MastaBase
User's Guide

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Marije Vugts

Contents

Introduction

This CD-ROM is the product of the Leiden Mastaba Project (LMP), which started in 1980. The project concerns an integral and analytic study of the secular or 'daily life' scenes and their accompanying texts in the elite tombs of the Memphite area during the Old Kingdom (± 2600-2150 BC). The aim of the project is to gain insight into the development of number, size, internal organization and shape of the various (sub)themes, their location in the tomb, their wall position (upper/ middle/lower level), and their orientation (north/east/south/west) on the walls. A synthesis of these aspects will shed new light on the pragmatics and dynamics of the elite funerary culture of the Old Kingdom. A main issue of interest is the tension between the *collective* (adherence to the generally accepted) and the *individual* (deviating from and/or gradually changing the accepted).

For the initial set up of the project and its research questions, see R. van Walsem, 'The mastaba project at Leiden University', in: S. Schoske (ed.), *Akten des vierten Ägyptologenkongresses München* 1985, 2 (München, 1989), 143-154, esp. 143-145.

All available data have been digitized in a database, the so-called 'MastaBase', which is incorporated on this CD-ROM. As a result this CD-ROM contains information on over 300 *published* tombs. Occasionally additional blocks are encountered in publications. However, preference has been given to complete and published tombs, resulting in incomplete coverage of the corpus of loose blocks in the current edition of this CD-ROM. Moreover, new publications continue to appear frequently. Therefore such a project as this one will never truly approach completeness.

The data of each tomb include:
- General data plus tomb plan;
- Concise description of all 'secular' iconography, by room, by register, plus multi-coloured wall schemes;
- Hieroglyphic texts (including transliteration and translation)

Thanks to the standardization in the MastaBase it is now possible to gain quick overviews into various aspects of these tombs and their decoration via extensive selection procedures.
However, it should be noted that, owing to the immense diversity of the material, it is not possible to be completely consistent. Moreover, the material proved to be even more complex and diverse than anticipated. More than once *ad hoc* decisions

had to be made concerning the categorization of scenes and/or texts. Utmost care was taken to be as consistent as possible when dealing with such a sizeable corpus. It will be obvious that for *quantitative* questions, which may be used for detecting trends in cultural development, the program can save a lot of time for the researcher in collecting his material. For detailed research on levels beyond the coverage of the MastaBase, *e.g.* the variation in number of participants in scenes such as fishing with a seine (or dragnet), the original publications have to be consulted.

The foregoing implies a very important point: that the database is *not a replacement* for the original publications. Also, one needs to keep in mind that it is impossible to foresee *every possible* question that might be asked by a user! In other words, one should not expect that the program is perfect.

Before clarifying several aspects of the data, there are some general remarks that need to be made.

- The necessary transliteration font is included on this CD-ROM and will be automatically installed at start-up.
- Names given in transliteration are entered without hyphens so as to enable searches for names.
- All words given in transliteration are written in lower case.
- Transliterations are entered according to the Manuel de Codage[1]:

norm	ꜣ	i	ꜥ	w	b	p	f	m	n	r	h	ḥ	ḫ	ẖ	s	š	q	k	g	t	ṯ	d	ḏ
key	A	i	a	w	b	p	f	m	n	r	h	H	x	X	s	S	q	k	g	t	T	d	D

General tomb data

Tomb plans

Most tomb plans are reproductions from Porter and Moss (courtesy of J. Málek). In addition N. Kanawati kindly permitted us to copy the tomb plans of his mastaba publications. Other tomb plans are facsimiles from other publications some even from quite old publications. The tomb plans are not consistent in respect to quality, since the quality of the source publications vary. Additionally, technical limitations and overly detailed plans have sometimes resulted in a lesser

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[1] Jan Buurman – Nicolas Grimal – Michael Hainsworth – Jochen Hallof – Dirk van der Plas: *Inventaire des signes hiéroglyphiques en vue de leur saisie informatique*. Informatique et Égyptologie 2. Institut de France. Mémoires de l'Académie des Inscriptions et Belles-Lettres. Nouvelle Série. Tome VIII. Paris 1988.

quality in MastaBase. All plans can be enlarged by clicking on the plan in the tomb records.

LMP no.

The tombs included in the database are numerically designated in an arrangement roughly following their chronological order, with their datings originally following those of Porter and Moss. Over the course of time numbers were added to the beginning, middle, and end of our preliminary list, resulting in designations such as 000a or 036a (always in lower case). The numbers now range from 000a-263, but represent in total 337 tombs.

Tombs with more than one owner, such as that of Nefermaat and his wife Itet, have been split up when they consist of independent sub-complexes for each owner[2]: each sub-complex gets the same number with the addition of A and B (in upper case). Several tombs have been renumbered over time, resulting in 'empty' numbers[3]; *e.g.* LMP no. 233 (Seneb) has been renumbered into LMP no. 027a, following the publication of the article of Nadine Cherpion, 'De quand date la tombe du nain Seneb' in *BIFAO* 84, which reconsiders the date of this tomb. As a result LMP no. 233 no longer exists. The thought of renumbering all tombs has occurred to us, but numerous theses written by students making use of the current numbering system and the numerous cross-references throughout the database made us decide against this.

In addition to the tombs, several blocks have been added. When they could be dated, they have been inserted in chronological order among the tombs, but a few blocks of uncertain date have been entered in the database at the end of the chronological order, starting with a 'B', *e.g.* B001, B002 etc. Preference has been given to complete and published tombs, resulting in incomplete coverage of the corpus of inscribed blocks in the current edition of this CD-ROM.

