

AKADEMIE DER WISSENSCHAFTEN UND DER LITERATUR

Abhandlungen der  
Geistes- und sozialwissenschaftlichen Klasse  
Einzelveröffentlichung Nr. 17

**Svenja A. Gülden, Tobias Konrad, Ursula Verhoeven (Hrsg.)**

## **Ägyptologische „Binsen“-Weisheiten IV**

**Hieratisch des Neuen Reiches: Akteure, Formen und Funktionen**

Akten der internationalen Tagung  
in der Akademie der Wissenschaften und der Literatur | Mainz  
im Dezember 2019



AKADEMIE DER WISSENSCHAFTEN UND DER LITERATUR • MAINZ  
FRANZ STEINER VERLAG • STUTTGART

Schutzumschlag:

Statuette eines Schreibers aus Theben, 1391–1353 v. Chr., 18. Dynastie, Serpentin,  
Höhe 12,5 cm, New York, Metropolitan Museum Acc. no. 31.4.1a.  
<https://www.metmuseum.org/art/collection/search/544521>.

Bibliografische Information der Deutschen Nationalbibliothek

Die Deutsche Nationalbibliothek verzeichnet diese Publikation in der Deutschen Nationalbibliografie; detaillierte bibliografische Daten sind im Internet über <http://dnb.d-nb.de> abrufbar.

ISBN: 978-3-515-13333-3

© 2022 by Akademie der Wissenschaften und der Literatur | Mainz

Alle Rechte einschließlich des Rechts zur Vervielfältigung, zur Einspeisung in elektronische Systeme sowie der Übersetzung vorbehalten. Jede Verwertung außerhalb der engen Grenzen des Urheberrechtsgesetzes ist ohne ausdrückliche Genehmigung der Akademie und des Verlages unzulässig und strafbar.

Satz: Tobias Konrad M.A., AKU-Projekt

Druck: Druckerei & Verlag Steinmeier GmbH & Co. KG, Deiningen

Gedruckt auf säurefreiem, chlorfrei gebleichtem Papier

Printed in Germany

# Dating of literary ostraca with the *Hieratische Paläographie der nicht-literarischen Ostraka der 19. und 20. Dynastie* by Stefan Wimmer – an experiment\*

ANDREAS DORN

## Abstract

For around one hundred years the *Hieratische Paläographie* by Georg Möller was the only diachronic and diatopic chrestomathy. It was used for all kind of purposes, from identifying signs to approximately dating texts – not just literary ones, for which the chrestomathy was principally produced, but also administrative texts. With the publication of Wimmer's *Hieratische Paläographie* in 1995, there now existed a chrestomathy for administrative texts from Deir el-Medine, covering a period of around 250 years. As an experiment, Wimmer's palaeography was tested as a means of dating literary texts, which were exemplified by a pre-existing small group of signed and, therefore, quite well-dated texts. On the one hand it could be shown that this works quite well, whilst on the other it demonstrated that earlier identified signs relevant for dating, such as  $\overline{\text{D}}\text{51} + \text{D40}$  and  $\ominus$  (Aa1), are quite reliable tools. Local idiosyncrasies could be detected, as could exceptions to the changes observed in the use of signs over time owing to the human factors, which always have an impact in studies into handwriting styles.

## Introduction

For a long time, and until a digital palaeography becomes accessible,<sup>1</sup> the palaeography of Georg Möller<sup>2</sup> remains the only diachronic, as well as diatopic chrestomathy, which on the one hand is used to identify hieratic signs and on the other to date texts or as a dating reference tool.<sup>3</sup> Other palaeographies have been compiled, such

---

\* In memory of the 100<sup>th</sup> anniversary of Georg Möller's death (5. November 1876, Caracas – 2. Oktober 1921, Uppsala).

1 For a recent overview, see Gulden, Krause and Verhoeven 2020. I would like to thank S. Polis for his comments on an earlier draft of this paper, S. Wimmer for the permission to include several of his tables, Muhammad Ragab for producing the figures and B.G. Davies for correcting my English and further rectifications.

2 Möller <sup>3</sup>1927.

3 For Möller's palaeography and its precursors, see the summary by Polis 2020, 552–553.

as those of Edel and Goedicke.<sup>4</sup> In the last thirty years, quite a number of publications of hieratic texts have included palaeographic tables which have allowed access to more signs, attested in different text categories,<sup>5</sup> from different places, as well as from different periods. However, most of these tables consist of signs from one document or from a group of documents from the same place and period.<sup>6</sup>

The second volume in Möller’s palaeography, covering the period of the New Kingdom, is based on different administrative, juridical, literary and even religious papyri (table 1) written in the so called “Buchschrift”, which he considers as a neat form of cursive writing.<sup>7</sup> Möller does not explicitly state that the formal appearance of the writing is the unifying factor in presenting signs from texts from different genres. The intended addressees and/or the place of production are, in most cases, related to the court or the higher administration, which explains the high formal quality of the hieratic writing that was formerly designated as “Kanzleischrift”. As already stated, Möller’s palaeography has not only been used to identify signs in literary texts or to propose dates for them,<sup>8</sup> but also, due to the lack of a comparable chrestomathy for other text genres, for transliterating and analysing administrative texts which were written less neatly in “Alltagsschrift”, administrative cursive writing.

Table 1: Overview on the documents used by Möller for the second volume of his *Hieratische Paläographie*<sup>9</sup>

Document	Date	Provenance	Content
P. Louvre 3226	T. III	Not stated: Thebes?	Admin.: Deliveries and accounts of dates
Berlin P. 3029 Lederhandschrift	A. II	Thebes	Copy of building inscription of Senwosret I

continued on next page

4 Edel 1980; Goedicke 1988.

5 When articles or books were not consciously referenced, valuable tables of object related palaeographical studies are hard to be found as, for example, in the case of Lakomy 2008, 110.

6 For a systematic overview, see Polis 2020, 553.

7 Möller 1927 II, Introduction 7–15. Besides these basic documents, it has to be noted that for each period Möller used complementary texts from approximately the same time as the basic document.

8 An example of another use of Möller’s palaeography is the analysis of the signs reproduced by Möller to identify particular writing practices of a scribe or those of different scribes, as well as for the comparison of the hieratic and the hieroglyphic scripts. For the latter, see Gasse 2018.

9 Cf. also the updating of Möller’s sources for the New Kingdom with references to single documents and inventory numbers by Tobias Konrad: <https://doi.org/10.5281/zenodo.4638768> [18 Aug 2021].

## Dating of literary ostraca

Document	Date	Provenance	Content
“Gurob”	A. III+A. IV	Gurob	Admin.: juridical texts; protocols
P. Rollin P. Paris BN 203–213	S. I	Memphis	Admin.: royal accounts
“Ennene”	S. II, Si., Mer.	Saqqara/Memphis	Lit.: P. d’Orbiney, P. Anastasi II, Sallier II, Anastasi IV + V
“Pentoere”	Mer.	Thebes?	Lit.: Sallier I, Sallier III
P. Harris	R. III–IV	Thebes	Temple endowments and history of the reign of Ramesses III
P. Harris	R. III–IV	North: Memphis, Heliopolis	Temple endowments and history of the reign of Ramesses III
P. Abbott	R. IX	Thebes	Court case: tomb robberies
“Ndm.t”	Herihor	Thebes	Rel.: BD

This lack of a chrestomathy for cursive administrative texts was, at least for non-literary texts from Deir el-Medine, partly rectified by the palaeography produced by Stefan Wimmer.<sup>10</sup> Based on the past application of Möller’s palaeography for cursive non-literary texts, the idea came about to test to see whether Wimmer’s palaeography of cursive non-literary ostraca can also be used to date literary texts written in a literary ductus.

## Preliminaries

The two palaeographies conceptually show some major differences: the palaeography by Wimmer contains ostraca from one place (Deir el-Medine), whilst the one by Möller covers papyri from several locations. Möller took the signs which he considered as being representative of a period, usually from one long(er) document enriched with some additional texts; Wimmer used signs from several dated ostraca containing much shorter texts, which led to the appearance of a larger number of different sign forms in his charts (variations) since the texts used were written by different scribes. A marked difference between the two chrestomathies is the greater amount of sign groups and entire words in Wimmer’s palaeography. This new broader approach has led to a shift from the focus on isolated signs to the analysis of sign groups which are more representative.<sup>11</sup> This approach also takes into account the fact that in administrative texts the number of ligatures is higher. The inclusion

<sup>10</sup> Wimmer 1995.

