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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
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Vorwort

Der vorliegende Band basiert auf Vorträgen, die auf der vierten internationalen Tagung der *Ägyptologischen „Binsen"-Weisheiten* in den Räumlichkeiten der Akademie der Wissenschaften und der Literatur | Mainz vom 9. bis 11. Dezember 2019 gehalten wurden.[1] Organisiert wurde die Tagung vom wissenschaftlichen Team des Mainzer Akademievorhabens „Altägyptische Kursivschriften (AKU). Digitale Paläographie und systematische Analyse des Hieratischen und der Kursivhieroglyphen", das an der JGU Mainz sowie der TU Darmstadt angesiedelt ist.[2] An der Tagung nahmen insgesamt 20 Vortragende und 45 Gäste aus dem In- und Ausland teil, u. a. aus New York, Providence, Tokio, Jerusalem, Warschau, Madrid, Turin, Uppsala, Kopenhagen, St. Petersburg, Oxford, Liverpool, Leiden, Lüttich, Basel, Leipzig und München.

Das Thema „Hieratisch des Neuen Reiches: Akteure, Formen und Funktionen" war angelehnt an die laufenden Corpus-Module des AKU-Projekts, die sich mit dem Hieratisch der 18. Dynastie und dem sog. Verwaltungshieratisch der 19.–20. Dynastie beschäftigen. Das Programm bot 21 Vorträge und Berichte in sieben inhaltlichen Sektionen:[3]

- Schrift und Schreiberhände der 18. Dynastie
- Hieratisch, Kursivhieroglyphen, Hieroglyphen
- Graffiti
- Formale Aspekte
- Ramessidische literarische Texte
- Administrative Texte der 19.–20. Dynastie
- Digitale Tools und Aspekte.

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1 Die früheren Tagungen wurden ebenfalls publiziert:
Verhoeven, Ursula, Hrsg. *Ägyptologische „Binsen"-Weisheiten I-II. Neue Forschungen und Methoden der Hieratistik*. Abhandlungen der Akademie der Wissenschaften und der Literatur in Mainz. Geistes- und Sozialwissenschaftliche Klasse. Einzelveröffentlichung 14. Stuttgart: Franz Steiner Verlag, 2015. https://doi.org/10.25358/openscience-573.
Gülden, Svenja A., Ursula Verhoeven und Kyra van der Moezel, Hrsg. *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*. Abhandlungen der Akademie der Wissenschaften und der Literatur in Mainz. Geistes- und Sozialwissenschaftliche Klasse. Einzelveröffentlichung 15. Stuttgart: Franz Steiner Verlag, 2018. http://doi.org/10.25358/openscience-5178.

2 Für weitere Informationen siehe die Web-Präsenz: https://aku.uni-mainz.de.

3 Vgl. das Programmheft mit Abstracts auf: https://doi.org/10.5281/zenodo.3676389 sowie den Blog-Beitrag über den Ablauf der Tagung auf HieratischAKUell: https://aku.hypotheses.org/1903.

Dazu fand eine *Walk around session* statt, um vor den Bildschirmen die Möglichkeiten digitaler Methoden zu erproben und zu diskutieren.

Wir freuen uns, dass 13 Beiträge von insgesamt 15 Autorinnen und Autoren für die Veröffentlichung eingegangen sind und diese zumeist im Vergleich zur mündlichen Fassung erheblich erweitert und aktualisiert wurden. Da viele Beiträge mehrere Themen der oben genannten Sektionen der Tagung ansprechen, haben wir uns entschlossen, sie in diesem Band in alphabetischer Reihenfolge der Autorennamen und nicht nach dem ursprünglichen Programmablauf anzuordnen.

Wir danken allen Beteiligten für ihre Bereitschaft und Mitwirkung sehr herzlich, insbesondere vor dem Hintergrund der erschwerten Arbeitsmöglichkeiten und Zugänglichkeiten zu Museen und Bibliotheken während der Pandemiezeit.

Die großzügige Finanzierungsbeihilfe durch das *Gutenberg International Conference Center (GICC)* und die dahinterstehende *Deutsche Forschungsgemeinschaft* erleichterte die Durchführung der Tagung in erheblichem Maße, wofür das Organisationsteam und die Teilnehmenden sehr herzlich danken. Die Betreuung innerhalb der Reihe der Abhandlungen der Mainzer Akademie sowie die Korrespondenz mit dem Steiner Verlag übernahm dankenswerterweise wiederum Olaf Meding. Ein Jahr nach Erscheinen der Papierform wird auch dieser Band auf der Plattform „Gutenberg Open Science“ online und mit *open access* zur Verfügung gestellt werden.[4]

Mainz, im Januar 2022

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AKU Altägyptische Kursivschriften

4 https://openscience.ub.uni-mainz.de [19.01.2022].

Allgemeine Abkürzungen

Abb.	Abbildung
Anm.	Anmerkung
av. J.-C.	avant Jésus-Christ
BM EA	British Museum, Egyptian Antiquities (London)
bspw.	Beispielsweise
bzw.	beziehungsweise
ca.	circa
cf.	confer, compare
CG	Catalogue général (Ägyptisches Museum Kairo)
cm	Zentimeter, centimetre, centimètre
D.	Dipinto
d. h.	das heißt
e. g.	exempli gratia
et al.	et alii
f., ff.	folgende
Fig.	figura
i. e.	id est
JE	Journal d'entrée (Ägyptisches Museum Kairo)
Jr.	junior
L.	Leichentuch
MMA	Metropolitan Museum of Art (New York)
Nr.	Nummer
O.	Ostrakon
OIM	Oriental Institute Museum (Chicago)
P.	Papyrus
p.	page
pl.	plate, planche
pp.	pages
RMO	Rijksmuseum van Oudheden (Leiden)
ROM	Royal Ontario Museum (Toronto)
S. R.	Special Register (Ägyptisches Museum Kairo)
s. v.	sub voce
t.	tablet
Tf.	Tafel
TT	Theban Tomb
u. a.	unter anderem
u. a. m.	und andere mehr

u. E.	unseres Erachtens
v°	verso
vgl.	vergleiche
vs	verso
z. B.	zum Beispiel

Quelles « Richesses inconnues » dans le fonds inédit des ostraca littéraires de l'Ifao ? Approches actuelles

Florence Albert

Abstract

The work undertaken by Georges Posener on the IFAO's literary ostraca has undoubtedly contributed to highlight most of the most characteristic witnesses of the literary artworks kept at the Institute. However, the collection is partially published and one of the current issues is still to understand the part of the « richesses inconnues » among the unpublished documentation. Nevertheless, in the case of the IFAO collection, it is difficult to focus the research on specific texts, particularly because of its quantitative importance. The aim of this contribution is to set out the various works currently carried out to overcome this difficulty, and to present some of the ostraca studied in this context. These cases of study illustrate the state of the unpublished collection and allow to do some observations on the understanding of the texts, with the help of the handwritings and the hieratic palaeography.

Lorsque Posener publie en 1951 son article sur les « richesses inconnues de la littérature égyptienne », il a pour ambition de dresser un inventaire des « belles lettres » égyptiennes et d'attirer l'attention sur plusieurs œuvres et textes littéraires connus jusqu'alors de façon fragmentaire.[1] Fort des classifications établies, le travail qu'il conduit en parallèle sur le fonds des ostraca littéraires de l'Ifao a assurément contribué à faire connaître l'essentiel des témoins les plus significatifs de cette littérature conservés à l'Institut français d'archéologie orientale.[2] Cependant, la collection n'est encore que partiellement publiée ; et l'un des enjeux actuels est d'essayer de comprendre la part qu'occupent encore ces richesses parmi la documentation inédite.

Dans cette optique, il est essentiel d'élaborer des stratégies qui permettent de cibler les recherches, le fonds de l'Ifao étant trop important en terme quantitatif pour entreprendre l'édition, pièce à pièce, de l'ensemble des objets. Deux approches sont ainsi privilégiées pour sélectionner les ostraca en vue de leur publication et comprendre peu à peu la nature et la répartition des textes inédits de la collection : l'approche par « le texte », et l'approche « matérielle », chacune d'entre elle offrant

1 Posener 1951 ; Posener 1952.

2 Voir par exemple (références non exhaustives) : Posener 1933 ; Posener 1934–1938 ; Posener 1950 ; Posener 1950–1972 ; Posener 1952 ; Posener 1971 ; Posener 1977–1980.

des perspectives et des résultats distincts. Il s'agit ici de présenter quelques-uns des ostraca étudiés dans ces différents cadres. Ceux-ci illustrent un état du fonds et permettent de dresser certains constats.

État actuel du fonds des ostraca littéraires de l'Ifao : un bref rappel

La collection des ostraca de l'Ifao, confiée pour étude par le CSA à l'Institut, est constituée lors des fouilles Ifao conduites à Deir el-Medina entre 1922 et 1951. Son édition commence dès les années 30, après que les ostraca ont été répartis en plusieurs fonds. Le fonds des ostraca littéraires compte 7000 objets, dont environ 1000 ont été publiés, principalement sous la forme de catalogues.[3]

Jusqu'à récemment, la sélection des ostraca en vue de leur publication se faisait essentiellement « par le texte » : les ostraca étaient sélectionnés en fonction de critères textuels (mots et expressions clés, paléographie, etc.). Cette méthode de sélection a largement été facilitée par les classements préalables de Posener, les ostraca littéraires ayant été regroupés, dès le début du travail sur le fonds, en fonction de leur matière (céramique, calcaire), de l'orientation et de la taille des textes afin de faciliter les raccords. En outre, entre 1995 et 2000, les ostraca littéraires ont tous été photographiés en noir et blanc;[4] et le reconditionnement de la collection, intervenu en 2011, a donné l'occasion d'enregistrer l'ensemble des objets dans une base de données associant les numéros d'inventaire aux numéros de clichés et indiquant toutes les informations portées sur chaque ostracon : marque de fouilles, numéros spéciaux et Séquestre. Cette couverture photographique et la base de données servent désormais d'outils principaux de consultation et de repérage pour les recherches.

Les approches actuelles sur le fonds des ostraca littéraires

Si l'approche « par le texte » reste privilégiée pour sélectionner les pièces à étudier, une approche « matérielle » de la documentation est développée en parallèle. Celle-ci permet de constituer des groupes cohérents d'objets qui ont l'avantage de pouvoir être appréhendés de manière plus exhaustive. Il s'agit dans ce cas de considérer la variété et/ou les types de textes copiés sur des ostraca présentant des caractéristiques matérielles communes qui peuvent être facilement identifiées : support, encres, pro-

3 Pour un historique détaillé du travail entrepris sur la collection des ostraca littéraires : Albert 2017 ; Albert à paraître a.

4 Cette couverture photographique est régulièrement complétée et enrichie par des photographies couleurs sur les lots d'ostraca faisant l'objet de publication.

venance, etc. Au-delà de la publication des inédits à proprement parler, ces deux approches permettent de lancer une réflexion sur l'aspect des écritures et la paléographie des ostraca littéraires qui varient sensiblement d'un objet et d'un texte à l'autre.[5] La question se porte alors sur les raisons de ces variations et, en corolaire, sur la fonction des ostraca littéraires comme support d'écriture et de transmission des textes.

Les recherches « par le texte » : perspectives et limites

Plusieurs thèmes de recherche sur le fonds des ostraca littéraires de l'Ifao reposent sur une sélection des objets « par le texte ». Ainsi, de larges sondages fondés sur des caractéristiques philologiques et paléographiques ont permis à Dorn et Polis de mettre au jour de nouveaux témoins de la production textuelle du scribe Amennakhte, de vérifier la pertinence de l'approche paléographique « globale » telle qu'elle a été définie par Gasse[6], et de développer la notion « d'échelle de sacralité » des écritures qui doit être prise en compte dans pour le traitement de la documentation littéraire.[7] Selon un procédé comparable, N. Sojic s'est lancée dans l'étude des lettres et lettres modèles, en s'appuyant sur un corpus d'environ 150 ostraca littéraires puisés dans le fonds de l'Ifao. L'enjeu est ici de s'interroger sur la définition du genre et sur sa place dans la production littéraire de Deir el-Medina.[8]

Cette approche est également venue alimenter les sujets des trois premières *Académies hiératiques*, séminaires de formation doctorale désormais véritablement ancrés dans les activités de recherche conduites sur les ostraca de l'Ifao.[9] Les objets y sont sélectionnés en fonction de thématiques spécifiques. La première *Académie hiératique* s'est concentrée plusieurs ostraca mentionnant le « flabellifère », dévoilant essentiellement des exercices épistolaires et des lettres mettant en jeu différents membres de la communauté de Deir el-Medina.[10] Les thèmes des deux années suivantes ont, quant à eux, mis en évidence des ostraca et des textes variés, dont il est souvent plus difficile de comprendre la nature et les usages.

Ainsi, les ostraca « religieux », c'est-à-dire ceux faisant mention de noms de divinités ou d'autres marques de religiosité, ont fait l'objet de la deuxième *Académie hiératique*. Le travail a notamment permis d'identifier de nouvelles attestations

5 Voir sur ces questions en dernier lieu Ragazzoli 2019.
6 Gasse 1992.
7 Dorn, Polis 2017. Voir également la synthèse sur les activités du scribe dans Dorn, Polis 2019.
8 Travail qui sera publié sous la forme d'un catalogue analytique dans la collection DFIFAO, Ifao.
9 Pour une présentation des *Académies hiératiques* : Albert à paraître.
10 Albert et Gasse 2019.

d'hymnes, à Amon (OL 1412, OL 4037)[11] et au Soleil levant (OL 285)[12], et des prières personnelles originales teintées de phraséologie hymniques (OL 3913)[13]. D'autres textes, en revanche, n'ont pas pu être identifiés avec certitude :

- L'OL 266[14] livre un texte rédigé en rouge, dans une écriture hiératique qui semble rapide mais régulière. Il est fait mention d'Amon, du *hrw-nfr*, et de l'expression *wn=tw r(ỉ)=k*, « qu'on ouvre ta bouche », qui place peut-être l'ostracon dans un registre rituel.
- L'OL 3916[15] en calcaire, rédigé sur ses deux faces, fait référence à différentes divinités (Horus, Min, Thot) et contient diverses notions telles que « l'héritier du dieu » et « le parfum du dieu ». Les deux faces sont rédigées d'une même main et semblent livrer un seul et unique texte. L'état fragmentaire de l'ostracon, qui est abîmé en de nombreux endroits, empêche cependant de comprendre sa teneur exacte et sa nature : hymne, texte magique, voire une *historiola*.

Ces ostraca témoignent de l'existence de textes inconnus pas ailleurs. Si leur thématique est largement hymnique, ils reflètent néanmoins des pratiques littéraires spécifiques où, parallèlement au travail de copie réalisé dans un cadre didactique dans le cas de certains hymnes, un processus de composition semble véritablement mis en œuvre par les auteurs de plusieurs textes originaux. Au-delà de la notion de « mains », ces différents cadres d'utilisation doivent également expliquer les différences paléographiques qui s'observent d'un ostracon à l'autre. Par exemple l'OL 3913 montre une écriture régulière et maîtrisée, en parfaite corrélation avec le contenu original de l'ostracon qui témoigne des connaissances du scribe et de ses capacités à créer de nouveaux textes. Celui-ci a d'ailleurs parfaitement su tirer parti de son support en calibrant son texte sur toute la surface de la céramique. Cela contraste avec l'impression rendue par l'OL 3916, dont l'écriture est plus rapide et saccadée, sentiment accentué à cause d'une certaine irrégularité des interlignes. On se demande dans ce cas si cette écriture est le fruit du manque d'expérience du scribe, ce que la présence de corrections interlinéaires tendrait à souligner. La complexité du texte copié pourrait témoigner, au contraire, d'une sorte de spontanéité qui relèverait alors plus de la maîtrise du texte et d'une rapidité d'exécution. La singularité de cette main doit, dans ce cas, peut-être être perçue comme un indice pour distinguer la nature et/ou la fonction de ce texte des autres compositions « religieuses » étudiées dans le cadre de cette 2e *Académie hiératique*.

11 Lebée à paraître.
12 Motte à paraître a.
13 Motte à paraître b.
14 Habachi à paraître.
15 Dalino à paraître.

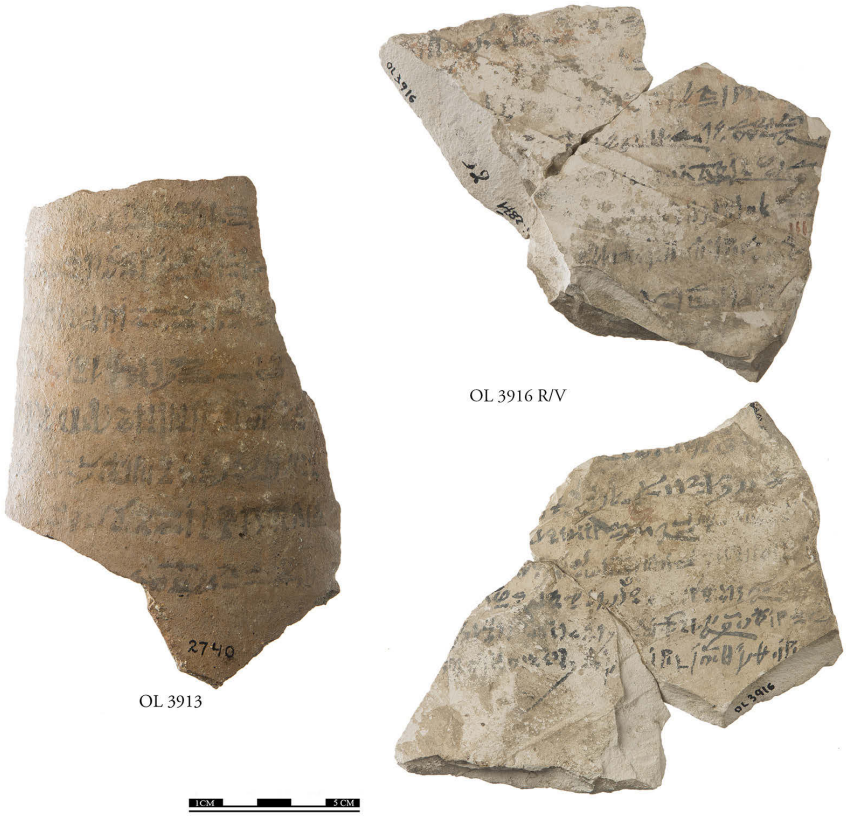

Fig. 1: Ostraca IFAO OL 3913, OL 3916 R/V (© I. Ibrahim, Ifao)

La 3e *Académie hiératique* était centrée, quant à elle, sur le thème du pharaon. Les ostraca ont été sélectionnés sur la base de mots ou d'expressions faisant référence au roi dans le fonds inédit de l'Institut. Elle a, entre autres, permis d'identifier un nouveau témoin du conte de *Sinouhé* (OL 3985),[16] ainsi qu'un brouillon de lettre adressée au roi (OL 3162 + 3171), peut-être rédigée par Amenakhte, relative au don d'une statue royale à mettre en relation avec la lettre du P. Turin 1879, et qui vient ainsi s'ajouter au dossier sur ce personnage.[17]

16 Verhoeven à paraître.
17 Claude et Frère à paraître.

Elle a aussi donné l'occasion d'entreprendre l'étude de l'OL 4175[18], qui avait vraisemblablement déjà été repéré par Posener[19] mais qui n'avait pas été publié. Il s'agit d'un ostracon en calcaire rédigé sur ses deux faces d'une même main. L'écriture est fine, régulière et très maîtrisée. Le texte, qui fait mention d'Amon et Mout, à la dernière ligne du *recto*, puis de Khonsou, à la première ligne du *verso*, laisse supposer que la composition se suit d'une face à l'autre de l'ostracon. Lors de la copie, l'ostracon a été retourné selon un axe horizontal, il manque ainsi la partie supérieure du texte au *recto*, et la partie inférieure au *verso*. Certains des bords latéraux sont également perdus, sur une surface qu'il est impossible aujourd'hui de déterminer.

La composition ne trouve pas de parallèle mais sa nature lexicale et sémantique invite à la rapprocher des hymnes aux rois copiés sur ostraca[20] et des récits historiques comme la *Bataille de Qadesh* du P. Chester Beatty IV et d'autres textes relevant du même thème tels que *Thoutmosis III en Asie* (P. Turin 1940+1941) ou encore l'*Hymne au char* (O. Edimbourg et O. Turin CGT 57365).[21] Cependant, l'œuvre et fait appel à différentes sources textuelles. Elle est copiée sur un ostracon qui n'est pas palimpseste. Le texte ne contient pas de corrections, le scribe maîtrise l'hiératique et dispose vraisemblablement d'une réelle culture littéraire. Les recharges d'encre se situent généralement au début de groupes sémantiques cohérent, souvent au niveau des points de ponctuation, ce qui laisse penser que l'auteur comprend pleinement le sens de son texte.

Cette pièce illustre, une fois encore, le phénomène de création littéraire, décliné sur un thème bien exploité durant l'époque ramesside.[22] Aucun indice ne permet à ce stade de définir le texte comme un hymne au roi, dans ce cas destiné à un Pharaon (*pr-ʿ3*) qui n'est pas nommément mentionné dans la partie conservée ; ou comme un récit s'apparentant au genre de la « fiction historique », et dont l'OL 4175 serait alors un rare exemple attesté sur ostraca.

Ces quelques exemples montrent que l'approche par le texte est toujours susceptible d'apporter de nouveaux témoins originaux nécessaires à la compréhension des pratiques littéraires de Deir el-Medina. Cette approche est néanmoins tributaire des sondages effectués dans le fonds des inédits selon des critères de recherche qui, dépendant de contenus textuels, ne peuvent que difficilement être appliqués à l'ensemble des ostraca. Il suffit qu'un texte soit trop effacé ou en lacune pour exclure un témoin qui aurait pu être représentatif. En outre, l'approche par le texte implique, de fait, une orientation des recherches sur des textes de nature spécifique (par exemple, les hymnes lorsque les critères se fondent sur la thématique

18 Albert à paraître b.

19 Comme le suggère le numéro d'inventaire provisoire porté sur l'ostracon.

20 Voir par exemple : Fischer-Elfert 1997, 58–77, textes 13 à 15.

21 Sur ces textes, voir notamment Manassa 2013.

22 Manassa 2013 ; Fischer-Elfert 1999.

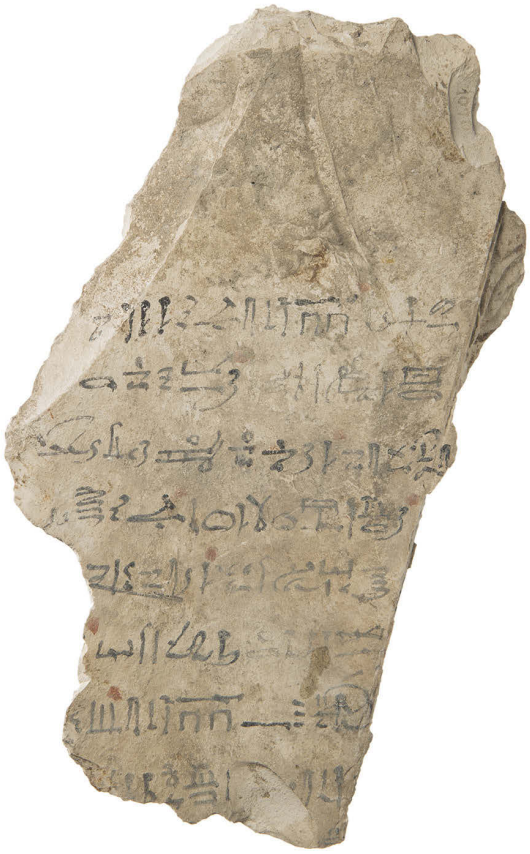

Fig. 2: Ostracon IFAO OL 4175 V (© I. Ibrahim, Ifao)

religieuse). L'appréciation d'un champ lexical significatif pour la recherche de certains textes peut être complexe, notamment dans le cas particulier des « Richesses inconnues » telles qu'elles ont été définies et listées par Posener.[23] Le repérage de nouveaux ostraca sur la foi de ce seul critère peut donc être biaisé. Il est, dès lors, difficile de faire des statistiques et de tirer des conclusions sur des usages ou des tendances littéraires à l'échelle de la collection, ce qu'il serait souhaitable de pouvoir progressivement faire.

23 Posener 1951.

L'approche matérielle : mieux appréhender la variété des textes et des registres d'écriture

Il a donc paru nécessaire de mettre en place d'autres systèmes de sélection des ostraca qui, s'ils ne se concentrent pas en première intention sur le texte, permettent de cibler des groupes d'objets aux caractéristiques matérielles communes, qu'il s'agisse de l'emploi d'un support, d'une encre spécifique, ou que ces groupes portent des marques de fouilles permettant de préciser des provenances plus précises. Ces critères facilitent le repérage et la sélection des ostraca qui peut être réalisée de manière plus exhaustive. Les textes sont ensuite appréhendés, avec l'intérêt de pourvoir prendre notamment en compte la variété textuelle et les registres d'écriture observés au sein d'un même groupe. Plusieurs dossiers sont en cours d'étude selon cette nouvelle approche du fonds inédit de l'Ifao, à l'exemple des ostraca de grand format étudiés par Gasse.[24] De même, les ostraca portant les marques « KE290 », « maison G » et « SO IV » ont été rassemblés par Dorn et Polis et seront publiés sous la forme d'un catalogue.[25] Certains d'entre eux montrent de nouvelles compositions textuelles inconnues par ailleurs. Ils sont rédigés d'une même main et peuvent être rapprochés de plusieurs autres documents. Ils viennent enrichir les connaissances sur la production littéraire d'un scribe de Deir el-Medina, dans l'esprit de ce qui a pu être fait pour Amennakhte.[26]

Là encore, les *Académies hiératiques* sont l'occasion de lancer de nouveaux thèmes. Dans ce cadre, les ostraca rédigés en rouge ont fait l'objet de la 4e session de l'académie en 2018. L'objectif est de dresser un catalogue où une liste précise et exhaustive des usages pourra être établie.[27] Le cas des tablettes à écrire, abordé lors de la 5e *Académie hiératique*,[28] permet d'illustrer plus en avant les enjeux d'une approche matérielle. Plusieurs tablettes à écrire ont déjà été publiées par Posener dans ses catalogues. Celles-ci se mêlent aux autres ostraca indistinctement de leur nature matérielle, l'étude se centrant exclusivement sur les textes consignés. L'Ifao conserve néanmoins encore de nombreuses tablettes fragmentaires inédites qu'il s'agit de recenser.[29] L'idée est de les confronter au reste de la documentation et de faire une étude systématique de ce support d'écriture.

24 L'étude des ostraca de grand format sera publiée par Gasse, dans un prochain volume de catalogue des *DFIFAO* en préparation.

25 En préparation par Dorn et Polis. Volume en préparation à paraître dans les DFIFAO, Ifao.

26 Cf. note 7 pour les renvois bibliographiques.

27 4e *Académie hiératique* : l'encre rouge dans les ostraca littéraires de Deir el-Medina (30 sept.–04 oct. 2018).

28 5e *Académie hiératique* : les tablettes inédites de l'Ifao. Un fonds fragmentaire à remettre en contexte (29 sept.–03 oct. 2019).

29 À titre d'exemple, voir l'étude préliminaire de Gasse (Gasse 2008–2009).

Il n'est pas difficile de comprendre, au vu de l'état de conservation de ces tablettes, pourquoi elles sont restées inédites : elles sont cassées, et les textes qu'elles présentent sont souvent très effacés en raison, notamment, des nombreux emplois dont elles ont fait l'objet. Plusieurs textes y ont été successivement écrits puis raclés, jusqu'à l'usure excessive de la surface. Cependant, cet état traduit un usage pratique de ces objets qui doit être pris en compte et qu'il est intéressant de comparer avec d'autres tablettes déjà publiées. Parmi les tablettes fragmentaires étudiées, il a déjà été possible d'identifier certains textes. À titre d'exemples :

- Un extrait de la *Lettre satirique d'Hori* (P. Anastasi I) sur la tablette OL 4278.[30] Il s'agit d'un des textes les plus abondamment copié sur ostraca.
- Un parallèle, sur la tablette OL 145[31], à un *Hymne au Nil* connu sur l'O. DeM 1105.[32] L'OL 145 donne les deux premières lignes du texte, avec un découpage sensiblement identique à celui de l'O. DeM 1105. La tablette OL 45 soulève ainsi la question du cadre de rédaction de ce texte, qui a été copié au moins deux fois selon une disposition similaire.
- La tablette OL 5786[33] atteste d'un texte connu par d'autres parallèles et vraisemblablement à mettre en relation avec l'*Enseignement d'Amennakhte*.[34]
- Enfin, la tablette OL 107[35] montre quant à elle un texte contenant une date[36], et mentionnant un *ḥny sš.w*, qu'il serait tentant de rapprocher, là encore, de l'*Enseignement d'Amennakhte*, bien qu'il n'en constitue pas un parallèle.[37]

La fonction didactique de ces tablettes peut être évoquée, compte tenu des textes qui y ont été copiés. Cette fonction serait en adéquation avec, d'une part, l'aspect des écritures, qui peuvent sembler maladroites sur certaines de ces tablettes mais qui sont d'une manière générale assez bien maîtrisées, ce qui tend à montrer le niveau d'apprentissage des scribes et, d'autre part, l'usure des tablettes, celles-ci ayant été abondamment utilisées : elles sont pour la plupart palimpsestes, et elles ont reçu quantité de textes avant d'être abandonnées. Le texte identifiable est simplement le dernier à y avoir été écrit. Le *verso* des tablettes, généralement lui aussi inscrit, donne également des informations sur leur usage. Ainsi, parmi les tablettes évoquées, les *versos* des OL 4278 et OL 145 livrent des textes qui n'ont pas pu être reconnus à ce stade. Néanmoins, le *verso* de l'OL 145 semble avoir été rédigé par une autre main,

30 Pinon à paraître. Texte déjà identifié dans Gasse 2008–2009, 50.
31 Daubisse à paraître.
32 Posener 1938, 26, pl. 54–54a ; Fischer-Elfert 1986, 29–30.
33 De Maré à paraître.
34 Voir Fischer-Elfert 1983 pour les textes parallèles ; et Dorn 2013 pour le rapprochement du texte avec l'*Enseignement d'Amennakhte*.
35 Rabbia à paraître.
36 Sur la présence de dates dans les textes littéraires, voir notamment Hagen 2013, 79–80.
37 Sur l'*Enseignement d'Amennakhte*, voir Dorn 2004.

Fig. 3: Tablettes IFAO OL 145 R/V, OL 107 R/V (© A.-L. Daubisse, M. Rabbia, Ifao)

dans une direction différente de celle du *recto*. Le *verso* de l'OL 5786 contient, quant à lui, une figuration fragmentaire en rouge, qui pourrait être interprétée comme un exercice de dessin du roi massacrant ses ennemis. Le *verso* de l'OL 107 constitue un brouillon de lettre ou une lettre modèle adressée au flabellifère, lui aussi rédigé par une autre main que le texte littéraire du *recto*. Cela suggère que ces tablettes pouvaient être utilisées pour copier toute sorte de textes à plusieurs moments, mais aussi probablement par différentes personnes.

Ces tablettes témoignent ainsi d'une fonction particulière relative à la formation des scribes de Deir el-Medina. Les traces écrites et matérielles qu'elles montrent permettent de mieux comprendre comment ces objets étaient utilisés dans ce contexte d'apprentissage. Néanmoins, cette fonction didactique ne peut pas être généralisée

Fig. 4: O. DeM 1214 (© Ifao)

à toutes les tablettes.[38] Certaines d'entre elles semblent en effet relever d'un autre usage, à l'exemple de l'O. DeM 1214 déjà publié.[39] Cette tablette fragmentaire porterait l'extrait d'une œuvre originale rapprochée, même si cette attribution n'est pas certaine, du *Conte de Néferkarê et du général Siséné*, connu par deux autres parallèles : la tablette OIC 13539 et le papyrus Chassinat I. L'originalité du texte, sa transmission sur une longue période, et le fait qu'il ait été copié sur des supports spécifiques (tablettes et papyrus), laissent supposer qu'il ait eu une certaine valeur. En ce sens, l'O. DeM 1214 ne paraît pas être palimpseste et l'écriture y est particulièrement soignée, ce qui le distingue des autres tablettes jusqu'à présent évoquées. Au-delà de son intérêt littéraire, il serait tentant de considérer cette tablette non pas comme un simple support d'écriture mais plutôt comme un véritable « objet de prestige » destiné à être conservé, celui-ci n'ayant vraisemblablement reçu qu'un seul texte copié, peut-être pour lui-même, avec une habilité patente. Si l'attribution du texte s'avérait correcte, Posener suggère que la tablette ait été de grande taille, rédigée dans le sens de la longueur.[40] Ce format conférerait, d'autant plus, un statut particulier à cet objet. L'état fragmentaire de la grande majorité des tablettes empêche néanmoins de les distinguer sur la foi de ce seul critère, d'où l'intérêt de se pencher sur les registres d'écriture pour mieux les caractériser.

38 Sur l'usage et la fonction des tablettes à écrire : Hagen 2013, 82–85.
39 Posener 1972, 29 et pl. 48–48a ; Posener 1957.
40 Posener 1957, 122.

Ainsi, la prise en compte de la matérialité du texte, de la manière dont il est écrit, combinée au support sur lequel il est rédigé, peut apporter des éléments de compréhension sur l'usage et la fonction des objets. Le thème des tablettes à écrire permet, en outre, de livrer de nouveaux témoins à des compositions textuelles parfois peu connues, et de mieux cerner, dans ce cas, leurs cadres d'utilisation.

Les différentes recherches conduites sur le fonds des ostraca littéraires conservés à l'Ifao tendent à montrer que les « Richesses inconnues » constituent désormais une forte minorité des textes encore inédits, les sondages, quelle que soit leur méthode d'approche, ne donnant que peu de résultat. Cependant, le fonds regorge de nouveaux textes, souvent originaux, qui montrent l'aptitude des scribes à la création littéraire, qu'ils appliquent à des genres circonscrits, tels que les hymnes, les Enseignements, voire les récits. Tous les ostraca inédits signalés dans cet article seront publiés, sous forme de catalogues ou dans les prochains volumes des actes des *Académies hiératiques*. Ils rendent compte, de manière assez représentative, de la nature et de l'état des textes encore susceptibles d'être mis au jour à l'Ifao. Bien qu'ils sortent d'un cadre « profane » à proprement parler, ils soulignent néanmoins la notion d'instabilité des genres soulevée par Posener,[41] qui rend souvent difficile les classifications. En outre, ils illustrent des processus de composition, à la fois textuels et matériels, mis en œuvre. Si la recherche par le texte est désormais rendue plus difficile compte tenu des modalités de sélection des ostraca par ce biais, l'approche matérielle laisse envisager un champ de possibilités intéressant, permettant de combiner la découverte de nouveaux textes à une meilleure compréhension de la fonction et des contextes d'utilisation des ostraca littéraires.

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41 Posener 1951, 30. Sur la fluidité des genres dans la littérature, voir également Baines 1996, 170–171.

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Hieratic at the turn of the 20th and 21st dynasties: the case of the 21st dynasty graffiti from the temple of Hatshepsut at Deir el-Bahari

Mirosław Barwik[1]

Abstract

Since the great discoveries at the end of the 19th century it has been known that the area of the Deir el-Bahari temples played a prominent role as a burial ground for the Theban priesthood, including high priests of Amun. A number of hitherto unpublished ostraca dating to the 21st dynasty, found in the area, provides a testimony of institutional activity in that place. The abundant material still awaits publication, so its chronological framework cannot be effectively correlated with the available archaeological evidence. Strangely enough, such intense activity of the necropolis crew in the area is hardly reflected by the graffiti, quite common in other areas of the necropolis. New hieratic graffiti found recently in the temple of Hatshepsut significantly fill this gap.

New hieratic graffiti recently found in the temple of Hatshepsut at Deir el-Bahari provide a new basis for studying the activity of the institution of the Theban necropolis in the period of the 21st dynasty. Two of them were, in fact, known earlier. One of them is a large hieratic dipinto painted on the southern wall of the north wing of the lowermost portico (marked as "A" on the diagram; cf. fig. 1), transcribed by Spiegelberg in 1899.[2] The second is a graffito found by Winlock, and subsequently rather hastily transcribed by Gardiner in the 1922–23 season.[3]

The former text is of special importance as it is explicitly dated to the year 49, apparently of Psusennes I or Menkheperre,[4] though once wrongly related to a group of texts connected with the building of the temple of Thutmosis III at Deir el-Bahari.[5] The dipinto in question gives also the name of a hitherto unknown mayor of Western Thebes – Ankh-Hor-en-Aset, who appears to be the son of the high priest Menkheperre. This is evident from the text of a further graffito, located on the adjoining north wall of the lower ramp of the temple, ca. 8.5 m to the east (fig. 1:

1 Acknowledgement: I am grateful to Paul Barford for revising my English.

2 Spiegelberg's Notebooks WS 121; now in the archives of the Oriental Institute, University of Chicago (courtesy J. A. Larson).

3 Winlock's Notebooks VII, 160; courtesy Metropolitan Museum of Art, New York.

4 Cf. Barwik 2011, 294–297, pls. 2–3.

5 Cf. Van Siclen 1982–1983.

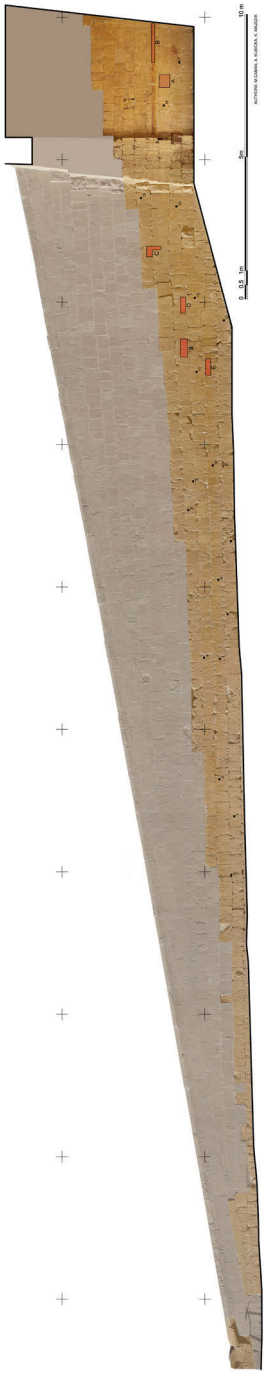


Fig. 1: Location of the graffiti on the lower ramp (M. Caban, A. Kubicka, K. Majdzik)

"D").[6] Here we read: "(1) Son of the high-priest of Amun-Ra, king of the gods, general of the entire army of Upper and Lower Egypt, (2) the leader Menkheperre [who is at the head of the] great armies of the whole of Egypt, (3) mayor Ankh-Hor-en-Aset of [the] west of Thebes [...]".

Significantly, the name of the high priest is not encompassed in a royal cartouche, which sheds some light on the alleged kingship of Menkheperre, providing that the text is not too distant in time from the year 49 of the dipinto in the nearby portico. Certainly, the precise dating of this graffito is open to debate, but nevertheless it may be related to the dipinto of "year 49", as well as other graffiti written in the adjoining area. It seems that graffito written about two metres to the left of the preceding one (fig. 1: "E"), was inscribed by the same person, as the handwriting is exactly the same.[7] This time, however, it was written in the name of another son of the high priest Menkheperre: "(1) Son of the high-priest of Amun-Ra, king of the gods, god's [father of Amun, god's father of Mut] (2) the great, lady of *Asheru*, prophet of Pakhet, the great, lady of *Seret* (i. e. Speos Artemidos), prophet (of) Shepes?, lord of [*Hut-ka*?], chief (3) of "cadets" of the general, the leader Ankhefenmut".

What was the purpose of writing these two memoranda in this particular place? Was it a commemoration of a burial of one of the persons mentioned in them, or else their role as supervisors, directing work of some sort conducted nearby? Significantly, priest Ankhefenmut son of Menkheperre was buried in the Bab el-Gasus tomb,[8] a little bit to the north of the lower courtyard of the Hatshepsut temple, not far away from the latter graffito. There can be no doubt that he is the same person as the Ankhefenmut of the graffito (though the titles of the latter are more expanded than those attested on the furniture found in Bab el-Gasus).[9] So it is possible that the graffito in question commemorates preparations for his burial (which apparently took place slightly later, during the period of office of Smendes II, another son of Menkheperre).[10]

The activities of the institution of the Theban necropolis in the period of the 21st dynasty, were hitherto known mostly from the Theban graffiti, and also from a group of ostraca from the Deir el-Bahari area (mostly unpublished).[11] There are four ostraca dating to the 21st dynasty among those found by the Polish Mission in the

5 To be published by the present author.

6 To be published by the present author.

7 Daressy 1907, 13 (A 140); Sadek 1985, 163–168 (C 20); Niwiński 1988, 130–131 (no. 140); Niwiński 1989, 289–290 (nos. 103, 105); Niwiński 1995, 126–134, pls. 22.2–3; Jansen-Winkeln 2007, 188 (11.14); Aston 2009, 190–191.

8 Cf. Jansen-Winkeln 2007, 188.

9 Compare, however, Niwiński 1988, 46; Niwiński 1989, 290 ("late 21st Dyn."); Niwiński 1995, 133–134.

11 Cf. Demarée 2003, 245–250.

area of the Deir el-Bahari temples. One of them (the limestone ostracon O. DeB inv. no. F.8958) was found during clearance of the eastern slope of the platform of the Thutmosis III temple in the 1980s.[12] The text written on the *recto* relates to the "inspection (of) the [work] of those who are at the mountain". Unfortunately, the date once written at the beginning has not been preserved, though several day dates are mentioned in the text of the ostracon. The text gives a lengthy list of 29 workmen's names, most of which are known from other available sources. Unfortunately, none of the leading authorities of the necropolis staff are enumerated here, and the precise dating of the document therefore still needs further study. In accord with the practice of the Ramesside period, the presence of workmen was marked by dots or a cross, and once the absence of sick workman was precisely annotated by adding the *mr*–sign (U23) in front of the name. For unknown reasons, the efforts of only three of the workmen were subjected to a more detailed records, as the days of their work are enumerated.

The inscriptional material relating to the activity of the necropolis crew can now be substantially enlarged on the basis of a newly recognised list of workmen, and a form of necropolis journal, inscribed on the walls of the Hatshepsut temple. Unlike the texts presented until now, written with large hieratic signs in the *Buchschrift*, these inscriptions are written in hieratic cursive with extremely small signs incised apparently with a fine implement, perhaps a flint flake. The first of these inscriptions (here marked as "B", cf. fig. 1),[13] which can be divided into seven separate "groups", was located on the *dado* ornament on the south wall of the lower north portico, in the vicinity of the above mentioned dipinto of "year 49", and below an erased depiction of Hatshepsut as a sphinx trampling Egypt's foes. Here a date was written at the extreme right, alongside a general description of an action undertaken: "Year 40, first month of *akhet*, day 1: coming (to) the mountain; Penparei, Ha[...], Padiamun, Pehsuhor, Meheftahut" (this is the text of "Group 1").

More workmen's names are written to the left on both bands of the *dado* ornament. These are arranged in groups dated to the successive days of the first month of *akhet* (day 2, 4, 5, 5 to 7, 8, and 10), and each of the groups comprises from two to five names. The overall number of workmen whose presence at Deir el-Bahari was registered in such an unusual way amounts to 19 names. Certainly this is not very many if one compares it for example to the strength of the crew given by the ostracon discussed above (29 names) or another one published recently (O. Cairo 524 of approximately the same time),[14] where the number of workmen amounts to 87 persons, which is the highest known number of men engaged in the work in the area of the Deir el-Bahari temples during the 21st dynasty. The persons registered here

12 To be published by the present author.

13 To be published by the present author.

14 Hassan 2016, 131–134, pl. 37.

include the following: Hori, Nesamun, Nebwenenef, Padikhonsu, Pamay, Kabenefnebi, and Penkai. Strangely enough, only three of the workmen appear twice in these series, and this is a certain *Shakater/Shakaiunter(y)* ("Groups" 3 and 6), as well as Nesamun and Hori. It is open to question whether this *Shakater* is the same person as the *Shakaiuntery* attested by the aforementioned ostracon from the Polish excavations, as well as a newly published ostracon from the Cairo Museum (O. Cairo 450 *recto* I, 5).[15] The latter is apparently a foreign name, possibly of Nubian (or more precisely Nilo-Saharan) origin, and this would perhaps explain the different spellings of the name used in the cited documents. If this is the case, the presence of the name of *Shakater*/*Shakaiuntery* would enable us to date the two aforementioned ostraca and the graffito to approximately the same period.

No titles or functions are attached to the names registered in the inscription on the *dado*, so it is unclear whether Penparei and Meheftahut are the persons known from the archives of the necropolis as the scribes of the necropolis.[16] It seems in fact that this may be a result of a simple homonymy. On the other hand, the exposed position of the name of Penparei, placed at the beginning of the *dado* lists, may allow us to assume that he played an important role (perhaps as the scribe of the royal necropolis).

Unfortunately, there are no names in the kind of "journal of work" written high up on the northern wall of the lower ramp (here marked as "C", cf. fig. 1).[17] Instead, a series of dates makes this document a precious hint as regards the organisation of work in this area of the necropolis in the late period of existence of the institution of the necropolis. Even if the year date of the previous inscription is not preserved perfectly, here the text is dated again to year 49 (line 1), and year 1 (line 2), besides the highly doubtful year date of line 4 (rather illegible mostly because of the erosion and crystalline structure of the stone, but possibly also to be read as "year 1"). These year dates are presumably those of Psusennes I and Amenemope according to the "traditional" chronology (an alternative would be the years of high priest Menkheperre and the Tanite king Amenemope).[18]

The form of this graffito, as well as the quite unusual place where it was located, make it an extraordinary document among graffiti dating to the 21st dynasty. Even if some elements of it are still doubtful in reading, the general sense seems to be clear: it is a register of work done by relatively small groups of workmen at some particular

15 Hassan 2016, 126, 129, pl. 35; compare also unpublished O. DeB inv. no. F.8959 (line 4).

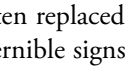
16 Cf. Černý 2004, 206–207 (30), 211 (38).

17 To be published by the present author.

18 For a discussion, cf. e. g. Jansen-Winkeln 1992, 34–37; von Beckerath 1995, 49–53; Kitchen 1996, XVII–XVIII (§§ L-M); Jansen-Winkeln 2006, 226–232; Lull 2007, 257–267; Kitchen 2009, 191–192 (§ 75); Lull 2009, 245–249; James and Morkot 2013, 218–219, 223–225, 237–240; Jansen-Winkeln 2016, 92–96.

dates. It is worth noting that the text was inscribed about 2 m above the stairway leading to the adjoining portico (cf. fig. 1), so it seems that this area was at least partly covered by debris at that time. Otherwise it would be difficult to explain the reason for locating the graffito in such an inconvenient and barely accessible place. It is hardly likely that a scribe or scribes used some kind of scaffolding or ladder to reach the upper sections of this wall to make this inscription, especially if we bear in mind that the text had been written during a prolonged span of time.

As a matter of fact, the apparent differences of handwriting in particular sectors of the register seem to suggest that the text was not inscribed in one moment, but rather that the process of completing the graffito took place over some span of time. First of all, however, the dates themselves point to such a conclusion. The successive dates inscribed on the wall comprise at least 34 entries, within a period from I *peret* 9 to at least the second decade of I *shemu* of the next year. An exact evaluation of the period covered by the register depends, however, on the adopted sequence of the entries, as they were successively written on the wall. If we assume a natural sequence of lines as they are distributed on the wall, then the span of time would amount to about 17 months. This could be reduced perhaps to about 5 months on the assumption that line 2 of the text was inscribed after the entry of line 19 was written, but this seems highly doubtful.

The dates are followed by what seems to be the workmen's signs, in the lower part often replaced by the *ditto*-sign () to omit repetitions. The number of discernible signs amounts to about 6 or more items. It is worth noting that the signs used here are not recorded in any other documents from the Theban necropolis. As in the case of notes made on the *dado* of the lower portico, the number of workmen who appear under each particular date is never high: it ranges from two to four signs. Certainly, this poses a serious problem in determining the kind of work done in the vicinity of the temple by such a meagre crew. Significantly, in the lower part of the inscription, beginning with the first day of I *shemu* (of the first year of unnamed reign), just two signs prevail: these are signs having a literal value *pn* (or else the numeral 90?) and *ib*, not to take into consideration the rather doubtful signs at the end of lines 17–19. For an unknown reason, the sign which could be read as *pn* was also written, in a slightly larger scale, to the left of the first column of enumeration, and below the second one (perhaps this was just a scribal exercise?).

The parallels for such an unusual journal may be sought in graffiti dating to the 20th and the 21st dynasties, especially those located in the Valley of the Kings, and in the area of the Deir el-Bahari royal cache (TT 320).[19] Among these, graffito 1696 (from the Valley of the Kings) dating to the 20th dynasty is noteworthy, as here too

19 Cf. graffiti nos. 561, 562, 1310, and 1319: cf. Spiegelberg 1921, 46–47, pl. 63; Černý 1956, 20–21, pl. 59.

the day dates are followed by workmen's signs (there is no certainty that lines 9–10 are of the same date as the preceding lines).[20]

The reason for inscribing all of the graffiti discussed here on the north wall of the lower ramp, and adjoining portico, must be sought perhaps in special topographical circumstances, as this is a place hidden in deep shadow during all the day – a factor which would prompt any group of workmen engaged in work conducted in the area of the lower terrace to take their rest precisely in this highly convenient place. On the other hand, the reason for the presence here of the working party must be explained by work on the tombs and burials behind the northern boundary walls of the temple, well attested by the available archaeological evidence. Winlock discovered here two small tombs built or reused during the 21st dynasty (MMA tomb 59, and 60).[21] In addition, the tomb of queen Meritamun of the early 18th dynasty (TT 358) was inspected and reused in the early period of the 21st dynasty.[22] More significantly, however, the so-called Deir el-Bahari second cache (Bab el-Gasus) is located directly to the north of the lower courtyard of the temple. The activity of the necropolis crew, documented by some of the graffiti from the temple, may be related perhaps to the work conducted in this tomb.

Only two graffiti datable to this period are located outside the shaded area of the lower ramp and adjoining portico. One, the earlier it seems, had been written on the wall above the Lower Chapel of Anubis, and this is the sole example of the 21st dynasty graffito written in the area of the upper terrace of the temple, but outside the restricted cultic area of the Upper Court. The other one was placed on the left doorjamb of the north-west gate of the lower courtyard of the temple.

The first of the texts has the form of large tableau (fig. 2), well documented among graffiti of the Theban mountain at the turn of the 20th and the 21st dynasties. It commemorates members of the illustrious family of the scribes of the royal necropolis – Thutmosis and his son Butehamun, and more precisely their descendants active in the period of the 21th dynasty: "(1) Royal scribe of the necropolis Thutmosis; his son (2) scribe in the Horizon of Eternity of the domain of everlastingness Butehamun; (3) his son *wab*-priest of Amun scribe Meniunefer; his son scribe in the Place of Truth Ankhefenamun; (4) son of his son, scribe in the Place of Truth of the necropolis Meniunefer; his son (5) scribe in the Place of Truth of the necropolis Amenmose".[23]

There are good reasons to believe that the second of the Meniunefers, enumerated here beside two or three sons of Butehamun, was a hitherto unknown grandson of the latter, and son of the scribe Ankhefenamun. The exact genealogical position

20 Cf. Černý and Sadek 1970a, pl. 10; Černý and Sadek 1970b, 10.

21 Winlock 1924, 21–29; Winlock 2001, 93–98; Niwiński 1984, 78–79; Aston 2009, 198–202.

22 See below.

23 Cf. Barwik 2020.

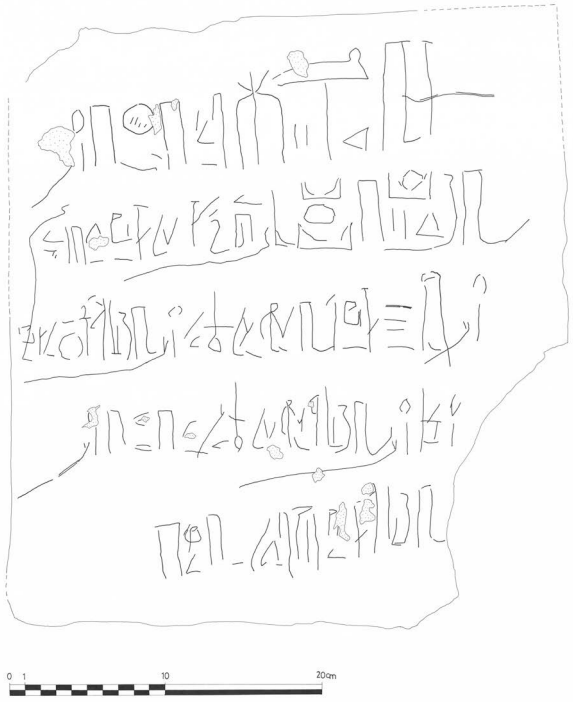


Fig. 2: Facsimile of the graffito with the names of the descendants of the scribe of the royal necropolis Thutmosis (drawn by the author)

of Amenmose, placed at the end, cannot be elucidated satisfactorily due to the specific structure of the graffiti of this type. As often is the case with graffiti of this kind, naming several members of a family, the authorship of the graffito remains obscure. One can only presume that it was written after the death of Butehamun, having in mind the extraordinary and somewhat artificial titulary attached to his name. A possibility exists that it dates to Ankhefenamun's tenure of office, and consequently this would place it within the period of office of the high priest Masaharta, when the nearby tomb of Meritamun was entered by an inspecting party, as documented by inscriptions on the shroud and bandages used to rewrap her mummy, relating to years 18 and 19, and giving the name of Masaharta.[24]

The text inscribed on the side gate of the lower courtyard (fig. 3) seems to be one of the latest among those presented here. It contains a prayer to the Amun of the temple in Medinet Habu written by "the *wab*-priest of Amun (of) United with Eternity, overseer of recruits (in) the Place of Truth Nespaneferher, son of the army

24 Winlock 1932, 48, 53, pls. 40, 41(B); cf. Jansen-Winkeln 2007, 28–29 (3. 52–53).

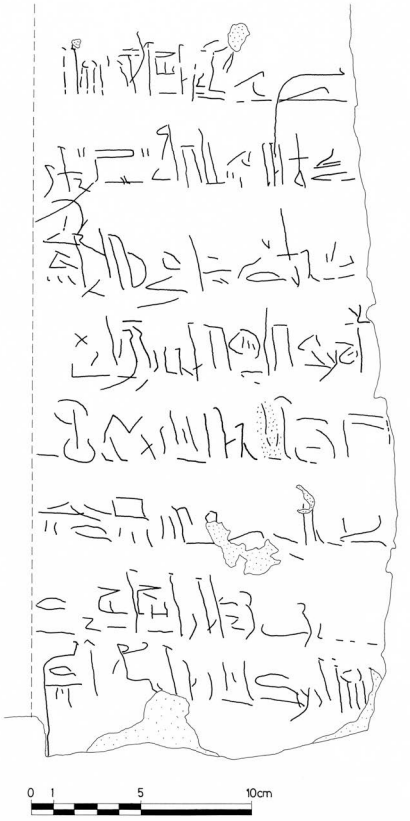


Fig. 3: Facsimile of the graffito of Nespaneferher (drawn by the author)

scribe of the royal necropolis Ankhef".[25] It seems that this Nespaneferher must have been the son of the well-known necropolis scribe Ankhef/Ankhefenamun – a relationship already attested by the Theban graffito no. 3251,[26] though it has never been taken into consideration in previous discussions on the descendants of Butehamun who were active during the 21st dynasty. The Nespaneferher of graffito no. 3251 is titled "scribe of the royal necropolis" (similarly in graffito no. 897),[27] and presumably he attained the office some time after the graffito in the Deir el-Bahari temple was written.

It remains a moot question whether he supervised work conducted in the area. More probably he was only one of the officials responsible for it, having in mind

25 Cf. Barwik forthcoming.

26 Sadek et al. 1972, pl. 218; Sadek 1972, 165.

27 Spiegelberg 1921, 74, pl. 94; cf. also Černý 2004, 214 (46).

his relatively humble position, judging by his titles given by the graffito. It is worth noting here, that the name of the foreman Horemkenesi also appears in the Deir el-Bahari texts, though his exact chronological position remains obscure – one can only speculate that he lived one or two generations earlier, apparently being a contemporary of the scribe Butehamun and his elder sons.[28] His name was mentioned in one of the Deir el-Bahari ostraca (O. DeB 781),[29] but the reason may be sought merely in fact that he was buried there – in the area of the temple of Mentuhotep II Nebhepetre.[30] The circumstances connected with making of the ostracon would perhaps have been clearer had the text written on the verso been preserved better. Unfortunately, it has been severely damaged, perhaps an effect of prolonged contact with water.

A slight possibility exists of course that the Ankhef mentioned in the graffito of Nespaneferher was not the same person as Ankhefenamun the son of Butehamun, thus not connected with the famous family of the necropolis scribes. One of the candidates would be for example Ankhef son of Nes[amun] from O. DeB inv. no. F.8958.[31] An unusual "military" title ascribed here to the scribe Ankhef(enamun) (*sš mšʿ n pȝ ḫr*), with no exact parallels in the preserved sources relating to Ankhefenamun son of Butehamun, must not obscure the mere fact that he was indeed the scribe of the royal necropolis. The addition of the phrase "of the army" may be explained perhaps by the social and political context of the graffito, of which nothing certain can be said.[32] In consequence, the identification of this Ankhef with the well-known necropolis scribe Ankhef/Ankhefenamun, son of Butehamun, seems to be the most plausible solution. In such a case, the graffito would be the latest piece of evidence regarding this influential family of the necropolis scribes, descendants of the scribe Amennakhte son of Ipuy.

One can presume that Nespaneferher son of Ankhef commemorated his name in the graffito placed on the gate because it is on the way leading to the area where 21st dynasty burials and reburials had taken place. Understandably enough, his presence here would have had something to do with preparations of these burials, though no further details are known connected with this. There are good reasons, however, to connect Nespaneferher with the two British Museum ostraca published by Demarée (nos. O. BM EA 51842 and O. BM EA 51843),[33] both containing short prayers or invocations (?) of similar contents. They were written in the name of a

28 Cf. Taylor 1995, 19–20; Häggman 2002, 349–351; compare, however, Antoine 2019, 114, 120–121.

29 Cf. Barwik 2011, 297–298, pl. 4; compare also O. Cairo 524, line 5: Hassan 2016, 132–133, pl. 37.

30 Cf. Taylor 1995; Dawson, Giles, and Ponsford 2002; Aston 2009, 219.

31 See above.

32 Or simply relating to the institutional background of the complex in Medinet Habu; see a comment by Antoine 2019, 104.

33 Demarée 2002, 37, pls. 148–150.

person whose identity is unknown due to their state of preservation but can be restored perhaps as that of Nespaneferher from the tiny traces preserved on the latter ostracon (line 5). The titles of the person in question, as documented on O. BM EA 51842, are extremely similar to those of the Deir el-Bahari graffito. What is more, his father and grandfather are respectively Ankhef and Butehamun.

The exact chronological relationship of the graffito written above the Lower Chapel of Anubis and that naming Nespaneferher son of Ankhef cannot be evaluated properly, though both seems to be broadly related to the second generation after the death of the necropolis scribe Butehamun. Both Meniunefer and Nespaneferher appear to be hitherto unknown grandsons of Butehamun. A cursory palaeographic comparison of the hieratic forms of the *Buchschrift*, attested in these two graffiti (cf. figs. 4–8) leads to the conclusion that their authors must have been different persons. Substantial differences are observable also between all the graffiti of the group discussed here, except the noteworthy affinity of graffiti "D" and "E", commemorating the names of two of the sons of the high priest Menkheperre.

The question of the authorship of the graffiti is of vital importance for the chronology of the texts in question but also for the chronology and aim of the actions undertaken in the area by the institution of the necropolis. To verify the hypothesis about the suggested authorship of the two BM ostraca, it would be necessary to compare them with other texts written in all probability by Nespaneferher himself. Unfortunately, there are only incised graffiti which could be taken into consideration, and any comparison of these with hieratic texts written on ostraca is of course highly unconvincing, as the writing technique is different in both cases. The question becomes even more complicated due to the fact that the editor of the two British Museum ostraca suggested that they were in a different handwriting.[34] Moreover the palaeography of the ostraca and the graffito seems to be substantially different (cf. fig. 9).

Leaving apart the graffito commemorating the sons and grandson(s) of Butehamun (which is in fact a separate entity, at least regarding its location), the question arises what is the relationship of the graffiti to each other. It is possible that some of them at least relate to one particular stage of work done in the area during a relatively restricted span of time (about a year and a half). Unfortunately, this idea cannot be substantiated in more detail, and the date of year 40 of the graffito on the *dado* of the lower portico points rather to a longer period of time. Interestingly, however, it seems that the group of texts presented here would be dated to the short period from the very end of the reign of Psusennes I (or alternatively the pontificate of Menkheperre) to the very beginning of the reign of Tanite king Amenemope.[35]

34 Demarée 2002, 37.

35 The chronological consequences of the graffiti in question will be discussed in detail in a separate paper.

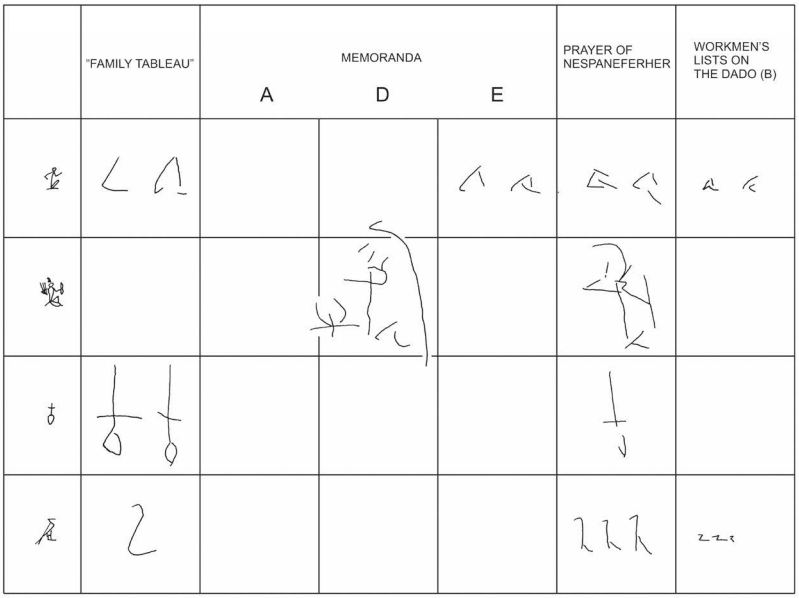


Fig. 4: Palaeographic table of the Deir el-Bahari graffiti

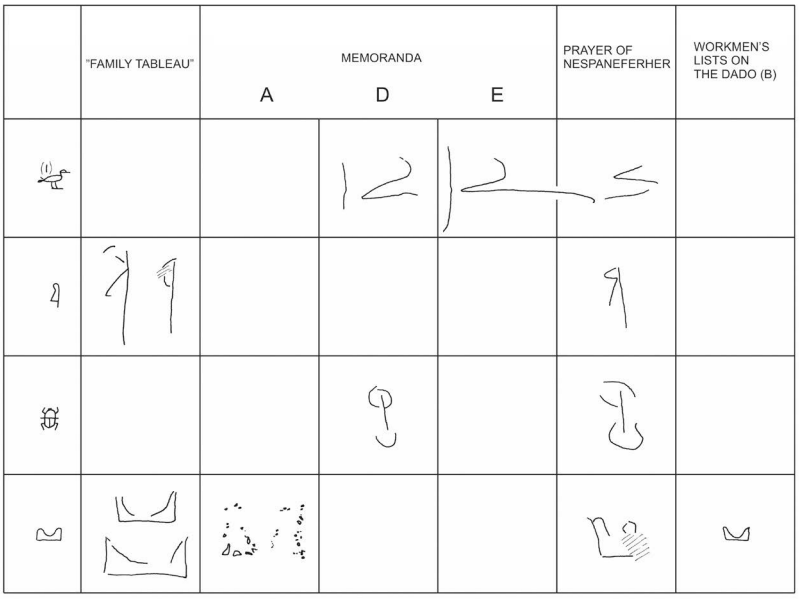


Fig. 5: Palaeographic table of the Deir el-Bahari graffiti (continuation)

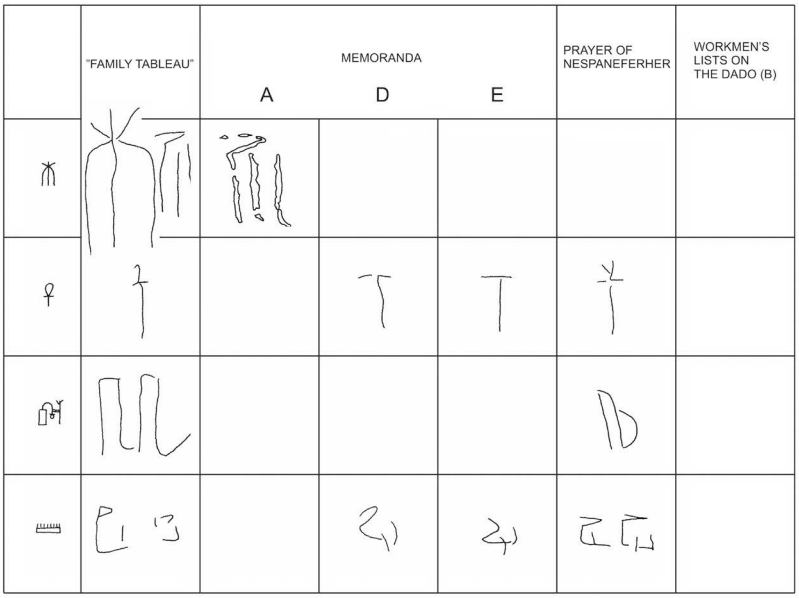


Fig. 6: Palaeographic table of the Deir el-Bahari graffiti (continuation)

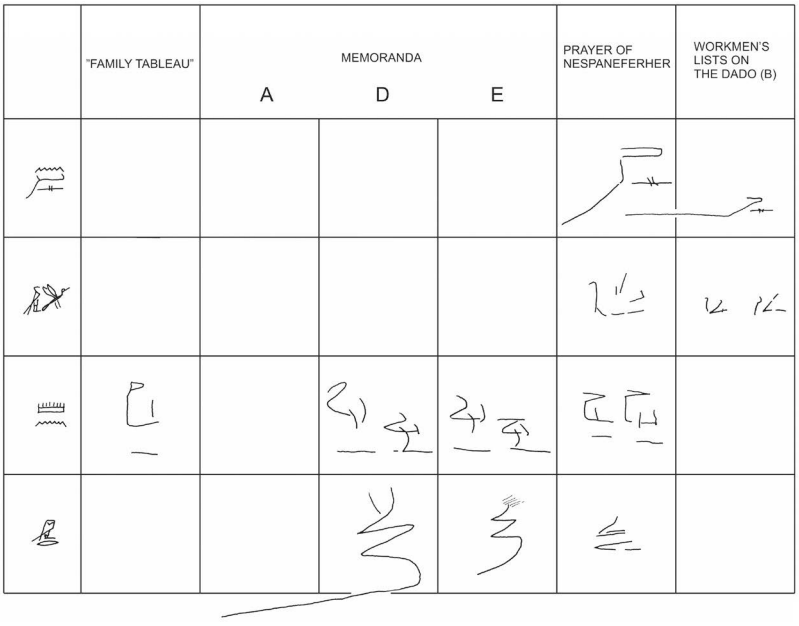


Fig. 7: Palaeographic table of the Deir el-Bahari graffiti (continuation)

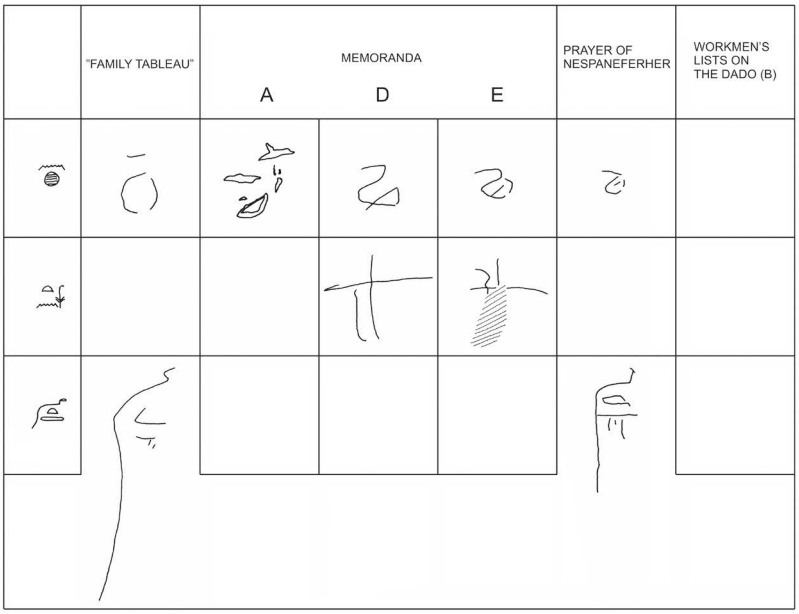


Fig. 8: Palaeographic table of the Deir el-Bahari graffiti (continuation)

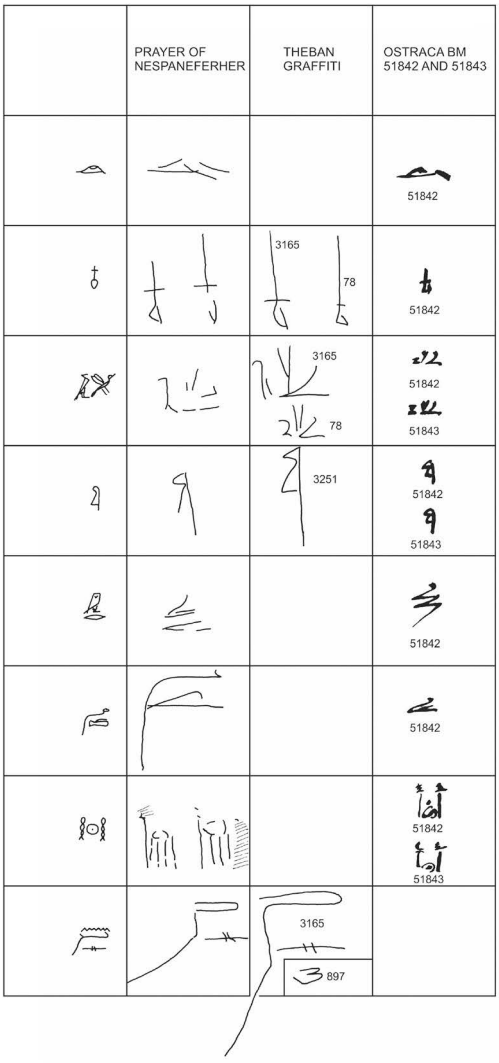


Fig. 9: Palaeographic table comparing hieratic signs in the texts related to Nespaneferher

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A family affair in the community of Deir el-Medina: gossip girls in two 19th dynasty letters*

Rob Demarée, Kathrin Gabler and Stéphane Polis

Abstract

In this paper, we publish two letters found by E. Schiaparelli in Deir el-Medina (1908). These can be dated to the mid-19th dynasty (c. year 45–50 of Ramesses II) based on palaeographical and prosopographical clues. They add to the body of evidence for epistolary communications between women in the community of workers. In complex interactions (involving numerous quotes based on hearsay), the daughters and other female relatives of *Tȝ-ḫr.t* (ii) complain about the evil behavior of their mother and each other. The scribal hand is the same for both letters, though the letters were sent by different individuals, and it reveals the writing habits of a scribe who was active during the first part of the reign of Ramesses II. As such, autographs can be excluded.

1. Introduction

The two letters published in this paper contain thematically connected communications between the mostly female members of the family of *Tȝ-ḫr.t* (ii).[1] In Letter

* This paper was written within the framework of the 'Crossing Boundaries' project (http://crossing-boundaries.uliege.be/); see Polis et al. 2020. The Introduction, sections 3.2, 4.2, and the Conclusion were written by the three authors; sections 2 and 6 are by Kathrin Gabler; sections 3.1 and 4.1 are by Rob Demarée and Stéphane Polis; sections 3.3, 4.3 and 5 are by Stéphane Polis. The images are scans by the Museo Egizio (Turin) and the hieroglyphic plates were prepared by Klaudija Stanic (Basel). We are very grateful to Matthias Müller (Basel), Renaud Pietri (Liège), Philipp Seyr (Munich/Liège), and Jean Winand (Liège) for insightful comments and suggestions on earlier drafts of this paper; to Susanne Töpfer (Turin) for facilitating all aspects of our work on these papyri (the hieroglyphic transcriptions have been checked against the original documents in September 2021); and to Daniel Waller (Oxford) for improving the English of this article. The Turin Papyrus Online Platform (https://collezionepapiri.museoegizio.it) provides access to digital pictures and a complete set of metadata about the papyri discussed in this paper, cf. document https://papyri2020.museoegizio.it/d/524 [8 June 2020].

1 Unless stated otherwise, the identification of individuals follows Davies' 1990 numbering system. For general studies about women in Deir el-Medina, see Toivari-Viitala 2001, Sweeney 2006a, 2016, and Donker van Heel 2018. On women's correspondence specifically, see Swee-

1, the daughter of *Tȝ-ḫ‘.t* (ii), named *Ḥnw.t-mrw.t* (i), expresses – in vivid fashion[2] – her sadness and discontent due to gossips spoken behind her back.[3] She complains about the evil behavior of her mother, sisters, and further female relatives, and she discusses the misappropriation of commodities within the family. Letter 2 is more lacunary than Letter 1 but it is evidently connected with the same family-internal issues. Interestingly, while both letters have different senders and addressees, they were written by the same scribe,[4] probably a professional, who was somehow connected to the family and who penned the missives for these women.

In this paper, we adopt the contextualizing approach of the ‘Crossing Boundaries’ project and dive into the social milieu of Deir el-Medina during the first part of the 19th dynasty. Our goal is threefold: (1) to discuss the material features, form, and contents of the letters, (2) to analyze the grammatical, orthographical, and palaeographical habits of the untidy scribe who wrote them, and (3) to elucidate the prosopographical issues at stake so as to situate the communications within these two letters both temporally and geographically.

The paper is structured as follows. After a discussion of the provenance of both letters in section 2, we provide a hieroglyphic transcription of the reconstructed documents and describe their material features, especially the folding patterns. In sections 3 and 4, we propose an annotated transliteration and translation of Letter 1 and Letter 2. Section 5 is devoted to a discussion of the main characteristics of the hieratic handwriting (from its layout and general organization down to individual signs), while prosopographical information is scrutinized in section 6. Based on the evidence discussed in sections 5 and 6, we suggest a date for these letters in the Conclusion and discard the possibility that they were autographs.

2. Provenance

The Ramesside documents from Deir el-Medina in the Turin papyrus collection[5] may be divided into at least two lots. The first of these, the so-called ‘Drovetti lot’,

ney 1993, who observes that the subject matter of these letters “falls into four broad groups: transactions, confrontations, family matters and errands”.

2 On the interplay between gender and language in the Ramesside letters and the difficulty of identifying genderlects, see Sweeney 1998a and 2006b.

3 In Deir el-Medina, gossiping was apparently believed to potentially have terrible consequences. *Jj-nfr.t* (iii), the wife of *Sn-nḏm*, claims on Bankes stela no. 6 that she lost her eyesight *ḥr nȝ-n md.wt ḥm.wt* ‘because of those women’s talks/business’ (see Černý 1958, no. 6).

4 See section 6 and Polis, this volume (esp. section 6) for a discussion of this family of hands.

5 Töpfer 2018. For a broader contextualization of the Deir el-Medina material in the Museo Egizio in Turin and a discussion of the provenance of objects belonging to the Drovetti collection and coming from Schiaparelli’s excavations, see Del Vesco and Poole 2018.

was bought by the agents of Bernardino Drovetti somewhere in Western Thebes at the beginning of the 19th century.[6] New fragments of the *Stato Civile (SC)* – previously only known from the Turin papyri – have been identified at the French Institute for Oriental Archaeology (*IFAO*) in Cairo and suggest that (at least) some of these papyri come directly from the village.[7] The documents of the Drovetti lot date largely to the mid to late 20th dynasty, and comprise the majority of the Ramesside papyri in Turin.[8]

The second, much smaller, lot of papyri was discovered during the Italian excavations directed by Ernesto Schiaparelli in the region of the Valley of the Queens (e. g., Turin Provv. 3581, 18th dynasty) and in Deir el-Medina during the 1908/09 season.[9] These documents appear to date to earlier periods (first part of the 19th dynasty), like the newly edited letters discussed in this article.

A short note left by Giuseppe Botti in the folder (previously labelled CP080/SN3) where the main fragments of both letters (CP080/050 and CP080/043) were found reads as follows: "3 fragments put together in July 1948 from a small box (labelled) Schiaparelli's excavations at Deir el-Medina (1908). Letters" (fig. 1).[10] As the two letters were written by the same scribe (see section 5), we assume that they may have been stored together in antiquity.

