	Seshemnefer	595	---	3	V.L-VI.E
VI.E	Manufer	575–577	---	2	V.L-VI.E
VI.E	Mereruka	525–534	690	3	VI.E
VI.E	Rawer	558	30	2	VI.E
VI.E	Neferseshemptah	515–516	---	2	VI.E

Dynasty	Name	Porter – Moss – Málek 1981	Surface (m²)	No. Jambs	Date
VI.E	Neferseshemre	---	663	3	VI.E
VI.E	Inumin	---	138	3	VI.E
VI.E	Hesi	---	119	3	VI.E
VI.E	Seankhuiptah	---	34	2	VI.E
VI.E	Merefnebef	---	---	2	VI.E
VI.E	Sabu	463	---	3	VI.E
VI.E	Hefi	---	---	3	VI.E
VI.E	Sabu (Ibebi)	460	219	3	VI.E
VI.E	Kagemni	521–525	981	3	VI.E
VI.E	Mehu	619–622	512	3	VI.E
VI.E	Mereri	518–519	---	2	VI.E
VI.E	Iy	624	---	3	VI.E
VI.E	Neferseshemre	511–512	---	3	VI.E
VI.E	Meryreankh	586	---	3	VI.E-VI.M
VI.E	Nenkheftka	580–581	---	2	VI.E-VI.L
VI.L	Manufer	456–457	---	2	VI.L
VI.L	Ishfi	513	---	2	VI.L
VI.L	Akhtihotep	633–634	---	2	VI.L
VI.L	Kapuinpu	579–580	---	2	VI.L
VI.L	Nihebsedneferkare	683	---	2	VI.L
VI.L	Teti	684	---	2	VI.L
VI.L	Hermeru	626	---	3	VI.L
VI.L	Iyenhor	630	---	3	VI.L
VI.L	Niankhpepy	630	---	3	VI.L
VI.L	Nyankhnefertem	---	85	2, 3	VI.L
VI.L	Wernu	---	---	2	VI.L
VI	Iput	396–397	---	2	VI
VI	Semdent	520–521	---	3	VI
VI	Neferseshemptah	453	---	2	VI
VI	Kednas	456	---	2	VI
VI	Neferseshemseshet	585–586	---	2	VI
VI	Kapuinpu	586	---	3	VI
VI	Neferseshemseshet	585–586	---	2	VI
VI	Serefka	307	---	2	VI

Tab. 3 Saqqara: number of false doors jambs

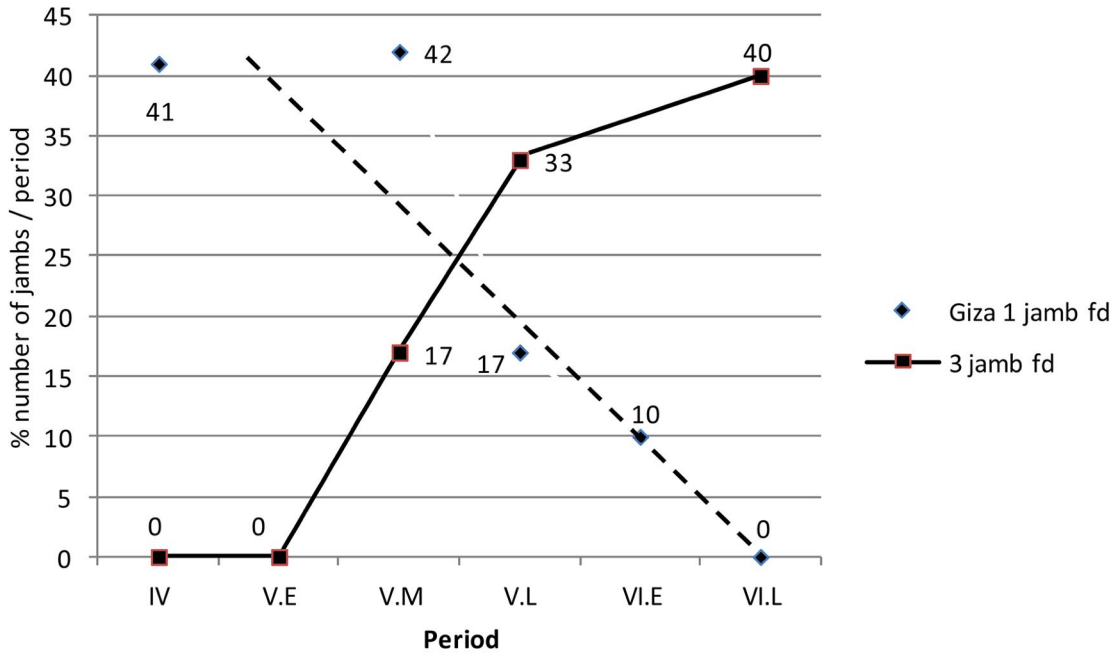

Chart 2 The chronological development of the one- and three-jamb false doors in Giza

