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The Order of the Kushite Kings According to Sources from the Eastern Desert and Thebes Or: *Shabataka was here first!*

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Abstract

The correct order of the first two kings of the Twenty-fifth Dynasty has been the subject of a growing debate since Michael Bányai proposed a revision of the traditional chronological model in 2013. By placing Shabataka¹ before Shabaka Bányai challenged the commonly accepted view according to which it was Shabaka who established the Twenty-fifth Dynasty and secured Kushite control over all of Egypt after having re-conquered the North and disposed of his adversary Bocchoris of the Twenty-fourth Dynasty. Since then Bányai's proposal of modifying the sequence of the Kushite kings, thus making Shabataka Bocchoris' opponent, has received a growing number of supporters who have brought forward additional arguments in favour of it.

The present article introduced new arguments based on a careful analysis of prosopographic, archaeological and epigraphic data from the Western Desert and Thebes—especially relating to the Kushite Nile Level

* This article is based upon a paper presented at the conference “Thebes in the First Millennium BC,” held at the Mummification Museum in Luxor in September 2016. I am indebted to the editors of the conference proceedings, Julia Budka, Ken Griffin and Elena Pischikova, for allowing me to publish the results of my research in the *JEGH*. I would also like to thank the editors of the *JEGH* for accepting my paper for inclusion in the current issue at such a late date. Furthermore, I am indebted to Christophe Thiers, director of the CFEETK, for letting me personally examine the Nile Level Records in September 2016. Finally, my sincere thanks are due to John A. Larson Jr. and Kiersten Neumann from the Oriental Institute of the University of Chicago for kindly providing me with high resolution scans of photo negatives taken by the Epigraphic Survey at Karnak Temple and for granting me permission to publish them.

1 Instead of the commonly employed name forms “Shebitku” and “Shabako” the more “neutral” renderings “Shabataka” and “Shabaka” are adopted in this article. This is because they conform to Egyptological conventions of pronouncing unvocalised hieroglyphic texts without implying particular vocalisation patterns whose reconstructions are potentially erroneous. For the mismatch between “Shabataka” and Σεβίχως, which provided the first two vocals in “Shebitku,” see sections 2.1. I would like to thank William Pope for sharing with me his views on this issue.

Records at Karnak—which provide the strongest evidence for the sequence “Shabaka – Shabataka” hitherto adduced.

Keywords

Twenty-fifth Dynasty – Chronology – Shabataka – Shabaka – Eastern Desert – Graffiti – Thebes – Nile Level Records

Preliminaries

The present article is not concerned with questions about absolute chronology or the wider historiographic consequences resulting from the reversal of the traditional order of the first two Kushite kings. These issues have already been addressed on several occasions by a number of Egyptologists endorsing the revised sequence² and are likely to occupy scholarly attention for some time to come. Instead, my aim is to present further evidence for the new model which is unambiguous and comes as close to definitively proving the sequence “Shabataka – Shabaka” as possible, thus providing a solid basis for future research on the history and chronology of Egypt and the Ancient Near Eastern during the eighth and seventh centuries BC.

1. The basic question and the state of the debate

2 Cf. Payraudeau, “Retour sur la succession Shabaqo–Shabataqo”; Bányai, *et al.*, “Die Reihenfolge der kuschitischen Könige”; Broekman, “The order of succession between Shabaka and Shabataka”; Broekman, “Genealogical considerations”; Broekman, “Some consequences of the reversion of the order Shabaka – Shabataka”; Jansen-Winkeln, “Beiträge zur Geschichte der Dritten Zwischenzeit,” 33–40.

The chronological model of the Twenty-fifth Dynasty as established by Kitchen,³ von Beckerath⁴ and others⁵ was long deemed precise and robust, and the scope for modifications seemed to be restricted to identifying the precise date of the dynasty's start. However, this appraisal changed in 1999 when Frame (re-)published the Assyrian royal inscription at Tang-i Var in modern-day Iran.⁶ As was pointed out by Frame⁷ and later by Kahn,⁸ the Tang-i Var inscription not only links the reign of King Sargon II of Assyria with that of King Šapataku of Meluḥḥa (*i.e.* Shabataka), but also establishes April 706 BC as the *terminus ante quem* for the extradition of Yamani of Ashdod by Shabataka and thus implies that the latter had ascended the throne (of Meluḥḥa) already before that date.⁹ While Redford tried to remove the discrepancies between the new data and the traditional chronology by arguing for a prolonged co-regency between Shabaka and Shabataka,¹⁰ Kahn proposed instead to shift the beginning of the Twenty-fifth Dynasty from the traditional date of 716 BC to 721 BC.¹¹ This solution was also adopted as the most likely scenario by Jansen-Winkeln in his account on the chronology of the Third Intermediate Period in 2006.¹²

In 2013 Michael Bányai proposed an altogether different chronological model for the Third Intermediate Period.¹³ While not all of his results were met with unanimous enthusiasm, one of the key elements of his argumentation—the reversal of the sequence of the first two Kushite kings—sparked lively discussions and led on to a workshop which was held at the Westfälische Wilhelms-Universität Münster on 16 May 2014

3 Kitchen, *The Third Intermediate Period*², 148–173; 378–398.

4 Beckerath, *Chronologie des pharaonischen Ägypten*, 89–93.

5 *E.g.*, Bierbrier, *The Late New Kingdom in Egypt*, 102–108. For an earlier dissenting view see Depuydt, “The date of Piye’s Egyptian campaign and the chronology of the Twenty-fifth Dynasty.”

6 Frame, “The Inscription of Sargon II at Tang-i Var.”

7 Frame, “The Inscription of Sargon II at Tang-i Var,” 52–54.

8 Kahn, “The Inscription of Sargon II at Tang-i Var and the Chronology of Dynasty 25,” 8.

9 Questioning the chronological implications of the Tang-i Var inscription, Kitchen stresses the fact that Šapataku is not referred to as King of Mušri in the text, which in his opinion removes any necessity to alter the traditional chronological model and shift the accession date of Shabataka as King of Egypt to before 702 BC. Kitchen, “The Third Intermediate Period in Egypt: An Overview of Fact and Fiction,” 161–164, §§2–10.

10 Redford, “A Note on the Chronology of Dynasty 25 and the Inscription of Sargon II at Tang-i Var.”

11 Kahn, “The Inscription of Sargon II at Tang-i Var and the Chronology of Dynasty 25.”

12 Jansen-Winkeln, “The Chronology of the Third Intermediate Period,” 261–263. See also Hornung, Krauss and Warburton, *Ancient Egyptian Chronology*, 494, tab.

13 Bányai, “Ein Vorschlag zur Chronologie der 25. Dynastie in Ägypten.”

under the auspices of Prof. Angelika Lohwasser.¹⁴ Since then, the revised model of the Kushite succession has attracted a growing number of supporters, among them initial sceptics such as myself,¹⁵ who have come to the conclusion that “the arguments speaking for the order Shabataka – Shabaka outweigh those in favour of the conventional order, both in their materiality as in **their number**.”¹⁶ Most recently, the new order has been introduced into a textbook on Egyptian royal tombs,¹⁷ and is even presented as uncommented *communis opinio* regarding Kushite chronology in a new general account of ancient Egyptian history.¹⁸

2. General reflections on the significance of sources

However, as appears from the recent discussions,¹⁹ both chronological models are faced with counter-arguments and neither is reconcilable with the entire spectrum of available evidence. Thus, it becomes essential to carefully select the sources considered and weigh them according to their deemed level of significance. At this stage of the debate it is probably not the best way to proceed if one tried to tackle the basic and quite simple question of whether Shabaka or Shabataka ruled first by engaging in wide-ranging historical speculations. Owing to the complexity of the matter and the massive lacunae in our source material, historical reconstructions can be tailored to suit either of the two options without too much effort. Establishing the correct sequence of kings should therefore precede attempts at making sense of it in historical terms. We can certainly not claim to have preserved enough sources from the eighth century BC to get an inkling of all major political events and evolutions. One may only imagine the potential result of reconstructing Ptolemaic history of the second century BC without making any use of Hellenistic and

14 Cf. Lohwasser, “Vorbemerkung.” In Bányai *et al.*, “Die Reihenfolge der kuschitischen Könige,” 115–116.

15 Cf. Jurman. In Bányai *et al.*, “Die Reihenfolge der kuschitischen Könige,” 172–173; Jansen-Winkeln, “Beiträge zur Geschichte der Dritten Zwischenzeit,” 40.

16 Broekman, “The order of osuccession between Shabaka and Shabataka,” 17.

17 Dodson, *The Royal Tombs of Ancient Egypt*, 115; 149.

18 Agut and Moreno García, *L'Égypte des pharaons*, 552–555.

19 See esp. Bányai *et al.*, “Die Reihenfolge der kuschitischen Könige.”

Roman historiographers. Consequently, it may be advisable at this point to ask what kind of evidence would be needed to settle the question once and for all and move on to consider its general implications.

2.1. Textual sources and their historical implications

The early history of the Twenty-fifth Dynasty is reflected in a number of contemporaneous as well as slightly more recent textual sources, among them Assyrian royal inscriptions, the “historical” sections of the stelae Kawa IV and V and the different preserved versions of the Manethonian kinglist. Unfortunately, none of the nearly contemporaneous sources directly refer to a sequence of kings or designate a particular king as successor/heir of another king. The stelae Kawa IV and V in particular provide a pertinent example of the limits of historical reasoning based on ancient texts, since it is not the obvious association of Taharqa and Shabataka which has been put in doubt, but its chronological implication. Assuming that it was not the main aim of the author(s) of the two stelae to provide a comprehensive and coherent historical narrative, the identity of the “falcon (who) took off to heaven,” who is referred to in Kawa V, l. 15 as Taharqa’s predecessor, cannot be definitively established through a close reading of the two texts. While the probability of Shabataka, mentioned in Kawa IV, l. 8,²⁰ and “the falcon (who) took off to heaven” of Kawa V, l. 15²¹ being one and the same seems high at first, one should bear in mind that assessing the probability of historical scenarios depends to a great extent on the general predictability of complex human behaviour and a large number of test cases to consider.²² Egyptologists do usually not fare too well regarding both factors.