During the 1908/09 season, the Italian mission spent most of its time working in the village proper. They discovered fragments of papyri in a few rooms of the houses that they excavated. The team also explored several tombs in the Western necropolis, in which at least one papyrus was found (S. 10125, the *Ritual of Amenophis I*).[11] Both of these sites could be the find-spot of the CP080 letters, as documented archaeological contexts for letters (both from Deir el-Medina and other places and

6 http://web.philo.ulg.ac.be/x-bound/background/ [8 June 2020].

7 Demarée, Dorn and Polis 2020.

8 A preliminary estimate regarding the date of the administrative ostraca (100) and papyri (80) from Turin shows that most of the material belongs to the 20th dynasty, especially the reigns of Ramesses III–VI and Ramesses IX. The 'peak' of preserved papyri at the end of the 20th dynasty is mostly due to the evidence preserved in the Turin collection, because the number of preserved papyri coming from Deir el-Medina is otherwise stable during the Ramesside period. These numbers are based on searches in the Deir el-Medina Database (DMD)-Leiden and have been compared with (and adjusted in light of) the numbers provided by Haring 2018.

9 http://web.philo.ulg.ac.be/x-bound/background/ [8 June 2020]; Gabler and Soliman 2018, 14–18.

10 Giuseppe Botti taught Egyptology at the University of Florence from 1942 to 1956. In 1948, he would have been back at work on the Turin collection. The *Giornale*, co-authored with Thomas E. Peet, was published in 1928, see Bierbrier 2012, 73–74.

11 We are grateful to Paolo del Vesco for detailed information about Schiaparelli's work. According to a report letter from 12th of May 1909, Schiaparelli informed the Italian ministry about the fragments of papyri found in houses as well as the discovery of the *Ritual of Amenophis*.

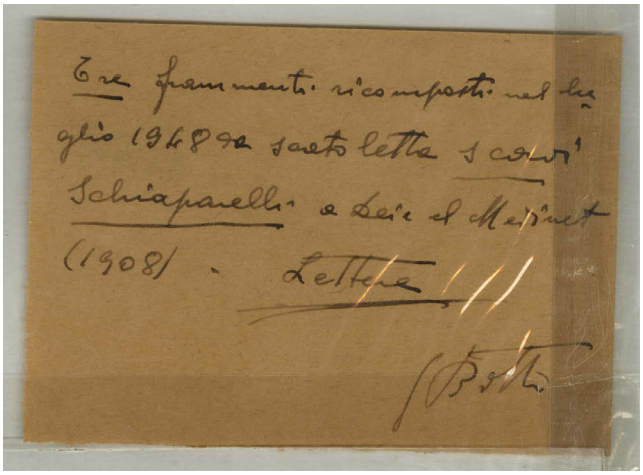


Fig. 1: Giuseppe Botti's note to CP080/SN3 (© Museo Egizio, Turin. Scan: Museo Egizio)

periods in Egypt) include tombs and houses, as well as the environs of villages, such as the *Grand Puits*.[12]

In 1908/09, Schiaparelli's team definitely investigated the following houses: N.O. (*Nord-Ouest*) I to III, N.O. V, the first rooms of N.O. VI to VIII, N.O. IX to XI, and N.O. XX. 26 years later, Bruyère mentions that the Italian team must also have explored N.O. IV, VIII, XII to XIV, and N.E. (*Nord-Est*) I to VI.[13] According to Bruyère, N.O. II was most likely the house in which the Italians found various ostraca and papyri.[14] The N.O. sector is the most disturbed archaeological area of the village, which makes it difficult to assign objects to find-spots (for which information is largely missing for the Italian mission) and houses to individuals. By contrast, in the southern and central sectors excavated by the French team, 50 to 90% of the houses can be assigned to their former inhabitants, while only 25% may be assigned in the sector N.O.[15] As such, if the two Turin letters were discovered in one of the N.O. or N.E. dwellings excavated in 1908/09, the identification of this structure is not possible on the basis of the available documentation and preservation of the site.[16]

12 Gabler and Soliman 2018, 14, 22; Gabler, in preparation.

13 Del Vesco and Poole 2018, 97–130, especially 122–128.

14 Del Vesco and Poole 2018, 123–124; Bruyère 1939, 280. Details kindly provided by Paolo del Vesco.

15 Bruyère 1939, 30–32, 292, 294–295; Gabler and Salmas, forthcoming; Gabler, in preparation.

16 Potential evidence that might allow the assignment of a house to a member of the *Sꜣ-Mw.t*-family is discussed in section 6 below.

At the same time, we know of letters that were (sometimes intentionally, sometimes incidentally) left in tombs.[17] During the 1908/09 season, the Italian mission worked in the following tombs: TT 1 to 10, 210 to 212, 215 to 217, 1241, 1259, 1069, 1071, and 1089 (325?).[18] None of these tombs belongs to the individuals appearing in the letters published here (see the prosopographical discussion in section 6), but some of them are located in the vicinity of the burial places of their relatives: TT 1 to 10 are close to TT 330 (the tomb of *Knr* (i)); TT 217 (belonging to the sculptor *Jpwj* (i) who was the brother of *Ḫnsw* (i)) is next to TT 219 of *Nb-n-Mꜣꜥ.t* (ii). It is therefore theoretically possible that the letters were discovered in one of these tombs or its surroundings.

To sum up, both find-spots – house/village and tomb/necropolis – are possible. However, a few clues would suggest that the northern part of the village is more likely: (a) the family of *Tꜣ-ḥꜥ.t* may have lived there, and (b) a fair number of texts by this family of hands come from zones north of the settlement.[19] As such, we consider a provenance from the northern area of the village more likely.

3. Letter 1 (P. Turin CP080/050+045+046+CP158/008)

3.1. Joining fragments and hieroglyphic transcription

Letter 1 is made up of four joining fragments (fig. 2–3). In the same folder as the main fragment (CP080/050), two smaller fragments (CP080/045 and 046) were found that form the beginning of r° 2–3 (= end of v° 2–3). Browsing through the thousands of fragments in other folders revealed CP158/008, which preserves the beginning of r° 5–9 (= end of v° 5–9).

3.2. Material description

Letter 1 is inscribed with black ink on a rather poorly erased piece of palimpsest papyrus (with some previous hieratic signs still clearly visible, like the plural strokes between the beginning of r° 5–6, the between the beginning of v° 2–3, and the

17 Gabler and Soliman 2018, 14–15.

18 Of the 566 letters in the DMD Leiden (https://dmd.wepwawet.nl [8 June 2020]), the provenance of 188 cannot be determined. A good number originate from the *Grand Puits* (73); from the Valley of the Kings (22); from the area of the German House (DAI Cairo, 31); the P. DeM series (25 found close to P 1165); from the *Kom* sud (18); the excavations of E. Schiaparelli in 1905 and 1909 (27); the excavations of G. Möller in the village (sector N.E., 14); from clearing the temple by E. Baraize (6). Details will be discussed by Kathrin Gabler in a separate contribution.

19 See section 5 and Polis, this volume.

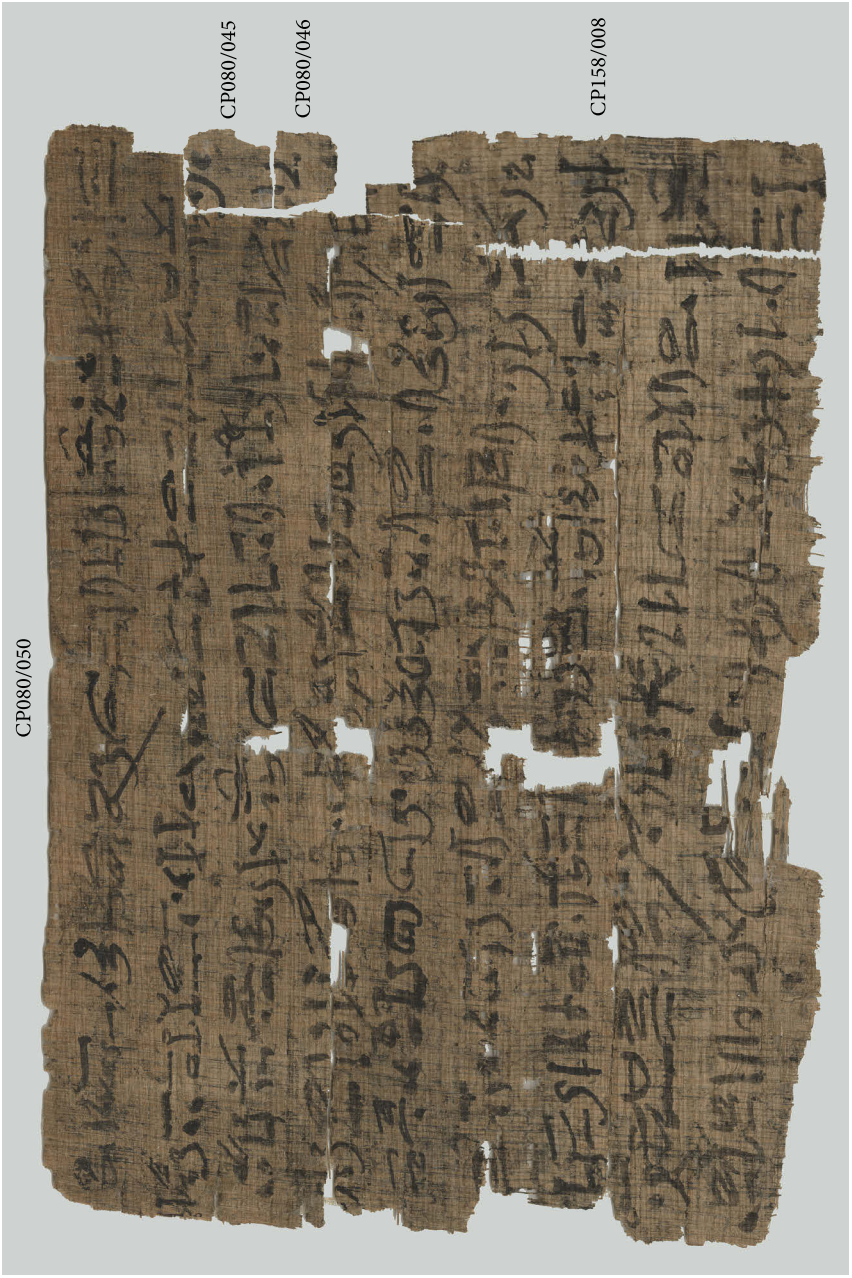


Fig. 2a: Letter 1 r°, P. Turin CP080/050+045+046+CP158/008 (© Museo Egizio, Turin; scan: Museo Egizio)

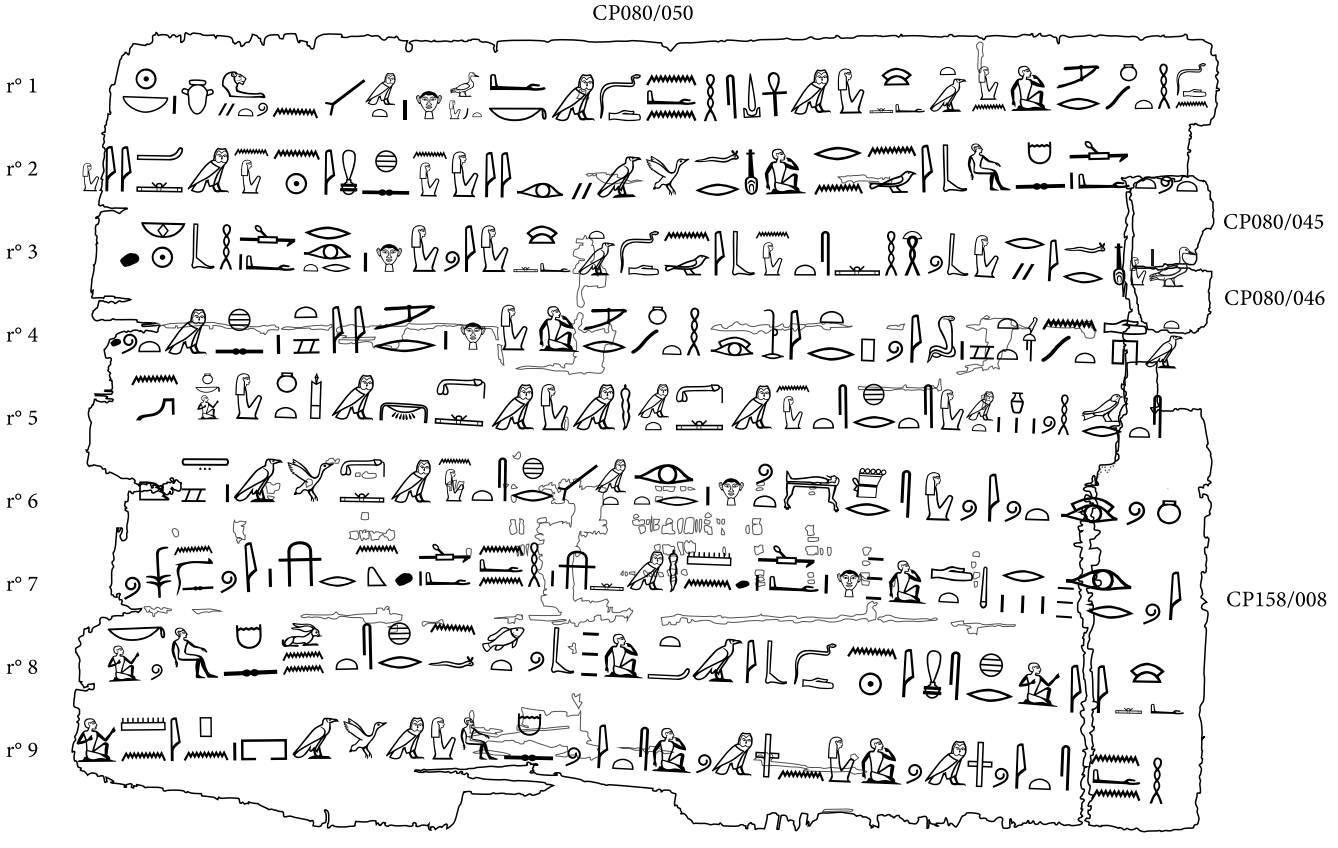


Fig. 2b: Letter 1 r°, P. Turin CP080/050+045+046+CP158/008 (hieroglyphic transcription © Stéphane Polis & Klaudija Stanic)

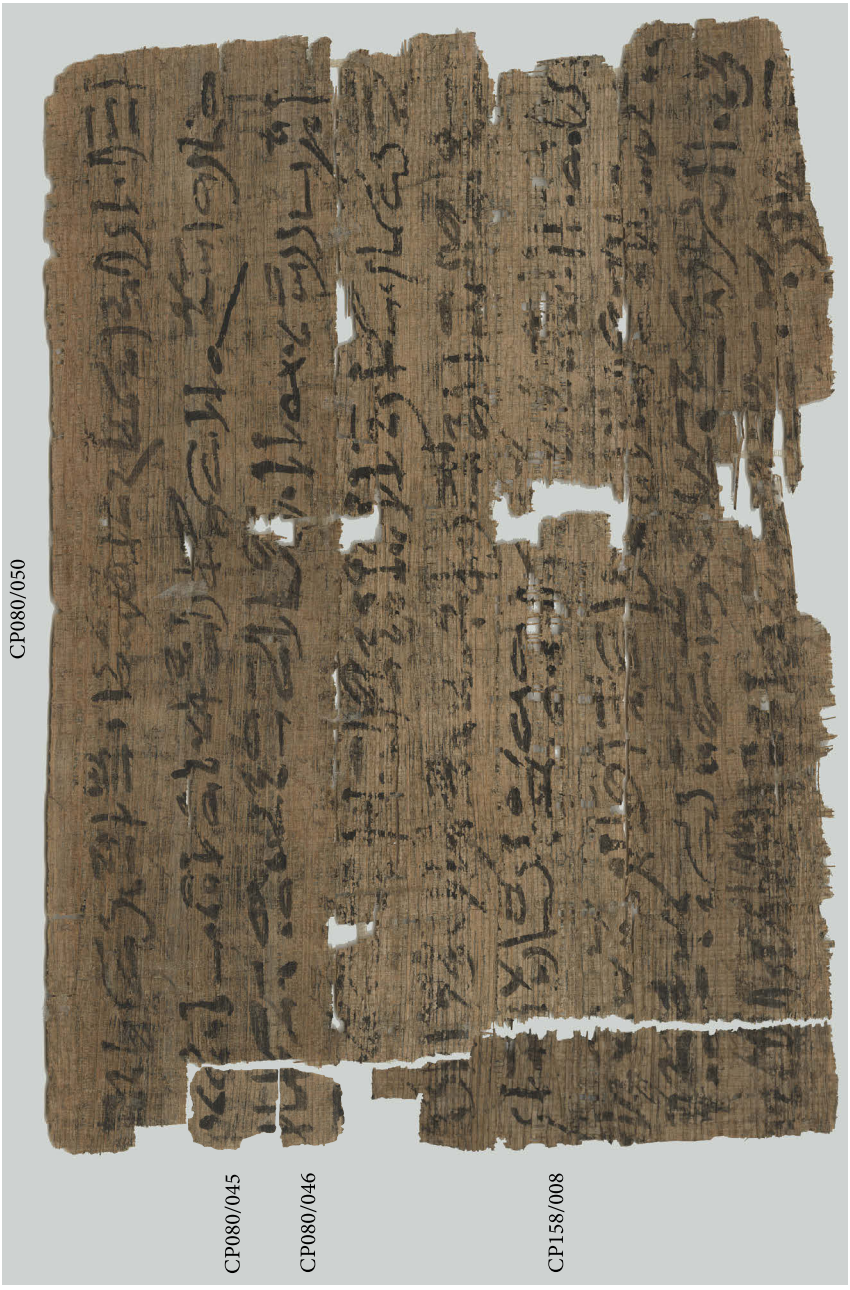


Fig. 3a: Letter 1 v°, P. Turin CP080/050+045+046+CP158/008 (© Museo Egizio, Turin; scan: Museo Egizio)

Fig. 3b: Letter 1 v°, P. Turin CP080/050+045+046+CP158/008 (hieroglyphic transcription © Stéphane Polis & Klaudija Stanic)

numerous traces at the end v° 1–2).[20] It measures 19.4×13.9 cm, with nine lines on each side. As the text flows between *recto* and *verso*, the papyrus is clearly preserved in its entire height. Consequently, the traces of ink at the bottom of *recto* and *verso* are better considered palimpsest.

As expected for a Ramesside letter,[21] the scribe resorted to a halved roll with the short side positioned horizontally and the rolled part of the papyrus positioned against his body. He began to write the letter on the vertical fibers (*recto* = V/H) and flipped it horizontally – which is not the normal practice – in order to write the *verso* (H/V), so that the top of the *recto* corresponds to the top of the *verso*.

As revealed by several material features, the letter was actually sent as a folded package (probably of Type FPII).[22] As evidenced by the lacunae at the center of the page, the letter was probably folded in two along the vertical axis and then rolled along the horizontal fibers (with six folds in total). Since the horizontal folds are slightly smaller towards the bottom, it seems likely that the scribe rolled it bottom up.[23] However, both practices (rolling from top to bottom or from bottom to top) are attested and the style is difficult to ascertain when the letter is found unfolded.[24] The broken right part of the *recto* (left of the *verso*) surely results from the folding of the extremities of the package, which may finally have been secured with string before dispatch.[25]

3.3. Annotated transliteration and translation[26]

Letter 1 contains two communications by and between women belonging to the same family. As is often the case with ancient letters, many details are not clear, and what makes it worse here is that the events unfold in a series of reported speeches by different individuals quoting each other. In this respect, the greatest hermeneutic challenge lies in the frequent use of the suffix pronoun  , which can express both

20 Investigation with *D-Stretch* did not lead to any substantial results regarding the content of the former text. It can be noted, however, that the size of the signs and orientation of the palimpsest are parallel to those of the preserved text, which makes it likely that another letter was previously written on the same sheet of papyrus.

21 Černý 1939, XVII-XX; 1952, 21; Bakir 1970, 19–22; Janssen 1991, 48–50.

22 Krutzsch 2008, 76, 83.

23 Bakir 1970, 25–26.

24 Krutzsch 2006, 170. The folding practice is illustrated in a videoclip '*Crossing Boundaries* in Home Office – Part 3' (https://www.youtube.com/watch?v=2rZ5nTotMyE [3 July 2020]).

25 Černý 1939, XIX.

26 In addition to traditional tools, digital corpora such as the *Thesaurus Linguae Aegyptiae* (http://aaew.bbaw.de/tla/) and *Ramses Online* (http://ramses.ulg.ac.be) have been used systematically to prepare the philological comments in sections 3.3 and 4.3.

the first-person singular *=j* 'I' and the second-person feminine singular *=ṯ* 'you'. Given the high number of quotes involving female participants, this may lead to some confusion on the part of the modern interpreter who is not familiar with the private affairs of the Deir el-Medina community.

As we understand it, the letter's sender is *Ḥnw.t-mrw.t* (i), a daughter of *Knr* (i) and *Tȝ-ḫʿ.t* (ii),[27] and the addressee of the first communication is her mother, *Tȝ-ḫʿ.t* (ii). *Ḥnw.t-mrw.t* (i) is saddened and offended because her mother has damaged her good name. According to what *Ḥnw.t-mrw.t* (i) heard from a certain *Ḥwj* – who is either her niece *Ḥwj* (ii) or, more probably, the sister-in-law of her elder sister *Nfr.t-jrj* (ii/viii) – *Tȝ-ḫʿ.t* (ii) complains heavily about her. *Tȝ-ḫʿ.t* (ii) wants *Ḥnw.t-mrw.t* (i) to come to a feast that she is planning in honour of Meresger; *Tȝ-ḫʿ.t* (ii) also wants *Ḥnw.t-mrw.t* (i) to be the one who anoints her because she took good care of *Ḥnw.t-mrw.t* (i) when she was seriously ill and quite obviously expects the same care and concern from her daughter, as she keeps saying in front of everyone (r° 1–6). Another – somewhat more obscure – matter relates to a basket and a sieve belonging to *Ḫʿj*, who is probably *Ḫʿj* (i), the son of her elder sister *Pȝ-šd.t* (i) and of the draughtsman *Nb-Rʿ* (i), and hence a nephew of *Ḥnw.t-mrw.t* (i). This matter is also at the center of Letter 2 (see section 4). A woman – the aforementioned *Ḥwj*, who is also the sender of Letter 2 – was apparently accused of misappropriating these items, though she proclaims her innocence. *Ḥnw.t-mrw.t* (i) used to live with *Ḥwj* in the house of *Pn-Jmn* – hypothetically *Pn-Jmn* (i) – to whom *Ḥwj* was probably married, and reports that *Ḥwj* felt miserable because *Pn-Jmn* wanted to divorce her. What the specific relations between *Ḥwj*, *Ḥnw.t-mrw.t* (i), and *Pn-Jmn* actually are, and whether *Pn-Jmn* was the one who accused *Ḥwj* of the act of misappropriation (which appears likely based on the clues in Letter 2) are challenging questions discussed in section 6.6.

The second communication of this letter is addressed to relatives of *Ḥnw.t-mrw.t* (i): her sisters *Mrj=s-gr* (v), *Nfr.t-jrj* (ii/viii), and *Ḥnw.t-ḏww* (i), as well as her mother-in-law *Twj* (i). She is quite obviously concerned about their gossiping behind her back, contributing like their mother to her bad reputation. The poor state of preservation of the bottom of the *verso* makes it difficult to reconstruct the matter at stake, but it seems that they disagree on matters regarding different sorts of bread, with deliveries involving male members of the family – *Nb-n-Mȝʿ.t* (ii), the husband of *Mrj=s-gr* (v), and perhaps *Pn-Jmn* (i) and *Nḫt-Jmn* (iii).

r° 1 *ḏd.n Ḥnw.t-mr(w.t) n Tȝ-ḫʿ(.t) m ʿ.w.s ḥnʿ-n*[1] *ḏd mk sȝ.t(=ṯ)*[2] *ḥr mwt n ḥȝty*[3] *rʿ nb*
r° 2 *twt*[4] *wʿ ḥms*[5] *bjn rn nfr*[6] *pȝy jry=ṯ n=j ḫ<r>=s*[7] *mjn(ȝ)*[8] *n=j m Ḥwj*
r° 3 *sȝ.t Nfr(.t)-jrj bw wȝḥ=s n=ṯ*[9] *bjn*[10] *ḏd [Tȝ-]ḫʿ(.t) jw=j {ḥr}*[11] *r jr.t wʿ ḥb (n)*

27 For a full discussion of the prosopographical issues, see section 6. All the individuals appearing in these letters are found in the family tree in fig. 23.

r° 4	*t[ȝ] dhn.t jmnt.t*[12] *jw(=j) (r) ptr*[13] *Ḥnw.t-mr(w.t) ḥr mry.t*[14]*, ḫ<r>=s, mtw=*
r° 5	*s wrḥ*[15] *m(w).t=s, ḫr=s(n) n=j m-bȝḥ Mw.t-nḏm(.t) m-bȝḥ Nwb-m-Jwnw.t, jnk nw*
r° 6	*tw*[16] *jw=ṯ sḏr.t(j) ḥr jr.t mwt*[17]*, ḫr=s n=j m-bȝḥ pȝ tȝ (n) km*[.t][18]
r° 7	*jw jr=w rȝ-mdw.t*[19] *ḥr wʿ mnḏm ḥnʿ-n wʿ nḳr*[20] *jw ns-sw*
r° 8	*Ḫʿj*[21]*, ḫr=s mjnȝ (ḥr-)ḏd (m-)bjȝ.t, bwt n=f*[22]*, ḫr=s, wnn(=j) ḥms.kw*
r° 9	*ḥnʿ-n=s jw wnm=j n wnm=s j[w] ḥms=j*[23] *m pȝ pr Pn-Jmn*
r° 1	*Ḥnw.t-mrw.t* says to *Tȝ-ḫʿ.t*, in life, prosperity and health.
	Look, your daughter is dying in (her) heart every day.
r° 2	Really, it is an evil slaying of good name what
	you did to me. Here is what *Ḥwj*
r° 3	'daughter' of *Nfr.t-jrj* tells me: "she neglected no bad deeds
	for you! *Tȝ-ḫʿ.t* said: 'I will organize a feast for
r° 4	the (goddess of) the western cliff, and I will look for *Ḥnw.t-*
	mrw.t at the riverbank,' she says, 'so that she
r° 5	anoint her mother,' she tells me in front of *Mw.t-nḏm.t*
	and in front of *Nwb-m-Jwnw.t.* 'I was the one
r° 6	who watched over you when you were playing dead!'
	she keeps telling me in front of everyone."
r° 7	And one had an argument about one basket and one sieve that belong to
r° 8	*Ḫʿj*. Here is what she says: "That's not true, shame
	on him," she says. When I was living
r° 9	with her and eating her food, after I moved into the house of *Pn-Jmn*
v° 1	*ḥnʿ-n=s jw=s ḥr fȝ mȝjr*[24] *ḥr Pn-Jmn m-ḏd ḫȝʿ=j ø*[25]
v° 2	*r-bl*[26] *ky-ḏd <n>*[27] *Mrj=s-gr Nfr(.t)-jrj n Twj*[28]
v° 3	*Ḥnw.t-ḏww jry=j jḫ bjn (m-)r-ʿ*[29] *pȝ jr.t n=j rn bj*
v° 4	*n m-ḏd bwt sw nȝy=ṯ šn.t*[30] *ḫr=s n=j [...]*
v° 5	*nkt ḫr=s n=j jmy ṯs.w jnk*[31] *pȝ-wn tȝy=j š(ȝ) 2*[32] *m-dj=ṯ*
v° 6	*[...] 2 [...]=s r=ṯ jr tm*[33] *wšb*[34] *n=s jw*
v° 7	*=j jr.t pȝ nty bjn ḫr=s m Nfr(.t)-jrj ḥr ḏd ?ʿḏn?*
	ʿnḫ[35] *bn jw=j dj.t dj.t(w) n=ṯ [t]ȝy[=j]*
v° 8	*š(ȝ) 2 ʿḳw jn n=j Nḫt-jmn wʿ ʿkk*[36] *m-ḏd tȝ dj.t Nb-n-Mȝʿ.t*[37]
v° 9	*[...] sw dj n=j Pn-Jmn [...] wʿ.(t) wḫȝ.t [...] jw=s m [...]*
v° 1	with her, she began to feel miserable about *Pn-Jmn* saying: "I want
v° 2	to divorce." Another message to *Mrj=s-gr* and *Nfr.t-jrj*, and to *Twj*
v° 3	and *Ḥnw.t-ḏww*: what did I do wrong again
	for making me a bad reputation,
v° 4	saying: "Your pleas, they are evil," she tells me […]

vº 5 something," she tells me, "Provide words of mine, because my two shares are in your possession
vº 6 […] 2 […] she […] to you who does not answer her, and
vº 7 I did what is wrong," so says *Nfr.t-jrj* saying, "?On my life?, I will not let my two shares of food
vº 8 be given to you"; *Nḫt-Jmn* brought me one *ʿkk-* bread, saying, "That is what *Nb-n-Mȝʿ.t*
vº 9 [?gave you?]" (and) *Pn-Jmn* gave me one *wḫȝ.t-* bread […] while she was […].

Notes and comments

1. The spelling  (*passim*) is typical of hieratic texts written during the 19th dynasty (e. g., O. Ashmolean Museum 112, rº 2; O. DeM 678, rº 2; P. Chester Beatty IX, rº 4, 7 & 8) and under Ramesses II in particular (e. g., O. Ashmolean Museum 165, rº 4 & 7; O. Berlin P. 11238, rº 2; O. DeM 144, rº 5; O. DeM 581, rº 6 & 9; O. DeM 10075, vº 3). It further seems to be a spelling habit of the literate family to which the scribe of this text belongs (see the discussion in Polis, this volume, section 6).
2. The ductus of  is slightly problematic, but compare with O. Louvre E 13156, rº 2 and the spelling of the masculine  in other letters by scribes of the same family (O. Berlin P. 11247, rº1; O. Černý 19, rº 1; O. DeM 10249, rº 1).
3. The figurative expression *mwt n ḥȝty* 'to die of the heart', although particularly vivid and cross-culturally telling, does not seem to be attested in other texts from Deir el-Medina (or elsewhere). On emotions and their metaphorical expressions, see Di Biase-Dyson 2018. Note the combination of the Present I with *rʿ nb*.
4. Since the nominal sentence in rº 2 is syntactically complete (A ø, *pȝy j-jr=ṯ*, 'it is A what you did'), the hieratic signs that read *twt* (or possibly *twj* with B1) at the beginning of rº 2 must stand for an initial particle. The most likely candidate is the particle *tjw*, 'really, verily, yes' (*Wb.* 5, 242,1–7, Gardiner 1957, 189 § 258), but its spelling as  is rather unexpected.
5. The verb *ḥmsj*, 'to sit' stands here for (or similar) *ḥms* 'to slay, slaughter, castrate' (*Wb.* 3, 96,9–10; Wilson 1997, 648; Lesko 2002, I: 314). The scribe quite obviously resorted to the wrong classifier for a verb that is poorly attested before the Greco-Roman period.
6. The phrase *rn nfr* '(lit.) good name' has a meaning parallel to its English equivalent and refers to someone's good reputation (see e. g. P. Lansing 10, 3 [*LEM* 108,14] = P. DeM 35, rº 3 [= Sauneron 1968, 20 & pl. I–II]).

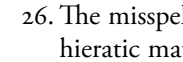
7. For the quotative *ḫr* 'to say' (Winand 2017) spelt with a single  during the 19th dynasty, see O. Prague 1826, r° 5 & 6 (= *HO* 70.2). The same spelling occurs at the end of r° 4.
8. Throughout Letter 1 and 2, the scribe appears to mistakenly use the spelling  'today' – a lexeme virtually absent from the administrative documents of Deir el-Medina – instead of the Late Egyptian adverb *mjn*ꜣ 'so' (*Wb.* 2, 44, 2–3). For the cataphoric expression of the subject (introduced by *m*) with quotative verbs, see Winand (2016, 862–863, 890–891). The phrase *ḫr=f mjn*ꜣ 'Here is what he says' is usually used in order to introduce a quote (rather than to conclude it); in 19th dynasty texts, see e. g. O. Cairo CG 25237, r° 4 (= K*RI* 3, 529,10–11); O. Leipzig inv. No. 1905, r° 2 (= Leipzig 16 in *HO* 33.2); O. Qurna 633, r° 5 (= Burkard 1999, 8, 15).
9. On the second-person *ṯ* and not *j*, we assume an *IRP* ('Indirekte Rede mit Personalanpassung', see Peust 1996, 53–61, 82–84 and Peust 2014).
10. The expression *bw wꜣḥ=f bjn* does not seem to be attested so far, but it is assuredly the antonym of the well-known *bw wꜣḥ=f nfr* 'he did not overlook/leave aside any good deed' (see e. g. *Qadesh*, § 103 [= K*RI* II, 37,10–15]; P. Anastasi 8, v° 2–3 [= K*RI* III, 504,2]; P. Geneva D 191, v° 12–13 & 14 [= *LRL* 59, 10 & 12–13); P. Leiden 371, v° 18 [= Gardiner and Sethe 1928, 25]). See the thorough discussion of this construction by Vernus, in press. The expression clearly refers to the mean-minded attitude of *Tꜣ-ḫʿ.t* toward her daughter; the closest parallel is found in P. Boulaq 13, frag. 4 (= Haikal 1983, 220, pl. 44): *[b]w wꜣḥ=f zp ḥḏ r tm jr n=f [sw]* 'he did not overlook any harmful deed so as not to do it for him.'
11. At the beginning of a direct speech, the sequence  can only be interpreted as a Third Future *jw=j {ḫr} r jr.t* with superfluous *ḫr* (which is confirmed by the conjunctive of r° 4–5). For the use of the preposition *ḫr* in this pattern, see Winand 1992, 485–486, § 763, with previous literature.
12. Note that the reading  is tentative, but seems to fit the traces at the beginning of r° 4. The goddess metonymically referred to as (*tꜣ*) *dhn.t jmnt.t* '(the) Western cliff' (e. g., O. DeM 1722 + Fitzwilliam Museum E.GA.6130.1943, r° 4 [= K*RI* 7, 190,10–11]) is Meresger, as stated explicitly in stela Turin CGT 50058, 1–2 (= Tosi and Roccati 1972, 286, with Adrom 2005).[28] On this nickname (*rn nfr*, 'good name') of Meresger, which can also be *tꜣ dhn.t wr.t n.t Jmnt.t* 'the great cliff of the West' (stela Turin CGT 50059 = Roccati and Tosi 1972, 287), see Yoyotte 2003, 289–294. Feasts in honour of Meresger (Valbelle, s. v. Meresger, *LÄ* IV, 80) are well documented at different dates (Bruyère 1930, 236–242, Schott 1950, 100, and stela Bordeaux, with

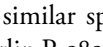
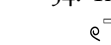
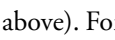
28 Cf. also Rummel 2016 for this denomination in Thebes, and Verhoeven 2020, I, 283–284 for the 'great cliff' as name of the goddess in the Western necropolis of Asyut.

Clère 1975, esp. 76–77) and often involved offerings of various sorts (e. g., O. DeM 273, r° 6; O. Michaelides, r° 1,1–2).

13. The verb *ptr* is used transitively here with its etymological meaning 'to look for', 'to search for', or even 'to find'. It is semantically quite close to verbs such as *rḫ* 'to know' and *gmj* 'to discover, to find' (see already Winand 1985, 71). In Late Egyptian, this use is not exceptional; see for instance P. Anastasi 4, 8,3 (= *LEM* 43,1–2).
14. For a discussion of the location and function of the *mrj.t*, 'market-places' along the riverbanks, see the excursus in Gabler 2018a, 334–336.
15. The anointment of elderly relatives was probably a common practice during religious feasts, but – to the best of our knowledge (and unlike in funerary contexts where information abounds; cf. Thompson 1998) – no extant textual source makes explicit reference to it (see Koura 1999).
16. For the transitive use of *nw(ꜣ)* 'to look, to watch' in Late Egyptian, see the remarks in Stella 2012, 442, 457.
17. The construction *sḏr ḥr jr.t mwt* 'to be playing dead', probably highly ironic in the present context, is not attested so far. One could have thought of a parallel to the expression *sḏr m rꜣ-ʿ mwt* in the *Tale of the Two Brothers* (P. d'Orbiney, 13,3–4 = *LES* 22,15–23,1) when Anubis discovers his younger brother Bata lying dead upon his bed: *jw=f rmj(.t) m-ḏr ptr<=f pꜣy=f> sn šrj sḏr m rꜣ-ʿ mwt*, 'He wept when <he> saw <his> younger brother lying in the state of death'. However, *ḥr jr.t* is palaeographically secure.
18. For the omission of *n* in the phrase *pꜣ tꜣ (n) Km.t* (probably due to a line break), see P. Turin Cat. 1928+, r° 5–6 (Polis, in press).
19. The compound *rꜣ-mdw.t* 'speech, discussion, argument' (i. e., words in action, see its use in the *Dedic. Inscrip. of R. 2*, 88 [= K*RI* II, 333,2–3]) can be connoted positively in contexts such as *The Instruction of a Man for his Son*, § 1,5: *pnḳ rꜣ-mdw.t ḫr-ḥꜣ.t ḫpš* 'Exhausting an argument takes precedence over (using) strength', but also negatively as in the present context (see further *Neferty*, Xh [= Helck 1970, 39]: *tw r rdj.t ḫ.wt m msḏd r sgr rꜣ-mdw* 'Goods will be given with hatred to silence an argument'; P. Turin Cat. 1791 [= *Tb*. 42,14]: *mk rꜣ-mdw.t gr(.w)* 'Look the speech is over').
20. For the association between the *mnḏm*-basket and the *nḳr*-sieve, see Janssen 1975, 147–149.
21. The same possessive construction, with *Ḥʿj* as the legal owner, is found in Letter 2, r° 5, which confirms the direct thematic connection between the two letters.
22. On the use of *bwt* 'abomination' in legal contexts, see McDowell 1990, 27, 156–157. Two analyses are possible: a nominal predication *bwt ø n=f* 'this is an abomination for him' or an adverbial predication *bwt n=f* 'shame on him',

which is preferred here given the context of denegation after *(m-)bjꜣ.t* 'no', 'absolutely not'.

23. For the use of the *sḏm=f* of *ḥmsj* in dependent clauses, see P. Anastasi 6, 11 (= *LEM* 73,7–8), P. BM EA 10375, 14–15 (= *LRL* 45,7). On the issue more broadly, see already Černý 1964; Groll 1969, 190, and Gohy and Winand 2011, 213–215 for an overview of recent discussions. Whether all such occurrences of the *sḏm=f* construction of intransitive verbs should be analyzed as 'emphatic' is an open discussion; cf. Winand 1992, 192–193.
24. The emotive idiom *fꜣj mꜣr* is rare. Besides the present example, it appears only in the *Hymn to Mut* of O. BM EA 50725, r° 6 (= Demarée 2002, pl. 118, with Fischer-Elfert 2005, 91) in a context that does not permit elucidation of its precise meaning. It is, however, semantically close to the state expressed in *The Debate Between a Man and His Soul*, 127–129: *ḏd=j n ỉnjm mjn, jw=j ꜥṯp.kw ḫr mꜣjr n-gꜣw ʿḳ-jb* 'to whom can I speak today: I am burdened with misery for lack of an intimate' (Allen 2011, 99; similar expression in *Khakheperresen-eb* [O. BM EA 5645, r° 14 = Parkinson 1997, 58,11–12]). In both idioms, *mꜣr* 'misery, woe' (*Wb.* 2, 30, 4–6) is seen as a 'load, burden', but while the human subject is affected with *ꜥtp* ('loaded, burdened with misery'), the verb *fꜣj* refers to an emotion with an active agent (lit. 'to carry misery'), with senses that may be close to 'to feel miserable (about)'.
25. The traces at the end of v° 1 can hardly be anything else than a dot for a first-person singular subject. Since the phrase *ḫꜣʿ r-bnr* 'to throw out, to leave, to set free' (Eyre 1980, 151–153; 1987, 15n) is normally used with male subjects while women are said 'to leave' *šm* (Toivari-Viitala 2001, 90–95; 2013, 8–9), the direct speech should be put in the mouth of *Pn-Jmn*, but one cannot exclude that the divorce was actually wished by the woman in this context.
26. The misspelling  for is without parallel in the hieratic material from Deir el-Medina (for a summary of the uses of *bl/bnr*, see Gabler 2018a, 29–32).
27. *Mrj=s-gr* and *Nfr.t-jrj* cannot be the senders of the second communication since the grammatical subject that follows is a first-person singular (v° 3: *jry=j jḫ bjn (m-)r-ʿ* 'what did I do wrong again?'). As such, one has to assume that <*n*> has been omitted after *ky-ḏd* and that *Ḥnw.t-mr(.t)* is the author of the second communication as well, addressing her sisters after the first communication to her mother. This would make perfect sense if she happened to live outside the village when Letter 1 was written while her sisters were living in Deir el-Medina.
28. The hieratic signs at the end of v° 2 read  . This spelling most probably refers to *Twj* / *Tjj* (i), the wife of *Qꜣḥꜣ* (i) and mother-in-law of *Ḥnw.t-ḏww* (i), who is mentioned at the beginning of v° 3.

29. Assuming an omission of the initial *m* of the particle *m-r-ʿ*. For the expressive use of this particle in interrogative clauses, see Winand 2009, 526–527. For similar constructions, with the consequences of a potentially bad action expressed by DETERMINER+INFINITIVE, see e. g. O. DeM 326, r° 1–2 (*jry=j jḫ pꜣy=k hꜣb n=j nꜣy{=n} md.wt mḥr* 'what did I do that you send me these sick words') and P. Leiden I 371, r° 1–2 (*jry=j jḫ r=ṯ m btꜣ pꜣy=j ḫpr m pꜣy sḫr bjn nty tw(j) jm=f* 'what crime did I commit that I find myself in that evil state in which I am currently?'). Note that, from a purely palaeographic viewpoint, a reading  could be preferred, but it hardly makes sense in this context.
30. For a similar spelling of  *šn.t* with omission of the classifier  , see O. Berlin P. 9898, r° 1 (= Fischer-Elfert 2015, 319–322). This spelling is attested in hieratic texts for the lexemes derived from the verbs *šnj* 'to ask, to recite' (*Wb.* 4, 495, 8–17) and *šnj* 'to suffer' (*Wb.* 4, 494, 15–18). The context seems to favor the former interpretation, since it would be awkward to qualify 'suffering' as an abomination. For the use of the cataphoric pronoun as subject of the adjectival predication, with coreferential noun phrase in apposition, see Loprieno, Müller, and Uljas 2017, 669–671.
31. The same phrase, *ṯsw jnk* 'words of mine', occurs in Letter 2, v° 2.
32. The hieratic signs between *tꜣy=j* and *m-dj=ṯ* appear again at the beginning of v° 8, where they are better preserved and read  or, less probably,  . In this context, *š(ꜣ)* would have a meaning akin to 'share, portion', but we cannot produce any parallel for this word. If one chooses to read *š(ꜣ)ṯ*, the spelling could refer to a type of bread (or similar) that is not attested in the Deir el-Medina material so far, but is known in Old Kingdom sources as *š(ꜣ)ṯ(.t)* (Schwechler 2020, 103–104).
33. For a parallel to the use of *jrj* as participle introducing the negation *tm*, see P. Leiden I 343+345, r° VII,8 = O. Strasbourg H. 115, r° 3 (Beck 2018, 49, 19–20). This construction is extremely rare.
34. The verb *wšb* 'to answer' is spelt with the classifiers of the 'metal vessel'  (*Wb.* 1, 373, 6); see, e. g., O. BM EA 65930, r° 14, 16, v° 13 (= *HO* 46.2).
35. The group of hieratic signs between *ḏd* and *ʿnḫ* is puzzling. We tentatively suggest to read it  *ḳn* or *ʿḏn* (Quack 2000), and to understand the sequence *ʿḏn ʿnḫ* as an exclamation meaning something like 'on (my) life'. Note that one could also understand *ʿnḫ* as 'oath', with the omission of the classifier (see n. 30 above). For the phrase *ḏd ʿnḫ* 'to take an oath' in the Deir el-Medina material (instead of the more common *jrj ʿnḫ*, cf. McDowell 1990, 36–37), see, e. g., O. BM EA 65956, r° 11 (= *HO* 47.1) and P. Vienna 9340, r° 7 (= el-Kholi 2006, 24–25). This interpretation, however, leaves the reading of the group between *ḏd* and *ʿnḫ* entirely unsolved.

36. On different varieties of bread and ʿ*kk*-bread in particular, see Janssen 1975, 344–346; 1997. Note that a letter from the draughtsman *Nb-Rʿ* (i) to his son *Nḫt-Jmn* (iii) discusses similar matters involving ʿ*kk*-bread (O. DeM 10250).
37. The two male individuals in v° 8 are probably *Nḫt-Jmn* (iii) and his father *Nb-n-Mɜʿ.t* (ii), the nephew and bother-in-law of *Ḥnw.t-mrw.t* (i) respectively. On the *wḫɜ.t*-bread, appearing again in Letter 2, v° 6, see Janssen 1997, 23, 25, 27–29 and Schwechler 2020, 13–15.

4. Letter 2 (P. Turin CP080/043)

4.1. Hieroglyphic transcription

Letter 2 consists of a single fragment numbered CP080/043 (fig. 4–5). For the sake of completeness, we provide pictures of an additional fragment (CP080/047) which could have belonged to Letter 2 given its fiber structure, color, and handwriting, but

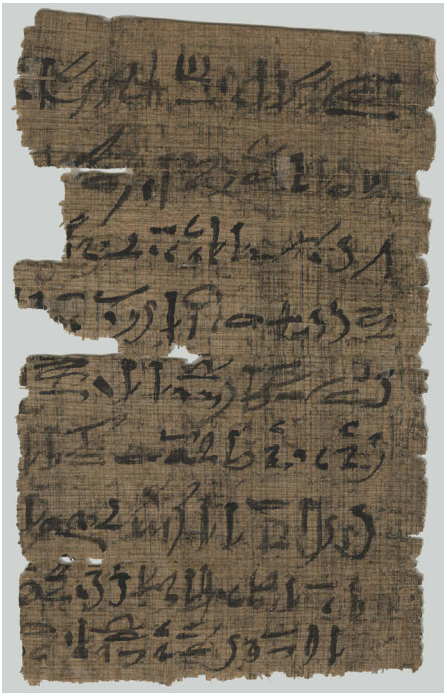


Fig. 4a: Letter 2 r°, P. Turin CP080/043 (© Museo Egizio, Turin. Scan: Museo Egizio)

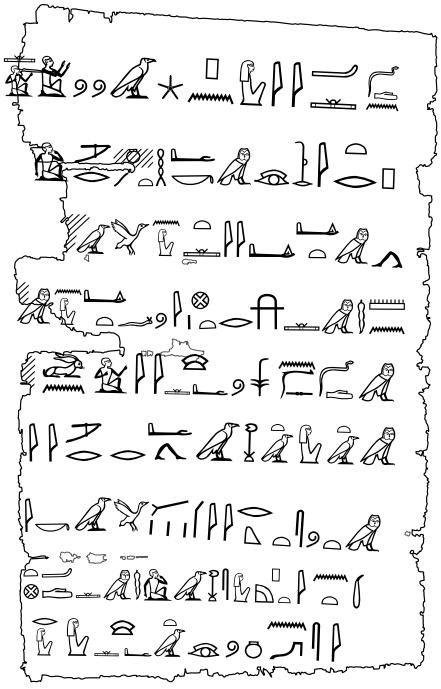


Fig. 4b: Letter 2 r°, P. Turin CP080/043 (hieroglyphic transcription © Stéphane Polis & Klaudija Stanic)

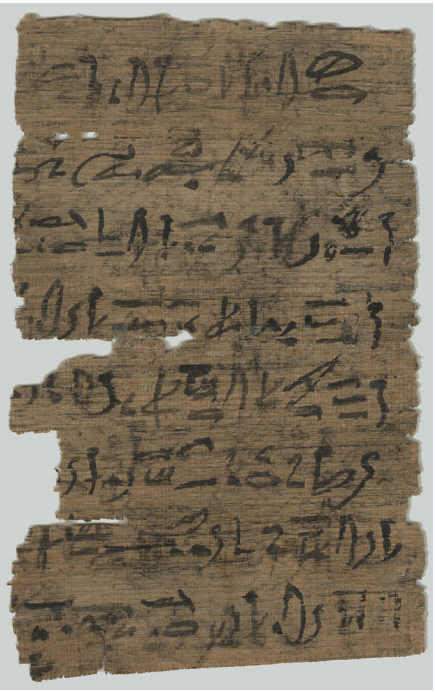


Fig. 5a: Letter 2 v°, P. Turin CP080/043 (© Museo Egizio, Turin. Scan: Museo Egizio)

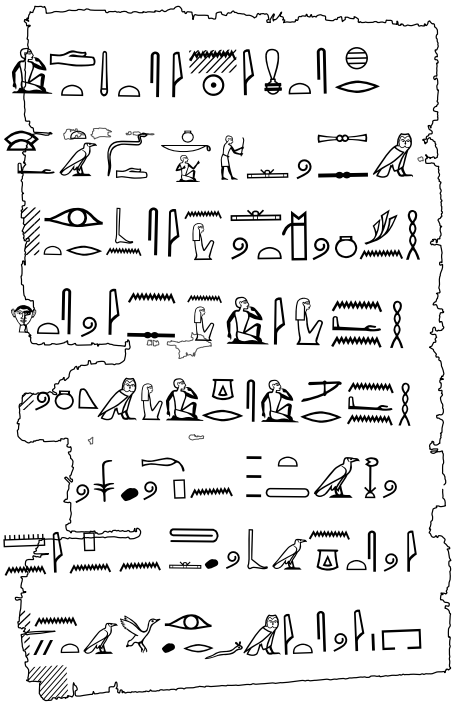


Fig. 5b: Letter 2 v°, P. Turin CP080/043 (hieroglyphic transcription © Stéphane Polis & Klaudija Stanic)

Fig. 6: CP080/047 r° (papyrological *verso*; © Museo Egizio, Turin. Scan: Museo Egizio)

Fig. 7: CP080/047 v° (papyrological *recto*; © Museo Egizio, Turin. Scan: Museo Egizio)

which could not be connected (or positioned with respect) to the main fragment (fig. 6–7).

4.2. Material description

Like Letter 1, Letter 2 is inscribed with black ink on a badly erased piece of palimpsest papyrus. It measures 9.3×15.1 cm, with nine lines on the *recto* and eight lines on the *verso* (with a possible ninth line centered at the very bottom). The papyrus

is probably preserved in its entire height, but we possess only half of its original width (the right-hand side of *recto* and *verso*). The scribe resorted to a halved roll (c. 20 cm), started his letter on the vertical fibers (*recto* = V/H), and flipped it – vertically this time (unlike for Letter 1) – in order to write the *verso* (H/V). When he was done, he turned it into a package similar to Letter 1, folding it into two along the vertical axis (see the comments in § 3.2), which ultimately broke the sheet of papyrus into two parts (of which only the right side is now preserved).

4.3. Annotated transliteration and translation

Due to the missing left-hand part of the papyrus, the contents of Letter 2 are even more difficult to reconstruct than the contents of Letter 1. *Ḥwj*, one of the main protagonists of Letter 1, is definitely the sender and *Pn-dwꜣ* is probably the addressee. The likeliest scenario is that *Ḥwj*, the daughter of *Pꜣ-šd* (x) and *Nḏm.t-bḥd.t*, contacted her brother *Pn-dwꜣ* (iii). The possibility that *Ḥwj* (ii), the daughter (in-law?) of *Mrj=s-gr* (v) and *Nb-n-Mꜣꜥ.t* (ii), was the sender cannot be excluded entirely, but it would be challenging to explain why she would send a letter to her uncle (in-law?) *Pn-dwꜣ* (iii).

The letter opens on a matter involving *Ḥnw.t-mrw.t* (i), the sender of Letter 1, and a basket belonging to *Ḫʿj* (i) that is being sent to town (Thebes). This means that the topic of Letter 2 must be directly connected to the basket and sieve mentioned in Letter 1, r° 7–v° 2. An additional sister of *Ḥnw.t-mrw.t* (i) is then introduced. Absent from Letter 1, this sister is named *Tj-n.t-jp.t* (i); she was the wife of *Ḫnsw* (i). Besides *Tj-n.t-jp.t*, the mother of *Pn-dwꜣ* (iii), called *Nḏm.t-bḥd.t*,[29] and *Tꜣ-ḫʿ.t* (ii), who is again apparently at the center of declarations and reported speeches, are mentioned. Finally, an older sister *Mrj=s-gr* (v) is mentioned, as well as *Pn-Jmn*, who was connected to the 'basket and sieve' issue in Letter 1 and about whom it is said that he will have to pay double for some commodity, perhaps the aforementioned basket and sieve.

r° 1 *ḏd.n Ḥwj <n>*[1] *Pn-dwꜣ [...]*
r° 2 *ptr mk*[2] *Ḥnw.t-mr[w.t ... ꜥn]*
r° 3 *m-ḏj.t dy.t n=j pꜣ*[3] *[...]*
r° 4 *mnḏm r njw.t, jw=f dj.t n=j m[...]*
r° 5 *m-ḏd ns-sw Ḫʿj*[4] *wn [...]*
r° 6 *mntṯ*[5] *tꜣ ḫꜣꜥ r mrj[.t ...]*
r° 7 *mtw=s rky*[6] *pꜣ ky [...]*

29 Ranke 1935 I, 215, n° 13.

r° 8 *Tj-n.t-jp.t sḫ; Nḏm.t-bḥd.t [...]*
r° 9 *js*[7] *nw T;-ḥ‘.t r=j [...]*

r° 1 Addressed by *Ḥwj* <to> *Pn-dw;* […]
r° 2 But look: *Ḥnw.t-mrw.t* […]
r° 3 again, do not let the […] be given to me […]
r° 4 basket to town, and he gave me […]
r° 5 saying ‘it belongs to *Ḫ‘j*’ […]
r° 6 of yours, the one left at the riverbank […]
r° 7 and she will fend off the other […]
r° 8 *Tj-n.t-jp.t*, *Nḏm.t-bḥd.t* remembered […]
r° 9 would *T;-ḥ‘.t* look at me […]

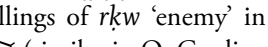
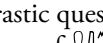
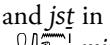
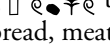
v° 1 *ḫr=s mjn(;)*[8] *jsṯ mdw [...]*
v° 2 *m ṯs.w jnk*[9] *ḏd T;-ḥ‘[.t ...]*
v° 3 *ḥn.tw n=j js bn*[10] *jr=j j[y ...]*
v° 4 *ḥn‘=j, j.n=j, jw=s ḥ[r...]*
v° 5 *ḥn‘ Mrj=s-gr m k[...]*
v° 6 *wḫ;.t n kps*[11] *[...]*
v° 7 *jw=s n k;b*[12] *n Pn-Jm[n ...]*
v° 8 *pr jw=s jm=f jr p; nty [...]*
v° 9 *[...]*

v° 1 Here is what she says: ‘did […] discuss […]
v° 2 of words of mine?’ *T;-ḥ‘.t* said ‘[…]
v° 3 entrusted to me, would I not co[me …]
v° 4 with me,’ I said, and she […]
v° 5 with *Mrj=s-gr* in […]
v° 6 *wḫ;.t*-bread in *kps*-basket […]
v° 7 it will cost twice as much to *Pn-Jmn* […]
v° 8 a house in which she is. Whoever will […]
v° 9 […]

Notes and comments

1. The emendation is not mandatory here, since we might be dealing with a joint communication. The restitution of <*n*> however is likely: it would be quite astonishing for male and female siblings to send a letter together. See the comments on Letter 1, v° 2 where the same omission occurs.
2. For the use of the particle *ptr* before *mk*, see a possible example in P. Boulaq 13, frag. 12, 5 (= Haykal 1983). The reverse order *mk ptr* ‘but look’ is more often

attested, especially in literary works; see for instance P. Chester Beatty I, 7,11–12 (= *LES* 46, 15–16); P. Turin Cat. 1966, r° 1,10 (= López 1992, 138); P. Moscow 120, 2,81–82 (= *LES* 75, 12–13). On the diachronic relationships and distribution of the two particles in Late Egyptian, see Winand 2004, 105–106.

3. The traces at the end of r° 3 do not allow us to restore the name of the product that ought not to be brought.
4. The same construction occurs in Letter 1, r° 7–8 (see § 2.2, n. 20–21), which means that a *mnḏm*-basket and a *nḳr*-sieve were probably mentioned at the end of r° 4.
5. We interpret the sequence  as a spelling of the independent pronoun 2SG.F. Unexpected spellings of this rare pronoun are not uncommon (see e. g. O. UC 39656, r° 3 = *HO* 23.4). For the exact same spelling, see O. BM EA 65930, r° 7 (= *HO* 46.2).
6. For the classifiers in *rḳj* 'to fend off, to be hostile' (*Wb.* 2, 456,9–12), see the spellings of *rḳw* 'enemy' in O. Gardiner 347, r° 10 (= *HO* 103.4):  (similar in O. Gardiner 358, r° 5 = *HO* 105.1).
7. On antiphrastic questions with *js* and *jsṯ* in Late Egyptian, see Collier 2014.
8. About the use of  'today' for  *mjnꜣ* 'so' (*Wb.* 2, 44,2–3), see § 3.3, n. 8.
9. The same phrase, *ṯs.w jnk* 'words of mine', occurs in Letter 1, v° 5.
10. See n. 7 above.
11. On the *wḫꜣ.t*-bread, see § 3.3, n. 37. The spelling  that follows is the unit of measurement (a basket of some sort) for bread, meat, and other products that is transliterated *kps* (*Wb.* 5, 119,2); see P. Boulaq 11, r° 2,8 (= Peet 1934, 189) for a similar spelling (). This allows clarification of the discussion by Grandet 2003, 110, and Schwechler 2020, 14–15 of the *kꜣp=w* unit.
12. Understood as a variant of the construction with the analogical Third Future *jw=f r=j m ḳꜣb* 'it will cost me twice as much' that one commonly finds in the apodosis of oaths when promising not to dispute an agreement (cf. Winand 1996, 135–136). The scribe certainly confused the velar and uvular stops, writing for  for  .

5. Palaeographic analysis: towards a scribal profile

In this section, we discuss the principal features of the hieratic hand that wrote the two letters and describe the main habits of the scribe in terms of (§ 5.1) general writing style and arrangement of the texts,[30] (§ 5.2) spelling mistakes and emenda-

30 Gasse 1992.

tions, and (§ 5.3) shape and ductus of words and (groups of)[31] signs.[32] The goal of this palaeographic description is to establish a preliminary 'scribal profile' that takes into account the different dimensions of a hand. Indeed, if identifying scribes by their hands is a notably difficult business[33] – both because of the high degree of variation that can be observed for individual hieratic hands[34] and because handwriting analysis is still 'no less an art than a science'[35] – a joint examination of the different aspects of the written performance[36] allows one to avoid the methodological pitfalls found in approaches that focus on specific palaeographic aspects in isolation and to objectify attributions that might otherwise remain highly subjective. As such, the discussion that follows will contribute in the long run to identifying further writings by the same scribe.[37]

5.1. Layout of the texts and handwriting style

The texts of Letter 1 and Letter 2 cover the entire available surface of both papyri, with very small top/bottom and right/left margins, a regular characteristic of 18th–19th dynasty letter writing that is taken to its extreme here. It seems that this scribe was exceedingly and systematically economical with his writing media, even cutting words in order to make more space available (Letter 1, r° 5–6 [cf. fig. 9], v° 3–4; Letter 2, r° 2–3, 3–4).[38] This parsimonious approach is also exemplified by the use of palimpsest sheets of papyrus. Furthermore, his interlinear spacing is small, corresponding to roughly half the height of the writing line. Taken together, these characteristics contribute to the crowded appearance of the text.

Overall, baselines are straight and regular (fig. 8a), but this orderliness – which attests to the skills of the scribe – tends to diminish as the text unfolds (fig. 8b).

The handwriting style is in stark contrast with the quite principled organization of the layout. We are faced with an untidy and smudged hand, with a fast ductus, round but jerky movements, and a definite lack of sharpness. Besides the variation in sign shapes (§ 5.3) and the use of a blunt brush, three global features contribute to this messy impression.[39] First, the density of the ink varies significantly across

31 Van den Berg and Donker van Heel 2000; Dorn 2015; McClain 2018.
32 Regulski 2018.
33 Janssen 1987; 2000; Sweeney 1998b; Miyanishi 2016; Hassan and Polis 2018.
34 Polis 2020, 554–559.
35 Ast 2018, 34.
36 Dorn and Polis 2016, 67–73; Demarée 2018.
37 Polis, this volume, section 6.
38 Cf. Müller 2006, 315.
39 Polis, this volume.

Fig. 8: Comparison of baselines (a = Letter 1, r° 1) vs. (b = Letter 1, r° 8) (© Museo Egizio, Turin. Scan: Museo Egizio)

the text, with clear traces of dipping (c. 4/5 times per line in Letter 1; see the white arrows in fig. 8a) that are usually meaningful[40] but lead to an alternation between sequences of thin and thick strokes (see fig. 9, dipping after *m-bꜣḥ*).

Fig. 9. Alternation between thin and thick sequences of strokes due to dipping (Letter 1, r° 5)

Horizontal sign spacing is a second key characteristic. One can indeed observe many overlaps between hieratic signs belonging to different morphemes. Fig. 10 illustrates a series of such overlaps between  and  (a),  and  (b), and (c),  and  (d), and  (e), and (f). This feature obviously affects legibility as well.

A third factor is fluctuation with respect to the vertical positioning of signs: small hieratic signs (like , , , or) may be written on the baseline, as is usually the case in hieratic texts written in lines, but the scribe of Letter 1 and Letter 2 often centers them vertically, putting them in the middle of the writing line (or even above). Fig. 11 illustrates this phenomenon with four occurrences of in Letter 1 (a–d) and with in Letter 2 (e).

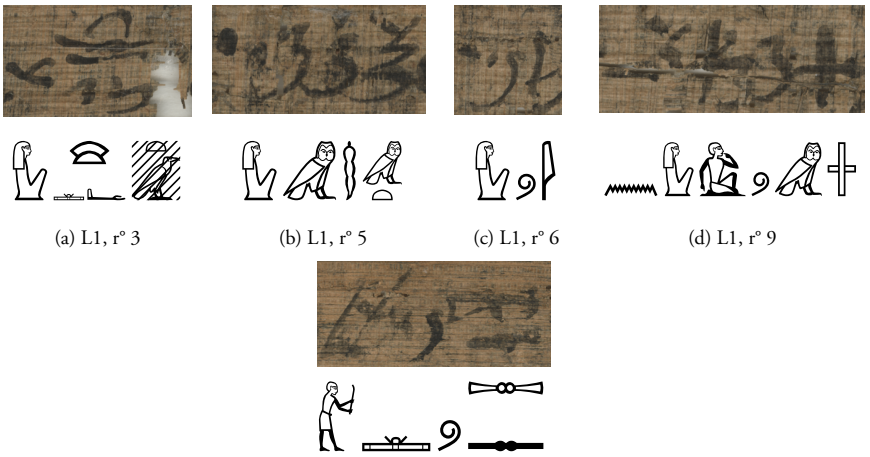
It is worth noticing that the handwriting does not deteriorate progressively (as is often observed in hieratic texts): the characteristics described above are intrinsic to this hand, which is definitely not untrained, and do not result from external circumstances.

40 Ragazzoli 2017, 106–107; 2020, 69–77.

(a) L1, r° 3 (b) L1, r° 8 (c) L1, v° 1 (d) L1, v° 7

(e) L2, r° 7 (f) L2, v° 7

Fig. 10. Overlaps between hieratic signs

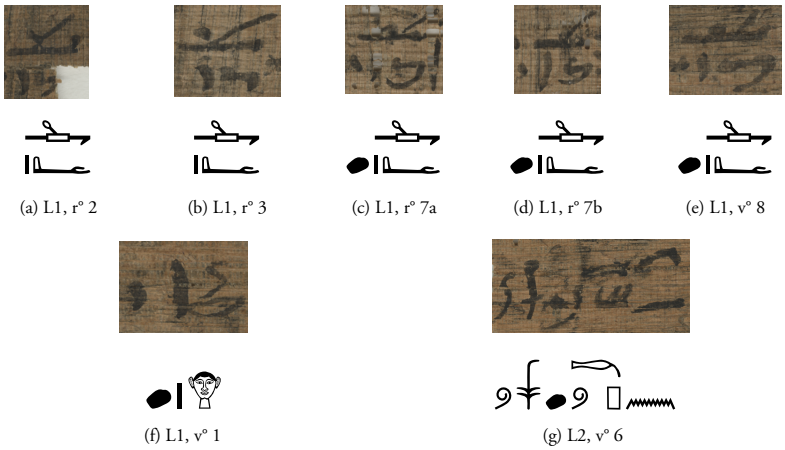


(a) L1, r° 3 (b) L1, r° 5 (c) L1, r° 6 (d) L1, r° 9

(e) L2, v° 2

Fig. 11. Vertical positioning of small hieratic signs

It appears that this scribe inclines to the progressive addition of dots after some words (a phenomenon which does not appear to be linked to dipping). This feature is conveniently illustrated by the occurrences of *wʿ* 'one, a' in Letter 1 (fig. 12a–e): while the dot is not used in r° 2 & 3, it occurs systematically later on in the text. Dots also appear in more unexpected contexts, like after the preposition *ḥr* (fig. 12f) or in the middle of the word *kps* (fig. 12g).



(a) L1, r° 2 (b) L1, r° 3 (c) L1, r° 7a (d) L1, r° 7b (e) L1, v° 8

(f) L1, v° 1 (g) L2, v° 6

Fig. 12. Addition of dots

5.2. Spelling mistakes and emendations

As observed above, though the letters were assuredly written by a skilled scribe, they were produced quite hastily and without much aesthetic consideration: efficiency of communication appears to have been his primary goal. The impetuosity of his writing, however, led him to commit several spelling mistakes that are detrimental to the good understanding of the letters he penned.

On several occasions, he resorts to the wrong classifiers, writing  *ḥmsj* 'to sit' for  *ḥms* 'to slay' (fig. 13a),  *mjn* 'today' for the adverb  *mjn;* 'so' (fig. 13b; see also Letter 1, r° 2 and Letter 2, v° 1), and  *wšb* 'metal vessel' for  *wšb* 'to answer' (fig. 13c). He also omitted the classifier  twice in *šn.wt* 'demands' (Letter 1, v° 4) and perhaps in *ʿnḫ* 'oath' (Letter 1, v° 7).

Even more surprising is the inversion of  and  in the word *r-bnr* 'outside' (fig. 14a): the frequency of the group writing  for the phoneme /l/ is high in Late Egyptian hieratic texts, and – to the best of our knowledge – this is the sole occurrence of this phenomenon. These kinds of mistakes are rather unusual and might suggest a scribe who did perhaps not follow the regular curriculum in aquiring hieratic literacy.

In other places, however, the scribe realized that he was making a mistake and retouched the hieratic sign while writing (see, e. g.,  in fig. 9) or emended it. Fig. 14b is a case in point: due to the occurrence of the proper name  earlier in Letter 2 (r° 5), he began to write a *yod* after the group in the name  , but immediately emended it to  without bothering to erase the vertical stroke that he had already penned for the *yod*.

(a) L1, r° 2 (b) L1, r° 8 (c) L1, v° 6

Fig. 13. Uses of wrong classifiers

(a) L1, v° 2 (b) L2, r° 9

Fig. 14. Mistake and emendation

5.3. Individual words, sign-groups, and signs

In this section, we examine diagnostic words, sign-groups, and individual signs that are attested in both letters in order to show that – beyond the general style, layout, and spelling habits – the shared identity of the hand across Letter 1 and Letter 2 can be observed at a more basic level. This further allows us to date the manuscripts roughly on palaeographic grounds.

Given the strong thematic connection between Letter 1 and Letter 2, many words appear in both letters despite their relatively small size. In fig. 15 (compare also fig. 17a vs. e), we illustrate the shared ductus for a clause (*ḫr=s mjn*ȝ 'here is what she says'; fig. 15a vs. 15b), for a proper name (*Ḫꜥj* 'Khay'; fig. 15c vs. 15d), and for a verb/particle (*ptr* '(to) see'; fig. 15e. vs. 15f).[41]

Highly symptomatic of this hand is the spelling and ductus of the preposition *ḥnꜥ* that one finds in Letter 1 and Letter 2 written  (fig. 16). Note the initial  that almost takes the shape of a hieratic owl (), sometimes with a dot on top.

41 Individual signs ( ,  ,  , ) are discussed below, but note already the ductus of (fig. 15e–f, 17b–c), with a ligature between the right-hand side vertical stroke and the horizontal stroke. Wimmer 1995, 267c.

(a) L1, r° 8

(b) L2, v° 1

(c) L1, r° 8

(d) L2, r° 5

(e) L1, r° 4

(f) L2, r° 2

Fig. 15. Comparison of phrases and word

Zooming in on smaller units,  *mn*, considered as an important ligature in palaeographical studies (e. g., Dorn 2015), is given a particular shape in both letters: the upper part  is written with a single stroke, almost like an oblique <z>, that is normally not ligatured with the *n* below (fig. 17a–d; an exception is fig. 17e). That specific shape seems to have been in use mostly during the 19th and the beginning of the 20th dynasty.[42]

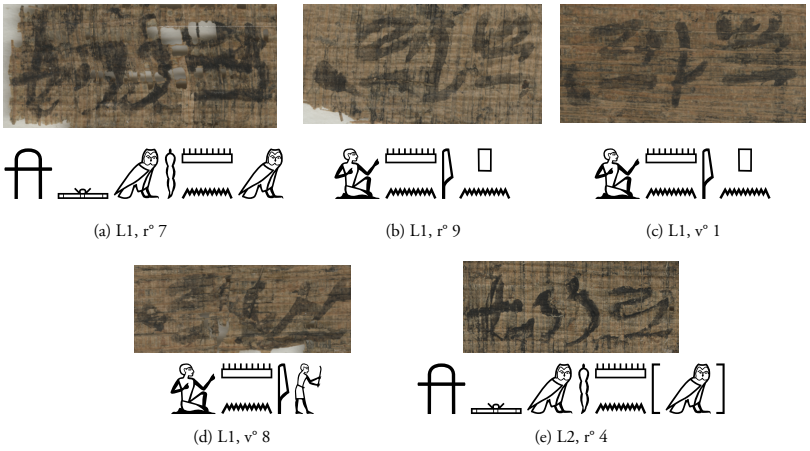
The classifier  also displays an identical ductus in both letters (fig. 18), and is realized with two strokes.[43] This hieratic form is sometimes a quicker way to write  after earlier occurrences with 3 or 4 strokes in the same text.[44] Here however, the simpler form is used consistently in Letter 1 and Letter 2.

The shape of the eye touched up with paint () is clearly shared by both manuscripts as well (fig. 19), and displays a characteristic rounded upper eyebrow. Unfortunately, this feature cannot be used to date the manuscripts due to the current lack of palaeographic data.[45]

42 Cf. Wimmer 1995, 383aa.
43 Wimmer 1995, 10b.
44 Dorn and Polis 2016, 69.
45 Möller 1909, II, no. 83; Wimmer 1995, 31.

L1, r° 1 L1, r° 7 L2, v° 4 L2, v° 5

Fig. 16. Occurrences of the preposition *ḥnʿ*



(a) L1, r° 7 (b) L1, r° 9 (c) L1, v° 1

(d) L1, v° 8 (e) L2, r° 4

Fig. 17. Ductus of the group

L1, r° 7 L1, r° 8 L1, r° 9 L1, r° 9 L1, v° 5 L2, r° 8 L2, v° 4 L2, v° 5 L2, v° 5

Fig. 18. Ductus of the classifier

As far as dating is concerned, the most relevant hieratic sign is definitely (fig. 20). Indeed, Wimmer[46] has shown that its <s> shape is a reliable marker of texts written during the 19th dynasty.

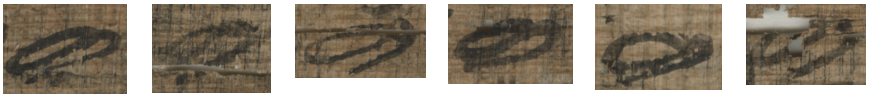
The same observation holds true for . As observed by Wimmer,[47] during the 19th dynasty, the left stroke often extends below the middle of the writing line (fig. 21), as opposed to 20th dynasty examples with left strokes that are usually much shorter. It is also worth noting that the right stroke is markedly curved and even takes on an -like shape, which is definitely an indicator of the hand of our scribe.

46 Wimmer 1995, 396a–aa; 1998, 1229; Dorn, this volume.

47 Wimmer 1995, 279a; 1998, 1228.

L1, r° 4 L2, r° 2 L2, r° 9

Fig. 19. Ductus of the classifier 𓁹



L1, r° 2 L1, r° 4 L1, r° 5 L1, r° 6 L1, r° 8 L1, r° 8

L1, v° 3 L1, v° 4 L1, v° 7 L1, v° 7 L2, v° 1

Fig. 20. Ductus of the phonogram 𓄿

L1, r° 1 L1, r° 3 L1, r° 5 L1, r° 5 L1, r° 6 L1, r° 6 L1, r° 8 L1, r° 8 L1, r° 9 L1, r° 9

L1, v° 1 L1, v° 4 L1, v° 7 L1, v° 9 L2, v° 1 L2, v° 1 L2, v° 3 L2, v° 4 L2, v° 5 L2, v° 8

Fig. 21. Ductus of the phonogram 𓊪 (with and without a following 𓈖)

Finally, the 𓎛 takes three different shapes in Letter 1 and 2. In its fuller form, it is made up of three strokes: a rounded <ɔ> at the top, a vertical stroke, and a short right-oblique stroke towards the bottom (fig. 22a). This shape seems characteristic

L1, r° 2 L2, r° 5 L2, v° 1

Fig. 22a. 𓎛 with three strokes (and a curved upper stroke)

L1, r° 2 L1, v° 4

L1, v° 3 L1, r° 4 L2, r° 6

Fig. 22b. 𓎛 with three strokes (and a blob/dash on top)

L1, v° 2 L1, r° 8

Fig. 22c. 𓎛 with two strokes

of early New Kingdom hieratic texts[48] and tends to disappear progressively during the Ramesside period.[49]

This full shape coexists with another three-stroke ductus in which the rounded <ɔ> on top takes the form of a blob or short horizontal dash (fig. 22b).

48 Möller 1909, I & II, no. 282.
49 Wimmer 1995, 181–182.

In its simplest form, illustrated already by some occurrences in fig. 22b, the  is made up of only two strokes (vertical and oblique) with some pressure on the brush at the beginning of the vertical stroke in order to get the blob-effect (fig. 22c).

The scribal profile sketched above establishes beyond a reasonable doubt that the two letters were written by the same scribe: they display the same habits and practices in terms of general style, layout, and spelling, as well as individual word and sign ductus. In terms of dating, the data suggest a date during the 19th dynasty (and point towards an early date in this period, given the shape of the *yod* for instance). The prosopographical discussion in section 6, which takes advantage of the huge quantity of information available for the Deir el-Medina community, leads to more fine-grained results.

6. Prosopographical analysis[50]

The rich written material from Deir el-Medina provisions us with plenty of prosopographical information that may be scrutinized in order to delineate precisely the temporal, geographical, and social contexts of the two letters studied in this paper. In table 1, we list all the individuals mentioned and sum up their roles in the letters, while a chronology of the persons and most important objects is presented in table 2.

Table 1

Individual	Letter 1	Letter 2
Ḥnw.t-mrw.t	Sender of the letter, accusing her mother and several sisters of bad behavior, lived in the house of *Pn-Jmn*, left the village	Topic of the communication between *Ḥwj* and *Pn-dwꜣ*
Tꜣ-ḫꜥ.t	Addressee of the first communication, accused of bad behavior by *Ḥnw.t-mrw.t*, organizes a feast for Meresger, took care of her sick daughter *Ḥnw.t-mrw.t*	Looking after a female person, said something

continued on next page

50 We would like to thank M. Marée for discussing the iconographic and stylistic dating criteria of the stelae and statues with us.

Individual	Letter 1	Letter 2
Ḥwj ('sꜣ.t' Nfr.t-jrj)	Reports negative words spoken by *Tꜣ-ḫr.t*, linked to the basket belonging to *Ḫʿj*, lived in the house of *Pn-Jmn* (maybe as his wife)	Sender of the letter, linked to the basket belonging to *Ḫʿj* (which was brought to Thebes)
Nfr.t-jrj	Sister in-law of *Ḥwj*, addressee of the second communication, accused of bad behavior by *Ḥnw.t-mrw.t*	–
Pn-dwꜣ	–	Addressee of the letter
Mw.t-nḏm.t	Witnessed *Tꜣ-ḫr.t* gossiping in front of *Ḥwj* who reported it to *Ḥnw.t-mrw.t*	–
Nwb-m-Jwnw.t	Witnessed *Tꜣ-ḫr.t* gossiping in front of *Ḥwj* who reported it to *Ḥnw.t-mrw.t*	–
Ḫʿj	Owner of a basket and a sieve	Owner of a basket which is now in Thebes
Pn-Jmn	Inhabitant of a house, former (?) relative of *Ḥwj* and *Ḥnw.t-mrw.t*, was divorced (?)	May pay double the price of a commodity
Mrj=s-gr	Addressee of the second communication, accused of bad behavior by *Ḥnw.t-mrw.t*	Had an issue with someone (*Ḥwj* and *Tꜣ-ḫr.t*?) about bread and a basket? which may cost *Pn-Jmn* double
Twj / Tjj	Addressee of the second communication, accused of bad behavior by *Ḥnw.t-mrw.t*	–
Ḥnw.t-ḏww	Addressee of the second communication, accused of bad behavior by *Ḥnw.t-mrw.t*	–
Nḫt-Jmn	Brought bread to *Ḥnw.t-mrw.t*?	–
Nb-n-Mꜣʿ.t	Involved in a delivery	–
Tj-n.t-jp.t	–	Involved in the matter
Nḏm.t-bḥd.t	–	Invloved in the matter

As evidenced by the grammatical and palaeographic discussions of sections 3–5, the letters date to the first part of the 19th dynasty. A prosopographical investigation leads to a more precise dating within the long reign of Ramesses II. The names attested in both letters point to the family of *Sꜣ-Mw.t* (i) (Davies 1999, chart 27). The close connection of this family to the family of *Qꜣḥꜣ* (i), the famous foreman of the

left side, was first noticed by Thomas G. H. James.[51] In what follows, information about each individual is discussed separately (see the full family tree in fig. 23) and a contextualized interpretation of the letters is proposed in the Conclusion.