Codes and other numbers

The known codes of the tombs, from Lepsius, Mariette etc., are given. For an explanation of these codes, see 'Type of code' in the Code Index. Additionally the numbers given to these tombs by Yvonne Harpur[4] and Naguib Kanawati[5] have been included. To distinguish the tombs from one another, an additional coding

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[2] The following tombs have been split up: 001 (A-B), 002 (A-B), 062 (A-B), 063 (A-B), 181 (A-B), 182 (A-C), 251 (A-B).

[3] The following tomb numbers do not exist: 076, 079b, 082, 140a, 161, 196, 233, 241.

[4] Y. Harpur, *Decoration in Egyptian Tombs of the Old Kingdom*.

[5] N. Kanawati, *The Egyptian Administration in the Old Kingdom*.

is added for those tombs without known codes. This LMP-code consists of a T(omb) (or TB for undated blocks, see above) and a number, e.g. T112 or TB001.

Dating

Various dates are given:

1. *Most likely date*
   The most likely date is entered by the project based on at least three other dates. When questionable the most likely date is left empty.
2. *Porter & Moss date*
   The addition of a question mark indicates that Porter and Moss were not sure about this date.
3. *Harpur date*[6]
   When the term '(taq)' is given here, it means Harpur gives a suggested *terminus a quo*. In her publication she calls it a 'suggested *terminus ante quem*'. However, she refers to the *last*, not *first* known appearance and thus refers to a *terminus a quo*.
4. *Cherpion date*[7]
   The addition of '(imp)' in a Cherpion date refers to the fact that Cherpion does not give the date in her indices (mainly IB and IC), but *implicitly* mentions the date elsewhere in her book. An '*' indicates that Cherpion did not have the opportunity to study this tomb completely.
5. *Kanawati date*[8]
6. *Other dating*
   Other dates, when available, are also given with (in brackets) the publication from which they come. All dates from Baud's *Famille royale et pouvoir sous l'Ancien Empire égyptien* are included.

Additionally, since the presence of a royal name provides us with a *terminus a quo* these are included in the database. In case several royal names occur in the same tomb, only the name of the last reigning king is entered here.

Finally, for search purposes a separate entry 'Dating' has been established. This entry is compiled based on the dates explained above. In principle the date chosen for this entry is the Most Likely Date. If this does not exist, the Porter and Moss date is chosen. When there is no Porter & Moss date either, one of the other dates

is chosen in the following order: Cherpion no., Harpur no. and Kanawati no. It is not possible to search on the other dates.

Additional terms like first/second half or early/middle/late are based upon the following schedule:

Dynasty 4 (2613-2494)	Sneferu (2613-2589)		Early
	Cheops (2589-2566)	First half	
	Djedefre (2566-2558)		Middle
	Chephren (2558-2532)		
	Mycerinus (2532-2503)	Second half	
	Shepseskaf (2503-2498)		Late
Dynasty 5 (2494-2345)	Userkaf (2494-2487)		
	Sahure (2487-2475)		Early
	Neferirkare (2475-2455)	First half	
	Shepseskare (2455-2448)		
	Neferefre (2448-2445)		Middle
	Niuserre (2445-2421)		
	Menkauhor (2421-2414)	Second half	
	Djedkare (2414-2375)		Late
	Unas (2375-2345)		
Dynasty 6 (2345-2181)	Teti (2345-2323)		Early
	Userkare (2323-2321)	First half	
	Pepi I (2321-2287)		Middle
	Merenre I (2287-2278)		
	Pepi II (2278-2184)	Second half	
	Merenre II (2184-2181)		Late

N.B. The dates are from I. Shaw (ed.), The Oxford History of Ancient Egypt (Oxford, 2001). Instead of Merenre II this publication has Nitiqret immediately following Pepi II.

The user should realize that certain tombs are only dated by an interval, e.g. LMP no. 138 "Dynasty 5, end or Dynasty 6, early". This implies that in a total summation of the tombs by concrete dynasty numbers, these tombs will be counted twice: under dynasties 5 and 6. This grand total thus will, necessarily, exceed the real total of tombs in the database. With respect to (statistically) chronological

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[6] Y. Harpur, *Decoration in Egyptian Tombs of the Old Kingdom.*
[7] N. Cherpion, *Mastabas et Hypogées d'Ancien Empire.*
[8] N. Kanawati, *The Egyptian Administration in the Old Kingdom.*

questions this complication can best be avoided by first asking the database for separate lists of tombs dated to dynasties 4-5, respectively 5-6, print these, and use them as a checklist against the lists that ask for "(all) tombs" dated to dynasty 4, respectively 5 and 6.

Gender

Here the gender of the tomb owner is given (male/female). When the gender is unknown a question mark has been entered in this field. In a few cases one chapel is dedicated to both husband and wife. In these (and similar) cases 'both' is entered.

Literature

The given literature is not exhaustive. Included are the most important publications. Since not all publications have been at hand during the work, it has not always been possible to include references to all pages, figures and plates. The references are concise. For the complete bibliographic entry and for the used bibliographical abbreviations consult the bibliography.