<sup>11</sup> After Wimmer 1995, the analysis of sign groups and entire words (especially names) was, amongst others, also adopted by van den Berg and Donker van Heel 2000. An earlier example

of more texts in Wimmer's palaeography would have made it even more valuable, with the result that some of the gaps in his charts could have been avoided. Due to the limited number of analysed texts, several signs are only attested in one period (19<sup>th</sup> but not in the 20<sup>th</sup> dynasty, or vice versa) or only for a few reigns, which consequently reduces the quantity of usable signs for dating purposes.<sup>12</sup>

## Limits in using Wimmer's palaeography for dating purposes

The result of Wimmer's work is summarised in three plates<sup>13</sup> which contain 58 signs (fig. 1).<sup>14</sup> Their forms show distinctive differences between the 19<sup>th</sup> and the 20<sup>th</sup> dynasty, so that they can be used for dating purposes,<sup>15</sup> but in only 29 cases (50 %) signs from both dynasties formed part of the tables. This number becomes even smaller when signs, which are not or only rarely attested in literary texts such as numbers or the sign group for 'year', were excluded.

---

can be mentioned which was mainly caused by the limited set of words (names and products) in the respective corpus, see Edel 1980.

- 12 One has to take into account that Wimmer's palaeography was a PhD thesis. Therefore, the definition of a manageable corpus (number of texts) is self-evident, and with the decision to use only dated texts the work is based on safe grounds, thereby avoiding circular dating. It is not the aim of the author to criticise the work of Wimmer but, as stated in the title of this paper, to use it for an experiment to test his palaeography for a purpose other than what it was originally intended. Furthermore, it has to be noted that at the time of the publication of Wimmer's palaeography works such as those of Davies 1999 and Janssen 2005 had not yet appeared. The former would have allowed the inclusion of a greater number of texts based on the well-dated biographies of many of the people from Deir el-Medine; the latter contained in diachronic order one specific administrative text group, which could be a suitable corpus to be further investigated for palaeographical and dating purposes.
- 13 Wimmer 1995 I, 245–247. Wimmer stressed that these plates had to be used in combination with the detailed discussion of each sign or sign group.
- 14 Sign will be used here for practical reasons for each entry in Wimmer's tables, including sign, ligatured sign, as well as words.
- 15 It has to be stressed that the distinction between 19<sup>th</sup> and 20<sup>th</sup> dynasty made by Wimmer for the description of the development of sign forms and the observation of changes is primarily an artificial one. The distinction works quite well, but changes take a certain time as will be shown below in the discussion of the eye sign  $\curvearrowright$  (D4) and as Wimmer 1998, 1233, also pointed out when he presented 19<sup>th</sup> dynasty examples of the sign  $\ominus$  (Aar), which is relevant to 20<sup>th</sup> dynasty dating. Therefore, the short chronological units, largely corresponding to an individual reign, are very useful for describing the development of the changes (see fig. 2 for the chronological organization of the tables and the wider dividing line between the 19<sup>th</sup> and 20<sup>th</sup> dynasty).

Dating of literary ostraca

O.1 	O.1/D.21/X.1(N.5) 		P.6 	S.29 	(G.7/)S.34/U.28/S.29 		
b 	b 	c 	a 	a 			
	a 			b 	b 		
T.3 	U.10/BB.7 	V.28 	V.30 	W.22 	X.1 	X.1/G.1 	
	a 	d 		b d 	a b 	b 	
c 	b 	e 	a 		c 	c f 	
X.1/Z.7 	Y.3 	Y.5/N.35 M.17/Y.5/N.35 		Z.7/Y.1 	AA.1 		
	b 	a 			a aa 		
b c 	a d 	b c d 	c 	b ba 			
AA.18 	AA.28 	Cc.2 	Cc.3 	Cc.4 	Cc.10 	Cc.20 	Cc.30 
a 	a b 	a 					
b 	c d 	c 	b b 	b 	b 	c 	

Fig. 1: Summarizing table showing signs with distinct forms in the 19<sup>th</sup> dynasty (2<sup>nd</sup> line, below hieroglyphic equivalent in 1<sup>st</sup> line) and the 20<sup>th</sup> dynasty (3<sup>rd</sup> line). Empty fields illustrate the limited diachronic use of some signs for dating purposes (Wimmer 1995 I, 247)



Dating of literary ostraca



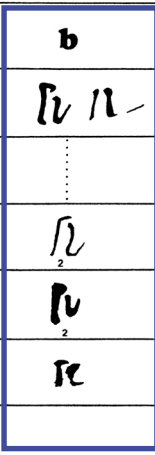










































Y. 3				M: 537	
SETHOS I.	<b>a</b> 				
1-25 RAMSES II.			<b>b</b>		
26-45 RAMSES II.	 <small>15</small>		 	<b>c</b>	<b>d</b>
46-67 RAMSES II.			⋮		
MERNEPTAH	 <small>2</small>		 <small>2</small>	⋮	⋮
AMENMESSE	 <small>6</small>		 <small>2</small>	⋮	⋮
SETHOS II.	 <small>3</small>			⋮	⋮
SIPTAH/ TAWOSRET	⋮				⋮
SETHNACHTE				⋮	⋮
1-11 RAMSES III.	 <small>2</small>  <small>2</small>				
12-21 RAMSES III.	 <small>4</small>  <small>4</small>  <small>10</small>			⋮	
22-32 RAMSES III.	 <small>3</small>  <small>10</small>  <small>10</small>		⋮	 <small>10</small>	
RAMSES IV.	 <small>4</small>  <small>10</small>  <small>10</small>  <small>10</small>  <small>10</small>		⋮		
RAMSES V.			⋮		
RAMSES VI.			⋮		
RAMSES VII.			⋮		
RAMSES IX.	 <small>4</small>  <small>10</small>				

Fig. 2: The sign form variants of the scribal palette  $\text{𓏏}$  (Y3) with always attested type a and only in the 19<sup>th</sup> dynasty attested type b (after Wimmer 1995 II, 382)

upper left to lower right but slightly turning downwards at its right end – and the 20<sup>th</sup> dynasty type b of that stroke on the right side of the sign which is connected with the horizontal stroke or added separately to it and turning down to the left, similar to a comma “,”.<sup>18</sup> Generally, this change in the sign structure is distinctive for both dynasties, though there are some earlier attestations (Ramesses II) for the “younger form” of the sign in writings of  jr + r + (.t) and  jr.n (see Wimmer 1995 II, 29, pl. D. 4/D. 21/X. 1), 30 pl. D. 4/N. 35) and some longer attested “u”-forms of the right hand stroke of the sign (see fig. 3). Therefore, it was quite reasonable not to include the eye  (D4) as a strong dating marker in the final tables. But the sign shows two distinct forms, which could support dates based on other signs. Type b, with the comma-like downwards-oriented last stroke of the sign, fits the general observation that the sign forms are becoming more ligatured in the 20<sup>th</sup> dynasty compared to the 19<sup>th</sup> dynasty, allowing in the case of the eye  (D4) a faster, more efficient, writing with the option of making a ligature with the sign below, as was also the case with the above-discussed  (Y5 + N35) or with the group r +  (D21 + D36) for which a new ligatured type is attested for the 20<sup>th</sup> dynasty (see Wimmer 1995 II, 35, pl. D. 21/D. 36: type c).

## The identification of idiosyncrasies in the use of signs at Deir el-Medine

Before proceeding to some of the sign forms which can clearly be attributed to the 19<sup>th</sup> or 20<sup>th</sup> dynasty, it has to be mentioned that Wimmer’s *Hieratische Paläographie* could contain local idiosyncrasies due to the exclusive use of texts from Deir el-Medine. This is already partly the case with the eye  sign (D4), which shows in administrative, as well as in literary, texts from the middle of the 20<sup>th</sup> dynasty onwards the form with the short comma “,”-like final stroke, whereas in texts from elsewhere this form is far less frequently attested than the longer nearly horizontal stroke, mainly slightly turning downwards, and the continued existence of some “u”-like final strokes as described above.