Table 2

object/relative dating individual	**Stela Turin N. 50069 S I**	**Stela BM EA 144, early R II**	**Stela Turin N. 50012, Year 20**	**Stela BM EA 328 Year 20**	**TT 330 *Knr (i)* <Year 40**	**Statuette MET <Year 40**	**O. BM EA 5634, Year 39/40**	**Stela BM EA 818, Year 40**	**TT 219 *Nb-n-M^{r}.t (ii)***	**Other**
T$_{3}$-ḫ^{r}.t (ii)	x single	x married	x 5 children		x	x		x		
Knr (i)		x married	X married 2x, 5 children	x	x shabti	x	retired dead?	x		
S$_{3}$-Mw.t (i)			x		x					
P$_{3}$-šd.t (ii)			x		x					
S$_{3}$-Mw.t (ii)			x?							
Ḥ^{r}j (ii)			x							
Ḥwj (xx)			x							
M$_{3}$ḥj (i)			x							
T$_{3}$-wr.t (vi)			x		x					
Jrtj-nmḥ (i)			x							
Nwb-ḫ^{r}.tj (i)			x							
Ḥwj-nfr (iii)			x eldest son	x eldest son	x	x	x	x		
S$_{3}$-Mw.t (iii)			x?		x stela frg.		x	(x)		dead, O. BM EA 66411, Year 9 Mer.
Ḥw.t-j$_{3}$/jj (s$_{3}$.t W$_{3}$ḏ-ms (i)?)										O. BM EA 66411, Year 9 Mer.
Wsr-ḫ$_{3}$.t (viii)			x							
Ḥwj (xxi)			x							
Mrj=s-gr (v)			x eldest daughter		x shabti stela frg.	x		x	x	
Nb-n-M^{r}.t (ii)							x		x	
Wp-w.t-ms (i)						x			x	O. DeM 202, Turin N. 57099, Year 38
Ḥwj (ii)									x	
T$_{3}$-ḫ^{r}.t (iii)									x	
P$_{3}$-šd.t (i)			x		x	x		x	x	
Nb-R^{r} (i)							dead?		x	
Ḥ^{r}j (i)									x	= *Ḥ^{r}j* (iii)
Nḥt-Jmn (iii)							x?		x	
P$_{3}$-ḥrj-pḏ.t (iii)									x	
Jmn-m-jp.t (iv)										
Nfr.t-jrj (ii/viii)								x	x	
Pn-dw$_{3}$ (iii)							x		x	TT 3
Knr (vi)									x	TT 3
P$_{3}$-šd (v)									x	TT 3

continued on next page

51 James 1970, 50.

object/relative dating individual	Stela Turin N. 50069 S I	Stela BM EA 144, early R II	Stela Turin N. 50012, Year 20	Stela BM EA 328 Year 20	TT 330 *Knr (i)* <Year 40	Statuette MET <Year 40	O. BM EA 5634, Year 39/40	Stela BM EA 818, Year 40	TT 219 *Nb-n-M³ʿ.t (ii)*	Other
Nḏm.t-bḥd.t									x	TT 3, 326, stela Geneva D 55
Ḥwj sꜣ.t Nḏm.t-bḥd.t									x	TT 3, stela Geneva D 55
Tj-n.t-jp.t (i)					x shabti			x		
Ḥnsw (i)							x			
Ḥnw.t-ḏww (i)								x		
Jn-ḥr-ḫꜣ (i)							x			
Knr (ii)										
Ḥꜣj (iv)										
Ḥwj (v)										
Qꜣḫꜣ (ii)										
Ḥnw.t-mrw.t (i)								x		
Pn-Jmn										
Jj-NN					x					
Qꜣḫꜣ (i)	x workman	x foreman								
Twj / Tj (i)	x									Court of TT 216

6.1. *Ḥnw.t-mrw.t*

The sender of Letter 1 is a woman named *Ḥnw.t-mrw.t*. This name is attested for a single individual in Deir el-Medina so far: *Ḥnw.t-mrw.t* (i), the daughter of *Knr* (i) and *Tꜣ-ḫʿ.t* (ii).[52] This letter was probably addressed to her mother, from outside of the village. *Ḥnw.t-mrw.t* is attested on the damaged limestone stela BM EA 818. This stela belonged to her father *Knr*, who is depicted in the first register in front of a goddess; only the lower part of the goddess is preserved and no inscription remains.[53] The stela was acquired in 1854 by the British Museum.[54] The individuals and titles attested on the stela confirm that it comes from the community of Deir el-Medina. The lower register of the stela depicts the *nb.t-pr Tꜣ-ḫʿ.t* and eight of their (eleven known)[55] children – all of whom are depicted as adults and linked to their

52 Davies 1999, 275.

53 https://www.britishmuseum.org/collection/object/Y_EA818 [18 September 2020].

54 James 1970, 49, pl. XL.

55 The children missing from the stela are a daughter, *Jj-NN*, and two sons, *Wsr-ḥꜣ.t* (viii) and *Ḥwj* (xxi). As none of the objects quoted by Davies 1999, 275, n. 892, refer to a son called *Pꜣ-šd*, the name *Pꜣ-šd* (xvii) probably stems from an incorrect reading of K*RI* III, 824,13 in which *sꜣ<.t>=s Pꜣ-šd* is written. This phrase refers to the daughter who is attested on several objects, and conforms to the arrangement of the tomb inscriptions: first daughters, then sons. *Ḥwj* and *Wsr-ḥꜣ.t* are depicted as small boys on stela Turin N. 50012. This stela dates to an earlier period (see below). The two boys are attested only on this object and probably left the set-

mother by the term *sꜣ/.t=s*. Following the two sons, *Ḥwj-nfr* (iii) and the (possible and quite probable) reconstruction *Sꜣ-Mw.t* (iii), three pairs of daughters appear: *Mrj=s-gr* (v) and *Nfr.t-jrj* (ii/viii), *Pꜣ-šd.t* (i) and *Tj-n.t-jp.t* (i), and *Ḥnw.t-ḏww* (i) and *Ḥnw.t-mrw.t* (i). The names of all six daughters were probably followed by the epithet *mꜣʿ-ḫrw*. The paired arrangement of the women is known from other contexts; it is possible that they are depicted according to the order of their birth, from eldest to youngest.[56] *Ḥnw.t-mrw.t* would therefore be one of the younger children born to this couple; this hypothesis is supported by further evidence discussed below. Based on iconographic and stylistic criteria, stela BM EA 818 may be dated to a period between the early and the middle part of the reign of Ramesses II. Prosopographical evidence points towards the middle of this reign (max. year 40, which is when *Knr* probably died), and this is supported by the palaeographic features of the stela.

Ḥnw.t-mrw.t would have been born around year 20 of Ramesses II (slightly earlier, depending on the date of stela Turin N. 50012). Five of her sisters married within the settlement and remained there. *Ḥnw.t-mrw.t* left the village around year 40. Living somewhere nearby, she might have married[57] and met her sisters/family occasionally at the *mrj.t* (as mentioned in Letter 1). This marketplace (on the riverbank) was an important meeting point and place to exchange products and goods, as well as the latest news and gossips.[58]

6.2. *Tꜣ-ḫʿ.t*

A woman called *Tꜣ-ḫʿ.t* is the addressee of the first communication of Letter 1 and appears in Letter 2 as well. We know three women with this name in Deir el-Medina, all from the family of *Qꜣḥꜣ* (i) and *Knr* (i).[59]

Tꜣ-ḫʿ.t (i) and her husband *Ḥꜣj* (i) were the paternal grandparents of *Qꜣḥꜣ* (i), and must have lived in the late 18th and early 19th dynasty.[60] The couple had a son,

tlement because – unlike their elder brothers – they did not get a job in tomb construction. Consequently, stela BM EA 818 does not include them, but includes their younger sisters, who would have been born after the Turin stela was produced.

56 Gabler 2017, 18–20; Gabler, forthcoming.

57 She was also somehow connected to *Pn-Jmn*: according to Letter 1, she spent some time in his house. For a discussion of this point and the identification of *Pn-Jmn*, see section 6.6.

58 Its location is debated. For an overview of the textual references and a discussion of its location, see Gabler 2018a, Exkurs, 334–336. According to administrative texts, there were several *mrj.t*-places on the East and West bank (one around Deir el-Bahari, one around Deir el-Medina, etc.). In the letters, the phrase probably refers to the *mrj.t* close to the village, on which Jac. J. Janssen focused during his inaugural lecture 'De Markt op de Oever' in 1980.

59 Davies 1999, 305.

60 Davies 1999, 13.

Ḥwj (ii), who married *T3-nḥsj* (i). At least eight children were born from the marriage of *Ḥwj* (ii) and *T3-nḥsj* (i), among them, the foreman of the left side, *Q3ḥ3* (i), *Ḥwj-nfr* (ii), and *T3-ḫ‘.t* (ii), who was named after her grandmother.[61]

T3-ḫ‘.t (ii) married *Knr* (i) *s3 S3-Mw.t* (i), with whom she had at least eleven children: four sons and seven daughters who are known from different sources.[62] The two Turin letters refer to five of her daughters: *Ḥnw.t-mrw.t* (i), *Nfr.t-jrj* (ii/viii), *Tj-n.t-jp.t* (i), *Mrj=s-gr* (v), and *Ḥnw.t-ḏww* (i). She is depicted on several stelae, either in the context of the family of her brother *Q3ḥ3* (i) or with her own family.

Stela Turin N. 50069 is dedicated to *Ḥwj* (ii) and *T3-nḥsj* (i) and mentions several of their children, including *T3-ḫ‘.t* (ii). The focus of this object is *Q3ḥ3* and his family, as it depicts some of his children. It must have been erected before *Q3ḥ3* (i) was appointed foreman in the early years of Ramesses II as he bears the simple title *sḏm-‘š m s.t M3‘.t* on the stela. If we assume that *Q3ḥ3* (i) did not become foreman before the age of 20 in the early years of Ramesses II, he and his sister *T3-ḫ‘.t* would have been born at the latest at the beginning of the 19th dynasty.[63] As such, the stela should be dated to the reign of Seti I (confirmed by stylistic reasons) or less likely to the early years of Ramesses II, before *T3-ḫ‘.t* got married and had children. *T3-ḫ‘.t* (ii) may have been their eldest daughter, as indicated by the decision to name her after her grandmother.[64]

Stela BM EA 144 records *Q3ḥ3* as foreman (*ḥrj js.t m s.t M3‘.t*) and depicts *T3-ḫ‘.t* in the last register, as well as her husband, *Knr*, and her brothers, *P3-ḥrj-pḏ.t* (ii) and *Ḥwj-nfr* (ii/iv).[65] It should be dated to the early years of Ramesses II, when *Q3ḥ3* replaced *P3-šd* (x) as foreman and his sister *T3-ḫ‘.t* married *Knr*. As *Q3ḥ3*’s brother-in-law, *Knr* (i) is depicted first, followed by *Q3ḥ3*’s siblings, *P3-ḥrj-pḏ.t* (ii), *T3-ḫ‘.t* (ii), and *Ḥwj-nfr* (ii/iv).[66]

Most of the objects (stelae, tombs, statues) that depict *T3-ḫ‘.t* focus on her husband, *Knr* (i), and are discussed in section 6.3. *T3-ḫ‘.t* (ii) is otherwise not attested

61 Davies 1999, chart 3.

62 Davies 1999, 274–275, chart 27. *P3-šd* (xvii) is an erroneous reading for *P3-šd.t* (i), see above. The couple had only four sons.

63 Gabler (2018b, 169) summarizes age groups and the ages at which certain functions would have been occupied.

64 https://www.britishmuseum.org/collection/object/Y_EA144 [18 April 2020].

65 James 1970, 46–47. Stelae BM EA 144 and Turin N. 50069 both probably originate from the area of the tomb of *Q3ḥ3* (TT 360) or of his father *Ḥwj* (TT 361). *Jn-ḥr-ḫ‘* (i) *s3 Q3ḥ3* (i) is also attested on stela BM EA 144.

66 James 1970, 46–47. James suggests identifying *Ḥwj-nfr* as the son of *Knr* and *T3-ḫ‘.t* (ii). This identification does not fit well with either the arrangement of the figures (*Ḥwj-nfr* should be next to *Knr* and *T3-ḫ‘.t*) or the relative chronology of the individuals (all of whom are depicted as adults). *Ḥwj-nfr* (iii) would have been born around the time the stela was produced. Why *P3-ḥrj-pḏ.t* is depicted between *Knr* and *T3-ḫ‘.t* remains an open question.

in administrative texts so far: the Turin letters mark her first appearance in hieratic texts.[67]

T3-ḫr.t (ii) must have been born during the reign of Haremhab or Ramesses I; she married *Knr* in the early years of Ramesses II (who died around year 40; see below) and would have died towards the end of the reign of this king. She lived for roughly 70 years, maybe even longer, and must have been highly influential. She was born into an important family; six of her seven daughters married within the community; and she survived her husband for quite some time (possibly as head of the family), coordinating various matters (the feast for Meresger; care-taking of her sick daughter *Ḥnw.t-mrw.t*) as evidenced by the letters.

T3-ḫr.t (iii), named after her grandmother *T3-ḫr.t*, was the daughter of *Mrj=s-gr* (v) *s3.t T3-ḫr.t* (ii) and *Nb-n-M3r.t* (ii). Little is known about this woman. She is depicted in TT 219, her father's tomb, together with her siblings, among whom is *Wp-w3.wt-ms* (i),[68] and she must have been born in the middle of the reign of Ramesses II, according to the relative chronology of her family. As such, *T3-ḫr.t* (iii) should most likely be excluded as the addressee of Letter 1.

Having settled these two identifications for Letter 1, we continue by identifying further individuals mentioned in the two letters as well as discussing the family's relative chronology.

6.3. *Knr* (i) and sons

Knr (i), the husband of *T3-ḫr.t* (ii) and father of their eleven children, is not mentioned in the letters, but it is necessary to discuss several of his attestations in order to develop the inner chronology of the family and to date the letters more precisely.

Stela BM EA 328 depicts the god Ptah, Ramesses II, and the vizier *P3-sr* in its first register.[69] The second (and final) register includes a short prayer to Ptah by the *sḏm-ʿš m s.t M3r.t Knr* and his son the *sḏm-ʿš m s.t M3r.t Ḥwj-nfr*. It seems that father and son were active together in the crew when the object was manufactured. *Ḥwj-nfr* (iii) was most likely the family's eldest son and would have been 15 to 20 years old when he worked with his father (who would have been around 40). The stela

67 Gabler, forthcoming, explains why women are rarely attested in administrative texts of this period. *T3-ḫr.t* probably appears in an unpublished hieratic letter written by the same scribe (O. IFAO OL 4119; under study by St. Polis).

68 Davies 1999, 237, chart 21. This 'brother' married *Ḥwj* (ii), who is one possible sender (the less likely one) of the second letter. For a discussion of this question, see section 6.5.1.

69 https://www.britishmuseum.org/collection/object/Y_EA328 [18 September 2020]. The last attestation of *P3-sr* as vizier is in year 21 of Ramesses II, cf. Frood 2007, 148.

dates to approximately year 20 of Ramesses II. James suggests that the object may originate from the area of TT 330, the tomb of *Knr* and *T3-ḥ‘.t*.[70]

TT 330 is located at the northern end of the Western necropolis, on the upper terrace in the corner close to TT 8. The small tomb is badly preserved and its interior is in poor condition. The second/middle register of the preserved decoration in the chapel depicts eight family members, including the late father of *Knr*, *S3-Mw.t* (i), and *S3-Mw.t*'s wife, *P3-šd.t* (ii). *Knr* is referred to as *sḏm-‘š m s.t M3‘.t*. The same register depicts at least five further relatives – of whom only *Knr*'s sister, *T3-wr.t* (vi), can be clearly identified.[71] The third register focusses on *Knr*'s family: his wife *T3-ḥ‘.t*, and their children *s3.t=s Mrj=s-gr*, *s3.t=s P3-šd.t*, *s3.(t)=f* (*Tj-n.t-*)*jp.t*, *s3.t=f Jj-NN*, *s3=f Ḥwj*(*-nfr*?), and *s3=f NN*.[72] The change of the suffix (*=s* to *=f*) and the link to either the mother or the father is unsystematic. Judging from what is accessible and legible, it seems that the daughters were depicted before the sons. *Nfr.t-jrj*, *Ḥnw.t-ḏww*, and *Ḥnw.t-mrw.t* are missing from the inscriptions – though they appear in stela BM EA 818 – while another daughter, *Jj-NN* (possibly the youngest), is included. The three missing daughters may however have been depicted in the missing parts of the decoration/text. Assuming that all the children were depicted according to their age, *Mrj=s-gr* would have been the eldest daughter and *Ḥwj-nfr* the eldest son. *Nfr.t-jrj* is missing between *P3-šd.t* and *Tj-n.t-jp.t*, as are *Ḥnw.t-ḏww* and *Ḥnw.t-mrw.t*. Speaking of the sons, *S3-Mw.t* as well as *Ḥwj* and *Wsr-ḥ3.t* are missing. The latter two had probably left the village by then (see above and below), while *S3-Mw.t*'s name may be included amongst the damaged portion of the inscriptions. The texts may have been installed around year 20 of Ramesses, by which time all of the children were born, but they were most likely written later on. Why *Knr*'s famous sons-in-law (*Nb-n-*

70 James 1970, 49–50, pl. XL.

71 One name may contain the element '*w‘*', while another one may contain the element *Jj-NN* (maybe the name of the daughter depicted in the third register). The tombs in the Western Necropolis usually form family clusters, as in the case of the *Ḥwj-Q3ḥ3*-family (to which *T3-ḥ‘.t* belonged); see Gabler and Salmas, forthcoming. However, this family cluster (TT 360 and 361) is located at the opposite end of the site – at the southern end of the necropolis – while TT 330 is located at the northern end, surrounded by the tombs of ordinary workmen from earlier periods. Note that an increasing lack of space is not a convincing reason for locating TT 330 in the northern corner, as most of the tombs were under construction during the time of Ramesses II. *Knr*'s sons-in-law (*Nb-n-M3‘.t* and *Jn-ḥr-ḫ‘*) had tombs within their family clusters at more prominent locations. The necropolis administration had to grant a tomb (cf. McDowell 1999, 67–69). O. BM EA 5624 clearly states that locations for tombs were allocated to the crew by the State during the reign of Haremhab. One may assume, however, that the exact locations were discussed within the community. Because *Knr* probably joined the crew in the early years of Ramesses II, he had no family cluster to connect a tomb to, and no ancestors in Deir el-Medina (except by marriage). He was thus probably granted a spot to build a (small) tomb, without connection to the family cluster, in the northern corner.

72 Bruyère 1925, 93–97, pl. II and XXVI; K*RI* III, 824, 12–14.

Mꜣʿ.t (ii), *Nb-Rʿ* (i), *Pn-dwꜣ* (iii), *Ḫnsw* (i) and *Jn-ḥr-ḫʿ* (i)) are not mentioned in TT 330 remains open to debate, though their interment would permit a more precise dating.[73] A fragment of a limestone stela from the tomb further permits the possible identification of the son *Sꜣ-Mw.t* (iii), the daughter *Mrj=s-gr* (v), and her daughters (*Knr*'s granddaughters), perhaps *Ḥwj* (ii) and *Tꜣ-(ḥʿ.t)* (iii).[74] In addition, three shabtis are also known: for *Mrj=s-gr* (v), for *Knr* (i), and perhaps for (*Tj-n.t-*) *jp.t* (i).[75]

Stela Turin N. 50012 most likely originates from TT 330, even if it must have been created before the tomb itself – or at least before the tomb's decoration – as it depicts members of *Knr*'s family at different ages. Two sons are depicted as young boys and several other children are missing, that is, they were not yet born.[76] Most of the Turin stelae stem from the Drovetti collection acquired by the Museo Egizio in 1824. The corner of the necropolis in which TT 330 is located belongs to what was one of the highest and most easily accessible parts of the Western necropolis during the 19th century. Many (well-preserved) stelae and artefacts must still have been in their original location when the site was rediscovered around 1800, and it is possible that stela Turin N. 50012 did not come from the chapel of TT 330 but from one of the chapels nearby.[77] This stela provides important insights into the origins and ancestors of *Knr* (i). *Knr* is depicted in each of the stela's three registers:

(1) Making an offering (with a *ḥs*-vase) in front of the seated gods Osiris, Ptah-Sokar, Anubis, Horus, and Hathor. He is dressed in a short kilt of early Ramesside style, and named as *sḏm-ʿš m s.t Mꜣʿ.t ḫr.tj-nṯr n Jmn m njw.t rsj Knr.*

(2) Making an offering (with an incense burner) in front of his ancestors and family in the role of a sem-priest (and dressed accordingly). The text refers to him as *sḏm-ʿš m s.t Mꜣʿ.t Knr mꜣʿ-ḫrw sꜣ Sꜣ-Mw.t mꜣʿ-ḫrw ms n nb.t-pr Pꜣ-šd.t*

73 The tomb and its inscriptions are not published; as such, a dating is difficult to establish.

74 Bruyère 1925, 96.

75 We would expect *Mrj=s-gr* (v) to have been buried with her husband *Nb-n-Mꜣʿ.t* (ii) in TT 219, and the tomb is located too far away for the shabti to be a stray find. The shabti might also be interpreted as a gift for her father. Two pottery fragments bearing the name of an Osiris *Twrꜣ* cannot be put in context. A similar case is stela St. Petersburg 44, which is dedicated to a certain *Wsr-ḥꜣ.t*. This man probably lived in the 18th dynasty; his filiation (*sꜣ Knr*) is not visible in Lieblein 1873, 26, contra Bruyère 1925, 97.

76 Porter and Moss 1960, 398.

77 Tosi and Roccati 1972, 47–49, 266; Gabler 2017, 20–21. During their 1908/09 season, the Italian mission directed by Schiaparelli explored by chance almost the same area – TT 1–10, 210–212, 215–217, as well as 1241, 1259, 1069, 1071, and 1089 (325?) – the upper terraces whose tombs were most easily accessible. We would like to thank Paolo del Vesco and Federico Poole for this information.

mꜣʿ-ḫrw. The family members depicted are: his beloved father *ḫr.tj-nṯr n Jmn m kꜣ.t? Sꜣ-Mw.t mꜣʿ-ḫrw*; his mother, the *nb.t-pr Pꜣ-šd.t mꜣʿ-ḫrw*; his brother, the *ḥrj mnj.w n Jmn Mꜣḥj mꜣʿ-ḫrw*; his sister *Tꜣ-wr.t*; his brother, the *ḫr.tj-nṯr n Jmn Ḥʿj mꜣʿ-ḫrw*; his brother, the *ḫr.tj-nṯr Ḥwj*; his beloved sister *Jr.tj-nmḥ mꜣʿ-ḫrw*; and his wife (*ḥm.t=f*), the *nb.t-pr Nwb-ḫʿ.tj*.

(3) Sitting as passively as Osiris, *sḏm-ʿš m s.t Mꜣʿ.t ḥr jmnt.t njw.t*, accompanied by his wife, the *sn.t=f mrj=f nb.t-pr Tꜣ-ḫʿ.t* and his beloved brother the *bꜣk n Jmn Sꜣ-Mw.t mꜣʿ-ḫrw*, as well as two small, naked boys, his sons *Ḥwj* and *Wsr-ḥꜣ.t mꜣʿ-ḫrw*. The active role of the donor of the object – the individual depicted bringing a flower offering – is taken by his beloved son *Ḥwj-nfr mꜣʿ-ḫrw*, accompanied by his daughters *Mrj=s-gr mꜣʿ-ḫrw* and *Pꜣ-šd.t*; all three children are depicted as adults.

We concur with the common interpretation of these registers, which posits that *Knr* and his family (parents, siblings, and his first wife, *Jr.tj-nmḥ*) worked first in Thebes/on the East bank on tasks that were most likely related to the Karnak temple. Almost all of the male family members (the father *Sꜣ-Mw.t* and three sons) occupied the profession of *ḫr.tj-nṯr*, while the fourth son was the chief of herdsmen. It is likely that *Knr* was amongst the craftsmen who were transferred from other building projects (e. g., Karnak) to Deir el-Medina in the early Ramesside period.[78]

Knr probably arrived at the village with his brother *Sꜣ-Mw.t* (ii), who is depicted in the Turin Stela in the same register as the new Deir el-Medina relatives. But because this man is attested only on this stela, it is also possible that the inscription *sn* was a mistake for *sꜣ* and that we are dealing with *Sꜣ-Mw.t* (iii) (see below). We have no further information about *Knr*'s father, mother, or other brothers and sisters beside the information that is included in his tomb inscriptions (patronym and matronym) and on the stela. As such, *Knr* may have joined the crew alone (or with *Sꜣ-Mw.t* (ii)), without his first wife (whom we know only from the Turin stela). *Jr.tj-nmḥ* may have died at an early age, or was unwilling to move, or they may have divorced. In any case, this first marriage does not seem to have produced children (*Knr* was certainly fairly young, around 20 years old, when he came to the village).

Knr married a second time when he joined the crew, this time to an important local woman, *Tꜣ-ḫʿ.t* (ii), whose ancestors (probably all resident in the village) can be traced back for three generations.[79] This marriage to the sister of the subsequent foreman of the left side, *Qꜣḥꜣ* (i), connected him to one of the most influential families in the community. *Knr* himself was probably an eligible bachelor, as the newly

78 For an overview, see Soliman 2015, Table 102, 489–490. Note that *Sꜣ-Mw.t* (i), however, certainly did not transfer to Deir el-Medina.

79 Davies 1999, chart 3.

appointed inhabitants of the village took on specific jobs as stonemasons, draughtsmen, or painters; appreciated for their skills, they were often housed in the southern sectors that were built at the time of Seti I.[80]

Stela Turin N. 50012 can be dated, iconographically and stylistically, to the first half of the reign of Ramesses II (earlier than year 20 at the latest, as three of *Knr*'s children, or four, depending on whether one identifies *Sꜣ-Mw.t* (ii) or (iii), are depicted as adults); being 15 to 20 years old, they were maybe not yet married. Two younger sons are depicted as young boys. The five absent daughters would have been born after the stela was produced, from max. year 20 onwards; they would have been old enough to get married sometime in the following 15/20 years. Stela Turin N. 50012 probably served as a memorial object – designed to honour *Knr* and his ancestors – commissioned by his eldest son *Ḥwj-nfr* and intended to provide himself and his family (as outsiders) with some history in the new social environment of Deir el-Medina.[81]

Knr was a *ḫr.tj-nṯr*. This title is attested from the Old Kingdom onward.[82] It is commonly translated as necropolis workman, and more specifically as quarryman or stonemason/stonecutter. *Knr* would certainly have performed such masonry-related tasks at the construction sites in the Valleys of the Kings and Queens from the beginning of the reign of Ramesses II onwards.[83] *Ḫr.tj-nṯr* is a functional title, rarely attested in the context of Deir el-Medina in the Ramesside period.[84] It embraces different duties of daily life and could be used in religious and funerary contexts in addition to the usual cultic title *sḏm-ꜥš m s.t Mꜣꜥ.t*.[85]

Knr is also represented by the wooden statuette New York MMA 65.114.[86] He is carrying a standard crowned with the head of a falcon. The statuette dates to the

80 Gabler 2018a, 526; Gabler, forthcoming. For *Knr*, no dwelling can be identified based on the available data.

81 The name *Knr*, written with the throw stick (T14), suggests a foreign origin. Fischer (1977, 137–140) suggests the fourth cataract. A discussion of the name is found in Ward 1994, 74–78, 84–85, who suggests a Libyan origin. The name and its spelling are too vague to indicate any (foreign) origin in the case of *Knr* (i), especially as all his other relatives bear common Egyptian names.

82 Jones 2000, no. 2894.

83 Whether he joined the crew in the time of Seti I is doubtful, as *Tꜣ-ḥꜥ.t* is depicted without her husband on stela Turin N. 50069, which dates to this period.

84 The DMD Leiden (https://dmd.wepwawet.nl/) gives only 15 hits, and most of these attestations are in lists on ostraca dating to the 18th dynasty, as well as in a few administrative ostraca from the early Ramesside period (Gabler 2018a, 183). Besides P. BM EA 10055, all the 20th dynasty attestations occur in Turin papyri. The title also appears occasionally in hieroglyphic inscriptions from Deir el-Medina dating to the times of Seti I and Ramesses II.

85 Functional titles were seldom used in religious or funerary contexts, cf. Beck and Gabler 2019, 55.

86 Fischer (1977, 137–140) assumes that the statuette would have been placed in the tomb of *Knr*.

reign of Ramesses II.[87] Henry Fischer labelled its inscriptions from (a) to (i).[88] Text (a) consists of a small emblem for Amun-Ra, typical of statues of the Third Intermediate Period and later.[89] Inscription (b), located on the kilt, refers to *Knr* as *ḥmw.w wr m s.t Mꜣʿ.t*. The same text also appears on the right and left sides of the base, (h) and (i), as well as on the back pillar, (g), and the top of the base, (d) and relates him to Amun-Ra in Karnak, where he must have been employed before he moved to Deir el-Medina, see above. On the staff (c), *Knr* is referred to as *sḏm-ʿš m s.t Mꜣʿ.t* and *ḥmw.w wr*.[90] His wife is depicted on the right side of the statuette, along with inscription (f), which reads: *sn.t=f mrj=f nb.t-pr Tꜣ-ḥʿ.t mꜣʿ-ḫrw, sꜣ.t=s Mrj=s-gr mꜣʿ-ḫrw*.[91] This inscription again proves that *Mrj=s-gr* (v) must have been his eldest daughter. Inscription (h), on the back of the base, mentions his son *Ḥwj-nfr* (iii), lending further support to the hypothesis that *Ḥwj-nfr* was the eldest son. *Ḥwj-nfr* is also referred to in text (d) on top of the base. Judging by the style and iconography of the object, as well as the prosopographical information, the statuette should be dated to the early years of Ramesses II, when the couple had only these two children (max. year 10). Alternatively, it may be that – due to a lack space – only the eldest male and female were included, meaning a date of max. year 40 (the last attestation for *Knr* occurs shortly before). This would conflict with text (e), however, a short inscription at the surface of the base beneath the staff, which is almost invisible in the photographs accessible via the MMA online database. This line mentions *sꜣ.t=f Pꜣ-šd.t mꜣʿ-ḫrw sꜣ n Wp-wꜣ.wt-ms mꜣʿ-ḫrw*. The first part refers to *Pꜣ-šd.t* (i), a daughter of *Knr* (probably the second oldest, according to stela Turin N. 50012). The name *Wp-wꜣ.wt-ms* is known for one person in Deir el-Medina: *Knr*'s grandson *Wp-wꜣ.wt-ms* (i), the son (in-law?) of *Mrj=s-gr* (v) and *Nb-n-Mꜣʿ.t* (ii). No *Wp-wꜣ.wt-ms*

87 https://www.metmuseum.org/art/collection/search/545870 [19 April 2020].

88 Fischer 1977, fig. 32, 31, 138.

89 We are grateful to M. Marée who supports dating the statue to the period of Seti I and the early years of Ramesses II from an iconographic and stylistic point of view. Similar statues from Deir el-Medina also date to the first half of the reign of Ramesses II, e. g. for *Rʿ-ms* (Turin C. 3046, Leiden AH 211), *Pꜣ-šd* (Turin C. 3047), *Pn-bwj* (Turin C. 3048), *Jmn-nḫt* (Leiden AH 210), without inscription (Turin C. 3049). The statuette Leiden AH 210 bears a similar emblem for Amun-Ra. https://collezioni.museoegizio.it/; https://www.rmo.nl/en/collection/search-collection/ [25 June 2020].

90 His father-in-law *Ḥwj* (ii) bore the same title *ḥmw.w wr*, e. g., O. Carnarvon 300 PP. Because this title is attested more often during the reign of Seti I and the early years of Ramesses II, its use provides a further indication of the object's date. Davies (1999, 274) interprets the title as 'merely honorific' – which may be correct. Note however that *Knr* had relationships with a 'real' *ḥmw.w wr*, his father-in-law.

91 The inscriptions on the back pillar and the right arm are hard to read, even with a high-resolution picture. They seem to include prayers, but no further relatives.

is attested earlier than year 38 of Ramesses II (see below).[92] Fischer has already noted that this inscription is unusual; he concurs with the identification of *Pꜣ-šd.t* (i), but offers no solution for *Wp-wꜣ.wt-ms*, though he suggests that he may have been another son.[93] Correlating the iconography, style, and prosopography of the object, one can propose that the statue was produced in the early years of Ramesses II, and that inscription (e) was partly added at a later date:[94] *Wp-wꜣ.wt-ms* would have been born around year 20 and begun working actively around year 38/40 (but probably not in the crew).

Only four administrative ostraca refer to *Knr* (i).[95] O. Ashmolean Museum 116, which records a deficit of water, must date before (or close to) year 40, depending on whether *Knr* himself is referred to or whether his name was intended to represent the household even though he was already dead.[96] Column I, in which *Knr* is listed, may reflect the delivery sequence of water to houses in sector S.E. – these homes received 1 ¼ sack of water, the usual amount for a workman's family.[97] Consequently, only houses S.E. I, IV, or V could have housed this family.[98] O. Berlin P. 14350, a list of 20 workmen, includes *Knr*. According to Gutgesell, the text dates between year 38 and 40, with 38 or 39 being more likely.[99] O. DeM 843 is a grain ration list of 13 workmen that records their monthly wages. *Knr* opens the list, receiving 1 ½ sacks; he is followed by his son-in-law, *Nb-n-Mꜣʿ.t* (1 sack); another of his sons-in-law, *Pn-dwꜣ* (1 ¼), appears in line 13. *Knr* and *Nb-n-Mꜣʿ.t* seem to be linked to the left side, while *Pn-dwꜣ* perhaps belonged to the right. According to Grandet, the text should be dated before year 39.[100] O. Varille 12 also dates to the period shortly before year

92 Davies 1999, chart 21, 275. His father/father-in-law *Nb-n-Mꜣʿ.t* (ii) was active between year 25/26 and 64 of Ramesses II; see section 6.5.1 below.

93 Fischer 1977, 140. The construction *sꜣ n* is puzzling; an emendation to *sꜣ=f* would make sense.

94 His name may have been added (later) because he was the eldest (and only) 'grandson' (at that time); or added in the mid-reign of Ramesses II on the occasion of his grandfather (in-law?)'s death around year 40; or added after *Knr*'s death. See the discussion about *Nb-n-Mꜣʿ.t* and *Mrj=s-gr*. Only an investigation of the original may prove whether or not these signs vary from the other hieroglyphs.

95 Other texts dating to the late 19th dynasty probably refer to *Knr* (ii) *sꜣ Jn-ḥr-ḫʿ* (i), a grandson of *Knr* (i); *Knr* (iii) lived in the 20th dynasty. Davies 1999, 16, 19, chart 3.

96 Janssen 1979, 12. It is possible that O. DeM 10170 records water delivered to a *Ḥwj-nfr*; see Grandet 2010, 56–57. As most of the water delivery texts date to the period of Ramesses II, it is possible that *Ḥwj-nfr* (iii) or (ii/iv) is meant here.

97 Gabler 2018a, 126–128.

98 The other houses in the S.E. sector can be assigned to other inhabitants; Gabler, in preparation.

99 Gutgesell 2002, 99.

100 Grandet 2003, 21–23.

40 (36 to 40).[101] The text lists 15 persons – usually with a title – either wab-priests or sculptors, and a guardian. *Knr* is recorded as *sḏm-ʿš m s.t Mɜʿ.t ḥr Jmnt.t njw.t*. Some of the other individuals seem to have been related to him: the *wʿb Ḫnsw* may have been his son-in-law (i), as may *Pn-dwɜ* (iii). The wab *Ḥwj* was possibly another relative.[102]

Knr (i) must have died around year 40 of Ramesses II. In any case, he was certainly retired by then, as O. BM EA 5634 does not include him in the working schedule, while it includes his son *Ḥwj-nfr* (iii) as well as several of his sons-in-law.[103]

Stela BM EA 818, which belonged to *Knr*, is discussed above in the section dedicated to *Ḥnw.t-mrw.t*. This item dates again to max. year 40 of Ramesses II, shortly after *Knr* (i) must have died.

6.4. The sons – and their families

Knr's younger sons *Wsr-ḥɜ.t* (viii) and *Ḥwj* (xxi) (named after his uncle *Ḥwj* (xx)) are known only from the stela Turin N. 50012 (and probably left the village at some point around year 20 in order to seek jobs elsewhere), but the two elder sons *Sɜ-Mw.t* (iii) and *Ḥwj-nfr* (iii) were given positions in the gang, working for a while together with their father.[104] They must have been born in the early reign of Ramesses II (before/around year 10). *Ḥwj-nfr* was possibly active in the crew from year 20 onwards, while *Sɜ-Mw.t* joined the gang some 10 years later. Any timeline for *Sɜ-Mw.t* (iii) depends on whether we identify him on the Turin stela or not. If we do not (and instead identify *Sɜ-Mw.t* (ii)), then *Sɜ-Mw.t* (iii) would appear to have been *Knr*'s youngest son, born after the Turin stela was produced; in this case, he would have joined the crew only after his brother *Ḥwj* and *Wsr-ḥɜ.t* had left. If we identify *Sɜ-Mw.t* (iii) on the Turin stela, he would represent the second oldest son, and his name (following that of his paternal grandfather and uncle) would reflect the practice of name-giving in Deir el-Medina.

101 Gutgesell 2002, 85; Černý NB 107.44.

102 O. Berlin P. 14340 and O. IFAO 1010 refer to *Knr* at this period (Gutgesell 2002, 99, 112–113).

103 Graffito 589 (K*RI* III, 611,7–8) records the *sḏm-ʿš m s.t Mɜʿ.t Knr* and his 'son' (the son-in-law) and foreman *Jn-ḥr-ḫʿ*. At the time this text was carved, *Knr* seems to have still been active in the crew, and *Jn-ḥr-ḫʿ* already promoted to the rank of chief workman. In O. BM EA 5634, however, *Jn-ḥr-ḫʿ* (i) is still an ordinary workman (see below). An explanation that accounts for these observations entails the promotion of *Jn-ḥr-ḫʿ* in year 40 of Ramesses II, when *Knr* would still have been alive but most likely retired.

104 *Ḥwj-nfr* and *Sɜ-Mw.t* may be attested on O. Gardiner 265, from the reign of Merenptah; see Gutgesell 2002, 62–63. Pace Davies (1999, 27) and Grandet (2010, 49), it is uncertain whether *Sɜ-Mw.t* (ii) lived in Deir el-Medina.

Ḥwj-nfr (iii) was *Knr*'s oldest son (see stelae BM EA 144 and 328, as well as the wooden statuette discussed in section 6.3). It is possible that he worked with his father for 15 to 20 years. The Turin stela supports this hypothesis, as *Ḥwj-nfr* is the donor of the object. Named after his uncle *Ḥwj-nfr* (ii/iv) *sꜣ Ḥwj* (ii), *Ḥwj-nfr* (iii) is attested on a couple of ostraca.[105] He is numbered amongst the 40 workmen attested on O. BM EA 5634 in year 40,[106] where he is noted as having been ill for several days. At that time, he must have been around 35 years old. Even if he reached old age, he was probably no longer active as a workman under Merenptah.[107] *Ḥwj-nfr* is also attested in two water ration lists, O. DeM 189 and 370. In the first text, his

105 Davies 1999, 17–18, 275. Davies lists twelve individuals with the name *Ḥwj-nfr*, often in relation to the family of *Ḥwj* (ii) and *Qꜣḥꜣ* (i). It is therefore not always clear whether an attestation relates to *Ḥwj-nfr* (iii) or a namesake (see below).

106 The same text attests to several further men that are relevant to the family and its chronology. *Pn-dwꜣ* (iii) is attested with *Jn-ḥr-ḫꜣ* (i) who was absent from work because his wife (*Ḥnw.t-ḏww* (i)) had her period on the 4th month of *ꜣḫ.t*, day 17. At this time, he was still acting as a workman (and had not yet been appointed the foreman of the left side). *Ḫnsw* (i) was ill for several days; so was *Nb-n-Mꜣꜥ.t*. Janssen (1980, 127–135) observes that a clear distinction of the workmen between the right and the left side is not apparent and requires further discussion. According to O. Toronto ROM 906.20.1, *Ḥwj-nfr* belonged to the right side (max. year 38/39 of Ramesses II); see Gutgesell 2002, 104. However, contra Gutgesell, *Ḥwj-nfr* must have been active in the crew much earlier than year 36; see above.

107 According to Gutgesell (2002, 64 vs. 109), *Ḥwj-nfr* would have died around year 2 of Siptah or year 8 of Ramesses III – aged 70, 80, or even 90! He was most likely retired towards the end of the 19th dynasty. Furthermore, several namesakes are known from the same period: *Ḥwj-nfr* (iii) or *Ḥwj-nfr* (ii/iv) may be attested in the following texts: Ramesses II – O. IFAO 331 (year 36, with the title *ḥmw*, pointing to *Ḥwj-nfr* [ii/iv], whose father was a *ḥmw.w wr*), O. DeM 10125, O. IFAO 597, 1347 (each close to year 40). The latter texts must refer to namesakes, as *Ḥwj-nfr* (ii/iv) would have been approximately 80 to 90 and *Ḥwj-nfr* (iii) 70 years old in the reign of Seti II. Even if one of these two men reached such an old age, he was probably not active in the crew and thus unlikely to be recorded in work lists, cf. O. DeM 621 (Merenptah?, which refers to a *Ḥwj-nfr* on the right side); O. Cairo CG 25510, 25516 (each Seti II, incl. another *Knr*); O. Cairo CG 25507, 25513, O. Ashmolean Museum 37, O. Černý 4 (each Seti II?); O. Cairo CG 25521 (year 1/2 Siptah, which refers to a *Ḥwj-nfr* on the left side), O. Cairo CG 25519, O. DeM 695, 10127 (a *Ḥwj-nfr* on the right and left side, as well as a *Knr* on the left), O. Gardiner Frag. 22 a (with *Ḫnsw* and a *Jmn-m-jn.t*), O. Turin N. 57388 (each Siptah?). For the texts, see Gutgesell (2002, 56), who admits that *Ḥwj-nfr* might refer to two different workmen bearing the same name. A filiation appears in texts of the 19th dynasty only for *Ḥwj-nfr* (ix) *sꜣ Tjꜣ* in O. Cairo CG 25505 (Seti II/Siptah). Scribes usually used patronyms for workmen when dealing with two contemporaneous namesakes. Therefore, at least two, even three, namesakes were working towards the end of the 19th dynasty. O. DeM 560 refers to the scribe *Ḥwj-nfr*, along with *Ḥꜥj* and two women; see Gutgesell 2002, 142 and see below. O. DeM 10351 includes a certain *ṯꜣj-mḏꜣ.t Ḥwj-nfr* (vii) and a *Ḫnsw* in the 19th dynasty, cf. Grandet 2017, 95–96.

brother *S3-Mw.t* is also present.[108] The brothers received the normal amount of water for workmen, 1 ¼ sack.[109] This text might indicate the sequence of deliveries to the houses in the N.E. sector, as might O. DeM 370, which includes the house of *Ḥwj-nfr*.[110] Given the fact that their father *Knr* is also named in such a list (O. Ashmolean Museum 116) and that the three men acted simultaneously as workmen, they must have all occupied different houses. Moreover, O. DeM 189 must reflect rations before year 40, as *Jn-ḥr-ḫ*ʿ (i) receives the ordinary amount of water (the ration for foremen was higher).[111] O. DeM 370 probably dates around the same period.[112] Unfortunately, the sectors N.E. and N.O. were excavated several times (see section 2) and objects possibly originating in these structures are not documented, while the area is partly damaged.[113] The water account can therefore only broadly indicate the location of the houses of *Knr*, *Ḥwj-nfr*, and *S3-Mw.t* in the northern part of the village. Nevertheless, it demonstrates that both sons must have left their family home and moved to their wives' homes, or taken over the houses of relatives. Without the names of their wives, however, we cannot confirm whether the men came to live in these houses as a result of the pattern whereby houses were passed on to female children within families.[114] No wife or children are attested for *Ḥwj-nfr*, though he was almost certainly married when he was a member of the crew. One can assume that his wife was the daughter of an ordinary workman, as chances would otherwise be high that more information would be available about a woman from an important family.[115]

The wife of *S3-Mw.t* (iii) is mentioned anonymously on O. BM EA 5634 as having her period on day 25 of the 1st month of *pr.t* and day 23 of the 4th month of *pr.t*, as Terry Wilfong has convincingly shown. Jac. J. Janssen observes that, on day 23 of the 4th month of *pr.t*, a daughter of *W3ḏ-ms* (i) was sick and that her father was also away from work.[116] Given further evidence for menstrual synchrony among exactly

108 The name *S3-Mw.t* is used only in *Knr*'s direct family (his father, his brother, and his son). The name appears in Deir el-Medina exclusively in the 19th dynasty.

109 Davies 1999, 275; Gabler 2018a, 126–128. The list O. DeM 10163, which includes *Q3ḥ3*, *P3-ḥrj-pḏ.t*, *S3-Mw.t*, *Qn*, *Nfr-rnp.t*, and *Jmn-ms* could theoretically also be a water list, cf. Grandet 2010, 48–49.

110 Gabler and Salmas, forthcoming.

111 Gabler 2018a, 126–129. At the same time, the text is one of the earliest pieces of evidence for the scribe *Qnj-ḥrj-ḫpš=f* (i), who took on the title of Scribe of the Tomb in year 40.

112 Gutgesell 2002, 109.

113 Gabler and Salmas, forthcoming.

114 Gabler, forthcoming. Following the suggestion that their dwelling is located in the Northern sector, the find-spot of the letters might have been in this area; see section 2.

115 Gabler, forthcoming.

116 Janssen, 1980, 127–152; Demarée 2002, pl. 25–28. Wilfong 1999, 419–434, especially 425–427. However, Janssen fails to distinguish *S3-Mw.t* (i) from (ii) or (iii), the grandson/son on the stela Turin N. 50012 (p. 143). In any case, it is unlikely that *S3-Mw.t* (ii), who would

these women,[117] it is possible that *S3-Mw.t* (iii) was married to a relative of *W3ḏ-ms*. According to O. BM EA 66411, the *rmṯ-js.t S3-Mw.t* was married to *Ḥw.t-j3*. His wife had to pay his debts, amounting to 12 sacks of emmer and 8 sacks of barley,[118] to at least eight creditors after his death in year 9 of Merenptah at the estimated age of 65.[119] The name *Ḥw.t-j3* is rare in Deir el-Medina. It appears in O. Turin N. 57062 (year 47 of Ramesses II), a text that is difficult to interpret, but in which *Ḥw.t-j3* swears an oath, perhaps to the goddess Anukis.[120] In O. VM 3000, also middle of

have been *Knr* (i)'s contemporary, was still active later than year 40 of Ramesses II, especially considering how rarely he is attested.

117 Davies 1999, chart 6. There is only one *W3ḏ-ms* attested in the community; he had only one son (*Nb-nfr*). *Ḥw.t-j3* may have been the daughter of this *W3ḏ-ms*. The workman was active during the mid-reign of Ramesses II; his son *Nb-nfr* (iii) was active towards the end of the 19th dynasty.

118 For comparison, a workman's monthly ration was 4 sacks emmer and 1 ½ sacks barley. The debts are at least as high as four months' wages, and 20 sacks correlate to 160 deben! These large debts may indicate a major investment, e. g. work on a tomb, its decoration, funerary equipment, or the purchase of several animals. The names of the creditors favour the first suggestion: the *sš(.w)-qd Nfr-ḥtp* and *Jpwj* seem to have been involved in craftsmanship. TT 330, which may be the family's tomb, is too poorly preserved to suggest the possible burial of *S3-Mw.t* (iii) in the tomb of his father *Knr* (i).

119 McDowell 1999, 181; Toivari-Viitala 2001, 212; Gutgesell 2002, 9, 62–64. Gutgesell refers to O. Zurich H 2, but this is incorrect; the ostracon is O. Zouche H 2 = O. BM EA 66411. *S3-Mw.t* (iii) is also attested in O. Gardiner 219, together with his brother-in-law *Pn-dw3*; in O. DeM 661 with his brother-in-law *Ḫnsw*; and in O. Cairo CG 25524. All these texts stem from shortly before he died in year 9 of Merenptah. *Ḥw.t-j3* may have been born around year 25 if she was the daughter of *W3ḏ-ms*; in this case, her husband would have been around the same age, or possibly up to 15 years older (depending on whether or not *S3-Mw.t* (iii) is attested on stela Turin N. 50012). In O. Turin N. 57080, a *rwḏw*-inspector, *S3-Mw.t*, is recorded as being involved with wood deliveries and deficits. On the basis of other documents that include this title, one can assume that this *rwḏw* is a different person than *S3-Mw.t* (iii) – perhaps *S3-Mw.t* (ii)? Gabler 2018a, 80–81, 431–433.

120 The same text mentions *P3j* (i), the father-in-law of *P3-šd.t* (i) – who was a sister of *S3-Mw.t* (iii) – or *P3j* (ii), a grandson of *P3j* (i), as a 'water-carrier/carrying water for Anukis'. For a summary of the interpretations of this text, see Donker van Heel 2016, 47–48. According to O. Berlin P. 11247, *P3j* (i) became blind; this text can be dated to year 50 of Ramesses II at the latest. Otherwise, we have no evidence for *P3j* (anymore). *P3-Rʿ-ḥtp* (i), the son to whom the letter is addressed, must have been born in the early years of Ramesses II. Attested around year 40, his son *P3j* (ii) died at the end of the 19th dynasty; see below. When exactly *P3-Rʿ-ḥtp* (i) died is hard to determine, due to the existence of several namesakes during the reign of Ramesses II, of which probably only one or two lived until the time of Siptah. Gutgesell 2002, 149–150, dates *P3j* (i) from year 5 of Ramesses II until year 4 of Amenemesse. This seems highly unlikely, as it would mean that the man lived to be over 110 years old. *P3j* (i) must have been born in the very early 19th dynasty. In year 47 of Ramesses II he was probably around 60, 70, or even 80 years old (depending on whether he was born under Haremhab, Ramesses I, or Seti I). The loss of his eyesight at this age seems realistic. The *P3j*

the reign of Ramesses II, *Ḥw.t-jꜣ* is included in a list of at least 18 women.[121] In both cases, we are probably dealing with the wife of *Sꜣ-Mw.t* (iii); any children of theirs are unknown. O. VM 3000 includes several names that can be related to the family of *Knr* (and the two letters): *Nfr.t-jrj* and *Mrj=s-gr* might have been *Ḥw.t-jꜣ*'s sisters-in-law (see section 6.5). The anthroponym *Ḥw.t-jꜣ* might be spelt elsewhere as *Ḥw.t-jj*; she was a sister of *Nfr-ḥtp* (iii).[122] The origin of the two women is unknown, but the name *Nfr-ḥtp* would point to the family of *Wꜣḏ-ms* (i), whose wife *Jj-m-wꜣw* (ii) was a granddaughter of *Nfr-ḥtp* (i).[123] If *Ḥw.t-jꜣ* is indeed *Ḥw.t-jj*, this possible wife of *Sꜣ-Mw.t* (iii) would have been around 12 to 15 years old in year 39/40, and would have reached an estimated age of roughly 70 years under Ramesses III.

6.5. The daughters – and their families

6.5.1. *Mrj=s-gr* (v) and *Nb-n-Mꜣʿ.t* (ii) – and family

The pieces of evidence discussed thus far suggest that *Mrj=s-gr* (v) was the eldest daughter of *Tꜣ-ḫʿ.t* (ii) and *Knr* (i) – born in the early years of Ramesses II and depicted as an adult on stela Turin N. 50012, when she would have been around 15 years old. Her 'son' *Wp-wꜣ.wt-ms* (i) is attested around year 40 of Ramesses II, which means that *Mrj=s-gr* would have married her husband about year 20, that their son was most likely born shortly thereafter, and that he was old enough for work around year 40 (being 15 to 20 years old). In addition to *Wp-wꜣ.wt-ms* and *Ḥwj* (ii), the couple had at least four other children, including three daughters: *Tꜣ-ḫʿ.t* (iii), who was named after her maternal grandmother, *Tꜣ-jnj.w* (i), and *Ḫnrw* (vi).[124]

Mrj=s-gr was married to *Nb-n-Mꜣʿ.t* (ii).[125] The inscriptions on an offering table record *Nb-n-Mꜣʿ.t* together with his parents-in-law, *Tꜣ-ḫʿ.t* and *Knr*. The table is partly destroyed, but it seems probable that *Mrj=s-gr* was mentioned in the lost portions of the table.[126] Other attestations of *Nb-n-Mꜣʿ.t* (ii) *sꜣ Jmn-nḫt* (xxi) support the scenario

attested in the reign of Amenmesse (who died in year 4) must be *Pꜣj* (ii), as argued by Davies 1999, 152. O. Cairo CG 25784 reads, in r° 3: *Nb-Jmn qrs Pꜣj*. The letter O. Černý 19 seems to have been written by *Pꜣj* (i) on the occasion of the death of his wife, *Mrj.t-Rʿ* (ii), the mother of *Pꜣ-Rʿ-m-ḥb* and the addressee of the letter, who would have worked on his mother's coffin.

121 Gutgesell 2002, 26; Hagen 2016, 210–212. *Ḥw.t-jꜣ* appears on r° II, 6, alongside *Ḥnw.t-mḥj.t*, *Ḥnw.t-Jwnw*, *Tꜣ-Mrj.t*, and *ꜣs.t*. The *verso* includes a *Nfr.t-jrj* and *Mrj=s-gr*, see also section 6.7.

122 O. Louvre E 13156, see *Ḥnw.t-ḏww* (i) below, as well as other texts.

123 Davies 1999, chart 6.

124 Davies 1999, chart 21.

125 Davies 1999, 236–239.

126 Bruyère 1928, 39, fig. 26.1; Maystre 1936, 5–7; Davies 1999, 237. While the *Knr*-family was linked with the title *bꜣk n Jmn*, *Nb-n-Mꜣʿ.t* was a *bꜣk n Ḥw.t-Ḥr*. This information derives from

adduced so far. *Nb-n-Mꜣ<.t* was active in the crew from at least year 25/26 onwards (by which time he was likely married to his wife). He probably served until year 64 (being the only individual of that name at that time).[127] In year 25 and 26, he got involved in some business with *Nb-R<* (i) over a period of eleven months.[128] *Nb-R<* was the husband of *Pꜣ-šd.t* (i), a sister of *Mrj=s-gr* (v). Both couples would have been married by then. In the grain ration list of O. DeM 843, *Nb-n-Mꜣ<.t* appears alongside his father-in-law *Knr* (i) and another of his brothers-in-law, *Pn-dwꜣ* (iii), all of whom acted together on the crew.[129] According to O. DeM 621 + 829 – where he receives 2 ¾ sacks of grain on the left side of the gang – *Nb-n-Mꜣ<.t* (ii) worked until year 64,[130] which means that he worked actively for a period of (at least) 40 years, until the approximate age of 65. He appears again in the list of O. DeM 188 + 373, where he receives 1 ¼ sacks, the usual amount of water per household, even though the amount may also refer to a grain ration.[131] This text might even date to the reign of Siptah or Tausret. In this case, either his name was intended to refer only to the household; *Nb-n-Mꜣ<.t* (ii) reached the age of 85; or we are dealing with a third (unknown) *Nb-n-Mꜣ<.t*.

Nb-n-Mꜣ<.t is also recorded together with his brother-in-law, *Pn-dwꜣ* (iii), in the water account O. Ashmolean Museum 195, where each man receives one *jnḥ.t*-jar.[132] In O. DeM 706, he is again on the left side, and once more with his brothers-in-law: *Pn-dwꜣ* (iii) and *Sꜣ-Mw.t* (iii) (on the right side) and *Ḫnsw* (i) and *Nḫt-Jmn* (iii) (on the left). O. BM EA 5634 provides little information, but it does let us know that *Nb-n-Mꜣ<.t* was ill four times. *Nb-n-Mꜣ<.t* also appears with *Pꜣ-šd.t* (i), the wife of *Nb-R<* (i), in the presence list O. Cairo CG 25573 (see section 6.5.2). The couple

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the lintel Turin N. 6026 and 6050 and traces on the wall of a hut in the west group in the mountains/Village du Col. *Mrj=s-gr* is mentioned on a stela fragment with some of her siblings; see K*RI* III, 827,7.

127 Davies 1999, 236. *Nb-n-Mꜣ<.t* (ii) was named after his grandfather (i), his only attested namesake in Deir el-Medina.

128 According to O. Ashmolean Museum 228, *Nb-n-Mꜣ<.t* gave some grain, bread, and natron to *Nb-R<*. Later on, he gave some further bread, grain, and a leather skin to him. The text does not give any further information about the trade, for instance, whether *Nb-R<* as *sš-qd* decorated an item for *Nb-n-Mꜣ<.t*. Interestingly, the reverse of the ostracon was used as a palette; it depicts the sign for *ḥsmn* (natron). The limestone piece may have been used to smooth natron by one of the two families, but it has no find-context; see DMD Leiden. In O. DeM 641, *Nb-n-Mꜣ<.t* is referred to in the context of bread and dates.

129 Grandet 2003, 21–24, 212–214.

130 Grandet 2000, 76, 77, 213. Grain ration lists usually list titles alone (*sš*, *ꜥ n js.t*, *sj*, etc.), and only list individual names when additional payment is concerned or deficits have to be paid. The amount of 2 ¾ suggests such a scenario; as a retired workman, *Nb-n-Mꜣ<.t*, would certainly have received a lesser ration.

131 Gabler 2018a, 637.

132 Gabler 2018a, 126, 130.

Mrj=s-gr and *Nb-n-Mꜣʿ.t* (and probably two of their nephews, *Nḫt-Jmn* and *Ḥʿj*), are mentioned in Letter 1, in the context of bread delivery (maybe in relation to the feast organized by *Tꜣ-ḫʿ.t*). Furthermore, *Mrj=s-gr* is accused by her sister *Ḥnw.t-mrw.t* of casting her in a bad light.

TT 219 was the family's tomb. It depicts several of the couple's children (*Wp-wꜣ.wt-ms* (i) or *Ḥwj* (ii), *Ḫnrw* (vi), *Tꜣ-jnj.w* (i), *Tꜣ-ḫʿ.t* (iii), and possibly more) and at least one grandson, *Nb-mḥj.t* (iv). It also depicts *Nb-n-Mꜣʿ.t*'s parents-in-law, *Knr* and *Tꜣ-ḫʿ.t*, as well as *Pꜣ-šd.t* (i) and her husband *Nb-Rʿ* (i) (both with and without their sons), the *sš-qd Nḫt-Jmn* (iii) and *Ḥʿj* (i), and *Nfr.t-jrj* (ii/vi) with her husband *Pn-dwꜣ* (iii) and their sons *Pꜣ-šd* (v) and *Knr* (vi).[133] Pace Davies, it seems unlikely that *Wp-wꜣ.wt-ms* would have had a son (*Nḫj* (vii)) when the tomb was decorated in the first half of the reign of Ramesses II. *Nḫj* (vii) must have been another 'son'/relative of *Mrj=s-gr* and *Nb-n-Mꜣʿ.t*, and thus a brother/-in-law of *Wp-wꜣ.wt-ms* (they are both called *sꜣ=f* in the inscriptions).[134] Even if *Wp-wꜣ.wt-ms* was married around year 40, his possible children would have been very young (< 10 years), and certainly not depicted as adults in TT 219.

According to Davies, *Wp-wꜣ.wt-ms*' wife was *Ḥwj* (ii); she is a possible candidate for the identification of the *Ḥwj* who sent Letter 2, and was probably around the same age as her husband.[135] *Wp-wꜣ.wt-ms* and *Ḥwj* are depicted together several times in TT 219 offering either to the gods or to their parents. Besides the tomb and the statuette MMA 65.114 (discussed in section 6.3), his name is attested in the context of pottery delivery on only two ostraca: O. Turin N. 57099 (delivering vessels, with *Jmn-m-jn.t* or *Jmn-m-jp.t*, in year 38, 1+ month of *pr.t*, day 21)[136] and O. DeM 202 (delivering vessels, 3rd month of *pr.t*, day 18). *Ḥwj* is attested only in TT 219 and maybe in the Turin letters. Because this family (*Wp-wꜣ.wt-ms*, *Ḥwj*, and their relative *Nḫj*) are rarely mentioned in Deir el-Medina and because they are all labelled as *sn*/*.t*/*=f*/*=s*, *Wsjr*, and *nb.t-pr* in the few available inscriptions, it is likely that they worked outside of Deir el-Medina, possibly as potters. Given the rarity of the name, one may identify the *Wp-wꜣ.wt-ms* of TT 219 with the deliverer mentioned in the ostraca.[137]

It is not clear, however, why the (potential) children of *Mrj=s-gr* and *Nb-n-Mꜣʿ.t* were not named (as one would expect) after their grandparents or other relatives. The names *Wp-wꜣ.wt-ms* and *Nḫj* are not attested on either the paternal or maternal

133 Maystre 1936, 9–11. The family scene is pl. IV.

134 For a discussion of the possible scenarios, see Gabler 2018a, 313–314, 682. He could be identical to the potter *Nḫj* (VIII).

135 Davies 1999, 237.

136 Gutgesell 2002, 6; Gabler 2018a, 683, 714. We are probably dealing with *Jmn-m-jp.t* (xvi = ii), the *smd.t*-scribe of the left side and possibly the son of *Mjn-ms* (i).

137 Gabler 2018a, 313–314.

side of the family,[138] but *T3-ḫ3ʿ.t* (iii) was named after her grandmother (ii). Nonetheless, the scenes of TT 219 seems to confirm that the two men are 'sons' – *Wp-w3ḥ.wt-ms* performs the role of different priests in ceremonies for his 'parents' and is referred to in the inscriptions as *s3=f*, which can be interpreted in multiple ways. Another scenario would posit *Ḥwj* (ii) as the biological daughter of *Mrj=s-gr* and *Nb-n-M3ʿ.t*; her husband, *Wp-w3ḥ.wt-ms* (the relation 'son-in-law' expressed as *s3=f*), would then have taken on the duties of a son in the tomb decoration because they had no son of their own.[139] As the eldest daughter (named after her great-grandfather, *Ḥwj* (ii)), *Ḥwj* could not have been depicted as the main ritualist in these scenes, but instead is shown together with *Wp-w3ḥ.wt-ms*, and – in one scene – is even depicted slightly larger than her husband.[140] The painter perhaps tried to match the relations between the family members with the male-centric conventions of Egyptian texts and images. This second scenario would fit with the names of the family members and their roles, and would explain why the unusual name *Wp-w3ḥ.wt-ms* is rarely attested.

Ḥwj was born around year 20, and probably had to leave the village once she was old enough to get married (around year 35 to 40), having been unable to secure a husband who was part of the crew.[141] She found a husband in the form of the potter *Wp-w3ḥ.wt-ms*, and – though outside of Deir el-Medina – she would have been able to keep in contact with her family through letters, as is perhaps confirmed by the new documents as well as by deliveries made by her husband and his family to the village. If *Nḫj* (vii) is identified with the potter *Nḫj* (VIII), this man would be the older brother of *Wp-w3ḥ.wt-ms*, the brother of the son-in-law of *Mrj=s-gr* (= '*s3=f*'), attested around year 30.[142] In our opinion, this is the most convincing scenario; it fails only to explain the name of *Wp-w3ḥ.wt-ms* on the statuette MMA 65.114, where *Ḥwj* = the eldest granddaughter of *Knr* would have been expected.[143]

To sum up, either *Wp-w3ḥ.wt-ms* (a potter) or *Ḥwj* was the child of *Mrj=s-gr* and *Nb-n-M3ʿ.t*, and lived between year 20 and 40 plus. In any case, the couple *Wp-w3ḥ.wt-ms* and *Ḥwj* must have lived and worked outside of Deir el-Medina. They are both depicted in the family's tomb, and they kept contact via work-related activities and occasional meetings in public spaces like the *mrj.t*-place. *Ḥwj* and *Ḥnw.t-mrw.t*

138 *Nḫj* (VIII) was also a potter, which supports the identification of *Wp-w3ḥ.wt-ms* as a potter, Gabler 2018a, 682.

139 Davies 1999, chart 21.

140 Maystre 1936, pl. V, 29, pl. VI. Depictions of children in the tombs of their families who acted in the service personnel are possible, especially in the time of Seti I and Ramesses II, cf. Gabler 2018a, 127, 165–166, 314.

141 Gabler, forthcoming. Marriage outside of the village was common for many girls born to 'ordinary' workmen.

142 Gabler 2018a, 313–314.

143 As the relevant inscription is not clear from the photos, we cannot exclude the possibility that *Ḥwj* was recorded in addition to *Wp-w3ḥ.wt-ms*; see above.

may have shared a similar destiny, and wrote letters about different matters to the village, where the letters were kept. If we identify *Ḥwj* (ii) as the sender of Letter 2, she certainly provides further insights into the issues pertaining to the basket of *Ḫʿj* and *Ḥnw.t-mrw.t*. *Ḥwj* could have provided additional information from the outside: moving around (maybe to Thebes), she could have kept track of the basket and informed her uncle or uncle-in-law *Pn-dwꜣ* by message. However, this scenario cannot explain why *Ḥwj* is called *sꜣ.t Nfr.t-jrj* in Letter 1. No daughter is attested for *Nfr.t-jrj* (ii/viii) and *Pn-dwꜣ* (iii) so far: either we are dealing with an as yet unattested child or we should read '*sꜣ.t*' according to a different interpretation; see below. A more plausible scenario concerning the identity of the sender of Letter 2 is suggested in section 6.5.3 where *Nḏm.t-bḥd.t* and her daughter *Ḥwj* are discussed.

6.5.2. *Pꜣ-šd.t* (i) and *Nb-Rʿ* (i) – and family

This couple is not mentioned in the Turin letters and both individuals are briefly discussed here in order to reconstruct the entire family and their time frame, and because their children are attested in these texts. Named after her paternal grandmother, *Pꜣ-šd.t* (i) was probably the second oldest daughter of *Tꜣ-ḫʿ.t* (ii) and *Knr* (i). She was most likely born around the same period as her sister *Mrj=s-gr* (in the early years of the reign of Ramesses II) and she is attested in the same contexts: stela Turin N. 50012, statuette MMA 65.114, stela BM EA 818, the family's tomb TT 330, and TT 219, the tomb of her brother-in-law *Nb-n-Mꜣʿ.t* (ii) (where she appears with three of her four sons in different combinations: the *sš.w-qd Nḫt-Jmn* (iii), *Ḫʿj* (i), and *Pꜣ-ḥrj-pḏ.t* (iii)).

Pꜣ-šd.t (i) married the *sš-qd Nb-Rʿ* (i) *sꜣ Pꜣj* (i), with whom she had at least four sons: *Nḫt-Jmn* (iii), *Ḫʿj* (i), *Pꜣ-ḥrj-pḏ.t* (iii), and *Jmn-m-jp.t* (iv). They also had one daughter, whose name we do not know. The *šrj.t Nb-Rʿ* is mentioned in O. DeM 10218 in the context of textiles.[144] According to O. Ashmolean Museum 228 (see above), the couple were married at the latest in year 25/26 of Ramesses II and their first children had been born by that time. The *sš-qd Nb-Rʿ* (i) has no namesake within the village; *Nb-Rʿ* (II) was a *šʿd-ḫt* in the reign of Siptah and possibly a grandson

144 Grandet 2010, 101. Davies refers to the offering table Turin N. 22029 on which another grandchild of *Pꜣj* (i) (*sꜣ n sꜣ=f Ḥwj*) is recorded. Either this grandson was related to *Pꜣ-Rʿ-m-ḥb* (i), he may have been named after his maternal grandfather, *Ḥwj* (ii), the father of *Tꜣ-ḫʿ.t* (ii). *Nb-Rʿ* and his wife are mentioned in the inscriptions. Davies 1999, 150. This child is not shown in chart 10.

of *Nb-Rᶜ* (i); this grandson might be a child of the otherwise unattested daughter who most likely married outside of the village.[145]

The family consists of several *sš.w-qd* 'draughtsmen'. Like *Nb-Rᶜ*'s father, *Pꜣj* (i), his brothers *Pꜣ-Rᶜ-m-ḥb* (i) and *Pꜣ-Rᶜ-ḥtp* (i) inherited the title and probably received their training within the family. The only son not attested with this title is *Rᶜ-wbn* (ii). Two sisters named *Bꜣk.t-Rᶜ* (i) and (ii) are also known to have been born to *Pꜣj* (i) and *Mrj.t-Rᶜ* (ii).[146] The members of this family are responsible for several letters on ostraca and papyri. *Nb-Rᶜ* wrote some of these messages[147] to relatives: O. Brussels E 6781 to his brother, the *sš-qd Pꜣ-Rᶜ-m-ḥb* (i) (around year 25 to 32);[148] O. DeM 558 to the *sš-qd Nḫt-Jmn*, probably his son (around year 40 to 58);[149] O. DeM 10250, again to his son, the *sš-qd Nḫt-Jmn* (iii), dealing with *mḏꜣj.w*. *Nb-Rᶜ* is also the addressee of the unpublished ostracon O. IFAO 102, a letter written by the scribe *Bꜣk*. His name also appears in O. IFAO 1519 (also unpublished). In O. DeM 240, several members of the family are linked to sandals produced by the sandal-makers *Mꜣḥj* and *Ḫᶜ*: *Pꜣj* (i), *Pꜣ-Rᶜ-ḥtp* (i), *Nb-Rᶜ* (i), and *Pn-dwꜣ* (iii) (his brother-in-law; see section 6.5.3). Footware is also discussed in O. DeM 126 and O. DeM 10249. The three texts may be dated roughly to year 30 of Ramesses II.[150] O. Turin N. 57431 contains a passage from the *Teaching of Amenemhat*, which was certainly copied by the *sš-qd m s.t Mꜣᶜ.t Nb-Rᶜ* (even if the name *Ḥnw.t-nfr.t* appears on r° 5).[151] The handwriting is obviously different from the cursive hieroglyphic hand on O. DeM 1153, a passage of the Kemit which contains the same 'signature' *jn sš-qd Nb-Rᶜ*.[152] Furthermore, *Nb-Rᶜ* left

145 Gabler 2018a, 82 (e. g. O. Cairo CG 25593, 25603); Gabler, forthcoming. *Pꜣj* (i), the father of *Nb-Rᶜ* (i), appears to be attested until year 47, according to O. Turin N. 57062; see Davies 1999, 150.

146 Davies 1999, chart 10; for *Pꜣj* (i) and (ii), see above. *Pꜣj* (i) must have died around year 50 of Ramesses II (at 60 to 85 years old, and probably blind), *Pꜣj* (ii) in year 4 of Amenmesse. Details on the monuments of *Pꜣj* (i) are provided by Malek 1979, 153–156.

147 *Nb-Rᶜ* may have been responsible for (at least parts of) O. Toronto ROM 906.19.5, on the reverse of which he is indicated as the sender.

148 Gutgesell 2002, 148.

149 Gutgesell 2002, 116–117. The text must date to around year 40 or before, as *Nb-Rᶜ* is no longer attested after year 40.

150 Gutgesell 2002, 60–61; Gabler 2018a, 390–391, correcting my previous suggestion that the sandal-maker *Mꜣḥj* may have been the brother of *Pjꜣj* (i) *sꜣ Jmn-ms* (i), not of *Pꜣj* (i) *sꜣ Jpwj* (v).

151 Cf. Gutgesell 2002, 132; Lopez 1982, 41, pl. 138. *Ḥnw.t-nfr.t* may be identified with *Ḥnw.t-nfr.t* (ii), the daughter of *Qꜣḥꜣ* (i) and sister of *Jn-ḥr-ḫᶜ* (i) (who married *Ḥnw.t-ḏww* (i), a sister of *Pꜣ-šd.t* (i)).

152 Some additional names and titles are visible at the end of this text: *jn sš-qd Nb-Rᶜ*, […] *sꜣ=f sš Ḥwj*? *sꜣ=f sš Bꜣkj-*? *ḫrj-ᶜ sš NN*. Some letters were sent by the *sš-qd Nb-Rᶜ* with a similarly elaborate spelling of the element Ra (see O. Brussels E 6781, O. DeM 558, and O. DeM 10250).

several graffiti, sometimes writing out only his name and title, and sometimes the names of his colleagues in addition.[153]

The wife of *Nb-Rˁ* – *tȝ ḥm.t Nb-Rˁ* (= *Pȝ-šd.t*) – is mentioned in a list of workmen, O. Cairo CG 25573.[154] The text dates to approximately year 40 of Ramesses II, indicating that *Pȝ-šd.t* was still alive at that time. Interestingly, *Nb-Rˁ* himself is not included in the list, raising the possibility that his wife replaced him at work just like in the duty roster O. DeM 145 where *Tȝ-wr.t-m-ḥb* assumed the duties of *Nfr-ḥr*.[155] *Nb-Rˁ* is not recorded in O. BM EA 5634 (also year 40), indicating that he may have retired or died around that time. If the Cairo ostracon dates from shortly before, he might have been ill and his wife may have gone to work in his place. If this was the case, then his father *Pȝj* (i) – who is still attested in year 47 – outlived his son. *Pȝ-šd.t* perhaps died shortly after, as she cannot be traced after year 40. Since the couple is not referred to in the new Turin letters, they may have passed away before these messages were written. Their burial place is unknown.

Nb-Rˁ and his family left behind several stelae (all dating to the reign of Ramesses II) that the draughtsman may have (partly) produced himself.[156] The stela Berlin 20377 is a well-known object in the context of personal piety: *Nb-Rˁ* prays for his ill and badly behaving son, *Nḫt-Jmn* (iii), and *Ḫˁj* (iii) is attested as well.[157] These two men are certainly the *Nḫt-Jmn* and *Ḫˁj* of the Turin letters: the owner of the basket (and sieve) and the bringer of bread. The stela Turin N. 50056 also depicts the same three men: the *sš.w-qd Nḫt-Jmn* and *Ḫˁj* adore a cat. *Ḫˁj* (i) writes to his '*sn*' the *sš-qd Pȝ-Rˁ-m-ḥb* (i) in P. Grdseloff 1 (which is very probably written by the same scribe

153 Davies 1999, 154; K*RI* III, 659, 5–9 (= graffiti 849, 1045, 1050). *Nb-Rˁ* is also depicted in TT 2, 218, and 250, but without his wife.

154 The ostracon originates from the Kings' Valley, close to KV 47. Two women are mentioned at the end of this text, column II: the anonymous woman of *Nb-Rˁ* (*tȝ ḥm.t Nb-Rˁ*; probably *Pȝ-šd.t*) and a woman called *Jj*. The presence of the women in this context is extraordinary, as there is no direct evidence for the presence of any women at the construction sites; see Gabler, forthcoming.

155 DMD Leiden, turnus lists of year 30, 4th month of *šmw*. In Deir el-Medina, three women with that name are attested: the wife of *Nḫt-sw* (i), the daughter of *Nb-nfr* (xxiii) and the wife of *Ḫnsw* (vi) (who was a relative of *Nfr-ḥr* (i/vi), Davies 1999, chart 7), and the wife of *Jmn-nḫt* (v); the last two women are the likeliest candidates considering the dating. A similar case is found in O. Leiden 2000/1.2, where a *Tȝ-wr.t-m-ḥb* is again included in a list of workmen (but in the context of grain rations), cf. Demarée 2000, 79–87.

156 For an overview, see Davies 1999, 153–154; K*RI* III, 653–659; Moje 2007, 147–148. *Nb-Rˁ* is attested solely on the stelae BM EA 276, Boston MFA 09.290, Turin N. 50063, and in N. 50036 with his son *Jmn-m-jp.t* (iv). Stela Louvre N. 4194 is made by *Nḫt-Jmn* (iii), *sȝ Nb-Rˁ*. Besides, *Nb-Rˁ* is depicted on a stela (no. 207) published in Bruyère 1952, 51. I owe this reference M. Marée.

157 K*RI* III, 653–655.

as the two Turin letters); *sn* means uncle in this instance.[158] *Ḫʿj* (i) may have been named after the uncle of his mother *Pꜣ-šd.t* (i), *Ḫʿj* (ii).[159] The two sons might have been born around year 25 of Ramesses II, being some 15 years old when they actively worked in the crew around year 40.

