

CHAPTER 1. LITERATURE SURVEY ON DATING CRITERIA

This review is concerned only with books and articles which appear to be directly related to the subject of this study, which is concerned primarily with stelae from the Twelfth Dynasty. The aims of the study are:

- To bring together the various published studies of the characteristics of Middle Kingdom stelae,
- To add data derived from existing stelae, and
- To develop a technique that will take into account as much internal evidence as possible from an undated stela to assign the stela to a particular reign, without resorting to external information such as genealogies.

Later sections, including notes on the statistical methods used to analyse the data, will complete the review of literature examined in the course of the study. Comments on examples of the features of the stelae are based on the study itself.

Evers (1929), in his chapter on the stelae of the Middle Kingdom, offers the opinion that the stela as an art form reached its peak in the reign of Senusret I. He traces the development of the stela during the Middle Kingdom in general terms with little reference to individual features, but citing examples to illustrate his text. He makes the point that a stela cannot be dated from one feature alone, but only from a combination of features. Further, a stela usually contains text and figures; any stela containing only text must be understood as part of an assembly of stelae. His observations may be summarised as follows:

- The stela as an independent object originated in the evolution of a tomb wall inscription into a rectangular panel of landscape format on which text and figures were placed side-by-side. This form is not found later than Dynasty 11. (In fact, several of the stelae in this study, e.g. CG20518, are of landscape format, and date from the Twelfth Dynasty.)
- From late Dynasty 11, the two parts are placed one above the other in portrait format and a round top is added to the rectangle (e.g. CG20515, Louvre C3). Usually in the Middle Kingdom the main text is above the figures; the reverse is usually true in the New Kingdom, though this arrangement began in the time of Amenemhat III.
- The form of the false door carried over from tomb inscriptions to stelae, particularly in the time of Amenemhat I and Senusret I.
- Few stelae from the times of Amenemhat I and Senusret II are known.
- Characteristics of early Middle Kingdom stelae include: confident low relief of the figures in the tableaux, double lines separating the horizontal lines of text, and a richness of detail in both the content and the moulding of items in the tableaux.
- Division of the stela into fixed registers dates from the time of Senusret I, and was usually limited to two registers by the end of his reign.
- A typical stela of the reign of Amenemhat II had a low arcuate top, a raised edge forming a frame around the text and tableau, a small number of figures modelled with some delicacy in two registers, and vertical columns of text (e.g. CG20531).

Literature survey

- The winged sun-disc was introduced into private stelae in the reign of Senusret II and remained common under Senusret III (e.g. CG20702), but its use diminished in the time of Amenemhat III.
- During the reigns of Senusret II and Senusret III, the figures of the tableaux tended to be set in the middle of the stela, with text at the sides.
- By the middle of the reign of Amenemhat III figures and text were intermixed, with a vertical column of text associated with each figure, the two often surrounded by a frame, resulting in a chessboard pattern on the stela.
- During the time of Amenemhat III the figures and emblems and gods appeared at the top of private stelae (e.g. CG 20686), whereas they had appeared only on official stelae in earlier reigns.
- Towards the end of Dynasty 12 the quality of workmanship in the stelae deteriorated, the deterioration continuing into Dynasty 13 and into a dark period of poorly made stelae thereafter.
- In Dynasty 17 there was a return to the technology of stelae of the time of Senusret I, but stelae of the later period can be distinguished from those of the Middle Kingdom because of the inclusion of Horus eyes and because of their format, particularly in the placement of the main text below the figures rather than above them.