When one compares Wimmer’s types – one with a long final stroke (right end of the sign) drawn from the upper left to lower right (describing structurally a “u”) and one also drawn from the upper left to lower right but slightly turning downwards at its right end – with the entries of , D4 (and also , D6) in Möller’s palaeography (fig. 4), it becomes clear that these two forms were, according to Möller, present in literary texts during the entire New Kingdom, whereas at Deir el-Medine the

<sup>18</sup> As fig. 3 shows, Wimmer defined several types (for the applied criteria for each type, see Wimmer 1995 I, 150–151) which were for practical reasons reduced here to only three different types.













































Hierogl.	Louvre 3226	Lederhs.	GurÖb	P. Rollin	Ennene	Pentoere	Harris Th.	Harris H. M.	P. Abbott	Ndm-t
82  Dy n 18	 9,8  2,11	 a,5	 P 9785,6  P 9784,6	 206,5  205u,5	 V (A,5),12	 II S 1,8  II S 2,10  I S 4,12	 3,11  17a,14	 25,12  7c  48,3  16c	 2,2  4,15	 4,17
83  Dy n 18		 a,2,10	 II (1)10	 204,III,9	 14,1  6,1c	 III S 2,3  7,5,8,9	 7,7	 25,5 Jc  48,9 m	 2,8  7,1	 4,2

Fig. 4: Attested forms of the signs  (D4) and  (D6) in neat formal cursive writing with the constant presence of Wimmer's type a (see above fig. 3) and the mainly Theban form of the sign with the “,”-like right final stroke typical for the 20<sup>th</sup> dynasty (after Möller <sup>2</sup>1927 II, 7)

form with the “,”-like final stroke becomes predominant in the 20<sup>th</sup> dynasty. What attracts further attention is that this can also be seen in Möller's palaeography in which the  sign (D4) with the “,”-like final stroke is characteristic for Theban manuscripts of the 20<sup>th</sup> dynasty, pointing to a local use of this sign form (fig. 4).<sup>19</sup>

The validity of Wimmer's tables that consist of signs from administrative texts for the dating of literary texts shall be illustrated (table 2) with an example from a witness to the teaching of Amennakhte which can be firmly dated to the middle of the 20<sup>th</sup> dynasty, with the oldest definitively dated copy being from year 26 of Ramesses III,<sup>20</sup> and also with an example from the letter of Menna from the same period, both of which were written by quite experienced hands. These two texts confirm the observations made above concerning the use of the form of  (D4) and  (D6) with the “,”-like final stroke at Deir el-Medine and the application of Wimmer's palaeography for the dating of literary texts (from Deir el-Medine). Another example from the teaching of Amennakhte (O. Basel Tal der Könige 732), written by a less experienced scribe, most probably a pupil,<sup>21</sup> shows on the one hand that the period of use of the “older” form of  (D4) can be extended somewhat further, whilst on the other hand the variety of signs used by that scribe<sup>22</sup> can also reduce the validity of signs for dating purposes. In the case of O. Basel Tal der Könige 732 all three forms of the sign are attested in the same text. Here, in addition to the reasons put forward in explaining that phenomenon in the letters of Thutmose,<sup>23</sup> one is inclined to explain the use of different sign forms by a lack of routine, a certain uncertainty, or a pupil who has not yet found his best writing style. However, what all three texts have in common is the particular form used for  (Aa1, h).



19 For diatopic differences in writing styles, see already Möller <sup>2</sup>1927 II, Introduction, 2–3, 12–13.

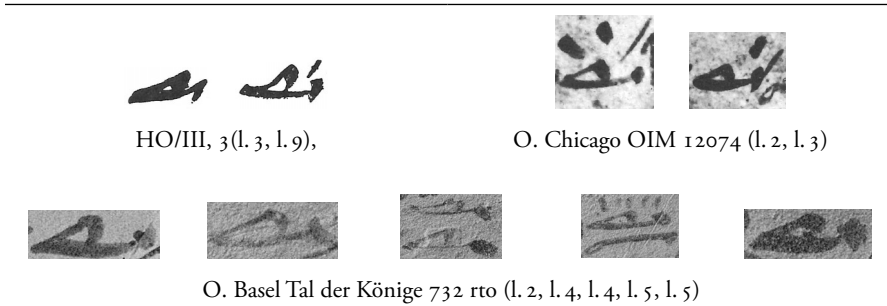
20 See Dorn 2013, 124 (O. Lacau = HO III/3).

21 Dorn 2004, 46–47.




22 See Janssen 1987, who already raised that issue over twenty years ago.


23 See Janssen 1987.

Table 2:  (D4) and  (D6) attested in some of the witnesses of the teaching of Amen-nakhte (HO III/3 and O. Basel Tal der Könige 732) and in the letter of Menna (O. Chicago OIM 12074)<sup>24</sup> (not to scale)



## Discussion of some of the dating relevant signs with a particular focus on (Aa1, *h*)

Clear cases of dating relevant signs are  (Aa1)<sup>25</sup> as well as the sign group  (D51 + D40), which is attested for example as the determinative of the title *sš-ḳd*. In the 19<sup>th</sup> dynasty the former sign has two visual variants based on the form of an “s”. One, type a, with open loops, sometimes slightly bent to the left, the other one, type aa, without openings and looking more like a horizontal “8” but with the same stroke sequence (see Wimmer 1995 II, 396, pl. Aa. 1). Type aa sometimes resembles the 20<sup>th</sup> dynasty form, which makes analysis of the ductus essential for a clear distinction before the sign is used for dating purposes. The 20<sup>th</sup> dynasty form of the sign  (Aa1), type b, consists of a circle drawn in one movement built by a loop with the end of the stroke leading from the right side or the top inside the circle. This sign form, clearly structurally different from the 19<sup>th</sup> dynasty precursor, is not only attested in isolated use but also in combination with other signs in words or sign sequences, such as *hn*, *hr*, *ht* and others (see Wimmer 1995 II, 397–399, 401–403).

When Wimmer’s palaeography (fig. 5) is compared with that of Möller (fig. 6), it becomes obvious that Wimmer’s type b of the sign  (Aa1), characteristic for its

24 Černý and Gardiner 1957 I, pl. III/3; Dorn 2011, pl. 636. Černý and Gardiner 1957 I, pl. LXXIIA. I’m aware of using here drawings as well as photographs which is from a methodological point of view disputable. In the case of HO III/3 (no photograph of the ostrakon is known to me) the quality of the rendering of the signs seems to me good and clear enough for the purpose here.

25 Wimmer 2000, 355: “Mit diesem Zeichen liegt eines der deutlichsten Datierungsmerkmale vor.”

AA . 1 / D . 21	AA . 1 / N . 35	AA . 1	H:57/91	H:57/331	H:57/9
SETIWS I.	SETIWS I.	SETIWS I.			
1-25	1-25	1-25			
RAMSES II.	RAMSES II.	RAMSES II.			
26-45	26-45	26-45			
RAMSES II.	RAMSES II.	RAMSES II.			
46-67	46-67	46-67			
RAMSES II.	RAMSES II.	RAMSES II.			
MEKNEPTAH	MEKNEPTAH	MEKNEPTAH			
AMENESSE	AMENESSE	AMENESSE			
SETIWS II.	SETIWS II.	SETIWS II.			
SIPTAH/ TAMSBRET	SIPTAH/ TAMSBRET	SIPTAH/ TAMSBRET			
SETIMOCHE	SETIMOCHE	SETIMOCHE			
1-11	1-11	1-11			
RAMSES III.	RAMSES III.	RAMSES III.			
12-21	12-21	12-21			
RAMSES III.	RAMSES III.	RAMSES III.			
22-32	22-32	22-32			
RAMSES III.	RAMSES III.	RAMSES III.			
RAMSES IV.	RAMSES IV.	RAMSES IV.			
RAMSES V.	RAMSES V.	RAMSES V.			
RAMSES VI.	RAMSES VI.	RAMSES VI.			
RAMSES VII.	RAMSES VII.	RAMSES VII.			
RAMSES IX.	RAMSES IX.	RAMSES IX.			

387

388

386

Fig. 5: The two distinct, dating relevant, forms of sign  $\ominus$  (Aaa) in administrative cursive writing as attested in the 19<sup>th</sup> (upper half) and in the 20<sup>th</sup> dynasty (lower half), used alone or in combination with other signs (after Wimmer 1995 II, 396–398)

use at Deir el-Medine during the 20<sup>th</sup> dynasty,<sup>26</sup> is attested hundreds of years earlier in formal cursive writings throughout the country,<sup>27</sup> namely in Papyrus Prisse (from Thebes) as well as in the Illahun papyri according to Möller.<sup>28</sup> Wimmer's type a, the distinctive form used during the 19<sup>th</sup> dynasty at Deir el-Medine, seems therefore to be an idiosyncratic phenomenon when it is used in literary texts at Deir el-Medine (see below). According to Möller's palaeography, Wimmer's type a is attested at least between the late Middle Kingdom (P. Berlin P. 3022 with the story of Sinuhe)<sup>29</sup> and the beginning of the New Kingdom (P. Ebers).

574												
	Thutmosis III.		Amenophis II.	Amenoph. III/IV.		Sethos I.	Menephtah, Sethos II.		Ramses IV.		Ramses IX.	21. Dynastie

Fig. 6: The sign  $\ominus$  (Aar) diachronically and diatopically always attested in neat formal cursive writing corresponding to Wimmer's type b (after Möller 1927 II, 51)

The same but inverted case of a sign (see above scribal palette  $\text{𓏏}$ , Y3) which is attested according to Möller's palaeography during the entire New Kingdom in the same form and with a use of that form at Deir el-Medine only during one of the two dynasties under discussion because of a change of the sign form, can be witnessed with the Seth-animal ( $\text{𓏏}$ , C7).<sup>30</sup> The change in the use of the sign instead of the change of the form of the sign makes this case even more particular. In literary texts the recumbent animal is frequently attested, whereas in administrative texts from Deir el-Medine the use of the form of the sitting god with the head of the Seth-animal is only attested from the reign of Sety II onwards. Janssen was the first to observe that this change could be considered as a dating criterion:




26 When Stefan Wimmer analysed further texts after the publication of his *Hieratische Paläographie* he found earlier attestations of type b with a use already from Sety II onwards, see Wimmer 1998, 1233.