Ḫʿj (i) is referred to as *sš-qd* twice, in the stela Turin N. 50056 and in the letter O. DeM 581. He is the sender of the latter, in which he asks for writing materials; *Ḫʿj* also seems to have been ill and lacking food, and asks *Mrj-Rʿ* (who was possibly the *smd.t*-scribe (iii) of the right side, attested before year 40) for supplies in the same message. Elsewhere, *Ḫʿj* is either not given a title (even if in the tomb inscriptions of TT 219, the title *sš-qd*, given to his aforementioned brother, *Nḫt-Jmn*, may have applied to him),[160] or he is attested solely with the title *sš*.[161] Černý commented upon the use of this title for *Ḫʿj* and explained that the title 'scribe' would have been more appropriate in the context of a letter.[162] With respect to the stela Berlin 23077, the element *qd* is usually marked as "missing," but this does not necessarily have to be the case. In O. Varille 3, an unpublished letter, the *sš Ḫʿj* writes to his 'brother' *Mḥj*. In addition to *Mḥj*, *Pjꜣj* and *Pꜣj* are also mentioned.[163] In the letter O. DeM 681, the *sš Ḫʿj* asks his 'brother' *Pꜣ-ḥj* to bring a *kbs*-basket and to give some items to the women *NN-n-jnḥ*, *Pn-ʿn-NN*, and maybe *Pꜣ(-nḫt)*. Besides baskets, a supply of wood is required in connection to a certain *Ḥr.*[164] The letter O. DeM 10381 was sent by a *Ḫʿj* (*sꜣ Nb-Rʿ*?) and is addressed to 'his father *Jpw*' – either his great-grandfather (v) (which is highly unlikely, because this man lived in the late 18th dynasty) or an otherwise unattested father-in-law.[165] In O. DeM 560, the woman *Wrnr* asks the scribe *Ḥjj-nfr* and a woman called *Nfr.t-ḫʿ* to take care of their/her 'brother,' *Ḫʿj*, whom Davies identifies as *Ḫʿj* (i) and the husband or brother of *Nfr.t-ḫʿ*.[166] If the latter is

158 Grdseloff 1940/1941, 533–536 (= K*RI* III, 542,7–9). The letter was found intact, folded into a package of 2 cm. It is a small reused part of a bigger papyrus; the message measures only 4 x 8 cm. The use of the term *sn* for 'brother, brother-in-law, nephew, cousin, uncle', etc. is common (see Bierbrier 1980, 100–107).

159 *Ḫʿj* (iii) was a *smd.t*-scribe of the right side, attested at the same time as *Ḫʿj* (i), around year 40 of Ramesses II (Davies 1999, 125–126).

160 Davies 1999, 154. The letter O. DeM 785 is addressed solely to *Ḫʿj* and concerns a mat.

161 In the unpublished and fragmentary letter O. OIM 13630, the *sš-qd* (or *rmṯ-js.t*, the beginning of r° 1 is badly damaged) *Ḫʿj* writes to his 'brother' the scribe *Pn-dwꜣ*. The individuals of this letter would fit with the context of the Turin letters. Note that *Pn-dwꜣ* (iii) is otherwise not attested as a scribe; neither is *Ḫʿj* (iii) as a workman.

162 Černý 2001, 192. O. Turin N. 57124 lists the names of four 'scribes,' each with a title: *Pn-dwꜣ*, *Pjꜣj*, *Ḫʿj* and *Mrj-sḫm.t*. This text is not a letter and contradicts Černý's statement.

163 Černý NB 107.49. The text might relate to the issues referred to in O. DeM 240 (see, e. g., the sandals and the sandal-maker *Mḥj*).

164 The name *Pꜣ-nḫt* is reconstructed by Wente 1990, 155–156.

165 Grandet 2017, 137–138.

166 Davies 1999, chart 10.

the case, the text may be dated towards the end of the lifetime of *Ḫʿj*, around year 50 to 60 of Ramesses II.

The letters written to and by *Ḫʿj* and sent from and to the village favour the identification of *Ḫʿj* (i) with *Ḫʿj* (iii), the *smd.t*-scribe, attested around year 40 of Ramesses II. It is conceivable that *Ḫʿj* replaced *Mrj-Rʿ* (iii) around year 40 as *smd.t*-scribe (of the right side) and changed the title from *sš-qd* to *sš*.[167] This would explain the letters sent by *Ḫʿj* to the village, as well as their references to supplies (first asking for them, and later providing them).[168] According to O. Gayer-Anderson (unnumbered), the scribe *Ḫʿj* (iii) was responsible for fish deliveries in year 42 for at least 8 months, before a certain *Smj* took over. A clear connection to the right side is not apparent concerning *Ḫʿj* (iii), but because *Pn-Tȝ-wr.t* (ii) occupied the position on the left,[169] it follows that *Ḫʿj* should be associated with the right. O. Berlin P. 14841 is addressed to *Ḫʿj* who is asked to bring fat; this would fit with his identification as *Ḫʿj* (iii).[170] In the letter Louvre E 27679, the anonymous sender asks the *sš Ḫʿj* to bring beans as a libation offering for his mother. *Ḫʿj* (i = iii) could have fulfilled such an urgent request and possibly dealt with baskets, sieves, and their contents, as in the two letters: *Ḫʿj* was the owner of the two items which were at the center of discussions between women of the family in both Letter 1 and 2.

Unlike *Ḫʿj*, *Nḫt-Jmn* (iii) remained in the crew, probably as *sš-qd*. He is attested in O. BM EA 5634 on a number of occasions in year 39/40 of Ramesses II, either with his boss, in trouble with his eye/s, or ill.[171] In the letter O. DeM 558, from around year 40 of Ramesses II, the *sš-qd Nb-Rʿ* (i) asks his son, the *sš-qd Nḫt-Jmn*, to take a person called *Nḫ* to the *qnb.t*-court because he did not bring what they agreed upon and to take care of other businesses with the *mḏȝj Pȝ-sr*.[172] According to O. DeM

167 This scenario is supported by O. BM EA 5634, which does not mention *Ḫʿj*. Like *Mjn-ms* (i), *Jmn-m-jp.t* (xvi), another son of a member of the community, became a *smd.t*-scribe; see Davies 1999, 124; Gabler 2018a, 430, 434–435.

168 It is possible that he stayed in the village, where he had worked thus far as a draughtsman and moved around coordinating the service personnel later in life; compare the case of *Pn-ȵjw.t* (i/iii).

169 Gabler 2018a, 715.

170 The name is not visible in DeM online, but is recorded in the DMD Leiden. The piece may originate from the village (it was found by G. Möller in 1913; https://dem-online.gwi.uni-muenchen.de/show_beschreibung.php?id=456&beschreibung=%2Fproj%2FHODF-G%2FOstrakaBerlinBeschr6%2Fb14841-beschr.jpg&inventar_nr=Berlin+P+14841 [22 May 2020], which would support the hypothesis that *Ḫʿj* lived in Deir el-Medina while occupying the office of *smd.t*-scribe. In an unpublished letter (on a Cairo ostracon), the *sš-qd Nḫt-Jmn* writes to *Ḫʿj* and asks about *Nb-Rʿ* and some goose fat. The two texts may be related to the stela Turin N. 50056 in which the two adore a big cat.

171 Demarée 2002, pl. 28.

172 Gutgesell 2002, 116–117; see above.

706, *Nḫt-Jmn* worked on the left side of the crew.[173] He received the letters O. DeM 783 (where he appears to have been unable to supply the sender with vegetables that year and offers a roll of papyrus in compensation) and 784 (concerning the cost of a mat).[174] In O. Berlin P. 14254, *Nḫt-Jmn* is mentioned together with *Ḫnsw* (i), his wife *Tj-n.t-jp.t* (i), and *Pn-dwꜣ* (iii), possibly after year 50 of Ramesses II.

The name *Nḫt-Jmn* is included in a grain or water ration list (O. DeM 86, Ramesses II); a grain ration list (O. Michaelides 65); and a list of workmen, found in the King's Valley (O. Cairo JE 72466), dating to the very end of the 19th dynasty. But *Nḫt-Jmn* (iii) had a namesake in the person of the *ṯꜣj-mḏꜣ.t Nḫt-Jmn* (ii) *sꜣ Pjꜣj* (ii), who lived at least until the mid-reign of Ramesses II. This man was also linked to the family: he was the brother-in-law of *Tj-n.t-jp.t* (i), that is, the brother of her husband *Ḫnsw* (i). The texts that date toward the end of the 19th dynasty probably refer to *Nḫt-Jmn* (iii), who could have reached an age of 60 to 70 years. His brother *Ḫʿj* probably died earlier, towards the end of the reign of Ramesses II. The references to trade and basketry strongly support the identification of *Ḫʿj* and *Nḫt-Jmn* in the Turin letters as *Ḫʿj* (i) and *Nḫt-Jmn* (iii).[175] *Nḫt-Jmn* brought bread to *Ḥnw.t-mrw.t*, probably outside of the village, while his uncle *Nb-n-Mꜣʿ.t* was also involved in these transactions (Letter 1). From a prosopographical point of view, *Ḫʿj* could possibly be identified as the scribe who penned the Turin letters.[176]

6.5.3. *Nfr.t-jrj* (ii/viii) and *Pn-dwꜣ* (iii) – and family

The couple *Pn-dwꜣ* (iii) and *Nfr.t-jrj* (ii/viii) are attested in the two Turin letters: *Nfr.t-jrj* is accused by her sister *Ḥnw.t-mrw.t* (i) in the first letter, and *Pn-dwꜣ* is probably the addressee of the second letter, which was sent by *Ḥwj* '*sꜣ.t Nfr.t-jrj*,' who was possibly his niece or more likely his sister (see below). *Nfr.t-jrj* was born after stela

173 The same text includes several relatives (see above): *Pn-dwꜣ*, *Nb-n-Mꜣʿ.t*, *Ḫnsw*, *Sꜣ-Mw.t*, etc. (see Grandet 2000, 13).

174 He also received the letters O. DeM 965 (where he is referred to as *sš-qd*) and O. DeM 969, as well as O. Louvre E 23554 (in which *Nḫt-Jmn* is requested to make some windows). O. DeM 972 was most likely written by *Nḫt-Jmn* to his father, the *sš-qd Nb-Rʿ*. As such, the letter probably dates close to year 40.

175 With respect to *Ḫʿj*, this identification is further supported by the rarity of his name; there is a single namesake *Ḫʿj* (iv), who acted as a doorkeeper in the 20th dynasty. *Nḫt-Jmn* had several namesakes within the same family, e. g. *Nḫt-Jmn* (xxi) was the father of *Nb-n-Mꜣʿ.t* (ii). This man would have reached a very old age around year 50 of Ramesses II. The brother of *Nb-n-Mꜣʿ.t*, *Jmn-nḫt* (xxiv) is hardly known from any sources. In any case, when and why scribes used *Jmn-nḫt* as opposed to *Nḫt-Jmn*, and whether there is a real difference between the order of the elements and the individuals, remains open to further investigation. The contemporaneous sculptor *Nḫt-Jmn* (ii) is discussed above.

176 Polis, in this volume, section 6.

Turin N. 50012 was produced; her two older sisters, *Mrj=s-gr* (v) and *Pꜣ-šd.t* (i), are attested on this stela while she is not. Born around year 15 to 20 (but before *Tj-n.t-jp.t* (i), *Ḥnw.t-ḏww* (i), and *Ḥnw.t-mrw.t* (i)), *Nfr.t-jrj* (ii/viii) is attested on stela BM EA 818 but not in the family's tomb TT 330, though this may be due to the tomb's poor state of preservation. *Nfr.t-jrj* and her husband are depicted in TT 219, the tomb of *Nb-n-Mꜣꜥ.t* (ii), her brother-in-law. They had (at least) two sons, *Pꜣ-šd* (v) and *Knr* (vi), who are also attested in TT 219 (see above).[177] The close connection of the three elder daughters of *Knr* are confirmed by the scenes in this tomb: *Mrj=s-gr* (vi) married the (later) tomb-owner, and her two sisters (close in age) *Pꜣ-šd.t* (i) and *Nfr.t-jrj* (ii/viii) (plus their families) were included in the decoration. Furthermore, the relatives of *Pn-dwꜣ* (iii) – his father *Pꜣ-šd* (x), his mother *Nḏm.t-bḥd.t*, a brother *Mnnꜣ* (iv) and *Qꜣḥꜣ* (vi) – are also depicted in the tomb.[178]

We do not know much about *Pn-dwꜣ* (iii) at first glance.[179] He is attested in only a handful of administrative texts under Ramesses II. He is listed on O. BM EA 5634, for instance, in one entry, where he is drinking with *Ḫnsw*, his brother-in-law (see 6.5.5). *Pn-dwꜣ* was also involved in the sandal transactions within the *Nb-Rꜥ*-family that are referred to in O. DeM 240 (see above). He also appears in the house and laundry list of O. DeM 258 (with *Ḫnsw* again);[180] in the list on O. Berlin P. 14254 (see above and below); perhaps in O. Gardiner 219 + O. BM EA 25289 (in an account alongside *Sꜣ-Mw.t* (iii)); possibly in O. Gardiner 199 (around year 40, in a list of workmen, with *Nb-n-Mꜣꜥ.t* and his namesake *sꜣ Dd*); as the addressee of the letter O. OIM 13630, which was written by his 'brother' (his nephew *Ḫꜥj* (i = iii)); and in O. Turin N. 57124 (again with *Ḫꜥj*; see above).

However, more can be said about *Pn-dwꜣ*'s background. His son *Knr* (vi) was named after his maternal grandfather, the father of *Nfr.t-jrj*. His other son, *Pꜣ-šd* (v), would have been named after his paternal grandfather, the father of *Pn-dwꜣ* (iii). TT 3, the tomb of *Pꜣ-šd* (x) – foreman of the left side in the very first years of Ramesses II – is hardly discussed by Davies, who does not provide a chart for this

177 Davies 1999, 237, chart 36; Maystre 1936, 9–11. The family scene is on pl. IV.

178 Davies 1999, 166; Maystre 1936.

179 Davies 1999, 66. He has several namesakes in the family of *Qn* (ii) (*Pn-dwꜣ* (i/vi)) and in the family of *Djdj* (i) (*Pn-dwꜣ* (ii)), as well as a son of *Nw-nb* (*Pn-dwꜣ* (iv)) and *Pn-dwꜣ* (v), all of whom lived in the 19th dynasty. As in the case of *Ḫnsw* (see below), identification proves impossible when the name *Pn-dwꜣ* is the only piece of information available. One of these four namesakes lived until the end of the 19th dynasty. Gutgesell (2002, 39) does not distinguish between these men and assumes that one person acted from year 32 of Ramesses II until the reign of Siptah. According to Grandet (2017, 10) the 'latest' attestations for *Pn-dwꜣ* may reflect (iv) or (v). In O. DeM 706, a *Pn-dwꜣ* is part of the right side. In the case of O. IFAO 989, is it likely that we are dealing with *Pn-dwꜣ* (iii) and his father *Pꜣ-šd* (x).

180 This house (or the house of a namesake) is attested on O. DeM 818, in a query to an oracle.

family, which would explain *Pn-dwꜣ*'s origins.[181] He was born to *Pꜣ-šd* (x) *sꜣ Mnnꜣ* (iii) and *Nḏm.t-bḥd.t* (called *Tꜣ-bsy*), who is mentioned in Letter 2. As such, *Nfr.t-jrj* (ii/viii) married into another important family in the village.[182] *Pn-dwꜣ* may have been a younger son of *Nḏm.t-bḥd.t*, born in the early reign of Ramesses II and active in the crew from at least year 39/40 (according to O. BM EA 5634) to year 50, when he would have received Letter 2 from *Ḥwj*. If – as it seems – *Nḏm.t-bḥd.t* was still alive at that time, her trajectory would have been similar to that of *Tꜣ-ḫrᶜ.t* (ii). Both women would have been born around the time of Haremhab, got married (at the latest) during the reign of Seti I (*Nḏm.t-bḥd.t*) or early in the reign of Ramesses II (*Tꜣ-ḫrᶜ.t*), had many children shortly thereafter (eleven for *Tꜣ-ḫrᶜ.t*, and at least ten for *Nḏm.t-bḥd.t*), and reached an estimated age of 70 to 85 years. Unlike *Tꜣ-ḫrᶜ.t*, however, we can catch only a glimpse of *Nḏm.t-bḥd.t*. In addition to TT 3, TT 326, and stela Geneva D 55 (where she appears with her daughter *Ḥwj*, who was probably her eldest daughter and named after her paternal grandmother), she is referred to only in Letter 2, linked to *Tꜣ-ḫrᶜ.t* and *Tj-n.t-jp.t*.[183]

Her daughter *Ḥwj* may be an alternative (and more likely) candidate for the sender of Letter 2 (and the snitch of Letter 1). In this scenario, the older sister of *Pn-dwꜣ* (iii) contacts her brother; she may have married outside of the village, as we lack any further information about his sister. This *Ḥwj* cannot be *Ḥwj* (ii), as the latter would have been born about 15 to 20 years later than *Ḥwj sꜣ.t Nḏm.t-bḥd.t*. To clarify which *Ḥwj* is meant, the scribe added *sꜣ.t Nfr.t-jrj* in Letter 1 – the term allows a wide interpretation including the meaning sister-in-law instead of the more common *sn.t*.[184] *Nḏm.t-bḥd.t* and *Pꜣ-šd* (x) were married in the reign of Seti I and

181 Davies 1999, 2, 166–167. A prosopographical discussion can be found in Zivie 1979, 112–121. A detailed prosopographical investigation would take us too far away from the Turin letters and is foreseen for another contribution.

182 The biological brothers of *Pn-dwꜣ*, *Mnnꜣ* (iv) and *Qꜣḥꜣ* (vi), are also depicted in TT 219 and referred to as 'brothers' of *Nb-n-Mꜣᶜ.t* (ii), their brother-in-law (Maystre 1936, pl. 7). The name given to the younger son of *Pꜣ-šd.t* (i) and *Nb-Rᶜ* (i) must derive from a relative of *Pꜣ-šd* (x) and *Pn-dwꜣ* (iii): *Pꜣ-ḥrj-pḏ.t*, a brother of *Pꜣ-šd* (x).

183 Zivie 1979; K*RI* I, 375–380; Moje 2007, 66; Pörtner and Wiedemann 1906, 24: 21, table VIII.

184 Gabler 2017, 11, 18; Bierbrier 1980, 100–107; Franke 1983, 170–174. The use of *sꜣ*/*sꜣ.t* or *sn*/*sn.t* may also depend on the intended perspective: *sꜣ*/*sꜣ.t* refers to someone in the same or a similar generation, while *sn*/*sn.t* refers to someone of a younger/other generation. The use of *sꜣ.t* in our case strengthens the identification of *Ḥwj sꜣ.t Nfr.t-jrj* as sister-in-law of *Nfr.t-jrj* (same generation) instead of the niece (*Ḥwj* (ii) who belongs to another generation). The perspective could be either that of *Ḥnw.t-mrw.t* (same generation), or that of the scribe (who sees the sisters/sisters-in-law as one generation). Letter 2 deals mainly with the business of the *Tꜣ-ḫrᶜ.t*-family, therefore *Ḥwj* may have been linked to *Nfr.t-jrj* instead of *Nḏm.t-bḥd.t* or *Pn-dwꜣ*. A third option would be an unattested daughter of the couple *Nfr.t-jrj* and *Pn-dwꜣ* named after her aunt *Ḥwj sꜣ.t Nḏm.t-bḥd.t*. Because there are no indications for this scenario, this is the unlikeliest option.

possibly had children during the same period. The Geneva stela depicts the mother and daughter as adults adoring Isis.[185] If we identify the sender *Ḥwj* of Letter 2 as the sister of *Pn-dwꜣ* (iii), she would have been roughly 60 years old towards year 50 of Ramesses II (at a time when all of the individuals attested in the letters may have been alive); *Pn-dwꜣ* might have been born in the early years of the same king, being about 10 years older than his wife *Nfr.t-jrj*. The couple may have died towards the end of the reign of Ramesses II.

In the two scenarios suggested for the Turin letters – in which the sender of Letter 2 is *Ḥwj* (ii) or (more likely) *Ḥwj sꜣ.t Nḏm.t-bḥd.t*, and the sender of Letter 1 is *Ḥnw.t-mrw.t* – the senders of the letter/s to Deir el-Medina lived outside of the village but in its vicinity. They were informed about the same issues, knew the same people (their relatives in the village), were related to each other, and contacted the same scribe to write their messages (see section 5). This scribe must have been active in Western Thebes, acting as the contact person for many people and writing letters for them (see the discussion in Polis, this volume, section 6). Additionally, *Ḥwj sꜣ.t Nḏm.t-bḥd.t* would be older than *Ḥnw.t-mrw.t*, which could account for the fact that they lived together in the house of *Pn-Jmn* as wife and daughter-in-law respectively, as Letter 1 seems to indicate, thereby strengthening the second scenario (see section 6.6).

6.5.4. *Ḥnw.t-ḏww* (i) and *Jn-ḥr-ḫ*ˁ (i) – and family

Ḥnw.t-ḏww (i) was a younger daughter of *Tꜣ-ḫ*ˁ*.t* (ii) and *Knr* (i). She was probably around the same age as *Ḥnw.t-mrw.t* (i); both would have been born around year 20 of Ramesses II. *Ḥnw.t-ḏww* is attested on stela BM EA 818 and in TT 330 (see above). She married the foreman of the left side, *Jn-ḥr-ḫ*ˁ (i) *sꜣ Qꜣḥꜣ* (i), once more strengthening the links between two influential families of that period. This marriage was a union between two cousins, since *Tꜣ-ḫ*ˁ*.t* was a sister of *Qꜣḥꜣ*.[186] According to O. BM EA 5634, the couple was married since at least year 39/40, as *Jn-ḥr-ḫ*ˁ was away from work at that time because *Ḥnw.t-ḏww* had her period (the 4th month of *ꜣḫ.t*, day 17). She displays menstrual synchrony with a daughter of *Wꜣḏ-ms* and *Nfr-ꜣbw*.[187] At this time, *Jn-ḥr-ḫ*ˁ was still an ordinary workman: he is listed like other members of the crew. He probably took on the role of foreman shortly thereafter, when his (elder?) brother *ꜣnj* (i) (who acted as the deputy of the left side) perhaps died, meaning that

185 Moje 2007, 66 dates the stela to the reign of Seti I; Chappaz 2003, 101 to the Ramesside period. The style and iconography of the object point to the reign of Seti I and the first half of the reign of Ramesses II (information kindly provided by M. Marée).

186 Davies 1999, 275; James 1970, 50.

187 Wilfong 1999, 426–427.

a younger son of *Qꜣḥꜣ*, *Jn-ḥr-ḫꜥ* (i) succeeded him as foreman.[188] The lists of workmen dating to the end of the 19th dynasty must refer to his namesake *Jn-ḥr-ḫꜥ* (ii), who was still a workman before also assuming the post of foreman of the left side in year 22 of Ramesses III.[189] *Jn-ḥr-ḫꜥ* (i) (as a workman/representative of the household) is part of the water ration list of O. DeM 189 (see above). *Jn-ḥr-ḫꜥ* (i) was buried in TT 299, probably with his family (K*RI* III, 609–911). *Ḥnw.t-ḏww* (i) is also attested with her husband on the doorframe of a naos, BM EA 597 + Turin N. 50220. Graffito 589 depicts her father *Knr* (i) with his 'son' (in-law), the *ḥrj js.t Jn-ḥr-ḫꜥ*.[190]

The couple had at least four sons and two daughters: *Qꜣḥꜣ* (ii) – named after his paternal grandfather; *Knr* (ii) – named after his maternal grandfather; *Ḥwj* (v) – named after his maternal great-grandfather; and *Ḥꜣj* (iv) – possibly named after *Ḥꜣj* (ii), another uncle of *Ḥnw.t-ḏww* (i). This son later succeeded his father as foreman. Their daughter *Nfr.t-jrj* (i) was named after her aunt (ii/viii). Their youngest child was perhaps *Tꜣ-nḏm-ḥꜣb.t* (i).[191] Their children must have been born in the second half of the reign of Ramesses II. All four sons were workmen towards the end of the 19th dynasty and into the early 20th dynasty.[192] When the Turin letters were sent, some of them may have been small children and they are not mentioned.

The name *Ḥnw.t-ḏww* is attested for four women in Deir el-Medina: *Ḥnw.t-ḏww* (i) is whom the other relatives are named after. *Ḥnw.t-ḏww* (ii) was the daughter of *Nfr.t-jrj* (i) and was named after her grandmother *Ḥnw.t-ḏww* (i). *Ḥnw.t-ḏww* (iii) was the daughter of *Nb-wꜥ* (i). And *Ḥnw.t-ḏww* (iv) was the daughter of *Ḥwj-nfr* (x), judging by the name related to the *Ḥwj* (ii)-family. If O. Ashmolean Museum 115 is dated to year 9 of Merenptah or Ramesses III, any of these three namesakes may have been the cause of a situation so severe that the crew had to stop working and the vizier was need to solve the problem.[193] The fragmentary text O. IFAO 1282 may relate to the same issue (if the Ashmolean text dates to the reign of Ramesses III); in this *qnb.t*-verdict, the name *Ḥnw.t-ḏww* is again mentioned alongside *Twj* and *Tꜣ-*

188 Davies 1999, 13, 15.

189 Davies 1999, 16, 279, e. g., O. Cairo CG 25526 and 25781. In O. Strasbourg H. 110, *Jn-ḥr-ḫꜥ* (i) is foreman, based on the grain rations he received.

190 K*RI* III, 609–611, 7–6; see section 6.3. The doorframe was found in the same season by the Italian mission as the letters.

191 Davies 1999, 16.

192 Davies 1999, 19–20. The fact that all four sons worked in the crew highlights the influence of this family. *Knr* (ii) died before year 11 of Ramesses III, perhaps even before his brother *Ḥꜣj* (iv) became chief workman under Amenmesse. The property of *Knr* (ii) led to several posthumous *qnb.t*-gatherings: O. Cairo CG 25555 + O. DeM 999 and possibly P. Boulaq 10.

193 The same text mentions the workman *Ḫꜥ-m-sbꜣ*, who is attested from the end of the 19th dynasty onwards. As such, one can exclude dating the text to Merenptah, thus eliminating *Ḥnw.t-ḏww* (i).

wr.t-ḥr.tj.[194] The three women/names are also mentioned in O. Cairo CG 25705 + O. IFAO 1322 + O. Varille 38 + O. DeM 10363, in which *Ḥnw.t-ḏww*, mother of *Knjꜣ*, is included amongst 30 other women celebrating at a drinking party for Hathor. If *Knjꜣ* is correlated with *Knr* (ii), *Ḥnw.t-ḏww* (i) might have lived until the reign of Ramesses III and reached an age of at least 65 to 75 years.[195] The same text refers to *Tꜣ-nḏm.t-ḫꜣb.t*, either the daughter (i) of *Ḥnw.t-ḏww* (i) or a related namesake (ii or iii), who is attested in several texts (feast lists) from the reign of Ramesses III and IV.[196] This woman must have been married to a member of the community, though her husband is unknown. The women in our letters seem to have organized feast for different goddesses on a regular basis, as Letter 1 shows for *Tꜣ-ḫꜥ.t*. *Ḥnw.t-ḏww* attended several of these parties; being the wife of a foreman, she might also have planned similar events. Her mother in-law, *Twj* (i) – the wife of *Qꜣḥꜣ* (i) – is certainly addressed in the second communication of Letter 1, together with *Ḥnw.t-ḏww* (which strengthens this identification). *Twj* is mentioned several times together with other women of the village. She must have been of the same generation as *Tꜣ-ḫꜥ.t* and *Nḏm.t-bḥd.t*. Born in the early 19th dynasty, she had at least 12 children with *Qꜣḥꜣ*, and lived until the end of the same dynasty.[197]

O. Louvre E 13156 is commonly dated to the reign of Ramesses II and would thus relate to *Ḥnw.t-ḏww* (i), though this needs to be discussed before any firm opinion is offered about the individual it refers to. The division of *Nb-jmnt.t*'s possessions between his daughters *ꜣs.t* and *Ḥnw.t-ḏww*, as well as other members of the community (*Nfr-ḥtp*, *Jmn-m-jp.t*, etc.), makes no sense from a prosopographical point of view. Neither *Nb-jmnt.t* (i) nor *Nb-jmnt.t* (ii) seem, at first glance, to have had daughters of these names. If this text refers to *Nb-jmnt.t* (i), it would suggest a date during the reign of Ramesses II, but there are no links to any *Ḥnw.t-ḏww*. However, *Nb-jmnt.t* (ii) *sꜣ Jn-ḥr-ḫꜥ* (ii), a great-grandchild of *Ḥnw.t-ḏww* (i), lived under Ramesses III. The other individuals in this text (*Nfr-ḥtp* and his sister *ꜥnḫ-n-njw.t Ḥw.t-jj*) strongly suggest dating the text to the time of Ramesses III.[198] We are therefore probably dealing here with the family of *Nb-jmnt.t* (ii): with *Ḥnw.t-ḏww* (V), his brother-in-law *Nfr-ḥtp* (iii) – husband of *Twj* (ii) – and his sister *Ḥw.t-jj/ꜣ* (see above).[199] This

194 A more precise dating of this text than 'Ramesses III–IV' is a matter for further prosopographical investigation into the women at Deir el-Medina.

195 Grandet 2017, 113. *Jn-ḥr-ḫꜥ* (i) died towards the end of the 19th dynasty.

196 O. Berlin P. 14222; O. DeM 155 beta; O. UC 39630, as well as O. DeM 10363, discussed by Grandet 2017, 107–116, and especially 113, 370–378.

197 Davies 1999, 2, 13–14, chart 1 and 3.

198 *Ḥw.t-jj* is attested in several ostraca of that time, being the only individual bearing this name: O. Ashmolean Museum 136, O. Cairo CG 25555 + O. DeM 999, O. Gardiner AG 57, O. DeM 10004, see above.

199 Davies 1999, 26, chart 3. The relation between *ꜣs.t* and *Ḥw.t-jj* is confirmed by their joint appearance in the list of women in O. VM 3000, *recto* (Hagen 2016, 2010).

Ḥnw.t-ḏww may also be referred to in the name list P. Vienna inv. No. 3925. O. VM 3001 further records the household of the guardian *Jmn-m-jn.t* (iv), to which a *Ḥnw.t-ḏww* belonged; if this text is dated to the reign of Ramesses II, *Ḥnw.t-ḏww* (iii) may be identified here as the (first) wife of *Rʿ-ms* (iii).[200] O. Ashmolean Museum 151, where *Ḥnw.t-ḏww* is linked to woodwork in a transaction between the *sš-qd Nb-nfr* and *Jmn-m-jp.t*, must also refer to *Ḥnw.t-ḏww* (ii), (iii) or (iv).

6.5.5. *Tj-n.t-jp.t* (i) and *Ḫnsw* (i)

According to our sources, *Tj-n.t-jp.t* (i) *sȝ.t Tȝ-ḫʿ.t* (ii) and *Knr* (i) must have been one of the younger daughters of this couple. She was probably close in age to *Ḥnw.t-mr-w.t* and born around year 20 of Ramesses II. These two sisters are attested together on stela BM EA 818 and in TT 330, discussed above. As often with younger children, her name is rare.[201] *Tj-n.t-jp.t* is also mentioned in O. Berlin P. 14254 as *ʿnḫ-n-njw.t*, letting us know that she was married when this text was written. The ostracon includes an account of bread distributed to several individuals; at the top of the list is *Tj-n.t-jp.t*. The text is partly destroyed, but among the names are her husband *Ḫnsw* (i), her brother-in-law *Pn-dwȝ* (iii), and her nephew *Nḫt-Jmn* (iii). The texts date to the later 19th dynasty.

Tj-n.t-jp.t married the *ṯȝj-mḏȝ.t Ḫnsw* (i) *sȝ Pjȝj* (ii), who was a member of an important family of the 19th dynasty. No children are attested for this couple.[202] Unlike his wife's name, *Ḫnsw*'s name was very common in Deir el-Medina.[203] An early attestation of *Ḫnsw* (i) (as *ḥmw*) is found in P. DeM 15. In this letter, he says to his mother *Nfr.t-ḫʿ* (iii) that he promised not to eat a certain type of meat again, but broke his oath, and asks his mother to tell the god by whom he swore to have

200 Hagen 2016, 208–211; Gabler and Salmas, forthcoming; Davies 1999, 180. Amenemone (iv) shared his household with *sȝ.t=f Wȝḏj.t-rnp.t*, *sȝ.t=s Mrj=s-gr*, *sȝ.t=s Nfr.t-jrj*, *sȝ.t=s Nḏm.t-kȝjȝ*, *sȝ.t=s Ḥnw.t-wʿ.tj* and a *Mw.t-nḏm.t*. The *verso* of the ostracon mentions at least three more persons: *Ḥnw.t-NN*, *Ḥnw.t-ḏwwʔ*, and *Mrj.t-Rʿ*. Either we are dealing with several otherwise unattested female relatives of Amenemone (iv) or these kinship terms are used in a flexible manner. In comparison with other lists, the *Stato Civile* in particular, one can interpret the relationships as follows: the first *sȝ.t=f* is a mistake for *mw.t=f* (*Wȝḏj.t-rnp.t* (ii)); the second *sȝ.t=s* refers to her daughter-in-law (*Mrj=s-gr* (iii)); the third *sȝ.t=s* to an unattested granddaughter/daughter of *Wȝḏj.t-rnp.t* (ii) or a sister of *Mrj=s-gr* (iii); while *Nḏm.t-kȝjȝ* (i) was *Wȝḏj.t-rnp.t* (ii)'s real daughter and the sister of the head of the household, *Jmn-m-jn.t* (iv); the other women that conclude the list were probably further female relatives.

201 Her only other namesake is a woman recorded in P. Milan E 0.9.40127 + P. Turin Cat. 2074, at the end of the 20th dynasty.

202 Maybe a daughter is mentioned on the offering table Cambridge E SS-15, see Bierbrier 1982, 87.

203 Davies 1999, 184, chart 14.

mercy.[204] A *Ḫnsw* is referred to in O. BM EA 5634 in year 39/40 – he is mentioned as being ill six times, once as being with his god, and twice at this god's feast. He also had drinks with *Pn-dwꜣ*, and one may therefore assume that we are dealing with *Ḫnsw* (i) and his brother-in-law *Pn-dwꜣ* (iii). His relationship with *Pn-dwꜣ* may have been strengthened by their being neighbours in the village: according to O. DeM 258 (a list of houses and laundry, dating to around year 40), the houses of the two workmen (and families) were possibly located next to each other.[205] The *ṯꜣj-mḏꜣ.t Ḫnsw* (i) erected the stela Louvre E 13935 for Meresger, which also records his *nb.t-pr Tj-n.t-jp.t*.[206] In O. DeM 706, *Ḫnsw* (i) is part of the left side, together with his relatives *Sꜣ-Mw.t* (iii), *Nb-n-Mꜣʿ.t* (ii), and *Nḫt-Jmn* (iii). The couple may have been roughly the same age, born around year 20, and he might have begun work around year 40. Letter 2 may be the last attestation of *Tj-n.t-jp.t* (i), around year 50; her husband may have outlived her, surviving until the end of the 19th dynasty.[207]

6.6. *Pn-Jmn* – a tricky issue

Four men named *Pn-Jmn* are attested at Deir el-Medina, and their identification has been the subject of prior discussions. *Pn-Jmn* (i) *sꜣ Wn-nfr* (i) was a brother of *Bꜣkj* (i), the first known foreman of the left side, during the reign of Seti I. Not much is known about this man: he probably lived during the first half of the reign of Ra-

204 Davies 1999, 184. There is no other evidence from Deir el-Medina for a mother named *Nfr.t-ḥʿ* and a son named *Ḫnsw*. The letter could date to the first half of the reign of Ramesses II, when *Ḫnsw* (i) was probably not yet married and his mother was still alive (pace Wente 1990, 140 and DMD Leiden, which date the text to the mid 20th dynasty, cf. Černý 1978, pl. 30 and 30a).

205 Gutgesell 2002, 115. Neither the dwelling of *Pn-dwꜣ* nor the dwelling of *Ḫnsw* can be identified; see Gabler, in preparation.

206 Davies 1999, 184; K*RI* III, 675, 2–6. In documents where only the name *Ḫnsw* is preserved, it is impossible to decide which individual is referred to. However, the stela fragment for Amenophis I (K*RI* III, 675, 9–10) includes a *wʿb Ḫnsw*, a *wʿb Pjꜣj*, a *šmsw Nḫt-(Jmn)*?, and a *šmsw Pn-dwꜣ*. This constellation of names points to *Ḫnsw* (i), together with his brother-in-law *Pn-dwꜣ*, with whom he probably had good relations; see Moje 2007, 115. Similarly, the fragmentary stela Turin 149 (K*RI* III, 713, 15–714, 2) mentions *Pn-dwꜣ, sn=f sḏm-ʿš m s.t Mꜣʿ.t šmsw m NN Jmn-nḫt*. The name *Ḫnsw* is often attested in administrative texts dating to the end of the 19th dynasty. An identification of these individuals would require an elaborate discussion. In this paper, only the texts in which *Ḫnsw* (i) can be identified at first glance are mentioned, which include O. DeM 290 (list of workmen), O. DeM 661 (grain ration list), perhaps O. Strasbourg H. 119 (list of workmen), and O. Varille 12 (as *wʿb*).

207 The tombs of several of *Ḫnsw*'s brothers are known (e. g., TT 217, 335, 336), but the burial place of this couple is not. If the fragmentarily preserved inscription on a shabti found in TT 330 (see above, section 6.3) reads *Tj-n.t-jp.t*, then she may have been buried in her family's tomb.

messes II. *Pn-Jmn* (ii) *sꜣ Bꜣkj* (i) or *sꜣ Jmn-nḫt* (i) lived in the first half of the reign of Ramesses II; he married *Nb.t-nh.t* (ii) and the couple had at least one daughter (and possibly several children, depending on the filiation); they were buried in TT 213. As *Pn-Jmn* (ii) is not mentioned in the workmen's list of O. BM EA 5634 in year 39/40, he may have been retired or dead by this point.[208] However, there is a *Pn-Jmn* attested in year 64,[209] who might still be *Pn-Jmn* (ii) (even if it would then be difficult to explain his absence from O. BM EA 5634). Alternatively, this may be *Pn-Jmn* (iii), a workman known from many work lists from the end of the 19th dynasty, though his origins and family are otherwise unknown; this man might also be identified with *Pn-Jmn* (ii) (if he lived a long life) or *Pn-Jmn* (iv). *Pn-Jmn* (iv) *sꜣ Ḫʿ-m-Wꜣs.t* (i), a great-grandchild of *Pn-Jmn* (ii), is attested from Siptah/Amenmesse until the mid 20th dynasty; he might also be the man recorded in year 64 on the right side, which would mark his first attestation. He had children (the age of striplings for the crew) in year 5 of Siptah.[210] The house of *Pn-Jmn* (iii) or (iv) may be referred to in the water supply list O. Stockholm Medelhavsmuseet MM 14126.[211]

Ḥnw.t-mrw.t was born around year 20 of Ramesses II. She apparently spent some time in the house of a *Pn-Jmn*, together with *Ḥwj* (*sꜣ.t Nḏm.t-bḥd.t* and *Pꜣ-šd* (x)) who was probably his wife, but the Turin letters were written when *Ḥnw.t-mrw.t* had left the house of *Pn-Jmn* as well as the village (Letter 1). Was she married to a son of his? The available data do not answer this question, but this might explain why she stayed in this dwelling instead of her family home. She possibly also was divorced from her husband, and left the village just like *Ḥwj*.[212]

Ḥnw.t-mrw.t could have got married at the earliest around year 35 of Ramesses II. As we do not know of any wife or children for *Pn-Jmn* (i) and (iii), no detailed scenario can be suggested.

Pn-Jmn (i) would have been born at the end of the 18th dynasty, and might have been some 25 years older than *Ḥnw.t-mrw.t*, which makes him a possible candidate as a father-in-law.[213] He could have been married to *Ḥwj*, and the couple would then

208 Davies 1999, 2–6, 216, chart 1 and 2.

209 O. DeM 621 + 829. The text also refers to *Nb-n-Mꜣʿ.t* (ii), but on the left side; see above. Gutgesell (2002, 7, 44) dates a/this *Pn-Jmn* between year 64 of Ramesses II and year 4 of Siptah, and possibly even year 2 of Ramesses VI.

210 *Wn-nfr* (iii), Davies 1999, 4, 6. *Pn-Jmn* (ii)? *sꜣ Bꜣkj* is perhaps also recorded in year 66 (cf. O. Cairo CG 25237), but this text might also document the inheritance of *Pn-Jmn sꜣ Bꜣkj*. In this case, the man was dead by year 66.

211 Davies 1999, 4.

212 Of course, there may have been other reasons why *Ḥnw.t-mrw.t* stayed in this house. With respect to the time frame and life span of the individuals involved, the abovementioned scenario seems the likeliest.

213 Davies 1999, 2.

have been divorced before Letter 2 was written (around year 40). Shortly after, both *Ḥwj* and *Ḥnw.t-mrw.t* must have left Deir el-Medina.

Pn-Jmn (ii) was probably married by that time to *Nb.t-nh.t* and had children, amongst which are at least four sons about whom we have little information: *Wn-nfr* (ii), *Šd-Jmn* (i), *Nb-ꜥn-sw* (ii), and *Jmn-ms* (ii).[214] We do not know the name of the wife (wives?) of *Pn-Jmn* (iv), but he had at least two sons: *Wn-nfr* (iii), who would have been roughly 15 years old in year 5 of Siptah (P. Greg)[215] and *Ḫꜥ-m-Wꜣs.t* (iii). *Ḫꜥ-m-Wꜣs.t* (iii) must have been born even later, as he appears as a workman under Ramesses III. Consequently, *Pn-Jmn* (iv) was probably too young to be married to *Ḥwj* and share his house with *Ḥnw.t-mrw.t*.

To sum up, the *Pn-Jmn* of the Turin letters might be *Pn-Jmn* (i) – *Pn-Jmn* (ii) being married to someone else, and the other two *Pn-Jmn* being slightly too young. This man appears to have been an unpleasant fellow, be it in his relationship with his (former) wife (*Ḥwj*, daughter of *Nḏm.t-bḥd.t*) or in the matter of the basket and the sieve belonging *Ḫꜥj* for which he may have had to pay double. *Ḥnw.t-mrw.t* and *Ḥwj* left (or had to leave) Deir el-Medina and she contacted her relatives by letter from outside the village.

6.7. Further individuals attested in the Turin letters

Three individuals are rarely (if ever) attested in texts from Deir el-Medina. The name *Mw.t-nḏm.t* (Letter 1) is also attested on O. Uppsala VM 3001 (discussed above). As this ostracon might refer to the family of the guardian *Jmn-m-jn.t* (iv) at the time of Ramesses II, she may have been a member of his family. The same text includes a *Ḥnw.t-ḏww* and a fragmentarily preserved *Ḥnw.t-NN* that might read *Ḥnw.t-Jwn.t*. A *Ḥnw.t-Jwn.t* is listed in O. Uppsala VM 3000, which includes several women belonging to the wider family of *Tꜣ-ḫꜥ.t* (ii) and her daughters (see above). Groups of women with these names celebrated several feasts together, especially in honour of the goddess Hathor: *Ḥw.t-jꜣ* would have been the wife of *Sꜣ-Mw.t* (iii), a brother of *Ḥnw.t-mrw.t* (i); *Tꜣj=sn-nfr.t* (i) was the wife of *Pꜣ-Rꜥ-ḥtp* (i) (who was a brother of *Nb-Rꜥ* (i)); an *ꜣs.t* and a *Tꜣ-mrj. Twj*, *ꜣs.t* and *Ḥw.t-jꜣ* appear together in several other sources. A *Nfr.t-jrj* and *Mrj=s-gr* are mentioned on the reverse of O. VM 3000. They may have been the (great-/grand-)daughters of *Tꜣ-ḫꜥ.t* (ii) (for a discussion of the lists, see section 6.5.4). *Ḥnw.t-Jwn.t* (i), a daughter of *Nfr-ꜣbw* (i) and *Tꜣ-ꜣs.t* (i), is known from the parental tomb TT 5. *Nfr-ꜣbw* was a brother of *Tꜣj=sn-nfr.t* (i). If *ꜣs.t* (i) is identical with *Tꜣ-ꜣs.t* (i) *sꜣ.t Twj* (i) (the wife of *Qꜣḥꜣ* (i)), we may consider identifying the same

214 Davies 1999, charts 1 and 2.
215 Davies 1999, 4.

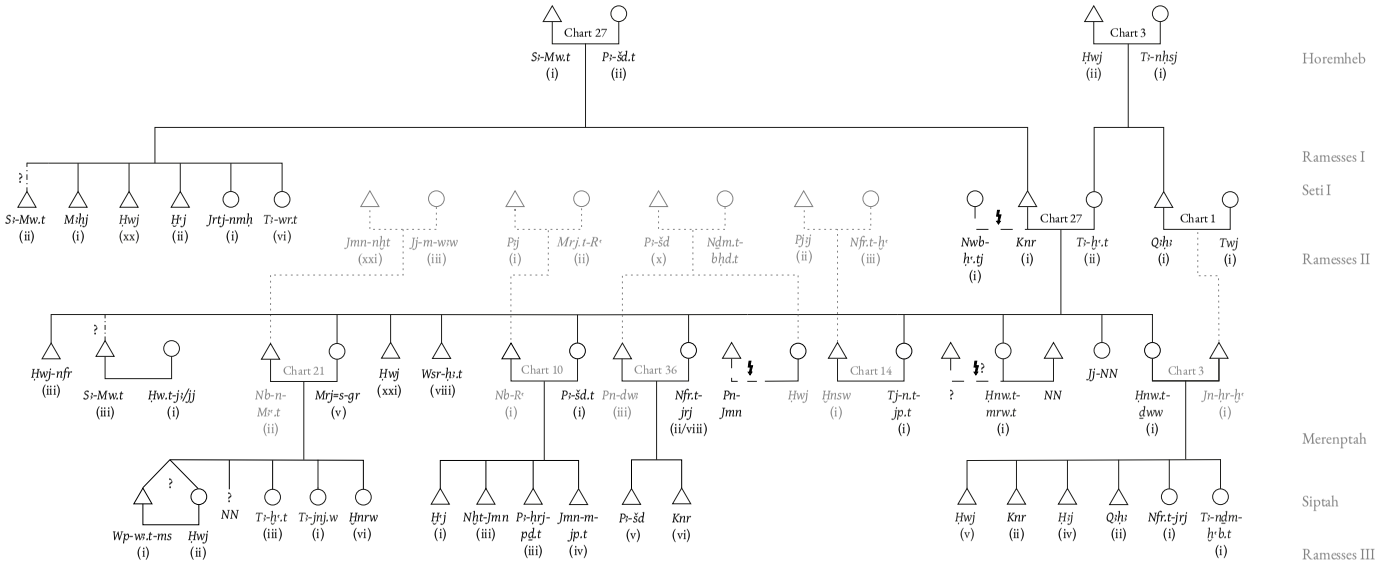

Fig. 23: The family of *Tı-ḥr.t* (ii) (© Kathrin Gabler & Klaudija Stanic)

Fig. 24: Overview of Deir el-Medina (© Kathrin Gabler & Klaudija Stanic, based on B. Bruyère, *Rapport sur les Fouilles de Deir el Médineh (1934 – 1935), Troisième Partie: Le Village, Les Décharges publiques, la Station de Repos du Col de la Vallée des Rois*, FIFAO 16, Cairo 1939, pl. VII)

woman in the two Uppsala ostraca.[216] *ꜣs.t* (i) and *Nfr-ꜣbw* (i) were active until year 40 of Ramesses II.[217]

Mw.t-nḏm.t and *Nwb-m-Jwnw.t* witnessed some gossiping by *Tꜣ-ḫr.t* that was subsequently reported by *Ḥwj* to *Ḥnw.t-mrw.t*. *Nwb-m-Jwnw.t* should be identified with the daughter of *Ks* (i). This woman is attested in TT 10, the tomb of her father and *Pn-bwj* (i); she is depicted together with her younger brother *Nfr-m-šnw.t* (i).[218] *Nwb-m-Jwnw.t* (i), *Ḥnw.t-mrw.t* (i), and possibly *Mw.t-nḏm.t* may have been around the same age and must have all been born within the village; they possibly left Deir el-Medina when they got married. But even if they lived outside the village, they definitely kept in touch with their relatives, met occasionally, and exchanged news and the latest gossip – either in person or via letter – as is demonstrated by the two Turin letters.

7. Conclusion

Summing up all the evidence, the two letters originating from Deir el-Medina (section 2) must have been sent from outside the village around year 50 of Ramesses II. This is in agreement with the palaeographic discussion (section 5), which indicates that they were written towards the first part of the 19th dynasty, and with the prosopographical analysis (section 6), which shows that the individuals, belonging to three generations (Table 1 and 2), would all have been alive around this time and old enough to justify their involvement in the matters and arguments at hand. In terms of relative chronology, Letter 1 was probably written slightly before Letter 2, which builds on the matter of the basket and *Pn-Jmn*, as well as the different kinds of bread.

The letters offer various new insights into the life of women in and around the village of Deir el-Medina during the first half of the 19th dynasty. However, since the two documents were written by the same scribe, autographs can be ruled out: they must have been penned for the women by a skillful (but admittedly careless) scribe who was connected somehow to the family of *Tꜣ-ḫr.t*. The precise identity of the scribe is open to discussion, but he certainly belonged to a line of draughtsmen that began with *Pꜣj* (i). As such, the letters do not contribute much to the difficult question of female literacy in the community of Deir el-Medina or ancient Egypt more broadly.[219]

216 Davies 1999, 7, 150–151, 158.
217 Davies 1999, chart 1, 11.
218 Davies 1999, 269, chart 28.
219 See Quack 2019, 927–928, quoting previous literature on the topic.

These texts are replete with difficulties: the handwriting is challenging at times, the grammar is somewhat intricate, the spellings are regularly idiosyncratic, and the subject matter is definitely complex. However, we think that the contextualized approach that we have adopted in this contribution solves most of the hermeneutic issues, even if we take for granted that the rich unpublished material from the village will lead to better understandings in the future.

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https://dem-online.gwi.uni-muenchen.de/show_beschreibung.php?id=456&beschreibung=%2Fproj%2FHODFG%2FOstrakaBerlinBeschr6%2Fb14841-beschr.jpg&inventar_nr=Berlin+P+ [22 May 2020].

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http://aaew.bbaw.de/tla/ [21 September 2020].

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https://collezionepapiri.museoegizio.it [10 June 2020].

Videoclip '*Crossing Boundaries* in Home Office – Part 3':
https://www.youtube.com/watch?v=2rZ5nTotMyE [3 July 2020].

Wooden statuette representing *Knr* (i); New York MMA 65.114:
https://www.metmuseum.org/art/collection/search/545870 [19 April 2020].

Hieratic signs in a cursive hieroglyphic text: the case of the burial chamber of the tomb of Djehuty (TT 11) with additions of other contemporary examples

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Abstract

Hieratic signs are often scattered throughout funerary texts that were written in cursive hieroglyphs during the New Kingdom. While some reasons for their presence have been adduced in the past, this paper suggests that an in-depth analysis of the type, function, frequency, and location of hieratograms in a text casted in a more formal script can offer meaningful insights into wider aspects of scribal culture and practices. Departing from a case study of the burial chamber in the tomb of Djehuty (TT 11) and other contemporary examples, the author argues that the presence of hieratograms can be explained by a dynamic combination of material factors, cultural causes, individual choices, and, probably, by unconscious and mechanical reasons.

State of the art

The analysis of all aspects related to the hieratic signs (or hieratograms) that appear in a funerary text written in cursive hieroglyphs can shed new light into wider aspects of scribal culture and practices. However, no systematic analysis of such signs in the prevailing private funerary composition of the 18th through the 20th dynasties – the Book of Going Forth by Day/Book of the Dead in the so-called Theban recension – has been hitherto undertaken. During this early and 'experimental' phase of the corpus, which affected the content, format, sequence, and media of the texts, cursive hieroglyphs came to dominate Book of the Dead (henceforth BD) productions, replacing the hieratic script that had prevailed in the earliest examples of the late Second Intermediate Period and early New Kingdom written on coffins

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and shrouds.[2] However, hieratic signs still turn up in many cursive hieroglyphic BD copies produced during the New Kingdom, and in all types of textual conveyors. Most editions of such artefacts – that tend to focus on shrouds and papyri – omit information on the typology or location of hieratograms,[3] or the data that they collect is incomplete.[4] In some cases, the interest in those signs arises only from the fact that they can provide chronological clues to date a manuscript.[5] An important step forward for script analysis in the late 1980s was the doctoral dissertation of Munro, which offered a compendium of hieratic signs found in several New Kingdom papyri and shrouds written in cursive hieroglyphs.[6] However, since both the work of Munro and current BD editions lack additional numerical or statistical information and co-textual data on hieratograms, it is difficult to evaluate the frequency or distribution of these signs in the manuscripts, let alone their context of use.

The prevailing script in the sources dealt with in this article (see section 2) was a system called cursive hieroglyphs, and sometimes dubbed linear hieroglyphs.[7] Cursive hieroglyphs maintained the figurative materiality and iconic power of hieroglyphs, but the signs were traced more schematically and often dispensed with inner details.[8] Since the Middle Kingdom, the system was considered a specific mark of religious texts (comprising funerary, ritual, and magical-medical content), and is often indexical of temple libraries. It was normally associated with a columnar format,

2 Dorman 2019, 27–33, 35–37. According to this scholar, what he dubs the 'scribal' compositional format (written in hieratic) was superseded by the 'monumental' one (opting for formal hieroglyphs in large vignettes and cursive hieroglyphs for the texts) during or shortly after the co-regency of Hatshepsut and Thutmose III.

3 Such was the outlook of BD publications until the 1990s, but since then, editions of sources in the prevailing series for BD studies (Catalogue of the Books of the Dead in the British Museum; Handschriften des Altägyptischen Totenbuches; Beiträge zum Alten Ägypten) include a section dealing with the type of script or, specifically, with hieratic signs.

4 The publications of the previous note usually include a section devoted to the hieratic signs that appear on a given manuscript. The location of some examples of each sign is pinpointed, without being exhaustive (with the exception of Munro and Fuchs 2015, 15–16).

5 McDonald 1981, 60. See also Munro 1988, 193. For the potential for dating offered by the intrusion of hieratic elements in the so-called Book of the Earth, see Roberson 2019, 170.

6 Munro 1988, 192–193, 254–257, Liste 19.

7 Verhoeven 2015, 25 (following Richard Parkinson and Penelope Wilson). See also Gasse 2016, 61–62 recalling Champollion's designation of this script as *hiéroglyphes linéaires*. The script has also been called 'semi-cursive'/*Semi-kursive*, 'book-writing'/*Buchhieroglyphen* or *Buchschrift* (Fischer 1976, 40; Ali 2002, 29), and *Totenbuch-Kursive* (Lucarelli 2020).

8 Descriptions and discussions of cursive hieroglyphs can be found in Fischer 1976, 40–44; Munro 1988, 193–197; Parkinson and Quirke 1995, 24–26; Ali 2001; Goelet 2003, 10–13; Haring 2006, 8; Allam 2007; Goelet 2010, 127–128; Graefe 2015; Lüscher 2015, 99–102; Verhoeven 2015, 38–39 (various tables in this article gather the opinions of several scholars on the sources from which this script derived, whether hieratic or monumental hieroglyphs); Gasse 2016, 62–65; Vernus 2017, 480; Lucarelli 2020.

with the signs facing rightwards or leftwards, and was also often coupled with a retrograde orientation when the texts were copied in either columns or lines. Another characteristic of this form of writing is its certain degree of statism, in the sense that there was some reluctance to introduce diachronic changes,[9] which is instead a hallmark of the hieratic script. Moreover, the absence of ligatures and abbreviations brings cursive hieroglyphs closer to the more formal and monumental hieroglyphs than to the more tachygraphic hieratic. As will be pointed out below, cursive hieroglyphs covered a wide spectrum of forms, ranging from the more detailed to the more schematic, and there are considerable variations in individual handwriting. In methodological terms, this poses a problem for a modern analytical search for closed categories, and it should instead be recognised that the boundaries between the abbreviated form of a cursive hieroglyph and a hieratic sign are often fuzzy.[10] All these considerations make urgent the need to compile detailed palaeographies so that we can access the wider picture.[11]

Sources

This paper addresses a specific medium on which funerary texts were copied in cursive hieroglyphs using rush-pens:[12] the walls and ceilings of burial chambers belonging to members of the Theban elite and subelite that were built during the early 18th dynasty, and were decorated with spells drawn from old and recent funerary corpora. The chamber of the 'overseer of the royal treasury, overseer of works for royal monuments, and overseer of the cattle of Amun' Djehuty (TT 11) will be used here as the main case study.[13] Djehuty was a high-ranking official, who probably originated from the area of Hermopolis and, at a later stage in his career, was pro-

9 Munro 1988, 194; Haring 2006, 8, n. 6; Lucarelli 2020, 581, 582, 587–588.

10 See also Dorman 2019, 39, n. 101.

11 Haring 2006, 9. This is one of the aims of the project set forth by Ursula Verhoeven, *Altägyptische Kursivschriften. Digitale Paläographie und Systematische Analyse des Hieratischen und der Kursivhieroglyphen* (https://aku.uni-mainz.de/ [1 August 2020]). An earlier attempt at gathering a palaeography of cursive hieroglyphs was announced by Ali (2001), but seems not to have been continued.

12 Carved signs imply a different technology and different actors, so that the work of scribes is obscured by that of those who chiselled the texts. The burial chamber of Senenmut (TT 353) will therefore not be taken into account in this study.

13 Galán 2014; Díaz-Iglesias Llanos 2017, 2019, 2020. The tomb of Djehuty is one of the targets of the Spanish Mission working in Dra Abu el-Naga under the direction of José M. Galán, for which see https://proyectodjehuty.com/ [1 August 2021].

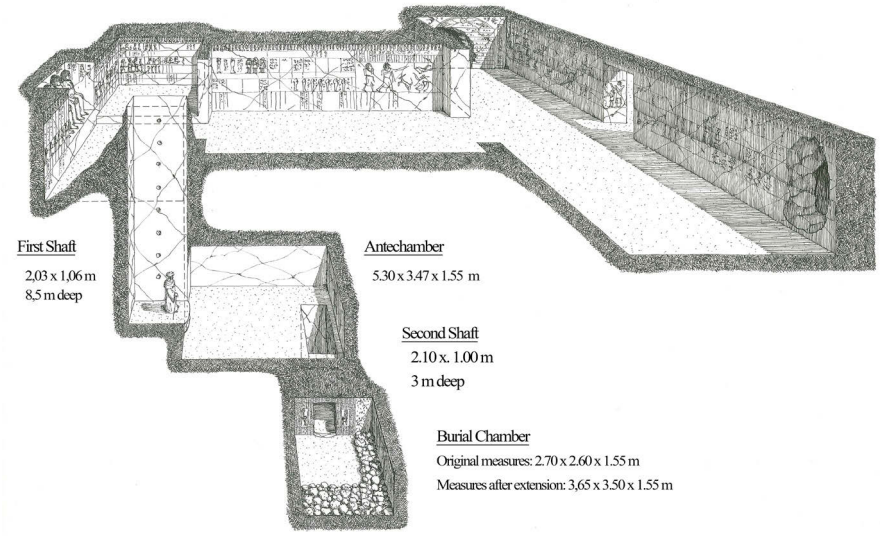

Fig. 1: Plan of the tomb-chapel of Djehuty (TT 11), with a reconstruction of the two stages documented in the decoration of the burial chamber (© Djehuty Project. Drawing: C. Cabrera)

moted to these positions in the Theban court under the joint reign of Hatshepsut and Thutmose III.[14]

Access to his burial chamber is gained from the innermost part of his tomb-chapel, via two shafts and an antechamber. Originally, all four walls and the ceiling of the chamber were covered with BD spells and vignettes. However, at an unknown point, but probably while the tomb owner was still alive, two of the inscribed walls were demolished to enlarge the room. The planned extension of the decoration was never completed since one wall was left roughly carved, while the other was covered with plaster to level out the surface (fig. 1). The ceiling also began to collapse at an uncertain date, probably as a result of mechanical cracks that originated in the process of, or as a result of, widening the space. The epigraphic task of recording and studying the texts of the burial chamber was begun by the author in 2013, with one aim being to reconstruct the original decoration by re-joining the fallen fragments.

Despite the loss of texts from the two undecorated (or still-to-be-decorated) walls and the partially decay and fall of the rest of the surfaces, the burial chamber of TT 11 still preserves 42 BD spells. This is the largest collection of formulae for any such mortuary space from the early and mid-part of the 18th dynasty yet discovered, and its complex decorative programme also stands out for the distribution

14 For his career, see most recently, Galán and Díaz-Iglesias Llanos 2020.

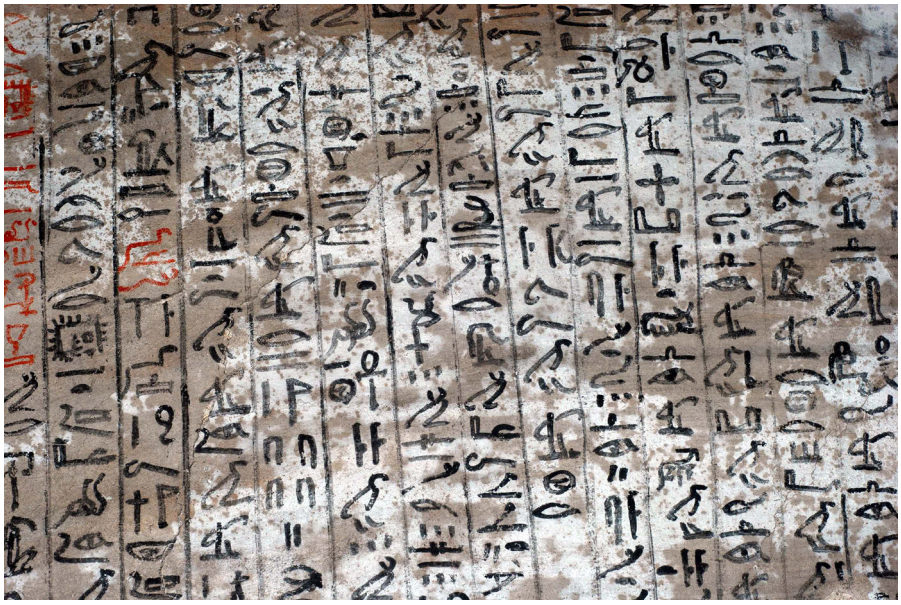

Fig. 2: A section of the decoration in the burial chamber of TT 11, corresponding to the ceiling (© Djehuty Project)

of its spells. The succession of formulae mimics past models (the sequence found on shrouds belonging to members of the royal family and court during the late 17th and early 18th dynasties), while also bringing in variation and innovation through the introduction of more uncommon spells.[15] The texts were written in cursive hieroglyphs with some intrusion of hieratic signs, and were arranged in columns that followed a retrograde orientation (fig. 2). In two cases – associated with compositions foreign to the BD tradition that surround the large-scale figure of Nut in the centre of the ceiling[16] and the image of Djehuty's parents on the north wall – the signs show a higher degree of monumentality. This level of formality was attained by bringing the shape of the characters closer to full hieroglyphs than to cursive ones, and by filling some graphemes with black paint. The presence of hieratic signs even in these more carefully executed sections should be highlighted for the purpose of this article (fig. 3).

In the study presented here the contemporary structures of the 'grain accountant of Amun, scribe and steward of the vizier Weseramun' Amenemhat (TT 82)[17] and that

15 Díaz-Iglesias Llanos 2019, 150–153.
16 Galán 2013.
17 Davies and Gardiner 1915, 102–109, pls. 26–45.

Fig. 3: Image of the goddess Nut, presiding the ceiling of the burial chamber of TT 11 and surrounded by formulae that go back to the Coffin Texts tradition (© Djehuty Project)

of the 'royal scribe and overseer of the double granaries of Upper and Lower Egypt' Nakhtmin (TT 87)[18] will serve to contextualise the burial chamber of Djehuty. The decoration of all three involved scribes who had an excellent command of cursive hieroglyphs and knowledge of the conventions governing the production of funerary manuscripts: scripts and graphical devices, including formatting tools, changes in ink colours, and the arrangements of texts and vignettes.[19] Additionally, the example of Nakhtmin is quite exceptional, since it is one of the few cases in the field of textual transmission in ancient Egypt where the intermediate model and the final product have been preserved. The publication by Lüscher of most of the ostraca

18 Guksch 1995, 74–75, pls. 14–18.

19 These aspects are discussed for TT 11 in Díaz-Iglesias Llanos forthcoming.

used by the scribes to remediate[20] the texts onto the walls of Nakhtmin's final resting place[21] offers a unique opportunity to track the copyists at work.

The joint analysis of these three burial chambers, together with that of the 'vizier' Weseramun (TT 61),[22] is part of a wider project that I started in 2019. Its aim is to apply ideas derived from the 'New' or 'Material Philology' to an underrated source in the study of ancient Egyptian texts, in order to understand scribal training and practices, and the human and material factors that affected the transmission of funerary compositions during the New Kingdom.[23]

The walls of the underground burial chambers in TT 11, 82, and 87, and – exceptionally – also the ceiling in the case of Djehuty, contain monumental or three-dimensional materialisations of texts and images, many of which were more frequently committed to mobile carriers such shrouds and leather or papyrus rolls.[24] In contrast with these two-dimensional and portable artefacts, three-dimensional spaces would have entailed a high expenditure and different physical constraints when it came to their decoration. However, our knowledge of the material process that underlies the decoration in such spaces is still limited with regard to body postures (were the scribes standing, squatting, or sitting while inking the walls and ceiling?) and forms of interaction with the written surfaces (what types of modifications could be introduced in the copied texts? Did the scribe understand the text that he remediated?). The mechanics of the scribal copying deployed in these chambers are still barely understood for large scale, vertical and horizontal surfaces that stand at the interface between the practices of ancient scribes and painters.

The architectural surfaces in TT 11, 61, 82, and 87 were filled with funerary spells and captions to vignettes written in cursive hieroglyphs, while monumental hieroglyphs (or signs close to these forms) were reserved for horizontal bands and some specific formulae that accompanied large scale figures. It is important to remember that although the cursive hieroglyphic script is regarded as *sehr normiert*, the spectrum of forms, formality, iconicity, and embellishment of the signs included in this system was quite broad.[25] The variety of cursive forms of the sign Gardiner D2 (𓁹) attested in a single document (fig. 4) indicates that while some scribes resorted to forms closer to hieroglyphs, others either tended towards hieratic, directly included

20 Hussein 2017 refers with this word to the act of transference of materials from one medium of transcription to another, a process in which changes to the length, content, and written form of the text were introduced by the scribe.

21 Lüscher 2013, 2015.

22 Dziobek 1994, 42–47, pls. 9–16, 28–35, 49.

23 Díaz-Iglesias Llanos 2020.

24 To contextualise the data, it should be remarked that for the 17th and 18th dynasties, the *Totenbuchprojekt* Database lists 42 shrouds and 192 papyri, and only 34 private tombs decorated with BD spells, cf. http://totenbuch.awk.nrw.de/ [13 April 2020].

25 Graefe 2015, 122–123.

Gardiner	Visual Glyph	TT 11	Möller
D2		 W I 77 W II 31 C V x+7 W I 13 C I 35 C I 49	Nr. 80

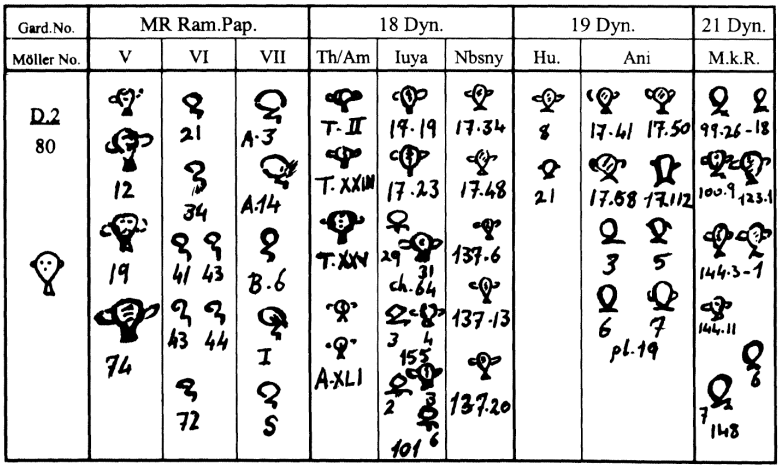

Fig. 4: Variants of the sign Gardiner D2 in cursive hieroglyphs, which illustrate both the variety of forms within a single scribal hand and differences between copyists in a given manuscript/composition. Above: examples drawn from the burial chamber of TT 11 (W stands for west wall; C for ceiling; Roman numerals indicate registers; Arabic numerals indicate the column number) (© Djehuty Project. Below: examples drawn from Ali 2001, 16)

hieratograms (Möller no. 80), or opted for hybrid graphemes[26] in the texts that they copied. The mental and physical process of writing in manuscript cultures was so swift, flexible, and fleeting[27] that several options can be found within a single scribal hand. As mentioned in the first section, the methodological problem behind the fuzzy boundaries existing between the abbreviated form of a cursive hieroglyph and a hieratic sign should be born in mind when undertaking any analysis of the different scribes who worked on the same object.

26 Lüscher 2015, 100 refers to these hybrid signs as "Zwischenformen, die also ansonsten weder im Hieratischen noch im Hieroglyphischen vorkommen." The case of hybrid ductus and forms of signs, which form a special category of signs that cannot be taken simply for hieratic or for cursive hieroglyphs, has been dealt with by Ali 2002, 14, 27; 2020.

27 Parkinson 2009, 90.

Hieratic signs in a cursive hieroglyphic text: queries to pursue

Past models: Why?

In previous publications, several authors sought to explain why hieratic signs appeared in funerary compositions written in cursive hieroglyphs. To my knowledge, at least six reasons have been adduced for their intrusion:

- Firstly, lack of space.[28] This circumstance is especially conspicuous in the case of hieratograms written at the end of columns, where these signs were easier to squeeze in than their cursive hieroglyphic counterparts.[29] This can also apply in instances of corrections, when overlooked signs had to be inserted in the margins and use was made of the more space-saving hieratic signs.[30]
- Secondly, pace of writing or a hurrying scribe.[31] This reason is perhaps related to what J. J. Janssen considered to be incidental variations in the signs of a text (in the case analysed by this scholar, a hieratic text), arising from the scribe paying inadequate attention throughout the writing process.[32] Janssen also pointed out that the writing style tended to deteriorate as a text unfolds, due to tiredness of the scribe, to an urge to finish, or to unknown reasons.[33] This principle is difficult to apply in the burial chambers since we don't know if the spells were written from beginning to end in a single copying session, or if they were copied in groups in several working days.
- Thirdly, alleged use of models written in hieratic.[34] This circumstance would have given rise to confusion between graphemes with similar forms when they were transcribed into a different script.
- Fourthly, scribal doubts or indecisiveness on which was the correct hieroglyphic form of a sign. As a consequence, the scribe might mechanically turn to the hieratic graphemes with which he was more acquainted through education and use.[35]

28 Lüscher 2008, 5; 2015, 101; Lapp 2014, pl. 14 (BD 93, col. 8), pl. 24 (BD 62, col. 4); Hussein 2017, 306–307; Lucarelli 2020, 582.

29 It is interesting to notice how the scribe of TT 87 changed the cursive hieroglyphs of an ostracon (his mastercopy) into hieratic signs when he reached the bottom of some columns on the wall (Lüscher 2013, 56 g in a column that ends with *pw*, the quail chick – Gardiner G43,  – of the ostracon is transformed into Z7,  , on the wall).

30 An example from TT 11 can be found in Díaz-Iglesias Llanos 2019, 160, fig. 9.7.

31 Lüscher 2008, 5.

32 Janssen 2000, 52.

33 Janssen 2000, 52.

34 Munro and Fuchs 2015, 14 (n. 49 for previous literature); Moje 2007, 456, 461.

35 Haring 2006, 9.

- Fifthly, the skills and self-confidence of the scribes in charge of copying the texts, using master copies written in cursive hieroglyphs (*vs* third point above). These personal traits would allow them to decide in which part of the composition they would write more or less schematised variants of the standard cursive forms that were found in their models.[36]
- Sixthly, the predominance of hieratic signs in the writing of certain words, for example, in the spelling of the titles and name of the owner of a textual artefact.[37]

These six reasons are by no means exhaustive, and there may be other, unknown factors.[38] Such unexplained causes tie in well with what Eyre labelled as free variations of signs that appear in a hieratic text without relation to the context or position (in a line or in relation to other signs).[39]

Although the third explanation has often been put forward in the past, recent analyses convincingly suggest that, at least in the case of subterranean burial chambers, it is unlikely that scribes would turn hieratic drafts into cursive hieroglyphic inscriptions in front of the wall, especially in narrow and poorly illuminated spaces.[40] The current tendency is to consider that the model used in the tomb decoration would have been similar to the end product, in terms of writing system.[41] As the case of Nakhtmin aptly demonstrates, and was also suggested by some scholars on the grounds of textual-transmission analyses of other earlier sources,[42] the use of master copies written in cursive hieroglyphs does not preclude the occasional presence of hieratic signs in these same *Vorlage*.[43] The latter could be faithfully copied or transformed into their cursive hieroglyphic counterparts when the texts were remediated. The example of Nakhtmin is illuminating in this sense. If one examines it closely, four main types of variations between the model (i. e. ostraca) and the copy (i. e. walls of the burial chamber of TT 87) can be detected: changes in the arrangement of

36 Lucarelli 2020, 588.
37 Dorman 2019, 32, commenting on the case of the *rishi* coffin of Satdjehuty-satibu (Munich ÄS 7163 + 7270).
38 Lüscher 2015, 101.
39 Eyre 1979, 86.
40 Kahl 1996, 70; Haring 2015, 72, 74–79.
41 Díaz Iglesias Llanos 2018, 38 (citing previous literature).
42 Allen 1976, 26–27 (cf. Kahl 1996, 69–72).
43 Lüscher 2013. A close parallel to TT 87 are the ostraca found in the courtyard of TT 29 (tomb of Amenemope), bearing parts of the *Duties of the Vizier*, a composition that was used in the decoration of the tomb's walls (Tallet 2005). The ostraca were written in columns of cursive or semi-cursive hieroglyphs, but some signs' forms are closer to hieratic than to the former script (Haring 2015, 70–71).

Fig. 5: Passage of BD 64 written on the fifth register of the ceiling in the burial chamber of TT 11, showing a corrupted version that originated from the substitution of signs with similar shape in hieratic (A1 for X1) (© Djehuty Project)

signs; substitution of equivalent graphemes (for example, Gardiner O34 and S29); transformation of script (from hieratic to cursive hieroglyphs or, less frequently, *vice versa*); and mechanical errors (mainly confusion or omission of signs).[44] The third is one of the more common adaptations introduced by the scribe as he[45] remediated the texts onto the three-dimensional surfaces. It is remarkable that there is a single mistake in the seventy-four instances of script transformation (specifically of the conversion of hieratograms into cursive hieroglyphs),[46] a fact that proves the competence and ability of the copyist.

Isolated hieratic signs in a master copy written in cursive hieroglyphs could also give rise to misinterpretations. In fact, some mistakes attested in the burial chamber of TT 11 may be due to the confusion of a scribe who turned hieratic signs from his model into the wrong hieroglyphs on the surfaces of the chamber.[47] In a passage of spell BD 64, while all parallels have the sentence *nn jw mwt=j r=j* 'no evil of my mother shall be against me', in TT 11 the meaningless *nn jw mwt trt* was recorded (fig. 5), perhaps due to the similar shape of the signs Gardiner A1 (first singular suffix pronoun,) and X1 (*t*,) in hieratic (= Möller nos. 33B and 575 respectively).

44 A systematic comparison between the ostraca and the walls of the burial chamber is currently undertaken by the author and Daniel Méndez Rodríguez in the framework of the project mentioned in n. 23 and will be the subject of a future article.

45 *In situ* analyses of scribal hands in the burial chamber of TT 87, using an array of criteria pertaining to the spheres of the signs, layout, and writing practices, has led me to conclude that a single copyist was responsible for the decoration.

46 The opposite phenomenon, the conversion of the model's cursive hieroglyphs into hieratic signs on the walls, is only attested three times (one of which is described in n. 29).

47 Kahl 1996, 11, n. 1; 69. Many examples of mistakes originating from the similar shape of signs in hieratic and cursive hieroglyphs are gathered in Lüscher 2013.

Suggested methodology: Which? How many? Where? By whom?

In the evaluation of the meaning and importance of the hieratic signs included in a text written in cursive hieroglyphs, I suggest one should take into account the following aspects before proceeding to offer explanatory hypotheses for their intrusion: 1. the typology or classification of the signs; 2. their function; 3. their frequency; 4. their location, in terms of general spatial distribution (i. e. on the ceiling, towards corners, on the left part of a wall, etc.), specific position or height within a column (in the upper, middle, or lower section of a text column), and word context; and (if possible) 5. their copyist, in other words, who wrote them.

