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The certainty of change : a research into the interactions of the decoration on the western walls of the cult chapels of the mastabas at Giza during the Old Kingdom

Roeten, L.H.

Citation

Roeten, L. H. (2011, March 23). *The certainty of change : a research into the interactions of the decoration on the western walls of the cult chapels of the mastabas at Giza during the Old Kingdom*. Retrieved from <https://hdl.handle.net/1887/16646>

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Chapter VI

The locations of the (sub)themes on the western wall.

The co-occurrence of (sub)themes on the western wall can also be studied by taking into account the place of the (sub)theme on the wall. On the western wall three wall sections are distinguished for the purpose of determining the location of the (sub)themes. This allows the calculation of the FO/period values for a (sub)theme for a certain wall section. Once the location of the (sub)themes has been determined, it is possible to describe their preference for

1. particular wall sections.
2. the formation of combinations.

The chronology of the relation of (sub)themes 1, 2 and 3 to the wall sections they are placed on shows that a direct connection exists between their location on the western wall and their function. The initial placement of (sub)theme 3 on the southern wall has also been taken into account.

I. Considerations concerning the location of the (sub)themes on the western wall.

In order to describe the location of the (sub)themes on the western wall it is necessary

1. to compile the various types of western wall layouts during the period under study.
2. to determine the division of the western wall into wall sections.
3. to number the wall sections in such a way that continuity in designation is maintained.

Not all of the 64 tombs that were originally included in the study of the type of (sub)themes on the western wall (catalogue IV.1/3.Vol.2.), are appropriate for the study of the location of the (sub)themes on that wall.¹ The following tombs are removed from the catalogue:

1. The tomb of Shepseskaf^{ankh} (PM, III¹, 175). The western wall was unfinished in a way that makes it impossible to determine the place of the false door(s) and the location of the decoration on the wall.
2. Tomb G 7560 (PM, III¹, 200). The available information is insufficient to determine on what part of the western wall the (sub)themes were placed.²
3. The tomb of Zaty (PM, III¹, 204-5). The excavation of this tomb has not been published, and although Harpur, *DETOK*, 385, plan 15 gives some information about the (sub)themes placed on this wall, insufficient information is given about their location thereon.³

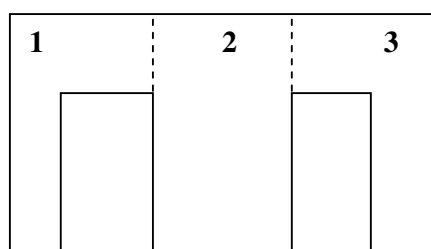
Thus the number of tombs for this part of the research project is reduced to 61 (see table VI.1.Vol.2).

The plans of the western walls of these 61 tombs are catalogued and the different types of layout of the walls are determined. The result is that in Giza only 5 basic forms of western wall layout can be distinguished throughout the Old Kingdom (figure VI.1).

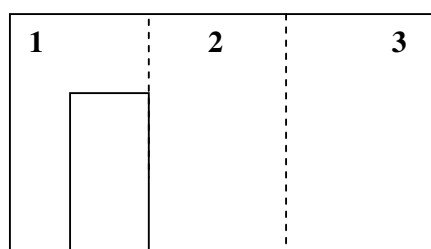
¹ This is partly due to poor publication of the decoration of the tomb, partly because the location of the false door(s) is unknown (the false door has been lost or it was never placed against the western wall), making the division into wall sections impossible.

² Reisner, *Giza I*, 322, footnote 1.

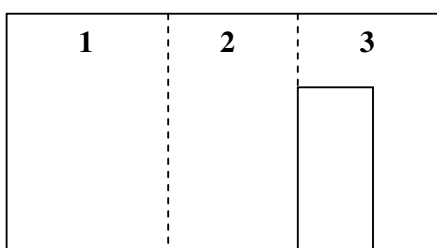
³ The Giza Archives Project (www.gizapyramids.org) gives more information, but also there not with enough certainty.



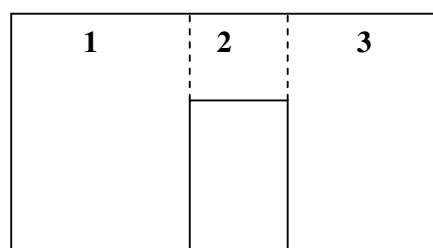
Type A



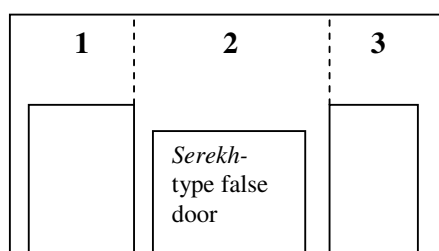
Type B-1



Type B-2



Type C



Type D

Figure VI.1: The basic types of western wall layout.

For the proposed types of western wall layout a division into wall sections has been made whereby equivalent wall sections are assigned the same number.⁴

In order to compile the placements of the (sub)themes, the “dots” in chronological ordering IV.1.Vol.2 are replaced by the numbers of the wall section on which the various (sub)themes are placed, resulting in table VI.1.Vol.2.

II. The location of the (sub)themes on the wall sections.

II.1. The placements.

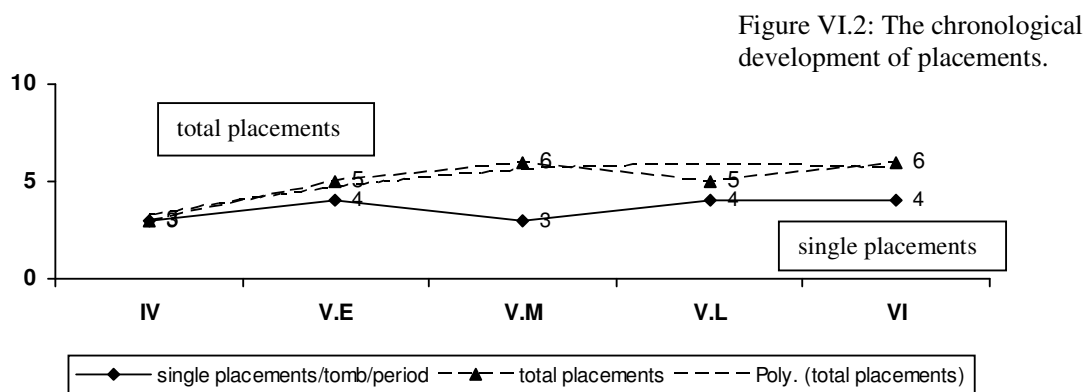
Some of the (sub)themes have multiple placements on several wall sections, this is called a combination.⁵

⁴ In types A, C and D the demarcation lines are determined by the false doors. In types B-1 and B-2 one of the demarcation lines depends on the false door, but the other depends on the placement of the (sub)themes on the remaining surface of the wall. The choice of the demarcation line is *not* based on the surface of the two sections thus formed.