27 The exclusive use of type b in literary texts was by referring to Möller already noted by Janssen in his review of Wimmer 1995, see Janssen 1997b, 343.



28 See Möller 1927 I, 55 (574).


29 See Möller 1927 I, 55 (574). The papyrus was acquired by Athanasi without any indication of an archaeological context, though a Theban origin seems to be the most plausible one, which would diatopically support the idiosyncratic form attested several hundred years later at Deir el-Medine. For the origin of the papyrus, see Parkinson 2001, 72.

30 Janssen 1997a; compare Möller 1927 II, 12 (144) with Wimmer 1995 II, 22 (C.7). The appearance of the sitting form can also be observed in Möller 1927 II, 6 (73) from the time of Sety I onwards.

“Summarizing, the name of the god Seth is in ostraca from the Nineteenth Dynasty fairly consistently written as , whereas during the Twentieth it appears as , less commonly as , and only very seldom as the recumbent animal. *Although a few exceptions do occur* (italics: AD), the form of the Seth-sign appears to be a reliable criterion for dating a relevant text to one of the two periods.”<sup>31</sup>

It is worth mentioning that Janssen pointed to the possibility that exceptions do occur, for which some reasons can be proposed: the fact that elsewhere (topographic) or in other writing styles (by structure) the “other” sign form is still in use in parallel creates the possibility that the sign can pop up more or less by chance because scribes can still be in contact with it. Another possibility is that some scribes do still use the old form.<sup>32</sup> Furthermore, it has to be noted that Janssen added a footnote to the above-cited final sentence of his article in which he stated that the validity of his observations for texts from outside of Deir el-Medine, for example Memphis, should form part of another study. This may refer to a consultation of Möller’s plates (see above footnote 19) and also indicates that Janssen also considered the possibility of idiosyncrasies.<sup>33</sup>

It can be shown that during the 19<sup>th</sup> dynasty the use of the “s” like  (AaI) in Deir el-Medine is not limited to administrative texts, but was also used in literary texts, which confirms the assumption that the palaeography by Wimmer can be used for dating purposes for both text genres. The use of Wimmer’s type a of  (AaI) in a literary text from Deir el-Medine can be seen on O. Cairo CG 25216 containing the story of Sinuhe, which was found in the tomb of Sennedjem (fig. 7).

The consistent use of the sign form across different genres makes it a marker for local scribal traditions. It is further remarkable that the 19<sup>th</sup> dynasty administrative form of  (AaI) attested at Deir el-Medine can even be found in some copies of the Kemyt, as on O. DeM 1163,<sup>34</sup> O. DeM 1172 + O. Cairo JdE 56842,<sup>35</sup> and on O. DeM 1847,<sup>36</sup> thus indicating the impact the sign form had on scribes even when they were

---

<sup>31</sup> Janssen 1997a, 145.

<sup>32</sup> For that phenomenon, resulting in the parallel presence of sign forms typical for different periods, see Janssen 1997b, 340, 344.

<sup>33</sup> It is quite astonishing to observe that Janssen published his critical review of Wimmer’s palaeography (“... very useful dissertations are written in which the author demonstrates that a particular approach to a problem does not lead to results”, Janssen 1997b, 344) in the same year as his article (Janssen 1997a) in which he proposes considering one single sign as dating relevant, which itself faces identical problems such as exceptions, variations, the parallel existence of the other sign forms in literary texts, etc.

<sup>34</sup> Mathieu and Ritter 2008, 211, pl. 8.

<sup>35</sup> Posener 1951/1952/1972, pl. 23.

<sup>36</sup> Gasse 2005, 128.

## Dating of literary ostraca

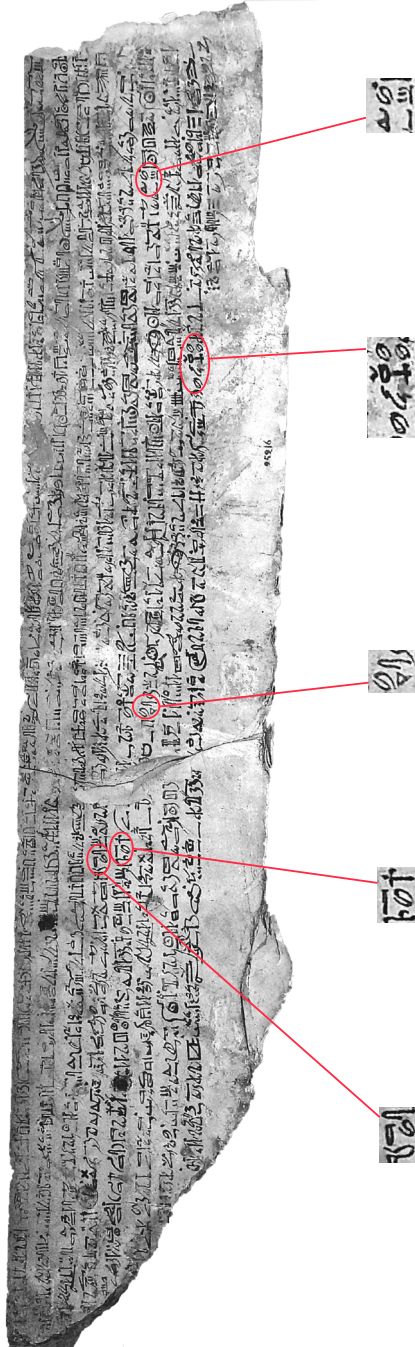


Fig. 7: The so-called Sinuhe O. Cairo CG 25216, found in the tomb of Sennedjem (TT 1) at Deir el-Medine, dating to the 19<sup>th</sup> dynasty, showing the idiosyncratic 𓂏 (Aat), the lying “s”-like sign (after Saleh and Sourouzian 1986, n° 220)

using another script, in this case the archaizing Middle Kingdom cursive writing written in columns. The sign  $\ominus$  (Aa1) is usually drawn in the Kemyt as a circle, but the way it was rendered, even the direction in which the circles were made, varies quite considerably from copy to copy. It is quite remarkable how many different sign forms of  $\ominus$  (Aa1) are attested in the Kemyt: some of the renderings show lines inside the circle referring to the hieroglyphic appearance of the sign, whilst others show only a point in the center of the circle resembling the rendering of the sun disc  $\odot$  (N5) in the same text.<sup>37</sup> Altogether the sign  $\ominus$  (Aa1) is a good example in illustrating variation as well as the use of a particular sign form across different genres.

### **Testing the dating relevance of Wimmer's *Hieratische Paläographie* on a group of dated literary texts with a special focus on $\ominus$ (Aa1)**

The use of the different forms of the sign  $\ominus$  (Aa1) during the 19<sup>th</sup> and 20<sup>th</sup> dynasties, its dating relevance for literary texts, and also an example of the impact of the existence of the round form in neat formal cursive writing throughout the entire New Kingdom on the idiosyncratic form attested in Deir el-Medine at the same time, shall be tested on a group of signed and, therefore, datable literary texts.<sup>38</sup> Finally, a date will be proposed for the inconclusively dated O. Berlin P. 9026 + O. Moscow Pushkin Museum 4478, which contains part of a teaching, formerly identified as “The teaching of a man for his son”, but which is nowadays referred to as “The teaching of Hardjedef”.<sup>39</sup>

---

37 See, for example, O. DeM 1857 and O. DeM 1858 in Gasse 2005, 140–141.

38 For the signed, dated, literary texts from Deir el-Medine, ordered chronologically, see the table in Dorn 2011, 160–161; Mathieu 2003; see also McDowell 2000, 226–227. It has to be stressed that the selection of this group is arbitrary and based primarily on its already existing grouping and dating. Not discussed here are the following ostraca from this group: the examples of the Kemyt, O. DeM 1204 (“Satire of the Trades” and the “Teaching for Amenemhat”) and O. DeM 1560 due to its poor state of preservation, which does not permit a proper palaeographic analysis, and in the case of the latter text, also its limited amount of text; O. Turin CG 57431 does not contain  $\ominus$  (Aa1), but can be dated to the 19<sup>th</sup> dynasty based on other signs like the scribal palette (Y3; see fig. 2 above), the determinative of *sš-ḳd.w* in line 4, and the very long “u”-like right stroke of the eye (D4). For the most recent study on colophons to the “Satire of the Trades”, including the ostraca under discussion here, see Jurjens 2020. She discussed two more datable ostraca based on the names mentioned in the colophons: O. DeM 1536 as well as O. London University college 32266; see also O. DeM 1037.