There follows a description of these aspects applied to the sources mentioned in section 2. In the case of the burial chamber of TT 11, the results of the analysis are to some extent hindered by the state of preservation of the surfaces. The lower part of the columns of the first register on the west and north walls (the only walls whose decoration is preserved) is severely damaged by salt, so that one can no longer verify if hieratic signs were used in these sections. The same applies to the second horizontal register on these same walls. Its columns start at a height of 40–50 cm above floor level and end only 10–15 cm higher than that level, so that the scribes must have written them while sitting or squatting. If this ergonomic factor had any bearing on the presence of hieratograms is difficult to say, in light of the current state of the lower surfaces.

To address the 'which?' query, it should be noted that in terms of typology most hieratograms found in TT 11 belong to certain groups or classes (fig. 6). There is an overwhelming preponderance of birds, especially of the more complex types, which either represent specific functions and values, or are depictions of the general concept [BIRD] or [EVIL]. Most types of birds, except for the more common quail chick (*w*), vulture (*ỉ*), and owl (*m*), and some rare types of ducks and geese, are usually rendered in hieratic or in abbreviated forms that dispense with depicting the breast and belly (cf. birds of section G in fig. 6, with those of fig. 2).

The class of birds is followed, in number of attestations, by that of trees and plants, and then by those signs related to the sky, earth and water, and to man and his occupations. To put this figure in context, hieratic signs from the birds' and plants' categories also predominate in texts written in cursive hieroglyphs on the ostraca of Nakhtmin[48] and in the burial chamber of Amenemhat (TT 82).[49] In

48 In stark contrast to the case of TT 11, the most often attested hieratic bird in these ostraca is the vulture (*ỉ*, Gardiner G1,  , Möller no. 192). In the cursive hieroglyphic texts written on these mobile carriers, this sign is rendered in hieratic in three quarters of its attestations.

49 In contrasts to TT 11, some common birds, such as the quail chick (*w*, Gardiner G43,  , Möller no. 200), are rendered in both cursive hieroglyphic and hieratic versions.

Gardiner's sections	Gardiner/Möller	Nr. of attestations
Sect. G. Birds	 (G24/Nr. 201)	2
	 (G25/Nr. 204)	3
	 (G28/Nr. 205)	8
	 (G29/Nr. 209)	10
	 (G29+R7/Nr. 209)	1
	 (G30/Nr. 212)	12
	 (G35/Nr. 215)	1
	 (G37/Nr. 197)	43
	 (G38/Nr. 217 bis)	4
	 (G39/Nr. 216)	26
	 (G41/Nr. 222)	10
Sect. M. Trees and Plants	 (M2/Nr. 268)	18
	 (M3/Nr. 269)	29
	 (M13/Nr. 280)	5
	 (M20/Nr. 279)	1
Sect. N Sky, earth, water	 (N1/Nr. 300)	6
	 (N5/Nr. 303)	10
	 (N23/Nr. 324)	2
	 (N25/Nr. 322)	11

Fig. 6: Hieratograms most frequently attested in TT 11, ordered by Gardiner's classes. For sake of convenience, the second column shows a single example of the signs' shape

TT 11, there are hardly any ligatures or connected forms, which might be due to the columnar format adopted. The exception is the group *wn* + *n*, a New Kingdom innovation,[50] which is written in a ligature only on the ceiling. Whether this was because of the difficulties – in ergonomic terms – of decorating a horizontal but inverted surface, or to the work of a different scribe than those in charge of the walls, is an issue that requires further research.

Inside the group of man and his occupations (Gardiner's class A), a fairly frequent and simple sign (A2, 𓀀) is often rendered in hieratic (Möller no. 35) in

50 Gasse 2018, 120, fig. 3b.

TT 11 (fig. 7, above).[51] With 76 witnesses, this is by far the most commonly attested hieratogram in the burial chamber of Djehuty, which may be down to the fact that this sign enters in the orthography of frequently written words such as *Jbty*/*Jbw*, the name of Djehuty's father, and the interjection *j*, ubiquitous in the 42 negative confessions of BD 125B.[52] In contrast, less common and more complex human figures were more carefully traced and display intricate details (fig. 7, below). In fact, there is no rule of thumb regarding the use of hieratic as a simplified alternative to a more elaborate cursive hieroglyphic sign. It seems that the scribes in charge of the decoration of this space deployed their graphic skills, which depended on their education and personal experience in copying and reading texts, when writing very complex signs, even in places such as the ceiling that were difficult to access (see fifth reason adduced in section 3.1).

Besides the presence of hieratic signs in the BD formulae of TT 11, one may speak of a certain material or palaeographical hieratic influence on cursive hieroglyphs.[53] I suggest that this influence is visible in three aspects: the ductus; the closeness displayed by signs with similar forms that correspond to dissimilar hieroglyphic signs; and the addition of diacritic strokes (fig. 8). A note of caution is important following Haring, who noted that some of the features to be discussed in the next paragraph do not necessarily indicate a direct derivation from hieratic, since many were current in contemporary and earlier cursive hieroglyphs.[54]

Firstly, as regards text orientation, hieratic is a right-to-left script only, although as Allen pointed out, individual signs were normally written from left to right, with the exception of right-to-left diagonals.[55] In the burial chamber of Djehuty, the order in which the strokes were executed when tracing the cursive hieroglyphs – from left to right – is particularly clear in the plural mark. Even when this sign is written with dots, instead of with strokes, the weight of the ink indicates the same direction of writing, which was counter to the reading direction of the signs within a column. Whether the similarity in execution derives from the influence of hieratic on cursive hieroglyphs, or to some practical issues related to the natural flow of the rush pens over the writing surface, is more difficult to say and dependent on trials with 'exper-

51 The texts copied in TT 87 hark back to past models, and the orthography stands out for its archaising traits, with the omission of divine and human figures (Lüscher 2013, 10), so that there are no hieratograms belonging to Gardiner's class A in this case.

52 Cf. the case of TT 82, where BD 125B is also attested but the classifier of the interjection *j* is written in cursive hieroglyphs.

53 The influence of hieratic on (monumental and cursive) hieroglyphs has been dealt with by Gutbub 1982; Meeks 2004, xiv–xv; Haring 2006, 9; Meeks 2007, 6–10; Polis 2020, 554–555.

54 Haring 2006, 8–9; 2010, 33–34; 2015, 74–75.

55 Allen 2002, 76.

Gardiner's sections	Gardiner/Möller	Nr. of attestations
Sect. A. Man and his occupations	(A1/Nr. 33)	1
	(A2/Nr. 35)	76

C II 51 W I 20 W I 23

Fig. 7: Above: hieratograms from Gardiner's A class in TT 11. Below: examples of elaborate cursive hieroglyphic signs depicting human beings in TT 11 with their location

imental epigraphy'. Secondly, as attested in hieratic texts, the absence of inner details in certain signs of TT 11 would render them indistinguishable where it not for the context of their use. Thus, the shape of the sun disc (N5, ⊙) and that of the *zp*-sign (O50, ◎) looks alike, and it is by virtue of the word in which they appear that one can tell them apart. Thirdly, the addition of diacritic marks, which is a hallmark of hieratic, is conspicuous in some graphemes of TT 11, such as the ox ear (F21, 𓄤), the tethering rope (V14, 𓍿),[56] and the fire drill (U28, 𓋴). The latter is the only sign for which I have found very few parallels among contemporary BD productions, appearing – to my knowledge – only in witnesses written in hieratic.[57]

To complete the 'which?' query, I should point out that the signs written in hieratic within the BD formulae that fill the surfaces of Djehuty's burial chamber perform predominantly the functions of phonograms and classifiers, and, to a lesser extent, of logograms.

The frequency and location of hieratograms in a cursive hieroglyphic text set the 'how many?' and 'where?' queries in motion, two issues that should be combined in the analysis.[58] In TT 11, the overall distribution of hieratograms does not always sug-

56 For the sign Gardiner F21, see Servajean 2011, 30 § 54; Haring 2006, 9, 56 § 71. For V14: Servajean 2011, 109 § 214; Haring 2006, 9, 124 § 247.

57 For example, in papyrus Brussels MRAH SN: http://totenbuch.awk.nrw.de/objekt/tm134264 [1 August 2020].

58 As Lucarelli points out (Lucarelli 2019, 139), textual analyses should be always complemented by an analysis of the text in close connection to its media of distribution. For this new trend of 'Material Philology' in Egyptology, see works quoted in Díaz-Iglesias Llanos 2019, 153, n. 39. The occurrence of variants in classifiers, their quantification and clustering within the three-dimensional space of a burial chamber are taken by Roberson 2019 as important indicators of the use of lost master documents.

Gardiner	Möller	Visual Glyph	TT 11
Closeness of forms in signs that correspond to dissimilar hieroglyphs			
N5	Nr. 303		 C I 38
O50	/		 C I 38
Addition of diacritic strokes			
F21	Nr. 158		 C V 29
U28	Nr. 391		 C I 25
V14	Nr. 528		 N I 4

Fig. 8: Examples of the different forms in which hieratic may have had an influence on the cursive hieroglyphs of TT 11

gest meaningful patterns, so that one should refrain from making generalisations. For example, the availability of space is a practical need that has been invoked as an overarching explanation for the introduction of the more abbreviated signs (see section 3.1.). However, two examples of TT 11 indicate that space constraints were a concern only in a limited number of cases. On the one hand, when some elements of a sentence (and not only a single sign) had been overlooked and the scribe needed to squeeze them in at a later stage, hieratic forms were useful.[59] But on the other hand, on the ceiling, where the bottoms of columns are better preserved than on the walls, one would expect to find such signs towards the lower parts of columns, as texts crammed in due to lack of space. However, in these circumstances, scribes turned to hieratic in very few instances.[60]

59 See example quoted in n. 30.

60 The same is true of TT 82 (Amenemhat), where reluctance to divide linguistic units between columns caused the cramming of many signs at the bottom of columns, and little use was made of hieratograms in these locations.

If one maps the location of hieratograms on the written surfaces of the TT 11 burial chamber,[61] the concentration of signs in corners and on the ceiling is conspicuous. Ease of execution should be considered as a major factor in the frequency and distribution of hieratic signs on a textualised artefact written in cursive hieroglyphs, given that their number might rise where the writing surface obliged copyists to adopt uncomfortable positions (as in TT 11). While the case of corners will be analysed below, the high number of hieratic forms in the BD formulae copied on the ceiling could be explained both by ergonomic factors and by the larger surface covered in texts. Thus, if the writing medium changed abruptly, from a vertical wall to the horizontal but upside-down surface of the ceiling, material constraints played a greater role, and these had an effect on both the texts in their general outlook and on individual signs. These constraints resulted in a simplification of the graphemes, with scribes resorting more often to hieratic, although some of the most carefully drawn signs of the chamber can be also found in this section. The mentioned constraints are also reflected in a less neat distribution of the signs within a column: they are often off-center, display a larger variety in sizes, the distance among them is more uneven, and they can overlap.

In TT 11, hieratograms appear most often at random points in the composition and at varying heights in the columns. Against preconceived ideas, these signs are neither predominant at the end of a spell, where one may surmise that a scribe was becoming hasty in his task, nor do they commonly appear at the lower part of columns (see above). To explain this phenomenon of random location, I suggest that copyists turned mechanically and unconsciously to the hieratic forms that they used more frequently and had learnt first, before moving into the hieroglyphic system at an advanced stage of their careers.[62] It is no wonder that they reverted, sporadically and mechanically, and without any recognisable pattern at a spatial level, to hieratic signs as they copied a text written in cursive hieroglyphs from a 'transportable text-carrier' onto the fixed walls and ceiling of Djehuty's final resting place.

Analyses can be further refined if different scribal hands can be identified in a textual artefact, adding the 'by whom?' to the list of queries to be pursued in the research. Two scribes can be distinguished on the west wall of the burial chamber of TT 11 by looking into a variety of aspects related to three broad analytical categories: layout, signs, and scribal practices. The pattern of use of hieratic signs – an aspect of the scribal practices' category – of these two individuals can therefore be compared across the same number of text columns. For sake of clarity they will be here called 'Scribe A' and 'Scribe B' (fig. 9). Scribe A resorted to hieratic signs in a limited

61 For this mapping strategy, see Díaz-Iglesias Llanos 2019, 158–159.

62 For the school curriculum, the types of script learnt by scribes, and how the transition between hieratic and cursive hieroglyphs might have been bridged, see Goelet 2010, 122–126.

number of cases, predominantly belonging to the birds' class. They further appear at random positions in spells and at different heights in the columns. Scribe B used hieratic in a wider range of signs that are not predominantly encompassed by the birds' group, but in most cases, he also used a cursive hieroglyphic version of these same signs. Thus, he could write a given word, for example *Rwty* or *ḥkꜣw*, once using hieratic for the signs Möller no. 125 and 108, and then turn to cursive hieroglyphs (Gardiner E23,  , and D28, ) for no apparent reason (fig. 9, lower section of the table). The same phenomenon is attested elsewhere in the burial chamber of TT 11, as will be discussed below, and indeed the use of a cursive hieroglyph and the same sign in hieratic is often attested within the same papyrus.[63]

Scribe B decorated the right-hand part of the west wall and used three times more hieratic signs than his colleague in charge of the left-hand part. As mentioned, the analysis of the frequency of use of hieratic signs must be accompanied by an examination of their location, since 'mapping' this feature on the wall indicates that 50% of these signs are concentrated in the final three columns before the corner. This ratio might indicate handedness, because a right-handed scribe would have felt less comfortable in the corner between the west and north walls than a left-handed one. In view of material constraints, he opted for reducing the size of many graphemes and simplifying their form to their hieratic version.

Because two scribes have been identified on the west wall of the burial chamber of TT 11, it is important to notice whether a hieratogram alternates in the text with a cursive hieroglyphic version of the same sign. It is a well-known phenomenon of Egyptian handwriting that in a brief text passage, even in the same words, scribes could use two forms of the same sign that differ in their degree of iconicity, i. e. a full or regular form and an abbreviated or alternate one (fig. 10).[64] This could happen with elaborate signs, but also with the most common graphemes such as the horned-viper (*f*, Gardiner I9,  , Möller no. 263, fig. 10, example B). Why a scribe opted for a full or an abbreviated form of a sign is difficult to say. In the case of TT 11, the choice does not seem to depend on a functional reason (for example, the lack of space at the bottom of columns, as discussed above). The selection is also not dependent on graphic arrangement or on how signs were grouped in quadrats, rejecting the idea that in the grouping of two signs that involve one sign of the birds' class and a vertical one, hieratic versions of birds are selected to better fit in the qua-

63 Milde 1991, 18; Lüscher 2008, 5, 2015, 101; Lucarelli 2020, 582. The use of forms closer to hieratic and to hieroglyphic in close vicinity is a phenomenon also attested in the Amduat.

64 I adopt the terminology for describing signs used by Allen 2002, 77–78. This phenomenon of synchronic variation of signs has been studied by Megally 1971 in the case of hieratic texts. This scholar dubs the different forms as *completes et développées* (those closer to hieroglyphs) and *abrégées et schématisées* (Megally 1971, xxiv, 14–15).

dratic unit.[65] Moreover, the use of hieratograms cannot be related to the spelling of certain words (see sixth reason given in section 3.1),[66] and nor does the position of a word bearing the hieratic sign within the text seem to be relevant, so that the idea that developed forms predominate at the beginning or in the title of a spell[67] should be discarded.

There is one conspicuous exception to the tendency of random alternation between hieratic and cursive hieroglyphic signs in TT 11. Scribe B used a regular and a more abbreviated form of the sign A1 in a seemingly conscious way (fig. 11); he wrote it one way when the sign is used as a first person suffix pronoun, and another when used as a classifier, accompanying nouns and personal names (such as that of Djehuty's father).[68] By way of comparison, Scribe A always wrote A1 the same way in each linguistic context. The hierarchy in the iconicity of the A1 grapheme used by Scribe B might have linguistic roots. Thus, he reserved the highest pictorial representation for the semographic use of the sign, but chose the more abstract form to convey grammatical and phonographic information.[69] Curiously, this hierarchy is the opposite of the one found in the Middle Kingdom hieratic papyri of Hekanakht. In his study of these manuscripts, Allen observed that for the same A1 sign – and for other graphemes as well – abbreviated forms were preferred to regular forms when they functioned as classifiers.[70]

Ali noted a similar phenomenon to the one described for Scribe B in TT 11 in the 19th dynasty cursive hieroglyphic papyrus of Ani (London British Museum EA 10470). According to this scholar, a copyist of the well-known BD papyrus of Ani tended to use what he called 'monumental' sign forms, close in shape to

65 The ostraca of Nakhtmin show examples of the pairing of a vertical grapheme and the hieratic *ꜣ* (G1) in a quadrat (Lüscher 2013, pl. 2, col. 9; pl. 4, cols. 5 and 6, etc.). In two cases, the distribution of the signs was altered on the walls, as the hieratic *ꜣ* of the ostracon was turned twice into its cursive hieroglyphic counterpart and filled all the space of the quadrat, together with a little stroke resp. a *t*-sign in front of the legs (Lüscher 2013, 89 l, pl. 16, col. 3, twice).

66 See n. 37.

67 This is an adaptation of Janssen's (Janssen 1987) analysis of the different hieratic forms of *pꜣ*. This scholar noticed that carefully written forms mostly occurred in the headings of the texts that he examined. See also bibliography cited in n. 33.

68 This phenomenon should be distinguished from the trend outlined by Meeks (Meeks 2007, 10–11, fig. 5d) to use different classifiers (the usual seated man, and the seated man with his arms crossed over the chest and his back covered with a cloth) to refer to a living individual and a dead one on a stela from the end of the Ptolemaic Period and probably also in Ramesside monuments.

69 The awareness that Egyptians had of their language as an abstract entity, forming a system, has been dealt with by Uljas 2013.

70 Allen 2002, 77–78. Elaborate forms came into play when the same signs were used as phonograms.

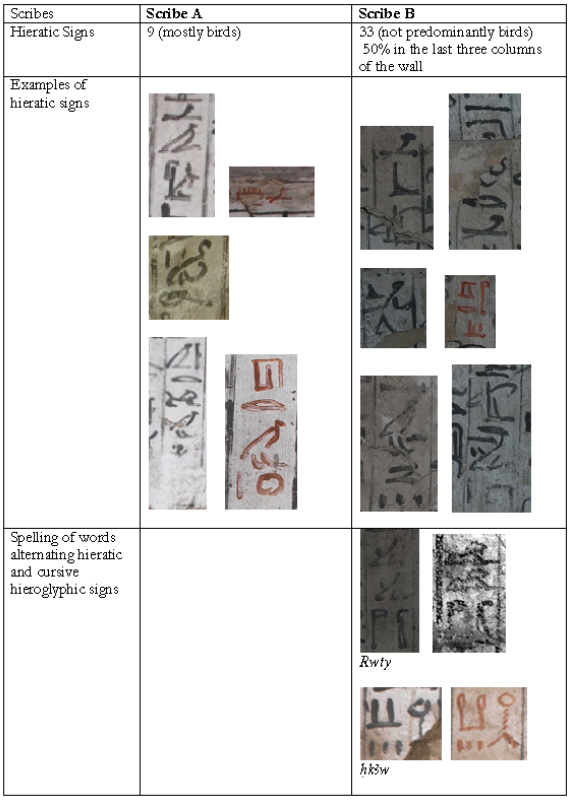

Fig. 9: Comparison between Scribe A and Scribe B in the use of hieratic signs in TT 11 (© Djehuty Project)

hieroglyphs, when writing the classifier that accompanied the name of the owner.[71] However, several scribes were involved in the manufacture of this manuscript, which was the result of a 'stock-like' production system,[72] and the one responsible for adding Ani's name in the void spaces within the texts was not the same as the one (or ones) who copied the BD formulae. The differences highlighted by Ali may well reflect more 'principal' variations between two scribal hands[73] than a conscious selection in the degree of a sign's formality made by a single copyist. Besides, the monumentalisation of the owner's name is a phenomenon attested in other types of textual sources.

71 Ali 2001, 20.

72 Leach and Parkinson 2010.

73 For the opposition between 'principal' and 'incidental' variations, see Eyre 1979.

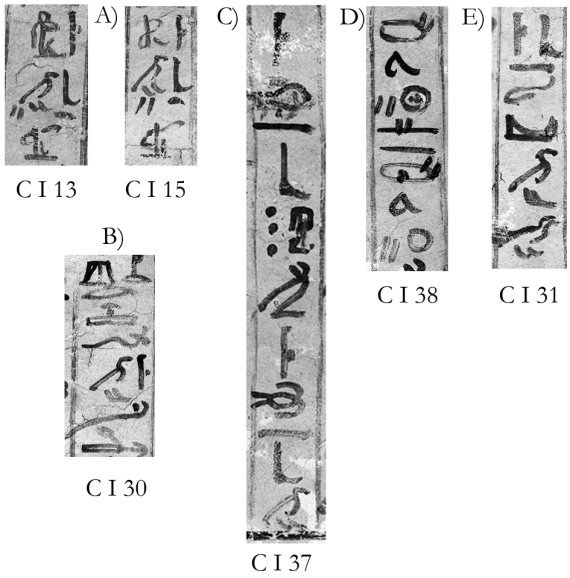

Fig. 10: Alternating hieratic and cursive hieroglyphic signs in the orthography of the same words in TT 11, involving the signs A1/Möller no. 33 (in example A), I9/Möller no. 263 (example B), K1/Möller no. 253 (example C), O50/Möller no. 403 (example D), G37/Möller no. 197 (example E) (© Djehuty Project)

To conclude, when studying a text written in cursive hieroglyphs, I suggest considering the presence of hieratic signs as a category in the analysis of scribal practices, at the same level as, for example, the introduction of corrections, different orthographic trends, or dipping patterns. I endorse the opinion of Haring, who stated that meticulous palaeographic analysis should not be considered a mere auxiliary tool to establish the date and provenance of an inscribed object or monument, but is instead a powerful means of gaining insight into how those who made hieroglyphic texts were organised.[74] In this sense, the type, function, frequency, location, and authorship of hieratograms in a text written in a more formal script could be explained by material factors, cultural causes, individual choices, and, probably, by unconscious and mechanical reasons. I would like to stress that the relationships between textual artefacts and human beings are complex and reciprocal. Scribes typically opted for certain media when committing texts to writing, and, at the same time, these material choices influenced scribal decisions and practices in an active manner.

Bearing in mind the material constraints imposed by the physical medium and the circumstances in which the work was executed – subterranean, small, dimly lit, scarcely ventilated spaces – it is no wonder that we find a concentration of hieratic

74 Haring 2010, 22, 31–33.

Fig. 11: Use of two forms of the sign A1 by Scribe B in TT 11, according to the function exerted by the sign: as a classifier (left), as a suffix pronoun (right) (© Djehuty Project)

signs in corners and on the ceiling in the burial chamber of Djehuty, but cultural and individual factors played no small role in the intrusion of hieratic signs. On the one hand, it should be remembered that hieratic was the first script taught at scribal schools, and the common writing system for everyday and administrative documents. With this cultural background in mind, one can explain that many hieratic signs pop up randomly and in a practically spontaneous manner when a text containing traits that were different to current administrative and even literary practices – cursive hieroglyphs, columns, retrograde orientation – was being copied. On the other hand, certain scribes tended to use hieratic signs more often than others, and for certain types of sign (for example, those belonging to the birds' group), so that one can consider them as part of the individual characteristic of a copyist.

Finally, I suggest that new insights could be gained by broadening the scope of research, and taking analyses from the spaces and writing surfaces dealt with in this paper to other types of media. It will thus be interesting to compare hieratic signs included in funerary texts written in cursive hieroglyphs in burial chambers of the early 18th dynasty, with those intruding in the same type of composition in contemporary papyri. I am referring to papyri copied in cursive hieroglyphs and, especially, to the few examples written in hieratic in columns: Bruxelles MRAH SN (dated to the reign of Thutmose III),[75] Los Angeles 83.A1.46.3 (of the 18th dynasty),[76] and Paris Louvre E. 11085 (dated to the early 18th dynasty, prior to the joint reign of Hatshepsut and Thutmose III).[77] The same applies to contemporary or slightly

75 Capart 1934; Totenbuchprojekt Bonn, TM 134264, <totenbuch.awk.nrw.de/objekt/tm134264> [19 April 2020].

76 Totenbuchprojekt Bonn, TM 134689, <totenbuch.awk.nrw.de/objekt/tm134689> [19 April 2020].

77 Munro 1995. Vertical columns of hieratic, separated from each other by dividing lines, are written after a section of several horizontal hieratic lines or pages.

earlier shrouds covered with columns of BD spells, of which some were written in hieratic (New York MMA 22.3.296, dated to the beginning of the 18th dynasty)[78] or where one finds many signs that come closer to hieratic than to cursive hieroglyphs (Turin 63005 + Uppsala VM MB 107, dated to the end of the 17th dynasty or beginning of the 18th dynasty;[79] Cairo JE 96804, of the early 18th dynasty).[80] There is a reason for preferring papyri and shrouds with texts arranged in columns when comparing media. When the vertical format is adopted and hieratic is written in columns instead of in horizontal lines, there is a tendency to restrict the ligatures, and there are different conventions in the selection of signs and their placement in relation to one another.[81] These circumstances more readily permit the comparison between different vehicles for text transmission that have hieratic signs interspersed within cursive hieroglyphic texts.

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78 Totenbuchprojekt Bonn, TM 133682, <totenbuch.awk.nrw.de/object/tm133682> [19 April 2020].

79 Ronsecco 1996, 203, pl. 90–94.

80 Munro 1994: 47–48, photo-pl. 20–21.

81 Goelet 2013, 117.

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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  (D51 + D40) and  (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,[1] the palaeography of Georg Möller[2] 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.[3] Other palaeographies have been compiled, such

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

1 For a recent overview, see Gülden, 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 ²1927.

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

as those of Edel and Goedicke.[4] 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,[5] 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.[6]

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.[7] 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,[8] 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*[9]

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 ²1927 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].

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
"Nḏm.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.[10] 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.[11] This approach also takes into account the fact that in administrative texts the number of ligatures is higher. The inclusion

10 Wimmer 1995.

11 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 (19th but not in the 20th dynasty, or vice versa) or only for a few reigns, which consequently reduces the quantity of usable signs for dating purposes.[12]

Limits in using Wimmer's palaeography for dating purposes

The result of Wimmer's work is summarised in three plates[13] which contain 58 signs (fig. 1).[14] Their forms show distinctive differences between the 19th and the 20th dynasty, so that they can be used for dating purposes,[15] 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.

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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 19th and 20th 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  (D4) and as Wimmer 1998, 1233, also pointed out when he presented 19th dynasty examples of the sign  (Aa1), which is relevant to 20th 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 19th and 20th dynasty).

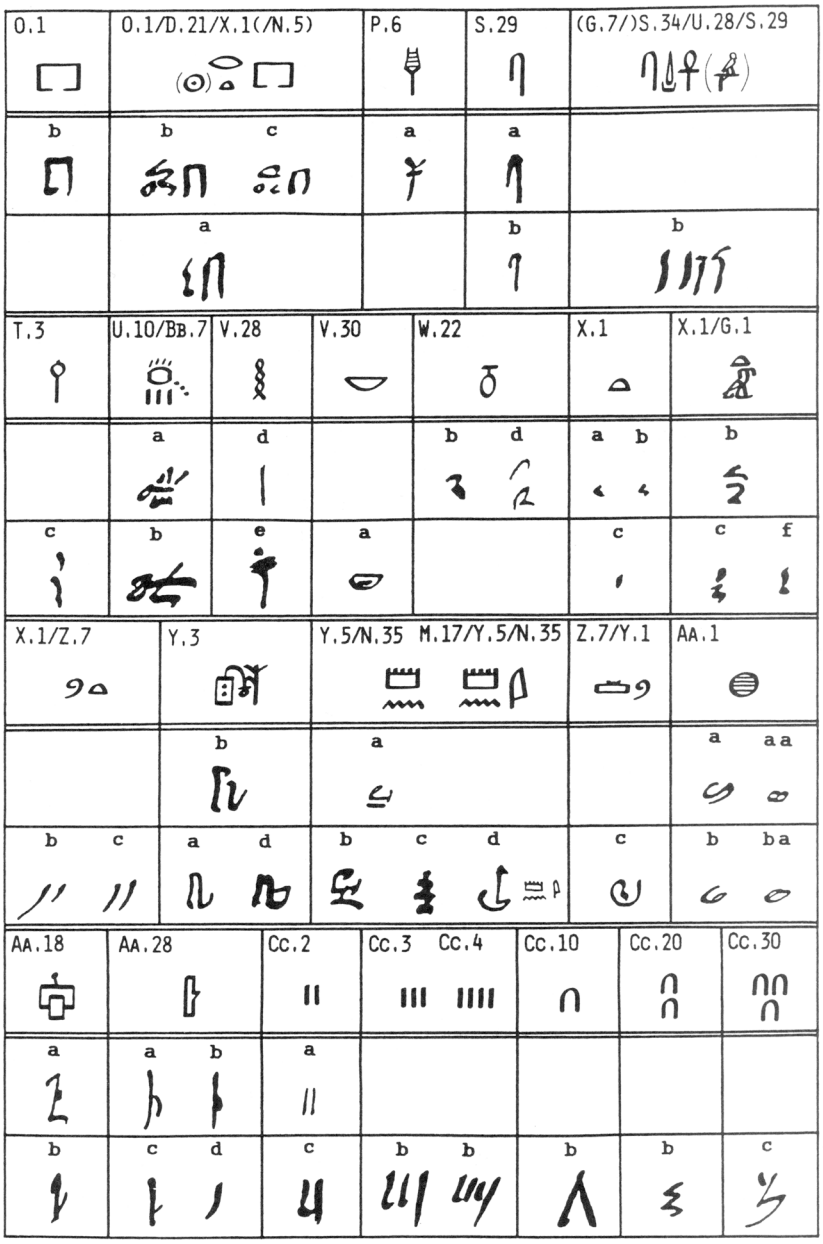


Fig. 1: Summarizing table showing signs with distinct forms in the 19th dynasty (2nd line, below hieroglyphic equivalent in 1st line) and the 20th dynasty (3rd line). Empty fields illustrate the limited diachronic use of some signs for dating purposes (Wimmer 1995 I, 247)

When using the valuable tables for dating, one has to be aware of what they show (fig. 2). In the case of the scribal palette  (Y3), the table makes it clear that type a is attested during both dynasties. The sign consists in most cases of three strokes, with a few examples formed using two strokes. Type b is made out of two unconnected strokes and, according to the table, it is not attested during the 20th dynasty. The scribal palette  (Y3) can only be used with restrictions: the presence of type b in a text allows a dating to the 19th dynasty, but if type a is consistently used in a text, then the sign has no dating relevance. Furthermore, it has to be noted that the disappearance or the non-existence of type b cannot be identified in a single text due to the constant presence of the alternate type a.

It has also to be mentioned that for each table (sign) one has to look for the reasons why a sign type is not attested during a particular period, which can be caused by its absence from the limited number of texts in the corpus.[16]

What is interesting for the discussion concerning the value of a sign for dating purposes is the case with the sign group  , *mn* + *n* (Y5 + N35). Type a, the group without ligature, is according to fig. 1 mainly attested during the 19th dynasty,[17] the same group with ligature during the 20th dynasty, which makes the sign group  at first sight a good dating indicator with distinct forms being used in each dynasty. This is disproved by the ligatured form of already attested during the 19th dynasty in writings of the word *ỉmn* (see Wimmer 1995 II, 383, pl. M. 17/Y. 5/N. 35), as well as the continuous use of the non-ligatured form during the 20th dynasty, which disqualifies the sign group for dating purposes. This case is a good example of how Wimmer's palaeography should not be used by focusing on one sign or page, but in an encompassing manner. This practice was applied by Wimmer, for example, in the case of the eye sign  (D4), which does not form part of his final tables. The main reason for this seems to be that there is a period – starting around Siptah/Tawosret and including the entire thirty-two years of the reign of Ramesses III – during which two different forms of the sign are attested (see Wimmer 1995 II, 28, pl. D. 4, 30 pl. D. 4/N. 35), blurring for that period any clear chronological distinction. This overlap alone does not weaken the difference between the two 19th dynasty types – one with a long final stroke (right end of the sign) drawn from the upper left to the lower right (describing structurally an "u") and one also drawn from the

16 Type b of the scribal palette (Y3) is attested for longer, at least until the reign of Ramesses IV, see Dorn 2015, 197, fig. 3 (O. Gardiner 25 vso = HO 38/1 = O. Oxford Ashmolean Museum 25), fig. 4 (O. Berlin P. 14262 vso). In this particular case it can be shown that a single scribe, in this case the scribe Amennakhte (v), used both forms at more or less the same time.

17 Due to a late attestation (Ramesses IX) of the group without ligature (see Wimmer 1995 II, 383 pl. Y. 5/N. 35), even a continuous use of this group seems plausible. If this is the case, we would then have an analogous, but chronologically inverted, situation as in the case of the scribal palette (Y3). Only the sign form that appears later is dating relevant, but the continuously present type cannot be used for dating purposes.

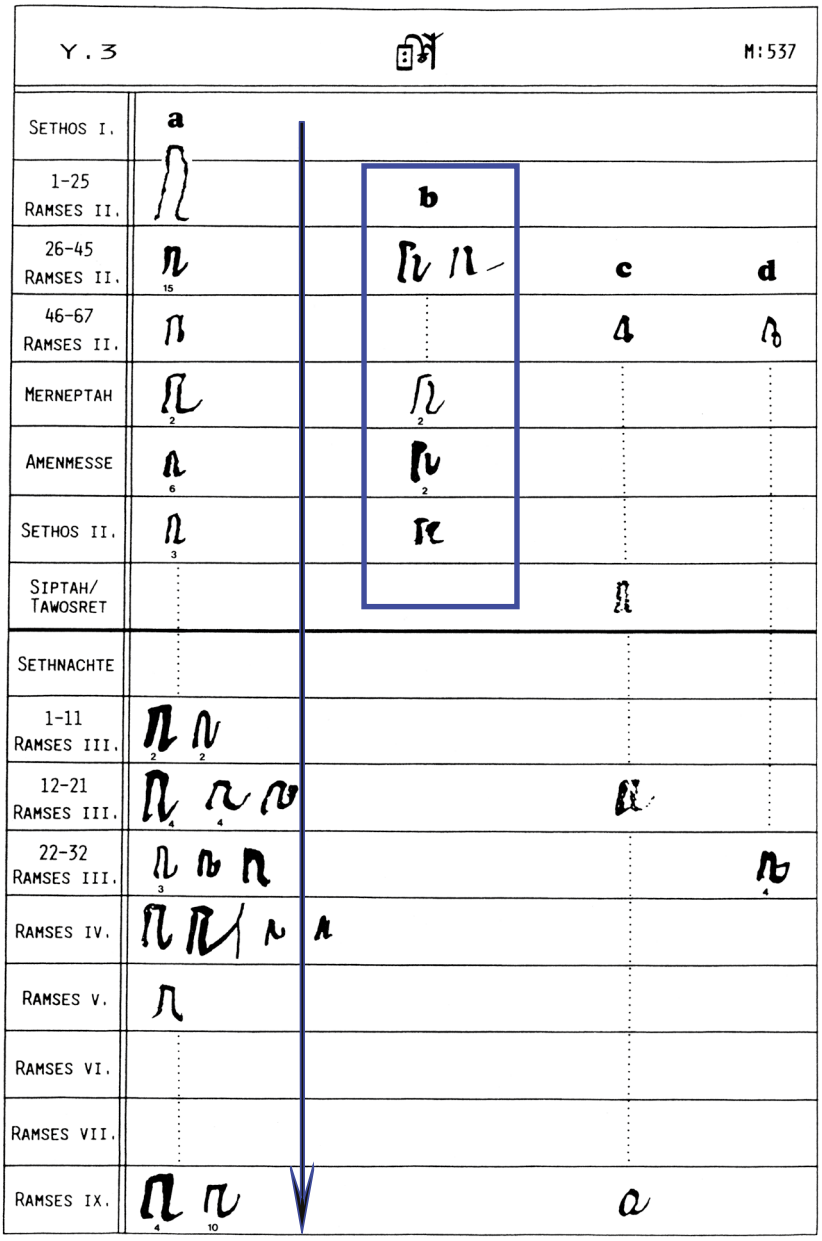


Fig. 2: The sign form variants of the scribal palette 𓏞 (Y3) with always attested type a and only in the 19th dynasty attested type b (after Wimmer 1995 II, 382)

upper left to lower right but slightly turning downwards at its right end – and the 20th 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 ",".[18] 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 20th dynasty compared to the 19th 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* + ꜥ, (D21 + D36) for which a new ligatured type is attested for the 20th 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 19th or 20th 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 20th 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

18 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.

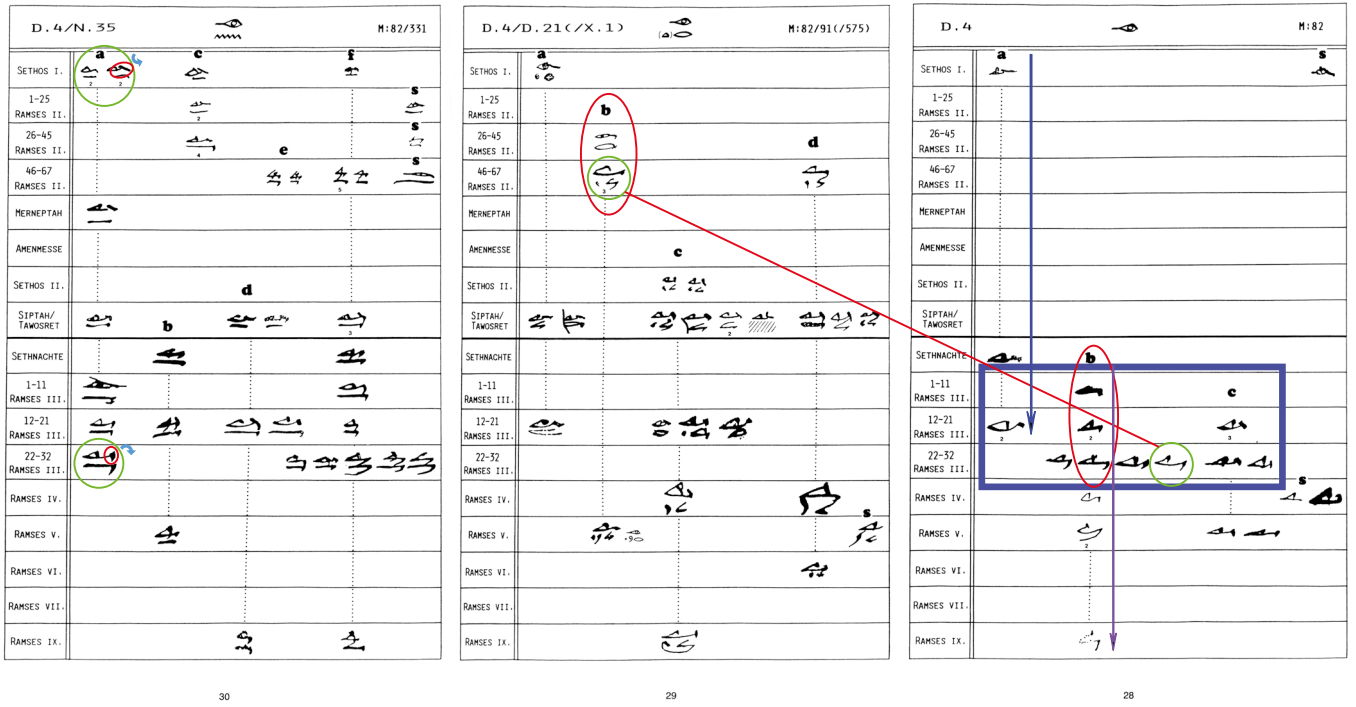


Fig. 3: The two distinct forms of the sign 𓁹 (D4) in administrative cursive writing as attested in the 19th (upper half) and in the 20th dynasty (lower half), with a parallel use of both signs from the end of the 19th dynasty until the end of the reign of Ramesses III in the 20th dynasty. D4 used alone or in combination with other signs (after Wimmer 1995 II, 28–30)

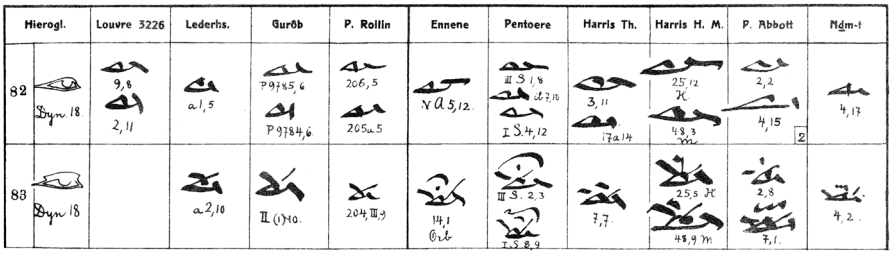


Fig. 4: Attested forms of the signs 𓂝 (D4) and 𓁹 (D6) in neat formal cursive writing with the constant presence of Wimmer's type a (see above fig. 3) and the mainly Theban form of the sign with the ","-like right final stroke typical for the 20th dynasty (after Möller ²1927 II, 7)

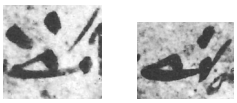
form with the ","-like final stroke becomes predominant in the 20th dynasty. What attracts further attention is that this can also be seen in Möller's palaeography in which the 𓂝 sign (D4) with the ","-like final stroke is characteristic for Theban manuscripts of the 20th dynasty, pointing to a local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

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 20th dynasty, with the oldest definitively dated copy being from year 26 of Ramesses III,[20] 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 𓂝 (D4) and 𓁹 (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,[21] shows on the one hand that the period of use of the "older" form of 𓂝 (D4) can be extended somewhat further, whilst on the other hand the variety of signs used by that scribe[22] 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,[23] 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 𓎛 (Aa1, *ḫ*).

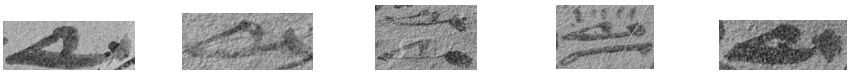
19 For diatopic differences in writing styles, see already Möller ²1927 II, Introduction, 2–3, 12–13.
20 See Dorn 2013, 124 (O. Lacau = HO III/3).
21 Dorn 2004, 46–47.
22 See Janssen 1987, who already raised that issue over twenty years ago.
23 See Janssen 1987.

Table 2: 𓂋 (D4) and 𓂓 (D6) attested in some of the witnesses of the teaching of Amennakhte (HO III/3 and O. Basel Tal der Könige 732) and in the letter of Menna (O. Chicago OIM 12074)[24] (not to scale)

HO/III, 3 (l. 3, l. 9),



O. Chicago OIM 12074 (l. 2, l. 3)



O. Basel Tal der Könige 732 rto (l. 2, l. 4, l. 4, l. 5, l. 5)

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

Clear cases of dating relevant signs are 𓄡 (Aa1)[25] as well as the sign group 𓊃 (D51 + D40), which is attested for example as the determinative of the title *sš-ḳd*. In the 19th 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 20th dynasty form, which makes analysis of the ductus essential for a clear distinction before the sign is used for dating purposes. The 20th dynasty form of the sign 𓄡 (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 19th dynasty precursor, is not only attested in isolated use but also in combination with other signs in words or sign sequences, such as *ḫn*, *ḫr*, *ḫt* 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 𓄡 (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 ostracon 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."

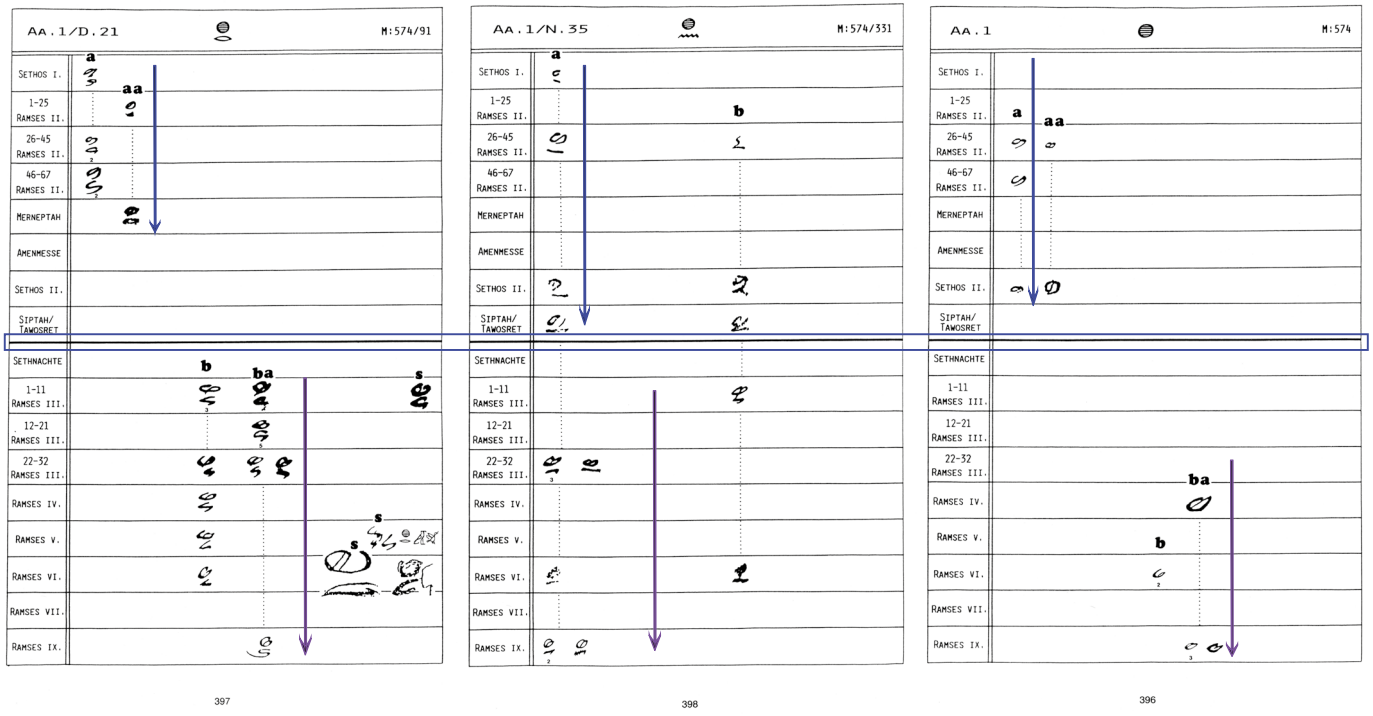


Fig. 5: The two distinct, dating relevant, forms of sign 𓄿 (Aa1) in administrative cursive writing as attested in the 19th (upper half) and in the 20th dynasty (lower half), used alone or in combination with other signs (after Wimmer 1995 II, 396–398)

use at Deir el-Medine during the 20th dynasty,[26] is attested hundreds of years earlier in formal cursive writings throughout the country,[27] namely in Papyrus Prisse (from Thebes) as well as in the Illahun papyri according to Möller.[28] Wimmer's type a, the distinctive form used during the 19th 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)[29] and the beginning of the New Kingdom (P. Ebers).

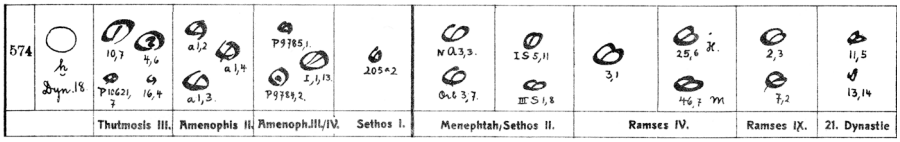


Fig. 6: The sign 𓂋 (Aa1) diachronically and diatopically always attested in neat formal cursive writing corresponding to Wimmer's type b (after Möller ²1927 II, 51)

The same but inverted case of a sign (see above scribal palette 𓂝, 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 (𓃩, C7).[30] 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 ²1927 I, 55 (574).

29 See Möller ²1927 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 ²1927 II, 12 (144) with Wimmer 1995 II, 22 (C.7). The appearance of the sitting form can also be observed in Möller ²1927 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."[31]

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.[32] 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.[33]

It can be shown that during the 19th dynasty the use of the "s" like  (Aa1) 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 (Aa1) 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 19th dynasty administrative form of (Aa1) attested at Deir el-Medine can even be found in some copies of the Kemyt, as on O. DeM 1163,[34] O. DeM 1172 + O. Cairo JdE 56842,[35] and on O. DeM 1847,[36] thus indicating the impact the sign form had on scribes even when they were

31 Janssen 1997a, 145.

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

33 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.

34 Mathieu and Ritter 2008, 211, pl. 8.

35 Posener 1951/1952/1972, pl. 23.

36 Gasse 2005, 128.

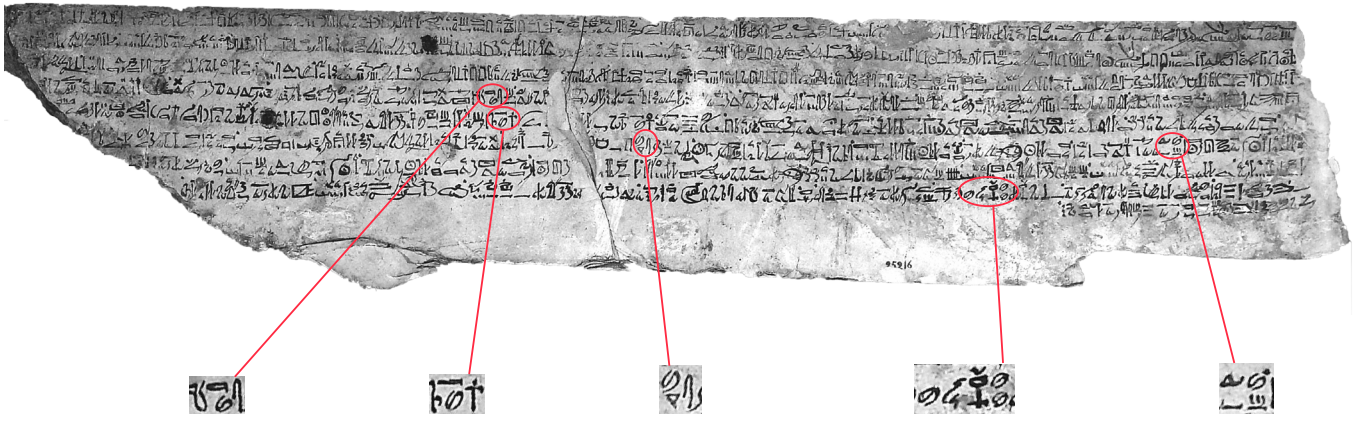


Fig. 7: The so-called Sinuhe O. Cairo CG 25216, found in the tomb of Sennedjem (TT 1) at Deir el-Medine, dating to the 19th dynasty, showing the idiosyncratic 𓄿 (Aa1), the lying "s"-like sign (after Saleh and Sourouzian 1986, nº 220)

using another script, in this case the archaizing Middle Kingdom cursive writing written in columns. The sign 𓏏 (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 𓏏 (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 𓇳 (N5) in the same text.[37] Altogether the sign 𓏏 (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 𓏏 (Aa1)

The use of the different forms of the sign 𓏏 (Aa1) during the 19th and 20th 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.[38] 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".[39]

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 𓏏 (Aa1), but can be dated to the 19th 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.

19th dynasty examples[40]

O. DeM 1106 (fig. 8)[41] 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.[42]

The sign 𓄿 (Aa1) in line 3 shows the form of the dense 19th dynasty "s"-type[43] as well as the long, left stroke of the two s-signs 𓋴 (S29)[44] in the same line. The rendering of the group 𓊪 (D51 + D40) as the determinative of the title *sš-ḳd.w* fits the expected form typical for the 19th dynasty.

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

The sign 𓄿 (Aa1) is not rendered in the expected idiosyncratic "s"-type form typical for texts from Deir el-Medine dated to the 19th 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 ostracon to be safely dated. … the degree of reliability… has to be rated very differently (translation: AD).[47]

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

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

42 Davies 1999, 161.

43 This is one of the cases which illustrates the above-mentioned problem that it is sometimes difficult to differentiate between the "closed" 19th dynasty s-type and the "round" 20th 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].

44 Wimmer 1995, 206.

45 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 19th dynasty, without providing further details on the dating; Posener 1938, 4, pl. 9–10a.

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

47 Wimmer 2000, 358.

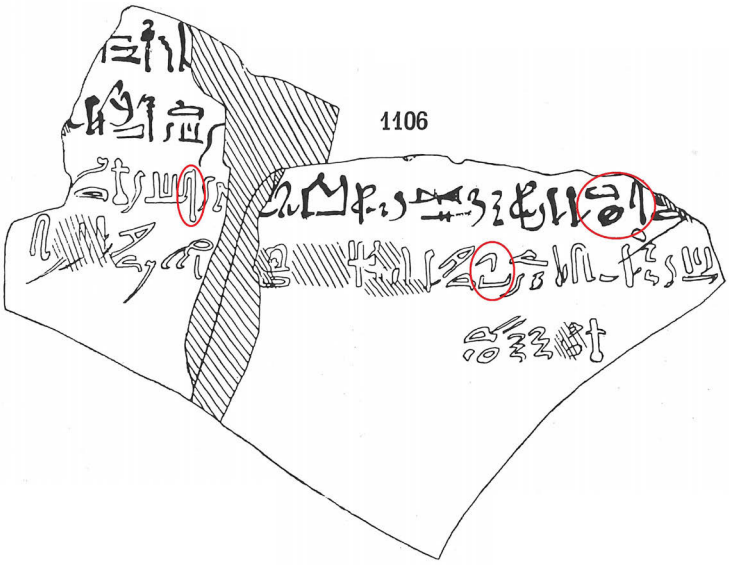


Fig. 8: O. DeM 1106 with the rendering of 𓄿 (Aa1) in § 24.6 of the former "Teaching of a man for his son", now of "The teaching of Hardjedef" (after Posener 1938, pl. 54a)

In the case of O. DeM 1014+ 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 19th dynasty date.[48] The complete absence of ligatures can be put forward as a general palaeographical argument which could support the 19th dynasty date.[49]

20th dynasty examples

O. DeM 1022 with the "Satire of the Trades § 10.1–10.5"[50] and O. DeM 1027 with the "Hymn to the Nile § I.1–10"[51] (fig. 10) were both written by Itnefer[52] who was

48 Wimmer 2001, with several examples. For different colour photographs of the entire ostracon 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.

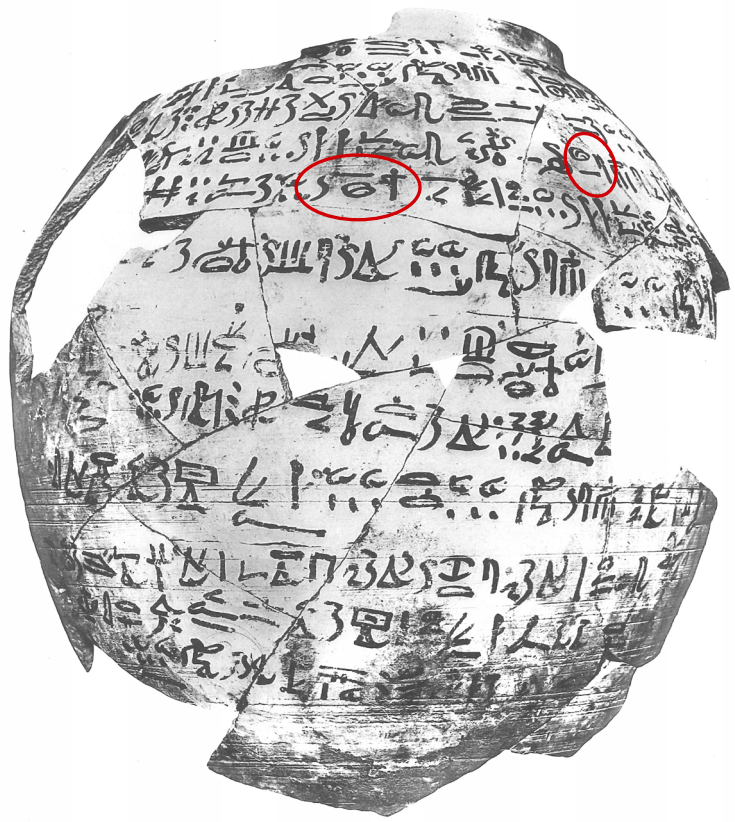


Fig. 9: O. DeM 1014[+] with the rendering of 𓄿 (Aa1) in § 30.5–30.6 of the "Satire of the Trades" (after Posener 1938, pl. 10a)

active during the middle of the 20th dynasty. On both ostraca the expected round Wimmer type b of 𓄿 (Aa1) was used, also confirming the presence of that sign form in literary texts from Deir el-Medine during the 20th dynasty.[53]

O. London British Museum EA 29549 with a Miscellanies text[54] (fig. 11) was written by a pupil (*ḫrỉ-ʿ*) of the future deputy Hay (vii) and is dated to year 14 of Ramesses III.[55] The ostracon 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.

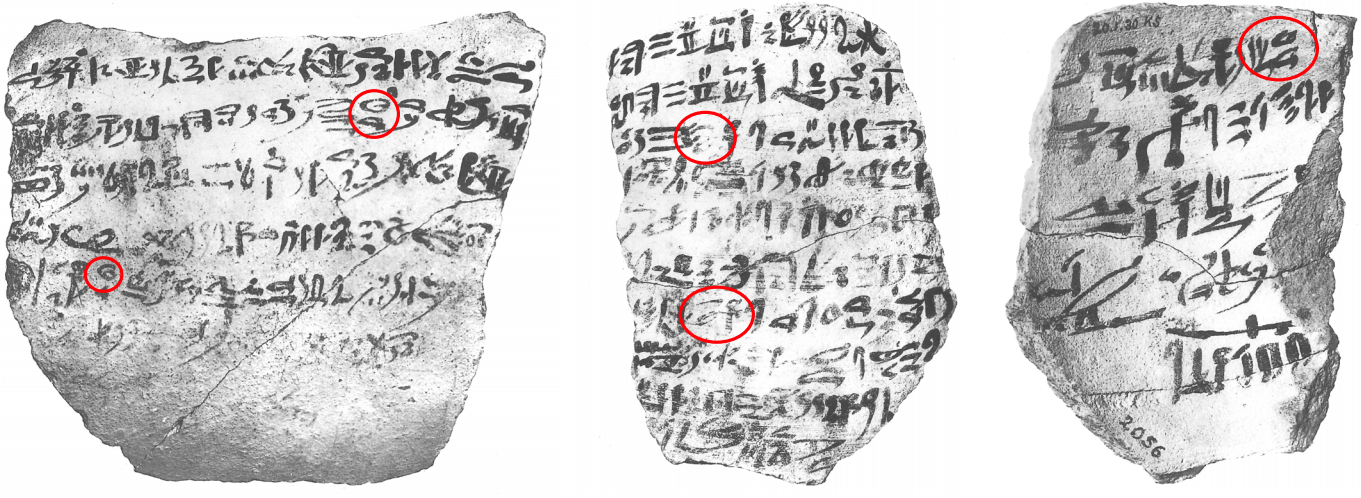


Fig. 10: O. DeM 1022 (“Satire of the Trades”; left) and O. DeM 1027 (“Hymn to the Nile”; right: *recto* and *verso*) signed by Itnefer with the rendering of 𓄿 (Aa1) marked by red circles (after Posener 1938, pl. 14a, pl. 16a)

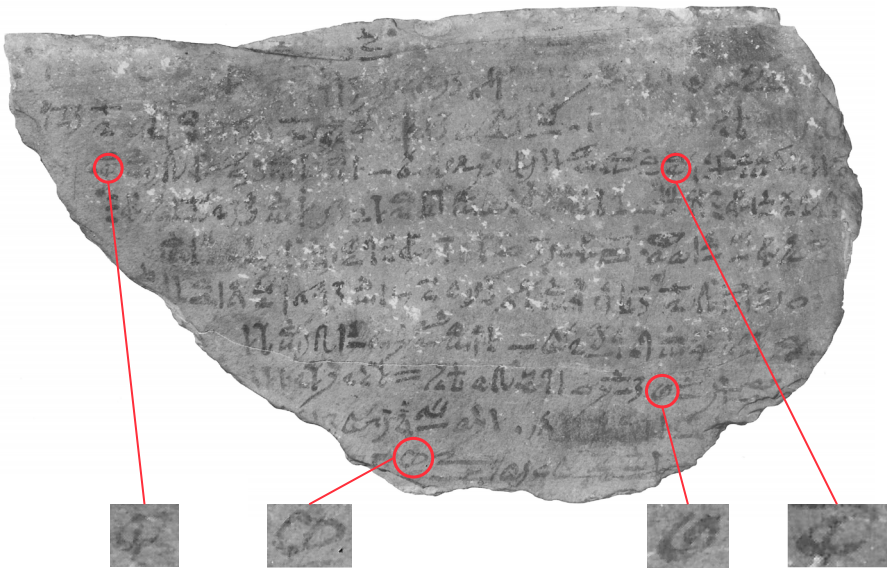


Fig. 11: O. London BM EA 29549 *recto* with a Miscellanies text with some of the 𓄿 (Aa1) signs marked in red which were drawn with two strokes instead of one loop (Demarée 2002, pl. 77)

because it shows a particular rendering of 𓄿 (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 19th 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 𓄿 (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 20th dynasty example from the list of school exercises may suffice here to illustrate the dating relevance of 𓄿 (Aa1) and the applicability of Wimmer's *Hieratische Paläographie* on literary texts.

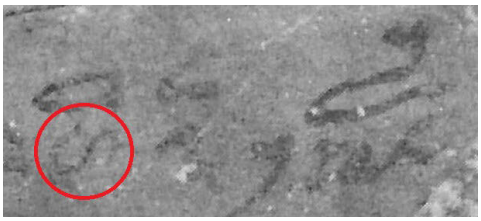


Fig. 12: O. London BM EA 29549, verso line 1, with the beginning of the name of Tarekhan with the 𓈖 (Aa1) sign to the lower left looking like the 19th dynasty "s"-like type (Demarée 2002, pl. 78)

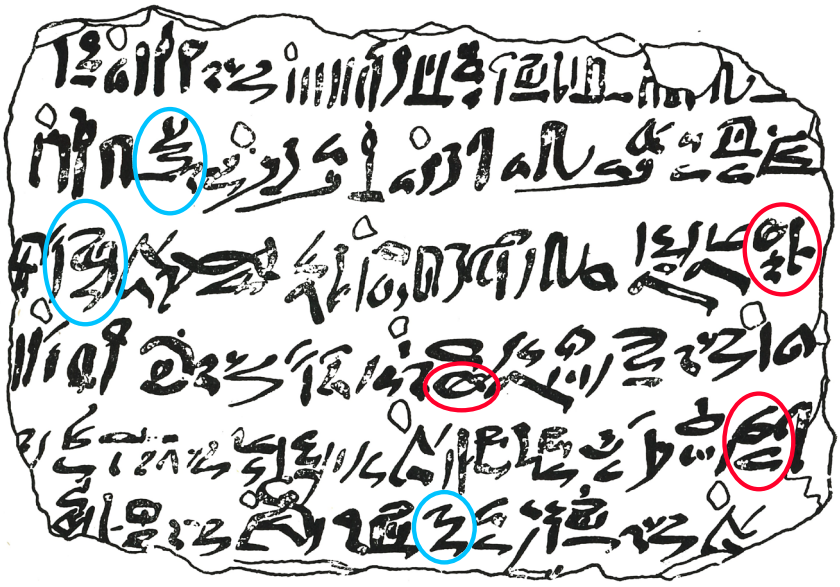


Fig. 13: O. Petrie 8 (= HO 10/3) *recto* with the sign 𓈖 (Aa1) marked in red and some ligatures marked in blue; both pointing to a 20th dynasty date (after Černý and Gardiner 1957 I, pl. X/3)

O. Petrie 8 (= HO 10/3),[56] 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.[57]

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

57 McDowell 2000, 229; Davies 1999, 96–98.

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

Applying Wimmer's *Hieratische Paläographie* for dating an undated literary ostracon

O. Berlin P. 9026 + O. Moscow Pushkin Museum 4478 (fig. 14) with "The teaching of a man for his son § 24.1–colophon"[58] 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.[59] 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,[60] 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.[61]

The 𓄿 (Aa1) is rendered in "s"-form indicating a date in the 19th dynasty, which is supported by signs discussed above, such as the scribal palette (𓏛, Y3; see above fig. 1 and 2) or the recumbent Seth animal. Based on the palaeographic analysis, the ostracon can clearly be dated to the 19th 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.

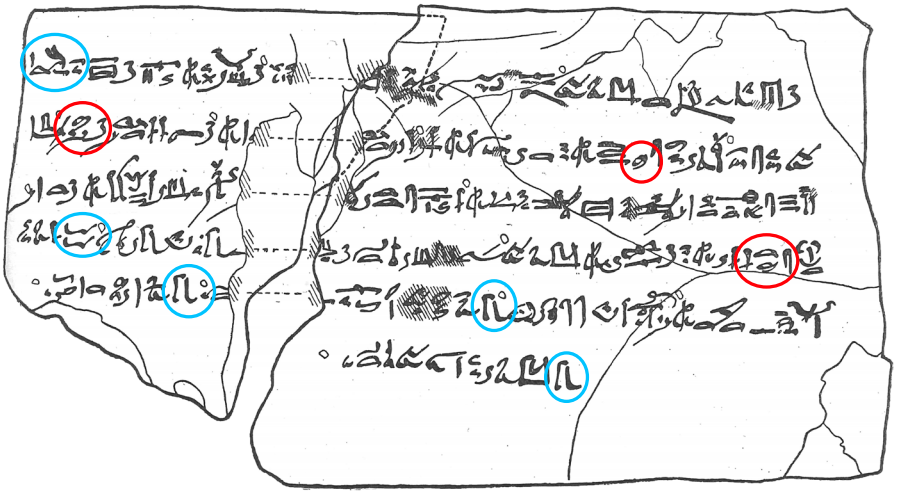


Fig. 14: O. Berlin P. 9026 + O. Moscow Pushkin Museum 4478 with the characteristic "s"-type 𓊃 (Aa1), typical for texts from Deir el-Medine dated to the 19th dynasty marked in red and other signs marked in blue supporting the newly proposed dating of the text to the 19th dynasty (after Posener 1950, fig. 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 𓊃 (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 19th and 20th dynasty, as O. DeM 1014+ and O. London BM EA 29549 have shown. As Janssen stated: "The proof of the pudding is in the eating"[62] 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."[63] 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.[64] 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,[65] 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".

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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].

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Von Bildern und Bienen – Methodenreflexionen zur digitalen paläografischen Analyse des Hieratischen

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Abstract

This paper addresses the question of to what extent digital methods and specific tools can be supportive for palaeographic studies of hieratic writing. A common task of palaeographic research is to find visually similar signs. An artificial neural network is used for image analysis of the hieratic sign of the bee (𓆇 Gardiner L2). Its output values are grouped using the dimensionality reduction technique *t-SNE*. The expected result represents a group of similar hieratic shapes. It is highlighted how the palaeographic data must be handled, focusing mainly on the compatibility of born digital data and retro-digitized material. For this purpose, a workflow for the treatment of the material is proposed. Digital palaeography is used to determine shape classes for the hieratic sign of the bee. The paper concludes with reflections on methodology and bias in research within the fields both of Egyptology and digital humanities.

Dieser Beitrag steht in Zusammenhang mit dem von Svenja A. Gülden im vorliegenden Band. In beiden Artikeln werden digitale Ansätze des AKU-Projektes[1] vorgestellt. Gülden unternimmt eine experimentelle Analyse zu Formvarianten hieratischer Zeichen der 18. Dynastie. Dabei berücksichtigt sie unterschiedliche Beschriftungsoberflächen und Textsorten auf der Basis bereits bereinigter digitaler Daten. Der vorliegende Beitrag fokussiert auf die Methodenreflexion zur digitalen paläografischen Analyse des Hieratischen und der digital unterstützten Formklassenbildung.[2]

Methodische Ausgangslage

In der mittelalterlichen Handschriftenkunde oder Kodikologie sind Methoden digitaler Paläografie mittlerweile bereits fester Bestandteil geisteswissenschaftlicher

1 „Altägyptische Kursivschriften. Digitale Paläographie und systematische Analyse des Hieratischen und der Kursivhieroglyphen“ (kurz: AKU-Projekt); https://aku.uni-mainz.de.

2 Wir danken Svenja A. Gülden für die anregenden Diskussionen bei der Erprobung der Methodik und Tools.

Forschung. Das methodische Spektrum ist breit gefächert und reicht von der Bereitstellung von digitalem Bildmaterial bis hin zu der computergestützten Auswertung mit Hilfe künstlicher Intelligenz.[3] Die Grundlage dieser Methoden bildet die Anreicherung des Bildmaterials mit Metadaten (Annotation), welche einen wesentlichen Aspekt der Datenaufnahme darstellt. Ziel derartiger Annotationen ist es, die Bilddaten anhand ihrer Metadaten auffindbar zu machen, zu gruppieren und somit einen Vergleich zu ermöglichen. Die Aufnahme, Bearbeitung und Veröffentlichung des Materials wird meist durch virtuelle Forschungsumgebungen und -anwendungen realisiert.[4]

Auch klassische paläografische Fragestellungen wie die Klassifizierung von Schriftarten bzw. deren Datierung können durch (semi-)automatisierte Verfahren unterstützt werden.[5] Mikrographetische Ansätze widmen sich dem Aspekt der Formausprägung einzelner Zeichen und ermöglichen einen Vergleich aufgrund von Ähnlichkeitsmetriken.[6] Kombinationen dieser methodischen Vorgehensweisen sind darüber hinaus in jeder erdenklichen Form möglich.[7]

In den Altertumswissenschaften – speziell in der Ägyptologie – sind Realisierungen digitaler Paläografie weniger verbreitet. Bisher wurden bspw. paläografische Daten polychromer Hieroglyphen in einer Online-Datenbank[8] veröffentlicht und eine digitale Edition demotischer Texte inklusive der dazugehörigen Paläografie publiziert.[9] Zusätzlich befindet sich ein Projekt zur Erkennung von Schreiberhänden im Grab des Inhercha (TT 359) in der Entwicklung.[10] Paläografische Daten im weiteren Sinne liefert das Projekt *The Abnormal Hieratic Global Portal,* das eine besondere Fokussierung auf die Didaktik des Abnormhieratischen besitzt.[11] Für das Hieratische und die Kursivhieroglyphen wird das Projekt *Altägyptische Kursivschriften* (AKU) ein Forschungsportal zur Verfügung stellen.[12]

Eine Reflexion von Annotationsvorgängen oder computergestützten Auswertungen standen in der Ägyptologie selten im Fokus, es wurden bspw. Vorschläge

3 Zum vielfältigen Verständnis des „Digitalen" innerhalb der digitalen Geisteswissenschaften siehe ausführlich Ciula 2017.

4 Für die Bereitstellung von annotiertem Bildmaterial siehe z. B. *DigiPal* (http://www.digipal.eu [06.09.2021]) oder *Models of Authority* (http://www.modelsofauthority.ac.uk) [06.09.2021].

5 Siehe dazu z. B. Stutzmann 2016; Kestemont, Christlein und Stutzmann 2017 und speziell zur Zeichenerkennung für das Hieratische Bermeitinger, Gülden und Konrad 2021.

6 Ciula 2005.

7 Siehe z. B. das Projekt *Digital Analysis of Syriac Handwriting* (http://dash.stanford.edu) [06.09.2021] sowie erläuternd dazu Crouser, Penn und Howe 2018; Penn u. a. 2020.

8 *The Polychrome Hieroglyph Research Project* (https://www.phrp.be [06.09.2021]).

9 *The Demotic Palaeographical Database Project* (http://demotischdemotisch.de [06.09.2021]).

10 Bettles und Haring 2020.

11 https://lab.library.universiteitleiden.nl/abnormalhieratic/ [06.09.2021].

12 https://aku.uni-mainz.de/ [06.09.2021].

zur Anwendung von Verfahren zur Digitalisierung und Grundzüge zur Struktur von diversen Forschungsvorhaben vorgelegt.[13] Dieser Artikel möchte einen Anstoß geben, die Methodenreflexion als ein erweitertes Ziel von Forschung zu definieren. Dadurch soll sich der Forschungsschwerpunkt weg von einem alleinigen Endresultat hin zu einer verstärkten Einbindung des Forschungsweges durch Methodenreflexion bewegen. Eine stetig reflektierte und offen dargelegte Methode führt zu einer Verbesserung des Forschungszyklus. Besonders die Forschungsdaten, die während des methodischen Prozesses entstehen, sollten gesammelt und archiviert werden, um so die Methodenreflexion nachvollziehbar und die Ergebnisse für andere reproduzierbar zu machen.[14]

Es wäre wünschenswert, die Fach-Community auch über methodische Fehlschläge und ergebnislose Ansätze zu unterrichten. Ein negatives Ergebnis führt zu einem Erkenntnisgewinn über die Anforderung und Beschaffenheit von Daten und die angewendete Methode. Der methodische Erkenntnisgewinn erfolgt dabei auf mehreren Ebenen:

1. Die Datengrundlage ist für die Methode nicht geeignet, kann aber bspw. durch Änderungen nachträglich an die Methode angepasst werden oder
2. die Methode lässt sich nicht für die zugrundeliegenden Daten nutzen, kann sich aber bspw. für andere Daten als fruchtbar erweisen.

Im Idealfall führt diese Divergenz zu einem wechselseitigen Dialog zwischen Methodenentwicklung und Datengenerierung.

Digitale Paläografie im AKU-Projekt

Ein typisches Forschungsobjekt der Paläografie ist die Formausprägung der kleinsten grafischen Einheit eines Schriftsystems, auch *Graphem* genannt.[15] Die Daten, die einer paläografischen Untersuchung zugrunde liegen, bestehen in der Regel aus Bilddaten, die anhand einer spezifischen Fragestellung aufgenommen werden. Generell ist die Arbeit mit diesen Daten eng auf eine entsprechende Visualisierung (z. B. als paläografische Tabelle) hin ausgerichtet.[16] Für eine objektive Beschreibung (und ohne Zuhilfenahme einer Visualisierung) verschiedener Schriftphänomene

13 Berg und Donker van Heel 2000, 39–42; Quirke 2010; Gülden, Verhoeven und Krause 2017; 2020.

14 Deutsche Forschungsgemeinschaft 2019, 18–19.

15 Zum durchaus schwierig zu definierenden Begriff *Graphem* in der ägyptologischen Forschung siehe Klinkenberg und Polis 2018; Polis 2018.

16 Untersuchungen, die Schriftphänomene rein deskriptiv betrachten, sind ohne entsprechende visuelle Wiedergabe schwer nachzuvollziehen. Siehe dazu z. B. Gardiner 1909, 2.

des Hieratischen fehlen bisher geeignete Ontologien und Taxonomien.[17] Für das AKU-Projekt stellt deswegen die manuelle digitale Umzeichnung (*Faksimile*) die Grundlage der paläografischen Aufnahme von Schriftzeichen dar.[18]

Dabei ist der Ansatz, die zum Teil schwer lesbare oder abgeplatzte Tusche durch eine klare Umzeichnung zu repräsentieren, nicht neu. Bereits in den ersten Veröffentlichungen von hieratischen Texten faksimilierten die Bearbeitenden diese per Hand.[19] Diese Art der Visualisierung hat sich in der Hieratistik etabliert; mittlerweile tendieren Forschende aber eher dazu, Ausschnitte aus dem Fotomaterial, so genannte *snippets*, in einer paläografischen Übersicht zusammenzustellen. [20]

Grundvoraussetzung für die paläografische Methodik bildet die Anreicherung visueller Repräsentationen (Zeichenformen, Wortschreibungen und andere Schriftphänomene) mit entsprechenden Metadaten, die den Informationsgewinn letztendlich ermöglichen.[21] Diesen Ansatz verfolgte bereits Möller, der in seiner *Hieratischen Paläographie*[22] unter anderem folgende Metadaten zu den Zeichen aufnahm:

- Identifizierung des Schriftträgers: [23]
  - durch den musealen Standort und die Inventarnummer oder
  - die Angabe von Nummern oder Tafeln aus der einschlägigen Edition oder
  - eine *in situ*-Angabe bei immobilen Schriftträgern
  - oder eine vorläufige Bezeichnung bei unpubliziertem Material
- Identifizierung des hieratischen Zeichens durch Zuordnung zu einer Standardhieroglyphe
- Fortlaufende Nummerierung aller Hieroglyphen nach eigenen Kriterien der Reihenfolge und Bildinhalte (inkl. einer Konkordanz zur damals verwendeten sog. Theinhardt-Liste[24])
- Datierung des Schriftträgers

17 Mögliche Ansätze liefern Kraus 2022, 7–12 oder Miyanishi 2016, 53–60, die die einzelnen Zeichen in ihre grafischen Grundkomponenten aufteilen.

18 Zur Verfahrensweise des Faksimilierens siehe Gülden 2018, 95–98.

19 Siehe bspw. Chabas 1867, 37.

20 Als mögliche Gründe dafür kann man die bessere Verfügbarkeit und Qualität von Fotomaterial sowie eine Zeitersparnis bei der Erstellung solcher *snippets* anführen. Zu den Ansätzen der Visulisierung paläografischer Daten siehe Gülden 2018, 95.

21 Gemeint ist hier die „klassische" Methode der Paläografie, die vor allem dazu verwendet wird, undatierte Texte besser zeitlich einordnen zu können, vgl. z. B. Verhoeven 2001, 272–275. Zur Methodik im erweiterten Sinn, die die Paläografie als Grundlagenforschung der Schrift und aller ihrer Spezifizierungen sieht, siehe z. B. Gülden, Verhoeven und Krause 2020, 637.