⁵ For the term “combination” see table “technical terms and abbreviation”.

II.1.1. The single and total placements.

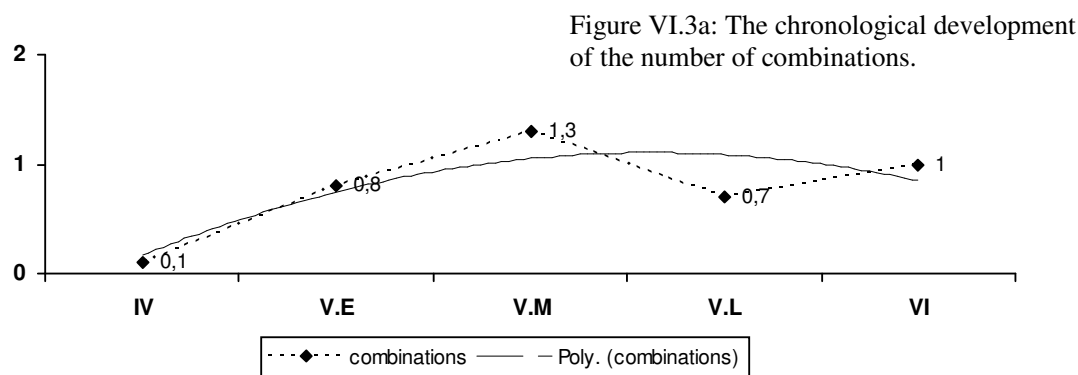
In table VI.1.Vol.2 the total placements and the single placements per period are counted and divided by the number of tombs in that period.⁶ The calculated values are compiled in figure VI.2 which shows that the use of single placements remained the same throughout the whole Old Kingdom. The curve of the total numbers of placements is identical with the chronological development of the number of (sub)themes as given in figure IV.1.



The curve of the total placements is best fitted with a polynomial, while the curve of the single placements can be considered to be a horizontal straight line.

II.1.2. The combinations.

In table VI.1.Vol.2 the combinations are counted for each period.⁷ The number of combinations per period is divided by the number of tombs in that period.⁸ The chronological development is given in figure VI.3a, and this shows that after a strong increase until the end of the period V.M, the number of combinations remains practically unchanged until the end of the Old Kingdom.



The conclusion from the curves in figures VI.2 and VI.3a is that only the employment of combinations increased strongly until the period V.M (figure VI.3a), because in that same period the number of

⁶ Combinations are not counted for the determination of the single placements. For the total placements the combinations are counted as the number of placements they contain.

⁷ Both double and triple combinations are accepted in the count, both types are counted as one combination.

⁸ The percentages are rounded up/down to figures with one decimal according to the rules described in chapter III, section III.1.2.

single placements did not change (figure VI.2). After an initial increase the same is true for the number of (sub)themes placed on the western wall (figure IV.1).

A possible explanation of this development could be a tendency to increase the quantity of decoration on the western wall without increasing the number of (sub)themes.⁹

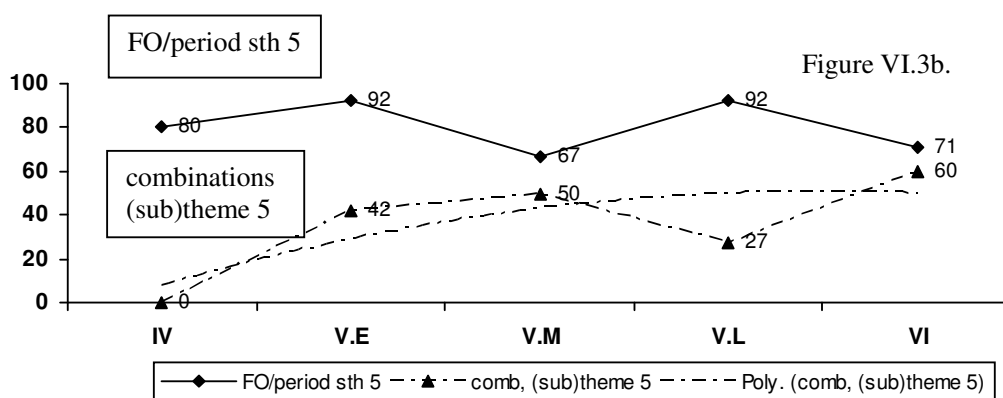
A more likely reason might be the fact that most of the combinations were due to the utilization of (sub)themes 5 (offering bearers) and 7 (priests), with the later introduction of (sub)theme 10; the three (sub)themes possibly having a unifying function (figure VI.4).¹⁰

The employment of the combinations of these (sub)themes is calculated per period (figures VI.3b, VI.3c, and VI.3d), and as a comparison for every (sub)theme the FO/period values have been added (determined from table VI.1.Vol.2).¹¹ Only for (sub)theme 10 (piles of food) is there a resemblance in the two developments.

It is evident that throughout the Old Kingdom (sub)theme 5 has been placed on the western wall at a relatively constant frequency and that the introduction of repeated (sub)themes started early in the 5th dynasty.

From figures VI.3b and VI.3c it can be inferred that the formation of combinations utilizing (sub)themes with a possible unifying function was increasingly employed from the start of the 5th dynasty on, yet the introduction and chronological development of combinations was different for the three (sub)themes that might have a unifying function. At the end of the period V.M the percentage of combinations reached its maximum value for all three (sub)themes.

The number of combinations shows an increasing tendency for all three (sub)themes until the period V.L. From then on the number of combinations remains stable for (sub)themes 5 and 10, while for (sub)theme 7 its repeated appearance begins to decrease. This would infer that (sub)theme 7 has a different character than the two other unifying (sub)themes, and that after the period V.M a unifying (sub)theme with this type of character was no longer necessary on the western wall.



⁹ However, this implies that the western wall of chapels dated to the period IV – V.E would only be partly or sparsely decorated. Of the tombs in chronological ordering IV.1.Vol.2 with a complete western wall belonging to this period, the decoration of the western wall is gathered from the available literature. From this it can be inferred that from the start of the 4th dynasty on at least the western wall was completely filled with decoration.