20 Macadam, *Kawa I*, 14–21, pl. 7; Jansen-Winkeln, *Inscriben der Spätzeit III*, 133, no. 48.74, l. 8.

21 Macadam, *Kawa I*, 22–32, pl. 9; Jansen-Winkeln, *Inscriben der Spätzeit III*, 137, no. 48.75, l. 15.

22 For a deconstruction of arguments based on Kawa IV and V which favour the traditional sequence see Payraudeau, “Retour sur la succession Shabaqo–Shabataqo,” 122–123; Broekman, “The order of succession between Shabaka and Shabataka,” 28–30.

In a similar fashion, one may feel inclined to equate Σαβακων/Sabacon, who is consistently named as the first king of the Twenty-fifth Dynasty in the different versions of Manetho,²³ with the “hieroglyphic” Shabaka for reasons of apparent similarity. As a consequence, Σεβιχος/Sebichos inevitably becomes a Greek rendering of Shabataka, despite the fact that the phonologic correspondence of the consonantal skeleton remains incomplete (> suppression of /t/). If one were to change the sequence of the two kings, the total incongruity would be similar, but in reverse order (thus, Σαβακων would constitute a defective rendering of Shabataka).²⁴ As has been shown by Gundacker among others, the Manethonian kinglist tradition preserves many valuable pieces of information on dynastic sequences and the identity of kings,²⁵ but owing to the complexity of its transmission it is the knowledge of the contemporaneous historic evidence which helps to inform our understanding of the Manethonian tradition, and (usually) not the other way round. These two examples are merely meant to demonstrate that the historical documents at our disposal are not suited to solve the problem of establishing the correct sequence of the Kushite kings and need to be relegated to later consideration.

2.2. Unequivocal genealogical data tied to individual reigns

Another type of source which has a potential impact on the reconstruction of relative historical chronology is prosopographic/genealogical data. If one could establish, for example, that person A held a particular office during the reign of Shabataka, A's son B the same office during the reign of Shabaka, and A's grandson C followed suit in the reign of Taharqa, it would be nearly impossible to argue against this sequence of kings. Unfortunately, sources which provide evidence of the necessary quality are scarce and not well-distributed in space and time. The Theban papyrus document pLouvre E 3328c from the early reign of

23 Cf. Waddell, ed. *Manetho*, 166–169; Mosshammer, ed. *Georgii Syncelli Ecloga Chronographica*, 84; Wallraff, ed. *Iulius Africanus Chronographiae*, 114–115.

24 Cf. Payraudeau, “Retour sur la succession Shabaqo – Shabataqo,” 119.

25 Gundacker, “The Chronology of the Third and Fourth Dynasties according to Manetho's *Aegyptiaca*,” 154–166.

Taharqa²⁶ seems to come close to this kind of evidence since it refers to the purchase of a slave in year 7 of Shabaka which provided the cause for a legal dispute under Taharqa and thus offers a valuable link between prosopographical data and historical chronology. However, also in this case the interpretation of the data given is not straightforward and depends on estimates of likelihood, *i.e.* whether one could imagine a time period of roughly 27 years (according to the conventional chronology) lying between the initial sale and the litigation or not.²⁷

2.3. Unidirectional, linear evolution of cultural phenomena tied to individual reigns

Linear developments in artistic style, the patterns of royal titularies, architectural motifs or the general planning of monumental building projects may provide valuable hints about the correct royal succession if the specific stages can be tied to individual reigns or periods. Indeed, the writing of the divine name “Osiris” with a flagpole (𓂏𓂏) has proven to be one of the most useful dating criteria for differentiating inscriptions of the second and early first millennia BC from those dating to the late Libyan/early Kushite periods and later.²⁸ Nevertheless, the chronological resolution of such observations is usually rather low and potential outliers have always to be taken into account. In the case of the royal tombs at el-Kurru, for example, the pertinent question is not so much whether the location and the architectural features of the tomb of Shabataka (Ku18) have more in common with that of Piankhy (Ku17) than with that of Shabaka (Ku15) (they undoubtedly have),²⁹ but whether these apparent similarities have ideological rather than chronological significance. During the late eighth century BC tangible evolutions are also observable in relation to the

26 See Malinine, “Un jugement rendu à Thèbes sous la XXV^e dynastie”; Jansen-Winkel, *Inschriften der Spätzeit* III, 216–219, no. 48.157.

27 Cf. Payraudeau, “Retour sur la succession Shabaqo – Shabataqo,” 119; Broekman, “The order of succession between Shabaka and Shabataka,” 28.

28 Leahy, “The Name of Osiris Written 𓂏𓂏.”

29 For the discussion on the royal tombs and stylistic developments in the related burial assemblages, see Payraudeau, “Retour sur la succession Shabaqo–Shabataqo,” 120; Broekman. In Bányai *et al.*, “Die Reihenfolge der kuschitischen Könige,” 151–152; Broekman, “The order of succession between Shabaka and Shabataka,” 21–23.

design of royal titularies³⁰ and the artistic production more generally.³¹ Although their potential contribution to solving the question of which Kushite king reigned first is limited for reasons outlined above, their careful study may still lead to valuable observations supporting a particular hypothesis.³²

2.4. Archaeological sequence (principle of superposition)

Possibly the strongest tool for identifying the correct sequence between two consecutive rulers³³ is to locate monuments or inscriptions of each in proximity to one another and establish their archaeological sequence conforming to the principles of superposition. This need not involve classical stratigraphy but can equally relate to the reuse (“usurpation”) of monuments or the superposition of epigraphic sources in the most literal sense. The fact that the Edifice of Taharqa by the Sacred Lake of Karnak incorporates reused blocks bearing the cartouches of Shabaka³⁴ would suffice as proof that the latter’s reign was chronologically earlier than that of Taharqa, had it ever been called into question. As the materiality of well-established archaeological sequences is of superior argumentative power and may well provide the “smoking gun” which could put an end to this specific discussion, it must be our foremost goal to find an unambiguous archaeological sequence involving monuments/attestations of both Shabaka and Shabataka (see section 3.4).

3. Further arguments for the sequence Shabataka – Shabaka

30 Cf. Payraudeau, “Retour sur la succession Shabaqo – Shabataqo,” 123.

31 Cf., e.g., Jurman, “Legitimation through innovative tradition,” 201–212. See also Jurman. In Bányai *et al.*, “Die Reihenfolge der kuschitischen Könige,” 172–173.

32 For the use of subtle stylistic traits as a dating criterion for monuments of the late eighth and early seventh centuries BC, see Perdu, “De Stéphinatès à Néchao,” 1225–1230.

33 This does not apply to cases where the reigns of the respective kings overlap partially or where a prolonged struggle for power resulted in a complex alternation of reigns (cf., e.g., the conflicts between Ptolemy VI Philometor and Ptolemy VII[I] Euergetes II).

34 Leclant, *Recherches sur les monuments thébains*, 77–78, § 17 bis; Leclant, “The Architecture of the Edifice,” 5–8;

The following paragraphs contain additional arguments for the sequence “Shabataka – Shabaka” arranged according to the different strategies of adducing evidence which have been laid out in section 2. As will become clear, the strength of the arguments increases from paragraph to paragraph. Although one may have opted to omit the weaker arguments altogether, they gain significance when considered in combination with the stronger ones.

3.1. Historical considerations

Even before the start of the debate some Egyptologists have been puzzled by the fact that the Kushite addition to the Libyan period Chapel of Osiris Heqadjet at Karnak associates the God’s Wives of Amun Shepenupet I—a daughter of the Libyan period king Osorkon III—and her successor Amenirdis I—daughter of Kashta—with King Shabataka and not with his presumed predecessor Shabaka.³⁵ That the two God’s Wives are presented as if both were still alive (*i.e.* accompanied by the epithet *ḥnh.tj d.t* as opposed to *m^{3c}.t hrw*)³⁶ provided a challenge to the conventional chronological model since it seemed to imply that Shepenupet I must have officiated into very old age (even if it was acknowledged that Amenirdis I appears as the one who consecrated the Kushite part of the chapel and takes clear precedence in its decorative

35 Leclant, *Recherches sur les monuments thébains*, 53; Bierbrier, *The Late New Kingdom in Egypt*, 103; Ayad, “The Transition from Libyan to Nubian Rule,” 41; Dodson, *Afterglow of Empire*, 159; Morkot, “The Late Libyan and Kushite God’s Wives,” 112–113. Broekman was the first who directed due attention to this issue in relation to the debate about the correct order of the Kushite kings. See Broekman, “The order of succession between Shabaka and Shabataka,” 25–26.