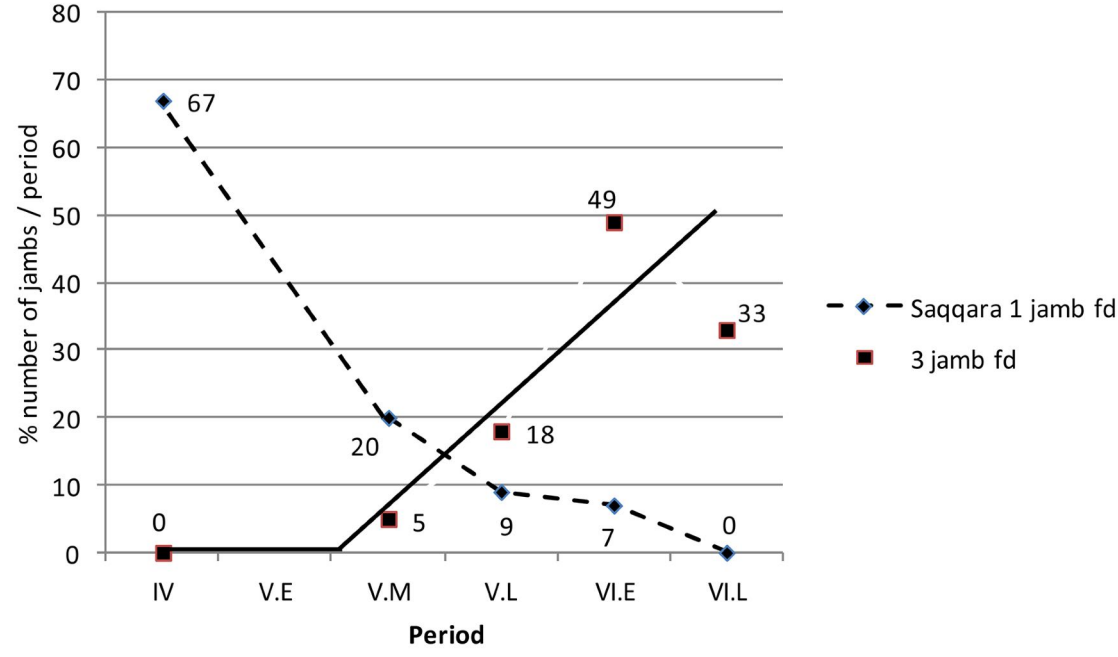

Chart 3 The chronological development of the one- and three-jamb false doors in Saqqara

For the one-jamb and three-jamb false door the results are given in charts 2 and 3.[33] Within the limits of quality of manufacture and dimensions, a three-jamb false door can be considered to be more expensive on average than an one-jamb door. In light of the hypothesized decreasing economic power during the later part of the Old Kingdom, which is based on a constant decrease of the surface of the tombs in the necropoleis of Memphis (Roeten 2016: fig. 132), at first the three-jamb false door would be the leading type, later to be replaced by the two-jamb door and after that by the one-jamb door. Such an inference, however, is contradicted by the curves in both diagrams.

This means that the chronological increase of the number of jambs must have originated from a cause other than an economic one.

The result for the two-jamb false doors in the necropoleis of Giza and Saqqara is more complex because the measuring points obtained in chart 4 are placed rather irregularly, and although the linear lines that can be calculated from these measuring points both show a slightly increasing tendency, the difference in increase between them is too small, and based upon points that are too variable to be able to draw conclusions from them.