¹⁰ For the term “unifying function”, see table “technical terms and abbreviations”.

¹¹ The FO/period is calculated from table VI.1.Vol.2 by counting the number of placements (combinations are considered as one placement) and dividing this number by the number of tombs. The values of “combinations (sub)theme X” are calculated by determining in table VI.1.Vol.2 for every period the number of tombs with placements (single or combinations) of (sub)theme X and calculating the percentage of tombs with combinations.

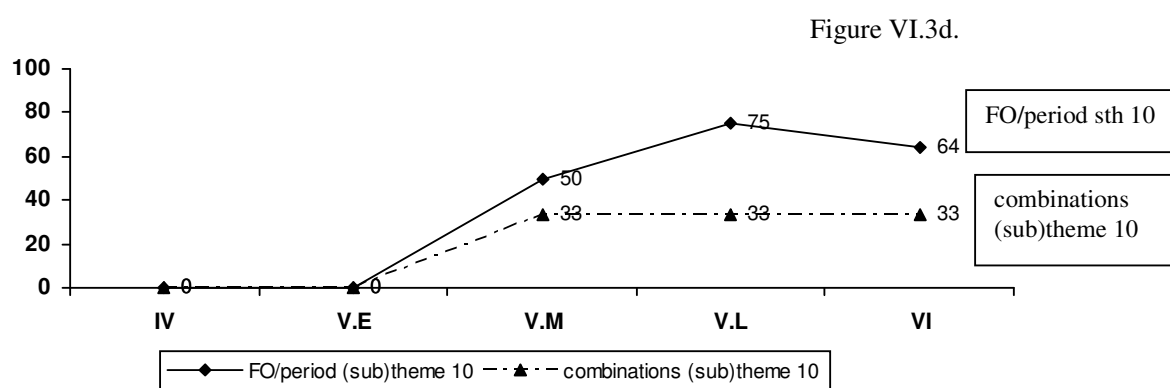
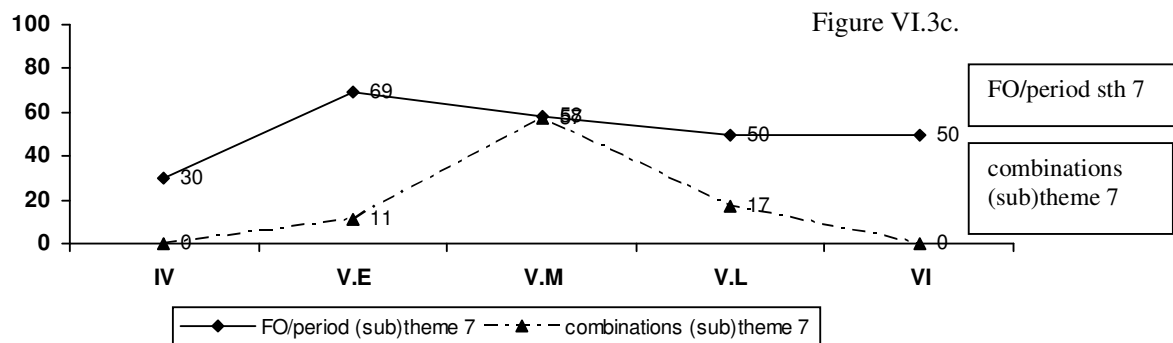


Figure VI.3b, c, d: The chronological development of the percentage of combinations of (sub)themes 5, 7 and 10.

(sub)theme	total placements	combinations		%
		double	triple	
1	5	0		0
2	24	3		13
3	32	4		13
4	20	3		15
5	49	16	2	37
6	7	0		0
7	32	4	2	19
8	14	2		14
9	28	2		7
10	24	6	2	33
11	23	3		13
total	258	49		

Figure VI.4: Percentage of combinations in the total of placements/ (sub)theme.

In table VI.1.Vol.2 for each (sub)theme the total number of occurrences over the whole period of the Old Kingdom is counted and the number of combinations is calculated as a percentage of that total (see figure VI.4).¹²

(Sub)themes 5 (offering bearers), 7 (priests) and 10 (piles of food) have a relatively high percentage of combinations (resp. 37%, 19% and 33%) and furthermore the 6 triple combinations occur with these three (sub)themes. These high percentages might be an indication that these (sub)themes have a unifying function, of which that of (sub)theme 7, having the lowest percentage, is the less pronounced.¹³

II.2. The spread of the placements over the wall sections.

In table VI.1.Vol.2 the total number of placements is counted.¹⁴ The spread over the wall sections is calculated as a percentage of the total placements (313) (figure VI.5). The result is for wall section 1 = 27%, wall section 2 = 51% and wall section 3 = 22%, indicating that there is a strong preference for wall section 2.

The spread over the wall sections is also calculated for each of the (sub)themes.

The preference for wall section 2 is obvious for all of the (sub)themes, the only exception being (sub)theme 1.

1. The preference of (sub)theme 1 for wall section 3 will be discussed in connection with its possibly signalling/identifying function on this wall section.
2. In order to determine whether the late introduction of (sub)theme 10 influences the validity of the comparison of the percentages of (sub)themes 5, 7 and 10 in figure VI.5, the percentages of these three (sub)themes are calculated from the introduction of (sub)theme 10 on (195 placements): the corrected percentages become resp. 21%, 11% and 17%, showing that the much stronger tendency of (sub)themes 5 and 10 to be (sub)themes with a unifying function remains the same.

(sub)theme	no. placements	% of grand total	ws 1	ws 2	ws 3	% ws 1	% ws 2	% ws 3
1	5	1.6	0	0	5	0	0	100
2	27	8.6	7	13	7	26	48	26
3	36	11.5	9	20	7	25	56	19
4	23	7.3	5	11	7	22	48	30
5	69	22.0	23	28	18	33	41	26
6	7	2.2	2	5	0	29	71	0
7	40	12.8	15	16	9	38	40	22
8	16	5.1	4	12	0	25	75	0
9	30	9.6	9	19	2	30	63	7
10	34	10.9	9	18	7	26	53	21
11	26	8.3	3	17	6	12	65	23
subtotal		99.9	86	159	68			
percentage			27	51	22			
grand total	313		313					

Figure VI.5: The preference of (sub)themes for specific wall sections.

¹² Combinations are counted as one placement.

¹³ As already mentioned for (sub)theme 5 in chapter V (section III, point 2).

¹⁴ Multiple placements (combinations) are counted as the number of placements they contain (e.g. the combination 1.2.3 is counted as 3 placements).