36 Cf. Jansen-Winkel, *Inschriften der Spätzeit III*, 41–46, no. 47.6. For the conscious use of the epithets *ḥnh(.tj)* and *m^{3c}(.t) hrw* to characterise a person as being alive or dead cf. the inscriptions of the famous calcite-alabaster statue of Amenirdis I in the Cairo Museum, CG 565. There, Amenirdis I’s dead royal father is systematically labelled as *m^{3c} hrw*, whereas she and her royal brother (the name having been erased) are designated as *ḥnh.tj/ḥnh(.w) d.t*. Perdu, “L’avertissement d’Amenirdis I^{ère} sur sa statue Caire JE 3420 (= CG 565),” 55; Jansen-Winkel, *Inschriften der Spätzeit III*, 258–259, no. 51.1.

programme³⁷). Since the status designation *ḥnh.tj d.t* is not necessarily to be taken literally,³⁸ the preferred solution of this chronological conundrum has been to assume that Shepenupet I had died before Amenirdis I and Shabataka commissioned the decoration of the chapel's anteroom.³⁹ However, the question whether Shepenupet I was dead or still alive at that time is of only minor concern to my argument. More significant seems the fact that the constellation of protagonists in the decoration is odd as such and appears to be chronologically out of place. The Chapel of Osiris Heqadjet is the only Theban monument directly associating members of the Theban Twenty-third Dynasty with Kushite rulers. In addition, it is also unique in representing Shepenupet I and Amenirdis I officiating side by side. Apart from her funerary chapel⁴⁰ no other known monument of/for Amenirdis I features a depiction of Shepenupet I. All this points to the Chapel of Osiris Heqadjet constituting a sort of architectural “hinge” which served to connect the Libyan and the Kushite political and cultural spheres. As has already been pointed out by Broekman, such an undertaking would make sense in a situation of political change and re-calibration, but it would seem slightly out of place at a time of firmly established Kushite domination over the Theban territory.⁴¹ What is more, in those instances where Amenirdis I is associated with a living (and identifiable) Kushite king outside the Chapel of Osiris Heqadjet, it is Shabaka and not Shabataka.⁴² In contrast, the only artefact mentioning Shepenupet I and Amenirdis I on a par is the well-known re-used granite vessel in the Museo Barracco in Rome, which also bears the cartouche of King Nimlot D, justified—a known contemporary of Piankhy.⁴³ While the inscriptions on this vessel may well predate the decoration of the Kushite anteroom in

37 Leclant, *Recherches sur les monuments thébains*, 53–54; Redford, “An Interim Report,” 21; Ayad, *God's Wife, God's Servant*, 132; Koch, „Die den Amun mit ihrer Stimme zufriedenstellen“, 25.

38 See, e.g., Murnane, *Ancient Egyptian Coregencies*, 267–272, although he is not absolutely right in equating *dj ḥnh(.tj)* with *ḥnh(.w)/.tj*.

39 E.g. Kitchen, *The Third Intermediate Period*², 480, Tab. 13 B; most recently Koch, „Die den Amun mit ihrer Stimme zufriedenstellen“, 116.

40 Hölscher, *Medinet Habu V*, 22, Pl. 13 B; Jansen-Winkel, *Inschriften der Spätzeit III*, 269, no. 51.17. The funerary chapel of Amenirdis I was decorated in large parts, if not in its entirety, during the tenure of Shepenupet II. See Koch, „Die den Amun mit ihrer Stimme zufriedenstellen“, 30.

41 Broekman, “The order of succession between Shabaka and Shabataka,” 26.

42 Namely, in Chapel b of North Karnak (Mariette, *Karnak*, Pl. 45c; PM II², 14) and in graffito M 187 at the Wadi Hammamat (Cuyat and Montet, *Les inscriptions*, 96, no. 187, Pl. XXXV). See below, section 3.2.

43 Bongrani Fanfoni, “Un nuovo documento,” esp. 71 w. fig.; Jansen-Winkel, *Inschriften der Spätzeit II*, 366, no. 36.1.

the Chapel of Osiris Heqadjet, it is still noteworthy that outside of filiations the association of the living Amenirdis I with Shepenupet I bears no connection to Shabaka's reign. Thus, one arrives at the interesting opposition "Amenirdis I/Shepenupet I/Nimlot D" and "Amenirdis I/Shepenupet I/Shabataka" on the one hand, and "Amenirdis I/Shabaka" on the other hand. Arguably, this observation does not bear great significance if taken on its own, but it has some import if considered together with section 3.3.

3.2. Genealogical data: Expedition inscriptions from the Eastern Desert

Certain pieces of genealogical information stemming from rock inscriptions/graffiti of the Eastern Desert can be roughly related to reigns of the Twenty-fifth and the early Twenty-sixth Dynasties and provide a welcome additional perspective on the topic of this paper without being "hard evidence" themselves. During the Kushite and early Saite periods a number of expeditions were sent to the wadis of the Eastern Desert to procure hard stones and other natural resources for the centrally administered building projects of the time. Some of these expeditions can be linked with a family of stonemasons or overseer of stonemasons who seem to have played an important role in these endeavours for at least three generations. The first generation is represented by the stonemason (*jky*) *P(3)-sn-n-Hnsw*, who—according to the already mentioned graffito Wadi Hammamat M 187—participated in an expedition dated to Year 12 of Shabaka and carried out under the auspices of the God's Wife of Amun Amenirdis I.⁴⁴ Although definitive proof is lacking I consider it quite likely that this expedition was administratively⁴⁵ and chronologically related to the one referred to in the right column of the famous Wadi Gasus "double date" graffiti, which

44 Couyat and Montet, *Les inscriptions*, 96, no. 187, Pl. XXXV.

45 The Wadi Hammamat and the Wadi Gasus lie in the same general region of the Eastern desert and any expedition moving through the Wadi Hammamat to the Red Sea at Quseir can approach the Wadi Gasus area quite easily by ship, since it is located not far from the harbour site of Mersa Gawasis. Alternatively, there existed a north-south desert route connecting the Wadi Hammamat with the Wadi Hammamh, finally leading to Wadi Gasus. See Bard, Fattovich and Manzo, "The ancient harbor at Mersa / Wadi Gawasis," 551–552 w. Fig. 16.

associates Amenirdis (I) with Year 12 of an unnamed king.⁴⁶ A generation later, “the stonemason of the domain of the God’s Wife of Amun, *Krj=f-r-Jmn*, named *P(3)-th*, son of the overseer <of stonemasons> of the domain of the God’s Wife of Amun, *P(3)-sn-n-Hnsw*, son of the stonemason of the domain of the God’s Wife of Amun, *P(3)-jwh³*,” is attested in Wadi Hammamat graffito M 70 without date or indication of the respective reign.⁴⁷ Another son of *P(3)-sn-n-Hnsw*, the “overseer of stonemasons, *Wn-Jmn*,” left a graffito (M 102) nearby,⁴⁸ likewise lacking a date or royal cartouche. However, the graffiti M 176 and M 189, which are located near M 187 and not too far from M 70 and M 102, comprise isolated nomen cartouches of King Taharqa⁴⁹ and thereby testify to contemporaneous activities in the region. Graffito G 128⁵⁰ in the same general area as M 70 and M 102 mentions a “stonemason of the domain of the God’s Wife of Amun, *Jr.t-Hr-r=w*” and may belong to either of these Kushite expeditions as well. The activities in the reign of Taharqa were perhaps connected with a contemporaneous mission to the Wadi Gasus, since the left column of the Wadi Gasus “double date” graffiti—associating a God’s Wife Shepenupet with a regnal year 19—is most likely to refer to Shepenupet II and Year 19 of Taharqa,⁵¹ the only Kushite king who is known to have reigned for so long.

The last traceable generation of this dynasty of stonemasons is represented by the prolific “chief of stonemasons of the domain of Amun, *P(3)-dj-*Wsjr**,” who left five graffiti in the central area of the Wadi Hammamat, namely M 44, M 52, M 68, M 128 (each providing name, title and filiation) and M 51.⁵² The latter

46 For the discussions on the dating of the Wadi Gasus graffiti see, e.g., Jurman, “Die Namen des Rudjamun,” 88–89 with further references. Arguing that the lack of a royal name within the two columns indicates that the dates refer to one and the same reign, Koch chooses to associate the Year 12 date rather with the reign of Taharqa. Koch, „*Die den Amun mit ihrer Stimme zufriedenzustellen*“, 43. Similarly, Pope, “Shepenwepet II and the Kingdom of Kush,” 361. However, within the sphere of the Kushite God’s Wives of Amun, the absence of royal cartouches and the lack of explicit differentiation between two kings should not come as a surprise. Cf. Leclant, *Recherches sur les monuments*, 374–382.

47 Couyat and Montet, *Les inscriptions*, 61, no. 70, Pl. XVII.

48 Couyat and Montet, *Les inscriptions*, 71, no. 102.

49 Couyat and Montet, *Les inscriptions*, 95, no. 176; 97, no. 189. For the different locations of the graffiti referred to, see Gundlach, In: *LdÄ* VI, 1099–1113.

50 Goyon, *Nouvelles inscriptions rupestres*, 131, no. 128, Pl. XXXIII.

51 Jurman, “Die Namen des Rudjamun,” 88–89.

52 Couyat and Montet, *Les inscriptions*, 48, no. 44, Pl. XIII; 52–53, no. 51, Pl. X; 53, no. 52; 60–61, no. 68, Pl. XXVII; 86, no. 128.

stands out in being a carefully executed rock inscription commissioned by the fourth prophet of Amun and overseer of all Upper Egypt, Montuemhat, which identifies *P(ḥ)-dj-Wsjr* as its creator in a separate text column. A rather crude stela (or detached rock inscription?) from Umm el-Howeit at near Wadi Gasus⁵³ provides further evidence of the association between *P(ḥ)-dj-Wsjr* and Montuemhat.⁵⁴ Its inscription relates the inauguration of the (lead) mine of Umm el-Howeit at in Year 16 (? > 14[+2]) of King Psamtek I (corresponding to 649 BC). The mission was commissioned by Montuemhat and overseen by *P(ḥ)-dj-Wsjr*, who may also have been responsible for carving the inscription. Again, there is a certain probability that the attestations of *P(ḥ)-dj-Wsjr* and Montuemhat at the Wadi Hammamat and at the Umm el-Huweitat/Wadi Gasus region refer to a single expedition or at least to roughly contemporaneous events. If so, 649 BC provides an important chronological anchor for *P(ḥ)-dj-Wsjr* and his ancestors.