Wall and register data

Wall data

Since the publication of Porter and Moss was the starting point of this project, their tomb plans and wall numbers have been used when available. They have sometimes given more than one number to a wall. These walls have been recorded as one in the MastaBase, but with both numbers. For instance, figure 1 shows a plan in which the eastern wall of the chapel is divided by a doorway. This wall has been given two numbers by Porter and Moss. In the MastaBase this wall has been numbered as '02-03'.
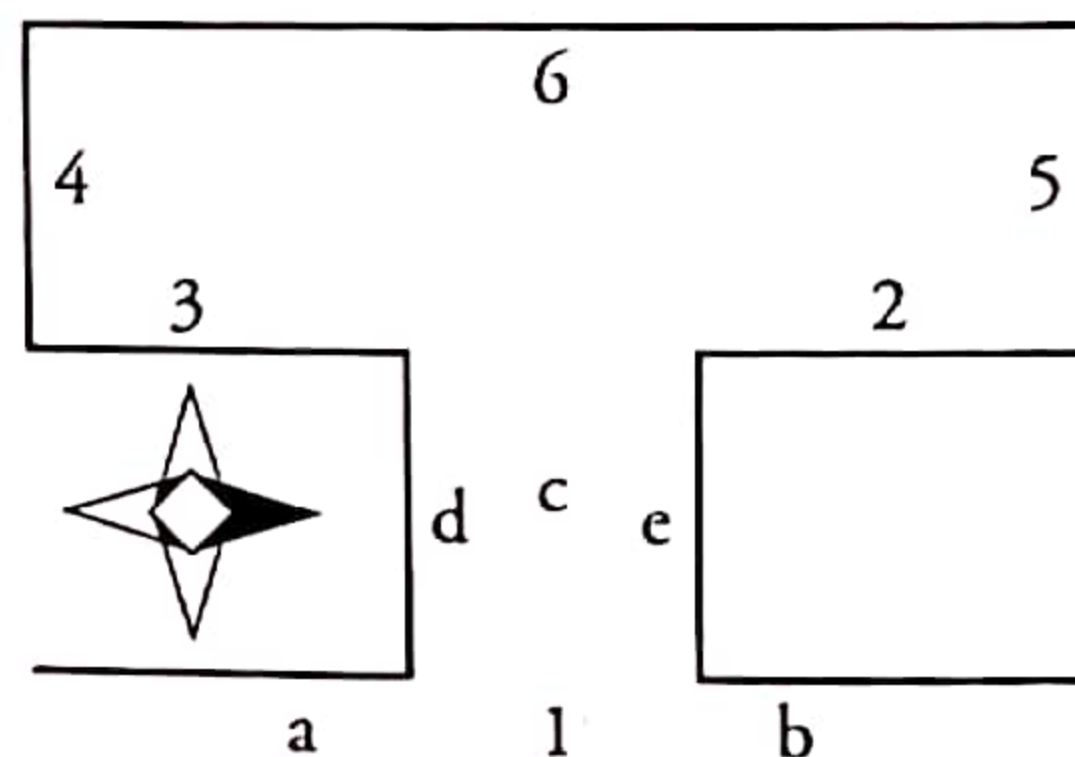

Fig. 1. Tomb plan of the tomb of *Shthtp* (LMP no. 039).

To every wall an orientation is allocated. Pillars depicting the owner on every side are entered as one wall with 'ALL' as orientation, since these depictions lie outside the scope of the project.

Wall schemes

The wall schemes are an indication of the arrangement of main and subthemes on the wall. Every main theme has its own colour and abbreviation. Every subtheme has its own abbreviation. For instance stock-breeding (ST; in green) as main theme and Milking (M) as subtheme (see Themes index).

It should be kept in mind, that these wall schemes are *by no means* proportionally correct reproductions! The same has to be said for the hatching of damaged areas, which are only approximate.

To the left of each wall scheme the register numbering from top to bottom is given. This is generated automatically. Anomalies occur when certain scenes occupy more than one register in height (see fig. 2). Additionally, numbers may overlap in cases of wide or complex walls.

Fig. 2.
Wall scheme of the East wall of the tomb of Hetepherakhty (LMP 045).

A register showing the harvest of grain, with the harvest of flax on both sides, should be depicted as:

Fig. 3

However, due to technical limitations a subtheme can only be entered once in a register, resulting in the following depiction:

Fig. 4.

When this occurs the *description* does state that the flax harvest is depicted on both sides of the harvest of grain.

Several times it was impossible to create a wall scheme. In these instances a description of the wall (as far as available) is given in the wall remarks, including the abbreviation(s) of the (sub)theme(s). Nevertheless, these themes have been entered in the database and are included in the statistics.

Damaged walls

Unfortunately there are many damaged walls and fragments. Of course these have been included.

When the upper part (or lower part) of a wall has been destroyed, the wall scheme shows an extra damaged register on top (or at the bottom) of the remaining registers (see fig. 5). This does not imply that there is only one destroyed register? (see also the remarks on the next page under the Wall position index (Wpi)).
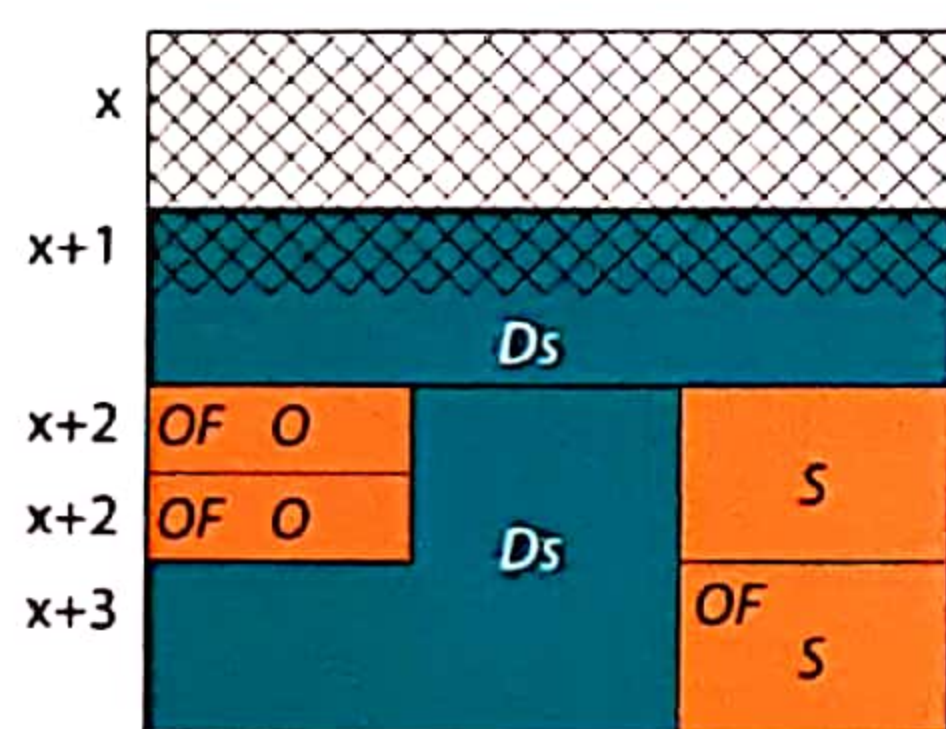