III. The chronological development of the employment of the main (sub)themes on the wall sections.

As already discussed, (sub)themes 2 and 3 are considered to be the most important (sub)themes on the western wall, and their presence or absence over time on its various wall sections has to be taken into consideration.¹⁵

III.1. (Sub)theme 2 (the tomb owner in physical contact with family).

Figure VI.5 shows that the (sub)theme is present on all three wall sections, and the curves in figures VI.6 and VI.7 represent the chronological development of this presence.¹⁶

The (sub)theme falls into disuse on wall section 3 during V.E and from V.M it has nearly completely disappeared from both wall sections 2 and 3.

Interestingly, the curves in the diagram show that in period IV.L - V.E (sub)theme 2 shifts southward from wall section 3 to wall section 2, after which period it increasingly falls into disuse.

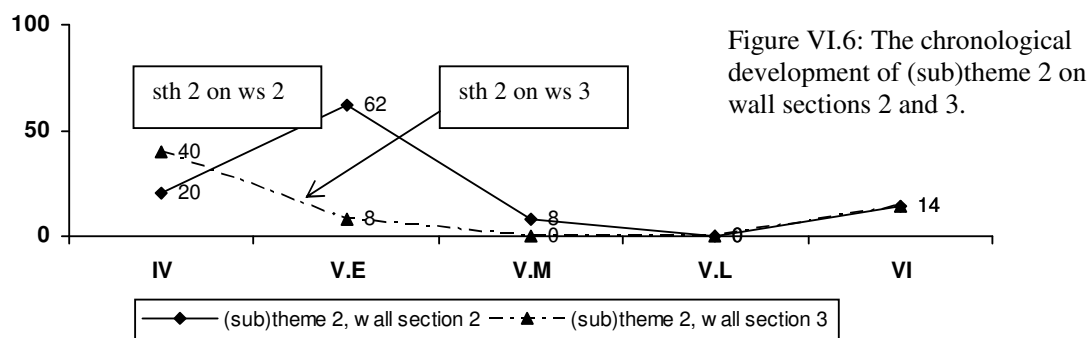


Figure VI.6: The chronological development of (sub)theme 2 on wall sections 2 and 3.

Figure VI.7 shows that (sub)theme 2 is hardly ever placed on wall section 1, and it is also evident that its frequency of placement on that wall section shows little change over time.

The conclusion is that

1. in the course of time (sub)theme 2 is transferred from wall section 3 to wall section 2, but that it is hardly ever placed further south, on wall section 1.
2. after the period V.M (sub)theme 2 disappears from the western wall until at the start of the 6th dynasty (sub)theme 2 returned on the western wall, but this time with a slight preference for wall section 1.

¹⁵ The percentages per period are calculated in the following way: “100 x number of placements on wall section” / “total number of tombs” (this value is closely connected to the FO value). By calculating it in this way the “popularity” of the wall section for that particular (sub)theme during that period has been taken into account. If e.g. in period X wall section 2 is used 3 times for a (sub)theme and in period Y also 3 times, the use (popularity) appears identical. However, period X comprises 5 tombs and period Y 20 tombs and this means that in period Y wall section 2 is less “popular” for the (sub)theme (for period X: $100 \times 3/5 = 60\%$ and for period Y: $100 \times 3/20 = 15\%$). The described way of calculation takes this difference in popularity into account.

¹⁶ The abbreviation “ws” stands for “wall section”, and “sth” for “(sub)theme”.

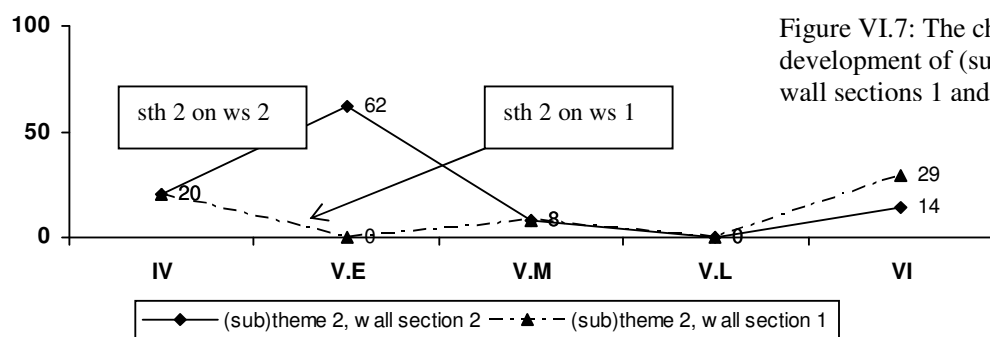


Figure VI.7: The chronological development of (sub)theme 2 on wall sections 1 and 2.

III.2. (Sub)theme 3 (the tomb owner at the offering table).

Figure VI.5 shows that the (sub)theme can be placed on all three wall sections, but with a strong preference for wall section 2.

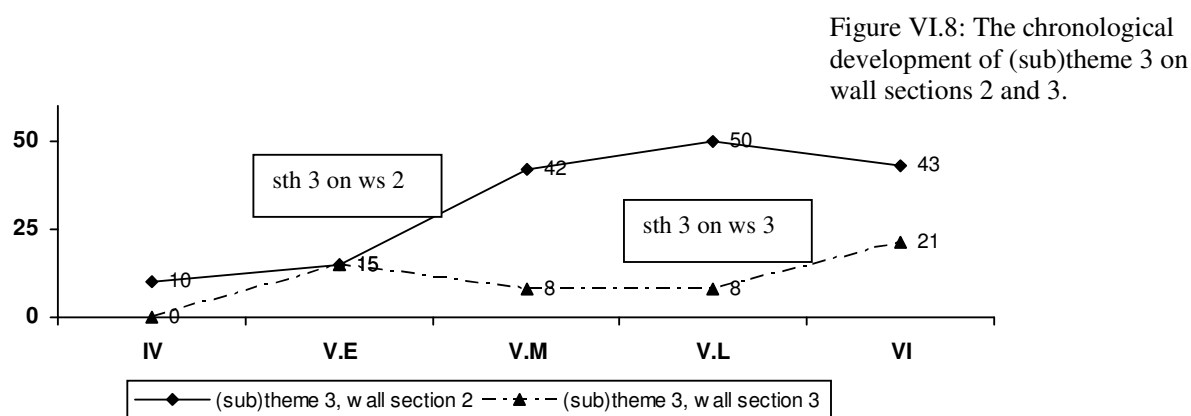


Figure VI.8: The chronological development of (sub)theme 3 on wall sections 2 and 3.