As none of these graffiti make any mention of King Shabataka, their value for the present investigation may seem negligible (unless one wished to equate absence of evidence with evidence of absence).

Despite this fact, however, a chronological analysis of the reconstructed expedition events (see Table 1) is able to reveal a certain pattern of potential significance. Under the (admittedly contestable) presupposition that all large-scale expeditions to the Wadi Hammamat/Wadi Gasus region conducted during the Twenty-fifth and early Twenty-sixth Dynasties have left their mark in form of graffiti and rock inscriptions, the temporal distance between the recorded events conforms much better to a chronology based on the revised sequence of Kushite kings than to the traditional model.

53 For the location of Umm el-Howeit at in relation to Wadi Gasus see Khalil and McClay, “Structural control on syn-rift sedimentation,” 1023, Fig. 5.

54 Vikentiev, “Les trois inscriptions concernant la mine de plomb d’Oum Huetat,” 179–186, Pl. I.

Family member	King	associated with God's Wife	at	In Year	Graffito/ Source	Trad. chron. ⁵⁵	Chron. distance	Rev. chron. ⁵⁶	Chron. distance
<i>P(β)-sn-n-Ḥnsw</i> First generation	Shabaka	Amenirdis I	W. Ham.	12	M 187	c. 710 BC	39 years	c. 694/3 BC	22 years
–	[Shabaka]	Amenirdis (I)	W. Gasus	12	"Double date" graffiti, right col.				
–	[Taharqa]	Shepenupet (II)	W. Gasus	19	"Double date" graffiti, left col.	c. 672 BC	23 years	c. 672 BC	23 years
–	Taharqa	–	W. Ham.	–	M 176, M 189				
<i>Ḳrj=f-Jmn</i> Second generation	–	–	W. Ham.	–	M 70				
<i>Wn-Jmn</i> Second generation	–	–	W. Ham.	–	M 102				
<i>P(β)-dj-Wsjr</i> Third generation	Psamtek I	Montuemhat	Umm el-Howeit	16(?)	Stela	c. 649 BC		c. 649 BC	
	–	Montuemhat	W. Ham.	–	M 44, M 51, M 52, M 68, M 128				

Table 1. Chronological analysis of graffiti connected with the family of *P(β)-sn-n-Ḥnsw* in the Eastern Desert. Dashes indicate the absence of data in the respective category. Royal names inside square brackets indicate that the recorded year date has tentatively been ascribed to this king by the author.

According to the traditional chronology, the intervals between the recorded expeditions amount to 39 and 23 years respectively. The gap between the attested events of Year 12 of Shabaka and Year 19 of Taharqa extends to almost 40 years and is thus nearly twice as long as the interval between Year 19 of Taharqa and Year 16(?) of Psamtek I. In contrast, employing the revised chronological model results in more regular intervals of 22 and 23 years respectively. This being so, one must be cautious not to assume that major state-

⁵⁵ Based on Hornung, Krauss and Warburton, eds. *Ancient Egyptian Chronology*, 494.

⁵⁶ Based on Broekman, "Some consequences of the reversion of the order Shabaka – Shabataka," 5.

sponsored expeditions to the Eastern Desert were “natural phenomena” only occurring at regular intervals.⁵⁷ Rather, they may have been subject to short-term political and economic considerations—perhaps often tied to specific building projects—, and seemingly regular patterns may be nothing more than analytical “artefacts”. Despite this necessary qualification, the observation is nevertheless in line with related arguments pointing to the fact that Shabataka’s royal agenda has more in common with that of Taharqa than that of Shabataka (see the following section).

3.3. “Linear” cultural evolutions: Building activities and royal display

It is not easy to decide whether there exist any unidirectional, linear developments within the ancient Egyptian cultural sphere which are on the one hand securely tied to specific reigns and on the other hand lend themselves to being used as chronological markers on the small scale. The patterns of attention which certain kings devoted to specific places and building complexes may be seen as one such example because they promise to offer valuable indicators of chronological continuity/discontinuity. Unfortunately, their analysis usually incorporates a high degree of ambiguity as chronological distance may not be the only reason for a king to ignore or neglect projects commissioned/promoted by his immediate predecessors.

3.3.1. Building activities

When considering the few building activities at Thebes securely dated to the reign of Shabataka one cannot help noting that almost all of them are connected with areas and projects bearing a great significance for the last rulers of the Theban Twenty-third Dynasty. Apart from the enlargement of the already mentioned Chapel of Osiris Heqadjet in the north-eastern district of the Temple of Amun-Re at Karnak (see section 3.1), Shabataka was also involved in the erection of a small chapel dedicated to an Osirian form of Amun near

⁵⁷ As demonstrated by Hikade, the preserved records of expeditions to the Wadi Hammamat during the New Kingdom do not exhibit a regular pattern. Hikade, *Das Expeditionswesen im ägyptischen Neuen Reich*, 274.

the south-eastern corner of the Sacred Lake of Amun-Re.⁵⁸ As recent research has demonstrated,⁵⁹ this Kushite chapel lay close to another small chapel decorated under King Osorkon III and together with the latter seems to have once formed part of a large building complex to the east of the “sacred storehouse” of Psammuthis.⁶⁰ Disregarding Shabataka’s activities at the quay of the Temple of Amun-Re (see the following section), no other building projects of his are known from Karnak.⁶¹ In contrast, Shabaka was responsible for several substantial construction works at Karnak,⁶² and it is noteworthy that he devoted special attention to gates⁶³ and colonnades,⁶⁴ thus foreshadowing the large-scale refurbishment of the processional infrastructure at Thebes by Taharqa.⁶⁵ A comparable pattern emerges at Luxor Temple, where Shabataka was commemorated by a relief panel inserted into the existing decoration on the rear wall of the main sanctuary,⁶⁶ while Shabaka’s activities involved the re-decoration of the gate of the first pylon⁶⁷ as well as the construction of a small kiosk⁶⁸ later to be dismantled.

As has already been remarked by Bányai⁶⁹ and Broekman,⁷⁰ even stronger evidence for the chronological proximity of Shabaka and Taharqa comes from the Small Temple at Medinet Habu, where Taharqa seems to have directly continued the decoration of the pylon begun under Shabaka, with no indication of Shabataka

58 Now at the Ägyptisches Museum Berlin, ÄM 1480. LDV, Pls. 3–4; Jansen-Winkel, *Inscriben der Spätzeit* III, 46–50, no. 47.7.

59 Masson, “Offering magazines,” 591–600.

60 LD I/2. Pl. 75, no. 10; LD Text III, 42; PM II², 223, U.

61 For a block with elements of Shabataka’s titulary which Leclant thought to have come from Thebes, see Leclant, *Recherches sur les monuments thébains*, 190, §49, C, I; 340–343.

62 Leclant, *Recherches sur les monuments thébains*, 335–340; for recent results of investigations on the Treasury of Shabaka see Licitra *et al.*, “A Major Development Project”; Licitra, “Gérer les richesses du temple à l’époque koushito-saïte.”

63 Leclant, *Recherches sur les monuments thébains*, 17, § 5; 36–41, § 10. On the Kushite gates of the Temple of Ptah see most recently Biston-Moulin and Thiers, *Le temple de Ptah à Karnak*, vol. I, xvi–xvii; 73–97 (Porte B); 109–124 (Porte D); vol. II, 41–59 (Porte B); 69–78 (Porte D).

64 Leclant, *Recherches sur les monuments thébains*, 19, § 7.

65 Cf. Leclant, *Recherches sur les monuments thébains*, 200–216; Arnold, *Temples of the Last Pharaohs*, 51–58; Morkot, *The Black Pharaohs*, 239–247.

66 PM II², 335–336; Leclant, *Recherches sur les monuments thébains*, 139–140, § 40.

67 Leclant, *Recherches sur les monuments thébains*, 134–137, § 38, Pls. LXXVII–LXXIX.

68 Leclant, *Recherches sur les monuments thébains*, 137–139, § 39, Pl. LXXX (erroneously identified as colonnade); Van Siclen III, “A kiosk (?) of Shabako at Luxor temple.”

69 Bányai, “Ein Vorschlag zur Chronologie der 25. Dynastie in Ägypten,” 76–77.

70 Broekman, “The order of succession between Shabaka and Shabataka,” 28.

having ever contributed to the project. Taken together these observations are not suited to provide a definitive answer to the problem of the Kushite succession, but they add to the general impression that the chronological and ideological distance between Taharqa and Shabataka exceeded that between Taharqa and Shabaka.⁷¹

3.3.2. Archaism and titulary



Another hint supporting the assumption that Shabataka is more closely related to the time of Piankhy than to that of Taharqa comes from his titulary as evidenced by Nile Level Record (NLR) no. 33 on the front wall of the quay tribune at Karnak (see also the following section).⁷² It has long been acknowledged that the tendency to emulate cultural models coming from different periods of the distant past had already gained momentum well before the onset of Kushite rule over Egypt.⁷³ As a consequence, it is often very difficult to put precise chronological labels on particular manifestations and schemes of archaism. In the case of Shabataka's titulary in NLR no. 33,⁷⁴ however, a particular detail may nevertheless bear chronological significance. Despite the fact that Shabataka's Horus Name *H^cj-m-W3s.t* harks back to models of the New Kingdom and the Third Intermediate Period, the peculiar arrangement of the Nebty and Gold Names immediately preceded by the title *nswt-bjt* is reminiscent of the early Old Kingdom and finds good parallels on monuments of King Snefru. Interestingly, the only other ruler of the late eighth or seventh centuries BC

71 In terms of political affiliations, the situation may have been quite different, given that there are certain hints at conflicts between Taharqa and Shabaka. See Leclant, *Recherches sur les monuments thébains*, 77–78, § 17*bis* (on blocks of Shabaka re-used for Taharqa's Edifice by the Sacred Lake); Depuydt, "Glosses to Jerome's Eusebios" (in accordance with the then prevalent chronological model Depuydt equated Latin "Sebio" with Shabataka). For a revised interpretation of these passages, see Payraudeau, "Retour sur la succession Shabaqo–Shabataqo," 122–123.