22 Möller 1927a; 1927b; 1936.

23 Für die ersten beiden Bände von Möllers *Paläographie* liegen bereits Konkordanzen der Quellenbezeichnungen vor: Konrad 2019; 2021.

24 Anonymus 1875.

- Position des hieratischen Zeichens:
  - auf dem Schriftträger bzw. in einem Text oder
  - auf den Tafeln der Edition
- in Einzelfällen Benennung der Zeichenanordnung, des Wortkotextes oder der Lesung.

Diese Metadaten stellen auch in der digitalen Paläografie Minimalanforderungen dar, die für schriftgeschichtliche Fragestellungen notwendig sind. Zur Datenaufnahme nutzt das AKU-Projekt eine relationale Datenbank, die auf dem Datenmodell von *Trismegistos*[25] aufbaut und durch Elemente des *Thot-Data-Model*[26] sowie projekteigene Entwicklungen erweitert wird.[27] Für die Langzeitarchivierung und zukunftsorientierte Kompatibilität wird parallel dazu eine *MariaDB*-Version[28] entwickelt, die die Basis der Online-Plattform bildet. Durch die Verwendung einer relationalen Datenbank werden die Forschungsdaten so weit atomisiert, dass vielfältige Such- und Sortierabfragen möglich werden.[29] Über die von Möller verwendeten Metadatentypen hinaus werden weitere mit aufgenommen wie z. B. alternative Zeichennummern aus anderen paläografischen Untersuchungen und hieroglyphischen Zeichenlisten, Textgenres oder die automatisch extrahierten Größen aus den Vektorgrafiken (siehe oben). Weiterhin werden nach den *linked open data* (LOD) Prinzipien verschiedene Verknüpfungen zu existierenden Thesauri und anderen digitalen Projekten eingebunden, die so nach und nach ein *semantic web* ägyptologischer Forschung bilden können.[30] Für eine systematische Analyse der altägyptischen Kursivschriften kommen einige Grundabfragen (z. B. nach Datierung, Zeichennummer, Materialität oder Genre) in Betracht, die sich durch den flexiblen Zugang

25 Depauw und Gheldof 2014.

26 Polis und Razanajao 2016.

27 Siehe dazu die Ausführungen bei Gülden, Verhoeven und Krause 2017, 258–266.

28 https://mariadb.org/ [03.09.2021].

29 Eine Einführung in die Theorie und Konzeption von relationalen Datenbanken bietet Klinke 2017. Speziell zum Begriff der Atomisierung bei der Datenmodellierung siehe Klinke 2017, 116. Auf die Vorzüge einer digitalen Publikationsform haben ausführlich Gülden 2016; Gülden, Verhoeven und Krause 2020 hingewiesen. Die Flexibilität, die ein solcher Zugang mit sich bringt, erlaubt es, gezielte Fragestellungen innerhalb der entsprechenden Forschungsumgebung zu untersuchen. Siehe dazu im Detail Gülden 2016, 88–90; Gülden, Verhoeven und Krause 2020, 640.

30 Als *linked open data* werden in der Regel Daten bezeichnet, die durch eine eindeutige Identifizierung im Netz veröffentlicht sind, auf andere Daten eindeutig verweisen (*linked*) und sowohl frei zugänglich als auch nutzbar (*open*) sind. Das *semantic web* bezeichnet die Vernetzung dieser Daten insgesamt. Einen ausführlichen Überblick zu den Begriffen und ihrer konzeptionellen Geschichte geben Pohl und Danowski 2013. Für die Ägyptologie stellt das Projekt *Thot - Thesauri and Ontology for Ancient Egyptian Resources* (https://thot.philo.ulg.ac.be/ [06.09.2021]) stabile Referenzen zu verschiedenen Thesauri zur Verfügung.

durch eine Datenbank leicht als Zeichenliste oder andere Formen der Visualisierung realisieren lassen.[31]

Auch klassische Printpublikationen ermöglichen einige dieser Zusammenstellungen, bei denen jedoch der explorative Charakter im Gegensatz zu digitalen Publikationsformen verlorengeht. Darüber hinaus sind vor allem zwei Punkte nicht oder nur begrenzt in gedruckter Form zu verwirklichen. Diese betreffen zum einen die Überprüfung des Faksimiles bzw. die Visualisierung des Kotextes am Original sowie zum anderen eine Suche bzw. Sortierung nach visuell ähnlichen Zeichen.

Vor allem die Suchmöglichkeit stellt ein dringendes Desiderat dar. Obwohl bereits Listen leicht verwechselbarer hieratischer Zeichen auf Grundlage visueller Merkmale publiziert wurden, ist ihre Zusammenstellung jedoch selektiv und immer aus dem Blickwinkel der jeweiligen Bearbeiterin bzw. des jeweiligen Bearbeiters ausgerichtet.[32] Ziel dieser Listen ist es, dem Lesenden eine Hilfestellung bei nicht eindeutigen Schreibungen an die Hand zu geben. Eine personalisierte Fragestellung wird dabei durch die begrenzte Auswahl auf bestimmte Zeichen eingeschränkt. Zudem ist es problematisch, den Begriff der visuellen „Ähnlichkeit" objektiv zu definieren. Zweifellos stellt die visuelle bzw. grafische Ähnlichkeit eine der Basismethoden der komparativen Paläografie dar, die ähnliche Sets morphologischer Merkmale zusammenstellt und miteinander vergleicht.[33] Gleichzeitig hängt die Empfindung von Ähnlichkeit oder Unähnlichkeit stark von der persönlichen Wahrnehmung und auch vom Vorwissen des jeweiligen Betrachtenden ab und bildet von Natur aus selten die Grundlage für eine objektive Beschreibung.[34] Gerhard Powitz, ein Experte auf dem Gebiet der mittelalterlichen Handschriftenkunde, fasst dazu treffend zusammen:

> *Daß letztlich, wenn es um die Beurteilung von Schrift geht, soviel von Erfahrung und der Fähigkeit zu sehen abhängt, ist geradezu ein Leitmotiv, das sich durch die methodologischen Äußerungen vieler Paläographen zieht. Vorrangig wichtig ist und bleibt in dieser Disziplin – als Grundlage der Ausbildung des sogenannten paläographischen Blicks – die Anschauung. Der Forschende muß Handschriften über Handschriften gesehen haben, im Original oder in Abbildungen oder im Faksimile; er muß sich in wechselnde Schriftbilder versenkt und versucht haben, ihre charakteristischen Züge dem Gedächtnis einzuprägen. Ein subjektives Ele-*

31 Formuliert wurden diese Grundzüge in Gülden, Verhoeven und Krause 2020, 640.

32 So z. B. Verhoeven 2001, 257–271 und Möschen 2018, 326, Abb. 5. Siehe zusätzlich el-Kholy 2007 und Kurth 1999, die antike Schreibfehler untersuchen, die womöglich auf die Ähnlichkeit von Zeichen zurückzuführen sind.

33 Verhoeven 2001, 273; Stokes 2015, 2.

34 Diese Problematik fällt in das Themengebiet, das als *perceptual similarity* bezeichnet wird. Siehe dazu bspw. Smith und Heise 1992.

> *ment wird sich nie ganz fernhalten lassen. Um so nötiger ist das Gespräch der beteiligten Subjekte, der Erfahrungsaustausch auf einem Gebiet, auf dem wir alle Lernende sind und bis zuletzt Lernende bleiben.*[35]

Im Bereich der *computer vision* und digitalen Paläografie existieren bereits Methoden und Metriken, die eine objektivere Beschreibung der Ähnlichkeitsverhältnisse von Schriftzeichen ermöglichen. Viele dieser Methoden nähern sich den perzeptiven Prozessen des Menschen so weit an, dass sie vergleichbare Ergebnisse zu traditioneller Expertise liefern, die jedoch im Gegensatz dazu einfacher reproduzierbar sind.[36] Digitale Umgebungen (inklusive der dazugehörigen Tools) haben den Vorteil, dass die Nutzenden des Forschungsportals dynamische Ähnlichkeitsvisualisierungen generieren können. Eine für die visuelle Analyse von Zeichenformen denkbare Umgebung stellt der sogenannte *VIKUS Viewer* dar, dessen Funktionalität nachfolgend für eine Fallstudie in Augenschein genommen wird.

Anwendungsbeispiele

Im Folgenden sollen anhand des Graphems der [BIENE][37] () die Vorteile, Herausforderungen und Fehlversuche aufgezeigt werden, die mit einem künstlichen neuronalen Netzwerk bei der Mustererkennung hieratischer Zeichen aufgetreten sind.

Mustererkennung mithilfe computergestützter Verfahren ist ein wichtiger Ansatz innerhalb der paläografischen Methode, da sie es ermöglichen kann, Regelmäßigkeiten und wiederkehrende Strukturen in einer großen Menge an Bilddaten zu erkennen. Zielsetzung der nachfolgenden Analyse ist die Gruppierung einzelner hieratischer Zeichen in sogenannte *Formklassen*.[38] Für den Variantenreichtum des Hieratischen sind die hieroglyphischen Kodierungen bei weitem nicht ausreichend, weshalb eine speziell für das hieratische Schriftsystem entwickelte Strukturierung benötigt wird. Diese Formklassen bilden je Graphem eine rein auf visuellen Kriterien basierende Untergliederung in Subgruppen. Da es bei einer großen Menge an Hieratogrammen[39] mit dem bloßen Auge nicht mehr möglich ist, diese Leitstruktu-

35 Powitz 1997, 248–249.

36 Bspw. Ciula 2005; Fecker, Märgner und Schaßan 2015; Kestemont, Christlein und Stutzmann 2017; Stutzmann 2016.

37 Im Folgenden werden die Hieratogramme unter die Kategorie [BIENE] subsummiert. Ob aus emischer Perspektive auch andere fliegende oder Staaten bildende Insekten der Kategorie angehören, muss noch evaluiert werden. Siehe dazu auch die Anmerkungen 42–44 (S. 190).

38 Siehe van der Moezel 2018, 65–72 für eine Beschreibung des Konzepts *Formklasse*.

39 Siehe Verhoeven 2001, 1 für die Definition des Begriffs *Hieratogramm*.

ren auf objektiver Basis zu bestimmen, können künstliche neuronale Netze helfen, eine Vorsortierung vorzunehmen.

Das Graphem [BIENE] 

Das Schriftzeichen, das eine Biene darstellt,[40] ist sowohl im Hieratischen, Hieroglyphischen als auch Demotischen belegt.[41] Es wird als Phonemogramm für den Lautwert *bj.t* und als Logogramm für verschiedene Bedeutungen wie „Biene", „Honig" oder „König" genutzt und kann zudem als Klassifikator für Insekten wie bspw. *tkk.t*[42], *ʿfj*[43] oder *bj.w*[44] stehen.

Im Hieratischen ist das Graphem der Biene ein fester Bestandteil paläografischer Studien[45] – häufig erfolgt dabei die eindeutige Zeichenreferenz über die Möller-Nummer 260 und/oder die Gardiner-Nummer L 2.[46] Zudem wird die [BIENE] in einigen Paläografien bei Ligaturen und Lexemschreibungen aufgeführt, die in

40 Siehe generell zur Biene und Imkerei im alten Ägypten Dedekind 1910; Kuény 1950; Nagy 1974; Brewer, Redford und Redford 1994, 125–129; Baqué-Manzano 2001; Kritsky 2007; Feierabend 2014; Kritsky 2015 sowie im Sudan Fluehr-Lobban 2018.

41 Siehe zum Vorkommen und Aussehen des Graphems der [BIENE] Pleyte 1866; Sethe 1892; Piehl 1898; Dedekind 1910, 23–32; Gardiner 1994, 477; Hoffmann 1994, 5–6; Bardinet 1999, 16–22; Meeks 2010, 281–284; Feierabend 2014, 27–46; Taf. 7; Kritsky 2015, Kap. 7; Sign TSL_1_16 <http://thotsignlist.org/mysign?id=16>, in: *Thot Sign List* [06.09.2021]; http://129.206.5.162/beta/palaeography/palaeography.html?entry= in: *Demotic Palaeographical Database Project* [06.09.2021] sowie zum „fünften Bein" der Biene in Darstellungen Evans 2016.

42 Siehe Erman und Grapow 1926–1931, Bd. 5, 336.12; Keimer 1933, 110–111; 1937, 180; Störk 1984, 75–77 und TLA-WCN 173760. Möglicherweise ist das Zeichen mit *kt.t* „Laus (wörtlich: die Kleine)" verwandt , siehe Meeks 2010, 293, Abb. 11a–b

43 Siehe Erman und Grapow 1926–1931, Bd. 1, 182.10–11; Keimer 1937, 181; Bardinet 1999, 17–20; Baqué-Manzano 2001, 507–508; Pfouma 2004, 110; 2010, 215–216; Meeks 2010, 291–293.

44 Siehe Osing 2003, 558; Pfouma 2010, 215–216; Meeks 2010, 281; TLA-WCN 54530. Im Hieratischen bspw. auf P. London, BM EA 10676 (P. Gardiner II), Kolumne 331 (Belegstelle: Buck 1961, 224m) bezeugt; siehe auch Goedicke 1988, 20b für ein Faksimile.

45 Ali 2002, Tf. 124; Bomhard 1998, 44; Cenival und Posener-Kriéger 1968, Tf. 6; Demichelis 2002, 23; Dobrev, Verner und Vymazalovà 2011, 26; Edel 1980, Tf. 40–42; Gasse 2002, 89; Goedicke 1988, 20; Lenzo Marchese 2008, Tf. 27; Marciniak 1974, 206–207; Möller 1927a, 25; 1927b, 24; 1936, 24; Posener-Kriéger 2004, Tf. 31; Posener-Kriéger, Verner und Vymazalovà 2006, 445; Roccati 2011, 222–223; Verhoeven 2001, 150–151.

46 Ausnahme stellt hier bspw. das Projekt *Paléographie Hiéroglyphique* (Leitung: Dimitri Meeks) dar, das die in der jeweiligen Paläografie aufgenommenen hieroglyphischen Grapheme mit 1 beginnend fortlaufend durchnummeriert. Siehe bspw. Haring 2006, 74 zum Graphem der Biene – § 114 – im Grab des Sennedjem in Theben (TT 1). Teilweise wird neben der Möller- und Gardinernummer auch auf das Nummerierungssystem für Ligaturen und ausgewählte Lexeme von Verhoeven 2001, 212–225 Bezug genommen, bspw. bei Backes 2016.

gedruckten Listen räumlich vom Eintrag der [BIENE] getrennt sind und daher nicht auf den ersten Blick verglichen werden können.[47] Eine systematische Untersuchung zum Schriftzeichen der [BIENE] im Hieratischen und den Kursivhieroglyphen fehlt bislang.

VIKUS Viewer

Neben den Visualisierungs- und Abfragemöglichkeiten, die die projekteigene Datenbank bietet, schöpft das AKU-Projekt auch aus *Open source*-Entwicklungen aus der *Digital Humanities*-Community. Für einen interaktiven und vor allem alternativen Zugang zu großen Datenbeständen eignet sich bspw. der *VIKUS Viewer*[48], der vom Projekt *Visualisierung kultureller Sammlungen* (*VIKUS*)[49] erstellt wurde. Kennzeichnend für das Tool ist vor allem die Leistungsfähigkeit bei der Anzeige, Visualisierung und Suche kombinierter Daten (und Metadaten),[50] wie sie auch im AKU-Projekt generiert werden. Dadurch bietet sich die Möglichkeit, die Forschungsdaten im Sinne des *distant reading* zu analysieren.[51]

Das Standard-Interface des Viewers besteht aus einer Zeitleistenansicht, bei dem die Bilddaten anhand ihrer Metadaten (in diesem Fall die Datierung) entsprechend chronologisch angeordnet werden (Abb. 1). Die Ansicht ist frei zoombar und erlaubt sowohl einen Überblick über die Gesamtmenge der dargestellten Datensätze als auch das Abrufen von benutzerdefinierten Detailinformationen. Diese werden beim Zoom auf den jeweiligen Datensatz angezeigt (Abb. 2). Zusätzlich sind alle Metadaten durch eine *Keyword*-Suche und eine Volltextsuche zugänglich gemacht. In Abbildung 1 sind am oberen Bildrand durch eine *Keyword*-Selektion alle Hieratogramme aus der Kategorie „Vögel" ausgewählt.

47 Siehe bspw. Backes 2016, 915, 944; Verhoeven 2001, 222–223.

48 https://vikusviewer.fh-potsdam.de/ [10.03.2021]. Siehe zudem die Einführung bei Gülden in diesem Band, Kap. 4.2.

49 https://uclab.fh-potsdam.de/projects/vikus/ [10.03.2021].

50 Zu den strukturellen Überlegungen, die dem *VIKUS Viewer* zu Grunde liegen, siehe Glinka, Pietsch und Dörk 2017.

51 Der Begriff *distant reading* wurde zuerst in der Literaturwissenschaft geprägt und wird als Antagonist zum *close reading* verstanden, siehe Moretti 2000, 56–60. *Distant reading* kann als globaler Ansatz gesehen werden, bei dem ein Erkenntnisgewinn nicht durch die explizite Autopsie aller einzelnen Datensätze zustande kommt. Die grundlegende Idee vom *distant reading vs. close reading* lässt sich u. E. auch auf paläografische Bilddaten anwenden. Diese Sichtweise wird auch von Bell und Ommer 2018 vertreten, die für die kunsthistorische Forschung den abgewandelten Begriff *distant viewing* verwenden. Speziell zum Begriff siehe Bell und Ommer 2018, 71. Obwohl der Begriff *distant reading* bzw. seine abgewandelten Versionen mittlerweile von Moretti selbst nicht mehr verwendet werden (Trilcke und Fischer 2016, 8–13), spiegelt er die Metathematik des hier verwendeten Ansatzes wider.

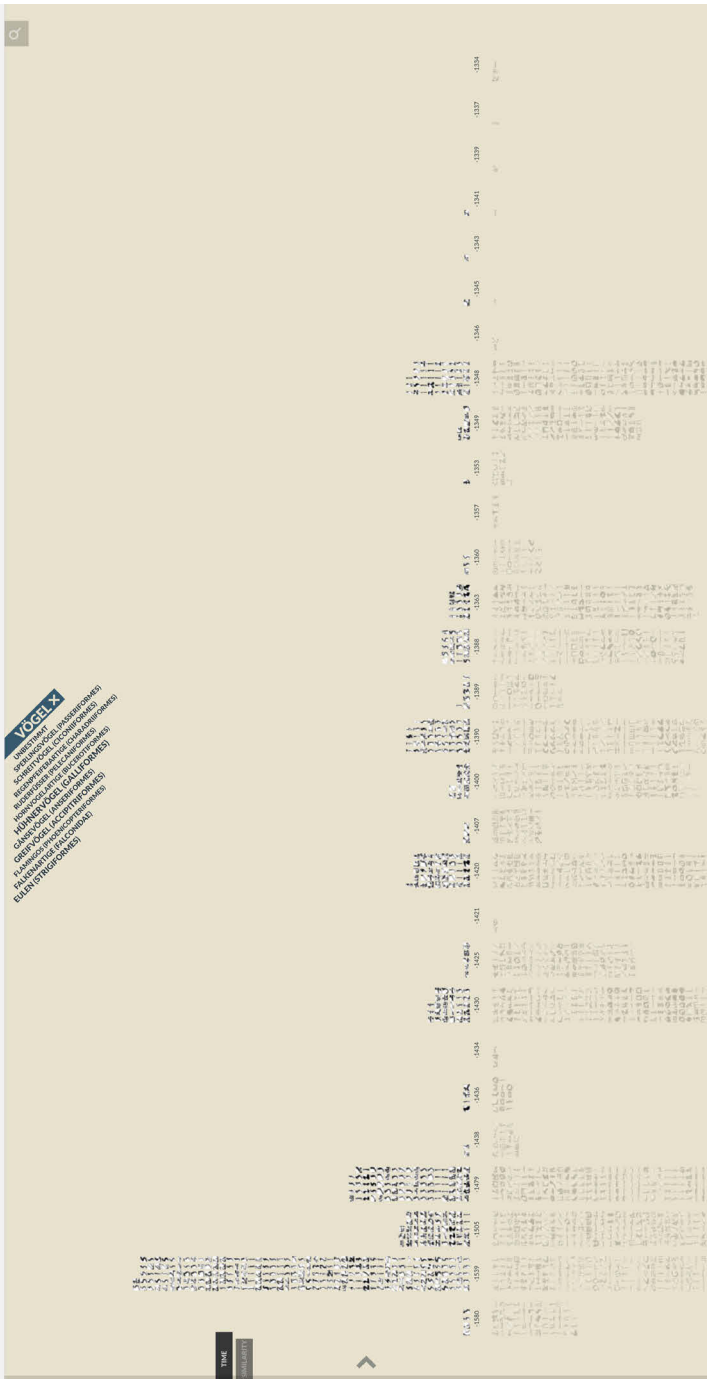

Abb. 1: Standard-Interface des *VIKUS Viewers* mit Zeitleistenansicht

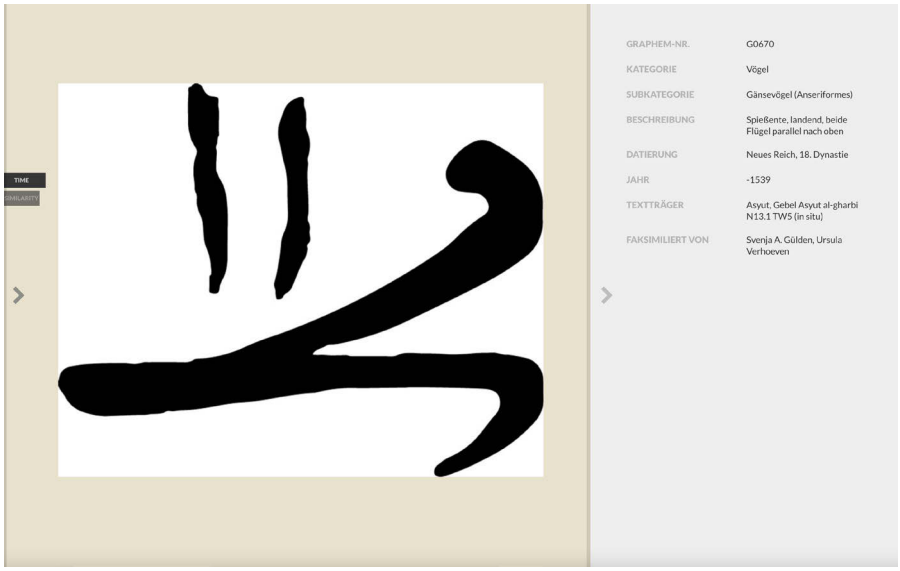

Abb. 2: Herangezoomte Ansicht eines Hieratogramms mit Metadaten im *VIKUS* Viewer

Eine weitere Funktion stellt eine Sortierung anhand der visuellen Ähnlichkeit dar. Visuell ähnliche Zeichen werden in Gruppen zusammengestellt und auf der Benutzeroberfläche entsprechend angeordnet. Dabei wird ein Verfahren zur Visualisierung hochdimensionaler Daten genutzt, das als *t-distributed stochastic neighbor embedding* (*t-SNE*)[52] bezeichnet wird und dazu fähig ist, die Daten in einem Koordinatensystem darzustellen. Dabei wird die Anzahl ihrer Dimensionen auf zwei reduziert, sodass der entstandene Plot bestmöglich die Relationen der einzelnen Datensätze untereinander wiedergibt. Obwohl die generierten Visualisierungen den Eindruck von Clusterverfahren erwecken, sollte hier eine Spezifität des Algorithmus beachtet werden: Ähnliche Datenpunkte (= Hieratogramme) werden von *t-SNE* in der Regel nahe zueinander platziert; eine räumliche Nähe von zwei Datensatzgruppen („Clustern") resultiert jedoch nicht unbedingt auch in einem hohen Grad von Ähnlichkeit. Entfernungsmessungen im leeren Raum zwischen den Gruppierungen sind somit nicht zielführend und sollten auf den Rohdaten oder mit anderen Verfahren durchgeführt werden.[53] Letztendlich liefert die Anwendung von *t-SNE* auf multidimensionale Daten eine gute Vorstellung über deren innere Strukturen und

52 Maaten und Hinton 2008.
53 Maaten 2018, 38–41.

ermöglicht den Forschenden erste interpretative Aussagen darüber.[54] Im Fall des *VIKUS Viewers* werden insgesamt 1024 verschiedene Dimensionen (siehe unten) verwendet, die für *t-SNE* als Deskriptoren dienen und somit eine Sortierung von Bilddaten anhand ihrer visuellen Ähnlichkeit ermöglichen.

Experiment 1: Auf der Suche nach Ähnlichkeit

Ziel des Experiments ist die Erstellung von diachronen Formklassen (siehe oben), um die Leitstrukturen der Allographe des Graphems [BIENE] zu detektieren. Dafür wurden insgesamt 55 einzelne Hieratogramme aus der Projektdatenbank für den *VIKUS Viewer* bereitgestellt. Die Bilddaten stammen aus den Printpaläografien von Gasse und Möller[55], aus den Folienzeichnungen von Lenzo und Verhoeven[56] sowie den Digitalisaten des AKU-Projekts. Das Corpus inkludiert Beispiele vom Alten Reich bis zur griechisch-römischen Zeit, um einen maximalen Variantenreichtum zu erzielen. Weitere Zeichen konnten aus urheberrechtlichen Beschränkungen nicht für diese Untersuchung berücksichtigt werden.

Die Anwendung von *t-SNE* resultiert in einem zweidimensionalen Plot, der die Ähnlichkeiten der einzelnen Hieratogramme zueinander wiedergibt. Abbildung 3 zeigt die durch den Algorithmus bestimmte Verteilung der Zeichen basierend auf 1024 Deskriptoren. Es lässt sich eine Zweiteilung in eine linke und eine rechte Gruppierung erkennen. Auf den ersten Blick scheint die Gruppierung anhand der visuellen Ähnlichkeit erfolgreich zu sein. Bei näherer Betrachtung ergeben sich jedoch einige Fragen. Besonders auffällig ist die Platzierung der Hieratogramme, die von Verhoeven (lila) stammen. Dabei ist nicht sofort nachzuvollziehen, warum die Formen der Biene, die die einzelnen Beine durch einen durchgängigen Strich abkürzen (z. B.  [57]), nicht im unteren Bereich an der Schnittstelle von Möller (orange) und Gasse ( [58], blau) positioniert worden sind. Des Weiteren fällt auf, dass eine klare Separierung von gedruckten Paläografien (linke Gruppe: Gasse und Möller) und von sowohl auf Folie gezeichneten als auch digitalen Faksimiles (rechte Gruppe: AKU, Lenzo und Verhoeven) besteht. Bevor die Ursache dieser „falschen" Gruppierung nicht evaluiert worden ist, muss dieses Ergebnis zunächst als unbrauchbar für die Erstellung von Formklassen (siehe oben) eingestuft werden.

54 Wie sich unterschiedliche Parameter des Verfahrens in der Visualisierung niederschlagen zeigen Wattenberg, Viégas und Johnson 2016.

55 Gasse 2002, 89; Möller 1927a, 25; 1927b, 24; 1936, 24.

56 Dem AKU-Projekt sind die originalen Folienumzeichnungen, die als Basis für die Printpaläografien von Lenzo 2008 und Verhoeven 2001 gedient haben, zur Verfügung gestellt worden.

57 Originale Folienumzeichnung von U. Verhoeven.

58 Gasse 2002, 89.

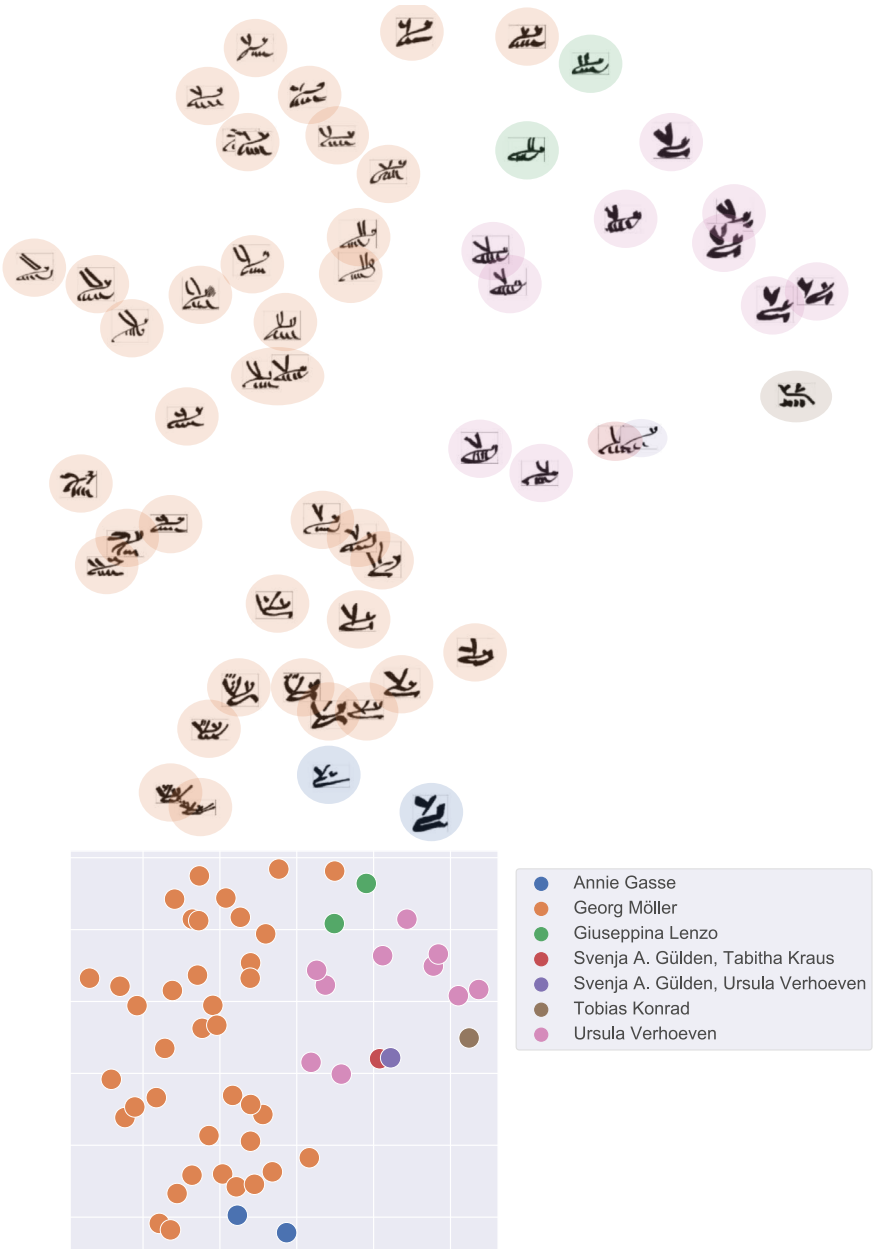

Abb. 3: Ähnlichkeitsverteilung der einzelnen Hieratogramme berechnet mit Hilfe von *t-SNE* (verwendete Parameter: *epsilon* = 10, *perplexity* = 30).

Zur Frage der Bilddeskriptoren: Wie misst man Ähnlichkeit?

Um das Ergebnis aus Experiment 1 nachzuvollziehen, sollte nach dem *distant reading* ein doppeltes *close reading* angewendet werden. Doppelt, da zunächst die Ähnlichkeitsfunktion des *VIKUS Viewers* hinterfragt werden und ausgehend davon schließlich das Ergebnis der Visualisierung noch einmal evaluiert werden muss.

Dabei sei noch einmal darauf hingewiesen, dass der Viewer die Bilddaten mit Hilfe eines künstlichen neuronalen Netzes, genauer gesagt eines sog. *convolutional neural network* (*CNN*), verarbeitet. Im Gegensatz zur menschlichen Wahrnehmung arbeiten künstliche neuronale Netze mit numerischen Repräsentationen der Bilder. In diesem Fall verwendet der Viewer ein Modell, das bereits auf Bilddaten des *ImageNet*[59] trainiert wurde (*pre-trained model*) und mittels des Frameworks *TensorFlow*[60] eingebunden ist.[61] Das vortrainierte Modell wird sozusagen für die Ähnlichkeitsanalyse zweckentfremdet, da die eigentliche Aufgabe des Modells darin liegt, ein Eingabebild der korrekten *ImageNet*-Klasse (also z. B. „Auto" oder „Hund") zuzuweisen. Das neuronale Netz generiert für jedes Bild, das verarbeitet wird, 1024 Ausgabewerte, die die Wahrscheinlichkeit der vom Netz vorgenommenen Klassenzugehörigkeit wiedergeben (z. B. Klasse „Auto" = 0.15, Klasse „Hund" = 0.85). Die 1024 Ausgabewerte werden für den Zweck der Ähnlichkeitsanalyse als Bilddeskriptoren verwendet. Somit findet der eigentliche Vergleich visueller Ähnlichkeit nicht auf Basis der Bilddaten selbst, sondern anhand der vom Modell ausgegebenen *ImageNet*-Klasse statt.[62]

Anhand der oben genannten Eigenschaften lässt sich folgende Hypothese formulieren: Ähnliche Eingabebilder generieren ähnliche Ausgabewerte, da das neuronale Netz versucht, die Bilder der gleichen *ImageNet*-Klasse zuzuweisen. Abbildung 4 zeigt einen Ausschnitt aus den 1024 Aktivierungswerten von drei verschiedenen Schriftzeichen.[63] Die beiden Hieratogramme der Biene weisen häufig ähnliche

59 *ImageNet* ist eine Bilddatenbank, aus der häufig Trainingsmaterial für Klassifizierungsmodelle mit künstlichen neuronalen Netzen verwendet wird. Darin sind die Bilddaten sowie eine semantisch korrekte Bezeichnung des Bildinhalts abgelegt. Somit kann ein Netz darauf trainiert werden, bspw. Bilder von Autos, Hunden oder Zäunen zu erkennen und korrekt zu klassifizieren. Siehe dazu Deng u. a. 2009 sowie http://www.image-net.org/ [06.09.2021].

60 https://www.tensorflow.org/ [06.09.2021].

61 Momentan verwendet der *VIKUS Viewer* als Modell das *MobileNet* 1.0.1 (Stand am 10.03.2021).

62 Genauer gesagt wird nicht der Ausgabewert der *ImageNet*-Klasse verwendet, sondern der Aktivierungswert der sich innerhalb des neuronalen Netzes in der Schicht vor der Ausgabeschicht befindet (auch *activation logit* genannt). Siehe dazu Pietsch 2018 sowie weiterführend Thorat 2018.

63 Die Belege der Zeichen sind von links nach rechts London, Petrie Museum of Egyptian Archaeology, UC 32782 (Faksimile Svenja A. Gülden, Tabitha Kraus), Berlin, Ägyptisches Museum und Papyrussammlung, P. 3029 (Möller 1927b, 24) und Paris, Bibliothèque Nationale de France, Egyptien 186–194 (Möller 1927a, 3).

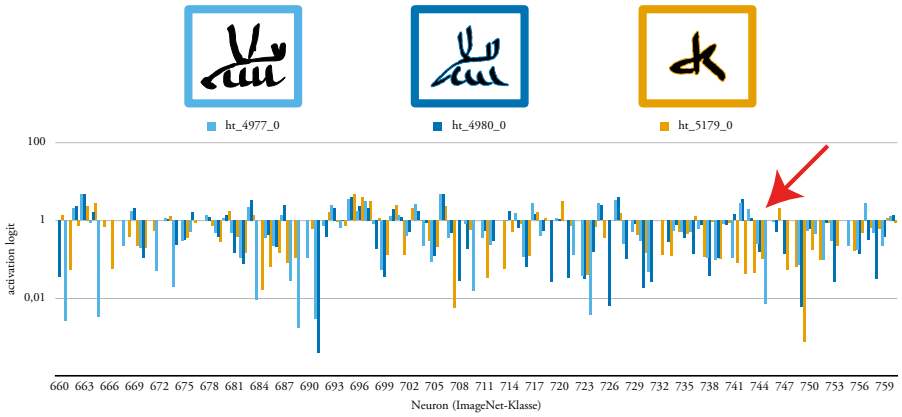

Abb. 4: Aktivierungswerte der einzelnen Neuronen Nr. 660 bis 760 im Vergleich mit unterschiedlichen Eingabebildern; blau: zwei verschiedene Belege der [BIENE] (), gelb: sitzender Mann ()

Abb. 5: Unterschiede in der Textur der verschiedenen Digitalisate (v. l. n. r.: Scan einer Printpublikation, Scan einer Folienumzeichnung, digitale Umzeichnung)

Werte auf, wohingegen der sitzende Mann z. B. im Bereich der Neuronen 740–745 deutliche Unterschiede erkennen lässt (Abb. 4, Pfeil). Der Algorithmus der Aktivierung ist determiniert, d. h. das neuronale Netz liefert bei jedem Durchgang mit den gleichen Eingabewerten konstante und invariable Ausgabewerte.[64]

Die oben genannte Hypothese lässt sich zwar grundlegend bestätigen, es kann jedoch nicht erklärt werden, warum wir die „falsche" Gruppierung aus Experiment 1 erhalten. Wie in der Einleitung dargelegt, besteht der erste Schritt einer Methodenreflexion aus der kritischen Betrachtung der Datenbeschaffenheit. Dabei sollte zunächst die Herkunft der Daten überprüft werden. Im vorliegenden Fall handelt

64 Im Gegensatz dazu handelt es sich bei dem hier verwendeten *t-SNE* um einen nichtdeterministischen Algorithmus, da Zufallszahlen als Startwerte verwendet werden und so die Anordnung der einzelnen Zeichen im Plot bei jedem Durchgang unterschiedlich ausfällt. Die Zusammenstellung der Gruppierungen bleibt jedoch konstant.

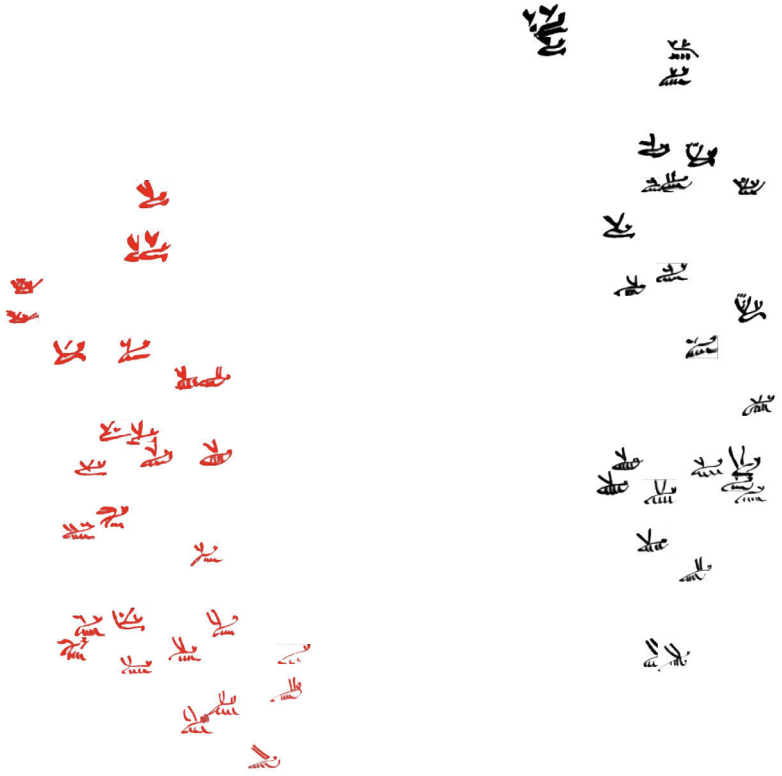

Abb. 6: Gruppierung mittels *t-SNE* der zur Hälfte künstlich rot gefärbten Daten aus Experiment 1 (verwendete Parameter: *epsilon* = 10, *perplexity* = 30).

es sich um Scans von Printpublikationen, Scans von Folienumzeichnungen sowie um digital erzeugte Umzeichnungen. Im direkten Vergleich der drei Quellentypen wird die unterschiedliche Textur sichtbar (Abb. 5).[65] Im Gegensatz zu den rein digital erstellten Bilddaten ist für die beiden Arten von Scans ein Bildrauschen in Form von weißen Einschlüssen innerhalb der Tuschestriche kennzeichnend. C*onvolutional neural networks* arbeiten vor allem mit den Farb- und Textureigenschaften der Bilder, wobei die äußere Form der Bilddaten zweitrangig behandelt wird. Bei Graustufenbildern, wie in unserem Experiment, arbeitet das CNN aufgrund der fehlenden Farbinformation noch stärker mit der Bildtextur.[66] Dieses Verhalten lässt

65 Die Belege der Zeichen sind von links nach rechts P. Ebers (Möller 1927b, 25), Turin, Museo Egizio 53007 (Faksimile von Giuseppina Lenzo für Lenzo Marchese 2008) und London, UC 32782 (Faksimile Svenja A. Gülden, Tabitha Kraus).

66 Zu diesem speziellen Verhalten von neuronalen Netzen siehe bspw. Carter u. a. 2019.

sich besonders gut illustrieren, wenn die Bilddaten aus Experiment 1 zur Hälfte rot gefärbt werden. Dabei fällt auf, dass das neuronale Netz bevorzugt auf die Farbe anspricht und nicht die äußere Form (Abb. 6). Für die Methodik bedeutet dies in Hinblick auf die Datenbeschaffenheit, dass selbst marginale Abweichungen der Farbtöne einen gewissen Effekt auf die Gruppierung haben könnten. Demnach sollte für diese Methode unbedingt eine einheitliche Textur und Farbgebung aller Zeichen gewährleistet werden.

Das Ergebnis aus Experiment 1 stellt somit zwar eine Gruppierung anhand von Ähnlichkeit dar, nicht jedoch in der Art und Weise, wie sie für die paläografische Methode brauchbar wäre. Festzuhalten ist, dass Forschende durch die Art der Faksimilierung einen sublimen *Fingerprint* in den Daten hinterlassen, deren Beschaffenheit zudem durch die Papierstruktur und Druckqualität maßgeblich beeinflusst wird. Es zeigt sich somit, dass das Verfahren, wie digitale Forschungsdaten erstellt werden, weitreichende Auswirkungen auf die Ergebnisse haben können. Abschließend lässt sich hierzu mit Wido van Peursen festhalten: „Even in image capture and editing, which may at first sight be a rather straightforward and 'objective' procedure, 'virtually all parameters in the process (…) require intellectual, critical choices, interpretation, and manipulation' […]."[67]

Exkurs: Ein Workflow zur Retrodigitalisierung

Wie die obige Fallstudie zeigt, ist eine vergleichende Untersuchung der im AKU-Projekt anfallenden unterschiedlich beschaffenen Daten erst möglich, wenn sie in eine einheitliche Form gebracht wurden. Der folgende Workflow zeigt einen Weg auf, wie traditionell erstellte Faksimiles vorbereitet werden können, sodass eine übergreifende Untersuchung mit digitalem Material möglich wird.[68] Typischerweise wurden Paläografien bisher im Printformat veröffentlicht. Als Beispiel für den hier präsentierten Workflow soll Georg Möllers *Hieratische Paläographie* dienen. Bevor Daten für Forschungszwecke erhoben werden, sollten zuerst die Nutzungsrechte geklärt werden.[69] Da nach geltendem deutschem Urheberrecht die Schutzfrist für Möllers *Paläographie* im Jahr 1991 ausgelaufen ist, kann das AKU-Projekt die dort abgedruckten Zeichen bearbeiten, in die Projektdatenbank aufnehmen und unter einer freien Lizenz weiterverbreiten.

Nach dem hochauflösenden Scan der Originalpublikation mit einer Auflösung von 1200 × 1200 ppi liegt das Material in Form von Graustufenbildern vor (Abb. 7,

67 Peursen 2010, 12.

68 Eine erste Version dieses Workflows ist bereits in Gülden 2018, 99–102 beschrieben worden.

69 Einen guten Überblick über die Rechtslage in Deutschland bietet Bundesministerium für Bildung und Forschung 2020.

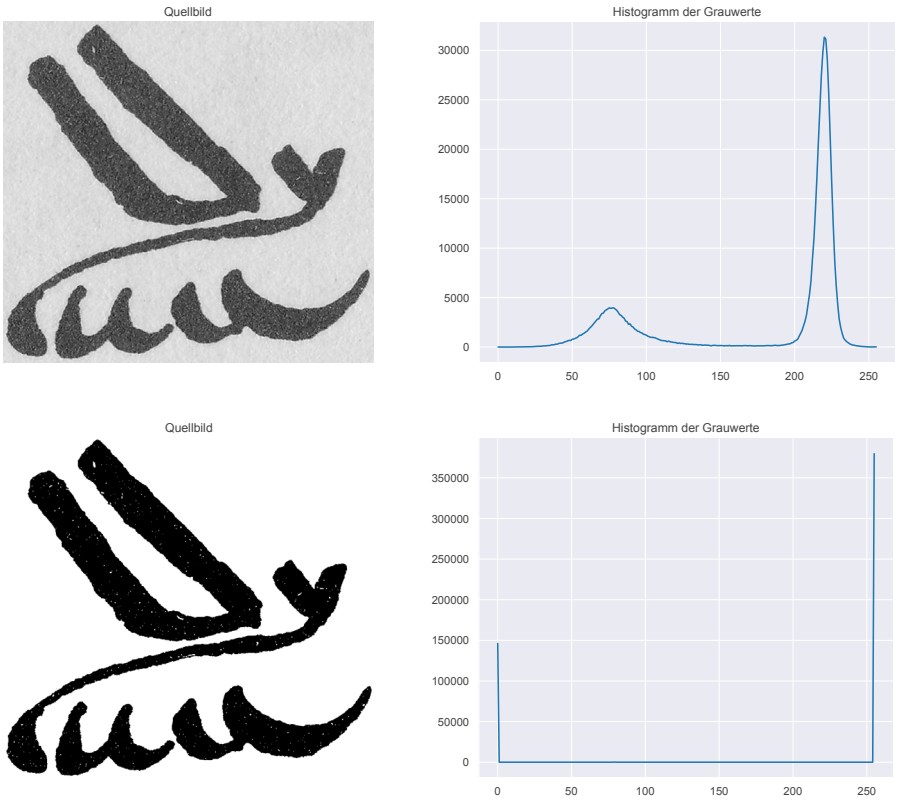

Abb. 7: Quellbilder und korrespondierende Histogramme der Grauwerte vor (oben) und nach der Tonwertspreizung (unten).

oben). Die stark aufgeraute Oberflächenstruktur des Papiers ist in dieser Form bereits sichtbar. Um einen möglichst guten Kontrast zum Papieruntergrund zu erhalten, wird eine Tonwertspreizung[70] durchgeführt, die bewirkt, dass die Graustufenwerte fast ausschließlich in die Bereiche von Schwarz (0) und Weiß (255) verschoben werden (Abb. 7, unten). Die so entstandenen Bilder können auch als Binärbilder verstanden werden, wobei die Bezeichnung für die Daten in Experiment 1 nicht ganz korrekt ist, da die Dateien im Gegensatz zu echten Binärbildern immer noch mit einer Farbtiefe von 8 Bit (0–255) statt 1 Bit (0/1) abgespeichert werden.

Für die visuelle Anzeige am Bildschirm in Originalgröße und für den Druck in Printmedien sind diese Graustufenbilder bereits geeignet und bedürfen keiner weiteren Bearbeitung. Unter gewisser Vergrößerung offenbaren sich jedoch Struktu-

70 Zu diesem Verfahren siehe Bredies und Lorenz 2011, 62–63.

ren, die durch die Papieroberfläche entstanden sind und die Arbeitsweise des CNN maßgeblich beeinflussen (siehe oben, Abb. 5). Um das unerwünschte Bildrauschen zu entfernen, hat sich eine zweistufige Nachbearbeitung der Bilddaten als zielführend herausgestellt. Dabei greift das Projekt auf eine ganze Toolbox von Bildbearbeitungsalgorithmen zurück, die in der freien Software-Bibliothek *scikit-image*[71] für die Programmiersprache *Python*[72] enthalten sind.

Zunächst wird ein zusätzliches Schwellenwertverfahren (sog. *Otsu-Verfahren*, nach Noboyuki Otsu[73]) angewendet, um eventuell vorhandene Gradienten der Grauwerte zu reduzieren. Danach werden durch ein spezielles Verfahren (*Opening*) die weißen Pixel innerhalb der faksimilierten Tuschestriche gefüllt.[74] Ein *Opening* setzt sich eigentlich aus zwei verschiedenen Prozessen zusammen:

a) Durch *Erosion* werden alle schwarzen Bildbereiche überfüllt, was jedoch auch dazu führt, dass das Schriftzeichen seine Fläche vergrößert.
b) Um diesen Effekt auszugleichen, wird danach eine *Dilatation*[75] angewendet, die die vergrößerten Bildbereiche um den gleichen Faktor wieder reduziert.[76] Als Resultat erhält man ein Faksimile, das nahezu frei von dem unerwünschten Bildrauschen ist (Abb. 8b).

Diese gesäuberten Bilddaten können im nächsten Schritt mit Hilfe des *Potrace*-Algorithmus in Vektordaten konvertiert werden (Abb. 8d).[77] Abschließend werden aus den Vektordaten nochmals Rastergrafiken erzeugt, die durch die beschriebenen Verfahren den manuell erstellten digitalen Faksimiles des AKU-Projekts in ihrer äußeren Erscheinung so weit wie möglich angeglichen sind. Nachdem die Normalisierung durchgeführt wurde, sind die Daten für eine Analyse mittels *convolutional neural networks* optimal aufbereitet.

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71 Walt u. a. 2014 sowie https://scikit-image.org/ [06.09.2021].

72 https://www.python.org/ [06.09.2021].

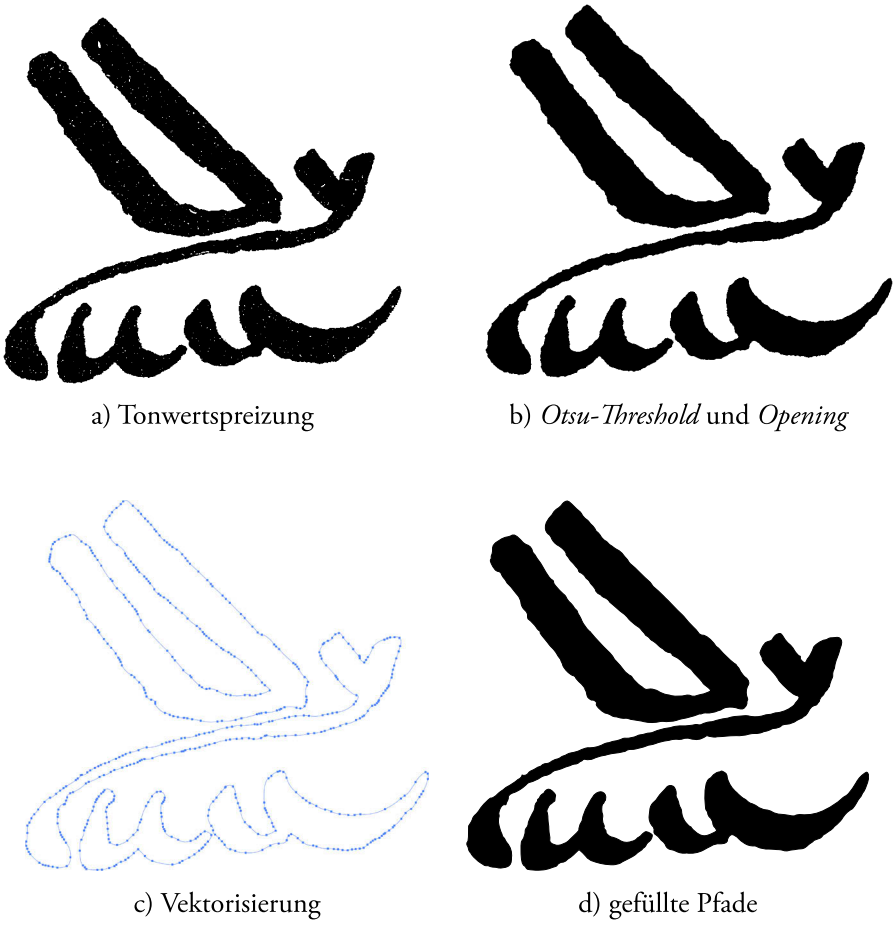
73 Siehe dazu Otsu 1979. Vor allem in der englischsprachigen Literatur sowie in den Softwarebibliotheken wird das Verfahren meist *Otsu-Threshold* bezeichnet.

74 Siehe dazu Bredies und Lorenz 2011, 83–88. Standardmäßig werden solche Bildverfahren auf invertierte Bilder angewendet. Für das Material des AKU-Projekts ist eine Invertierung jedoch nicht notwendig.

75 In der *scikit-image*-Bibliothek wird dieses Verfahren *dilation* genannt.

76 Erfahrungsgemäß hat sich für den Parameter *selem* der Funktion *binary_opening* eine Scheibe mit drei Pixeln als Radius als ausreichend zur Verbesserung der Daten von Georg Möller herausgestellt.

77 Selinger 2003 sowie http://potrace.sourceforge.net/ [06.09.2021]. Die TIFF-Bilddaten müssen vor der Vektorisierung in ein Bitmap-Format, z. B. *Portable Graymap* (PGM), umgewandelt werden. Für diese Stapelverarbeitung eignet sich z. B. die Software *ImageMagick* (https://imagemagick.org/ [06.09.2021]). Um die Originalgröße der Faksimiles wiederherzustellen, empfiehlt sich eine Größenreduktion bei der Vektorisierung mit *Potrace* mit dem Faktor 0,06 (entspricht einer Umrechnung von 1200 zu 72 ppi).



a) Tonwertspreizung

b) *Otsu-Threshold* und *Opening*

c) Vektorisierung

d) gefüllte Pfade

Abb. 8: Stadien des kompletten Workflows zur Retrodigitalisierung (a–b: Rastergrafik, c–d: Vektorgrafik)

Experiment 2: Bereinigte Daten

Nach der oben beschriebenen Bearbeitung wurden die Bilddaten erneut anhand ihrer Ähnlichkeit gruppiert. Ziel ist es nach wie vor, Leitstrukturen zu erkennen, um Formklassen des Graphems [BIENE] zu bilden.

Der erste Schritt in der Reflexion der Methode ist es wieder, den erzeugten Plot kritisch zu analysieren. Denn nur die Expertise durch Fachleute kann die Ergebnisse zielgerichtet bewerten. Wie bei vielen Methoden aus dem Bereich des maschinellen

Lernens kann es auch hier zu einem Rauschen kommen, das die Bildung von Ausreißern begünstigt. In unserem Fall soll der Plot nur der visuellen Unterstützung dienen und keine maschinell gebildeten Cluster repräsentieren.

Grundlegend zeigt der neu erzeugte Plot eine Unterteilung in zwei große Gruppen, wobei wir mit der Detailanalyse nun den Bereich des *close reading* betreten. Die eine Gruppe besteht aus detaillierten Zeichenformen, bei denen der Körper durch einen diagonalen Strich und die Beine durch einzelne Striche dargestellt sind. Die andere umfasst reduzierte Formen, bei denen der gedrungene Körper und die Beine meist eine Einheit bilden, die häufig auch nur durch einen einzelnen Strich ausgeführt ist. Darauf basierend lassen sich drei Haupt-Formklassen bilden (Abb. 9 und Tabelle 1). In der Formklasse A sind Zeichenformen vertreten, die die morphologischen Merkmale des Insekts in einer ausführlichen Form wiedergeben. Daneben erzeugen die Formen von A-1 (z. B. ) eine bestimmte Gruppierung, die darauf beruht, dass es sich ausschließlich um kalligrafische Schreibungen der Ramessidenzeit (19./20. Dynastie) handelt. Im Gegensatz dazu umfasst A-2 (z. B. ) die geläufigen Varianten in der Zeitspanne vom Alten Reich bis zur 18. Dynastie.

Die Zeichen der Haupt-Formklasse C stellen die oben beschriebene reduzierte Form dar. In C-1 (z. B. ) finden sich vor allem Belege ab der Hellenistischen Zeit, deren gemeinsames Merkmal ein zusätzliches Element zwischen den Flügeln ist. C-2 (z. B. ) vereint Zeichen, die dieses Element nicht besitzen; sie sind in den vorliegenden Daten nur ab der 26. Dynastie vorhanden. Diese Form ist jedoch schon unter Amenophis II. (Mitte der 18. Dynastie) belegt; aus Gründen der Schriftökonomie liegt sie in Ligatur mit X1 () vor.[78] Als Bindeglied zwischen den Formklassen A und C kann B (z. B. ) gesehen werden, da sie Merkmale der jeweils anderen in sich vereint. Die Körper der Bienen sind bereits leicht gedrungen und auch die Beine stehen schon näher beieinander, sind aber noch nicht durch einen einzigen Strich abgelöst. Diese Belege stammen alle aus der Zeitspanne von der Dritten Zwischenzeit bis zur Spätzeit und bilden daher nicht nur visuell, sondern auch zeitlich eine in sich geschlossene Formklasse.

Zusammenfassend lässt sich festhalten, dass im Gegensatz zu Experiment 1, bei dem kein Gradient in der Verteilung der Zeichenformen zu erkennen war, sich im Plot des 2. Experiments ein deutlicher Verlauf von Formklasse A zu C zeigt (siehe Abb. 9 und Tabelle 1). Eine Einfärbung anhand der Datierung macht deutlich, dass die Zeichenmorphologie mit der Datierung der Belege weitgehend korreliert (Abb. 10).

78 Möller 1927b, 24, Nr. 260. Ohne die Ligatur ist die Form mindestens seit der späten 18. Dynastie belegt, siehe Condon 1984, 81. Zu Rückgriffen der Schreiber der 26. Dynastie auf Zeichenformen der 18. Dynastie siehe bereits Verhoeven 2001, 251 (neben der [BIENE] L 2 sind zehn weitere Zeichen auffällig).

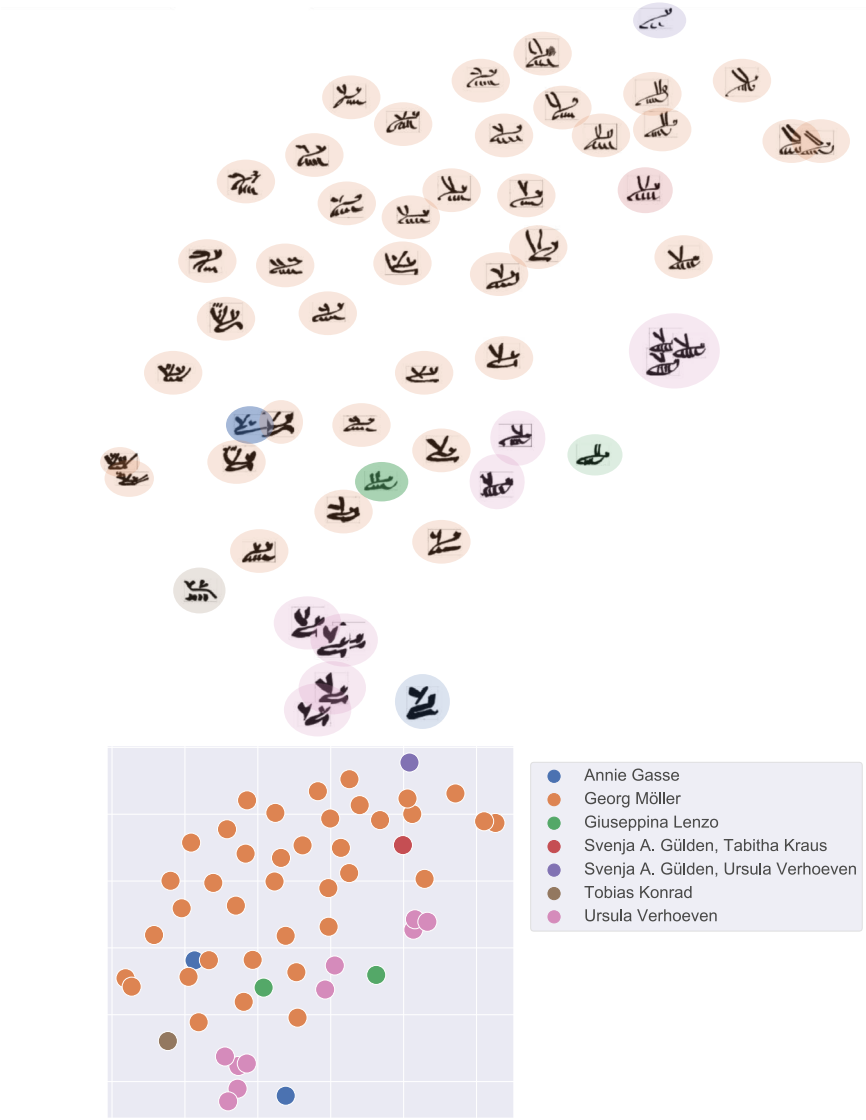


Abb. 9: Ähnlichkeitsverteilung der normalisierten Hieratogramme berechnet mit Hilfe von *t-SNE* (*epsilon* = 10, *perplexity* = 30).

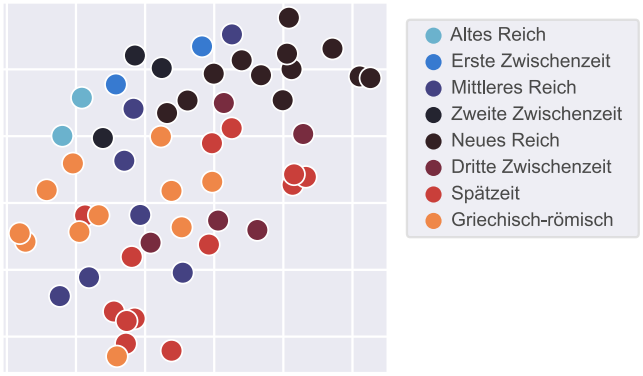
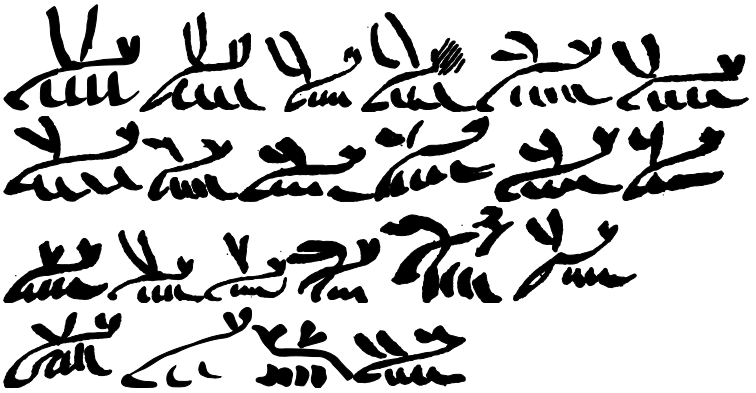


Abb. 10: Ähnlichkeitsverteilung der Einzelbelege aus Experiment 2 mit farblich gekennzeichneter Datierung.

Man sollte nun die Frage stellen, ob der ganze Aufwand für ein derart offensichtliches Ergebnis gerechtfertigt ist. Zunächst stellen die durchgeführten Experimente Fallstudien dar, die infrage kommende Methoden auf ihre Anwendbarkeit hin überprüfen. Eine funktionierende Methode sollte auch für andere Datenmengen skalierbar sein, insbesondere dann, wenn die Datenmenge die visuelle Aufnahmefähigkeit der Forschenden übersteigt. Bisherige, rein manuelle Ansätze für die Formklassenbestimmung des Graphems [BIENE] haben gezeigt, dass selbst bei einer Anzahl von lediglich 100 verschiedenen Belegen, eine objektive Einteilung nicht möglich ist. Außerdem würde eine Einteilung dieser Bienen in generelle Formklassen bei z. B. drei verschiedenen Expertisen drei verschiedene Ergebnisse mit unterschiedlicher Anzahl von Formklassen liefern. Selbst bei einer gleichen Anzahl von Formklassen würde sich sehr wahrscheinlich die Zuordnung der Hieratogramme zu den einzelnen Formklassen unterscheiden. Und gerade hier zeigt sich der Vorteil mathematischer Beschreibungen, die der subjektiv empfundenen Ähnlichkeit wesentlich weniger Raum geben. Hilfreich bei der Erstellung von Formklassen ist der generelle Gradient, der es ermöglicht, die grundlegenden Formen und Strukturen zu erkennen. Diese Entscheidungshilfe kann vor allem dazu dienen, die Gewichtung einzelner Merkmale, wie z. B. die Form der Flügel oder der Beine, objektiver für die finale Eingruppierung einzuschätzen. Ähnlichkeitsvisualisierungen, wie sie der *VIKUS Viewer* ermöglicht, sind somit unterstützend, aber nicht klassifizierend gedacht. Das Maß an Subjektivität wird dabei auf ein Minimum reduziert. Ein vollständiger Verzicht darauf ist jedoch für die hier verwendeten Bilddeskriptoren nicht möglich und auch nicht gewollt. Zwei Ausreißer im Datensatz sollen dies verdeutlichen (Abb. 9): Ein Beleg für das Bienengraphem vom Ende der 26. Dynastie aus der Zeit des Amasis () wurde im Plot in räumlicher Nähe zu den Vertretern

Tabelle 1: Formklassen des Graphems [BIENE]

Formklasse	**Zeichen**
A-1	
A-2	
B	
C-1	
C-2	

der Formklasse B platziert (z. B. ). Bedingt durch die singuläre Morphologie ist eine manuelle Korrektur zur Klasse C-2 notwendig. Maßgeblich hierfür ist u. E. die Gestaltung der Beine durch einen einzelnen Strich. Auch der kursivhieroglyphische Beleg  , der zusammen mit  im Plot (Abb. 9 links unten) ein Paar bildet, gehört für uns eindeutig der Klasse A-2 an. Die räumliche Nähe dieser Gruppe zu den anderen Belegen (vorwiegend Klasse C) sollte nicht zu einer Überinterpretation führen, da dem leeren Raum zwischen den Gruppen keine Bedeutung zukommen sollte (siehe oben).

Als übergreifendes Ergebnis lassen sich zusätzlich die Leitstrukturen des Graphems definieren, die das Konzept der [BIENE] ausmachen. Es besteht aus einer Kombination der Flügel-, Bein- und Körperform. Während im oberen Bereich des Plots bspw. lange Flügel vorherrschen, nimmt die Flügellänge nach unten hin ab. Beine und Körperform werden von oben nach unten immer gedrungener, sodass am unteren Ende des Plots Formen dominieren, die durch eine Einheit aus Körper und Beinen geprägt sind. Eine wichtige Erkenntnis ist, dass die jeweils entscheidenden Leitstrukturen, die zur Platzierung der einzelnen Bienen im Plot führen, unterschiedlich gewichtet werden. Diese unterschiedliche Gewichtung konnte durch eine rein manuelle Formklassenzuweisung nicht zufriedenstellend vorgenommen werden. Die Ähnlichkeitsvisualisierung ist somit eine entscheidende paläografische Hilfeleistung, um Leitstrukturen objektiver zu gewichten.

Zusammenfassung und Ausblick: Reflexion digitaler Methodik

Die vorliegende Untersuchung zeigt, dass paläografische Daten altägyptischer Handschriften durchaus für digitale Analysen geeignet sind. Fast immer erfordert die Methode eine sorgfältige Aufbereitung der Bild- und Metadaten, sodass der Einfluss von eventuell störenden Informationen in den Daten auf das Ergebnis minimiert wird.

Für diese Studie konnte eine Ähnlichkeitsvisualisierung mit Hilfe des *VIKUS Viewers* durchgeführt werden, die für spezifische paläografische Fragestellungen wertvolle Unterstützung bietet. Wichtig bei der Anwendung künstlicher neuronaler Netze und der nachfolgenden Dimensionsreduktion mit *t-SNE* ist die Notwendigkeit eines Grundverständnisses des jeweiligen Verfahrens. Anwendende einer digitalen Methode sollten Grundkenntnisse darüber besitzen, wie das durch die Methode produzierte Ergebnis zustande kommt. Auf diese Weise kann im Vorfeld evaluiert werden, ob die Daten für die jeweilige Methode geeignet sind und ob sie noch entsprechend vorbereitet werden müssen. Auch die Gefahr von Überinterpretationen des Ergebnisses wird dadurch reduziert. Für alle datenorientierten Verfahren ist eine

Sensibilität seitens der Datengenerierung erforderlich, da die Art, wie die Daten erstellt werden, maßgeblich das Resultat beeinflussen kann.[79] Dass falsch aufbereitete oder nicht aufbereitete Daten für die ägyptologische Forschung kein hilfreiches Ergebnis liefern, konnte Experiment 1 zeigen.

Im Gegensatz dazu liefern die durch die Aufbereitung normalisierten Daten in Experiment 2 Ansätze zur Gruppierung von Schriftzeichen anhand ihrer Leitstrukturen. Für insgesamt 55 Hieratogramme des Graphems [BIENE] konnten auf diese Weise fünf Formklassen bestimmt werden. Die automatische Gruppierung anhand der Zeichenmorphologie kongruiert im Experiment auch mit der Datierung der Belegstellen. Hierbei sollte jedoch beachtet werden, dass die Anzahl von 55 einzelnen Datensätzen in den Experimenten 1 und 2 gerade für ein interpretierbares Ergebnis ausreichen. In der Regel führt eine größere Datenmenge auch zu besseren Ergebnissen, da davon ausgegangen werden kann, dass der Prozentsatz von statistischen Ausreißern im Verhältnis zur Gesamtmenge geringer ist.[80]

Künstliche neuronale Netze können nicht nur bei der Bestimmung und Analyse von Formklassen eines bestimmten Graphems helfen, sondern auch übergreifend visuelle Ähnlichkeiten unterschiedlicher Grapheme oder Kategorien hervorheben. Beobachtungen nach dem *distant reading*-Prinzip lassen mehr Gedankenfreiraum zu, um nach dem Warum zu fragen und gezielter und objektiver Eigenschaften der Schriftökonomie und kognitiven Schreibprozesse zu erforschen. Eine Analyse mittels eines auf Ähnlichkeitsmerkmalen basierenden Tools wie des *VIKUS Viewers* kann bei bestimmten Korpora oder Materialsammlungen als Ansatz zur Mustererkennung eingesetzt werden, um gezielt wiederkehrende Strukturen zu identifizieren. Besonders bei Forschungsvorhaben, die mit einer hohen Anzahl an Bilddaten arbeiten, können auf diese Weise schnell Ergebnisse erzielt werden, die mithilfe ägyptologischen Fachwissens kontextuell eingeordnet und ggf. weiterverfolgt werden können. Ausblickend wäre zu überlegen, ob bessere Bilddeskriptoren, die an die Spezifika der paläografischen Daten angepasst sind, die Leistungsfähigkeit der Ähnlichkeitsgruppierung verbessern können. Dass dabei die Verwendung künstlicher neuronaler Netze nicht zwingend ist, haben Bogacz u. a. 2018 bewiesen, indem sie als Bilddeskriptor das *histogram of oriented gradients* (*HOG*) erfolgreich zur Clusterung von Maya-Hieroglyphen verwendeten.[81]

79 Dieser Effekt wird auch als (*Technical* bzw. *Emergent*) *Bias* bezeichnet. Siehe dazu und zu möglichen Verfahren, den *Bias* zu reduzieren Leyrer 2021.

80 Dies gilt unter der Voraussetzung, dass es sich um eine insgesamt gute Datenqualität handelt. Die im Datensatz enthaltene Anzahl von fehlerhaften Einträgen sollte dabei so gering wie möglich sein. Solche fehlerhaften Daten sind z. B. falsch zugeordnete Zeichennummern oder – vor allem bei Daten aus Printpublikationen – Bildelemente, die nicht zum eigentlichen Zeichen gehören.

81 Zum Bilddeskriptor siehe Bogacz u. a. 2018, 106.

Retrospektiv können wir festhalten, dass die Reflexion unseres Forschungszyklus und die Beschäftigung mit der Frage, warum welche Methode mit welcher Datengrundlage ergebnislos verläuft, zu einer Weiterentwicklung der paläografischen Methode geführt hat. Als Konsequenz werden wir in Zukunft Forschungsdaten, die während des methodischen oder theoretischen Prozesses entstehen, sammeln und nicht verwerfen. So hoffen wir die Methodenreflexion für die Fach-Community nachvollziehbarer zu gestalten. Der Reflexionsprozess ist an diesem Punkt keineswegs abgeschlossen. Vielmehr ergeben sich für die zukünftige Forschung im Spannungsfeld von Methodik, Daten und ihrer Aufbereitung weitere theoretische Überlegungen, die sich bspw. bis zum sogenannten *algorithmic criticism* ausdehnen lassen.[82]

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82 Zum *algorithmic criticism* siehe weiterführend z. B. Ramsay 2008, der noch einmal hervorhebt, dass nicht der eigentliche Text (oder in unserem Fall bspw. ein Papyrus,) untersucht wird, sondern ein Transformat.

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Online-Ressourcen

Software

ImageMagick – https://imagemagick.org/
MariaDB – https://mariadb.org/
Potrace – http://potrace.sourceforge.net/
Python – https://www.python.org/
scikit-image – https://scikit-image.org/
TensorFlow – https://www.tensorflow.org/
VIKUS Viewer – https://vikusviewer.fh-potsdam.de/

Projekte

Altägyptische Kursivschriften – https://aku.uni-mainz.de/
DigiPal –http://www.digipal.eu/
Digital Analysis of Syriac Handwriting – http://dash.stanford.edu/
Hieroglyphic "Hands" – https://journals.openedition.org/baefe/996#tocto2n12
Models of Authority – http://www.modelsofauthority.ac.uk/

The Abnormal Hieratic Global Portal – https://lab.library.universiteitleiden.nl/abnormalhieratic/
The Demotic Palaeographical Database Project – http://demotischdemotisch.de/
The Polychrome Hieroglyph Research Project –https://www.phrp.be/
THOT – Thesauri & Ontology – https://thot.philo.ulg.ac.be/
THOT Sign List – http://thotsignlist.org/

Materialität, Textsorten, Schreiberhände – eine experimentelle digitale Analyse zu Schriftzeichen der 18. Dynastie

Svenja A. Gülden

Abstract

In hieratic writing, the allographs of a grapheme have a great variety of forms. This richness of shapes can be explained by the numerous factors that influence the hand of the scribe and the execution of the signs: the scribe's education, different levels of training, the materiality of the writing surface and the choice of writing instruments, the text type, and many further aspects. Research on these aspects – as well as the question of determining individual writing characteristics vs. general writing habits – requires large quantities of hieratic characters. Without digital support, such an analysis is hardly possible. Whereas other disciplines in the humanities already have tools for digital paleographic analysis, there is nothing comparable for hieratic writing. Therefore, it is necessary to test existing tools developed by/for other disciplines to see if and how they can be applied to the study of hieratic writing. This experiment is testing such a tool, and hieratic signs are analyzed digitally concerning their shape, materiality, and text types.

Dieser Beitrag steht in Zusammenhang mit dem von Simone Gerhards/Tobias Konrad im vorliegenden Band. In beiden Artikeln werden digitale Ansätze des AKU-Projektes[1] vorgestellt. Bei Gerhards/Konrad liegen die Schwerpunkte auf der Methodenreflexion zur digitalen paläografischen Analyse des Hieratischen und der digital unterstützten Formklassenbildung. Der hier vorliegende Beitrag ist eine experimentelle Analyse zu Formvarianten hieratischer Zeichen der 18. Dynastie. Untersucht werden verschiedene Beschriftungsoberflächen und Textsorten auf der Basis bereits bereinigter digitaler Daten.[2]

1 „Altägyptische Kursivschriften. Digitale Paläographie und systematische Analyse des Hieratischen und der Kursivhieroglyphen“ (kurz: AKU-Projekt); https://aku.uni-mainz.de.

2 Da sich beide Beiträge auf Tools und Methoden beziehen, die im AKU-Projekt eingesetzt werden, wird hier – um Redundanzen zu vermeiden – die Beschreibung von Details reduziert. Dies betrifft insbesondere die Funktionsweise des eingesetzten Tools, sowie die Beschreibung des Workflows, mit dem bereinigte digitale Daten für das hier vorgestellte digitale Experiment generiert werden. Ich danke meinen Kolleg*innen, insbesondere Tobias Konrad, für wertvolle Kommentare und Hinweise.

1 Fragestellungen

Bei der Erforschung der hieratischen Schrift war es zunächst ein wichtiges Ziel, die hieratischen Zeichen zu identifizieren und den korrespondierenden Hieroglyphen zuzuordnen.[3] Der Variantenreichtum, in dem die einzelnen Allographe niedergeschrieben wurden, machte das Hieratische aber bereits zu Beginn der Schrifterforschung zum Gegenstand paläographischer Studien, um zu versuchen, Handschriften zeitlich und/oder geographisch zu verorten und mehrere Niederschriften einer Schreiberschule und -tradition oder sogar einer bestimmten Schreiberpersönlichkeit zuweisen zu können.

Wie aber kommt es zu dem Variantenreichtum von Allographen und welche Faktoren können die Handschrift eines Schreibers beeinflussen?