Müller (1933) aims at gaining an understanding of the artistic form of the stela, based on the knowledge that the typical contents of a Middle Kingdom stela are the endpoint of a long development during the Old Kingdom and First Intermediate Period. Although his long article is not aimed at dating of stelae, he makes the following points in passing:

- Continuity of the text through the lunette and upper part of the rectangle carries over from Dynasty 11 (e.g. Louvre C1, and C3).
- Various formulae, including the Abydos formula, are more common during the early part of Dynasty 12, but provide no certain means of dating.
- The two-field form of stela, with a field of text in the upper half and a tableau below, reached its artistic peak in the reign of Senusret I (e.g. Met 12.184) and then degenerated.
- Since the reign of Amenemhat II the composition of the contents tended to be strongly symmetrical and balanced.
- Over the same period there was a tendency to include vertical columns of text.
- Since the time of Senusret III the lunette often included a central cartouche flanked by images of gods (e.g. Florence 2506).
- From the second half of Dynasty 12, the stela often had a central column of text flanked by tableaux.
- Towards the end of Dynasty 12 the distinction in size between the figure of the owner and the other figures tended to be reduced. (In line with this ‘democratisation’, Louvre C6 has an individual *hṯp-di-nswt* formula for each individual shown.)

Smither (1939) states that the writing of *hṯp-di-nswt* supplies useful chronological data for the Middle and New Kingdoms, particularly when the writing is horizontal. He gives a table in which the writing $\overline{\text{𓆎}} \overline{\text{𓆑}} \overline{\text{𓆑}}$ is stated as the usual form during the Dynasties 11 to 13 and the

writing $\text{𓆎} \text{𓆏} \text{𓆑}$ usual in Dynasties 14 to 17. This suggests that Dynasty 13 would be a *terminus ad quem* for the form with the 𓆏 as the final sign.

However, the Cairo Museum stela CG20702 which bears cartouches of Senusret III, has the $\text{𓆎} \text{𓆏} \text{𓆑}$ form. Smither argues that the cartouche of Senusret's throne name is anomalous, the text corrupt and the workmanship poor. He further states that this is the only monument purporting to date from the Twelfth Dynasty that he has found with this form of *hṯp-di-nswt* and concludes that the dating is wrong.

Thus, the form of *hṯp-di-nswt* with the 𓆏 in second position is a useful indicator that a stela with such an inscription is unlikely to have originated later than the Second Intermediate Period

Bennett (1941) presents an analysis of 121 inscriptions on walls and stelae of the Middle Kingdom, in which he counted the various features and noted the changes that occurred from the Eleventh to the Thirteenth Dynasties. In his summary, he groups the features under the headings of 'Dynasty 11', 'Early Dynasty 12', 'Later Dynasty 12' (into which he also lumps Dynasty 13).

The features that he considers are:

- The interpretation of the donor of the funerary gifts; in Dynasty 11 the list of gifts follows directly after the gods nominated (the gifts coming directly from the king), whereas later the list tends to be preceded by *di=f* (or *di=sn*) 'that he (or they) might give ...'.
- The spelling of the name of Osiris; in the Eleventh Dynasty it has a determinative, of which the frequency declines until it is not used in the later Middle Kingdom. The form $\text{𓆏} \text{𓆑}$ is usual; the form $\text{𓆏} \text{𓆑}$ does not appear until the time of Senusret III.
- The title $\text{𓆏} \text{𓆑}$ and its accompanying determinative are less frequent later in the period than they are earlier.
- The writing of Busiris; from its earlier form $\text{𓆏} \text{𓆑} \text{𓆑}$ it changes through various forms until it becomes most commonly $\text{𓆏} \text{𓆑} \text{𓆑}$ in the reign of Amenemhat III.
- The designation of the recipient of the funerary gifts; in the reign of Senusret I, the usual form was 𓆏 followed by the owner's name. In the reign of Amenemhat II, the recipient was usually the *ka* of the venerated owner $\text{𓆏} \text{𓆑} \text{𓆑}$ (*name*), and by the time of Senusret III the owner was no longer venerated; the designation was usually simply $\text{𓆏} \text{𓆑}$ (*name*).
- The gifts listed; incense and oil were often included during Dynasty 12, where the earlier list had been only 'bread, beer, oxen, fowl, alabaster and clothing'.
- The phrase 'on which the god lives' $\text{𓆏} \text{𓆑} \text{𓆑}$, following the list of gifts, occurs first under Senusret I, and later is often combined with the remainder of Prayer 108 (Barta 1968).
- The gods invoked in the *hṯp-di-nswt* formula; Anubis and Osiris are the most usual in the Eleventh Dynasty, but in Dynasty 12 Osiris is the most popular and Wepwawet generally replaces Anubis. Other gods also appear in the Twelfth Dynasty.