Fig. 5. Example of a wall of which the upper part has been destroyed from the tomb of Ptahshepses in Abusir (LMP 036a).

Fragments can be labelled in two ways, depending on whether or not we can attribute the block to a certain wall in the tomb. When labelled 'Fr-...' it cannot be attributed to a wall, when labelled '...-fr' it can. For instance 02-fr is a block that originally belonged to wall no. 2, but its original position on that wall remains unknown. In contrast, the label Fr-02 indicates that a block is the second of a tomb but that the wall to which it belonged is unknown.

Register data

Every register receives a number, except for the categories 'A' and 'EX'. This is due to the fact that depictions of the owner ('A') and elements such as the false door and offering lists ('EX') are beyond the scope of this project. Occasionally this results in skipped numbers, as is the case in LMP no. 115, room I, wall 02, where the sixth register does not have a number (depicted are family members; EX/FM). As a result the list of descriptions by register 'jumps' from register 02/5 to 02/7.

Registers (and subregisters) are numbered from top to bottom and left to right. Their number always includes the wall number. For instance 46/1 is the topmost register of wall 46[9].

The descriptions of the scenes are concise. Descriptions are also entered for depictions of the owner ('A') and elements, such as the false door and offering lists ('EX').

For each (sub)register, it is indicated whether or not the scene contains texts (Y = Yes; N = No; ? = Unknown).

Wall position index (Wpi)

For statistical purposes we have included the so-called Wall position index or Wpi, which determines the relative (upper/middle/lower) position of a theme on the tomb wall. In order to calculate this index, the following data are needed: K and N.

These symbols originate from statistics, where K indicates a selection of the population and N the entire population. Here this translates to K (either calculated from above or below) as register such-and-such and N as the total number of registers.

E.g. for Games (GA), Music (M):
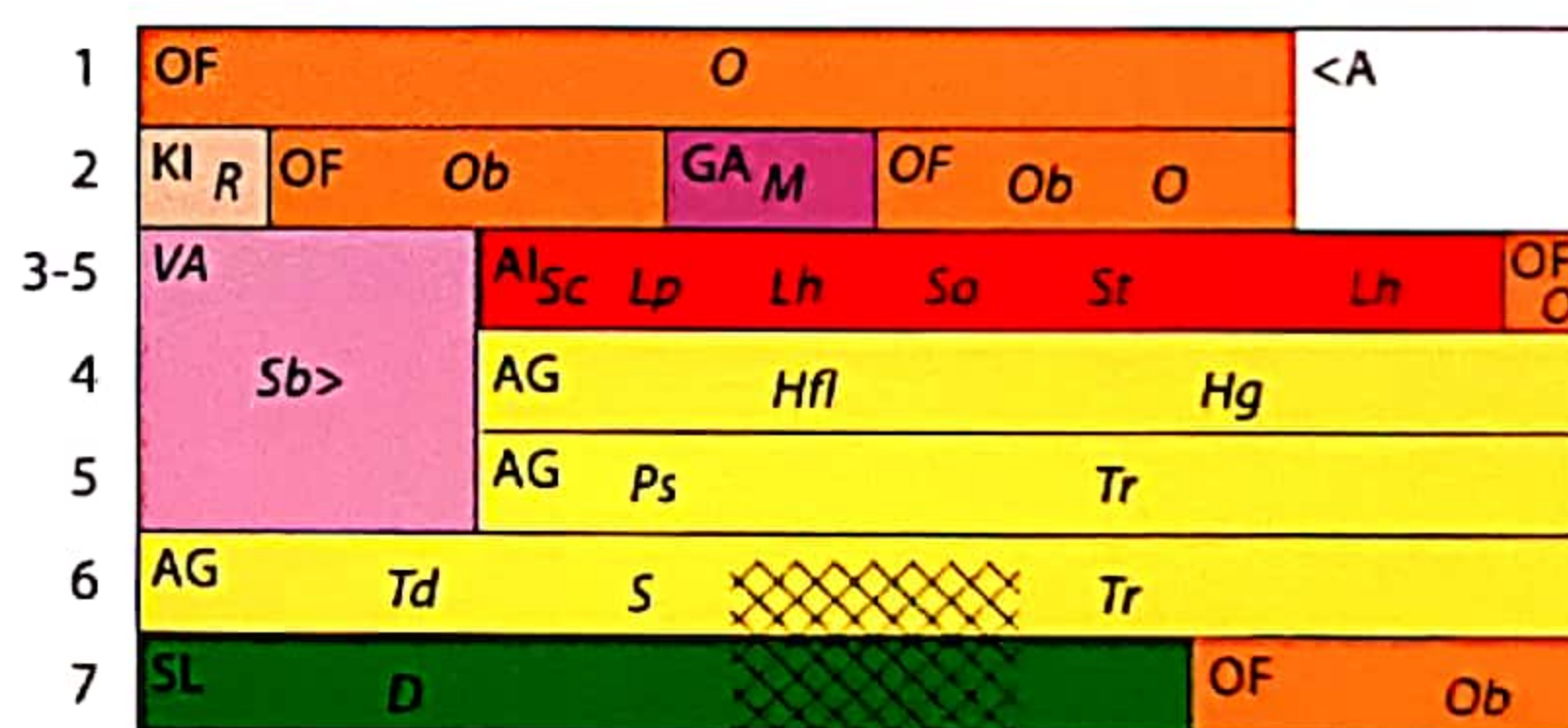
K from above: 2
K from below: 6
N: 7
Wpi: U (Upper)

Fig. 6. Wall scheme from the tomb of Hetepherakhty (LMP 045).