A study of the cult chapels of the seven tombs which have, according to table VI.1.Vol.2, (sub)theme 3 on wall section 3, proves that this placement is rare (figure VI.8).¹⁷

¹⁷ In table VI.1.Vol.2 over the whole period 7 cult chapels have (sub)theme 3 on wall section 3. In 3 of these cult chapels (the cult chapels of Seshemnufer [I] (PM, III¹, 142-3), Merib (PM, III¹, 71-2) and Kapunesut (PM, III¹, 135), the (sub)theme is placed partly on wall section 3 and partly over the false door(s) (Junker, *Giza II*, 62ff). The cult chapel of 'Ankhmare' (PM, III¹, 206, plan XXXI) is problematic. In the rock-cut chapel G 7837/G 7843 (sub)theme 3 is north of the false door. The tomb has been constructed in two stages (Reisner, *Giza I*, 238), the last stage being the part with the false door (G 7837). This means that originally (sub)theme 3 was on the southern part of the western wall. In the chapel of Nufer [I] the persons at the offering table on wall section 3 are the parents of the deceased, and *not* the deceased himself. The conclusion is that only in the cult chapels of Iasen and Idu (both 6th dynasty) is (sub)theme 3 really placed on wall section 3 of the western wall. This means that the most important placement of the (sub)theme is always on a wall section other than 3. Furthermore, the only two instances in which (sub)theme 3 is placed on wall section 3, it is *not* placed in front of the entrance of the cult chapel.

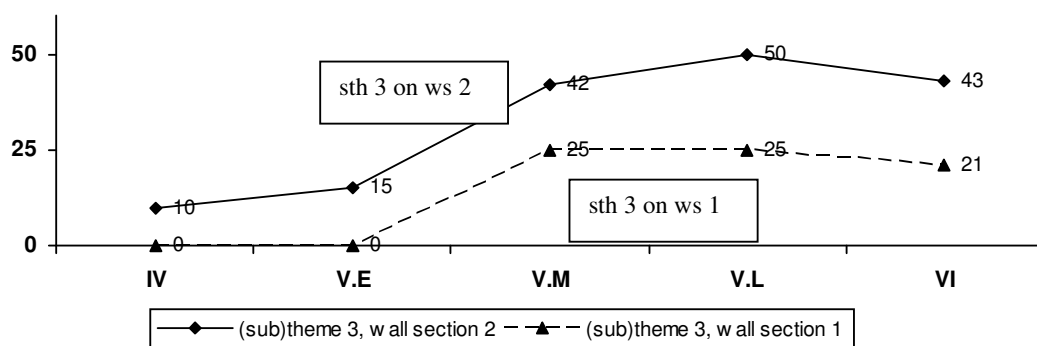


Figure VI.9: The chronological development of (sub)theme 3 on wall sections 1 and 2.

In figure VI.9 the chronological development of (sub)theme 3 on wall sections 1 and 2 has been compared. It is evident that from V.E onward the presence of the (sub)theme on wall sections 1 and 2 develops in the same manner.¹⁸

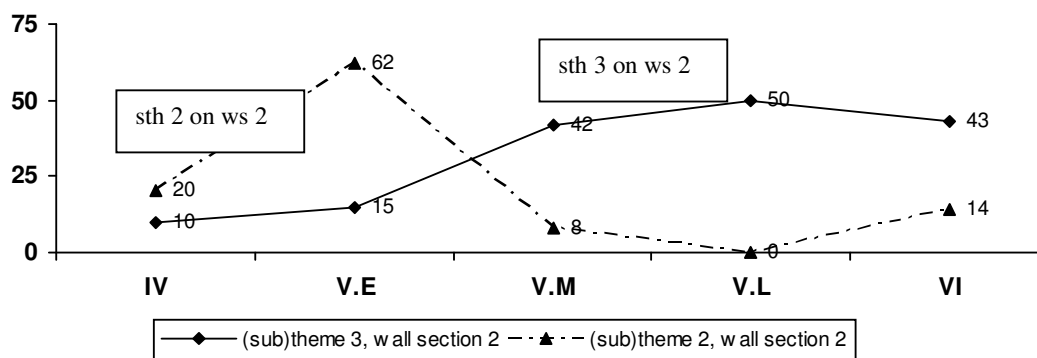


Figure VI.10: The chronological development of (sub)themes 2 and 3 on wall section 2.

Figure VI.10 shows that during the period in which (sub)theme 2 prevails on wall section 2, (sub)theme 3 is hardly ever present there. In period V.E (sub)theme 2 shifts from wall section 3 to 2 (figure VI.6), but in period V.M the placing of (sub)theme 3 on wall section 2 increases markedly at the expense of (sub)theme 2.

III.3. (Sub)theme 1 (tomb owner alone, standing or sitting).

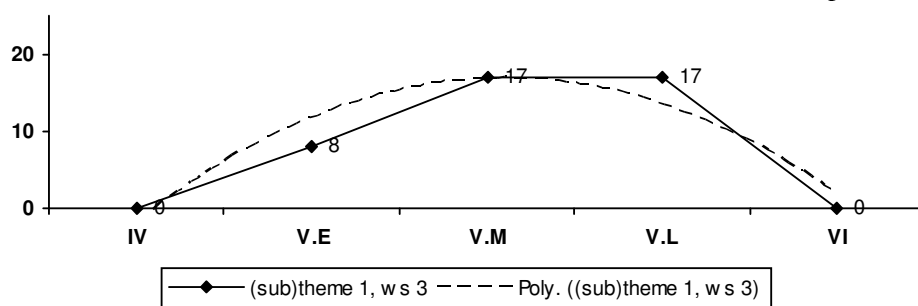
Its FO value in table IV.1a.Vol.2 (14%) indicates that it is not an important (sub)theme.¹⁹ Diagram IV.1.Vol.2. shows that the period during which it was “popular” enough to be chosen with an appreciable frequency does not last long (V.E – V.L). Yet its chronological development must be considered important enough to warrant a further discussion.

¹⁸ The value for (sub)theme 3 on wall section 2 in period IV is highly unreliable because it is based on 1 placement.

¹⁹ It has the lowest FO value of the (sub)themes that eventually are admitted to the research project.