Literature survey

- The phrase ‘in all his places’ after the name of Osiris, common in Dynasty 11, falls out of use thereafter.
- The combined titles of Osiris, which change continually during the Middle Kingdom, each combination being typical of a particular reign.

In his tables, Bennett presents a count of the occurrences of each feature and a figure said to be the percentage of stelae exhibiting the feature. This latter figure may be taken as an estimate of the probability that an ‘undated’ stela belonging to the period will contain the feature. This becomes important in a later note (Bennett 1958), but Bennett’s method of calculation does not appear to be consistent throughout the paper.

Bennett (1958), in a brief communication, stated that he had been using his earlier figures to try to date many stelae into one of his three stated periods. His method was to ‘add up the components of a formula and compare the totals for each period’. His note includes an example taken from the stela BM286. He selects five of his earlier characteristics and presents the following table (given here in the same format as in the original paper), showing the percentage of stelae in each period that would be expected to contain the component (feature or characteristic). The conclusion is that the stela should be dated to the later Twelfth Dynasty.

Component	Dynasty 11	Early Dynasty 12	Later Dynasty 12
Osiris without determinative	10	56	94
<i>nb ʿnh-ḥwy</i>	0	0	15
<i>di=f prt-ḥrw</i>	0	67	94
‘On which the god lives’	0	35	36
<i>k3 n</i>	0	17	79
Total	10	175	318

If the figures are treated as probabilities (as they should be, expressing them as decimal fractions), the likelihood of finding the features together should be found by *multiplying* them together (in mathematical terms *AND*-ing them), not adding them (*OR*-ing them). In this example, addition gives nonsensical results (probabilities greater than unity - 1.75 and 3.18!) for both Dynasty 12 periods. Multiplication gives *zero* probabilities for both Dynasty 11 and Early Dynasty 12. If we omit the second row of the table (to allow a non-zero result for Early Dynasty 12), the difference in probabilities between the three periods is much more striking - zero for Dynasty 11, 0.011 for early and 0.251 for late Dynasty 12. Though the probabilities are small, the evidence in favour of the later period is overwhelming (a ratio of probabilities of about 20 to 1 instead of 2 to 1).

Pflüger (1947), like Bennett with whom he had discussions during their separate studies, concentrates on stelae dated by internal evidence, tracing the changes from reign to reign in the shape of the stelae and the contents of the tableaux. Unlike Bennett, Pflüger prefers general terms, rather than precise numbers, to describe his findings. In addition, he gives a broad-brush account of the historical environment and its influence on the contents of the stelae. He notes the lack of any known stelae from the reigns of Amenemhat I and Queen Sobekneferu (though Hayes (1968), on *external* evidence, assigns Metropolitan Museum stela 12.182.1 to the reign of Amenemhat I.)

The features that Pflüger discusses are:

Literature survey

- The shape of the stela; in Dynasty 11 stelae were of rectangular (portrait or landscape) form or rectangular with semicircular tops. Landscape rectangles disappeared and low arcuate lunettes appeared during the reign of Senusret I and the rectangular 'false door' form appeared under Amenemhat II.
- The content of the stela; no stela of purely religious character has been found from the Eleventh Dynasty, but by the time of Senusret I about half of the known stelae contain only religious material. By the reign of Amenemhat III this proportion has grown to about three quarters.
- The status of family members: no stela from Dynasty 11 notes any members of the owner's 'old' family, but parents, brothers and sisters appear during the reign of Senusret I, at which time the mother is the central figure after the owner. The owner's wife is important on Dynasty 11 stelae, and she and her children remain important until the reign of Senusret III, after which their importance wanes.
- Domestic items - ewers and basins, mirrors, oil jars - appear in Dynasty 11, but thereafter their appearance declines until oil jars reappear under Senusret III.
- The lotus decoration on the seat is common in Dynasty 11 but then is seen less and less until it is rare in the time of Amenemhat III.
- The dog under the seat or table is common in Dynasty 11 but is seen no more after the reign of Senusret I.
- Rolls of fat on the owner's torso are fairly common during the reign of Senusret I but are not seen later; by the end of the dynasty the figures tend to be quite gaunt.
- Lotus blooms being smelt by the women are common in the time of Senusret I; both men and women smell lotus blooms in stelae of the reign of Amenemhat II, but then the action tends to disappear.
- The sceptre and staff were common in Dynasty 11, then almost disappeared and finally became fashionable again in the reign of Amenemhat III.
- Bracelets and anklets became rare after Dynasty 11.
- Offering scenes are common in Dynasty 11 but become rare, though are still found occasionally, under Amenemhat III.