When a wall is damaged and we cannot determine the original number of registers, N is given as 'x'. Additionally, K (from above) is entered as 'x+...' when the upper part of the wall is damaged and as '...+x' when the lower part is damaged (see also above the remarks under damaged walls).

In case of fragments, K and N, and thus the Wpi, cannot be determined.

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[9] The register numbering is not always consistent. In principle registers are numbered without a preceding 0. However, in case of 10 or more registers this preceding 0 has been added, resulting in register numbers like 06/(0)5.

Texts

In order to be as consistent as possible, the texts have been entered from left to right for each register by (sub)theme, which means that they may 'run' contrary to the original intended reading direction of the representation. In principle the texts are entered at subtheme-level. However, some texts relate to more than one subtheme. In these instances the text is entered at main theme-level. See for instance fig. 7 where the text running at the top of the register relates to the complete register and not only to the slaughter of cattle (SL/C) or of desert cattle (SL/D).

Fig. 7. A slaughtering scene from the tomb of Kagemni (LMP 183, wall 35, register x+6).

For technical reasons, it proved to be impossible to rigidly maintain the original orientation and order of signs, but if possible the lay-out (columns, rows, mixed) and the orientation are given. Note that the orientation refers to the *reading* direction and *not* the direction of the signs. However, as far as possible the composition of the signs has been preserved. When several signs are grouped together, this may result in small, unclear hieroglyphs. In these instances the original composition has sometimes been altered to maintain the clarity of the text. In addition each text is classified according to type: Caption; Spoken; Estate; Observation; Name/Title; Damaged and Unknown. Occasionally, a text can be interpreted as either Caption or Spoken. In these circumstances the text is assigned to one, and the other interpretation is added in the Remarks.

Even though depictions of the owner fall outside the scope of this project, exceptions are made. The so-called *observation*- or *mꜣꜣ*-texts that often accompany these depictions *do* fall within the objectives of the project and therefore are included. Since it felt unnatural to enter only the *mꜣꜣ*-text when other texts accompanied the same depiction, the decision was made to enter *all* texts that accompany such a scene (except for the titles of the deceased himself, see below).

Sometimes certain hieroglyphs are shown on the screen in *red*, indicating a hieroglyph that is not available as a graphic in the hieroglyphic module. The given hieroglyph is the closest available variant.

Names are not given in hieroglyphs, but are entered as N (for personal names), E (for estate names), DN (for names of dogs) and RN (for royal names). However, royal names are the exception to the rule. In this case, the hieroglyphic reproduction does give the name, while in both transliteration and translation RN is entered for search purposes. The reason for this exception is that a royal name can be used for dating purposes.

Titles have been included as often as possible, except for the numerous titles of the tomb owners themselves. These, and unrecognisable titles, are given as 'T'.
N.B. Titles of other family members are not included when falling within the EX(tra categorical) scenes or depictions of the owner (unless they are accompanied by an 'Observation' text).

Transliteration and translation are taken from the main publication of the tomb without critical evaluation. As always there are exceptions. For instance when a more recent study into a certain main or subtheme has provided a different and better translation, this is often preferred over the main publication.
Since transliterations and translations are taken directly from different publications, inconsistencies *do* occur, e.g. *s* and *š* are both used. Some items have been standardized: '=' (indicating suffix connections, such as *sḏm=f*) is converted into '.' and '*j*' into '*i*' or '*y*'.
When a publication does not give a transliteration, the Leiden Mastaba Seminar (LMS) has entered one. These transliterations are preceded by the scribal-sign .

Translations are entered in English, German or French. Other languages, such as Italian, have been translated into English.
When no transliteration or translation is available, the project has provided them if possible. In these cases LMS (Leiden Mastaba Seminar) has been entered in the Literature field.

Where '?' and 'sic' were necessary, this was done in the hieroglyphic reproduction as red coloured text. Notes are added in the hieroglyphic reproduction as red coloured numbers, while the corresponding explanation is entered in the remarks field. Additionally, notes have been added in transliteration and translation (as '(1)', '(2)').

Search and Statistics

All data can be accessed by choosing from several separately available INDEXES as well as through entering queries in one of the three MODULES.

The data of every index can be ordered per column by clicking on the column heading. Ordering the results of queries in the searching or text modules can be obtained by entering the criterion in the field 'ORDER BY' in the grey bar at the top where the query is entered.

When the results are presented in a table the width of every column automatically adjusts to the data presented in the column on that page. When leafing through the pages the width of the columns may vary.

The available INDEXES are:

1. *Tombs*
   showing LMP no., Code(s), Location, Owner's name, Most likely date.

2. *Codes*
   showing LMP. no., Type of code (*e.g.* A-E indicate Mariette's numbering system; LG refers to Lepsius' Giza tombs etc).

3. *Museum nos.*
   showing Inventory no., LMP. no., Collection.

4. *Concordance*
   Showing LMP no., Code(s), Porter & Moss reference, Harpur no., Kanawati no.

5. *Themes*
   showing Colours and Abbreviations of main themes, followed by Abbreviations per subtheme, and concluded by a separate list of all subtheme abbreviations in alphabetical order.