72 Beckerath, "The Nile Level Records at Karnak," 53, no. 33; Beckerath, "Die Nilstandsinschrift vom 3. Jahr Schebitkus am Kai von Karnak," 7; Jansen-Winkel, *Inschriften der Spätzeit III*, 40, no. 47.5.

73 See, e.g., Fazzini, "Several Objects, and Some Aspects of the Art of the Third Intermediate Period," 122–125; Ritner, "Libyan vs. Nubian as the Ideal Egyptian," 309.

74 For a different, yet consonant, approach towards the ideological and chronological implications of Shabataka's titulary in NLR no. 33, see Broekman, "The order of succession between Shabaka and Shabataka," 27.

whose titulary incorporates the sign combination  is Piankhy.⁷⁵ Another feature which Shabataka's titulary of NLR no. 33 shares with that of Piankhy on the Kadakol obelisk and with Snefru's is the rendering of the Gold Name as simple  (*i.e. bjk nbw?*). However, this particular name variant is also attested for Taharqa on a fragmentary statue of Montuemhat in Munich.⁷⁶

3.4. Archaeological sequence: The Nile Level Records

Ever since their first comprehensive publication by von Beckerath in 1966,⁷⁷ the Nile Level Records (NLR) on the front wall of the quay tribune leading to the entrance of the precinct of Amun-Re at Karnak have been regarded as a source of the first order for reconstructing the chronology of the Third Intermediate Period.⁷⁸ This was again demonstrated in 2002 when Broekman carried out a careful study on the relative positions of the individual texts and peculiarities of their respective orthographies, which enabled him to distinguish between two like-named rulers of the late Libyan period, one of which had previously gone unnoticed.⁷⁹ It is hardly surprising that Broekman also saw the potential of the NLRs to elucidate the problem of succession in the early Twenty-fifth Dynasty. At the end of his commentary to Bányai's *JEGH* article of 2015 he remarked:

Finally we have the Nile Level Records (NLR) on the quay wall of the temple of Amun at Karnak, from which information about the sequence of Shabako and Shebitku may be deduced. As said by Lauffray, “Les Abords

⁷⁵ Attested on a fragmentary obelisk from Kadakol, Sudan (Khartoum, Sudan National Museum inv.-no. 462). See Jurman, “Legitimisation through innovative tradition,” 203–205.

⁷⁶ Munich, Staatliches Museum Ägyptischer Kunst, Gl. 127. Beckerath, “Ein Torso des Mentemhêt in München”, 2–3, Fig. 2; Jansen-Winkeln, *Inschriften der Spätzeit III*, 204, no. 48.143.

⁷⁷ Beckerath, “The Nile Level Records at Karnak.”

⁷⁸ Cf. Kitchen, *The Third Intermediate Period*², 130–132, § 103; Jansen-Winkeln, “The Chronology of the Third Intermediate Period,” 234; Ritner, *The Libyan Anarchy*, 34–44, no. 7. See already Legrain, “Les crues du Nil depuis Sheshonq I^{er} jusqu'à Psametik.”

⁷⁹ Broekman, “The Nile Level Records.”

Occidentaux,” 86, the most ancient texts are found exactly in the central part of the wall, whereas those on the lateral parts are posterior to Shabako. However NLR No. 33, with a length of about seven meters, of Shebitku's 3rd regnal year, is prominently positioned in the central part, just above NLR No. 30 of year 2 of Shabako, outreaching this text at both sides. NLR No. 31 of Shabako—the year being illegible—was inscribed close to the right edge of the wall, on a distance of about six meters from No. 30, on a level with text No. 33 of Shebitku. If Shabako would have preceded Shebitku the space above NLR No. 30 would have been more than enough for having NLR No. 31 inscribed in it, just above No. 30, and to all probability Shabako would have done so. However, on the assumption that Shebitku preceded Shabako, the former already occupied that space, which forced Shabako to have NLR No. 31 inscribed somewhere to the right of Shebitku's Nile text.⁸⁰

I believe that Broekman's observation possesses highest relevance for the problem of the early Kushite succession, and an elaboration of his arguments presented in the following paragraphs seems indeed suited to put an end to this particular discussion.

The vertical position of the NLRs on the quay wall was of course primarily determined by the height of the Nile flood which they were meant to record. Regarding their relative horizontal position, a number of factors seem to have played a role. If the positioning of the individual texts is analysed in accordance with their supposed chronological sequence (cf. Fig. 1),⁸¹ a tendency to place inscriptions close to the centre of the façade becomes apparent—provided that there was enough space. This “search for salience” was

80 Broekman. In Bányai *et al.*, “Die Reihenfolge der kuschitischen Könige,” 172. See also Broekman, “The order of succession between Shabaka and Shabataka,” 25.

81 Based on Broekman, “The Nile Level Records.”

complemented or sometimes even counter-balanced by a trend to cluster chronologically (and dynastically) related inscriptions, as is, *e.g.*, the case with NLR nos. 1, 2 and 16 or with NLR nos. 23, 24 and 26.⁸² When considering the spatial distribution of the Kushite NLRs, one needs to bear in mind that the current appearance of the western façade of the quay tribune is the result of a modification of the original structure. As Lauffray explained, the original front wall (preserved as Section A, see Fig. 1) was partly dismantled and then extended by two sections to the north (Section B) and to the south (Section C).⁸³

Place Fig. 1 approximately here

Judging from the chronological sequence of the NLRs, the enlargement of the quay tribune took place at some point between the late Libyan period and the reign of Shabaka, as no inscriptions (securely) datable to the Libyan period occur in Sections B and C, while Shabaka's NLR no. 31 of Year 4 is the earliest preserved record inscribed on the extensions.⁸⁴ Interestingly, the only inscription which is placed exactly at the centre of the façade in its later stage is Shabataka's NLR no. 33. As hinted at by Broekman (see quote above), it is also by far the longest of all the preserved inscriptions and comprises the largest and most carefully incised hieroglyphs on the quay wall. These extraordinary technical features coincide with a very elaborate royal titulary and the (in the context of the NLRs) unique mention of a ritual appearance as king in the Temple of Amun (*i.e.* Shabataka's Theban "coronation," whatever this implied), making NLR no. 33 a display inscription in the truest sense. But even if one were to ignore these peculiarities or doubted their chronological significance, the traditional chronological sequence of Kushite kings produces an anomaly in regard to the established principles of positioning the NLRs.⁸⁵ According to the sequence "Shabaka – Shabataka," the first preserved Kushite record on the quay façade would be NLR no. 30 of Shabaka's Year 2.

82 Cf. Beckerath, "The Nile Level Records at Karnak," 44 w. Fig.; Broekman, "The Nile Level Records," 171.

83 Lauffray, "Abords occidentaux," 86 w. Fig. 6*bis*; Lauffray, "La tribune du quai de Karnak," 58 w. Fig. 9; Traunecker, "Les éléments historiques," 58–63.

84 For the contentious NLR no. 10, see Broekman, "The Nile Level Records," 175.

85 Already remarked in Broekman, "The order of succession between Shabaka and Shabataka," 25.

This record is placed near the central axis of the structure after its enlargement and would thus conform to the common practice of choosing the most prominent position available for each text. In striking contrast, Shabaka's subsequent record of Year 4, NLR no. 31, is located far to the right of NLR no. 30, although there would have been ample space to inscribe it immediately above NLR no. 30 (Fig. 1). Instead, it is spatially associated with NLR no. 32 from an unknown year of Shabaka, whose vertical position precluded to place it at or near the centre of the wall, because the surface at this particular height was already covered with Libyan period inscriptions. The placement of NLR nos. 30, 31 and 32 in this particular sequence seems counter-intuitive and runs contrary to the observed tendencies of aiming at prominence at/near the centre of the tribune and of creating clusters. Of course, it might be argued that NLR no. 32 could theoretically have recorded a Nile flood of Shabaka's Year 3, thereby preceding NLR no. 31 of Year 4. In such a case, the decision to position NLR no. 31 immediately above NLR no. 32 instead of NLR no. 30 would at least not seem completely arbitrary. Furthermore, one might even question the basic presupposition of the argument, namely that the principles governing the placement of hieroglyphic inscriptions on the façade of the quay tribune followed a rationale which is compatible with our modern ways of thinking. What may seem odd to us, might have made perfect sense to the ancient officials, scribes and artisans.

Place Fig. 2 approximately here

For this reason, it is imperative not to stop at general considerations regarding the positioning of the NLRs, but to look more closely at the materiality of the records themselves. As mentioned in section 2.4, establishing an incontestable archaeological sequence involving documents of Shabaka and Shabataka is among the very few categories of evidence which have the potential to definitively prove either of the two proposed orders of succession. Given that NLR no. 30 is positioned immediately below no. 33 (Fig. 2), we have the opportunity to take advantage of this unparalleled proximity between an archaeological feature securely linked to the reign of Shabaka and one linked to that of Shabataka. That this line of investigation has not been followed so far is probably due to the lack of published photographic documentation of high

quality.⁸⁶ Fortunately, the Epigraphic Survey of the Oriental Institute of the University of Chicago took large-size photographs of the façade of the quay tribune in the 1920s and thereby documented its many inscriptions in a significantly better state of preservation than they are in today.⁸⁷ One of these images, negative no. 8744 B (details of which are reproduced as Figs. 2–4), provides the chance to study the spatial relationship between NLR no. 33 and no. 30 in great detail. As can be seen on Fig. 3, the two inscriptions are placed so close to each other that their signs almost touch at certain places.