39 Verhoeven 2020 I, 247–255.

## 19<sup>th</sup> dynasty examples<sup>40</sup>

O. DeM 1106 (fig. 8)<sup>41</sup> with the former “Teaching of a man for his son” § 24.6–colophon, signed by Nefersenut who was the assistant of Merysakhmet (i), active together during the first half of the reign of Ramesses II.<sup>42</sup>

The sign  $\ominus$  (Aa1) in line 3 shows the form of the dense 19<sup>th</sup> dynasty “s”-type<sup>43</sup> as well as the long, left stroke of the two s-signs  $\parallel$  (S29)<sup>44</sup> in the same line. The rendering of the group  $\overline{\text{D5I} + \text{D40}}$  as the determinative of the title *sš-ḳd.w* fits the expected form typical for the 19<sup>th</sup> dynasty.

O. DeM 1014<sup>+</sup> (fig. 9) with the “Satire of the Trades § 1.1–6.2 and § 29–30.6”<sup>45</sup> signed by Neferhotep (ii), the assistant and son of Nebnefer (i), who was the foreman of the crew before year 40 of Ramesses II.<sup>46</sup>

The sign  $\ominus$  (Aa1) is not rendered in the expected idiosyncratic “s”-type form typical for texts from Deir el-Medine dated to the 19<sup>th</sup> dynasty, but in the round form of the neat formal cursive writing attested during the entire New Kingdom in literary texts, which may be the reason for the use of the “wrong” form here. This example shows that the application of Wimmer’s *Hieratische Paläographie* for literary texts focusing on one sign does not work without exceptions. It fits Wimmer’s statement that his palaeographical study for dating administrative ostraca from Deir el-Medine has to be used in a critical manner:

“Nun wurde aber nie behauptet, dass jedes der Kriterien bei jedem beliebigen Ostrakon eine sichere Datierung ermöglichen würde. ... der Grad an Zuverlässigkeit ... ganz unterschiedlich gewertet werden muss.” – It has never been claimed that any of the criteria would allow any ostrakon to be safely dated. ... the degree of reliability... has to be rated very differently (translation: AD).<sup>47</sup>

<sup>40</sup> See also O. Cairo CG 25216 containing the story of Sinuhe, discussed above (fig. 7).

<sup>41</sup> Posener 1938, 26–27, pl. 54–54a; Fischer-Elfert 1999, XVI.

<sup>42</sup> Davies 1999, 161.

<sup>43</sup> This is one of the cases which illustrates the above-mentioned problem that it is sometimes difficult to differentiate between the “closed” 19<sup>th</sup> dynasty s-type and the “round” 20<sup>th</sup> dynasty type, especially when using a facsimile which does not always allow the ductus to be properly identified. The ductus can be seen on the colour photographs, for which see: <https://www.ifao.egnet.net/bases/archives/ostraca/?id=19553> [8 July 2021].

<sup>44</sup> Wimmer 1995, 206.

<sup>45</sup> Jäger 2004, 8, Anhang 3, xli–xlvi. Ostraca with the “Satire of the Trades” found at Deir el-Medine were generally dated by Jäger to the late 19<sup>th</sup> dynasty, without providing further details on the dating; Posener 1938, 4, pl. 9–10a.

<sup>46</sup> McDowell 2000, 226 with n. 64; Davies 1999, 161; Jurjens 2020, 227, 234.

<sup>47</sup> Wimmer 2000, 358.

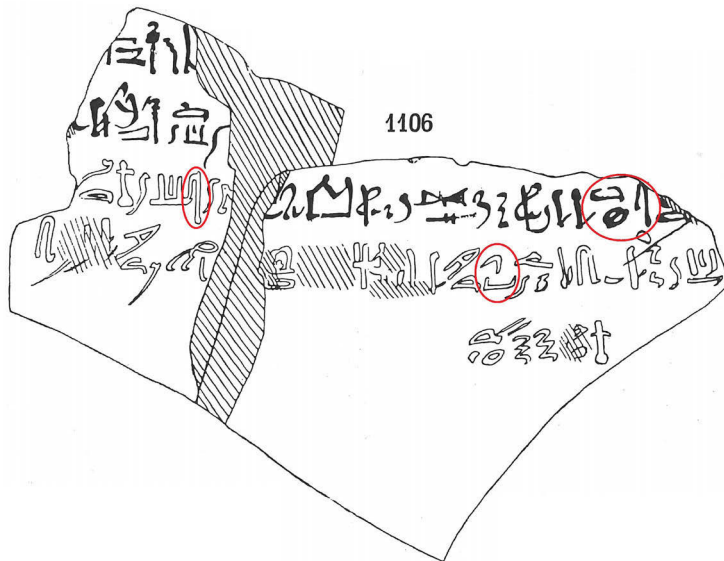


Fig. 8: O. DeM 1106 with the rendering of  $\ominus$  (Aa1) in § 24.6 of the former “Teaching of a man for his son”, now of “The teaching of Hardjedef” (after Posener 1938, pl. 54a)

In the case of O. DeM 1014<sup>+</sup> sufficient text exists to see if a palaeographic dating, based on the application of a quantitative analysis of the forms of relevant signs, confirms the 19<sup>th</sup> dynasty date.<sup>48</sup> The complete absence of ligatures can be put forward as a general palaeographical argument which could support the 19<sup>th</sup> dynasty date.<sup>49</sup>

## 20<sup>th</sup> dynasty examples

O. DeM 1022 with the “Satire of the Trades § 10.1–10.5”<sup>50</sup> and O. DeM 1027 with the “Hymn to the Nile § 1.1–10”<sup>51</sup> (fig. 10) were both written by Itnefer<sup>52</sup> who was

48 Wimmer 2001, with several examples. For different colour photographs of the entire ostracum see: <https://www.ifao.egnet.net/bases/archives/ostraca/?id=19461> [8 July 2021].

49 It has to be stressed that it is not appropriate to point to some formal criteria only or to the fact that the text was written by an untrained scribe, drawing each sign in an isolated manner, because the corpus under discussion consists of student exercises.

50 Jäger 2004, 8, Anhang 3, xlii–xlv, with the comment in footnote 45 above; Posener 1938, 6, pl. 14.

51 van der Plas 1986, 5 and 11, with the indication of a general date for ostraca from Deir el-Medine as Ramesside; Posener 1938, 7, pl. 16.

52 McDowell 2000, 227–228; Jurjens 2020, 227, 235.

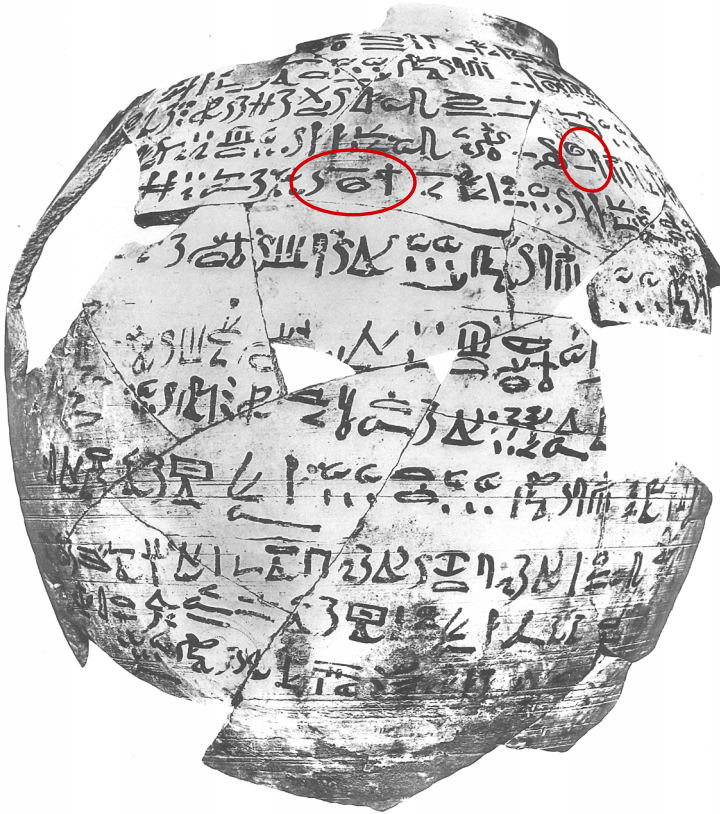


Fig. 9: O. DeM 1014\* with the rendering of  $\ominus$  (Aar) in § 30.5–30.6 of the “Satire of the Trades” (after Posener 1938, pl. 10a)

active during the middle of the 20<sup>th</sup> dynasty. On both ostraca the expected round Wimmer type b of  $\ominus$  (Aar) was used, also confirming the presence of that sign form in literary texts from Deir el-Medine during the 20<sup>th</sup> dynasty.<sup>53</sup>

O. London British Museum EA 29549 with a Miscellanies text<sup>54</sup> (fig. 11) was written by a pupil (*hri-<sup>o</sup>*) of the future deputy Hay (vii) and is dated to year 14 of Ramesses III.<sup>55</sup> The ostracum is quite interesting from a palaeographic perspective

53 For further images of O. DeM 1022, see <https://www.ifao.egnet.net/bases/archives/ostraca/?id=19469> [8 July 2021]; for O. DeM 1027, see <https://www.ifao.egnet.net/bases/archives/ostraca/?id=19474> [8 July 2021].