   N.B. We are fully aware of the fact that this categorization of main/subthemes is *ours* and may coincide only partly with the ancient Egyptian's in the best case.
   N.B. Instead of clicking on "Themes" under the heading INDEXES, the list can be activated as well by means of the button with multi-coloured squares in the top right corner

The three MODULES are:

1. *Searching* module
   Queries are on the level of data of *individual tombs*, *e.g.* searching on main/subtheme: all cases of the subtheme 'Milking' at Saqqara on an east wall.

Note that the level (and number) of the results of every query is dependent on the level of the criteria used in the query. The different levels are: tombs, rooms, walls and registers. In the DISPLAY in the grey bar at the top the items are ordered according to these levels. A query on the main theme Slaughtering (SL) will result in a totally different number of occurrences on tomb level (the number of tombs the theme occurs in) than on register level (the number of registers showing the theme). See example 1.

The results can be presented as: Listing, Tomb plans[10] and Wall schemes[11].

To look up a specific tomb, this module should be used. Enter the LMP no., name of owner or code as first criterion and press EXECUTE.

2. *Statistics* module
   Queries with one variable (*e.g.* Main theme, where Location like Giza OR Saqqara) or with two variables (*e.g.* Main theme X Location, where Location like Giza OR Saqqara) will be presented as pie charts (1 variable only) or bar charts, in- or excluding legend and marks. Queries with two variables are automatically presented in a bar chart. The first variable appears on the X-axis, the second on the Y-axis. The latter refers to the possibility of showing absolute numbers in the chart. Additionally a table with the results is presented below the chart.

   N.B. When showing percentages it may happen that all are shown as 100%. If this occurs switch the two criteria in the select boxes. This occurs when one of the criteria under WHERE is also the first selection criterion. For instance SELECT Main Theme X Most Likely Date, WHERE Main Theme = AG. You will get all results as 100% as all Main themes are 100% of the selection.
   N.B. To make sure that all data is printed, it is best to print tables in landscape.

The difference between the first two modules is a subtle one. The searching module can be used to find a specific individual tomb or obtain lists of tombs, rooms, walls or registers that meet the chosen search criteria (up to 4 criteria). When an overview or comparison of data is required, the statistical module should be used. This module generates cross-tables and charts for simple analysis or comparison.

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[10] By clicking on the plans, you can go to the complete tomb data.
[11] By clicking on the wall schemes, you can go to the complete tomb data.

3. *Texts* module

This module offers the possibility of producing *e.g.* all texts of the main theme ST(ock breeding), subtheme M(ilking). Unfortunately it is not technically possible to search on complete words. A search on, for instance, Translation like vin, will also include texts with translations including words containing the combination 'vin', like observing.

N.B. As the data are taken from the different publications, please be aware that s, š and z will all three be used. Searching for words that can be transcribed with more than one of these will require a search on all of the spellings.

N.B. For search purposes on transliteration, please note that all interpunction is ignored.

For every one of these modules the following SYMBOLS can be used:

=	is equal to
<>	unlike (to be used for excluding one option from the list; *e.g.* 'Tomb type <> Block(s) to exclude all blocks and only show results from tombs)
like	like (*e.g.* 'Transliteration like *nfr*', includes for example *nfrt*.)

SYMBOLS specifically used for *dates*:

>	greater than (indicating 'later than', excluding the given date)
>=	greater or equal to (indicating 'later than', including the given date)
<	smaller than (indicating 'earlier than', excluding the given date)
<=	smaller or equal to (indicating 'earlier than', including the given date)

It is possible to choose from three OPERATORS. These allow for highly specific searches and therefore improve your results. The search engine employs the operators AND, OR and NOT.

Joining search terms with the AND operator allows you to find entries containing each term. For example, the combination 'Location = Giza AND Gender = Female' lists all tombs in Giza belonging to women.

Note, however, that all criteria are on the same level. The third criterion is thus not a refinement of the first two. When requiring a list of all tombs containing dancing and/or singing scenes (both falling under the main theme Games) the search module can be used. However, the query where Main Theme = GA (games) AND Subtheme = D (Dancing) OR Subtheme = S (singing) *does not* result in the required selection. The third criterion is namely not linked to the first. The results will thus also show the subthemes 'S' of other main themes, *e.g.* agriculture (AG). To obtain the correct data, the following criteria should be entered in the search module: where Main Theme = GA (games) AND Subtheme = D (Dancing) OR Main theme = GA (games) AND Subtheme = S (singing).

Additionally, a combination like 'Location like Giza AND Location like Saqqara' is obviously an invalid question, since one tomb cannot be located in two places! To get a listing of tombs in either Giza or Saqqara, use the operator OR: 'Location like Giza OR Location like Saqqara'.

Finally, when, for instance, a selection of only tombs is required, the loose blocks can be excluded by using the third operator NOT. For instance 'Main theme = ST AND subtheme = M NOT Tomb type = Block(s)' results in all Milking scenes (ST = stock-breeding; M = Milking) in tombs, excluding all loose blocks.

After filling in all parameters press the EXECUTE button. The grey bar with the parameters now minimizes. To open it, press the Search, Stats or Texts button for the Search, Statistics or Texts module respectively.

N.B. Please note that if one is querying the database on the level of Main theme only, the selection of sub theme in the "display box" can only be given for *single* loose blocks or fragments and remains empty for (partly) preserved tombs in order to avoid incorrect scores.