Place Fig. 3 approximately here

What immediately catches the eye is the regular and generous spacing of the individual signs in Shabataka's monumental text. NLR no. 33 is also characterised by pronounced “descenders”, *i.e.* parts of signs extending below the virtual baseline of the inscription. This is particularly evident with the tails of the two cobras (𐪓, Gardiner Sign List I12), which reach below the lower tips of the floral emblems 𐪓𐪓 to the right. In contrast to Shabataka's text, the spacing of the hieroglyphs in Shabaka's NLR no. 30 is far more irregular and clearly reflects an effort to prevent overlapping with NLR no. 33. Whereas the imagined baseline of NLR no. 30 is quite uniform and well-defined, the “ascender height” of the individual signs varies considerably and appears to be subject to limitations defined by the already existing carvings above. For example, the name element *Šbk-t3.wj* is represented thrice at the beginning of NLR no. 30, but every time different sign dimensions and spacings were chosen in order to avoid collisions with the descenders of NLR no. 33. This pattern becomes most apparent when comparing the sizes and positions of the three <k> (𐪓) on Fig. 3. While in the case of the first two signs, the upper tips reach the imagined upper borderline of the

86 Among the few published images available are Legrain, *Les temples de Karnak*, 11, Fig. 11; 12, Fig. 12; Lauffray, “Abords occidentaux,” 88, Fig. 6; Dodson, *Afterglow of Empire*, 130, Fig. 97. For references to further images of the quay tribune see PM II², 21–22.

87 The photo negatives and some prints are now housed in the archives of the Chicago House at Luxor. I am indebted to John A. Larson Jr. and Kiersten Neumann for making available to me high-resolution scans of the Epigraphic Survey negative nos. 8744 and 8745.

inscription, the third <k> is markedly smaller and placed at a lower height so as not to cut into the tail of the cobra immediately above. Had NLR no. 33 not already been carved, there would have been no obvious motivation for adjusting the sizes and positions of the three <k> in this particular way. Farther to the left, it looks as if the twined wick <h> (𐎢𐎡) of NLR no. 30 even cuts into the depression belonging to the <ꜥ> of NLR no. 33 (Fig. 4).

Place Fig. 4 approximately here

However, this impression may be due to a photographic illusion fostered by peculiar lighting conditions, and should not be taken as evidence on its own right. A personal examination of this section of the inscriptions in September 2016 yielded no clear result as both signs have suffered greatly from weathering and erosion since the 1920s and their outlines are now rather blurred.

Irrespective of the dubious case of Fig. 4, the evidence described above and illustrated in Fig. 2 is in my opinion sufficient to reach a definitive conclusion regarding the order of kings during the early Twenty-fifth Dynasty:

The carvers of NLR no. 30, dated to Year 2 of Shabaka, clearly took into account the already existing NLR no. 33 dated to Year 3 of Shabataka. This simple fact equals Shabataka's Year 3 having preceded Shabaka's Year 2, which in turn means that Shabataka must have reigned before Shabaka.

4. Conclusions

The preceding paragraphs lead to the following conclusions:

- 1) The analysis of posthumous sources and modern judgements on the probability of historical scenarios are indispensable tools for the historian, but they should not be given precedence over the study of significant contemporaneous archaeological data, if available.
- 2) Establishing the correct order of the first two kings of the Twenty-fifth Dynasty is a problem which should and which can be considered separately from more wide-ranging questions on the chronology and history of Egypt, Nubia and the Ancient Near Eastern during the late eighth century BC. Nevertheless, the entire enterprise becomes meaningless if not followed by exactly such contextualising studies. It is therefore not a matter of relevance, but of priority.
- 3) Upholding the traditional sequence of reigns and considering only the contemporaneous Egyptian sources leads to the impression that the reign of Shabataka was marked by a stark discontinuity in almost all categories of the archaeological record, a phenomenon which cannot be properly accounted for. Adopting chronological models which extend the reign of Shabataka to more than 15 years makes this discontinuity appear even more peculiar.
- 4) The archaeological/epigraphic evidence of the Nile Level Records at Karnak provides in my opinion the strongest support for the reversal of the traditional sequence of kings hitherto put forward. It is also compatible with more general considerations regarding the regain of Kushite dominance over Egypt after Piankhy's campaigns. Quite obviously, NLR no. 33 of Year 3 served Shabataka to make a strong political statement and assert his legitimacy as an Egyptian pharaoh, at least at Thebes. His journey to the City of Amun and the rituals he might have performed there were perhaps nothing more than a first step in his larger endeavour of (re-)conquering northern Upper Egypt and the entire Delta. The supposed Memphite synchronism between Year 2 of a Kushite king (Shabaka/Shabataka?) and Year 6 of Bocchoris does certainly not speak against such a scenario, since the evidence for it has been shown to be elusive at best.⁸⁸ If—as seems likely—Shabataka regarded his visit to Thebes as an important opportunity to stage his political

⁸⁸ Payraudeau, "Retour sur la succession Shabaqo–Shabataqo," 119; Jansen-Winkel, "Beiträge zur Geschichte der Dritten Zwischenzeit," 33–35.

claims, he was probably also responsible for commissioning the enlargement of the quay tribune giving access to the temple of “his father” Amun on exactly this occasion.

Table 1

Family member	King	associated with	at	in year	Graffito/ Source	Trad. chron. ⁸⁹	Chron. distance	Rev. chron. ⁹⁰	Chron. distance
<i>P3-sn-n-Hnsw</i> First generation	Shabaka	Amenirdis I	W. Ham.	12	M 187	c. 710 BC	39 years	c. 694/3 BC	22 years
–	[Shabaka]	Amenirdis (I)	W. Gasus	12	“Double date” graffiti, right col.				
–	[Taharqa]	Shepenupet (II)	W. Gasus	19	“Double date” graffiti, left col.	c. 672 BC	23 years	c. 672 BC	23 years
–	Taharqa	–	W. Ham.	–	M 176, M 189				
<i>Krj=f-Jmn</i> Second generation	–	–	W. Ham.	–	M 70				
<i>Wn-Jmn</i> Second generation	–	–	W. Ham.	–	M 102				
<i>P3-dj-Wsjr</i> Third generation	Psamtek I	Montuemhat	Umm el-Howeit	16(?)	Stela	c. 649 BC		c. 649 BC	
	–	Montuemhat	W. Ham.	–	M 44, M 51, M 52, M 68, M 128				

Table 1. Chronological analysis of graffiti connected with the family of *P3-sn-n-Hnsw* in the Eastern Desert. Dashes indicate the absence of data in the respective category. Royal names inside square brackets indicate that the recorded year date has tentatively been ascribed to this king by the author.

⁸⁹ Based on Hornung, Krauss and Warburton, eds. *Ancient Egyptian Chronology*, 494.

⁹⁰ Based on Broekman, “Some consequences of the reversion of the order Shabaka – Shabataka,” 5.

Figure 1

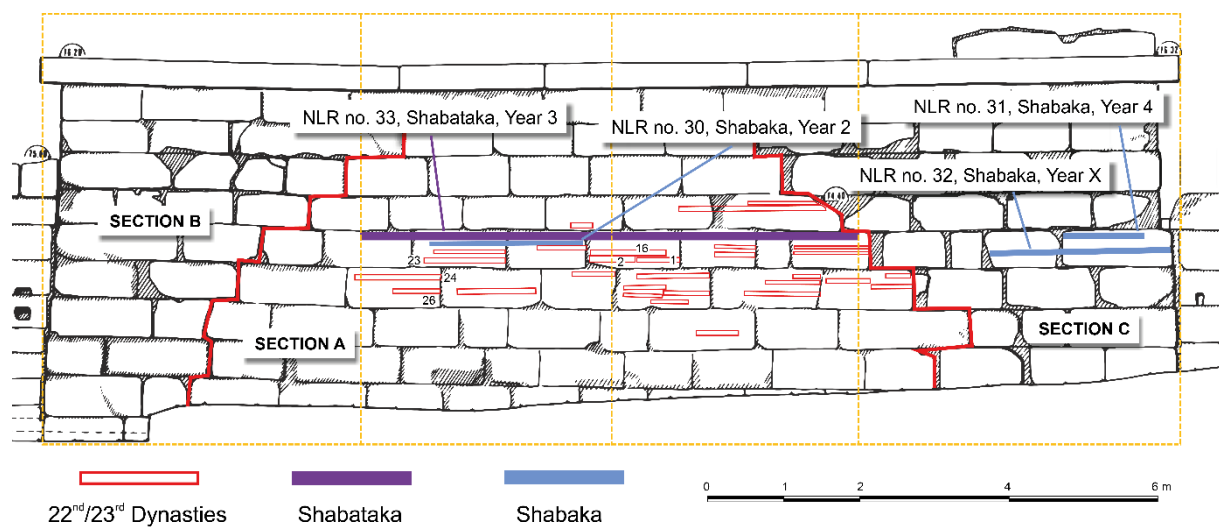


Fig. 2



Fig. 3

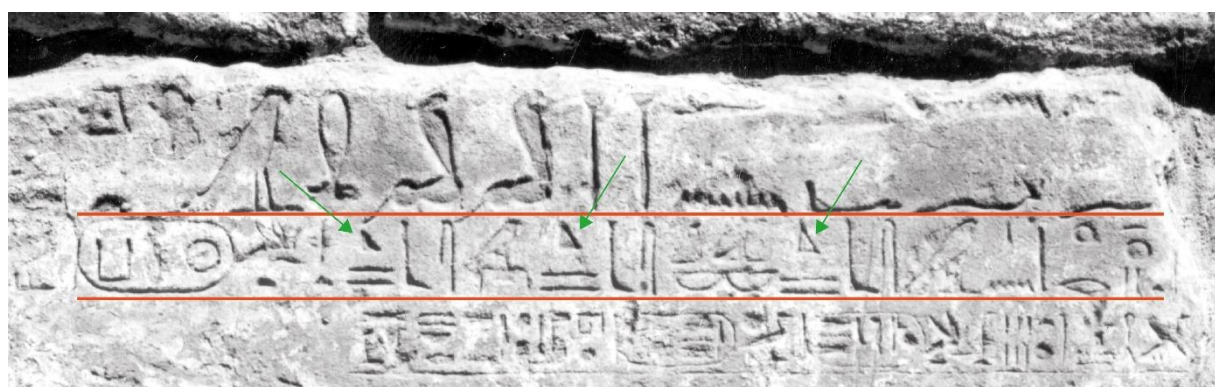


Fig. 4



Bibliography

Agut, D. and J.C. Moreno García. *L'Égypte des pharaons : De Narmer à Dioclétien, 3150 av. J.-C. - 284 ap. J.-C.* Paris: Éditions Belin, 2016.