Im Rahmen seiner Arbeit zum Papyrus Westcar (P. Berlin, Ägyptisches Museum und Papyrussammlung, P. 3033) hat Erman die hieratische Schrift in zwei Gruppen unterteilt, „eine Unziale für Bücher und eine Cursive für geschäftliche Schriftstücke".[4] Möller hat diese Einteilung in die sog. „Buch-" und „Geschäftsschrift" für seine umfassende dreibändige Paläographie[5] übernommen, u. a. mit der Absicht, „die regelmäßigen, für die einzelnen Epochen charakteristischen Schriftformen zu ermitteln".[6] Ob eine scharfe Trennung des Hieratischen in diese zwei (oder mehr) Schriftstile grundsätzlich haltbar ist, ist angesichts der fließenden Grenzen diskutabel. Dennoch scheint die Textsorte die Ausführung der einzelnen Zeichen zu beeinflussen.[7] Dorn führt zudem an,

> *dass ägyptische Schreiber für literarische und nichtliterarische (administrative) Texte unterschiedliche Schriftregister verwendeten: In literarischen Texten sind die Zeichen in der Regel deutlicher geschrieben und zudem oft auch größer als in administrativen Texten. Administrative Texte sind in vielen Fällen gedrungener, mit mehr abgekürzten und verschliffenen Zeichenformen.*[8]

Janssen erwägt sogar, dass die Sorgfältigkeit beim Schreiben eines Briefes vom Adressaten abhängig gewesen sein könnte und geht grundsätzlich davon aus, dass ein geübter Schreiber sowohl kursive als auch „klassische" Zeichenformen beherrscht

3 Siehe dazu Gülden 2018, 83–86.
4 Erman 1890 II, 33, vgl. auch 32–56.
5 Möller 1927a; 1927b; 1936.
6 Möller 1927a, 1.
7 Das gibt z. B. Burkard 2013, 78 zu bedenken.
8 Dorn 2015, 176 mit Verweis auf Burkard 2013.

habe.[9] Ob Zeichenformen deutlich oder gedrungen, kleiner, verkürzt bzw. verschliffen geschrieben wurden, kann zudem auch von deren Position im Text oder auf dem Schriftträger abhängen.[10]

Auch die Ausbildung eines Schreibers wird Einfluss auf das Formenspektrum seiner Handschrift genommen haben. Schreiberschulen in den verschiedenen Regionen Ägyptens hatten für manche Zeichen andere Traditionen. So hat beispielsweise Möller für eine unterschiedliche regionale Herkunft der Schreiber des Papyrus Harris (P. London, BM EA 9999) plädiert und dafür zwei Zeichenlisten vorgelegt.[11] In seiner Neubearbeitung dieses Papyrus hat sich Grandet allerdings gegen regionale Provenienzen der Schreiber ausgesprochen. Er ist der Ansicht, dass die verschiedenen Schreibungen auf regional erstellten Vorlagen beruhen und somit in die finale Niederschrift des Textes eingeflossen seien.[12] Aber auch diese Interpretation spräche für regional-spezifische Zeichenformen.

Weitere Faktoren, die die Handschrift eines Schreibers beeinflusst haben könnten, sind die Beschriftungsoberfläche und die Schreibmaterialien.[13] Die Oberflächenstruktur eines Schriftträgers, sei sie glatt oder rau, wirkt ebenso auf den Schreibfluss ein wie eine ebene, gebogene oder unregelmäßige Schreibfläche. Schreiben auf einer senkrechten Fläche hat eine andere Haltung der Binse erfordert als das Schreiben auf einer waagerechten Oberfläche.[14] Auch die Wahl der Schreibmaterialien (Binse und Tusche) kann Auswirkungen auf das Schriftbild im Ganzen und die Charakteristika einzelner Hieratogramme haben, z. B. die Strichstärke, die Größe der Zeichen oder auch – je nach Zusammensetzung der Tusche – die Intensität der Schriftfarbe. Letztere kann zusätzlich von der Oberflächenstruktur der Beschriftungsfläche beeinflusst werden, poröse Oberflächen wie z. B. Stuck saugen die Tusche/Flüssigkeit eher auf als Papyrus.

Schließlich darf nicht vergessen werden, dass die Handschrift[15] eines Schreibers dessen Habitus unterliegt, wie z. B. die Wahl der Schreibmaterialien, die individuelle Art die Binse zu führen, die Häufigkeit der Tuscheaufnahme oder eine Korrektur

9 Janssen 1987, 163–66; 2000, 55.

10 Vgl. dazu beispielsweise Megally 1971a, z. B. Taf. LXVIII, IX und X, Taf. LXXV, V; Munro 2015, Photo Plate 15 (BD 89); Verhoeven 1999, Photo – Tafel 13.

11 Möller 1927b, 2–3 (Papyrus Harris sowie weitere thebanische und unterägyptische Schriftzeugen), 12–13 (Papyrus Harris). Für die verschiedenen Schriftträger, die Möller unter verschiedenen Siglen zusammengefasst hat, siehe Konrad 2021 [06.04.2021].

12 Siehe dazu Grandet 1994, 23–26.

13 Siehe für eine Übersicht der Schreibmaterialien und deren Eigenschaften Eyre 2013, 22–35.

14 Siehe Sirat 1994, die beschreibt, wie sich Körperhaltung und Führen des Schreibgeräts auf die Schrift auswirken.

15 Vor allem, wenn die Texte mit Tusche geschrieben sind, kann man von der „Handschrift" eines Schreibers sprechen. Handelt es sich um lapidarhieratische Texte, die eingeritzt worden sind, scheint der Terminus „Handschrift" diskutabel.

bzw. ein Überschreiben von bereits Geschriebenem.[16] Aber auch Emotionen, die körperliche Verfassung, Konzentration, unterschiedliche Stadien der Geübtheit und Geschicklichkeit sowie individuelle Nachlässigkeiten können eine Rolle spielen.[17] Möglicherweise lassen sich bei Schreiberpersönlichkeiten, deren Wirken über einen längeren Zeitraum belegt ist, Veränderungen ihrer Handschrift mit steigendem Alter nachweisen.[18]

All diese beispielhaft genannten Faktoren machen deutlich, wie komplex und vielschichtig die Einflüsse sind, die das Schriftbild und die Formeigenschaften der einzelnen Hieratogramme bestimmen. Zudem wirkten diese Bedingungen nicht unabhängig voneinander auf den Schreibprozess ein, sondern in unterschiedlicher Weise miteinander verquickt.[19]

Angesichts dieser Komplexität stellt sich die Frage, wie die Einflüsse, die auf Schreiberhände einwirken, nachgewiesen und welche Methoden – abhängig von der Fragestellung – angewandt werden können.

Einige Studien widmen sich der Identifizierung von Schreibern und untersuchen beispielsweise, ob ausgewählte Texte diesen Individuen zugewiesen werden können. Dazu werden inzwischen eher Zeichengruppen und Wortschreibungen anstatt Einzelzeichen herangezogen. Angeregt hat diese Vorgehensweise Janssen, der die Schreibweisen der Zeichengruppe *p;* in Briefen von Thutmosis und dessen Sohn Butehamun untersuchte.[20] Sweeney hat in den von ihr analysierten Texten mehrere unterschiedliche Zeichengruppen berücksichtigt, sieht diesen Ansatz aber kritisch, denn es gäbe „no consistent pattern of similarity which would lead us to identify any two of these texts as written by the same hand".[21] Berg und Donker van Heel konnten dagegen zeigen, dass es über den Vergleich von Namensschreibungen und ausgewählten Worten durchaus möglich ist, Schreiberhände zu identifizieren.[22] Auch Dorn und Polis weisen zwar explizit darauf hin, dass der Versuch, mehrere

16 So bereits Posener 1973, 30 (Haltung der Binse) und auch Polis 2020, 557–58. Zum Druck der Binse auf die Beschriftungsoberfläche siehe Eyre 2013, 37, zur „Stratigraphy of writing" Parkinson 2009, 90.

17 Vgl. dazu Berg und Donker van Heel 2000, 15–16 (Emotionen); Eyre 1979, 86 (Geübtheit, Konzentration) Janssen 2000, 52 (Konzentration, Nachlässigkeiten etc.).

18 Siehe dazu z. B. Janssen 1987, 164; Černý 2001, 332–33, Dorn 2015.

19 Parkinson 2009, 90: „There are so many contingencies in writing that one cannot fully describe the process …".

20 Janssen 1987; er betonte aber, dass eine einzelne Zeichengruppe nicht ausreiche, um einen Text einem bestimmten Schreiber zuzuweisen (Janssen 1987, 165).

21 Sweeny 1998, 115. Siehe dazu aber auch den „Antwortartikel" von Janssen 2000, der darauf hinweist, dass auch Auswahl und Umfang der Texte für eine solche Untersuchung von grundlegender Bedeutung sind.

22 Berg und Donker van Heel 2000.

Texte einem bestimmten Schreiber zuzuordnen, nicht über den Vergleich von Einzelzeichen möglich sei, führen aber zudem aus, dass der Vergleich von Wortschreibungen allein ebenso wenig ausreiche. Neben der Kombination unterschiedlicher Ansätze sei es notwendig, den Duktus eines Schriftzeichens auch in unterschiedlichen Zeichengruppen zu untersuchen.[23]

Auf die Aussagekraft der „individual strokes of the pen" ist Eyre bereits eingegangen.[24] Die einzelnen Striche, aus denen sich ein Hieratogramm zusammensetzt, werden inzwischen in einigen Publikationen in Form von Umrisszeichnungen visualisiert, so beispielsweise in der Publikation der *Heqanakht Papyri* von Allen, der zudem die Anzahl der Striche für eine jeweilige Textsequenz angegeben hat.[25] Dass sich nicht nur mit Tusche geschriebene Texte für eine Untersuchung des Zeichenaufbaus mit Hilfe der Strichsequenz eignen, sondern in ganz besonderem Maße auch lapidarhieratische Texte, hat Dorn gezeigt.[26] Voraussetzung für eine Analyse der Zeichenstratigrafie ist allerdings nicht nur, dass die einzelnen Striche eines Hieratogramms deutlich sichtbar sind – beispielsweise in Texten, in denen man *dippings* gut erkennen kann – sondern vor allem, dass sie sich kreuzen bzw. überlappen.[27]

Eine mögliche Fragestellung wäre beispielsweise, ob die Schreiber des alten Ägypten standardisierte Schreibabfolgen für die hieratischen Zeichen entwickelt haben und ob davon abweichend individuelle Schreibergewohnheiten zu erkennen sind. Um diese identifizieren zu können, sollte aber zunächst untersucht werden, ob es evtl. allgemeingültige Schreibprinzipien gab. Dafür bedarf es einer sehr großen Anzahl von Hieratogrammen, deren Zeichenstratigrafie entsprechend dokumentiert sein sollte. Da sich aber eine solche Analyse ohne den Einsatz digitaler Hilfsmittel nur schlecht bewältigen lässt, ist eine digitale Dokumentation der Strichfolge beispielsweise in Form von Vektorgrafiken nahezu unabdingbar.[28]

Dennoch lassen sich Hieratogramme zunächst auch ohne die Berücksichtigung der Strichfolge im Hinblick auf ihre Formeigenschaften und mögliche Kausalitäten untersuchen, so beispielsweise, ob – und wenn ja, in welchem Maß – die Textsorte, aber vor allem auch die gewählten Materialien (insbesondere Binse und Beschriftungsmaterial), die Form von Hieratogrammen beeinflussen.

23 Dorn und Polis 2016, 69–72.

24 Eyre 1979, 86.

25 Allen 2002 Appendix A (193–26) und Appendix B (227–42). Siehe auch Ragazzoli 2012, 229–30, die zumindest einige ausgewählte Zeichengruppen auf diese Art darstellt.

26 Dorn 2015, 178.

27 Die Strichsequenz eines Zeichens wird – wo immer es möglich ist – vom AKU-Projekt dokumentiert.

28 Siehe dazu den Abschnitt „3 Digitale Paläographie".

Insbesondere für den Aspekt der Materialität liegen noch keine vergleichenden Untersuchungen vor.[29] Nicht zuletzt, weil auch hier große Quantitäten an Zeichen analysiert werden müssen, bietet sich die Unterstützung durch digitale Methoden und Tools an. Diese müssen allerdings zunächst auf ihre Funktionsweise, Effektivität und hinsichtlich der notwendigen Datenbeschaffenheit getestet werden.

2 Untersuchte Korpora

Grundlage für die hier vorliegende Analyse sind ausschließlich mit Tusche geschriebene Texte aus der 18. Dynastie, die einerseits verschiedenen Textsorten angehören, andererseits auf unterschiedlichen Beschriftungsoberflächen – Papyrus und Stuck – angebracht sind.[30] Alle untersuchten Hieratogramme sind in der AKU-Datenbank erfasst und annotiert.

2.1 Dipinti[31]

Im Grab N13.1 in der Nekropole von Assiut haben sich 156 Textdipinti erhalten, die die Besucher des Grabes vor allem während des Neuen Reiches auf die stuckierten Wände des Grabes geschrieben haben.[32] Von 24 der hier verwendeten Dipinti sind zudem die Schreibernamen bekannt.[33] Alle hieratischen Textdipinti dieses Grabes liegen digital faksimiliert[34] vor und werden sukzessive in der AKU-Datenbank erfasst.[35]

Zudem flossen in die Analyse Zeichenbeispiele eines Dipinto aus Abusir vom Pyramidenkomplex des Königs Sahure ein, dessen Hieratogramme – soweit sie in Möllers Paläographie aufgenommen sind – ebenfalls in die AKU-Datenbank einge-

29 So auch Polis 2020, 557–58.

30 Für einen Vergleich von Zeichenformen, die mit unterschiedlichen Schreibgeräten und Beschriftungsmaterialien (Binse vs. Steinwerkzeug und Papyrus vs. Gestein), aber offensichtlich von ein und demselben Schreiber erstellt wurden, siehe z. B. Ali 2002, 127–44 und Dorn 2015.

31 Zur Begriffsbestimmung siehe Verhoeven 2020, 15–16.

32 Verhoeven 2020.

33 Zu den Schreiber(namen) in Dipinti der 18. Dynastie aus dem Grab N13.1 und zur Identifizierung von Schreiberpersönlichkeiten siehe Verhoeven 2020, 267–76.

34 Zu den Faksimiles, die in Kooperation von S. A. Gülden und U. Verhoeven entstanden sind, siehe Verhoeven 2020, 23–24.

35 Stand der Datenerfassung (Dipinti): 05.07.2020. Von den Dipinti aus dem Grab N13.1 in Assiut konnten die Dipinti der 18. Dynastie auf der Nord- und Westwand, die bereits in der Datenbank erfasst sind, verwendet werden. Die Dipinti der Südwand und der Pfeiler im Grab N13.1 sollen nach der vollständigen Erfassung und Annotation in der Datenbank – ebenso wie weitere Dipinti – in zukünftige Analysen einbezogen werden.

pflegt sind. Für diese Analyse konnten somit folgende Textbeispiele der 18. Dynastie, die auf Stuck oder Stein geschrieben sind, verwendet werden:[36]

- 26 Besuchertexte mit diversen Inhalten, u. a. Schreiberlob, Lobpreisungen (von Gottheiten), historische Vermerke, satirisch-erotische Vermerke, Opferformeln, Opfergaben, Kolophon,
- 8 literarische Texte (Abschnitte aus Lehren) und
- 1 Text mit Königskartusche.

2.2 Papyri

Die zweite Gruppe von Zeichen stammt aus Texten der 18. Dynastie, die auf Papyrus geschrieben sind. Es handelt sich dabei größtenteils um Briefe an und von Ahmose (Peniati/Pajati), der höchstwahrscheinlich unter Hatschepsut/Thutmosis III. lebte,[37] sowie um Briefe an andere bekannte Persönlichkeiten aus der 18. Dynastie. Besonders zu erwähnen sind außerdem zwei nahezu identische Briefe, die an Amenophis IV. gerichtet sind.[38]

Insgesamt sind 10 Papyri unterschiedlicher Länge und unterschiedlichen Inhalts in die Untersuchung einbezogen worden: [39]

- 7 Briefe (div. Inhalte)
- 1 medizinischer Text
- 3 administrative Texte (Akten und ein königlicher Text)

2.3 Zeichenauswahl

Um dieses Experiment durchführen zu können, sollte eine ausreichende Anzahl von Einzelzeichen vorhanden sein, und zwar nicht nur, um überhaupt Cluster von mehreren Zeichen zu ermöglichen, sondern auch, um Hieratogramme zu untersuchen, die häufig belegt sind. Bei häufig geschriebenen Zeichen kann am ehesten vermutet werden, dass beim Schreibvorgang Automatismen greifen.[40]

36 Siehe dazu Tabelle 1 im Anhang (6.1).
37 Siehe dazu Müller 2006, 317 mit Verweis auf Glanville 1928, 297.
38 P. London, UC 32782 + 32783.
39 Stand der Datenerfassung (Papyri): 05.07.2020, siehe Tabelle 2 im Anhang (6.1).
40 So auch Janssen 1987, 162, der aber statt hieratischer Einzelzeichen Worte untersucht hat. Ein ähnliches Phänomen kann auch in anderen handgeschriebenen Texten, z. B. des Mittelalters, beobachtet werden, siehe Hofmeister, Hofmeister-Winter und Thallinger 2009.

Eine Statistikabfrage in der AKU-Datenbank ergab, dass für mehrere Grapheme[41] Hieratogramme in ausreichender Anzahl erfasst sind. Dazu gehören die Grapheme  (Gardiner G1), (Gardiner G17), (Gardiner M17), (Gardiner N35), (Gardiner Q3), (Gardiner X1), (Gardiner Y1) sowie (Gardiner Z7).

Zu berücksichtigen ist weiterhin, dass in der vorliegenden Bearbeitung zwar nur eine kleine Auswahl von Graphemen untersucht werden kann, dennoch sollten diese über unterschiedliche Komplexitäten, Ausrichtungen (senkrecht, waagerecht und diagonal) und Formelemente (gerade vs. geschwungene Linien) verfügen sowie aus unterschiedlichen Kategorien stammen. Daher wurden aufgrund der oben genannten Kriterien und der Konzentration auf die zuvor beschriebenen Korpora folgende Grapheme ausgewählt:[42]

 – Die hieratischen Allographe haben eine reduzierte, senkrechte Form und bestehen jeweils aus 1–3 Strichen/Punkten (136 Belege).

 – Die hieratischen Zeichen werden mit einem waagerechten und drei senkrechten Strichen geschrieben, sie sind eher linear, aber kompakt (58 Belege).

 – Im Hieratischen kann dieses Graphem sowohl kurz als auch in einer komplexen Variante geschrieben sein. In beiden Fällen sind geschwungene Zeichenelemente vorherrschend (120 Belege).

Je nach Textlänge und Erhaltungszustand der Hieratogramme variiert die Anzahl der Belege pro Textträger. Von 29 Schriftträgern konnten nur 5 oder weniger Hieratogramme in diese Analyse einfließen, von 12 Schriftträgern 6–10 Zeichen, von 4 Schriftträgern 11–18 Zeichen und von 2 Schriftträgern 41 bzw. 45 Hieratogramme. Diese Diskrepanz wird in den Clusterergebnissen sichtbar sein.

41 In der ägyptologischen Forschung ist die Definition des Begriffs „Graphem" nicht unproblematisch. Zu „hieroglyphischen Graphemen" siehe z. B. Polis 2018. Zur Verwendung des Begriffs im AKU-Projekt siehe Gülden 2018, 104, ähnlich auch Klinkenberg und Polis 2018, 14: „Lorsque la substance graphique est comprise comme une forme d'expression sémiotique en fonction d'un système d'écriture, les signifiants minimaux de ce système seront des graphèmes."

42 Eine weitere Eingrenzung des Materials besteht auf lizenzrechtlicher Ebene. Es können nur Zeichen verwendet werden, die in den Projekten „The Asyut Project" (https://www.aegyptologie.uni-mainz.de/the-asyut-project-feldarbeiten-in-mittelaegyptenfieldwork-in-middle-egypt/ [01.03.2021]) und „Altägyptische Kursivschriften. Digitale Paläographie und systematische Analyse des Hieratischen und der Kursivhieroglyphen" (https://aku.uni-mainz.de [01.03.2021]) faksimiliert wurden sowie das Zeichenmaterial aus Möller 1927a; 1927b.

3 Digitale Paläographie

Der Begriff „Paläographie" wird häufig im engeren Sinne einer Zeichenanalyse verwendet, in der Allographe eines Graphems in mehr oder weniger ausführlichen Listen nebeneinander gestellt und einer hieroglyphischen Variante zugeordnet werden.[43] Im weiteren Sinne umfasst der Begriff „Paläographie" aber sehr viel mehr: die Analyse der Zeichengröße, des Modulus und des Duktus[44], der Materialität von Schreib- und Beschriftungsgegenständen, der Schreibgewohnheiten vs. -besonderheiten eines Schreibers, der Orthographien, des Layouts u. a. m.[45]

Die *digitale* Paläographie bringt zusätzliche Komponenten ein.[46] Sie reichen von der Generierung digitaler Daten (Fotos, Scans, Zeichnungen etc.), über die Annotation und Bereitstellung von Daten in digitalen Medien ganz unterschiedlicher Art bis zur Langzeitarchivierung der Daten in Repositorien.

Auch wenn die ersten Ansätze digitaler paläographischer Arbeit in der Ägyptologie bereits in das Ende des 20. Jahrhunderts zurückreichen, sind gerade für das Hieratische kaum merkliche Fortschritte gemacht worden.[47] In anderen Geisteswissenschaften, wie z. B. der mittelalterlichen Handschriftenkunde und Kodikologie, sind dagegen digitale Methoden inzwischen fester Bestandteil der paläographischen Arbeit.[48]

Ein wichtiger Aspekt – nicht nur in Bezug auf digitales paläographisches Arbeiten – ist die Datengenerierung und Datenbeschaffenheit[49], denn sie bildet den Ausgangspunkt digitaler geisteswissenschaftlicher Forschung. Die Schaffung neuer digitaler Forschungsobjekte ist ein wesentliches Merkmal der *Digital Humanities*:

43 Eine solche Liste findet sich für die hier analysierten Zeichen im Anhang (6.2).

44 Zu diesen und anderen objektiven Kriterien in der Paläographie Stokes 2009, 313–15 mit Verweis auf weitere Literatur. Zum Duktus und der Stratigraphie hieratischer Zeichen siehe oben S. 214–15.

45 Siehe z. B. Gülden, Krause und Verhoeven 2020, 637.

46 Mit den sehr unterschiedlichen Aspekten des Digitalen in den (digitalen) Geisteswissenschaften hat sich Ciula 2017 ausführlich beschäftigt.

47 Siehe dazu Gülden, Krause und Verhoeven 2020, 634–36. Zu erwähnen sind aber digitale Ansätze jüngerer Projekte, die sich mit Hieroglyphen beschäftigen, z. B. *Hieroglyphic „Hands"* (https://journals.openedition.org/baefe/996#tocto2n12/ [10.03.2021]), oder das *Polychrome Hieroglyph Research Project* (https://www.phrp.be/ [10.03.2021]). Für das Demotische siehe das *Demotic Palaeographical Database Project* (http://demotischdemotisch.de/ [10.03.2021]). Zu aktuellen digitalen Ansätzen in der Ägyptologie siehe auch Haliassos u. a. 2020 und Bermeitinger, Gülden und Konrad 2021.

48 Siehe beispielsweise Ciula 2005; Fecker, Märgner und Schaßan 2015; Stokes 2009 und Stokes 2015.

49 Siehe dazu den Beitrag von Gerhards/Konrad im vorliegenden Band.

> *[…] the creation of digital objects – be it images of inscriptions or manuscripts, electronic versions of ancient corpora, or collections of secondary literature – is a crucial part of humanities research. It is more than just preparation for research. This is a fundamental difference between data-bases as they are used in the humanities and those that are used in the natural sciences. The way in which inscriptions are photographed or in which text corpora are transcribed and encoded, is crucial for the way in which these research objects will be studied in the future.*[50]

Das AKU-Projekt verwendet derzeit zwei Grafikformate – für Vektorgrafiken das Format SVG (*Scalable Vector Graphics* 1.1) und für Rastergrafiken das Format TIFF (*Tagged Image File Format* 6.0).[51] Beide zeichnen sich dadurch aus, dass sie unverändert, unkomprimiert und somit verlustfrei gespeichert werden können.[52] Dies ist insbesondere für die Langzeitarchivierung von Bedeutung.[53]

Die projekteigenen Faksimiles werden digital gezeichnet und als Vektorgrafiken gespeichert.[54] Ein Vorteil des SVG-Grafikformats besteht darin, dass der ihm hinterlegte XML-Code die Zeichen präzise beschreibt.[55] Die Größe des Zeichens[56] ist dort ebenso notiert wie z. B. die Anzahl der Striche (und deren Sequenz),[57] mit denen

50 Peursen 2010, 11.

51 Gülden 2018, 94–98. Zu SVG siehe https://www.w3.org/TR/SVG11/ [27.02.2021], zu TIFF siehe https://www.loc.gov/preservation/digital/formats/fdd/fdd000022.shtml [27.02.2021]. Für Empfehlungen zu Vektorgrafiken siehe https://www.ianus-fdz.de/it-empfehlungen/vektorgrafiken [27.02.2021] und zu Rastergrafiken https://www.ianus-fdz.de/rastergrafiken [27.02.2021].

52 Die Spezifizierung des Formates TIFF erlaubt zudem eine Speicherung mit verlustfreier Komprimierung.

53 Zur Datensicherung siehe https://www.ianus-fdz.de/dateispeicherung-mittelfristig [27.02.2021].

54 Die Methode des AKU-Projektes und Anleitungen zum digitalen Faksimilieren von hieratischen Zeichen werden sukzessive in mehreren Beiträgen im AKU-Blog https://aku.hypotheses.org mit der *community* geteilt (Stichworte: „digitales Faksimilieren", „graphische Annotation").

55 Auf die Vorteile vektorbasierter Umzeichnungen haben z. B. Brovarski 1996 und Manuelian 1998 bereits hingewiesen. Letzterer hat ausführlich die vektorbasierte Methode für das Umzeichnen von Reliefs beschrieben, die für den Druck – nicht aber für eine digitale Auswertung – konzipiert war. Für eine digitale Paläographie des (Abnorm-)Hieratischen bevorzugen Berg und Donker van Heel 2000, 39–40 dagegen den Einsatz von „digital filters" bei Rastergrafiken anstatt mit Hilfe des „painstaking computertracing of outlines" Vektorgrafiken zu erstellen.

56 Siehe Gülden 2018, 79, Abb. 11.

57 Diese wird im XML-Code durch die <path> Elemente beschrieben. Siehe dazu beispielhaft Fig. IV.9.2 bei Gülden, Krause und Verhoeven 2020, 642 mit der ausführlichen Darstellung des ersten <path> Elements (die weiteren sind verkürzt abgebildet).

ein Schreiber das Zeichen geschrieben hat. Außerdem kann der XML-Code mit zusätzlichen Daten zu Schriftphänomenen sowie anderen Informationen maschinenlesbar erweitert werden.[58] Somit können die Vektorgrafiken – über die visuelle Darstellung hinaus – digital analysiert und in größeren Quantitäten, als es analog möglich wäre, bearbeitet werden. Dennoch sind für Vektorgrafiken entsprechende Analysetools rar bzw. – für unsere Fragestellungen – noch nicht vorhanden.[59]

Für Rastergrafiken dagegen wurden in den *Digital Humanities* zahlreiche digitale Visualisierungs- und/oder Analysetools entwickelt. In den meisten Fällen handelt es sich um *open source*-Entwicklungen, die für andere Projekte nachnutzbar sind, insbesondere, wenn sie – obwohl aus anderen geisteswissenschaftlichen Disziplinen stammend – teilweise ähnliche Forschungsfragen bzw. Visualisierungsbedarfe haben.[60]

4 Analyse

4.1 Digitale Datenbasis

Für die Analyse mit dem nachfolgend beschriebenen Tool *VIKUS Viewer* werden Rastergrafiken im Format JPEG (*Joint Photographic Experts Group*)[61] benötigt. Dazu werden TIFF-Dateien zusammen mit einigen ausgewählten Annotationen aus der Projektdatenbank exportiert. JPEG-Dateien aus den projekteigenen TIFF-Dateien zu erstellen, ist ohne größeren (Zeit-)aufwand möglich. Zu beachten ist aber, dass die TIFF-Dateien, die in der AKU-Datenbank erfasst sind und die Datenbasis bilden, auf zwei unterschiedlichen Digitalisierungsmethoden beruhen. Dies ist einerseits die bereits erwähnte digitale Umzeichnung mit der Erstellung von Vektorgrafiken, andererseits die Retrodigitalisierung bestehender, in Buchform publizierter Paläographien.[62] Um die Bilddaten aus beiden Digitalisierungsprozessen vergleichen zu können, müssen sie in ihrer Textur übereinstimmen. Während die Umwandlung

58 Gülden, Krause und Verhoeven 2020, 641–43.

59 In Zusammenarbeit mit Kolleg*innen aus der Informatik und des wissenschaftlichen Rechnens wird sich das AKU-Projekt aktiv in die Entwicklung solcher Tools einbringen.

60 Dennoch können nicht alle Entwicklungen problemlos für das eigene Projekt adaptiert werden, weil sie z. B. speziell auf bestimmte Projekte bzw. Forschungsfragen zugeschnitten sind. Erschwerend kommt oft hinzu, dass personelle und finanzielle Ressourcen für die Entwicklung einer entsprechenden GUI (*graphical user interface*), die eine Verbreitung bzw. eine stärkere Nachnutzung eines solchen Tools unterstützen würde, fehlen.

61 https://jpeg.org/about.html [27.02.2021].

62 Zur Vorgehensweise im AKU-Projekt siehe zusammengefasst Gülden 2018, 99–101.

von Vektorgrafiken problemlos „saubere“ TIFF-Dateien erzeugt, ist die Generierung auf Basis der Retrodigitalisate ein aufwändigerer Prozess.[63]

4.2 Digitales Tool

Das Projekt *Visualisierung kultureller Sammlungen* (*VIKUS*)[64] an der Universität Potsdam hat verschiedene grafische Benutzeroberflächen entwickelt, die alternative Wege zur Erforschung des (digitalen) Kulturerbes ermöglichen sollen. Eines dieser Visualisierungstools ist der *VIKUS Viewer*, der einen interaktiven (und intuitiven) Zugang zu größeren Datenmengen ermöglicht.[65]

Durch geringfügige Anpassungen war es für das AKU-Projekt möglich, das Tool – gewissermaßen zweckentfremdet – für experimentelle Analysen zur Formvarianz hieratischer Schriftzeichen einzusetzen.[66]

Der *VIKUS Viewer* ist ein dynamisches Tool für die Datenanzeige im Webbrowser[67] und bietet zwei Ansichten: TIME und SIMILARITY. In beiden Ansichten lassen sich die angezeigten Bilddaten mit Hilfe einer *Keyword*-Suche und einer Volltext-Suche in den Metadaten filtern. Beide Suchmöglichkeiten können zudem miteinander kombiniert werden.

In der Zeitleistenansicht (TIME) werden die Hieratogramme entsprechend ihrer Datierung chronologisch angeordnet. Das Beispiel in Abb. 1 zeigt alle Bilddaten der Hieratogramme, die in dieser Analyse berücksichtigt wurden (Allographe zu  ,  und). Um die Filtermöglichkeit der *Keyword*-Suche zu illustrieren, sind die Bilddaten dort beispielhaft nach der Subkategorie „Eulen (*Strigiformes*)“ gefiltert. Sie werden oberhalb der Zeitleiste angezeigt. Alle anderen erfassten Hieratogramme aus den Kategorien „Mobiliar“ und „Pflanzen“ werden unterhalb der Zeitleiste ausgegraut abgebildet.

Die Zoom-Funktion des Tools erlaubt es zudem, ein ausgewähltes Zeichen zu vergrößern und die dazugehörigen Metadaten einzusehen (Abb. 2).

63 Siehe dazu die Beschreibung AKU-Workflows bei Gerhards/Konrad im vorliegenden Band, 195–198.

64 https://uclab.fh-potsdam.de/vikus/ [04.02.2021].

65 https://vikusviewer.fh-potsdam.de [04.02.2021]. Siehe dazu Glinka, Pietsch und Dörk 2017 und zum Aspekt der Nachnutzbarkeit des *VIKUS Viewers* Glinka, Pietsch und Dörk 2016.

66 T. Konrad hat den *VIKUS Viewer* für unsere Bedarfe geringfügig modifiziert. Siehe auch den Beitrag von Gerhards/Konrad im vorliegenden Band, in dem u. a. ein „fehlgeschlagenes“ Experiment mit diesem Tool beschrieben wird, das aber zur Überprüfung und Optimierung der AKU-Projektdaten beigetragen hat.

67 Die Abbildungen 1–11 sind (bzw. basieren auf) Screenshots der Browseranzeige. Die Dynamik des Tools geht dabei verloren, dennoch können auf diese Weise Ähnlichkeitscluster der Zeichen visualisiert werden.

Abb. 1: Ansicht TIME im *VIKUS Viewer*. Gefiltert nach dem *Keyword* „Eulen (*Strigiformes*)“

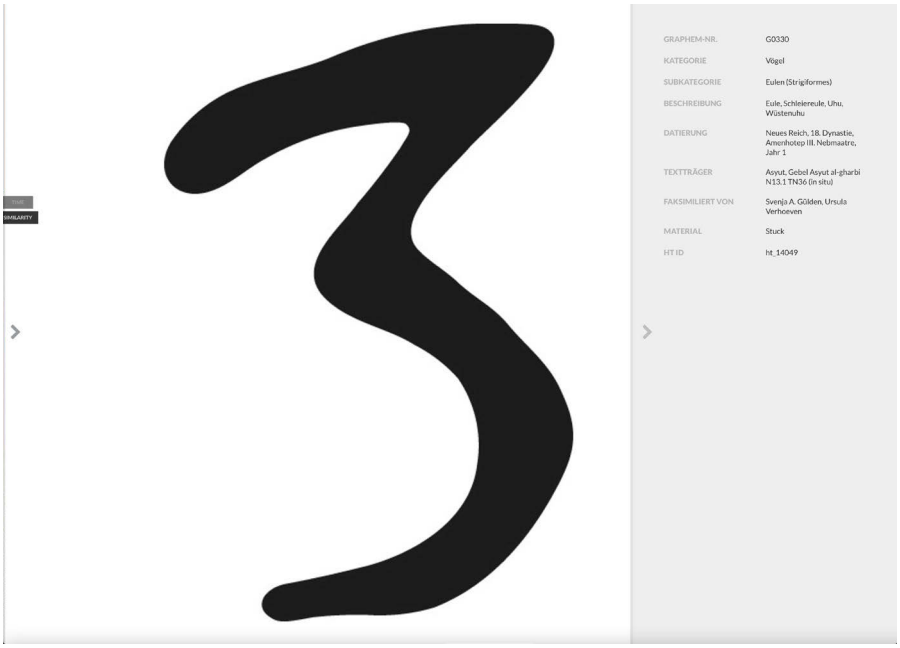


Abb. 2: Zoom eines Hieratogramms im *VIKUS Viewer* mit Metadaten

Mit der Ansicht SIMILARITY bietet der *VIKUS Viewer* die Möglichkeit, sich visuell ähnliche Bilddaten gruppiert anzeigen zu lassen, was für die Formanalyse der Hieratogramme besonders interessant ist. Die Ähnlichkeitsberechnung in dieser Ansicht basiert auf einem vortrainierten Modell von Bilddaten des *ImageNet*[68], das diese mit Hilfe von *TensorFlow*[69] in einem künstlichen neuronalen Netz verarbeitet.[70] Für die Visualisierung setzt der *VIKUS Viewer* den *t-SNE* (*t-Distributed Stochastic Neighbor Embedding*) Algorithmus ein, der 1024 Dimensionen als Deskriptoren verwendet, um die Bilddaten nach Ähnlichkeit zu sortieren. Ein Vorteil dieses Verfahrens ist, dass eine große Anzahl von Daten bei einer geringen Rechnerleistung in einem 2D- oder 3D-Raum visualisiert werden kann.[71] Die Abb. 3 zeigt eine auf

68 https://image-net.org/index.php [27.02.2021].
69 https://www.tensorflow.org [27.02.2021].
70 Siehe dazu und zum Folgenden ausführlicher auch den Beitrag von Gerhards/Konrad im vorliegenden Band, 192–193.
71 Maaten und Hinton 2008, 2599–2600.

Abb. 3: Similarity-Anzeige mit Clustern der Bilddaten zu den Graphemen ſ, □ und ſſ. Berechnet mit *t-SNE* (*epsilon* = 10 und *perplexity* = 10)

dieser Berechnung beruhende Ähnlichkeitsgruppierung der hieratischen Allographe der Grapheme , und  .[72]

Deutlich sind in der Abb. 3 mehrere Cluster[73] von Zeichen zu erkennen:
- schmale und vertikal ausgerichtete Zeichen (links),
- Zeichen, die deutlich geschwungener und bauchiger sind (rechts oben),
- Zeichen, die diagonal orientiert und etwas komplexer als die zuvor beschriebenen sind (rechts außen),
- Zeichen, die sich aus drei vertikalen Linien und einer horizontalen Line zusammensetzen (unten).

Aus ägyptologischer Sicht sieht man darin Allograph-Cluster zu , und  (mit einfacher und komplexer Form). Auch wenn hier und im Folgenden von ähnlichen Zeichenformen gesprochen wird, ist es wichtig sich zu vergegenwärtigen, dass das Tool nicht die äußere Form eines Schriftzeichens und somit das Schriftzeichen selbst identifiziert und analysiert, sondern Bilddaten. Die analysierten Bilddaten sind auf zwei Farbwerte – weiß (255) und schwarz (0) – beschränkt. Würden die Bilddaten mehrere Graustufen oder gar Farbe (z. B. im Falle von Rubra) aufweisen, wären diese in die Ähnlichkeitsanalyse der Bilder einbezogen worden und die Gruppierung ähnlicher hieratischer Zeichenformen wäre dann nicht möglich.[74]

4.3 Einzelanalyse

Um die Belege zu den drei Graphemen , und  im Hinblick auf ihre jeweiligen Formen zu analysieren, kann die Gesamtübersicht (Abb. 3) nicht verwendet werden, da die Ähnlichkeitsvisualisierung auf dem Vergleich zu allen Hieratogrammen beruht. Die einzelnen Grapheme müssen daher individuell betrachtet werden.

Bei allen drei Beispielen werden zunächst die Cluster der Zeichenformen auf ihre Plausibilität überprüft. Dies ist die Voraussetzung dafür, dass der Vergleich von Zeichenformen im Hinblick auf Textsorte und Materialität überhaupt möglich ist. In diesem Zusammenhang ist es wichtig zu betonen, dass nicht mit perfekt zusammengestellten Ähnlichkeitsgruppierungen, die sich scharf voneinander abgren-

72 Die Visualisierung identischer Daten kann je nach Modifizierung der Parameter *„epsilon"* (Lernrate) und *„perplexity"* (Parameter, der die Anzahl der nahen Nachbarn bestimmt) variieren und wird daher auch im Folgenden bei jeder Visualisierung angegeben. Siehe dazu sehr anschaulich Wattenberg, Viégas und Johnson 2016.

73 Streng genommen handelt es sich dabei nicht um digital berechnete „Cluster", sondern um eine Sortierung nach Ähnlichkeiten.

74 Siehe dazu die anschauliche Abb. 6 bei Gerhards/Konrad im vorliegenden Band.

zen, zu rechnen ist.[75] Die Grenzen werden vielmehr fließend sein und es ist zudem zu erwarten, dass für vereinzelte Hieratogramme auch eine andere Positionierung denkbar wäre. Die Hieratogramme haben jeweils mehrere Kriterien, die formbestimmend sind. Je nach Gewichtung dieser Kriterien können sie unterschiedlichen sog. „Formklassen"[76] zugeordnet werden. Beim Einsatz eines solchen digitalen Tools geht es daher um eine Vorsortierung von Zeichen mit einer ähnlichen Form, die auf vordefinierten Parametern beruht und somit reproduzierbar ist.

Weitere Aspekte, die auf ihren Einfluss hinsichtlich der Formausprägung überprüft werden, sind die Materialität (Schreiboberfläche und Binse) und die Textsorte. Abschließend werden an einem Graphem-Beispiel mögliche Zeichen-Cluster von Schreibern der Dipinti betrachtet.

4.3.1 Die hieratischen Allographe zum Graphem

Die hieratischen Allographe zum Graphem sind in ihrer Form reduziert. Daher sind sehr deutliche Formunterschiede nicht unbedingt zu erwarten. In Abb. 4 sind dennoch einige Gruppen zu erkennen. Vor allem im Bereich rechts bis rechts unten (Gruppe 1) sind gerade Linien (Bsp.: )[77] vorherrschend, während beispielsweise die Zeichen der Gruppen 2 und 3 weniger geradlinig sind (Bsp.: )[78]. Letztere weisen zudem einen deutlich dickeren Strich auf als die Zeichen aus Gruppe 1.

Dies korrespondiert im Wesentlichen mit den Beschriftungsoberflächen, die in der Abb. 4 (und den folgenden) durch die Farben grau (Stuck/Stein) und schwarz (Papyrus) gekennzeichnet sind.[79] Während die Zeichen auf Papyrus fast durchgängig dickere Einzelstriche haben, weisen die Zeichen der Dipinti sowohl dünne als auch dickere Linien auf und sind zudem meist etwas kantiger.

Im Hinblick auf die Textsorten lassen die Hieratogramme, die auf Papyrus geschrieben wurden, zwei deutliche Cluster erkennen (Abb. 5). Diejenigen, die aus dem medizinischen und den administrativen Texten stammen, bilden eine zusammenhängende Gruppe (Gruppe 7, unten), während die weiteren Cluster – zwei große (Gruppe 5 und 9) und zwei kleine (Gruppe 6 und 8) – sich aus Zeichen zusammensetzen, die den Briefen entnommen sind. Dabei bestehen zwei Gruppen fast

75 Die beispielhaft besprochenen Clustergruppen sind zur besseren Identifizierung farbig unterlegt. Zusätzlich finden sich Beispiele der Zeichenformen im Text. Diese sind – wie im *VIKUS Viewe*r – auf eine einheitliche Größe skaliert. Siehe dazu die Bemerkungen im Fazit. In der Zeichenliste im Anhang sind die Hieratogramme in ihrer Originalgröße abgebildet.

76 Zum Konzept der „Formklasse" siehe Moezel 2018, 65–72.

77 Von links nach rechts: D. Assiut, Grab N13.1 TW14, TN18 und TW30.

78 Von links nach rechts: P. London, BM EA 10104 und EA 10102 (2 ×).

79 Die Einfärbung der hieratischen Zeichen zur Markierung der Schreiboberfläche ist nachträglich erfolgt (siehe dazu die Bemerkungen zu s/w, Graustufen und Farbe weiter oben).

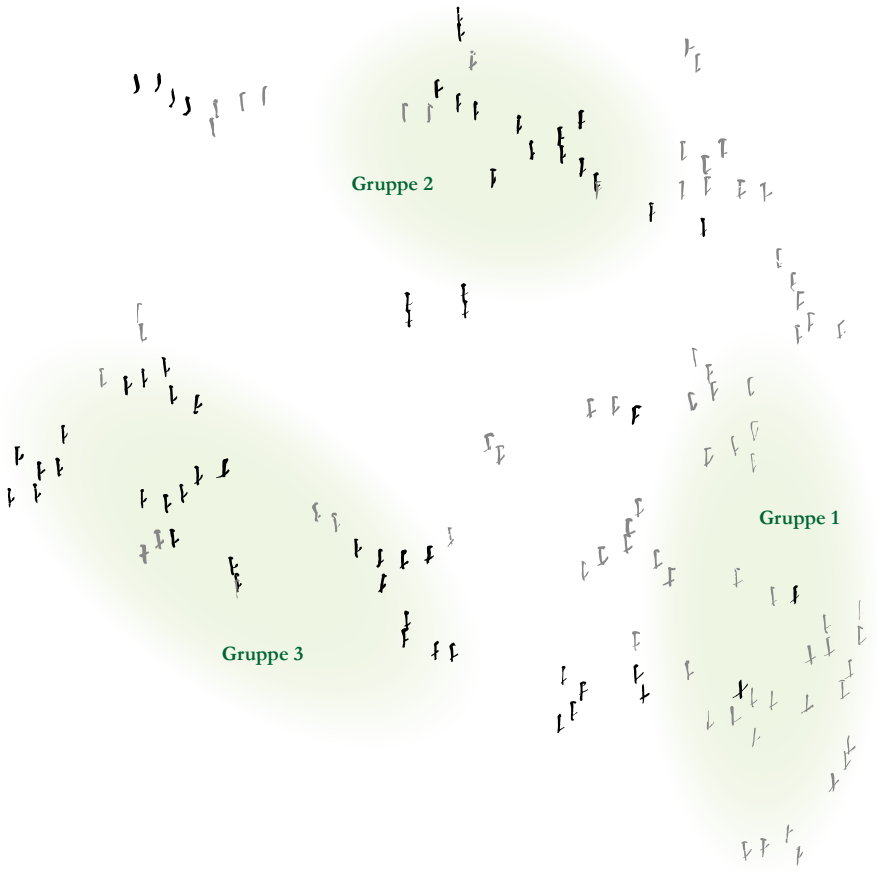


Abb. 4: Similarity-Anzeige mit Clustern der Bilddaten zum Graphem  . Berechnet mit *t-SNE* (*epsilon* = 5 und *perplexity* = 3)

ausschließlich aus Zeichen von nur zwei Papyri. Die in der Mitte isolierte Gruppe 6 von vier Zeichen stammt vom P. London, UC 32782 und das große Cluster links (Gruppe 9) setzt sich vorwiegend aus Zeichen des P. London, BM EA 10102 zusammen. Dennoch finden sich die Hieratogramme dieses Papyrus auch in den anderen Clustern wieder, deren Zeichen ansonsten mehr oder minder durchmischt aus allen anderen Briefen stammen. Dass das Clusterergebnis im Fall des P. London, BM EA 10102 so eindeutig erscheint, ist sicher dem Umstand geschuldet, dass von diesem Papyrus überproportional viele Zeichenbeispiele vorhanden sind.

Bei den Zeichen, die auf Stuck geschrieben sind, sieht die Situation etwas anders aus. Zwei große Cluster, die auf den Textsorten „Besuchertexte“ und „literarische Texte“ basieren, sind nicht erkennbar. Ins Auge fallen aber eine größere (Gruppe 4)

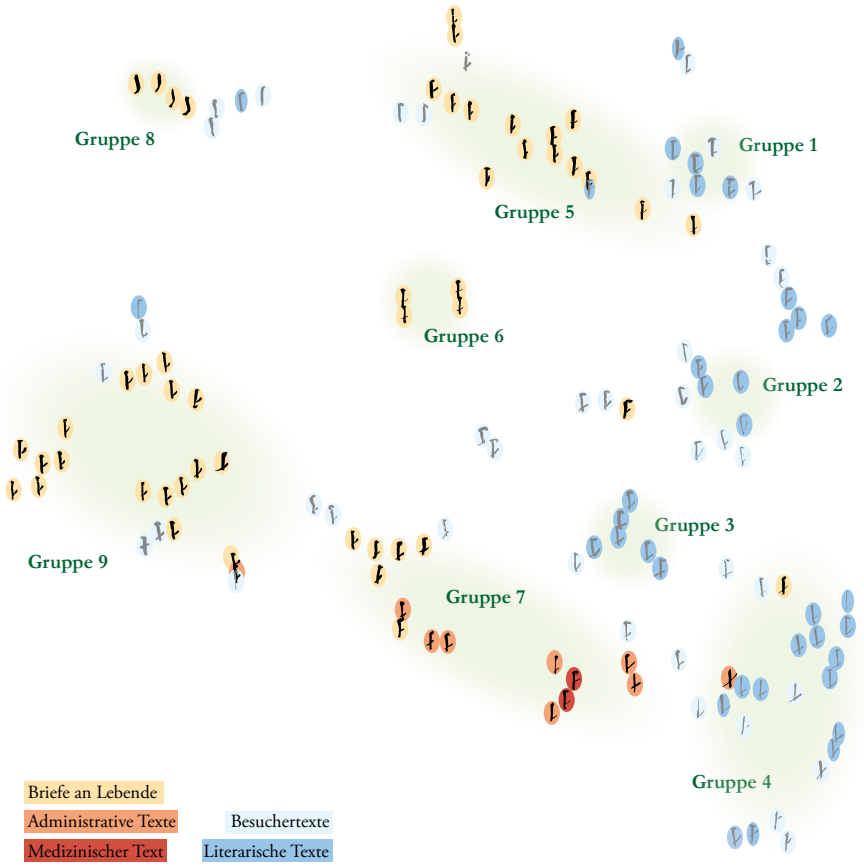


Abb. 5: SIMILARITY-Anzeige mit Clustern der Bilddaten zum Graphem 𓃀 und der Markierung unterschiedlicher Textsorten

und drei kleinere Gruppen (Gruppen 1, 2 und 3) mit Zeichen aus literarischen Texten, von denen sich die drei Cluster 1, 3 und 4 vorwiegend aus Zeichen des D. Assiut, Grab N13.1 TW30 zusammensetzen. Der Schreiber Men (Typ A) hat die Allographe von 𓃀 in TW30 so unterschiedlich geschrieben, dass man diese zwei oder drei „Formklassen“ zuweisen könnte.

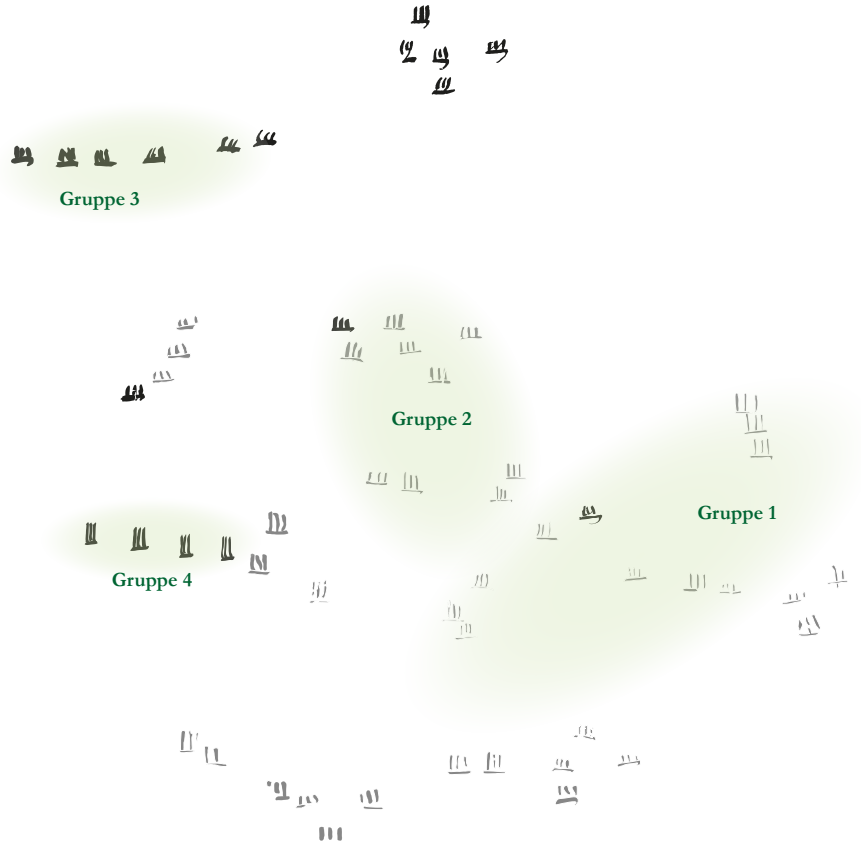


Abb. 6: Similarity-Anzeige mit Clustern der Bilddaten zum Graphem . Berechnet mit *t-SNE (epsilon* = 5 und *perplexity* = 3)

4.3.2 Die hieratischen Allographe zum Graphem

Die Hieratogramme, die das Graphem repräsentieren, haben ebenfalls ein reduziertes Formenspektrum – sie setzen sich aus einer horizontalen und drei vertikalen Linien zusammen. Dennoch lassen sich auch hier Unterschiede in der Ausführung der Zeichen erkennen und obwohl in diesem Fall – im Vergleich zu den Graphemen und – weniger Bilddaten analysiert wurden, konnten Cluster gebildet werden.

In der Abb. 6 sind rechts außen (Gruppe 1) gerade Formen mit relativ großen Strichzwischenräumen zu erkennen (Bsp. ,)[80]. In der Mitte (Gruppe 2) sind Hie-

80 Von links nach rechts D. Assiut, Grab N13.1 TN9, TN2.

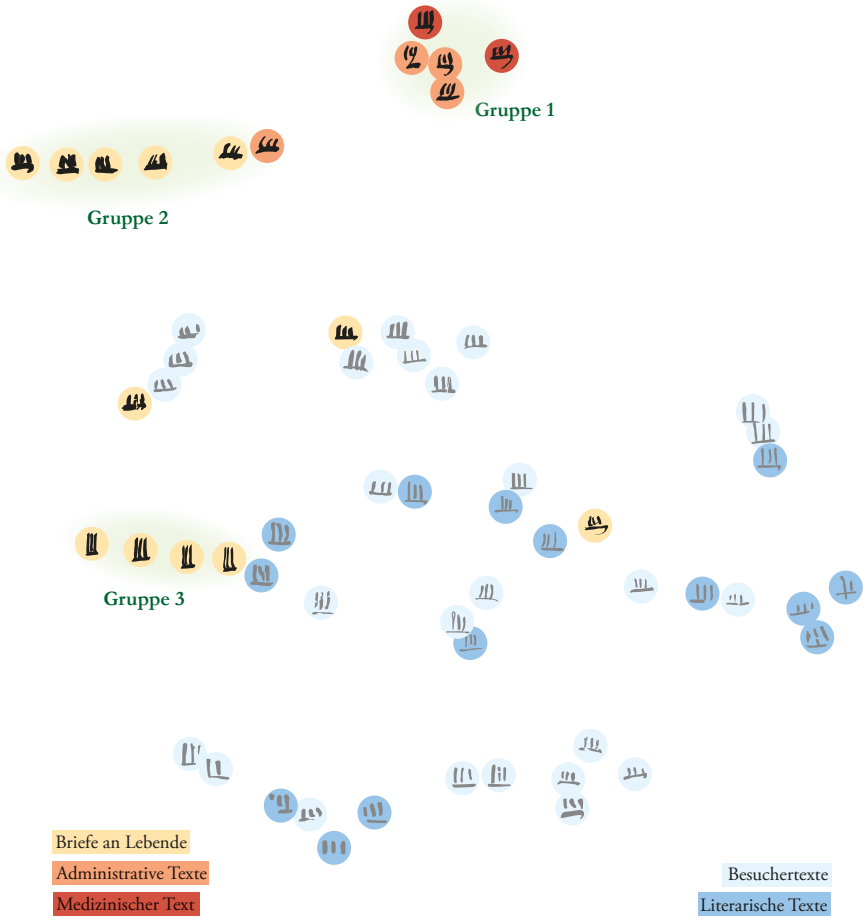


Abb. 7: Similarity-Anzeige mit Clustern der Bilddaten zum Graphem und der Markierung unterschiedlicher Textsorten

ratogramme gruppiert, die gerade Formen mit weniger Strichzwischenraum zeigen (Bsp. ,)[81]. Etwas dickere Einzelstriche zeigen die Hieratogramme in der oberen Hälfte der Gruppe 2 (Bsp. ,)[82]. Dichtere Strichzwischenräume sind bei den Zeichen in den Clustern oben links (Gruppe 3) (Bsp. , ,)[83] und der Gruppe 4 (Bsp. ,)[84] zu beobachten, wobei letztere schmal und langgezogen sind.

81 Von links nach rechts: D. Assiut, Grab N13.1 TN28, TN18.
82 Von links nach rechts: D. Assiut, Grab N13.1 TW2, P. London, UC 32782.
83 Von links nach rechts: P. Ebers und P. London, BM EA 10102 (2×).
84 Von links nach rechts: P. London, UC 32783, P. London, UC 32782.

Wie auch beim Graphem 𓃀 bereits beobachtet, entsprechen diese unterschiedlichen Zeichenformen, die durch den *VIKUS Viewer* automatisiert gruppiert wurden, in großen Teilen den unterschiedlichen Beschriftungsmaterialien (Abb. 6). Die auf Stuck geschriebenen Zeichen haben oft gerade Formen mit häufig etwas dünneren Einzelstrichen sowie zumeist recht große Strichabstände (Gruppe 1 und 2). Bei den Zeichen, die auf Papyrus geschrieben sind, sind die Strichstärken meist dicker und die Strichabstände deutlich dichter (Gruppe 3 und 4).

Bei den Zeichen, die den Papyri entnommen sind, lassen sich in Bezug auf die Textsorten drei Cluster erkennen (Abb. 7). Die Zeichen aus dem medizinischen und den administrativen Texten bilden eine Gruppe (1), die beiden anderen Cluster enthalten fast ausschließlich Zeichen, die aus Texten stammen, die der Textsorte „Brief" zugeordnet sind. Das Cluster links oben (Gruppe 2) setzt sich aus Zeichen verschiedener Papyri zusammen, während das Cluster 3 aus Zeichen der P. London, UC 32782 und UC 32783 gebildet ist.[85] Bei den Zeichenformen, die auf Stuck geschrieben sind, sind keine echten Cluster zu erkennen, die die beiden Textsorten hinsichtlich der Sorten „Besuchertexte" und „literarische Texte" trennen würden. Es ist vielmehr so, dass sich die Zeichen aus literarischen Texten in den Besuchertext-Gruppen wiederfinden.

4.3.3 Die hieratischen Allographe zum Graphem 𓅓

Erwartungsgemäß setzen sich bei den Allographen zu diesem Graphem zwei Gruppen deutlich voneinander ab – die ausführlich und die kurz geschriebenen Zeichen der Eule (Abb. 8). Innerhalb dieser Cluster sind aber auch weitere Untergruppierungen klar zu erkennen.[86]

Bei den abgekürzt geschriebenen Zeichen befinden sich auf der rechten Seite (Gruppe 1 und 2) sehr bauchige, z. T. ausladende Zeichenformen, die zudem eine dicke Strichstärke aufweisen (Bsp. )[87]. Die Gruppe 3 enthält Zeichen, die zumeist weniger rund, sondern eher kantig sind (Bsp. )[88] und zudem eine etwas schmalere Strichstärke haben. In einem weiteren Cluster (Gruppe 6) sind die kantigen Formen etwas ausgeprägter ()[89].

85 Beide Briefe gehören eng zusammen, sie sind nahezu identische Versionen eines Briefes, der an Amenophis IV. gerichtet ist.

86 Nicht alle Cluster können hier im Detail besprochen werden, es werden Beispiele vorgestellt.

87 Von links nach rechts: P. London, BM EA 10102 (2×), D. Assiut, Grab N13.1 TW30.

88 Von links nach rechts: D. Assiut, Grab N13.1 TW30, TW7, TN2.

89 Von links nach rechts: D. Assiut, Grab N13.1 TN39, P. Berlin, P. 3029 [Text a], P. London, BM EA 10104, D. Assiut, Grab N13.1 TN1.

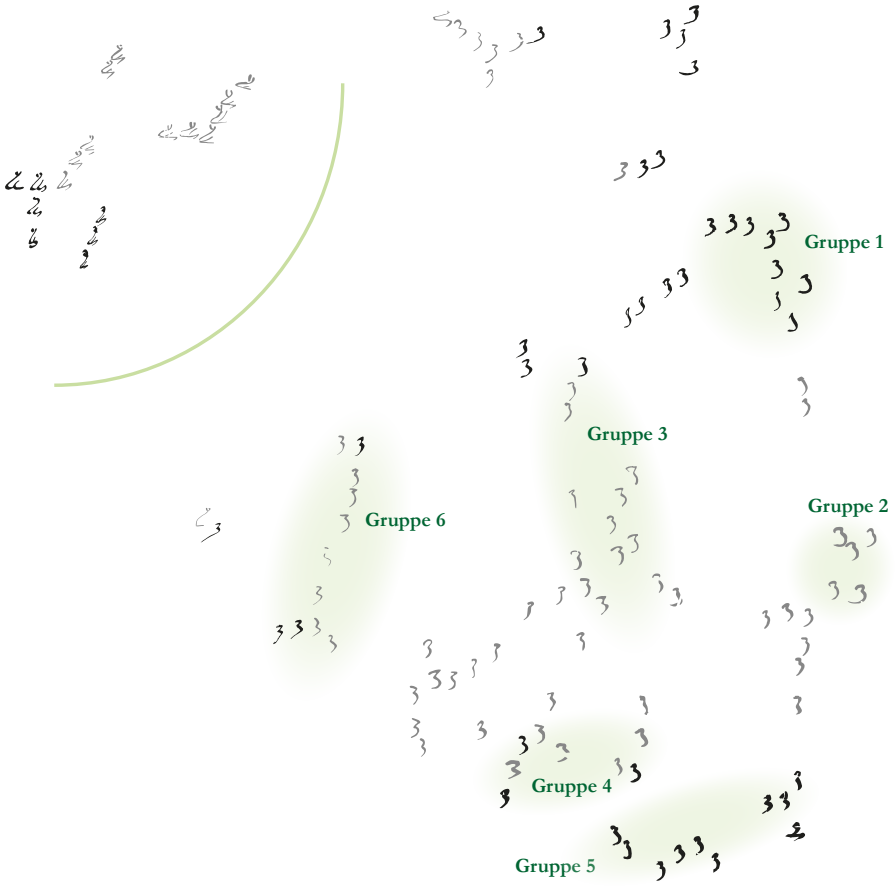


Abb. 8: Similarity-Anzeige mit Clustern der Bilddaten zum Graphem . Berechnet mit *t-SNE* (*epsilon* = 10 und *perplexity* = 3)

Vergleicht man die Zeichenformen im Hinblick auf die beiden Schriftträger Papyrus und Stuck, zeigt sich, dass auch hier die auf Papyrus geschriebenen Zeichen fast ausschließlich eine dicke Strichstärke haben. Aber auch die Hieratogramme der Dipinti haben in diesem Fall häufig dicke Linien (Gruppe 4). Zeichen mit dünneren Strichstärken sind zwar vorhanden, allerdings in einer etwas geringeren Anzahl.

Die Zeichenformen auf Papyrus sind zumeist rund (Gruppe 1 und 5, Bsp. ,)[90]. Auch bei den Dipinti gibt es ein Cluster mit bauchigen Formen (Gruppe 2 und Gruppe 4), die Zeichen mit kantigen oder spitzeren Formen sind allerdings zahlreicher vertreten.

90 Von links nach rechts: P. London, BM EA 10102 (2×).

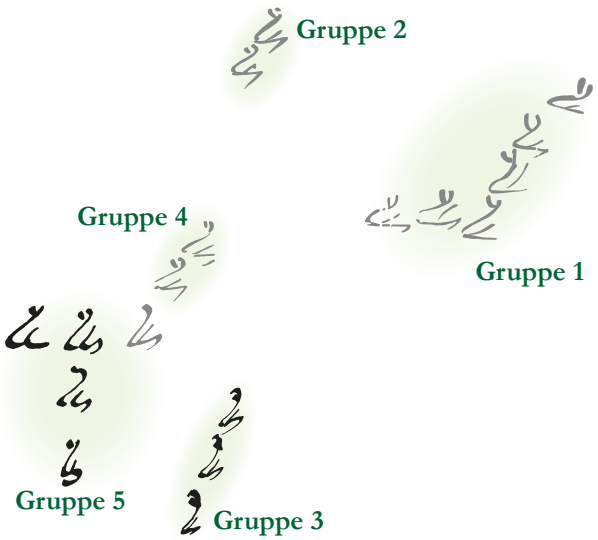


Abb. 9: Detail der SIMILARITY-Anzeige mit Clustern der Bilddaten zum Graphem  (Hieratogramme in ausführlicher Schreibung)

Die ausführlich geschriebenen Allographe des Graphems  bilden klare Cluster, und Merkmale der Ähnlichkeitsgruppierung durch den *VIKUS Viewer* sind sehr deutlich (Abb. 9). Eine Gruppe zeigt etwas breitere Zeichen mit einem größerem Strichabstand (Gruppe 1). Oben (Gruppe 2) sind zwei etwas kantigere Zeichen gruppiert, deren untere Abstriche jeweils sehr gerade und mit einer ausgeprägten Spitze ausgeführt sind. Ähnlich ist der Abstich auch bei zwei weiteren Zeichen darunter (Gruppe 4), allerdings ist die Stichstärke dieser Zeichen insgesamt deutlich schmaler als bei den beiden zuvor genannten. Die Gruppe 3 wird aus sehr schmalen, schlanken Zeichen gebildet, deren Einzelstriche sehr dicht beieinanderstehen und bei denen die „Rückendiagonale" sehr steil ausgeführt wurde. Eine ähnlich steile „Rückendiagonale" hat das Hieratogramm links dieser Gruppe, das aber u. a. aufgrund der Ausführung des „Kopfes" gut in das linke Cluster (Gruppe 5) passt.

Obwohl die Zeichenanzahl für einen Vergleich der Zeichenformen in Bezug auf die Beschriftungsoberfläche eigentlich zu gering ist, kongruieren die Cluster mit den unterschiedlichen Beschriftungsoberflächen. Die Zeichen, die auf Papyrus geschrieben sind, zeigen deutlich die Führung der Binse mit schmaleren Geraden und dickeren geschwungenen Partien, während die Linienstärke bei den Dipinti-Hieratogrammen nicht so konsequent variiert.

Der Vergleich der Zeichenformen in Bezug auf die Textsorten (Abb. 10) lässt bei den Zeichen, die aus den Papyrushandschriften stammen, mehrere Cluster erken-

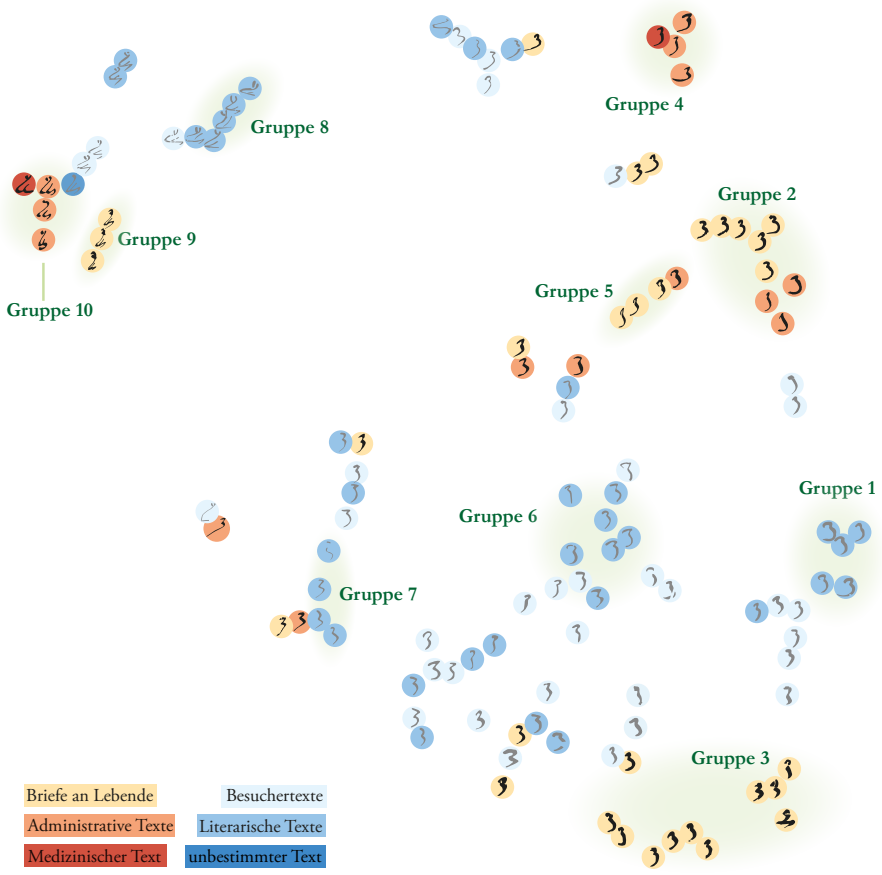


Abb. 10: Similarity-Anzeige mit Clustern der Bilddaten zum Graphem 𓅱 und der Markierung unterschiedlicher Textsorten

nen. Teilweise setzen sie sich ausschließlich aus dem medizinischen und den administrativen Texten (Gruppe 4 und 10) bzw. den Briefen (Gruppe 3) zusammen. In den Gruppen 2 und 5 finden sich hauptsächlich Zeichen aus Briefen mit vereinzelten Belegen aus administrativen Texten. Die Untergruppen mit sehr ähnlichen Formen stammen jeweils aus einem Brief (Bsp. Gruppe 2 𓅱, 𓅱 und Gruppe 5 𓅱, 𓅱)[91].

Bei den ausführlichen Schreibungen wird die Gruppe 9 aus drei Zeichen der bereits erwähnten Briefe an Amenophis IV. gebildet.

Die Zeichen aus den Dipinti zeigen keine großen Cluster für die Textsorten „Besuchertexte“ und „literarische Texte“. Allerdings haben sich ca. vier kleine Cluster

91 Von links nach rechts: P. London, BM EA 10102 (2×) und P. London, UC 32782 (2×).

aus literarischen Texten gebildet. Das Cluster der ausführlichen Schreibung (Gruppe 8) setzt sich aus Zeichen mehrerer Dipinti zusammen.[92] Die Zeichen der Gruppen 7 (Bsp. )[93] und 1 (Bsp.)[94] stammen jeweils aus einem Text, während die Gruppe 6 (Bsp.)[95] aus Zeichen mehrerer Dipinti gebildet ist.

4.3.4 Dipinti-Schreiber

Da sich in 24 der hier verwendeten Dipinti aus dem Grab N13.1 in Assiut die Schreiber mit ihren Namen verewigt haben, liegt es nahe, die Zeichenformen zumindest eines Graphems dahingehend zu untersuchen, ob sich ein oder mehrere Cluster ähnlicher Zeichen bestimmten Schreibern zuordnen lassen.[96] Die häufigsten Belege (7 Dipinti) finden sich für Chaemwese und Men (Typ A) (5 Dipinti).[97]

In der Abb. 11[98] ist zu sehen, dass Chaemwese – zumindest in den hier untersuchten Texten – die Eule stets in der kurzen Form geschrieben hat. Die ausführliche Schreibung der Eule findet sich nur für den Schreiber Men (Typ A) in literarischen Texten und den (nicht in die Betrachtung einbezogenen) Schreiber Iahmes A (Gruppe 4). Die beiden Schreiber Chaemwese und Men (Typ A) haben sowohl Besuchertexte als auch literarische Texte an die stuckierten Wände des Grabes N13.1 geschrieben. Dabei verwendeten sie für die kurze Schreibung des Graphems  mehrere Formvarianten, für die einige Cluster beobachtet werden können, so beispielsweise Gruppe 1, die zwei Untergruppen hat. Die bauchigen, ausladenden Formen (Bsp. ,)[99] stammen aus einem literarischen Text, den Men (Typ A) geschrieben hat, die etwas weniger ausladenden (Bsp. ,)[100] aus einem Besuchertext von Chaemwese. Ob dabei die Textsorte oder individuelle Aspekte eine Rolle spielen, muss offenbleiben.

92 Vgl. dazu aber auch Abb. 11, die zeigt, dass diese Texte dem Schreiber Men (Typ A) zugewiesen werden.

93 D. Assiut, Grab N13.1 TN1.

94 D. Assiut, Grab N13.1 TW30.

95 D. Assiut, Grab N13.1 TW7.

96 Auf die Problematik, Schreiberhände anhand von Einzelzeichen zu identifizieren, wurde in der Einleitung explizit eingegangen. Hier geht es nicht um den Versuch, Schreiberpersönlichkeiten anhand ihrer Schrift zu identifizieren, sondern vielmehr darum festzustellen, wie variantenreich die Schreiber die Einzelzeichen geschrieben haben.

97 Siehe dazu Verhoeven 2020, 272–74 (Chaemwese), 268–72 (Men). Für die den Schreibern zugewiesenen Dipinti siehe die Tabelle 1 der verwendeten Handschriften im Anhang 6.1, die auf der Analyse von Verhoeven 2020, Kap. 6 beruhen.

98 Für die bessere Sichtbarkeit der Schreiberkennzeichnung wurde hier auf die Visualisierung der Textsorten, die bei der Analyse aber einbezogen wurden, verzichtet.

99 D. Assiut, Grab N13.1 TW30.

100 D. Assiut, Grab N13.1 TN9, TW18.

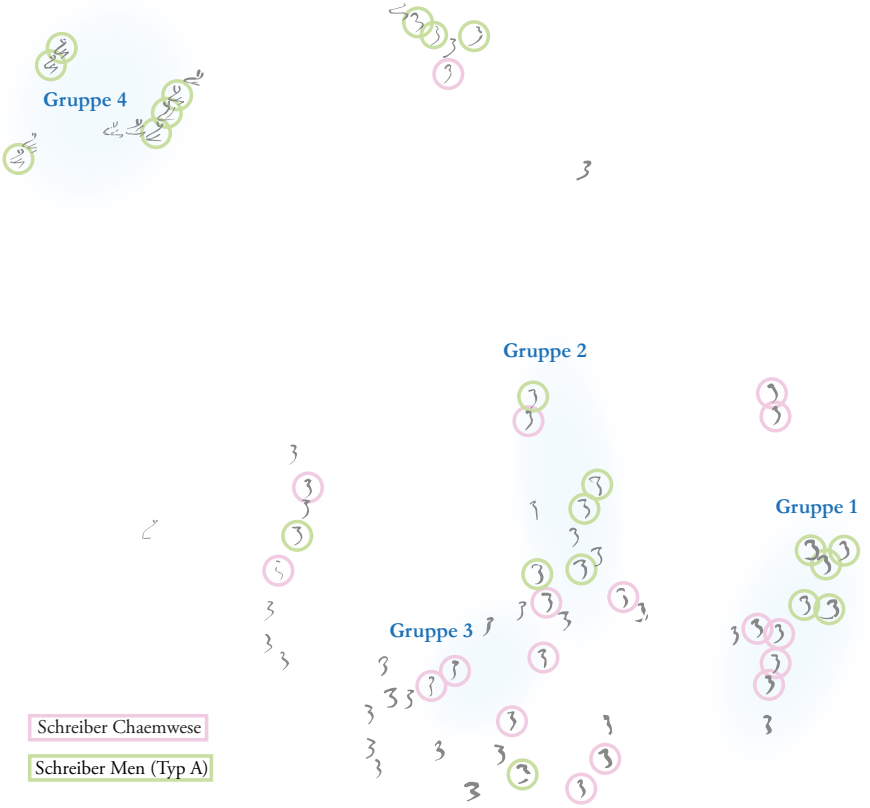


Abb. 11: Similarity-Anzeige mit Clustern der Bilddaten zum Graphem  und der Markierung der Schreiber Chaemwese und Men (Typ A)

Das Cluster in der Mitte (Gruppe 2) zeigt einige Zeichen mit einem ausgeprägten Kopfteil (Bsp.  , )[101], eine Formvariante, die von beiden Schreibern verwendet wird.

Eine andere prägnante Formvariante findet sich in Gruppe 3. Sie hat sehr schlanke und leicht nach rechts geneigte Formen (Bsp.  , )[102]. Diese Schreibung wird – zumindest in den hier untersuchten Texten – nur von Chaemwese (und anderen Schreibern) verwendet, nicht aber von Schreiber Men (Typ A).

101 D. Assiut, Grab N13.1 TN2 (Men (Typ A)), TN43 (Chaemwese).
102 D. Assiut, Grab N13.1 TW1 (Chaemwese), TW4 (Nebnefer).

4.4 Zusammenfassung der Einzelanalysen

Alle Einzelanalysen haben ergeben, dass die Clusterung der Bilddaten nach ähnlichen Formen erfolgreich und nachvollziehbar ist. Da eine Ähnlichkeitszuordnung durch mehrere Faktoren bestimmt ist, können Hieratogramme aber auch vereinzelt anderen Clustern zugeordnet sein als zunächst erwartet.

Die Cluster spiegeln auch sehr deutlich die Materialität – sowohl der Binse als auch der Beschriftungsfläche – wider, so beispielsweise die ausführlichen Formen der Eulen auf Papyrus. Bei diesen ist die Führung der Binse und der Wechsel von schmalen Linien und dickeren Zeichenpartien deutlich zu erkennen, im Gegensatz zu den ausführlichen Schreibungen aus den Dipinti, die dieses Merkmal nicht aufweisen. Weiterhin hat sich gezeigt, dass die weniger komplexen Zeichen, die kurze Schreibung der Eule eingeschlossen, bei den Papyrusbelegen fast ausschließlich dicke Strichstärken haben. Diese finden sich bei den Hieratogrammen aus den Dipinti zwar ebenfalls, aber in mindestens ebenso großer Anzahl sind Zeichen belegt, die (sehr) dünne Linien aufweisen. Ob die Beschaffenheit des Stucks dafür mitverantwortlich ist, ist möglich, aber nicht zu belegen. Für eine Untersuchung zu dieser Fragestellung sind größere Quantitäten an Hieratogrammen notwendig.

Anders als erwartet waren Cluster ähnlicher Zeichenformen bezüglich der Textsorten nicht immer deutlich. Bei den Dipinti, die nicht nur Besuchertexte, sondern auch literarische Texte umfassen, waren allenfalls kleine Gruppen auszumachen, wobei sich diese jeweils zumeist aus Belegen eines einzelnen Textes zusammensetzen. Möglicherweise würde sich dieses Ergebnis ändern, wenn ebenfalls größere Quantitäten an Zeichenbelegen herangezogen werden könnten.