In table VI.1.Vol.2 the (sub)theme is represented 5 times and all the placements are on wall section 3. In figure VI.12 the employment of (sub)themes on wall section 3 is given. The total lack of resemblance between the curve of (sub)theme 1 and those of (sub)themes 30 and 60 (the tomb owner alone on resp. the door jambs of the false door and the architrave of the false door) is evident from a comparison of figure VI.11 and diagrams VIII.1.Vol.2 and VIII.13.Vol.2. This means that, although as an effigy of the tomb owner they have a strong resemblance, their purpose on the western wall must have been completely different.

Figure VI.11: The chronological development of (sub)theme 1.



IV. The interaction between (sub)themes 1, 2 and 3.

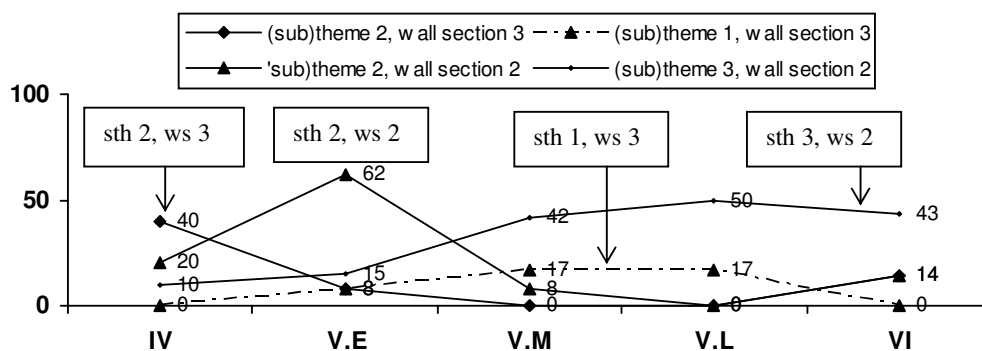


Figure VI.12: The chronological development of (sub)themes 1, 2 and 3 on various wall sections.

Figures VI.6 -10 enable some conclusions about the chronological development of the FO/period of (sub)themes 1, 2 and 3 (the three (sub)themes depicting the tomb owner), and the determination of their interaction(s). The curves have been compiled in figure VI.12. For (sub)theme 3 the frequency of employment has also been calculated for wall section 2 (figure VI.8).²⁰

From figure VI.12 the following can be inferred:

1. In the period V.M the frequency of employment of (sub)theme 2 on the wall section 2 reaches its minimum value. In the meantime (sub)theme 3 has nearly attained its maximum level on that same wall section.
2. (Sub)theme 1, the depiction of the tomb owner alone, is introduced on wall section 3 in the period V.E, and disappears at the end of V.L. This introduction might be the consequence of an obligation to place a depiction of the tomb owner on wall section 3, because (sub)theme 2

²⁰ The FO/period values have been calculated by taking the total number of placements (multiple placements are counted as the number they contain) and dividing this by the number of tombs in the period.

- is disappearing from this wall section. This might indicate that on wall section 3 (sub)theme 2 had a signalling/guiding role,²¹ and that this function was important enough to place another (sub)theme there to take over that role.
3. In figure VI.13 the decreasing tendency to choose (sub)theme 2 during the period V.E-V.L is evident.²²
 4. On wall section 3 the overall tendency is a decrease in frequency of employment of (sub)themes 1 and 2 (figure VI.12).²³

It is evident that on wall section 2 the role of (sub)theme 2 is gradually taken over by (sub)theme 3. However, this (sub)theme 3 is not newly designed for this purpose on this wall section:

1. Already at the start of period IV it is present on the southern wall of the chapel, and from the middle of the period V.E it is employed simultaneously on the western and the southern walls (tables VI.1.Vol.2 and VI.3.Vol.2). During the period V.L-VI (sub)theme 3 is no longer placed on the southern wall (figure VI.13).
2. From early pharaonic times on (sub)theme 3 was dominant on the niche stones (figure I.13), and later on the slab stelae and the panel of the “true” false door.
3. From the 1st dynasty on the (sub)theme has been found on cylinder seals placed next to the food offerings laid down in the burial chamber.²⁴ The presence of these objects bearing this particular scene proves that it already at this time played a role of the utmost importance and that its presence was obligatory.

In table IV.1.Vol.2 tombs of which both the western and the southern wall are sufficiently conserved to determine the presence or absence of (sub)themes 2, 3 and 11, are compiled in table VI.3.Vol.2.²⁵ From this table it is evident that with (sub)theme 2 placed on the western wall, (sub)theme 3 is practically always on the southern wall of the cult chapel.²⁶

²¹ For these terms see the table “technical terms and abbreviations”.

²² The FO/period values are calculated from table VI.1.Vol.2 by determining the number of placements of (sub)theme 2 per period and dividing this by the number of tombs in the period. Combinations are counted as the number of placements they contain.

²³ This is determined from table VI.1.Vol.2 by counting all the placements per period and calculating the percentage taken up by wall section 3, the result being that the employment of wall section 3 does not change throughout the Old Kingdom. From table VI.1.Vol.2 can be determined that after the disappearance of (sub)themes 1 and 2 from that wall section no other (sub)themes are more preferred for it.

²⁴ LÄ, V, 1128-9, s.v. „Speisetischszene“; Emery, *Archaic Egypt*, plate 29.

²⁵ Of the total of 34 tombs in table IV.1.Vol.2 which have a complete western wall, the tombs of Redi (Roth, *Gmast* 6, 69 ff) and Nefer-khuwi (Roth, *Gmast* 6, 142) do not have (sub)themes 2 on the western wall or (sub)theme 3 on the western or southern wall and are omitted from table VI.3.Vol.2. All the values in figure VI.13 are determined in table VI.3.Vol.2.

²⁶ In the tomb of Thenti (PM, III¹, 141-2) (sub)theme 3 is placed on the northern wall (see Harpur, *DETOK*, 400 [54]).

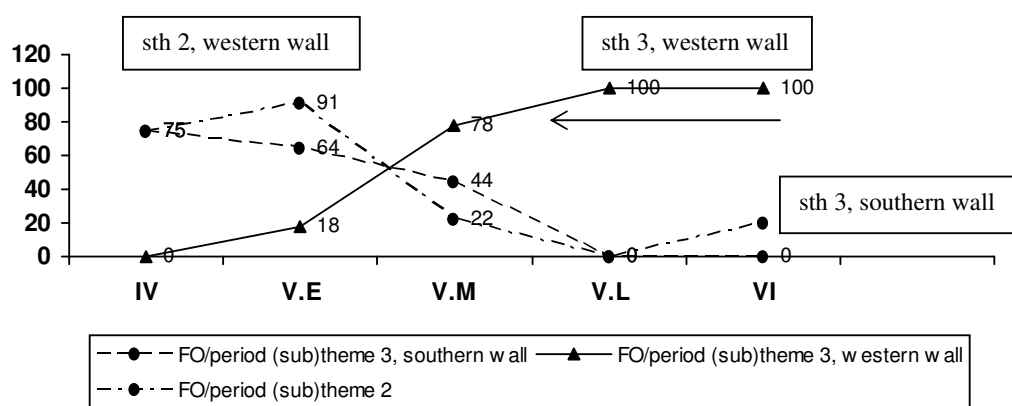


Figure VI.13: The chronological development of (sub)themes 2 and 3 on the western and southern wall.