Arnold, D. *Temples of the Last Pharaohs*. New York/Oxford: Oxford University Press, 1999.

Ayad, M.F. *God's Wife, God's Servant: The God's Wife of Amun (c. 740–525 BC)*. Abingdon/New York: Routledge, 2009.

———. “The Transition from Libyan to Nubian Rule: The Role of the God's Wife of Amun.” In *The Libyan Period in Egypt – Historical and Cultural Studies into the 21st–24th Dynasties: Proceedings of a Conference at Leiden University, 25–27 October 2007*, eds. G.P.F. Broekman, R.J. Demarée and O.E. Kaper, 29–49. Egyptologische Uitgaven 23. Leiden: Neederlands Instituut voor het Nabije Oosten; Leuven: Peeters, 2009.

Bányai, M. “Ein Vorschlag zur Chronologie der 25. Dynastie in Ägypten.” *JEGH* 6 (2013): 46–129.

———. with commentaries by A.I. Blöbaum, G. Broekman, K. Jansen-Winkel, C. Jurman, D. Kahn, A. Lohwasser and H. Neumann. “Die Reihenfolge der kuschitischen Könige.” *JEGH* 8 (2015): 115–180.

Bard, K.A., R. Fattovich and A. Manzo, “The ancient harbor at Mersa / Wadi Gawasis and how to get there: New evidence of Pharaonic seafaring expeditions in the Red Sea.” In *Desert Road Archaeology in Ancient Egypt and Beyond*, eds. F. Förster and H. Riemer, 533–556. Africa Praehistorica 27. Köln: Heinrich-Barth-Institut, 2013.

Beckerath, J.v. “Ein Torso des Mentemhêt in München.” *ZÄS* 87 (1961): 1–8.

———. “The Nile Level Records at Karnak and their Importance for the History of the Libyan Period.” *JARCE* 5 (1966): 43–55.

———. “Die Nilstandsinschrift vom 3. Jahr Schebitkus am Kai von Karnak.” *GM* 136 (1993): 7–9.

———. *Chronologie des pharaonischen Ägypten*. MÄS 46. Mainz: Philipp von Zabern, 1997.

Bierbrier, M.L. *The Late New Kingdom in Egypt (c. 1300–664 B. C.): A Genealogical and Chronological Investigation*. Warminster: Aris & Phillips, 1975.

Biston-Moulin, S. and C. Thiers. *Le temple de Ptah à Karnak, vol. I : Relève épigraphique (Ptah, n^{os} 1–191); vol. II : Relève photographique (Ptah, n^{os} 1–191) (Photographies de Jean-François Gout)*. BiGen 49. Cairo: Institut Français de l'Archéologie Orientale, 2016.

Bongrani Fanfoni, L. “Un nuovo documento di Scepenupet Ia e Amenardis Ia.” *Oriens Antiquus* 26 (1987): 65–71.

Broekman, G.P.F. “The Nile Level Records of the Twenty-second and Twenty-third Dynasties in Karnak: A Reconsideration of Their Chronological Order.” *JEA* 88 (2002): 163–178.

———. “The order of succession of between Shabaka and Shabataka; A different view on the chronology of the Twenty-fifth Dynasty.” *GM* 245 (2015): 17–31.

———. “Genealogical considerations regarding the kings of the Twenty-fifth Dynasty in Egypt.” *GM* 251 (2017): 13–20.

———. “Some consequences of the reversion of the order Shabaka – Shabataka.” *GM* 253 (2017) 1–8.

Couyat, J. and P. Montet, *Les inscriptions hiéroglyphiques et hiératiques du Ouâdi Hammâmât*. MIFAO 34. Cairo: Imprimerie de l’Institut Français d’Archéologie Orientale, 1912.

Depuydt, L., “The date of Piye’s Egyptian campaign and the chronology of the Twenty-fifth Dynasty.” *JEA* 79 (1993): 269–274.

———. “Glosses to Jerome’s Eusebios as a Source for Pharaonic History.” *CdE* 76 (2001): 30–47.

Dodson, A., *Afterglow of Empire: Egypt from the Fall of the New Kingdom to the Saite Renaissance*. Cairo: American University in Cairo Press, 2012.

———. *The Royal Tombs of Ancient Egypt*. Barnsley: Pen & Sword Archaeology, 2016.

Fazzini, R.A. “Several Objects, and Some Aspects of the Art of the Third Intermediate Period.” In *Chief of Seers: Egyptian Studies in Memory of Cyril Aldred*, eds. E. Goring, N. Reeves and J. Ruffle, 113–137. London/New York: Kegan Paul International; Edinburgh: National Museums of Scotland, 1997.

Frame, G. “The Inscription of Sargon II at Tang-i Var.” *Orientalia* 68 (1999): 31–57.

Goyon, G. *Nouvelles inscriptions rupestres du Wadi Hammamat*. Paris: Imprimerie nationale, 1957.

Gundacker, R. “The Chronology of the Third and Fourth Dynasties according to Manetho’s *Aegyptiaca*.” In *Towards a New History of the Egyptian Old Kingdom: Perspectives on the Pyramid Age*, eds. P. Der Manuelian and T. Schneider, 76–199. Harvard Egyptological Studies 1. Leiden/Boston: Brill, 2015.

Gundlach, R., “Wadi Hammamat.” In *LdÄ* VI, 1099–1113.

Hikade, T. *Das Expeditionswesen im ägyptischen Neuen Reich. Ein Beitrag zu Rohstoffversorgung und Außenhandel*. SAGA 21. Heidelberg: Heidelberger Orientverlag.

Hölscher, U. *The Excavation of Medinet Habu V: Post-Ramessid Remains*. Oriental Institute Publications 66. Chicago: The Oriental Institute, 1954.

Hornung, E., R. Krauss and D. Warburton, eds. *Ancient Egyptian Chronology*. Handbook of Oriental Studies I/83. Leiden/Boston: Brill, 2006.

Jansen-Winkel, K. “The Chronology of the Third Intermediate Period: Dyns. 22–24.” In *Ancient Egyptian Chronology*, eds. E. Hornung, R. Krauss and D. Warburton, 234–264. Handbook of Oriental Studies I/83. Leiden/Boston: Brill, 2006.

———. *Inschriften der Spätzeit, Teil II: Die 22.–24. Dynastie*. Wiesbaden: Harrassowitz Verlag, 2007.

———. *Inschriften der Spätzeit, Teil III: Die 25. Dynastie*. Wiesbaden: Harrassowitz Verlag, 2009.

———. “Beiträge zur Geschichte der Dritten Zwischenzeit.” *JEGH* 10 (2017): 23–42.

Jurman, C. “Die Namen des Rudjamun in der Kapelle des Osiris Hekadjet. Bemerkungen zu Titulaturen der 3. Zwischenzeit und dem Wadi Gasus Graffito.” *GM* 210 (2006): 69–91.

———. “Legitimation through Innovative Tradition – Perspectives on the Use of Old Models in Royal and Private Monuments during the Third Intermediate Period.” In *Royal versus Divine Authority, 7. Symposium zur ägyptischen Königsideologie*, eds. F. Coppens, J. Janák and H. Vymazalová, 177–214. Königtum, Staat und Gesellschaft Früher Hochkulturen 4,4. Wiesbaden: Harrassowitz Verlag, 2015.

Kahn, D. “The Inscription of Sargon II at Tang-i Var and the Chronology of Dynasty 25.” *Orientalia* 70 (2001): 1–18.

Khalil, S.M. and K.R. McClay, “Structural control on syn-rift sedimentation, northwestern Red Sea margin, Egypt.” *Marine and Petroleum Geology* 26 (2009): 1018–1034.

Kitchen, K.A. *The Third Intermediate Period in Egypt (1100–650 BC)*, 2nd edition. Warminster: Aris & Phillips, 1986.

———. “The Third Intermediate Period in Egypt: An Overview of Fact and Fiction.” In *The Libyan Period in Egypt – Historical and Cultural Studies into the 21st–24th Dynasties: Proceedings of a Conference at Leiden University, 25–27 October 2007*, eds. G.P.F. Broekman, R.J. Demarée and O.E. Kaper, 161–201. Egyptologische Uitgaven 23. Leiden: Neederlands Instituut voor het Nabije Oosten; Leuven: Peeters, 2009.