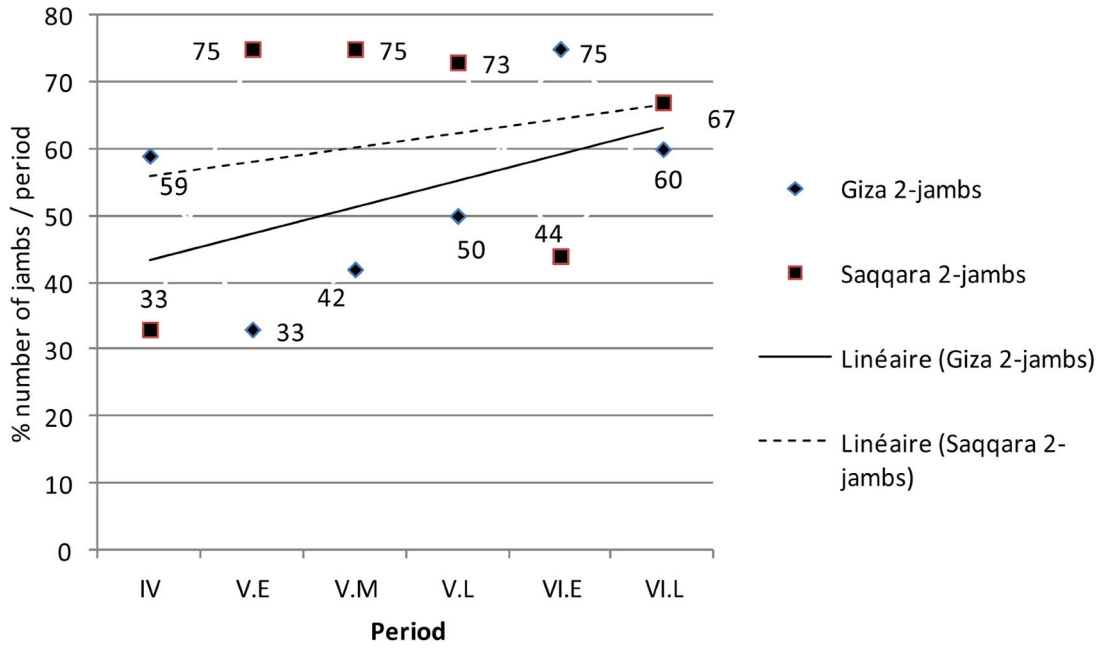

Chart 4 The chronological development of the two-jamb false doors in Giza and Saqqara

In chart 5 the chronological developments of the palace façade panelling, and the number of door jambs as given in charts 1 (here the mean of the values for the three different niches has been used), 2, 3 and 4 (in the latter the mean of the values for Giza and Saqqara that are given in the diagram has been calculated and placed in the diagram of chart 5) are gathered.

33 Strudwick (1985: 15–18) gives a brief overview of various chronological developments on the jambs, one of them being their number.

From this figure it can be deduced that during the disappearance of the palace façade on the exterior tomb walls the one-jamb and two-jamb false doors were already developed. This is in contrast to the three-jamb false door which is introduced after the disappearance of the palace façade panelling. The almost simultaneous disappearance of the one-jamb false door may be connected with this introduction.

The observation that both the one-jamb false door and the two-jamb false door were in use from the period that the palace façade panelling disappears from the exterior walls of the mastaba shows that these types of false doors can be interpreted as the successors of the original palace façade panelling. The continuous use of the two-jamb false door in contrast to that of the one-jamb false door, which disappears, can be explained by the supposition that the former's precursor, the plain compound niche, is the more important of the two. The emergence of the three-jamb door reverts to the most important of the three niches, the great door, which apparently began to play an increasingly important role.

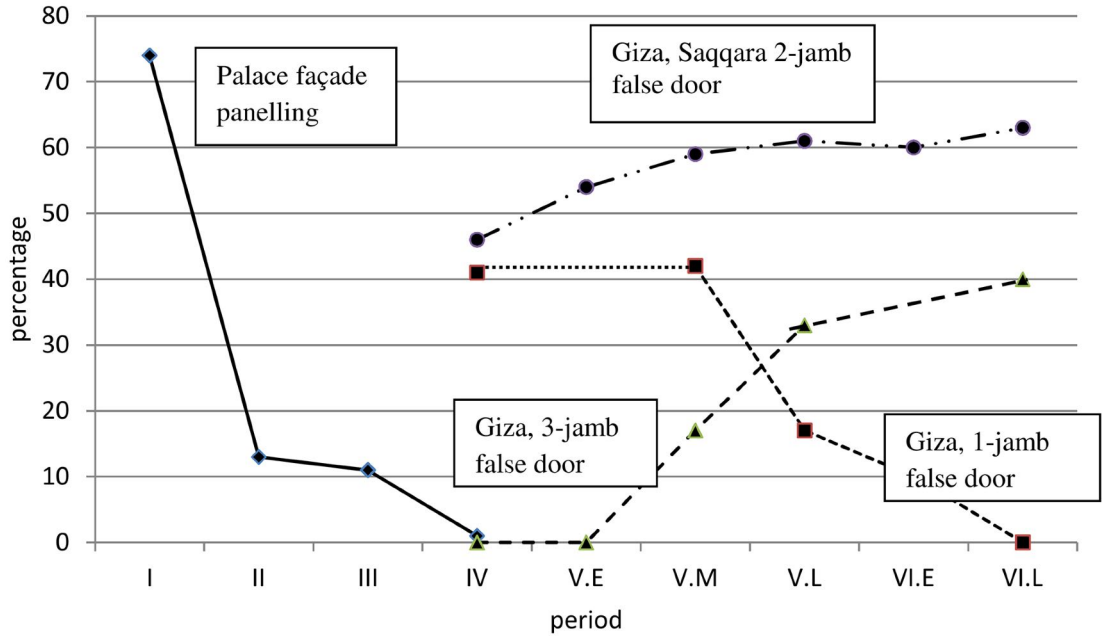

Chart 5 The chronological development of the palace façade panelling and the number of jambs on the false door