Pflüger's historical survey covers the diminution of the opulence of the feudal period as the power of the king increased, until the power of the nomarchs ended under Senusret III. Apart from what has been described above, this change largely explains the move from the secular inscriptions of the early Twelfth Dynasty to the high proportion of religious inscriptions towards the end of the Middle Kingdom.

Barta (1968) presents a study of the offering formula used in inscriptions of all types during a period from the Old Kingdom to the Graeco-Roman era. He defines the offering formula as comprising four elements:

- The king's formula *hṯp-di-nswt*, 'a gift which the king gives'.
- The gods' formula comprising the gods' names and qualifying epithets.
- A sequence of 'requested favours', or (briefly) 'prayers', of which he identifies over three hundred.
- The name of the one for whom the formula is included and the favours sought.

Literature survey

The prayers are numbered in approximately the order of the dates at which they appear. Most of those numbered below 50 do not appear again after the First Intermediate Period, though a few appear sporadically until Graeco-Roman times. A new series of prayers, numbered from 51 to 114, appears in the Middle Kingdom; some of these prayers also appear occasionally until the Graeco-Roman era. About 150 new prayers appear in Dynasty 18 and others in Dynasty 19 and subsequently, but only a few of these continue in use until Graeco-Roman times.

Because of the continued use of some of the prayers, they cannot be used as effective dating criteria. The best that can be said for them is that some of them can be used to determine an earliest possible date for an inscription. (In fact, I found Prayers 72 and 108 to be significantly correlated with the reigns of the kings in Dynasty 12.)

Barta cites the funerary stelae that have come down to us as the principal carriers of the offering formula from Dynasty 12. The characteristics of the offering formula from that dynasty are:

- The arrangement of the king's formula almost exclusively as $\overline{\text{𓄏}} \overline{\text{𓄏}} \overline{\text{𓄏}}$ when written horizontally, though it may have other forms when written vertically. Only four dated inscriptions from Dynasty 12, all graffiti, are known with the *di* sign in second place when written horizontally.
- Osiris and Anubis as the gods most frequently named, with the most common epithets for Osiris *hnty imntyw*, *nb ddw*, *ntr ʕ*, *nb ʕbdw*, and for Anubis, *hnty sh-ntr*, *tpy dw=f*, *imy wt*, and *nb ʔ dsr*.
- An increase over Dynasty 11 in the association with the gods' formula of the purposive clause *di=f* or *di=sn*.
- Continuation from earlier dynasties of the feasts listed.
- Various forms used in introducing the recipient's name and title, e.g. *n imʕh(w)*, *n kʕ n*, *n kʕ n imʕh(w)*, and so on.
- An increase over earlier dynasties of the request to the living to recite the gift list from the offering formula.

Simpson (1974) has tried to bring together objects from various museum collections to form groups that can be assigned to individuals or families. He designates each such group as ANOCx (Abydos Northern Offering Chapel and x his number for the group). He assumes that each of the groups was originally incorporated into the same architectural unit, even though he recognises that future work may prove his assumption wrong. I have used his groupings to help in the study of some stelae, e.g. Berlin 1204 which he groups with both CG20140 and Louvre C5.

Simpson provides good illustrations that I have used as the source of some of the examples of stelae without internal dating in order to test the decision tree and tables that have been developed in the course of this study. He also provides a list, by reign, of 125 stelae that are dated or are datable on other evidence; I have used stelae from this list as a check of the dates derived from the decision tables.