Examples

To get accustomed to the possibilities a few practical examples are listed here:

When, for instance, studying scenes depicting *fowling with a hexagonal net*, one may ask the following basic questions:

SEARCHING:

1) In which (and how many) tombs do these scenes occur?
   - Use the *searching* module
   - Select (in DISPLAY) all data you want to appear in the table (*e.g.* LMP no., Most Likely Date etc).
     N.B. The level of the criteria selected will influence the number of results. The 70 registers of fowling with a hexagonal net appear in 57 tombs!
   - Enter the following criteria:
     WHERE Main theme = FO [*i.e.* Fowling]
     AND Subtheme = H [*i.e.* Hexagonal net]
     N.B. To avoid misspellings, the desired value can be selected from a list by clicking on the button (☰) to the right of the value box.

- Found data can be ordered by any of the fields in the database. It is possible to order data by a maximum of 3 fields. For instance, when an order on Most Likely Date and within the same date on LMP. no. is required, enter in the first value box after 'ORDER BY' 'Most Likely Date' and 'LMP no.' in the second box.

2) A similar selection can be made for all tombs in Saqqara, excluding loose blocks which cannot be attributed to a tomb. To get this result extend the criteria of question 1 with:
   - AND Location like Saqqara
   - NOT Tomb Type = Block(s)

The locations of a few tombs are uncertain, resulting in locations such as 'Saqqara?' or 'Giza/Saqqara'. To include these tombs in the selection enter 'AND Location like Saqqara' instead of 'AND Location = Saqqara'.

In the same way the selection can be limited to all tombs dating to the 5th Dynasty. This can be done by simply adding the Dating criterion and choosing 5th Dynasty in the Dating pop-up in both left fields. Select OK to return to basic screen.
A selection on more precise dates can also be made:
   - To select all tombs dating to Unas or later, choose the Dating criterion and select the following in the Dating pop-up: 'Dynasty 5' in the top left field, followed by 'Unas, Wenis' in the top right field and 'First Intermediate period' in the bottom left field. Select OK to return to basic screen.
   - To select all tombs dating to the first half of the 5th Dynasty (thus all tombs dating to the 5th Dynasty *and* dated earlier than Niuserre), select in the Dating pop-up '5th Dynasty' in the top left field and 'Dynasty 5' in the bottom left field, followed by 'Niuserre' in the bottom right field. Select OK to return to basic screen.

By adding a criterion or replacing one with another, all sorts of selections can be created. The maximum amount of criteria available is 4.

STATISTICS:
3) What is the orientation of the walls (northern, southern, western, eastern) on which the scenes are depicted?
   - Use the *statistics* module
   - Enter the following criteria:
       SELECT Orientation
       WHERE Main theme = FO [*i.e.* Fowling]
       AND Subtheme = H [*i.e.* Hexagonal net]
   - The results can be displayed as either a bar chart or a pie chart (query with 1 variable only), in- or excluding a legend and/or the marks (*i.e.* the total number of tombs per category)

4) What is the position of the scene on the wall?
   - Use the *statistics* module
   - Enter the following criteria:
       SELECT Wpi [*i.e.* Wall position index]
       WHERE Main theme = FO [*i.e.* Fowling]
       AND Subtheme = H [*i.e.* Hexagonal net]
   - The results can be displayed as either a bar chart or a pie chart (query with 1 variable only), in- or excluding a legend and/or the marks (*i.e.* the total number of tombs per category)

5) Question 3 and 4 can be combined to see if there is a connection between wall and the position on that wall. For instance, a scene may occur in certain cases in the middle of the west wall, but in other instances on the lower part of the north wall.
   - Use the *statistics* module
   - Enter the following criteria:
       SELECT Orientation X Wpi
       WHERE Main theme = FO [*i.e.* Fowling]
       AND Subtheme = H [*i.e.* Hexagonal net]
   - When using two selection criteria (*i.e.* variables) the results can *only* be displayed as a bar chart (query with 2 variables). Again in- or excluding a legend and/or the marks (*i.e.* the total number of tombs per category)

Similar to the *searching* module the selection of data can be altered or refined by simply replacing or adding criteria, up to a maximum of 4.

6) Are there differences in, for instance, the placing of the scene on a specific wall between Giza and Saqqara?
   - Use the *statistics* module
       For this question 2 separate queries have to be performed and compared:

- First, to get an idea of the placement of the scene on specific walls in Giza enter the following criteria:

  SELECT Location X Orientation
  WHERE Main theme = FO [*i.e.* Fowling]
  AND Subtheme = H [*i.e.* Hexagonal net]
  AND Location like Giza

- When using two selection criteria (*i.e.* variables) the results can only be displayed as a bar chart. Again in- or excluding a legend and/or the marks (*i.e.* the total number of tombs per category). In order to compare the two queries the results should be printed. In order to get all data on the print it is best to print in landscape. Note, however, that some columns may fail to print when the table has too many columns for the width of the paper, even when printing in landscape. At the same time, the width of the chart is based on the width of the screen. Thus printing problems can possibly be resolved by changing your screen resolution.

- Secondly, to get an idea of the placement of the scene on specific walls in Saqqara, enter the following criteria:

  SELECT Location X Orientation
  WHERE Main theme = FO [*i.e.* Fowling]
  AND Subtheme = H [*i.e.* Hexagonal net]
  AND Location like Saqqara

  N.B. In order to get the same distribution in the resulting bar chart and table, it is important that the two variables are entered in the same order as in the first query.

- After running and printing both queries, the results can now be relatively easily compared.