The development and interaction of these elements can be interpreted as follows:

- On the exterior walls of the tombs the main niches in use are the plain single and plain compound niche (fig. 4).
- After the disappearance of the exterior wall decoration, both niches appear on the chapel walls in the form of a palace façade panelling that over the course of time transforms into a one-jamb and two-jamb false door.
- The disappearance of the one-jamb false door and the continued use of the two-jamb false door indicate that already in the original palace façade panelling the role of the plain single niche was in all likelihood subordinate to that of the plain compound niche.

– The above-mentioned observations lead to the conclusion is that in the palace façade panelling the (two) niches that had a special function would have been of the plain compound type.[34]

THE NUMBER OF JAMBS IN CONNECTION WITH THE SURFACE OF THE TOMB

In tab. 4 and 5 the surfaces of the tombs in the necropoleis of Giza and Saqqara as given in tab. 2 and 3 are divided into groups.[35]

Giza. Two-jamb false door			
Dynasty	**IV**	**V**	**VI**
Surface (m²)			
1–50		4	19
50–100	1	1	11
100–150		2	5
150–200		1	2
200–250	4	4	
250–300		1	
300–350		1	
350–400	1		
400–800	3	2	
> 800	1		

Giza. Three-jamb false door			
Dynasty	**IV**	**V**	**VI**
Surface (m²)			
1–50		1	3
50–100		3	4
100–150			4
150–200			
200–250			
250–300			
300–350			
350–400			
400–800			
> 800			

Tab. 4a Spread of the two-jamb false door in connection with the tomb surface in Giza
Tab. 4b Spread of the three-jamb false door in connection with the tomb surface in Giza

The grey squares in the tables of tab. 4 and 5 have been indicated irrespective of the number of false doors that belonged to the group, while the latter number has been added in the squares. Due to the poor reporting of the tombs in the necropolis of Saqqara, the number of tombs in tab. 5 is small, which makes any conclusions drawn from it unreliable.

34 This is visible in tombs S 3505 (Porter – Moss – Málek 1981: 446), where on the eastern wall in front of the second compound niche from the south a subsidiary tomb had been placed that must have had a special meaning (Emery 1991: fig. 53), and QS 2405 (Hesire; Porter – Moss – Málek 1981: 437–439), where every compound niche contained a wooden plate, while in at least one, but possibly in two of them, the tomb owner was depicted sitting at the offering table (fig. 5).

35 The division into surface-groups is arbitrary.

Saqqara. Two-jamb false door			
Dynasty	**IV**	**V**	**VI**
Surface (m²)			
1–50			2
50–100		1	1
100–150			
150–200			1
200–250			
250–300			
300–350			
350–400			
400–800		3	
> 800		1	

Saqqara. Three-jamb false door			
Dynasty	**IV**	**V**	**VI**
Surface (m²)			
1–50			
50–100			1
100–150			2
150–200			
200–250			1
250–300			
300–350			
350–400		1	
400–800			3
> 800			1

Tab. 5a Spread of the two-jamb false door in connection with the tomb surface in Saqqara
Tab. 5b Spread of the three-jamb false door in connection with the tomb surface in Saqqara

The curve of the development of the two-jamb false door in chart 4 (and in another form in chart 5), a false door type that is present throughout the Old Kingdom, shows that the decreasing tendency of the surface of the tombs in both necropoleis meant that these false doors were present in increasing numbers in tombs of modest dimensions (tab. 4a, 4b and 5a, 5b).

The introduction of the three-jamb false door began later in the Old Kingdom and the observation that, except for a small group of exceptionally large tombs in the necropolis around the pyramid of Teti (VI.1), they were placed in small tombs indicates that the introduction of this type of false door was independent of the dimensions of the tomb (Roeten 2016: figs. 67, 69). (The afore-mentioned group of special tombs is represented in the lower part of tab. 5b.)