54 Demarée 2002, 25–26, pl. 77–78.

55 McDowell 2000, 229; Davies 1999, 63–65.

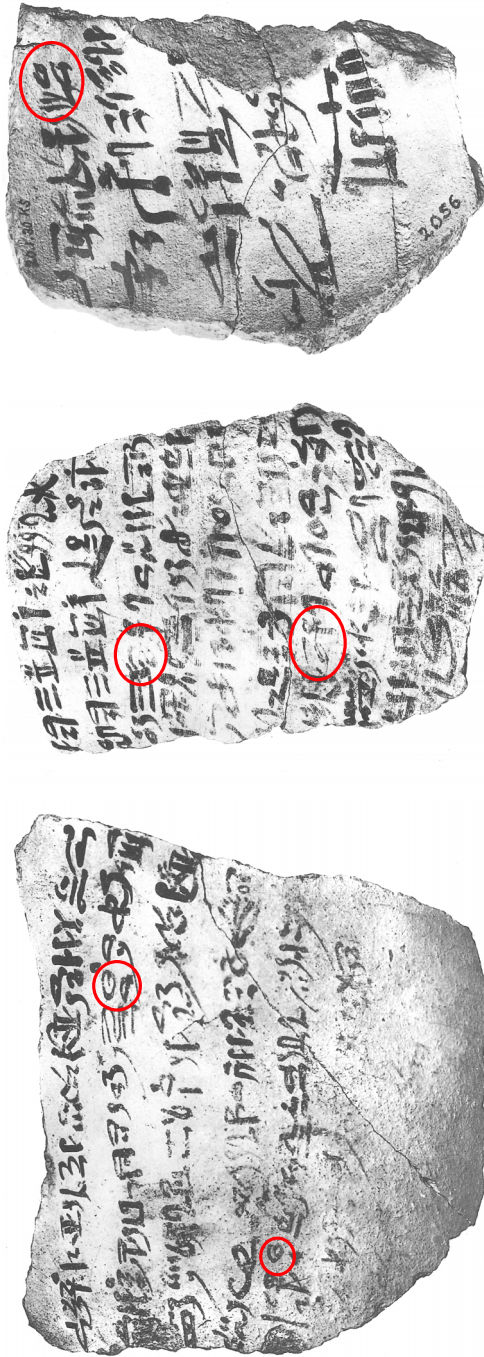


Fig. 10: O. DeM 1022 ("Satire of the Trades"; left) and O. DeM 1027 ("Hymn to the Nile"; right: *recto* and *verso*) signed by Itrifer with the rendering of Ⓞ (Aat) marked by red circles (after Posener 1938, pl. 14a, pl. 16a)

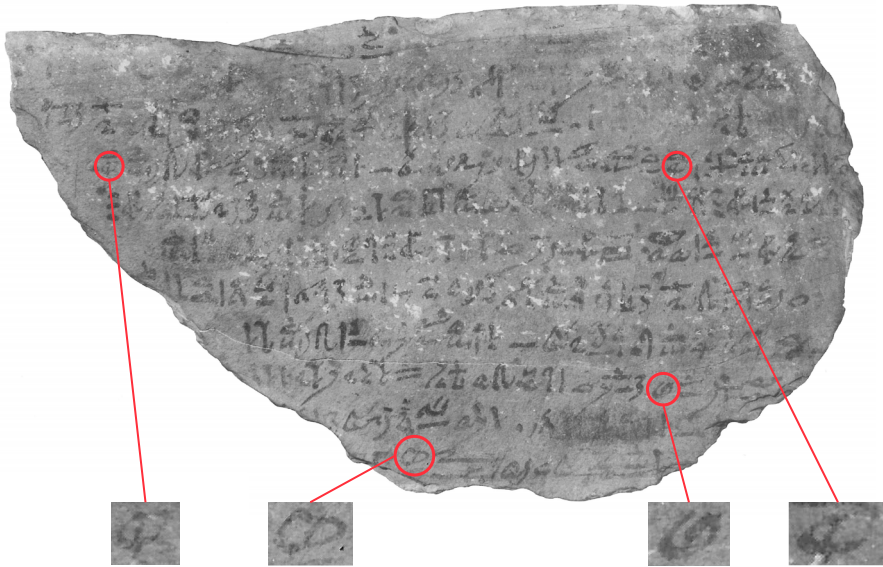


Fig. 11: O. London BM EA 29549 *recto* with a Miscellanies text with some of the  $\ominus$  (Aa1) signs marked in red which were drawn with two strokes instead of one loop (Demarée 2002, pl. 77)

because it shows a particular rendering of  $\ominus$  (Aa1), which was not written in one go but with two strokes: one from the top downwards, circumscribing the left semi-circle of the sign (sometimes even three quarters of a circle with the lower part of the line continuing nearby horizontally), followed by the separately drawn right part of the sign from the lower right up with a left turn down touching the bottom line. In one case on the verso (see fig. 12) the sign looks like the 19<sup>th</sup> dynasty “s”-like version because the right part is not written close to the left one (and with the abrasion of the lower right part of the sign). The rendering of the  $\ominus$  (Aa1) with two strokes – the end of each stroke can be identified based on the two small dark dots clearly visible in fig. 12 – was not observed by either Möller or Wimmer. The sign form is structurally based on the circle and not on the “s”-like form.

A final mid 20<sup>th</sup> dynasty example from the list of school exercises may suffice here to illustrate the dating relevance of  $\ominus$  (Aa1) and the applicability of Wimmer’s *Hieratische Paläographie* on literary texts.

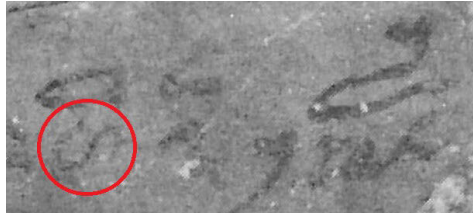


Fig. 12: O. London BM EA 29549, verso line 1, with the beginning of the name of Tarekhan with the  $\ominus$  (Aa1) sign to the lower left looking like the 19<sup>th</sup> dynasty “s”-like type (Demarée 2002, pl. 78)

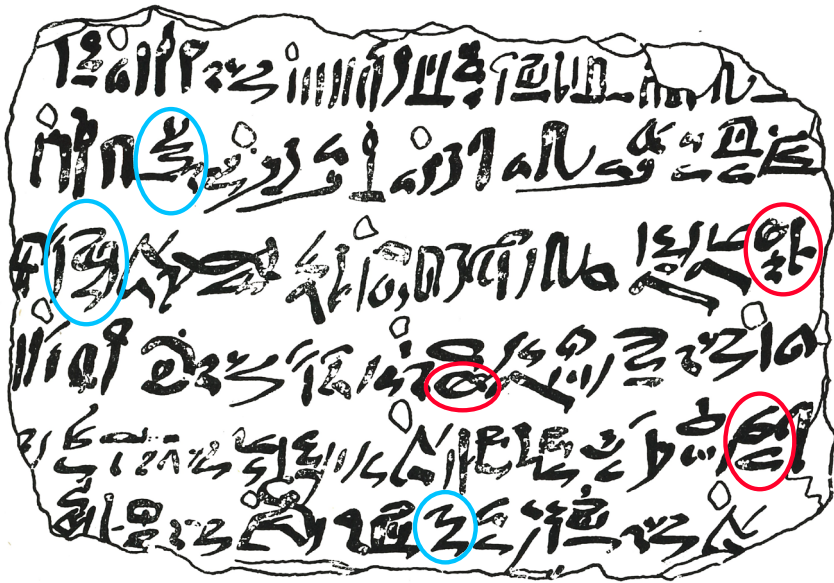


Fig. 13: O. Petrie 8 (= HO 10/3) *recto* with the sign  $\ominus$  (Aa1) marked in red and some ligatures marked in blue; both pointing to a 20<sup>th</sup> dynasty date (after Černý and Gardiner 1957 I, pl. X/3)

O. Petrie 8 (= HO 10/3),<sup>56</sup> with a Miscellanies text on the hardships of military life (adapted version of P. Anastasi V) (fig. 13), was written by Pahemnetjer (ii) who was active from year 3 of Ramesses IV onwards.<sup>57</sup>

<sup>56</sup> Černý and Gardiner 1957 I, pl. X/3, see also <https://www.ucl.ac.uk/museums-static/digitalegypt/deirelmedine/ostracaindex.html> [8 July 2021].