Koch, C. „Die den Amun mit ihrer Stimme zufriedenstellen“ – Gottesgemahlinnen und Musikerinnen im thebanischen Amunstaat von der 22. bis zur 26. Dynastie. Studien zu den Ritualszenen altägyptischer Tempel 27. Dettelbach: J.H. Röhl, 2012.

Lauffray, J. “Abords occidentaux du premier pylône de Karnak : Le dromos, la tribune et les aménagements portuaires.” In *Kêmi* 21 (1971): 77–144.


———. “La tribune du quai de Karnak et sa favissa : Compte rendu des fouilles menées en 1971–1972 (2^e campagne).” In *Karnak V (1970–1972)*, 43–76. Cairo: Centre Franco-égyptien d’Étude des Temples de Karnak, 1975.

LD I/2 = Lepsius, C.R., *Denkmaeler aus Agypten und Aethiopien nach den Zeichnungen der von seiner Majestät dem Koenige von Preussen Friedrich Wilhelm IV nach diesen Ländern gesendeten und in den Jahren 1842–1845 ausgeführten wissenschaftlichen Expedition, Abtheilung I: Topographie und Architektur, Band 2*. Berlin: Nicolaische Buchhandlung, 1849–1858.

LD V = Lepsius, C.R., *Denkmaeler aus Agypten und Aethiopien nach den Zeichnungen der von seiner Majestät dem Koenige von Preussen Friedrich Wilhelm IV nach diesen Ländern gesendeten und in den Jahren 1842–1845*

ausgeführten wissenschaftlichen Expedition, Abtheilung V: Aethiopien. Berlin: Nicolaische Buchhandlung, 1849–1858.

LD Text III = Lepsius, C.R., *Denkmäler aus Aegypten und Aethiopien nach den Zeichnungen der von seiner Majestät dem Könige von Preussen Friedrich Wilhelm IV nach diesen Ländern gesendeten und in den Jahren 1842–1845 ausgeführten wissenschaftlichen Expedition. Text, herausgegeben von Eduard Naville unter der Mitwirkung von Ludwig Borchardt bearbeitet von Kurt Sethe, Band III.* Leipzig: J.C. Hinrichs, 1900.

Leahy, T. “The Name of Osiris Written .

Leclant, J. *Recherches sur les monuments thébains de la XXV^e dynastie dite éthiopienne.* Bibliothèque d'Étude 36. Cairo: Imprimerie de l'Institut Français d'Archéologie Orientale, 1965.

———. “The Architecture of the Edifice.” In *The Edifice of Taharqa by the Sacred Lake of Karnak*, R.A. Parker, J. Leclant and J.-C. Goyon, 3–10. Brown Egyptological Studies 8. Providence: Brown University Press, 1979.

Legrain, G. “Les crues du Nil depuis Sheshonq I^{er} jusqu'à Psametik.” *ZÄS* 34 (1896): 119–121.

———. †. *Les temples de Karnak.* Brussels: Vromant & C^o, 1929.

Licitra, N. “Gérer les richesses du temple à l'époque koushito-saïte : Les découvertes récentes dans le Trésor de Shabaqo à Karnak.” *Égypte, Afrique et Orient* 81 (2016): 53–58.

Licitra, N., C. Thiers and P. Zignani. “A Major Development Project of the Northern Area of the Amun-Re Precinct at Karnak during the Reign of Shabaqo.” In *Thebes in the First Millennium BC*, eds. E. Pischikova, J. Budka and K. Griffin, 549–563. Newcastle upon Tyne: Cambridge Scholars Publishing, 2014.

Lohwasser, A. “Vorbemerkung.” In: Bányai, M. with commentaries by A.I. Blöbaum, G. Broekman, K. Jansen-Winkeln, C. Jurman, D. Kahn, A. Lohwasser and H. Neumann. “Die Reihenfolge der kuschitischen Könige.” *JEgH* 8 (2015): 115–116.

Macadam, M.F.L. *The Temples of Kawa. I: The Inscriptions*, London: Oxford University Press, 1949.

Malinine, M. “Un jugement rendu à Thèbes sous la XXV^e dynastie (Pap. Louvre E. 3228c).” *RdE* 6 (1951): 157–178.

Mariette, A. *Karnak : Étude topographique et archéologique.* Leipzig: J.C. Hinrichs, 1875.

Masson, A. “Offering Magazines on the Southern Bank of the Sacred Lake in Karnak: The Oriental Complex of the Twenty-fifth – Twenty-sixth Dynasty.” In *Thebes in the First Millennium BC*, eds. E. Pischikova, J. Budka and K. Griffin, 578–602. Newcastle upon Tyne: Cambridge Scholars Publishing, 2014.

Morkot, R.G. *The Black Pharaohs: Egypt's Nubian Rulers.* London: The Rubicon Press, 2000.

———. “The Late Libyan and Kushite God’s Wives: Historical and Art-historical Questions.” In *“Prayer and Power” Proceedings of the Conference on the God’s Wives of Amun in Egypt during the First Millennium BC*, eds. M. Becker, A.I. Blöbaum and A. Lohwasser, 107–119. ÄAT 84. Münster: Ugarit-Verlag, 2016.

Mosshammer, A.A., ed. *Georgii Syncelli Ecloga Chronographica*. Bibliotheca Scriptorum Graecorum et Romanorum Teubneriana. Leipzig: B.G. Teubner, 1984.

Murnane, W.J. *Ancient Egyptian Coregencies*. Studies in Ancient Oriental Civilization 40. Chicago: The Oriental Institute, 1977.

Payraudeau, F. “Retour sur la succession Shabaqo–Shabataqo.” *NeHeT1* (2014): 115–127. Accessed 26 June 2017. <http://sfe-egyptologie.website/index.php/publications/la-revue-nehet>

Perdu, O. “L’avertissement d’Aménirdis I^{ère} sur sa statue Caire JE 3420 (= CG 565).” *RdE* 47 (1996): 43–66.

———. “De Stéphinatès à Néchao ou les débuts de la XXV^e dynastie.” *CRAIBL* 2002, fasc. 4 (2002): 1215–1243.

PM II² = Porter, Bertha, R.L.B. Moss and E.W. Burney, *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Statues, Reliefs and Paintings, Vol. II: Theban Temples, second edition, revised and augmented*. Oxford: At the Clarendon Press, 1972.

Pope, J. “Shepenwepet II and the Kingdom of Kush: Implications of a Recent Study.” In *Joyful in Thebes: Egyptological Studies in Honor of Betsy M. Bryan*, eds. R. Jasnow and K.M. Cooney, 357–364. Material and Visual Culture of Ancient Egypt 1. Atlanta, GA: Lockwood Press.

Redford, D.B. “An Interim Report on the Second Season of Work at the Temple of Osiris, Ruler of Eternity.” *JEA* 59 (1973): 16–30.

———. “A Note on the Chronology of Dynasty 25 and the Inscription of Sargon II at Tang-i Var.” *Orientalia* 68 (1999): 58–60.

Ritner, R.K. “Libyan vs. Nubian as the Ideal Egyptian.” In *Egypt and Beyond: Essays Presented to Leonard H. Lesko upon his Retirement from the Wilbour Chair of Egyptology at Brown University June 2005*, eds. S.E. Thompson and P. Der Manuelian, 305–314. Providence: Department of Egyptology and Ancient Western Asian Studies, Brown University, 2008.

———. *The Libyan Anarchy: Inscriptions from Egypt’s Third Intermediate Period*. Writings from the Ancient World 21. Atlanta: Society of Biblical Literature, 2009.

Traunecker, C. “Les éléments historiques livrés par les inscriptions nilométriques.” In Lauffray, J. “La tribune du quai de Karnak et sa favissa : Compte rendu des fouilles menées en 1971–1972 (2^e campagne).” In *Karnak V (1970–1972)*, 58–63. Cairo: Centre Franco-égyptien d’Étude des Temples de Karnak, 1975.

Van Siclen III, C. “A kiosk (?) of Shabako at Luxor temple.” *Varia Aegyptiaca* 6/3 (1990): 177–183.

Vikentiev, V. “Les trois inscriptions concernant la mine de plomb d’Oum Huetat.” *ASAE* 54 (1957): 179–189.

Waddell, W.G., ed. *Manetho*. LCL 350. Cambridge, MA: Harvard University Press, 1940.

Wallraff, M., ed., with Umberto Roberto and, for the Oriental Sources, Karl Pinggéra, Translated by William Adler. *Iulius Africanus Chronographiae: The Extant Fragments*. Die Griechischen Christlichen Schriftsteller der ersten Jahrhunderte (GCS), Neue Folge 15. Berlin/New York: Walter de Gruyter, 2007.

Figure captions

Fig. 1 Overview of the Nile Level Records on the façade of the quay tribune at Karnak from the Twenty-second to the early Twenty-fifth Dynasty (adapted from Lauffray, “Abords occidentaux,” 58, Fig. 6*bis*).

Fig. 2 Middle section of NLR nos. 33 and 30. Detail of Chicago Oriental Institute photo no. 8744 B with captions added by author. (Courtesy of the Oriental Institute of the University of Chicago).

Fig. 3 Detail of NLR no. 30 showing adaptation of size and spacing of hieroglyphs in relation to NLR no. 33 above. Detail of Chicago Oriental Institute photo no. 8744 B with lines added by author. (Courtesy of the Oriental Institute of the University of Chicago).

Fig. 4 Detail of NLR no. 30 showing a part of the word *h^cpi*. Note how the upper edge of the twined wick <*h*> seems to cut into the depression belonging to the <^c> of NLR no. 33 above. Detail of Chicago Oriental Institute photo no. 8744 B. (Courtesy of the Oriental Institute of the University of Chicago).