The assumption of a direct connection between the dimensions of the tomb and the wealth of the tomb owner is nullified by the development of the necropolis of Giza after the reign of Khufu (IV.2) where an increasing lack of building space arose. This meant that in that necropolis the dimensions of the tombs were increasingly determined by the available space in the necropolis. In that case the surface of the tomb was no longer a direct indication of the wealth of the tomb owner, and the type of false door that was placed in the chapel could no longer solely be based on religious convictions, but was increasingly determined by the prosaic reason of what place was available in the chapel. Theoretically, the problem of available space was less urgent in the necropolis of Saqqara, but comparing the curves of charts 2 and 3 leads

one to the conclusion that the chronological development of the two-jamb and the three-jamb false doors is identical in both necropoleis except for the introduction of the three-jamb false door which in Saqqara takes place in a somewhat later period.

CONCLUSION

Despite the fact that in architecture and funerary tradition the number three has a certain amount of use, there are no indications that it plays a major role in any of the fields of cultural expression discussed in this study. A further observation is that if the number three and/or its architectural derivative, the unit, developed a degree of preference in any one of the fields, it turned out to be short-lived.

The theme that has the most perceptible connection with the number three both in architecture and funerary expression is the palace façade panelling, a theme that probably found its origin in the architecture either of the peribolos wall around the royal palace or of the exterior wall of the palace itself. This theme soon developed into a facsimile for royal power, which was apparent in the increasing use of the *serekh,* a marker of dominion, power and possession. Not only was the theme used on the exterior and interior walls of the tomb, it was used too on the walls of coffins and sarcophagi, in this way emphasizing the underlying idea of a residence. On the coffins and sarcophagi, the design of the palace façade panelling could be present and if so, showed a certain scope for original interpretation. However, in none of these expressions did the role of the number three or the unit become predominant.

Building on the observation that the palace façade panelling disappears from the exterior walls and reappears on the western wall of some of the newly developed types of cruciform chapels, it can be concluded that the three basic palace façade niches (plain single niche, plain compound niche and great *k3* door) are of such mortuary importance that they had to be preserved. This is corroborated by an intermediate phase in which the panelling had all but disappeared from the exterior walls, but the southern exterior niche was marked by a great *k3* door flanked by two units of plain niches (Reisner 1936: 248). The further development of the interior palace façade panelling led ultimately to the *serekh* false door and the true false door, of which the latter was the most used. The true false door can be considered as an original palace façade panelling niche which has been made shallower, and in keeping with the architectural conception of the niche, the number of door jambs of the false door is determined by the type of niche from which it was derived.

A study of the chronological development of the number of jambs incorporated into the false door reveals that the oldest false door design has either one or two jambs; of these two, the one-jamb false door disappears early in the Old Kingdom.

The missing overlap of the curve of the chronological development of the palace façade panelling with the curves of the one-jamb and two-jamb false doors in the necropoleis of Giza and Saqqara (chart 5), combined with the fact that the one-jamb and two-jamb false doors already existed when the panelling was disappearing,[36] makes it likely that the precursors of

36 The chronological developments shown in chart 5 do not exclude the possibility that the disappearance of the palace façade panelling and the simultaneous existence of the one-jamb and two-jamb false door are connected.

the one-jamb and two-jamb false doors had always been part of the palace façade panelling. It was the panelling's disappearance that revealed the existence on the eastern wall of two special niches whose basic form had been identical with that of the other niches (Jiménez-Serrano 2007: 27),[37] but which distinguished themselves from the others solely by a special decoration. From the end of the Second Dynasty the palace façade panelling almost completely disappears from the exterior walls of the tomb, only to be applied to features that are tied to the interior of the tomb like the walls of the chapel, and in a later period even to the walls of the burial chamber, and there also to the coffin or the sarcophagus. The continued and increasing presence of the two-jamb false door indicates that the niche that preceded this door is the more important constituent of the panelling. The three-jamb false door has the "great *k3* door" as the equivalent in the palace façade panelling and is introduced in the first half of the Fifth Dynasty in the necropolis of Saqqara and at the transition from the Fourth to the Fifth Dynasty in that of Giza. The observation that the three-jamb false door was introduced when the one-jamb and two-jamb false doors had already been in use for a longer period indicates that the three-jamb false door was not included in the ritual elements of the chapel as a substitute for the palace façade panelling.

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37 This is corroborated by the special niche with the wooden back and floor in mastaba 1060 at Tarkhan that can be dated to approximately the period of Djet (I.4; Petrie 1913: pl. XVIII). Saqqara mastaba S 3505 (reign of Qaa [I.8]) has a subsidiary grave in front of a niche in the southern part of the eastern exterior wall, while not far from this place a stele has been found. This stresses the importance of a niche situated at that place.

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