FO value.	14	18	36	50	50	57	62	53	73	73	87
no. occurrences	5	7	16	23	25	28	32	34	35	42	67
(sub)theme	1	6	8	4	2	11	9	10	3	7	5
1	-	---	40	20	0	20	60	80	40	100	160
6		-	57	14	100	0	29	---	0	57	100
8			-	56	88	6	38	13	25	106	131
4				-	35	48	52	65	83	78	117
2					-	4	37	11	26	70	107
11						-	50	85	96	69	104
9							-	73	67	63	127
10								-	88	59	132
3									-	75	114
7										-	130
5											-

Figure VI.14: The CP values determined in table VI.1.Vol.2.

After the frequency of employment of (sub)theme 2 (tomb owner with family) starts to decrease, (sub)theme 3 (offering table scene) is more and more placed on the western wall and less on the southern wall (figure VI.13).²⁷

The conclusion from table VI.3.Vol.2 is that at the end of the period V.E (sub)theme 3 starts to be transferred from the southern wall to the western wall of the cult chapel and that from the middle of period V.M on (sub)theme 3 is no longer placed on the southern wall.

V. CP and SWS values.

From table VI.1.Vol.2 the CP and SWS values of the interactions are determined and are compiled in table VI.2.Vol.2.²⁸ In this table the number of co-occurrences is given in brackets behind the CP value.

²⁷ The same is concluded in Harpur, *DETOK*, 70-1.

²⁸ The number of co-occurrences of multiple placements is determined according to the number of placements they contain. This means that a co-occurrence between 1.2 and 1 is counted as 1-1 and 1-2 (see chapter III).

The CP values given in table VI.2.Vol.2 can be slightly different from those given in figure V.2, because in the latter the multiple placements are taken as one (this is due to the fact that the co-occurrences are determined in chronological ordering IV.1.Vol.2 and there multiple placements are not taken into consideration).

FO value.	14	18	36	50	50	57	62	53	73	73	87
no. occurrences	5	7	16	23	25	28	32	34	35	42	67
(sub)theme	1	6	8	4	2	11	9	10	3	7	5
1	-	---	0.4	- 0.6	- 0.7	- 0.4	0.8	1.4	- 0.4	0.5	1.5
6		-	1.1	- 1.0	1.8	- 1.1	- 0.1	---	- 1.4	- 0.5	- 0.3
8			-	- 0.1	1.3	- 1.2	0.3	- 1.0	- 0.8	0.7	1.3
4				-	- 0.2	0.4	1.0	1.2	0.9	- 0.1	0.7
2					-	- 2.1	- 0.3	- 1.7	- 1.5	- 0.5	0.8
11						-	0.2	1.1	1.3	- 0.4	0.6
9							-	- 0.2	- 0.6	- 1.0	1.2
10								-	1.8	-1.1	1.2
3									-	- 0.9	0.4
7										-	0.9
5											-

Figure VI.15: The CPSD values determined in figure VI.14.

In figure VI.14 the determined CP values are compiled in such a way that the CPSD values can be calculated from them (figure VI.15). The FO values as given in figures VI.14 and VI.15 are determined in table IV.1a.Vol.2. The CP and SWS values from table VI.2.Vol.2 are plotted against each other in figure VI.16. The points with a negative and a positive CPSD value (taken from figure VI.15) are placed in the diagram with different symbols (see legend of figure VI.16).

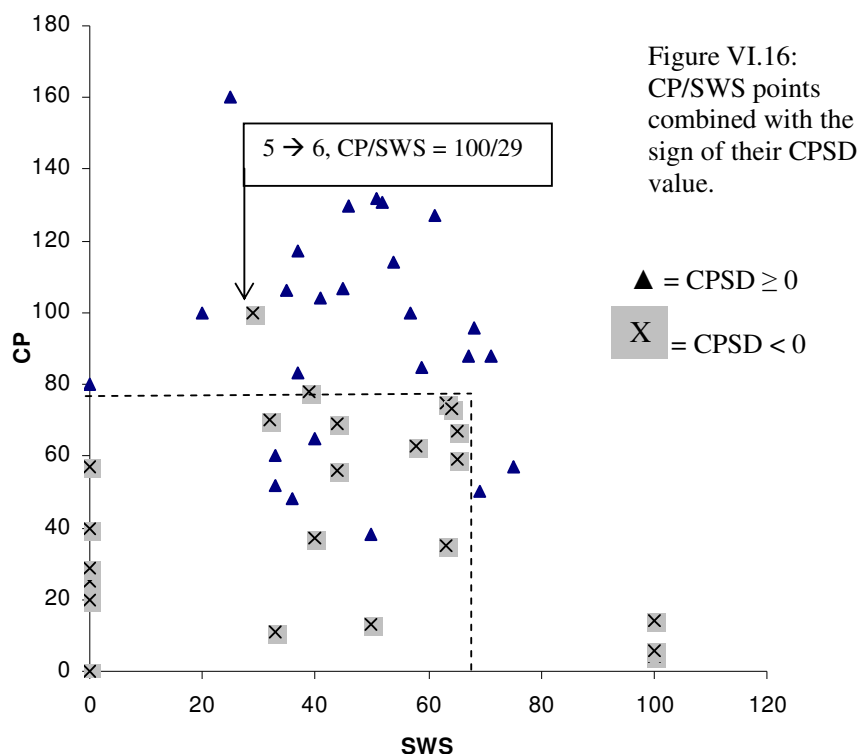
Although some intermingling of points representing positive and negative CPSD values takes place, it is evident that in the region defined by a CP value of 80 and a SWS value of 65, nearly all the points with a negative CPSD value are included.

The three points with a SWS-value of 100 all have very low CP values (the three points being: 14/100, 6/100 and 4/100) and are based on only one co-occurrence (table VI.2.Vol.2), which invalidates them.