Lapp (1986) gives a very detailed analysis of the offering formula during the Old Kingdom. Though he refers specifically to stelae in his introduction, he does not make it clear whether he is also considering tomb inscriptions; I assume he is. He divides the formula into three sections - the king's or god's formula, the prayers and the recipient. His analysis is divided into six parts:

Literature survey

- The king's formula and god's formula.
- *ḳrs* and dependent prayers.
- *pṛt-ḥrw* and the prayers and gifts referred to.
- Various other prayers.
- The recipient.
- The meaning of *ḥtp-di-nswt*.

The first part is important in the present study; in it Lapp states that, during the Old Kingdom, the normal horizontal form is $\text{𓄏} \text{𓄏} \text{𓄏}$, with a god's name following. He gives four other arrangements none of which moves the 𓄏 into the position immediately following the 𓄏 . Thus he confirms the earlier statement of Smither that the form $\text{𓄏} \text{𓄏} \text{𓄏}$ of the opening phrase of the offering formula is the common form only after Dynasty 13. Lapp states that the normal form of the phrase during the Old Kingdom is $\text{𓄏} \text{𓄏} \text{𓄏}$ for vertical text also, although the order is often changed for aesthetic reasons with the two tall signs adjacent.

Brovarski (1989) discusses inscribed material of the First Intermediate Period from Naga-ed-Der. He gives as palaeographic and epigraphic indicators for dating as:

- The writing of *ḥtp-di-nswt*. In particular, he quotes $\text{𓄏} \text{𓄏} \text{𓄏}$ as an early form, with $\text{𓄏} \text{𓄏} \text{𓄏}$ as the predominant form in the later part of the period.
- The writing of the name of Anubis.
- The spelling of the epithet of Anubis, *imy-wt*.
- The spelling and arrangement of the signs in *pṛt-ḥrw*.
- The form of the *ḳs*-harpoon.
- The form of the *pt* sign.
- The arrangement of *imḥw* and the form of the *imḥ* sign.
- The form of the Hathor hieroglyph and the writing of Hathor.

He gives a similarly extensive series of stylistic and iconographic grounds for dating.

He gives very detailed analyses of the inscriptions in five time periods and assembles them into thirteen groups based on the stylistic features. He then uses the two-way classification to provide a chronological classification.

Cherpion (1989) sets out 64 criteria for dating of inscriptions from the Old Kingdom; all are based on the tableau. In passing, she comments that bull's feet on the legs of the stool do not appear in the Middle Kingdom. She also comments on the evolution of the vertical loaves that appear on the offering table. Beginning as short loaves in Dynasty IV, they become taller in the course of the Old Kingdom and in Dynasty VI appear on short stalks, probably relating them to leaves as the sole source of nourishment in the Field of Reeds.

Hölzl (1990), in her study of the lunette decorations of Middle Kingdom stelae, classifies the elements of the decorations under the headings:

- Eyes - *wḏt*-eyes, human eyes and falcon's eyes.
- Winged sun-discs.

Literature survey

- Royal titularies.
- Representations of gods.

She gives a number of examples of internally dated stelae, placing them in chronological order within each of her classifications. But she does not draw any conclusions as to the usefulness of the decorations in dating of stelae that lack cartouches and dating by regnal year. In fact, she states that it is impossible to ascribe a particular form of winged sun-disc to the reign of a particular king. At best, we can speak of a preference for a particular form in a particular period. By implication, we can assume that she considers the same to be true of the other elements of her classification.

Hölzl (1992) makes further remarks on lunette decorations and makes the following points, confirming her earlier writing:

- The semicircular top is more common in the early Twelfth Dynasty and the arcuate top with definite shoulders where the arc meets the sides of the stela is more common in the late Twelfth and the Thirteenth Dynasty.
- During the Middle Kingdom the lunette decoration is usually separated from that in the rest of the stela; the top of the rectangle usually contains lines of text, the lower part showing offering scenes and depictions of the owner.
- During Dynasty 12 the most important decoration elements are *wꜥbt*-eyes, winged sun-disk (spreading from royal or high officials' stelae early in the period to lower officials later) and jackal gods (often the only decoration late in Dynasty 12).