<sup>57</sup> McDowell 2000, 229; Davies 1999, 96–98.

The ☉ (Aa1) shows the form typical for the 20<sup>th</sup> dynasty. The ligatures support that dating as does, for example, the short, left stroke of the ¶ (S29) in line 2. The rendering of the scribal palette (𓆎, Y3) in lines 1–3 does not contradict the 20<sup>th</sup> dynasty dating (not showing the form that is only attested during the 19<sup>th</sup> dynasty).

## Applying Wimmer’s *Hieratische Paläographie* for dating an undated literary ostrakon

O. Berlin P. 9026 + O. Moscow Pushkin Museum 4478 (fig. 14) with “The teaching of a man for his son § 24.1–colophon”<sup>58</sup> is not yet definitively dated. In her discussion of the literary ostraca with colophons, McDowell presents two different possibilities for the identification of the named persons.<sup>59</sup> Nakhy and Nebnefer, both mentioned in the colophon, can be linked either with Nakhy (v) and his father the chief workman Nebnefer (i), both active during the reign of Ramesses II,<sup>60</sup> or with a Nakhy who would otherwise be an unknown son of the chief workman Nebnefer (xiii) who is attested during the reign of Ramesses X, at a time when a scribe Ahautinefer (i) (also named in the colophon) was active.<sup>61</sup>

The ☉ (Aa1) is rendered in “s”-form indicating a date in the 19<sup>th</sup> dynasty, which is supported by signs discussed above, such as the scribal palette (𓆎, Y3; see above fig. 1 and 2) or the recumbent Seth animal. Based on the palaeographic analysis, the ostrakon can clearly be dated to the 19<sup>th</sup> dynasty and more precisely to the reign of Ramesses II.

## Conclusion

This experiment has shown that the *Hieratische Paläographie* of Stefan Wimmer, developed as a means of dating administrative texts from Deir el-Medine written on ostraca, can also be applied to the dating of literary ostraca from this village. The usability was conducted on a small corpus of datable literary texts written by pupils whose dating is based on personal names. The small number of texts, as well as the sign forms created by hands not yet fully trained, can be highlighted as weaknesses of the dataset, but even with this restriction and the use of a limited number of signs, clear results have been achieved by the experiment, as the case of O. Berlin P. 9026 + O. Moscow Pushkin Museum 4478 has shown. Furthermore,

58 Fischer-Elfert 1999, X.

59 McDowell 2000, 227.

60 Davies 1999, 67.

61 For Ahautinefer, see Davies 1999, 53; Gabler 2018, 301–302.

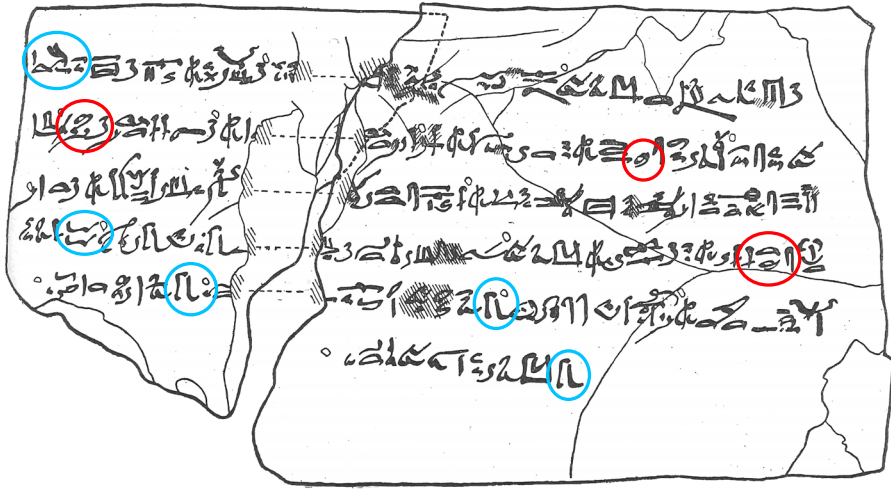


Fig. 14: O. Berlin P. 9026 + O. Moscow Pushkin Museum 4478 with the characteristic “s”-type  $\ominus$  (Aa1), typical for texts from Deir el-Medine dated to the 19<sup>th</sup> dynasty marked in red and other signs marked in blue supporting the newly proposed dating of the text to the 19<sup>th</sup> dynasty (after Posener 1950, fig. 1)

some local idiosyncrasies could be identified when it comes to the use of particular signs in literary texts, such as in the case of  $\ominus$  (Aa1), the sign which is a reasonably valid dating marker. However, during the analysis of this clearly relevant sign for dating and its applicability for dating literary texts, exceptions could be found on both sides of the timeline of each form, particular for the 19<sup>th</sup> and 20<sup>th</sup> dynasty, as O. DeM 1014<sup>+</sup> and O. London BM EA 29549 have shown. As Janssen stated: “The proof of the pudding is in the eating”<sup>62</sup> and also how the exceptions are valued: as a disproof of the method in general or as a general confirmation of the method with a certain percentage of reliability (to be defined in each analysed text or for each sign of a much bigger dataset). If the validity of the method – dating texts based on palaeography – is to be denied, then this would mean that palaeographic dating comes under a field which evades scientific examination. This is implied by Janssen’s statement: “Everyone dealing with ostraca is after some time able to distinguish, in most cases, between Nineteenth and Twentieth Dynasty texts, without being capable of exactly saying on which criteria he bases his intuitive feeling.”<sup>63</sup> Furthermore, in a field full of traps and hidden mines, like palaeography and palaeographic dating in particular, in which each researcher is confronted with a high degree of the “human factor of each ancient scribe”, the goal is still to work with scientific methods

62 Janssen 1997b, 342.

63 Janssen 1997b, 340.

which create quantifiable, resilient and verifiable results like the one introduced by Wimmer and not to rely upon “intuitive feeling”. The criticism of Wimmer’s *Hieratische Paläographie* is, in a way, astonishing since the method has been accepted and established since Möller published his palaeography and subsequently tested it successfully on a corpus of texts.<sup>64</sup> Therefore, it remains the role of future research to fix the shortcomings of Wimmer’s *Hieratische Paläographie* by including more signs in palaeographies, and at the same time developing the potential for its broader applicability, even on other text genres,<sup>65</sup> whilst taking into account that due to the “human factor” palaeography is not always restricted to genres, but that the genres can have different influences on the way in which signs were written. Or, in other words: “The proof of the pudding is how it is eaten”.

## Bibliography

- Černý, Jaroslav and Alan H. Gardiner. 1957. *Hieratic Ostraca I*, Oxford: University Press.
- Davies, Benedict G. 1999. *Who’s Who at Deir el-Medina. A Prosopographic Study of the Royal Workmen’s Community*. Egyptologische Uitgaven 13. Leiden: Nederlands Instituut voor het Nabije Oosten.
- Demarée, Robert J. 2002. *Ramesseide Ostraca*, London: British Museum Press.
- Dorn, Andreas. 2004. “Die Lehre Amunnachts.” *Zeitschrift für Ägyptische Sprache und Altertumskunde* 131: 38–55.
- . 2011. *Arbeiterhütten im Tal der Könige. Ein Beitrag zur altägyptischen Sozialgeschichte aufgrund von neuem Quellenmaterial aus der Mitte der 20. Dynastie (ca. 1150 v. Chr.)*. Aegyptiaca Helvetica 23. Basel: Schwabe.
- . 2013. “Zur Lehre Amunnachts: Ein Join und Missing Links.” *Zeitschrift für Ägyptische Sprache und Altertumskunde* 140: 112–125.
- . 2015. “Diachrone Veränderungen der Handschrift des Nekropolenschreibers Amunnacht, Sohn des Ipuī.” In *Ägyptologische „Binsen“-Weisheiten I-II: Neue Forschungen und Methoden der Hieratistik, Akten zweier Tagungen in Mainz (April 2011 und März 2013)*, ed. by Ursula Verhoeven, 175–218. Abhandlungen der Akademie der Wissenschaften und der Literatur Mainz, Geistes- und sozialwiss. Klasse. Stuttgart: Franz Steiner Verlag.
- Edel, Elmar. 1980. *Die Felsgräbernekropole der Qubbet el Hawa bei Assuan, II. Abteilung: Die althieratischen Topfaufschriften. Paläographie der althieratischen Gefäßaufschriften aus den Grabungsjahren 1960 bis 1973*. Abhandlungen der

64 Möller 1920.

65 For a case that clearly illustrates a text genre encompassing handwriting, see Polis in this volume [conclusions point 1 and 3].