In the diagram of figure VI.16 the following is possible:

1. To determine the character of interactions with CPSD values which preclude interpretation (it concerns values like CPSD = 0.0 or CPSD values close to this and interactions of which the CPSD value cannot reliably be determined). This is the case with the interaction between (sub)themes 5 and 7. In figure VI.15 a CPSD value of 0.9 is given, but because this value has been calculated from only three CP values, it is unreliable. The location of the point in the diagram of figure VI.16 on CP/SWS = 130/46 (52) makes it evident that the interaction is a association.
2. To discuss interactions that have CPSD values which do not fit the area of the diagram in which they are located.
 - a. In figure VI.16 in the region ostensibly reserved for points with a negative CPSD value, five points have a positive CPSD value. These are the interactions compiled in figure VI.17. According to their location in the diagram, they should be considered as points with a negative CPSD value. In figure VI.17 the description of these interactions makes it highly probable that they are in reality dissociations and not associations.
 - b. In figure VI.16 one point, although located in the area of positive CPSD values, has a negative CPSD value (CP/SWS = 100/29, CPSD = - 0.3). This is the interaction

between (sub)themes 5 (offering bearers) and 6 (personified estates). This interaction can, without any difficulty, be considered as a association.



9 → 1		60/33	butchery → tomb owner alone
9 → 8		38/50	butchery → scribes
	4 → 11	48/36	family → offering list
	4 → 9	52/33	family → butchery scene
	4 → 10	65/40	family → piles of food offerings

Figure VI.17:
The interactions
with positive
CPSD values in
the negative area.

The result of these considerations is that it is primarily the location of the CP/SWS point in this type of diagram that determines the character of the interaction between two (sub)themes and not the sign of its CPSD value.²⁹

As already discussed there are three (sub)themes which might possibly have a unifying function. From figure VI.15 it can be concluded that

1. (sub)theme 5 (offering bearers) has no specific preference for any (sub)theme, because all (except one) of its interactions have positive CPSD values.³⁰

²⁹ This result must be interpreted as a development of the method as proposed in chapter III, part V.1.2, this development was necessitated by the results obtained in chapter VI. It shows that erroneous CPSD values and/or signs can be corrected, thus giving the opportunity to determine, with a high degree of reliability, the character of the interaction between two (sub)themes. As a consequence, the next step, the determination of the cultic character of the various (sub)themes, can lead to the proposal of valid Egyptological conclusions based on reliable data and arguments.

2. In view of the number of negative interactions of (sub)theme 7 (priests), it is doubtful that it has a unifying function.
3. If in table VI.1.Vol.2 for (sub)theme 10 (piles of food) the CP/SWS value of its interactions is determined from the moment of its introduction on the western wall, the conclusion is that it has a positive interaction with the other (sub)themes (but a *strong negative* interaction with (sub)themes 2 (tomb owner with family) and 8 (scribes) when they “re-appear” during the 6th dynasty, and also with (sub)theme 7).

This unifying function will be further discussed in part IV of chapter VII.

VI. Preliminary conclusions.

1. The number of single placements does not change over time (figure VI.2), while that of the combinations increases in the period IV-V.M; after that a (small) decrease sets in (figure VI.3a).
2. (Sub)themes 5, 7 and 10 possibly have a unifying function, because they are (sub)themes which are preferentially employed to form combinations (figure VI.4).
3. The unifying function of (sub)theme 5 (offering bearers) has no specific preference for any of the (sub)themes, because all of its interactions have a positive CPSD value in figure VI.15 (the only exception being the interaction between (sub)themes 5 and 6 (personified estates) with a CPSD value of -0.3 , but which must in reality be positive considering the place of its CP/SWP point (100/29) in figure VI.16.³¹
4. A possible unifying function has been proposed for (sub)theme 10 (piles of food), but with a strong dissociation for (sub)themes 2 (CP/SWS = 11/33, CPSD = -1.7) and 8 (CP/SWS = 13/50, CPSD = -1.0).³² The CP/SWS values of the interaction of (sub)theme 10 with (sub)themes 7 (priests) (CP/SWS = 59/65, CPSD = -1.1) and 9 (the butchery scene) (CP/SWS = 73/64, CPSD = -0.2) are situated in the transitional area between association and dissociation (figure VI.16).³³ The conclusion is that the probable unifying function of (sub)theme 10 is restricted to certain (sub)themes.
5. The transfer of (sub)theme 2 (tomb owner with family) from wall section 3 to wall section 2 in period IV-V.E (figure VI.6) caused the short-term introduction of (sub)theme 1 (tomb owner alone) on wall section 3 (figure VI.12), and a likely conclusion is that the presence of a (sub)theme depicting the tomb owner was, at least in that period, obligatory on wall section 3.
6. The gradual shift of (sub)theme 3 (offering table scene) from the southern wall to the western wall and its subsequent fall into complete disuse on the former (figure VI.13 and table VI.3.Vol.2) is closely connected with the start of a decrease in the frequency of employment of (sub)theme 2 during the period V.M (figure VI.13).
7. Although the sign of a CPSD value of an interaction between two (sub)themes might indicate a association or an dissociation, it is the location of the CP/SWS point in the CP/SWS diagram that determines the character of the interaction.

³⁰ In figure VI.15 the interaction of (sub)themes 5 and 6 has a negative CPSD value (CPSD = -0.3). From figure VI.16 the location of the point of the interaction in the diagram (CP/SWS = 100/29) leads to the conclusion that the interaction is in fact a association. This is in accordance with the other interactions of the (sub)theme. From figure VI.15 it is evident that (sub)theme 7 is the least employed as a (sub)theme with a unifying function.

³¹ This interaction has CP/SWS values of 100/29 (table VI.2.Vol.2) and in figure VI.16 this CP/SWS point is well within the area of positive CPSD values, so its position in the diagram indicates a association.

³² The CP/SWS values of these interactions are within the area of negative CPSD values. There is no interaction with (sub)theme 6.

³³ The interaction of (sub)themes 9 (butchery scene) and 10 (piles of food) has a CPSD value of -0.4 (CP/SWS = 69/64), which is in the area where the signs of the CPSD values are transitional. The CPSD value of this interaction is not high which makes a conclusion difficult. The interaction between (sub)themes 7 (priests) and 10 has a CPSD value of -1.2 (CP/SWS = 59/65), the CP/SWS places the point of the interaction in the transitional area (figure VI.16), but in this case the CPSD value is high enough to make an dissociation likely.