To obtain a view of the differences between all locations enter the following criteria:

  SELECT Location X Orientation
  WHERE Main theme = FO [*i.e.* Fowling]
  AND Subtheme = H [*i.e.* Hexagonal net]

TEXTS:

7) Which texts accompany these scenes?
   - Use the *texts* module
   - Select (in DISPLAY) all data you want to appear in the table (*e.g.* LMP no., Hieroglyphic texts, Translation etc.)
   - Enter the following criteria:
     WHERE Main theme = FO [*i.e.* Fowling]
     AND Subtheme = H [*i.e.* Hexagonal net]

8) In what (sub)themes does the word *irp* occur?
   - Use the *texts* module
   - Select (in DISPLAY) all data you want to appear in the table (*e.g.* LMP no., Hieroglyphic texts, Translation, Main theme, Subtheme etc.)
   - Enter the following criteria:
     WHERE Transliteration like *irp*

     N.B. "like" is automatically chosen in this module, since the search is often for part of a text. For instance when searching for the word *nfr*, *nfrt* will also appear in the results. Note, however, that this option searches for words beginning with *nfr* anywhere in the text, resulting in this case in the exclusion of *snfr*.
     N.B. for this field no selection list is available. All transliterations should be manually typed in the box.

9) In what (sub)themes does the word 'wine' occur?
   - Use the *texts* module
   - Select (in DISPLAY) all data you want to appear in the table (*e.g.* LMP no., Hieroglyphic texts, Translation etc.)
   - Enter the following criteria:
     WHERE Translation like wine
     OR Translation like wein
     OR Translation like vin

     N.B. Since translations have been entered in English, German and French, such a search can only generate a useful result when the word is selected in all three languages!
     N.B. "like" is automatically chosen in this module, since the search is for any part of a text.
     N.B. for this field a selection list is not available. All translations should be manually typed into the box.

10) What sort of texts (*i.e.* Captions, Spoken text, Names/titles) accompany these scenes?

   There are two approaches to getting this information:

Via the *texts* module:
   - Select (in DISPLAY) all data you want to appear in the table, including TextType (*e.g.* LMP no., Hieroglyphic texts, Translation etc.)
   - Enter the following criteria:
     WHERE Main theme = FO [*i.e.* Fowling]
     AND Subtheme = H [*i.e.* Hexagonal net]
     ORDER BY TextType

Via the *statistics* module:
- Enter the following criteria:
  SELECT TextType
  WHERE Main theme = FO [*i.e.* Fowling]
  AND Subtheme = H [*i.e.* Hexagonal net]
  AND Text = Y

The first approach results in a list of the texts themselves, ordered by the various types of text. The second displays either a bar or a pie chart depicting the number of tombs in which each type of text occurs for these scenes.

11) In order to gain a synoptic overview of all Observation (*m33*) texts go to the text module and
   - Select (in DISPLAY) all data you want to appear in the table, including TextType (*e.g.* LMP no., Hieroglyphic texts, Translation etc.)
   - Enter the following criterion:
     WHERE TextType = Observation

12) In order to gain a synoptic overview of a specific type of text go to the text module and
   - Select (in DISPLAY) all data you want to appear in the table (*e.g.* LMP no., Hieroglyphic texts, Translation etc.)
   - Enter a criterion which is characteristic for the type of text you are looking for, for instance *šy* mentioned in captions above the cattle crossing scene:
     WHERE Transliteration like *šy*
     N.B. for this field a selection list is not available. All transliterations should be manually typed into the box.

Copying data from MastaBase

The "copy button" in the top right corner enables the user to open the shown pages and/or the wall schemes in the standard web browser, from where they can be copied into other documents. We trust that the user will give a full reference to his source when publishing the document with data from MastaBase.

Abbreviations

A	Owner (see Theme index)
A (or a)	In LMP no. indicates a subcomplex (or a separate tomb, which was included at a later date)
B	In LMP no. indicates that it is a block without known date
B (or b)	In LMP no. indicates a subcomplex (or a separate tomb, which was included in the database at a later date)
C (or c)	In LMP no. indicates a subcomplex (or a separate tomb, which was included in the database at a later date)
E	Entrance
E	East
Ex	Exterior
EX	Extra Categorical (see Theme index)
F	Façade
F	Female (in description of registers)
FD	False door
fig.	Figure
Fr-…	For fragments (of unknown wall placement)
…-fr	For fragments (of known wall placement)
imp	Implicit (in Cherpion date)
K	Statistical symbol for a selection of a population
L	Lower (see Wall position index / Wpi)
LMP	Leiden Mastaba Project
LMS	Leiden Mastaba Seminar
M	Middle (see Wall position index / Wpi)
M	Male (in description of registers)
ML	Middle – Lower (see Wall position index / Wpi)
N	Statistical symbol for an entire population
N	North
N	No (in register description, indicating absence of texts)
n.r.	Not recorded
p.	Page
pl.	Plate

P&M	Porter & Moss
S	Sarcophagus room
S	South
T	MastaBase code for tombs without other known codes
taq	Terminus a quo
tanq	Terminus ante quem
TB	MastaBase code for blocks without other known codes
tpq	Terminus post quem
U	Upper (see Wall position index / Wpi)
UM	Upper – Middle (see Wall position index / Wpi)
UML	Upper – Middle – Lower (= over (almost) the entire height of the wall; see Wall position index / Wpi)
vol.	Volume
W	West
Wpi	Wall position index
Y	Yes (in register description, indicating presence of texts)

Addenda, corrigenda et observanda

For "addenda, corrigenda et observanda" use the link in the table of contents of the Guide on the CD-ROM itself. Any further addenda etc. that may be found by using the cd can be sent to r.van.walsem@let.leidenuniv.nl.

Missing publications

The data digitalization of this cd was finished 31 January 2006 and is based on the publications at the time available in the libraries of the Nederlands Instituut voor het Nabije Oosten (NINO; The Netherlands Institute for the Near East; most acquisitions arrive via the Annual Egyptological Bibliography) and the Rijksmuseum van Oudheden (RMO; The National Museum of Antiquities; for old publications), Leiden. Since the arrival of books at the NINO sometimes takes considerable time, some books, for instance, K. Myśliwiec's publication of the tomb of Merefnebef at Saqqara (2004), could not be included.