Spanel (1996), in discussing the dating of two stelae in the Brooklyn Museum, draws on the changes in epigraphy and palaeography of wider range of inscriptions than do either Bennett or Pflüger, including coffins and wall inscriptions. He comments on Bennett's "still valid" study but criticises the limited size of his sample, evidently forgetting that Bennett had been struck by the possibilities of using the changes in epigraphy to date stelae to specific reigns and had presumably used other inscriptions to increase the sample size. (Originally, I could find only seventy internally dated funerary stelae of the Twelfth Dynasty, and have based this study on this 'small sample'. I have since found a few others which I have used as a further check of the decision tree.)

Spanel states that profound differences in writing occurred at the beginning of the Twelfth Dynasty, notably the shape of the book-roll determinative, which has emerged as an essential dating criterion. Early versions show only a lump of mud as the seal on the papyrus roll, later versions show one or two ties, which seldom occur before Dynasty 12. He cites the stela Louvre C1, which includes both versions, Louvre C3 and Cairo CG20516 and CG20515, which have single ties, and a number of stelae with two ties.

He summarises the invocation offering formula from the Old Kingdom to Dynasty 11 as "An offering given by the king (and) Osiris, lord of Busiris, foremost of the westerners, lord of Abydos, (that is) food offerings (to *or* of *or* for) the honoured one N." He then points out three important innovations under Amenemhat I:

- The inclusion of *di=f* before *pꜣrt-hrw*.
- The addition of incense, oil, alabaster and linen to the list of offerings.
- The further addition of *ht nbt nfrt wꜥbt ꜥnht nꜣr im*.

Literature survey

He also comments on the more elaborate writing in the Twelfth Dynasty than earlier, in the use of expletive and plural strokes, which do not, however, point to individual reigns.

Leprohon (1996), in discussing a rectangular stela in a private collection, lists his reasons for dating the stela to the late Twelfth or early Thirteenth Dynasty, favouring the reign of Amenemhat III:

- A *kheker*-frieze across the top of the stela.
- Items in the tableau of the owner facing an offering table and a woman and a male offering bearer facing him:
 - ✓ The owner's bag wig that exposes his ears.
 - ✓ The owner smelling a lotus flower.
 - ✓ The woman kneeling on one knee.
- Items in the text:
 - ✓ The $\overline{\text{f}}$ $\overline{\text{a}}$ $\overline{\text{A}}$ format of the opening of the funerary formula.
 - ✓ Lack of a determinant in the name of Osiris.
 - ✓ The stroke under the eye in Osiris' name.
 - ✓ The verb *di=f* before the list of offerings.
 - ✓ *wḥm-^cnh* (living again) applied to the deceased.

Most of these items correspond with features commented on by others.

Freed (1996), in her study of stela workshops of the early Twelfth Dynasty, deals with the style of the stelae in detail, relating it to specific groups of artisans working together. Among her comments she provides two useful criteria for dating a stela to a specific reign:

- The stela contains a cartouche in or near its upper border.
- Its context implies that its owner lived during the reign of the king mentioned.

She identifies ten workshops from the features of the tableaux and suggests dates during which the workshops were active. The features she identifies are:

- Colourful Theban group; these stelae are characterised by figures in low flat relief with an incised outline or painted only and generally have very little textual inscription, frequently without an offering formula. They probably date from the reign of Amenemhat I.
- Few standing figures; these are of various styles, all with one, two or three standing figures. They probably date to the reigns of Amenemhat I or Senusret I.
- Fleshy features; features common in these are pug noses and very fleshy lips and the men frequently have a folded cloth clutched to their chests. Although two of the stelae (Louvre C1 and C3) are internally dated, Freed makes no general statement on their dating.
- Vertical curls and flower; the unifying features of stelae of this group are men with curled close-fitting wigs and women carrying lotus flowers on short stems. On the basis of the cartouches of Senusret I and Amenemhat II on CG20516, Freed dates them all to the coregency.