- Rheinisch-Westfälischen Akademie der Wissenschaften 66. Wiesbaden: Harrassowitz.
- Fischer-Elfert, Hans-Werner. 1999. *Die Lehre eines Mannes für seinen Sohn. Eine Etappe auf dem „Gottesweg“ des loyalen und solidarischen Beamten des Mittleren Reiches*, Textband und Tafelband. Ägyptologische Abhandlungen 60. Wiesbaden: Harrassowitz.
- Gabler, Kathrin. 2018. *Who's Who around Deir el-Medina. Untersuchungen zur Organisation, Prosopographie und Entwicklung des Versorgungspersonals für die Arbeitersiedlung und das Tal der Könige*, Egyptologische Uitgaven 31. Leiden: Nederlands Instituut voor het Nabije Oosten.
- Gasse, Annie. 2005. *Catalogue des ostraca littéraires de Deir el-Medina*. Documents de Fouilles de l'IFAO 44. Le Caire: IFAO.
- . 2018. “Les ligatures dans les textes hiératiques du Nouvel Empire (à partir des ostraca). Entre pragmatisme et maniérisme.” In *Ägyptologische „Binsen“-Weisheiten III: Formen und Funktionen von Zeichenliste und Paläographie, Akten der internationalen und interdisziplinären Tagung in der Akademie der Wissenschaften und der Literatur, Mainz, im April 2016*, ed. by Svenja A. Gülden, Kyra van der Moëzel and Ursula Verhoeven, 111–129. Stuttgart: Franz Steiner Verlag.
- Goedicke, Hans. 1988. *Old Hieratic Paleography*, Baltimore/Md.: Halgo.
- Gülden, Svenja A., Celia Krause and Ursula Verhoeven. 2020. “Digital Palaeography of Hieratic.” In *The Oxford Handbook of Egyptian Epigraphy and Palaeography*, ed. by Vanessa Davies and Dimitri Laboury, 634–646. Oxford: University Press.
- Jäger, Stephan. 2004. *Altägyptische Berufstypologien*. Lingua Aegyptia. Studia monographica 4. Göttingen: Hubert & Co.
- Janssen, Jac. J. 1987. “On style in Egyptian handwriting.” *Journal of Egyptian Archaeology* 73: 161–167.
- . 1997a. “The Seth-Sign as Dating Criterion.” In Jac. J. Janssen, *Village Varia: Ten Studies on the History and Administration of Deir el-Medina*, 139–145. Egyptologische Uitgaven 11. Leiden: Nederlands Instituut voor het Nabije Oosten.
- . 1997b. Review of: Wimmer, Stefan, *Hieratische Paläographie der nicht-literarischen Ostraka der 19. und 20. Dynastie*, Ägypten und Altes Testament 28.1–2. Wiesbaden 1995. *Bibliotheca Orientalis* 54: 338–345.
- . 2005. *Donkeys at Deir el-Medina*. Egyptologische Uitgaven 19. Leiden: Nederlands Instituut voor het Nabije Oosten.
- Jurjens, Judith. 2020. “The Scribes who wrote Khety: Some Remarks on Colophons and Scribal Education.” *Chronique d'Égypte* 95: 220–235.

- Lakomy, Konstantin C. 2008. *Cairo Ostrakon J. 72460: Eine Untersuchung zur königlichen Bestattungstradition im Tal der Könige zu Beginn der Ramessidenzeit*. Göttinger Miszellen Beihefte 4. Göttingen: Alfa-Druck.
- Mathieu, Bernard. 2003. "La littérature égyptienne sous les Ramsès d'après les ostraca littéraires de Deir el-Médineh." In *Deir el-Médineh et la Vallée des Rois*, ed. by Guillemette Andreu, 117–137. Paris: Khéops.
- Mathieu, Bernard and Vanessa Ritter. 2008. "Les sections finales du manuel scolaire *Kémyt* (§ XV–XVII)." In *Mélanges offerts à François Neveu*, ed. by Christophe Gallois, Pierre Grandet and Laure Pantalacci, 193–238. Bibliothèque d'Étude 145. Le Caire: IFAO.
- McDowell, Andrea. 2000. "Teachers and Students at Deir el-Medina." In *Deir el-Medina in the third Millenium AD. A Tribute to J. Janssen*, ed. by Robert J. Demarée and Arno Egberts, 218–233. Egyptologische Uitgaven 14. Leiden: Nederlands Instituut voor het Nabije Oosten.
- Möller, Georg. 1920. "Zur Datierung literarischer Handschriften aus der ersten Hälfte des Neuen Reichs." *Zeitschrift für Ägyptische Sprache und Altertumskunde* 56: 34–43.
- . <sup>1</sup>1927 I, *Hieratische Paläographie. Die aegyptische Buchschrift in ihrer Entwicklung von der fünften Dynastie bis zur römischen Kaiserzeit*, vol. I. Leipzig: J. C. Hinrichs (Neudruck Osnabrück 1965).
- . <sup>2</sup>1927 II, *Hieratische Paläographie. Die aegyptische Buchschrift in ihrer Entwicklung von der fünften Dynastie bis zur römischen Kaiserzeit*, vol. II. Leipzig: J. C. Hinrichs (Neudruck Osnabrück 1965).
- Parkinson, Richard. 2001. *Poetry and Culture in Middle Kingdom Egypt. A Dark Side to Perfection*. London: Continuum.
- Polis, Stéphane. 2020. "Methods, Tools, and Perspectives on Hieratic Palaeography." In *The Oxford Handbook of Egyptian Epigraphy and Palaeography*, ed. by Vanessa Davies and Dimitri Laboury, 550–565. Oxford: University Press.
- Posener, Georges. 1938. *Catalogue des ostraca hiératiques littéraires de Deir el-Médineh I (Nos 1001 à 1108)*. Documents de Fouilles de l'IFAO 1. Le Caire: IFAO.
- Posener, Georges. 1951/1952/1972. *Catalogue des ostraca hiératiques littéraires de Deir el-Médineh II (Nos 1109 à 1266)*, Documents de Fouilles de l'IFAO 18. Le Caire: IFAO.
- . 1950. "Section finale d'une sagesse inconnue (recherches littéraires, II)." *Revue d'Égyptologie* 7: 71–84.
- Saleh, Mohamed and Hourig Sourouzian. 1986. *Offizieller Katalog. Die Hauptwerke im Ägyptischen Museum Kairo*, Mainz am Rhein: Philipp von Zabern.
- van den Berg, Hans and Koenraad Donker van Heel. 2000. "A Scribe's Cache from the Valley of Queens? The Palaeography of Documents from Deir el-Me-

- dina: Some Remarks.” In *Deir el-Medina in the Third Millennium AD. A Tribute to Jac J. Janssen*, ed. by Robert J. Demarée and Arno Egberts, 9–49. Egyptologische Uitgaven 14. Leiden: Nederlands Instituut voor het Nabije Oosten.
- van der Plas, Dirk. 1986. *L'hymne à la crue du Nil*. Egyptologische Uitgaven 4. Leiden: Nederlands Instituut voor het Nabije Oosten.
- Verhoeven, Ursula. 2020. “Besuchertexte, Lehren und Lieder des Neuen Reiches.” In *Dipinti von Besuchern des Grabes NI3.1 in Assiut*, ed. by Ursula Verhoeven, vol. I: 1–323; vol. II: pl. 1–343. The Asyut Project 15. Wiesbaden: Harrassowitz.
- Wimmer, Stefan. 1995. *Hieratische Paläographie der nicht-literarischen Ostraka der 19. und 20. Dynastie*. Ägypten und Altes Testament 28.1–2. Wiesbaden: Harrassowitz.
- . 1998. “Hieratische Paläographie: Zur Datierung der nicht-literarischen Ostraka.” In *Proceedings of the Seventh International Congress of Egyptologists*, ed. by Christopher J. Eyre, 1227–1233. *Orientalia Lovaniensia Analecta* 82. Leuven: Peeters.
- . 2000. “Welches Jahr 29?” In *Deir el-Medina in the Third Millennium AD. A Tribute to Jac J. Janssen*, ed. by Robert J. Demarée and Arno Egberts, 351–358. Egyptologische Uitgaven 14. Leiden: Nederlands Instituut voor het Nabije Oosten.
- . 2001. “Palaeography and the Dating of Ramesside Ostraca.” *Lingua Aegyptia* 9: 285–292.

## Online

- <https://www.ifao.egnet.net/bases/archives/ostraca/?id=19461> [8 July 2021].
- <https://www.ifao.egnet.net/bases/archives/ostraca/?id=19469> [8 July 2021].
- <https://www.ifao.egnet.net/bases/archives/ostraca/?id=19474> [8 July 2021].
- <https://www.ifao.egnet.net/bases/archives/ostraca/?id=19553> [8 July 2021].
- <https://www.ucl.ac.uk/museums-static/digitalegypt/deirelmedine/ostracaindex.html> [8 July 2021].
- <https://doi.org/10.5281/zenodo.4638768> [18 Aug 2021].