Literature survey

- Packed offerings group; figures in stelae of this group are carved in low flat raised relief with little internal detail, and a unifying feature is the very compact grouping of the offerings. Freed suggests dating this group to the reign of Amenemhat I; BM152 has a date of 10 but no cartouche to define the reign.
- Large male; the common feature of these stelae, which include Louvre C2 and Leiden V2, is the presence of a single large male, often exhibiting rolls of fat. Freed dates them to the reigns of Amenemhat I or Senusret I.
- Incised false door; the group is so named for the false door incised on the bottom register of a number of the stelae (including Berlin 1192, and CG20515). Most stelae in the group include at least one seated couple; the figures show very little modelling. Freed dates the group to the reign of Senusret I.
- Many active figures; characteristic features of this group, which includes Alnwick 1932, BM586, CG20026, CG20561, Leiden V3 and Met 12.184, are the well-organised groups of offerings and the variety of goods carried by the offering bearers. All stelae of the group are dated to the reign of Senusret I.
- Elongated skull; the distinctive style of relief carving in stelae of this group, which includes BM562, BM572 and Munich GLWAF35: the distinct bulge at the back of the heads of the male figures and the form of the leg of the offering table. The stelae are dated to the reigns of Senusret I and Amenemhat II.
- Attenuated figures; in the most common form of stelae of this group, which includes BM576, BM828, CG20531 and Guimet 11324, the owner is seated, his wife standing behind him with her hand on his shoulder. There are usually six or more family members and other figures. The group is dated to the reigns of Senusret I and Amenemhat II.

Doxey (1998) presents a comprehensive study of the non-royal epithets of the Middle Kingdom - words and phrases describing in a laudatory way the attributes of the person responsible for commissioning the text. She places them in two general classes:

- Those concerned with the individual's acceptance into the after-life, generally associated with the offering formula and usually containing a form of *imꜣh(w)* and *mꜣꜥ-hrw*.
- Those concerned with the person's standing relative to the gods or the king, generally occurring in self-presentation, commonly *irr ḥsst N*, where N is *nb=f* or a god's name.

She further classifies them under the headings of:

- The character and conduct of the individual.
- Interaction with his superiors - gods and king.
- Interaction with peers - officials and elite.
- Interaction with subordinates and the community.

She points out that the type of autobiography consisting of a series of epithets was popular in the early Middle Kingdom but became less common after the reign of Senusret I and then gained new interest under Amenemhat III. Although the subjects of the epithets varied over time, making them an indicator of social attitudes and political developments, they do not represent a reliable guide to the dating of the texts.

Literature survey

Simpson (2001), in describing the “Matariya” stela, comments on the overwriting by the owner of the name of an earlier owner; the early term *hryt-ntr* for the necropolis, the form of the bookroll, without any ties, and on the lack of *di=f* in the offering formula all indicating a date early in the Twelfth Dynasty.

None of the authors cited (with the possible exception of Bennett) uses any statistical methods.

Note on Dates of the Twelfth Dynasty

Many authors have provided dates for the reigns of the rulers of the Twelfth Dynasty. Two fairly recent sources, Shaw and Nicholson (1995), and Baines and Malek (2000) give the following dates (before the Christian era). Both sources warn that the dates are approximate, though Baines and Malik claim that their dates are within a decade. Despite the discrepancies between the dates given by sources, the durations of the reigns are consistent within the stated accuracy with those given by Beckereth (1997).

Ruler	Shaw & Nicholson	Baines & Malek	Beckereth
Amenemhat I	1985-1955	1938-1908	30 years
Senusret I	1965-1920	1918-1875	44 years
Amenemhat II	1922-1878	1876-1842	35 yeqrs
Senusret II	1880-1874	1842-1837	8 years
Senusret III	1874-1855	1836-1818	19 years
Amenemhat III	1855-1808	1818-1770	46 years
Amenemhat IV	1808-1799	1770-1760	9 years
Sobekneferu	1799-1795	1760-1755	4 years