Etwas anders stellt sich die Situation für die Papyruszeichen dar. Hier gab es deutliche Cluster mit Zeichen des medizinischen und der administrativen Texte, wenngleich in diesem Fall nur sehr wenige Zeichen in die Analyse einbezogen werden konnten. Auch die Zeichen aus den Briefen haben klare Cluster gebildet. Interessant wäre es, in einem nächsten Schritt zu untersuchen, ob es beispielsweise Unterschiede in der Ausführung der Zeichen je nach Adressaten gibt. Aber auch dafür sind höhere Quantitäten notwendig.

Bei der Betrachtung der Formvarianten, die die Schreiber Chaemwese und Men (Typ A) verwendeten, hat sich – erwartungsgemäß – gezeigt, dass die Schreiber nicht nur eine Formvariante oder „Formklasse" verwendeten, sondern die Ausführung eines Zeichens (z. T. stark) variierten.[103] Allerdings ist für diese beiden Schreiber – in den hier untersuchten Texten – jeweils eine „Formklasse" nicht belegt.[104]

103 Vorausgesetzt, die jeweiligen Schreibernamen sind einer Schreiberpersönlichkeit zuzuordnen.

104 Siehe Abb. 11, Gruppe 3 (nicht für Men (Typ A) belegt) und Gruppe 4 (nicht für Chaemwese belegt).

5 Fazit und Ausblick

Wie weiter oben bereits formuliert, analysiert der *VIKUS Viewer* keine Zeichenformen, sondern Bilddaten, die in diesem Experiment ausschließlich auf zwei Farbwerten beruhen. Es werden also Bilddaten gruppiert, die ähnliche Merkmale aufweisen. Der Schwarzwert definiert einerseits die Zeichenform, andererseits werden weitere Aspekte einbezogen wie beispielsweise die Dicke der Linien, die Auskunft über die Beschaffenheit des Beschreibstoffes und/oder der Binse geben können. Interessant ist, dass auch die in ihrer Form sehr reduzierten Zeichen zu Clustern ähnlicher Formausprägung gruppiert werden konnten. Wie sich bei der ausführlichen Schreibung der Eule gezeigt hat, ist bei komplexeren Hieratogrammen eine noch spezifischere Ähnlichkeitsgruppierung, die die Bildung von „Formklassen" unterstützt, zu erwarten.[105]

Sein Potenzial wird der *VIKUS Viewer* sicherlich bei einer größeren Anzahl von Zeichen entfalten, die manuell nicht effizient zu gruppieren wären. Ein ausgewogenes Verhältnis von Zeichenbeispielen unterschiedlicher Herkunft wäre wohl von Vorteil, ist aber schwierig realisierbar. Dieser Aspekt muss bei einer Auswertung berücksichtigt werden.

Für die Vergleichbarkeit der Bilddaten skaliert der *VIKUS Viewer* die Bilddaten auf eine einheitliche Höhe, wobei die Proportionen der jeweiligen Zeichen erhalten bleiben. Der Aspekt der Zeichengröße und der unterschiedlich großen Strich- und Zeichenabstände, die sich vor allem in der Einzelanalyse 4.3.2 gezeigt haben, gehören aber ebenfalls zu einer paläographischen Untersuchung. Dafür müssen andere Methoden und digitale Tools eingesetzt werden und mit den Ergebnissen beispielsweise einer *VIKUS Viewer* Analyse verglichen werden.

Die digitale Paläographie in der Ägyptologie steckt noch in den Kinderschuhen. Ein Grund dafür ist sicherlich, dass das Material bisher nicht in der notwendigen Quantität wie Qualität digitalisiert ist. Da in anderen Geisteswissenschaften im Bereich der digitalen Paläographie bereits sehr große Fortschritte gemacht wurden, hat die Ägyptologie die Möglichkeit, auf deren Entwicklungen aufzubauen, darüber zu reflektieren und zukünftige Methoden mitzugestalten. Die digitalen Ansätze sollen dabei keinesfalls den menschlichen Faktor in der Paläographie ersetzen, können aber wertvolle Unterstützung bieten, vor allem, wenn es nicht nur eine „Mikro-/Meso-Paläographie", sondern auch eine „Makro-Paläographie" geben soll.

Auch um den *educated guess* durch transparente und reproduzierbare Analysen zu ersetzen, sind digitale Methoden notwendig. Ob Janssen im folgenden Zitat digitale Analysen der hieratischen Schrift im Kopf hatte, ist mir nicht bekannt, aber treffender kann diese Problematik kaum formuliert werden:

105 Siehe dazu den Beitrag von Gerhards/Konrad in diesem Band.

Earlier generations of Egyptologists, approaching the matter of the writing from the standpoint of their intuition only, seem generally to have been certain in their opinions, but on what these were based remains obscure.[106]

6 Anhang

6.1 Verwendete Handschriften

Tabelle 1: Dipinti

Assiut, Grab N13.1 (in situ)[107]		
TN1	Literarischer Text: Lehre	
TN2	Literarischer Text: Lehre	Schreiber Men (Typ A)[108]
TN4	unklarer Text	
TN5	Besuchertext	Schreiber Duau
TN9	Besuchertext	Schreiber Chaemwese
TN12	Besuchertext	Schreiber Kaemwese
TN13	Besuchertext	Schreiber Ipu
TN14	Literarischer Text: Lehre	
TN17	Besuchertext	Schreiber It
TN18	Besuchertext	Schreiber Men (Typ A)
TN22	Literarischer Text: Lehre	
TN23	Besuchertext	
TN24	Literarischer Text: Lehre	
TN28	Besuchertext (?)	Schreiber Men (Typ C)
TN31	Besuchertext	Schreiber Pascheri
TN36	Besuchertext, Opferformel	Schreiber Neb-(?)
TN37	Besuchertext, Opferformel	Schreiber Men (Typ A)
TN38	Besuchertext	Schreiber Chaemwese
TN39	Besuchertext	
TN41	Besuchertext	Schreiber Men (Typ C)
TN42	Besuchertext	Schreiber Chaemwese

Fortsetzung auf der nächsten Seite

106 Janssen 2000, 51.
107 Verhoeven 2020; Faksimiles: Gülden/Verhoeven.
108 Zu den Schreibern der 18. Dynastie siehe Verhoeven 2020, 267–76.

TN43	Besuchertext, historischer Vermerk	Schreiber Chaemwese
TW1	Literarischer Text: Lehre	Schreiber Chaemwese
TW2	Besuchertext, Opfergaben	Schreiber Pascheri
TW3	Besuchertext, satirisch erotischer Vermerk	Schreiber Chaemwese
TW4	Besuchertext, Opfergaben, Schreiberlob	Schreiber Nebnefer
TW5	Besuchertext, satirisch erotischer Vermerk	Schreiber Men (Typ A)
TW7	Literarischer Text: Lehre	
TW8	Besuchertext, historischer Vermerk	Schreiber NN (königlicher Schreiber)
TW18	Besuchertext	Schreiber Chaemwese
TW21	Literarischer Text: Lehre	
TW27	Besuchertext (?)	
TW28	Besuchertext, Lob des Hapi	Iahmes (A)
TW30	Literarischer Text: Lehre	Schreiber Men (Typ A)
Abusir, Pyramidenkomplex des Sahure		
dipinto 2[109]	Unbestimmter Text, Königskartusche enthalten	

Tabelle 2: Papyri

Papyri	
Berlin, P. 3029[110]	administrativ, königlicher Text
Berlin, P. 9784[111]	Vertrag: Verkaufsurkunde
Berlin, P. 9785[112]	Vertrag: Verkaufsurkunde
Leipzig, P. Ebers[113]	Wissenschaftlicher Text: Medizinischer Text
	Fortsetzung auf der nächsten Seite

109 Möller 1927b, 7–8 (Quellenbeschreibung) hat diese Dipinti (Graffiti) von 1–12 durchgezählt. Siehe dazu auch Navrátilova 2015, 95–96. Faksimiles: Möller 1927b, Spalte „Louvre 3226“ („Graff. Abus.“).

110 Stern 1874; Goedicke 1974. Faksimiles: Möller 1927b, Spalte „Lederhs.“.

111 Gardiner 1906, 28–35; siehe auch Dessoudeix 2019, 309–10, 320–25. Faksimiles: Möller 1927b, Spalte „Gurôb“.

112 Gardiner 1906, 38–47; siehe auch Dessoudeix 2019, 313, 329–32. Faksimiles: Möller 1927b, Spalte „Gurôb“.

113 Jüngste Publikation Popko, Schneider und Scholl 2021; Faksimiles: Möller 1927a, Spalte „Ebers“.

London, BM EA 10102[114]	Brief: Brief an einen Lebenden
London, BM EA 10103[115]	Brief: Brief an einen Lebenden
London, BM EA 10104[116]	Brief: Brief an einen Lebenden
London, UC 32782[117]	Brief: Brief an einen Lebenden
London, UC 32783[118]	Brief: Brief an einen Lebenden
New York City (NY), MMA 27.3.560[119]	Brief: Brief an einen Lebenden
New York City (NY), MMA 27.3.561a–b[120]	Brief: Brief an einen Lebenden
Paris, Louvre, E 3226 A+B[121]	Administrativer Text

114 Glanville 1928; siehe auch Müller 2006, (Brief 1.1), 316–18, Übersetzung 318; Faksimiles: Gülden/Kraus.

115 Glanville 1928; siehe auch Müller 2006, (Brief 1.2), 316–18, Übersetzung 318–19; Faksimiles: Gülden/Kraus.

116 Glanville 1928; Faksimiles: Gülden/Kraus.

117 Griffith 1898, 91–92; siehe auch Dessoudeix 2019, 302–303, 306–307, 315–317. Faksimiles: Möller 1927b, Spalte „Gurôb".

118 Griffith 1898, 91–92; siehe auch Dessoudeix 2019, 304–6, 315–17. Faksimiles: Möller 1927b, Spalte „Gurôb".

119 Hayes 1960, 53, Taf. X.7; siehe auch Müller 2006, 317–18 (Brief 1.8), Übersetzung 320–21.

120 https://www.metmuseum.org/art/collection/search/554654 [19.04.2021].

121 Megally 1971b; Faksimiles: Möller 1927b, Spalte „Louvre 3226".

6.2 Paläographische Liste[122]

G0330 – Gardiner G17

Abusir, Pyramidenkomplex des Sahure dipinto 2 (in situ)

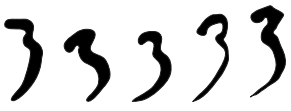
Assiut, Gebel Assiut al-gharbi, N13.1 TN1 (in situ)

3 1 3 3 3 4

Assiut, Gebel Assiut al-gharbi, N13.1 TN2 (in situ)

7 8

Assiut, Gebel Assiut al-gharbi, N13.1 TN9 (in situ)



1 1 1 1 4

Assiut, Gebel Assiut al-gharbi, N13.1 TN12 (in situ)

1

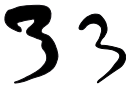
122 Bei den in der Liste verwendeten AKU-Nummern (G0330, L0230 und P0030) handelt es sich um eine vorläufige Nummerierung.

G0330 – Gardiner G17

Assiut, Gebel Assiut al-gharbi, N13.1 TN13 (in situ)

3 4

Assiut, Gebel Assiut al-gharbi, N13.1 TN18 (in situ)



4 4

Assiut, Gebel Assiut al-gharbi, N13.1 TN22 (in situ)

1

Assiut, Gebel Assiut al-gharbi, N13.1 TN24 (in situ)

1

Assiut, Gebel Assiut al-gharbi, N13.1 TN36 (in situ)

5 6

Assiut, Gebel Assiut al-gharbi, N13.1 TN38 (in situ)

4

G0330 – Gardiner G17

Assiut, Gebel Assiut al-gharbi, N13.1 TN39 (in situ)

3

Assiut, Gebel Assiut al-gharbi, N13.1 TN43 (in situ)

3 4 5 5 7 8

Assiut, Gebel Assiut al-gharbi, N13.1 TW1 (in situ)

1 1 2

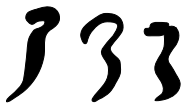
Assiut, Gebel Assiut al-gharbi, N13.1 TW2 (in situ)

3 4 4 6

Assiut, Gebel Assiut al-gharbi, N13.1 TW3 (in situ)

2 2

Assiut, Gebel Assiut al-gharbi, N13.1 TW4 (in situ)



3 5 6

G0330 – Gardiner G17

Assiut, Gebel Assiut al-gharbi, N13.1 TW5 (in situ)

2

Assiut, Gebel Assiut al-gharbi, N13.1 TW7 (in situ)

1 1 2 10

Assiut, Gebel Assiut al-gharbi, N13.1 TW18 (in situ)

1

Assiut, Gebel Assiut al-gharbi, N13.1 TW21 (in situ)

1 4 4

Assiut, Gebel Assiut al-gharbi, N13.1 TW28 (in situ)

5 6 9 10

G0330 – Gardiner G17

Assiut, Gebel Assiut al-gharbi, N13.1 TW30 (in situ)

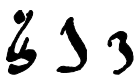
3 4 5 5 7 8 2

3 3 3 4 7 7 7 8 8 8

Berlin, Ägyptisches Museum und Papyrussammlung, P. 3029 [text a]

1,3 1,2 1,2 1,4 2,2 2,5

Berlin, Ägyptisches Museum und Papyrussammlung, P. 9784

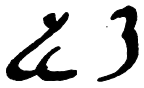


5 6 3

Berlin, Ägyptisches Museum und Papyrussammlung, P. 9785

7

Leipzig, Bibliotheca Albertina, Papyrus- und Ostrakasammlung, P. Ebers



54,15 1,2

G0330 – Gardiner G17

London, British Museum, EA 10102

2 3 6 9 10 11 11 13 14 14 17 2 2 3 3

6

London, British Museum, EA 10103

1 3

London, British Museum, EA 10104

2 2 3 3

London, Petrie Museum of Egyptian Archaeology, UC 32782

8 14 4 10

London, Petrie Museum of Egyptian Archaeology, UC 32783

5

New York City (NY), Metropolitan Museum of Art, MMA 27.3.560

1 2 3

G0330 – Gardiner G17

New York City (NY), Metropolitan Museum of Art, MMA 27.3.561a–b

1

Paris, Musée du Louvre, E 3226 A

9,4

Paris, Musée du Louvre, E 3226 B

3,5 1,3 4,2

L0230 – Gardiner M17

Assiut, Gebel Assiut al-gharbi, N13.1 TN1 (in situ)

1 2 2

Assiut, Gebel Assiut al-gharbi, N13.1 TN2 (in situ)

6 8 9 9 10

Assiut, Gebel Assiut al-gharbi, N13.1 TN4 (in situ)

1

Assiut, Gebel Assiut al-gharbi, N13.1 TN9 (in situ)

1 4

Assiut, Gebel Assiut al-gharbi, N13.1 TN12 (in situ)

3

L0230 – Gardiner M17

Assiut, Gebel Assiut al-gharbi, N13.1 TN13 (in situ)

1 1 2 2 4 4

Assiut, Gebel Assiut al-gharbi, N13.1 TN14 (in situ)

2 4 5

Assiut, Gebel Assiut al-gharbi, N13.1 TN18 (in situ)

1 1 1 1

Assiut, Gebel Assiut al-gharbi, N13.1 TN28 (in situ)

1 1 1

Assiut, Gebel Assiut al-gharbi, N13.1 TN31 (in situ)

1 2 2

L0230 – Gardiner M17

Assiut, Gebel Assiut al-gharbi, N13.1 TN37 (in situ)

2 5 6

Assiut, Gebel Assiut al-gharbi, N13.1 TN42 (in situ)

3

Assiut, Gebel Assiut al-gharbi, N13.1 TN43 (in situ)

1 7

Assiut, Gebel Assiut al-gharbi, N13.1 TW2 (in situ)

7

Assiut, Gebel Assiut al-gharbi, N13.1 TW3 (in situ)

2 2

L0230 – Gardiner M17

Assiut, Gebel Assiut al-gharbi, N13.1 TW4 (in situ)

7

Assiut, Gebel Assiut al-gharbi, N13.1 TW5 (in situ)

2 2 2

Assiut, Gebel Assiut al-gharbi, N13.1 TW7 (in situ)

1 1 2

Assiut, Gebel Assiut al-gharbi, N13.1 TW8 (in situ)

2 4

Assiut, Gebel Assiut al-gharbi, N13.1 TW21 (in situ)

2 3 3

Assiut, Gebel Assiut al-gharbi, N13.1 TW27 (in situ)

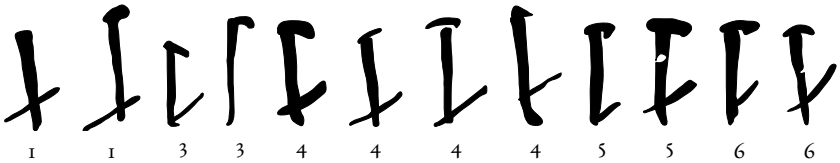
1

L0230 – Gardiner M17

Assiut, Gebel Assiut al-gharbi, N13.1 TW28 (in situ)

3 5

Assiut, Gebel Assiut al-gharbi, N13.1 TW30 (in situ)



1 1 3 3 4 4 4 4 5 5 6 6

6 6 7 7 7 7 7 10 10

Berlin, Ägyptisches Museum und Papyrussammlung, P. 3029 [text a]

2,4 2,9 1,8

Berlin, Ägyptisches Museum und Papyrussammlung, P. 9784

4

Berlin, Ägyptisches Museum und Papyrussammlung, P. 9785

10

L0230 – Gardiner M17

Leipzig, Bibliotheca Albertina, Papyrus- und Ostrakasammlung, P. Ebers

1,5 10,2

London, British Museum, EA 10102

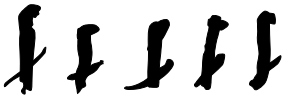
2 2 2 3 7 9 9 11 12 13 15 1 1 2 2 2

3 4 6 6 6 7 8 8 8

London, British Museum, EA 10103

4 4 1 1

London, British Museum, EA 10104



1 1 3 3 4

London, Petrie Museum of Egyptian Archaeology, UC 32782

1 1 1 7 9 10 10 12 13 1

New York City (NY), Metropolitan Museum of Art, MMA 27.3.560

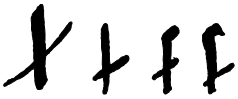
1 1 2 2

L0230 – Gardiner M17

New York City (NY), Metropolitan Museum of Art, MMA 27.3.561a–b

1

Paris, Musée du Louvre, E 3226 B



8,2 1,2 10,1 2,1

𓂋

P0030 – Gardiner Q3

Assiut, Gebel Assiut al-gharbi, N13.1 TN1 (in situ)

1

Assiut, Gebel Assiut al-gharbi, N13.1 TN2 (in situ)

6 7 10 10 11

Assiut, Gebel Assiut al-gharbi, N13.1 TN5 (in situ)

2

Assiut, Gebel Assiut al-gharbi, N13.1 TN9 (in situ)

1 5

Assiut, Gebel Assiut al-gharbi, N13.1 TN13 (in situ)

1

Assiut, Gebel Assiut al-gharbi, N13.1 TN17 (in situ)

1

Assiut, Gebel Assiut al-gharbi, N13.1 TN18 (in situ)

1 2

P0030 – Gardiner Q3

Assiut, Gebel Assiut al-gharbi, N13.1 TN23 (in situ)

1

Assiut, Gebel Assiut al-gharbi, N13.1 TN28 (in situ)

1

Assiut, Gebel Assiut al-gharbi, N13.1 TN36 (in situ)

6

Assiut, Gebel Assiut al-gharbi, N13.1 TN37 (in situ)

1

Assiut, Gebel Assiut al-gharbi, N13.1 TN38 (in situ)

2 4

Assiut, Gebel Assiut al-gharbi, N13.1 TN41 (in situ)

2

Assiut, Gebel Assiut al-gharbi, N13.1 TN42 (in situ)

2 3

P0030 – Gardiner Q3

Assiut, Gebel Assiut al-gharbi, N13.1 TN43 (in situ)

2 2 3

Assiut, Gebel Assiut al-gharbi, N13.1 TW2 (in situ)

2 4

Assiut, Gebel Assiut al-gharbi, N13.1 TW4 (in situ)

4

Assiut, Gebel Assiut al-gharbi, N13.1 TW21 (in situ)

1 2 2 4 4

Assiut, Gebel Assiut al-gharbi, N13.1 TW28 (in situ)

1 3 10 11

Assiut, Gebel Assiut al-gharbi, N13.1 TW30 (in situ)

3 4 4

Berlin, Ägyptisches Museum und Papyrussammlung, P. 3029 [text a]

1,17

P0030 – Gardiner Q3

Berlin, Ägyptisches Museum und Papyrussammlung, P. 9784

12

Berlin, Ägyptisches Museum und Papyrussammlung, P. 9785

1

Leipzig, Bibliotheca Albertina, Papyrus- und Ostrakasammlung, P. Ebers

58,13 50,21

London, British Museum, EA 10102

1 2 8 8

London, British Museum, EA 10103

1

London, British Museum, EA 10104

1

London, Petrie Museum of Egyptian Archaeology, UC 32782

1 4 9 15

London, Petrie Museum of Egyptian Archaeology, UC 32783

8

P0030 – Gardiner Q3
New York City (NY), Metropolitan Museum of Art, MMA 27.3.560  1
Paris, Musée du Louvre, E 3226 B  4,6

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8 Projekte

Altägyptische Kursivschriften – https://aku.uni-mainz.de

Demotic Palaeographical Database Project – http://demotischdemotisch.de/

Hieroglyphic „Hands" – https://journals.openedition.org/baefe/996#tocto2n12/

Polychrome Hieroglyph Research Project – https://www.phrp.be/

The Asyut Project – https://www.aegyptologie.uni-mainz.de/the-asyut-project-feldarbeiten-in-mittelaegyptenfieldwork-in-middle-egypt/

9 Online-Ressourcen

https://www.ianus-fdz.de/it-empfehlungen/vektorgrafiken

https://www.ianus-fdz.de/rastergrafiken

https://www.ianus-fdz.de/dateispeicherung-mittelfristig

https://image-net.org/index.php

https://jpeg.org/about.html

https://www.loc.gov/preservation/digital/formats/fdd/fdd000022.shtml

https://www.tensorflow.org

https://uclab.fh-potsdam.de/vikus/

https://vikusviewer.fh-potsdam.de

https://www.w3.org/TR/SVG11/

The hieratic 18th dynasty Book of the Dead of the Lady Hatnofer from the Egyptian Museum Cairo. Preliminary overview

Khaled Hassan[1]

Abstract

A few examples of Book of the Dead manuscripts in the hieratic handwriting from the beginning of the 18th dynasty were discovered. One of these early examples is the Book of the Dead that belongs to the lady Hatnofer, the mother of the renowned official Senenmut. This Book of the Dead comprises four manuscripts, i. e. two hieratic papyri, one leather roll, and one linen shroud. They are preserved in the Egyptian Museum Cairo. This paper will give a general overview of the two hieratic papyri and also will stress on some aspects and peculiarities of the hieratic handwriting, whereas the details of the script will be displayed in the study of these manuscripts. The other early examples and the reasons for using and abandoning the hieratic script at that time will be discussed in short. The scribes of the two papyri, based on palaeographic comparisons, will be displayed as well.

Fundamentally, the importance of the hereafter and the believing in a second life after death were hallmarks in the beliefs of the Ancient Egyptians, thus the Book of the Dead (BD) was not the output of the New Kingdom itself. This means that the corpus of the BD spells is not a completely new aggregation of religious texts, and some of its spells protrude from an earlier collection such as Pyramid and Coffin Texts.[2] Nevertheless, the New Kingdom era represents the real starting point for this long-lasting religious composition, which was recorded on the majority of the available writing mediums at that time. During the 17th and 18th dynasties, large linen shrouds were used on a wide range as a surface for writing the Books of the Dead spells.[3] A few of these shrouds contain spells in hieratic script arranged in vertical

1 Associate professor at the Faculty of Archaeology – Cairo University, Egyptology Department. I would like to thank the curators of the Egyptian Museum Cairo for granting me the permission to publish these papyri and providing me with recent photos. I am also indebted to the curators of the Metropolitan Museum of Art, New York for sending me the old photos of the two papyri and giving me permission to use them in the publication. Many thanks to Florence Albert, a scientific member of IFAO, for reading the draft of this paper and for her valuable comments.

2 Dorman 2018, 29.

3 Dorman 2018, 36.

columns such as L. Ahmose-Penhat (New York, MMA 22.3.296a), the prince and chancellor Ahmose in Turin Museum, and L. Ahmose Henut-tamehu in the Egyptian Museum Cairo.[4] Early attestations of these spells were inscribed on the inner walls of the rectangular sarcophagus of Queen Mentuhotep,[5] and the coffin board of Herunefer in the British Museum.[6] They have constituted the first incontrovertible evidence of the early BD examples.[7] This may also reflect that the decoration of the coffin interiors of that time with Book the Dead spells was only confined on the Royal sphere at the beginning.[8] Surprisingly, not only the spells on the coffins of the Queen Mentuhotep, and the coffin of Herunefer are arranged typically to the sequence of the New Kingdom Books of the Dead but also are inscribed in purely horizontal hieratic lines imitating the papyrus roll format.[9] Another early example of the BD is the fragmented shroud of the 17th dynasty King Intef, as the few surviving inscriptions could identify as a BD material rather than coffin texts.[10]

Early 18th dynasty hieratic BD examples

The cursive hieroglyph in retrograde style was the popular script for the BD during the New Kingdom.[11] Thus, the majority of the manuscripts in this era are written in cursive hieroglyphic and most of them ascribed to men rather than to women,[12] about 191 objects attributed to men in comparison to 25 objects ascribed to women

4 Dorman 2018, 36; Kockelmann 2018, 76.

5 Quirke 2013, xi; Dorman 2018, 34. The Queen Mentuhotep is the wife of King Djehouty who ruled towards the end of 13th dynasty or the very beginning of the 16th dynasty. The coffin has been discovered in Thebes at the beginning of 19th Century, but is lost today. The texts were copied by Sir John Wilkinson in 1832 at the time of the discovery. For more details about this coffin cf. Geisen 2004.

6 Dorman 2018, 34.

7 Parkinson and Quirke 1992, 47; Gestermann 2005, 104.

8 Végh 2017, 514; O'Rourke 2016, 32.

9 Dorman 2018, 34; Parkinson and Quirke 1992, 47; http://totenbuch.awk.nrw.de/objekt/tm135250 [27 March 2020].

10 http://totenbuch.awk.nrw.de/objekt/tm133831 [24 March 2020]; Quirke 1993, 1.

11 Kockelmann 2018, 69; According to the *Totenbuch*-project, a few hieratic BD manuscripts could date back to the 19th and 20th Dynasties as well, i. e. 19th dynasty: O. IFAO 1608, O. IFAO 3016, O. London BM EA 29511, P. London BM EA 9953 A, P. New York Amherst 33, sh. 4[1], P. Reading; 20th dynasty: L. Egyptian Museum Cairo JE 35409, O. IFAO 423, P. Marseille 5323, P. Turin 1828. http://totenbuch.awk.nrw.de/[27 March 2020].

12 The papyrus of Amenemipet/Baki, preserved in Warsaw museum Nardowe 21884, is one of relatively few 18th dynasty books of the Dead for women, in addition to the Cairo papyrus of Nebemteret from Saqqara.

in the New Kingdom.[13] A few copies of this genre dated to the beginning of the 18th dynasty and inscribed in the hieratic script have survived.[14] Most probably this refers that the earliest documentation of the spell sequences of the BD on papyri, leather, linen, and on the inner walls of the coffins has been formulated in hieratic handwriting.[15] These early examples raise two questions: Why was the hieratic script used for these early sources? Why the ancient Egyptian ceased utilizing the hieratic script for the BD at some point in the 18th dynasty? [16] The hypothetical reasons are still controversial. Later on, from the Third Intermediate Period onwards hieratic became the popular script for the BD manuscripts and was the preferred script for several religious texts from the Saite period onwards.[17]

For using this script, the early 18th dynasty hieratic manuscripts were most probably imitating the earlier examples having been inscribed on the inner walls of the coffins such as the one of queen Mentuhotep. This could indicate that at that time of the 18th dynasty the scribe tried to admit and follow this writing style which started on the coffins. Particularly Hieratic was the optimum script that was used on smooth sheets of papyrus from the first dynasty onwards. Thus it could be utilized, in some cases, as a pattern text for copying spells on the coffins like that of Mentuhotep and Herunefer.[18] The notion of using the hieratic script as master copy in some cases is acceptable and this could be enhanced by the leather manuscript of Nebimes from the beginning of 18th dynasty, where the name of the deceased has been squeezed in narrow spaces.[19] Another suggestion refers that the early sources in hieratic script preferred to pursue the writing style and tradition of the New Kingdom literary manuscripts which were executed in a very good hieratic handwriting.[20] In this vein, issuing copies in hieratic was more comfortable and easy for the copyists who were involved in producing the manuscripts, and this could be a possible reason for using hieratic in these early manuscripts.

At some point during the 18th dynasty, the ancient scribes stopped using the hieratic script for the BD. The reasons for this shift are unknown. However, it seems that it is far from the theory stating that the hieroglyph or even cursive hieroglyph is more prestigious than hieratic and the latter was basically dedicated for the secular

13 http://totenbuch.awk.nrw.de/uebersicht/besitzer-verwandte#StringBalken [24 March 2020].
14 Barwik 1997, 331.
15 Dorman 2018, 34.
16 On the parallel use of hieroglyphic, cursive hieroglyphs and hieratic scripts in the funerary texts cf. Graefe 2015, 119–142.
17 Taylor 2010, 267; Goelet 2010, 127. For more details about reusing the hieratic script in the BD at that time cf. Lenzo-Marchese 2007.
18 Dorman 2018, 35.
19 Shorter 1934, 34; Dorman 2018, 34.
20 Taylor 2010, 267.

texts, while the hieroglyphs were used for the afterlife texts.[21] At the same context, the existence of many BD spells in the hieroglyphic or even cursive hieroglyphic script in the elite tombs of the 18th dynasty does not prove that hieroglyphic was more prestigious than hieratic.[22] Practical factors could be possible reasons behind this shift such as the format of the manuscript and the distribution of the vignettes. From an aesthetic and physical point of view, it is remarkable that the format and general layout of the hieratic copies at that time have no aesthetic appearance in comparison with the hieroglyphic and cursive hieroglyphic versions. The texts were arranged in vertical columns or horizontal lines without any particular layout, while the cursive hieroglyphic copies displayed the attention of the scribes and artists to the manuscript. The best example is the BD papyrus of the gold worker Sobekmose (P. Brooklyn Museum of Art, New York, no. 37.1777 E). Sobekmose owned two versions of the BD written on the *recto* and the *verso* of the same papyrus.[23] The *recto* is inscribed in cursive hieroglyphic and the *verso* is executed in horizontal hieratic lines. The *recto* is well decorated with vignettes in different colours and the excellent layout has top and bottom margins. In contrary, the *verso* of this manuscript was written in 12 columns of purely hieratic lines, in black ink, with rubrics, but without any format or outlines for the text.

As a matter of content, it seems that the Egyptians believed in the magical power of the vignettes, so that they became important in the manuscripts side by side to the written texts.[24] Proceeding from this idea, the existence of vignettes is a fundamental part of the BD. Thus, perhaps the lack of vignettes was a negative point in the hieratic versions in the sight of the Ancient Egyptians. The cursive hieroglyphic copies are well prepared and decorated with several polychrome vignettes. For example, the papyrus of the gold worker Sobekmose contains four polychrome vignettes drawn only on the *recto*, and nothing is recorded on the *verso*.[25] While, the early copies of the hieratic BD contained one or two vignettes at the most, and some of them have no vignettes at all. An interesting notice is that some accompanying texts, captions, of the vignettes in the hieratic versions were inscribed in cursive hieroglyphics. Such as P. Los Angeles 83.A1.46.3 that contains only a single vignette drawn up at the right side of the papyrus before the beginning of the text itself. This illustration represents the vignette of spell 150 that normally ends many of the 18th dynasty BD papyri.[26] Although, the spells of this papyrus were inscribed in vertical

21 Goelet 2010, 126.

22 Galán 2010, 247–272. Several spells were inscribed on the walls of this tomb.

23 O'Rourke 2016.

24 Munro 2017, 54 ff.

25 The four vignettes were inserted through the text. Three of these illustrations were attested in the early 18th dynasty hieratic Books of the Dead i. e. Hatnofer (Vignette BD 125), Muti (Vignette BD 136B) and that of P. Los Angeles 83.A1.46.3 (Vignette BD 150).

26 Quirke 2013, 365.

columns, the labels of the mounds in the vignette were inscribed mostly in horizontal lines and also in the cursive hieroglyphic script, not in hieratic.[27] This attitude could reflect the existence of the cursive hieroglyphic in the memory of the scribes who are involved in the production of the manuscripts, and the master copy of the vignettes was executed in cursive hieroglyphic. Another possible reason for using the cursive hieroglyphic instead of hieratic is the writing system known as retrograde that was to be used only in the hieroglyphic and cursive hieroglyphic texts. Most probably the religious considerations of this writing style play a role in changing the script. [28] In one of the early hieratic copies, P. Ahmose, the title accompanying spell 136B was written in four short hieratic columns in a retrograde form.[29]

To sum up, the possible reasons for this abandonment is the lack of the aesthetic appearance of the manuscripts written in hieratic. Most probably, the format of the hieratic script was not enabling the scribes to insert more vignettes that were an essential element in this genre.[30] The retrograde writing system has religious importance for the ancient Egyptians and it was important to use it in these texts. All the previous reasons could play a role in stop using the hieratic for the copies of the BD. Few hieratic manuscripts dated back to the early 18th dynasty have been presented to the scholarly sphere, some of them are published in full and the rest still needs publication, in addition to the two unpublished papyri of the lady Hatnofer of the current paper:

1. Papyrus Los Angeles, Paul Getty Museum 83.AI.46.3, provenance unknown, one vignette.[31]
2. Papyrus Ahmose, Paris, Louvre E 11085/REF AE O 24030, from Thebes, one vignette.[32]
3. Leather roll of Nebimes, London, British Museum EA 10281, from Thebes, no vignettes.[33]

27 http://www.getty.edu/art/collection/objects/16233/unknown-maker-fragmentary-papyrus-with-spells-and-vignettes-from-the-book-of-the-dead-egyptian-1085-730-bc/?artview=dor649016 [27 March 2020].

28 For more information about this type of writing Goelet 2010, 128; cf. Niwinski 1989, 13; Chegodaev 1996, 19; Hassan 2014, 251–252.

29 Quirke 2013, 304. The papyrus of Nebseny provides similar vignette; Lapp 2004, pl. 77. Goelet mentioned in his paper that few hieratic BD papyrus were executed in retrograde style, however he did not mention them through his paper. Goelet 2010, 128.

30 Another possible reason is the wish to organize the manuscript (BD) as a resemblance of a tomb. The organization of tombs and hieroglyphic Books of the Dead seems to be more or less the same. Florence Albert in her comments on the draft.

31 Kraus 1979, no. 3; Kockelmann 2008, II, 133, no. 96.

32 Munro 1995.

33 Shorter 1934, 33–40; Munro 1987, 280–281; Bellion 1987, 65.

4. Papyrus Mwti Brussels, Royal Museum of Art and History SN, provenance unknown, two vignettes.[34]
5. Papyrus of Sobekmose, New York, Brooklyn Museum of Art 37.1777 E, from Saqqara, no vignettes.[35]
6. Papyrus of Neferkhawet, location unknown, from Deir el-Bahari.[36]
7. Papyrus of Ruyu, location unknown, from Deir el-Bahari.[37]
8. Papyrus of Baki, location unknown, from Deir el-Bahari.[38]
9. Papyrus London, British Museum EA 10738, 1–3, from Deir el-Bahari.[39]
10. Papyrus Moscow, Pushkin Museum, provenance unknown, coloured vignettes.[40]
11. Papyrus Mesemnetjer, Paris, Louvre E 21324 partially in hieratic, provenance unknown, no vignettes.[41]

The hieratic papyri of Hatnofer

Owner and provenance of the BD

The lady Hatnofer was the wife of Ramose and the mother of the eminent official Senenmut who lived at the time of Hatshepsut and Tuthmose III. The origins of Hatnofer are not distinctly known, however, the suppositions refer to Armant, a town located not far from Thebes, as her hometown.[42] Nothing is known almost about the origin of her husband Ramose, but he most probably had a modest origin such as a tenant farmer, artisan, or even a small landowner.[43] The relationship between Hatnofer and her son Senenmut is known through several written sources in Senenmut's tomb. The most salient source occurs on the central relief of the false

34 Capart 1934, 242-251; Munro 1987, 278–279; Kockelmann 2008, I–II, 391 (Index) (pBrüssel Nr. unbek.); Bellion 1987, 98. http://totenbuch.awk.nrw.de/objekt/tm134264 [27 March 2020].
35 O'Rourke 2016; Munro 1987, 302; Clère 1967-1968, 88–93; Bellion 1987, 94.
36 Barwik 1997, 331–338; Hayes 1959, 226; Hayes 1935, 17–36.
37 Barwik 1997, 331–338; Hayes 1959, 226; Hayes 1935, 17–36.
38 Barwik 1997, 331–338; Hayes 1959, 226; Hayes 1935, 17–36.
39 https://www.britishmuseum.org/research/collection_online/search.aspx?museumno=10738 [27 March 2020].
40 Kockelmann 2008, I, 396 (Index).
41 Munro 1987, 279, pl. 24; Taylor 2010, 267.
42 Roehrig 2004.
43 Roehrig 2004.

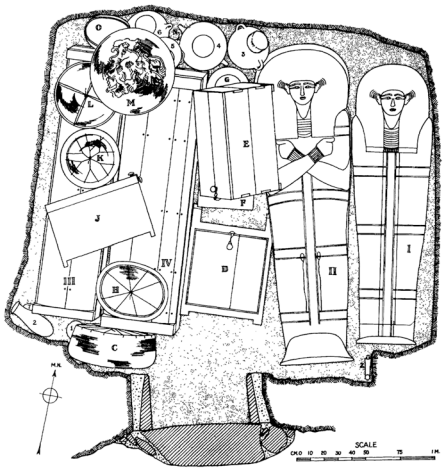


Fig. 1: Drawing of the objects found in the tomb of Ramose and Hatnofer (Lansing and Hayes 1937, 24, fig. 27)

door stela of TT 353. The text above the figures reads: "The steward of Amun Senemut, his beloved father Ramose, his mother Hatnofer, justified".[44]

In season 1935–36, the Egyptian Expedition of the Metropolitan Museum of Art under the direction of Ambrose Lansing and William Hayes, uncovered the small rock-cut tomb of Hatnofer and her husband Ramose below Senenmut's tomb TT 71.[45] It was precisely located under the ruins of the artificial terrace in front of this tomb, on the northeast face of the hill of Sheikh Abd el-Qurna at Deir el-Bahari region.[46] The small tomb of Hatnofer included the coffins of Ramose, Hatnofer, and six additional anonymous mummies of three young women and three children in two plain coffins, and numerous household objects, the majority of them belongs to Hatnofer (fig. 1).[47]

Besides the several other funerary objects in the tomb, her large wooden coffin is elaborately manufactured representing an anthropoid mummiform with crossed arms over the chest, with rows of hieroglyphic writings running over it.[48] This coffin contained a fully wrapped mummy in several shawls and sheets of linen, some of these shawls bore the title and the name of queen Hatshepsut in cursive hieroglyphic marks.[49]

44 Lansing and Hayes 1937, 22; Dorman 1991, 136.
45 Lansing and Hayes 1937, 12 ff; PM I, 2, 669.
46 Dorman 1991, 23.
47 Lansing and Hayes 1937, 31; Dorman 1991, 23.
48 Lansing and Hayes 1937, 19.
49 Lansing and Hayes 1937, 19.

Fig. 2: The leather roll of Hatnofer Cairo TR 25.1.55.6 (© Egyptian Museum Cairo)

On the chest of the mummy, outside the wrappings, a bunch of two papyri and one leather roll were found tied with a linen tape tucked under the edge of her gilded cartonnage mask.[50] The linen shroud that covered the mummy bears spells of the BD inscribed in cursive hieroglyphic and published by Munro.[51] Hence, the lady Hatnofer owned four BD manuscripts, i. e. two in hieratic script and two in cursive hieroglyphic, all of them preserved in the Egyptian Museum Cairo. Among the two cursive hieroglyphic manuscripts is a leather roll found together with the two hieratic papyri under the mask of Hatnofer's mummy. The leather roll (fig. 2) is composed of 14 cursive hieroglyphic columns written in black ink in retrograde style and contains only the spell 100 with its vignette. The name of Hatnofer is written over the drawing of her head in black ink as the rest of the god's names. The other cursive hieroglyphic manuscript is the linen shroud that covered the mummy of Hatnofer. It is preserved in the Egyptian Museum Cairo under the inventory number JE 66218.[52] This linen shroud displays only the spell BD 72 followed by the text of CT 335.[53]

50 Lansing and Hayes 1937, 20; Hayes 1959, 226. Likewise, three funerary papyri were found in position on the fully wrapped mummy of Nefer-Khewet's son-in-law Baki, a contemporary of King Thutmose III. Hayes 1959, 226; Dorman 2000, 17.

51 Munro 1994, 27.

52 Munro 1994, pl. 10.

53 Díaz-Iglesias Llanos 2018, 95.

Description of the papyri

The two papyri of Hatnofer I–II are inscribed in hieratic script and are now stored in the Egyptian Museum Cairo under the temporary number (TR) 25.1.55.6. They are found with the leather roll in the same place under the mummy mask. By the end of the excavation season, the two papyri were moved to the Metropolitan Museum of Art at New York for study purposes. They were kept through the years of World War II.[54] In 1953, before they were returned to Egypt, Hayes unrolled and photographed these two papyri for the first time. Then the staff of the Metropolitan Museum cut them into eight segments with varying measurements from 61 cm to 119 cm length. These sections were placed between heavy pieces of white acid-free cardboard, in order to preserve and secure them during their journey back to the Egypt.[55] At the same year, these papyri entered to the Egyptian Museum Cairo and recorded with the leather roll under the one temporary number TR 25.1.55.6.[56]

Papyrus Hatnofer I

Papyrus Hatnofer I is the longest manuscript in this group with about 4.65 cm length. The latter papyrus is written on both sides, i. e. *recto* and *verso*. The *recto* is composed of 22 pages, while the *verso* consists of 18 pages, in addition to about 4 blank pages on the *verso*, particularly at the end of the scroll. The text is written mainly in black ink with some insertions in red. These rubrics are used to highlight the titles and the key points of the spells. The lower part of the papyrus has mostly disintegrated because it was soaked in the mummification liquids while the mummy was still wet. As a result of this placement, the writings on this part are damaged and the ink is wiped out in many places. The title of the BD as *Pr.t m hrw* is inscribed at the last page of the verso in a vertical column. This papyrus displays only one vignette executed in red and black ink relating to chapter BD 125D, which is located on the first page of the *verso* (fig. 3). It is a representation of four squatting baboons seated around a rectangular lake of fire.

54 Dorman 2000, 17.

55 Dorman 2000, 17.

56 According to the Egyptian Museum database, these three manuscripts are recorded under the same number, while the number that assigned to the short one (P. Kairo o. Nr. CII) in *Totenbuchprojekt*-database, which is incorrect, cf. http://totenbuch.awk.nrw.de/objekt/tm135561#P.%20Kairo%200.Nr.%20(C%20II) [27 March 2020].

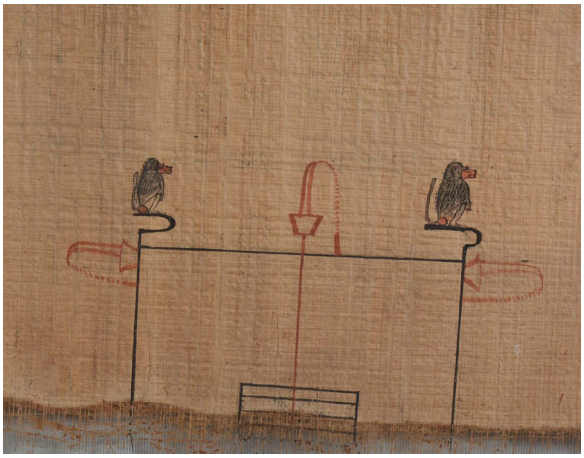


Fig. 3: Vignette 125D on the verso of Papyrus Hatnofer I (© Egyptian Museum Cairo)

Papyrus Hatnofer II

Papyrus Hatnofer II is made of a very thin and high quality papyrus and measures about 2.55 cm length.[57] The curators of the Metropolitan Museum of Art had cut it into four segments, which were laid between heavy pieces of white acid-free cardboard before it was taken back to Egypt.[58] Now, this manuscript is in a very bad condition and the disarticulated fragments can also be noticed everywhere. This papyrus is inscribed in nine horizontal hieratic pages only on the *recto* alongside with a detailed vignette of spell BD 150 in addition to several blank pages (fig. 4). The *verso* contains a very faint drawing of the vignette of the spell BD 150 which is hardly to be seen. The handwriting is coherent, neat, and elegant. The text is mainly inscribed in black ink with some rubrics as in the larger manuscript. The width of the pages of this roll is not fixed and varies from one page to another. The number of lines varies between 11–14 lines for each page. The lower part was not affected by the mummification liquids like the large manuscript. The handwriting is very faint in most parts of it, and several fragments were lost from this papyrus. The quite interesting point is that the last horizontal text on the *recto* ends with three short columns of hieratic text. This Papyrus contains two large vignettes, one is on the *recto* and the other is on the *verso*. The two vignettes belong to the spell BD 150, which ends many 18th dynasty Book of Dead papyri.[59] The *recto* represents the large

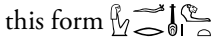
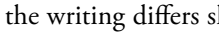
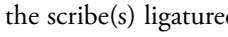
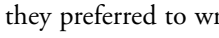
57 Dorman 2000, 17.
58 Dorman 2000, 17.
59 Quirke 2013, 365.

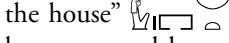
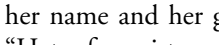
Fig. 4: Vignette 150 on the *recto* of Papyrus Hatnofer II (© Metropolitan Museum of Art)

and detailed illustration which is in a very good hand, while the vignette on the *verso* is hardly being seen because the ink is very faint. This vignette illustrates about 15 compartments of different heights and shapes.

Name and titles of Hatnofer

Papyrus Hatnofer I

The name of Hatnofer occurred on Papyrus I more than 31 times: about 21 times on the *recto* and 10 times on the *verso*. The common spelling for her name is written in this form  with very few changes, for example  . The palaeography of the writing differs slightly and most probably refers to different hands. Sometimes the scribe(s) ligatured the  and in a very quick movement, while sometimes they preferred to write them separately. The ligature in the writing  of was relatively rare (table 1).

In 12 examples the name of Hatnofer was preceded by the title "mistress of the house"  , while it is followed by this title once being placed between her name and her genealogy:  *Ḥ3.t-nfr nb.t pr s3.t Ḏḥwty,* "Hatnofer, mistress of the house, daughter of Djehuti" (table 1).[60] There are no attestations for the name of Hatnofer's father Djehuti or any of her family members elsewhere.[61]

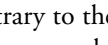
60 For more information about the titles which occur in the BD manuscripts cf. Albert 2012, 1–66.

61 The names of the owner's mother and father were usually recorded in the BD. Sometimes these are recorded with their titles and predications, cf. Munro 2015, 6; Munro 1995, 2–3.

Predications

Through the whole text, the owner's name is followed three times by the predication *mꜣʿ.t-ḫrw*: two on the *recto* and one on the *verso*. The form and the spelling of the predications were variable. In two examples they were written in detailed form, while in the other example it is inscribed in an abbreviated form (table 1).

Papyrus Hatnofer II

The name of Hatnofer occurs 23 times in this papyrus, about 19 times written on the first two pages. The common form of this name is  , about 15 times, while this short form  occurs about 8 times. Contrary to the longer papyrus, no titles for Hatnofer such as "mistress of the house" were used here. The palaeography and the orthography of the name are not identical throughout the text. Sometimes the scribe preferred to ligature the  and as like in the longer manuscript (), and sometimes the word *nfr* is written without and at all. The determinative of the seated woman (B1) was varied from the abbreviated form () to the detailed one ().

Predications

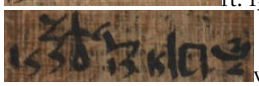
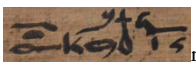
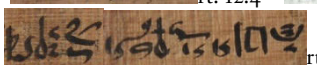
The name of Hatnofer was preceded by the name of Osiris about 16 times. It was followed by the predication *mꜣʿ.t-ḫrw* about 17 times. Most of the previous cases occur together: *Wsỉr Ḥꜣ.t-nfr mꜣʿ.t-ḫrw* "Osiris Hatnofer, justified" (table 2)

Sequence of the spells

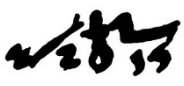
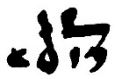
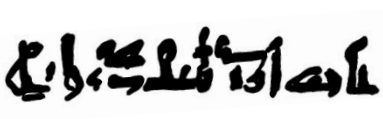
The spells of the BD were not constant or uniform geographically and chronologically.[62] Assuredly, the choice of the spells was not randomly executed, but the exact reasons behind the choice of certain spells in the manuscripts are still unknown.[63] Perhaps, the economic capacity or the personal predilection of the owner played a role for the length and the quality of the illustrations of the manuscript, but not for the arrangement of the spells. Most of the contemporary manuscripts of the 18th dynasty BD show a similar systematic sequence for a group of spells. Most probably this semi-uniform sequence resulted from a theological background and convic-

62 Kockelmann 2018, 73.
63 Kockelmann 2018, 73.

Table 1: Spellings from Papyrus Hatnofer I

Name	 rt. 5.2  rt. 1.1  rt. 12.7  rt 4.10
Name with titles and genealogy	 rt. 13.1  vs. 16.6  vs. 16.1  rt. 2.6
Name with predications	 rt. 12.4  vs. 15.6  rt. 7.3,4

Tab. 2: Spellings from Papyrus Hatnofer II

Name	 1.1	 1.2	 1.4
	 1.11	 1.13	 1.10
Name with predications	 1.11		 2.5

tions of the priests who were involved in producing these kind of manuscripts at that time. Totally, this papyrus contains 60 spells, about 40 on the *recto* and 20 on the *verso*. This is the largest corpus of spells which was compiled on contemporary hieratic BD manuscripts. The judgment spell BD 125 is one of the most important spells in the BD of Hatnofret, which seems to form the core of the roll. This papyrus also contains the spell 106 of the Coffin Texts.[64]

Spells on the *recto*

BD 22 – 23 – 24 – 25 – 26 – 28 – 27 – 43 – 30A – 31 – 33 – 34 – 35 – 74 – 45 – 93 – 91 – 41 – 42 – 14 – 68 – 69 – 70 + R – 92 – 72 + R – 71 – 67 – 9 – 8 – 63A – 61 – 59 – 105 – 95 – 106 – 99/99B + R – 125A – 125B – 125C – 125D

Spells on the *verso*

BD 125D – CT 106 – 1B/172 – 13/121 + R – 119 – 76 – 85 – 82 – 77 – 86 + R – 39 – 65 – 91 – 64 + R – 30B – 124 – 7 – 102 – 116 – 38A.

In comparison with the long manuscript, the short papyrus displays a few spells ordered in the following sequence: *recto* BD 136/136A - 136B - 149 - V150; *verso* BD V150.

Scribes of the papyri

The production of the BD manuscripts depends basically on a team of several experienced scribes and painters who must have been members in the scriptorium.[65] Some BD papyri of a considerable length were inscribed by only one scribe, while some others were written by different hands. Several examples of the 26th dynasty show that single manuscripts were written by different copyists such as the papyrus of Khamhor C being inscribed by four different scribes,[66] or the long papyrus of Iahtesnakht made by at least three different hands.[67]

64 Heerma van Voss 1986, 49–52.
65 Kockelmann 2018, 72.
66 Verhoeven 2017, 55-66.
67 Verhoeven 1993 and Verhoeven 2001: 102–225.

Papyrus Hatnofer I

Usually, the names of the scribes and artists who carried out the manuscripts were anonymous. So, defining the different hands of the manuscript can be accomplished only through the palaeographical investigation to the handwriting, the format, and also the style of the vignettes. From the first look one can state that the whole texts on the *recto* and the *verso* are written by the same hand, however, the close investigation to the handwriting reveals that at least three different scribes, i. e. A, B, and C, carried out this longer papyrus. The puzzling point is that each scribe has no specific pages of the text, but their handwritings are sometimes jumbled together. The similar features of the handwriting of this papyrus are somehow homogeneous, especially the scribes B and C. Sometimes, individual signs and words are inscribed in the same form by the three scribes, and this makes the distinction of the handwritings a difficult task. For making such distinction between the scribes' handwriting, the comparison does not depend on just a few signs, but it relies on comparing different words, group of signs, and ligatures.

Scribe A

The main scribe of this longer manuscript, most probably wrote the whole *recto*, except the pages number 3 and 14, and few pages of the *verso*. In fact, some pages of his hand are not exactly defined where no definite pieces of evidence have occurred. This scribe mostly used a thick brush forming bold and medium-sized signs. He had the ability to write the signs in different variant forms and this sometimes caused a problem in determining his handwriting. The connection between his handwriting on the *recto* and the *verso* came through the very close similarities on both sides. The palaeographical comparison shows the distinction between his hand and the two different scribes.

Scribe B

He wrote probably about eleven pages on the *verso*, numbers 6–13, 15–17. In fact, maybe some pages of his hand are not exactly defined where no definite pieces of evidence occurred. On one side, the handwriting of this scribe has been determined through different aspects such as the quite interesting form of the head-sign (D1 ) that was written in cursive hieroglyphic form in most of the previously mentioned pages (table 3).

On the other side, a clear distinction between this scribe and the two other scribes occurred through comparing their handwriting. This scribe used a thinner brush, compared to the scribe (A) forming large and thin signs.

Table 3: Head-signs (D1) of scribe B in Papyrus Hatnofer I

vs. 7.7 | vs. 7.5 | vs. 9.6 | vs. 9.6 | vs. 9.4 | vs. 15.8

Scribe C

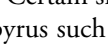
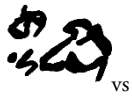
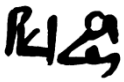
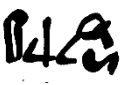
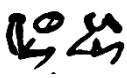
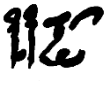
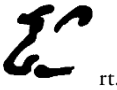
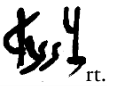
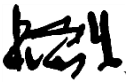
Based on paleographical bases, it seems that this scribe wrote only pages 3 and 14 of the *recto*. There are no traces of a similar handwriting through the rest of the papyrus. Comparing the two pages (see the table 4 below) reveals that they are inscribed by the same hand. Certain signs of these two pages were not formed in this way in the rest of the papyrus such as  ,  being inscribed with an interesting classifier, the sun with uraeus (N6 𓇼). The spelling with this determinative is attested only twice on page 14 of the *recto*, while the other forms were written with the normal determinative of the sun disk (N5 ⊙). The suffix pronoun *.f* of page 3 is characteristic by its tall and large form and this could be noticed through the text.

Table 4 compares the writings of three scribes for a number of words.

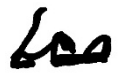
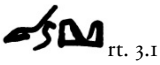
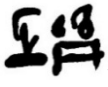
Table 4: Selected spellings of the three scribes of Papyrus Hatnofer I

	Scribe A	Scribe B	Scribe C
ỉḥ/ỉḫw	 vs .3.2	 vs. 7.3	 rt. 14.2
	 vs. 4.4	 vs. 11.1	
	 rt. 5.1	 vs. 13.2	
	 rt. 6.1		

continued on next page

	Scribe A	Scribe B	Scribe C
nḥ/nḥḥ	 rt. 15.4  rt. 9.3  rt. 19.1  rt. 19.2	 vs. 6.8	 rt. 3.12  rt. 3.18
ỉỉ	 vs. 5.2  rt. 1.2  rt. 8.11  rt. 20.5	 vs. 6.8  vs. 8.4  vs. 8.2	 rt. 14.2
mdw	 rt. 1.1  rt. 5.4  rt. 6.6  rt. 7.3  rt. 15.5	 vs. 15.6  vs. 15.10	 rt. 3.1

continued on next page

	Scribe A	Scribe B	Scribe C
ḏw	 rt. 8.4  rt. 6.7	 vs. 15.6  vs. 15.10	 rt. 3.1
ꜣ	 rt. 9.5	 vs. 8.6	 rt. 3.10
sḫm	 vs. 2.3  vs. 4.8  rt. 2.5  rt. 9.6	 vs. 7.2  vs. 7.3  vs. 8.6  vs. 10.2	 rt. 3.3
	 rt. 4.5  rt. 2.14  rt. 8.13	 vs. 7.5  vs. 10.6  vs. 15.9  vs. 12.2	 rt. 14.8
Nw.t	 rt. 8.9	 vs. 8.3	 rt. 14.8

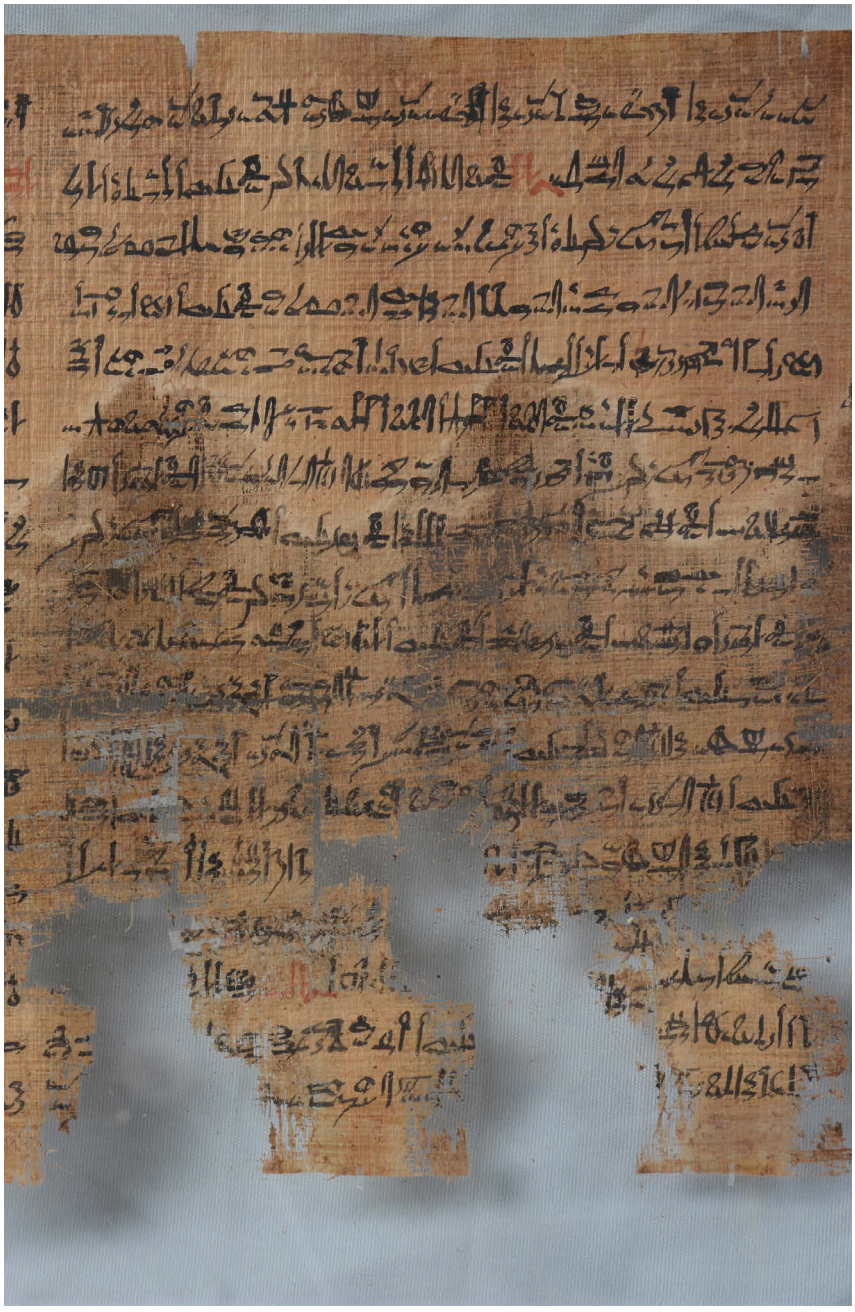


Fig. 5: Hatnofer Papyrus I, Cairo TR 25. 1. 55. 6, *recto* 8 (© Egyptian Museum Cairo)

Fig. 6: Hatnofer Papyrus II, Cairo TR 25. 1. 55. 6, *recto* 1 (© Metropolitan Museum of Art)

Papyrus Hatnofer II

It seems that the short manuscript is inscribed by only one hand, because many signs are repeated in the same form through the different pages of the manuscript. Similar to the long papyrus, the scribe was able to form the sign in variant forms.

What can be noticed in this papyrus is that the handwriting is more cursive than in the longer manuscript, particularly the ligatures and the size of signs are relatively small and short-formed. The handwriting of the first six pages displays compact signs, and the line spacing is narrow. Apparently, the scribe changed his attitude on the last three pages, where the line spacing is wider than in the first few pages. The arrangement of the signs and words is not compact like in the first pages. Interestingly, the scribe preferred to end spell BD 149 that also ends the whole manuscript in columns. He switched his writing direction and added three columns forming the end of the manuscript. The interesting point in these columns is that the scribe changed not only the direction but also some forms of his writings such as  . Changing the writing direction was relatively known in a few contemporary hieratic Books of the Dead; the scribe of the papyrus of Ahmose started the text

with 25 horizontal lines, and then shifted his writings to columns in the same page. This was an uncommon writing attitude in the hieratic Books of the Dead of the early 18th dynasty. The reasons behind this shifting are unclear; however, this could indicate that the ancient scribes somehow still adhered to this classical writing style. By comparing the handwriting of this papyrus with the long one, it reveals that the handwritings are different. There is little similar handwriting, however different words, determinatives, signs and writing style could assure the existence of different scribes of the two rolls. The comparison between the handwritings of the two manuscripts reveals that the two papyri were written in different hands (cf. fig. 5 and 6).

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Documentary texts from the 19th and 20th dynasties: the administration of the Tomb

Kyra van der Moezel

Abstract

The paper presents part of the work on the corpus module on administrative hieratic from the 19th and 20th dynasties of the project *Altägyptische Kursivschriften* (AKU). This module includes a more comprehensive study also on palaeographical habits and particularities seen in the texts within the corpus. That comprehensive study will be published elsewhere. The current paper focusses on the so-called 'necropolis journal' texts and especially on their form and content. It contains three analyses: the categories of text within the 'necropolis journal' corpus, different layouts found within that corpus and the question whether specific categories of text show specific characteristics of layout or even preferred formats.

Introduction: corpus, research questions and methodology

Since the project *Altägyptische Kursivschriften* (AKU)[1] started in 2015, one of its corpus modules concerned the palaeographic study of administrative hieratic script from dynasties 19 and 20. Work on this module took place from 2015 to 2021 and concerned the selection and collection of sources, palaeographic work and analysis of the hieratic signs (hieratograms) in their co- and contexts. The selection and collection of sources happened based on an orientational study for relevant text sources that would meet four criteria prescribed by the AKU project. The sources must be securely dated, well-preserved, accessible, and published or otherwise well-prepared, for AKU documents the hieratograms, their forms and metadata, but no transliterations, translations, lexical or grammatical discussions of the texts.[2] AKU is a palaeographic project that offers palaeographic data to be used in further studies, but for other information about the texts we refer to publications or other projects.

For administrative hieratic from the 19th and 20th dynasties, this led to a focus on sources from the Westbank of Thebes, which are many and accessible. A total of

1 A project of the Akademie der Wissenschaften und der Literatur Mainz, carried out at the Johannes-Gutenberg Universität Mainz in cooperation with the Technische Universität Darmstadt.

2 Gülden 2016, 6; Gülden in preparation.

342 texts on 325 ostraca was selected and collected from four institutions: the British Museum in London, the Museo Egizio in Turin, the Institut Français d'Archéologie Orientale in Cairo and the Ägyptisches Museum in Berlin.[3] They are all ostraca. At first, this was coincidence: ostraca were simply more readily available than papyri. After a while, it was decided to leave papyri out completely for two reasons: the ostraca-corpus was rapidly growing and it was considered more useful to focus on writing practices and scribal habits on ostraca rather than to include one or two papyri, which would hardly be enough for a thorough comparison of writing practices on different materials. Moreover, some cooperation partners have already worked on or are planning to work on papyri that are relevant to the corpus module. Hieratic sign material resulting from some of this research will be uploaded in the AKU database.[4]

The 342 texts are of various genres: so-called 'necropolis journal' texts; letters; court cases; inventories; (private) transactions; miscellaneous; even a small group of literary and religious texts.[5] Since this is a large and much varied group, only one theme could be selected for analytical focus: those texts that have received the label 'necropolis journal', which relates to 189 texts on 184 ostraca (fig. 1). This does not mean that the other ostraca were not at all worked on or were not included in the AKU database, only that the analytical focus came to lie on the 189 texts with a 'necropolis journal' topic.

The reason for typing 'necropolis journal' between quotation marks is that this term is much debated. It was first coined in the first half of the 20th century by Botti and Peet in their publication *Il giornale della necropoli di Tebe* (1928).[6] In the context of this publication, the term referred to a group of papyri that records dates, events and activities related to the work on tombs in the Valley of the Kings and the Valley of the Queens. Since then, many texts – papyri and ostraca – have been declared to

3 Many thanks go to Ilona Regulski (London), Susanne Töpfer (Turin), Cédric Larcher (Cairo) and Jan Moje and Ms. Schorneck (Berlin) for allowing me to either come and study the ostraca myself, or for providing me with photos of the sources. The ostraca are published in Demarée 2002 (London), López 1978-1984 (Turin), Černý 1935, 1937, 1970 and Grandet 2000, 2003, 2017 and Sauneron 1957 (Cairo) and *Deir el-Medine Online* (Berlin).

4 Currently we have received sign material from Maren Goecke-Bauer, who works on a palaeography of Deir el-Medina scribes and has included a large number of ostraca and several papyri. There is also contact with the project *Crossing Boundaries – Understanding complex scribal practices in Ancient Egypt* (based in Basel, Turin and Liège), in which the Turin papyrus collection is digitally documented. Cooperation is possible in case they have palaeographic outcome.

5 The latter do not belong to the theme of administrative hieratic. They were, however, collected in view of a future corpus module of the AKU project.

6 Botti and Peet 1928.

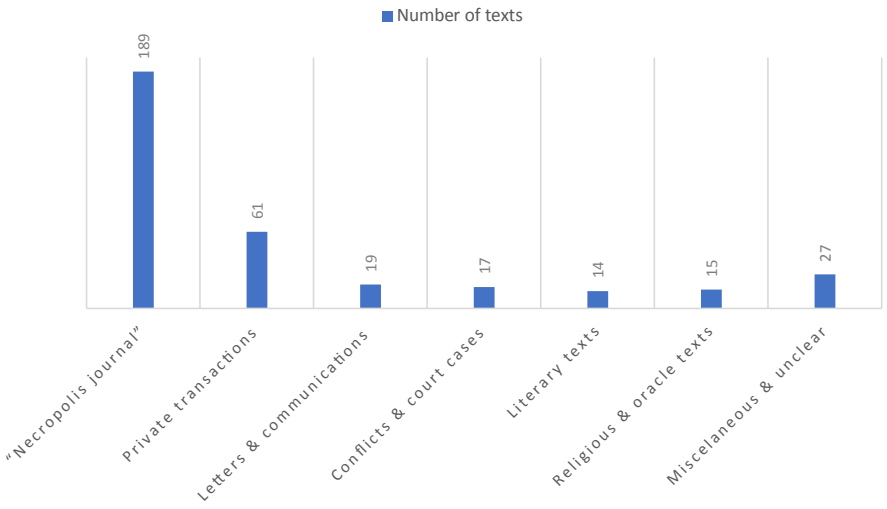

Fig. 1: The numbers and genres of the texts collected (the analytical focus lies on the texts with the label 'Necropolis journal')

belong to this 'necropolis journal', which now generally indicates texts that record all sorts of notes, activities and events related to the workmen and their work in, and the administration of, the tombs in both Valleys. The term has served alright in setting apart these texts from the thousands of texts from the Theban region of different nature: literary, religious, juridical, private, etc. Yet it certainly does not function well in actually *defining* the texts that are being shoved under this heading. The term 'necropolis journal' does not clarify further the sorts of texts and what their purpose was, or how we must picture their role, meaning and function within the administration of the Theban area. What actually is a 'necropolis journal', what does it imply? Can we truly speak of a 'journal'? Nowadays there is more resistance to the term. In fact, the term 'necropolis journal' seems to be an empty designation that we use merely out of convenience to refer to a group of texts that has the administration of the tombs in the Valleys as topic. The term is without meaning, or rather with deceptive meaning, yet still it remains in use, for in the opinion of the author we do seem to be in need of some term to refer to texts on the administration and progress of the work on the tombs in the Valleys. So, what would be an alternative? A designation such as documentary texts may be too broad and unspecific and may include the documentation of private transactions and inventories, not directly connected to the crew's work, as well. Obvious would then be the designation administrative texts, but in order to delineate the generality that is inherent in this term as well I consider, a combined description such as documentary texts related to the adminis-

tration of the work on the tombs in the Kings' and Queens' Valleys by the crew from Deir el-Medina – short: documentary texts on the administration of the Tomb – to best indicate the group of texts that at least in this paper is the analytical focus.

Within this large group of documentary administrative texts, patterns, similarities and differences between texts can be seen, e. g. texts recording similar content, or showing similar style and setup. A study was thus conducted to see which categories and which forms of layout were found within the corpus, and whether there was a relation between specific categories and specific forms of layout. The categorization of texts offered below is not meant to define the group we are dealing with (let alone it is meant to define something like the 'necropolis journal'!). This paper does not want to argue that the ancient Egyptians generated and organized the texts in such a systematic way. Offered is simply a categorical list of texts, showing which topics dealing with work on the tombs were encountered in the current corpus. It shows the dimension of the administration of the Tomb in the corpus, so that we know with what we are dealing.

Of course, the 'necropolis journal' question has been noted before by others.[7] The consensus is that we cannot speak of an actual journal, at least not in the modern sense of the word. But how this group of texts should then be seen, remains only vaguely described. Several have looked at topics and categories of text before, but most stop there, whereas it would also be interesting to carefully look at setup and layout. From there on, further comparisons can be made and further questions be asked.

From the above, the research questions in this paper will have become clear. They form three paragraphs:

1. Which categories of text do we find within the current eclectic corpus of texts with 'necropolis journal' topic?
2. Which types of layout do we find?
3. What results from a comparison between categories and layouts: do the categories show specific features of layout? In other words, can specific categories be linked to specific forms of layout?

Further questions would then be: do *individuals* (rather than text categories) show preference for a specific type of layout? For this a study of scribes must be undertaken. And even: could we, based on a comparison of layouts and categories, discover

7 A small selection of works that have focused on the classification of texts belonging to this journal and as such on defining this journal: Morfini 2019; McClain 2018; Donker van Heel and Haring 2003; Akiyama 1998, 30–47; Valbelle 1985; *Deir el-Medina Database* (field: classification).

systematicity in the workflow of the organization of scribes, or were the administrative reports simply written in the sense of anything goes?

The results described in the paragraphs are bound to the limits of the corpus of 189 texts on ostraca. This means that a diachronic dimension cannot be fully covered. Yet, this was also not a goal of the analysis. The goal was rather to analyze what we have in the AKU database regarding the topic 'necropolis journal' to offer this as a point of departure for expansion and further study. We do look at the chronological spread of categories and layouts, yet this would only be the start of a thorough diachronic analysis looking further at the development of categories and layouts, which should be based on a much larger corpus. This would then be a good spot to repeat AKU's request for cooperation partners, who can complement and use our data in further studies. For the methodology followed to create the digital facsimiles I refer to other publications by AKU.[8]

Analysis 1: classification of the texts

A first thing that needs clarification are the criteria on the basis of which the selection of documentary texts on the administration of the Tomb happened: when was a text included, when not? Of course, publications that label a text as being 'necropolis journal' were included. Otherwise, all texts with administration of the crew and their work were included, as well as all texts with administration of events that explicitly influenced the crew's work (e. g. a visit by the vizier, commotion concerning the lack of rations, the arrival of the enemy). Finally, all texts with administration on (the use of) materials and equipment were included, as well as all texts that concern rations given to the crew for their work.[9] Texts were excluded from the current corpus when they concern workmen or other inhabitants of the village, who speak about themselves in the first person singular, with some exceptions when content clearly links them to the administration of the work.[10] Also excluded were lists with large numbers of rarely mentioned foods or objects (e. g. shawls, bed linen), especially when they are without context. When such lists do have a clear context, they often record private transactions or inventories. Lists of food and/or objects for feasts were also left out. Feasts are sometimes mentioned in our texts as events inter-

8 Gülden 2018, 95–96; Gülden in preparation.

9 Texts recording the delivery of water by water-carriers were, however, excluded, since this category mingles much with private transactions between workmen and water-carriers concerning the hire of donkeys. The workmen and water-carriers took care of this privately. Moezel 2014, pp. 154–174.

10 E. g. in Ostracon Turin N. 57035 the author in first person clearly is a scribe working for the administration, noting himself sick for a couple of days.

rupting the crew's work, but those texts that primarily concern food and products particularly for such feasts are here considered not related to the administration of the Tomb. Finally, with some initial doubt, letters that mention the administration or work done in the tombs were left out as well. There are few such letters in the corpus, but as for layout, style and terminology they differ much from the other texts recording work progress and administration.[11] As such, the focus lies purely on the work carried out by the crew and how it was administered.

This led to the total of 189 texts on 184 ostraca that was already mentioned above.[12] However, as soon as the actual palaeographic work on this corpus began, it became clear that 11 texts were in such a bad state, which was even worsened by the mediocre quality of some of the photographs, that they were not usable for AKU goals. One further text appeared to date to the 18th dynasty instead of the 19th or 20th dynasty (O. Berlin P. 10666). This means that 177 texts were left for digital processing. The hieratograms were digitally drawn and imported into the database. Based on the terminology and topics the contents of the texts were assigned to one of the categories in tables 1 and 2.

Corrigendum: In these tables and elsewhere in the paper the citation of Turin ostraca should read O./ostracon/ostraca Turin CGT [number]. That is the citation method nowadays requested by the *Museo Egizio*.

11 See also Haring 2003, 125, who comes to the same conclusion. The letters are, however, included in the secondary corpus (those texts without a 'necropolis journal' theme) and they are therefore documented in the AKU Database.

12 Five ostraca contain different texts, yet both concerning the administration of the Tomb, on the *recto* and *verso*.

Table 1: Single categories of text

No.	Categorical description	Texts
1	Deliveries and/or deficits of products	O. Berlin P. 1122; O. Berlin P. 9897; O. Berlin P. 10632; O. Berlin P. 10654 *verso*; O. Berlin P. 10839; O. Berlin P. 10840; O. Berlin P. 11249; O. Berlin P. 11272; O. Berlin P. 12632 + O. DeM 150; O. Berlin P. 14149; O. Berlin P. 14156; O. Berlin P. 14210; O. Berlin P. 14213; O. Berlin P. 14218 *recto*; O. Berlin P. 14218 *verso*; O. Berlin P. 14264; O. Berlin P. 14302; O. Berlin P. 14614; O. Berlin P. 14657; O. Berlin P. 14666; O. BM EA 50728; O. BM EA 66412; O. DeM 1; O. DeM 3; O. DeM 4; O. DeM 10; O. DeM 15; O. DeM 20; O. DeM 26; O. DeM 48; O. DeM 52; O. DeM 75; O. DeM 76; O. DeM 91; O. DeM 94; O. DeM 137; O. DeM 138; O. DeM 142; O. DeM 143; O. DeM 144; O. DeM 145; O. DeM 147; O. DeM 346; O. DeM 577; O. DeM 591; O. DeM 611; O. DeM 621 + O. DeM 829 *recto*; O. DeM 707; O. DeM 718; O. DeM 726; O. DeM 837; O. DeM 842; O. DeM 843; O. DeM 844; O. DeM 846; O. DeM 851; O. DeM 852; O. DeM 854; O. DeM 855; O. DeM 859 *recto*; O. DeM 859 *verso*; O. DeM 863; O. DeM 869; O. DeM 10299; O. DeM 10324; O. DeM 10339 *recto*; O. DeM 10339 *verso*; O. Turin N. 57072; O. Turin N. 57080; O. Turin N. 57085 *recto*; O. Turin N. 57085 *verso*; O. Turin N. 57157; O. Turin N. 57167; O. Turin N. 57189; O. Turin N. 57469 = O. DeM 7; O. Turin N. 57470
2	Accounts of absence or presence	O. Berlin P. 11248; O. BM EA 5634; O. DeM 594; O. DeM 617; O. DeM 763; O. DeM 889; O. DeM 908; O. DeM 910; O. DeM 912 *recto*; O. DeM 913 *recto*; O. Turin N. 57020; O. Turin N. 57026; O. Turin N. 57028; O. Turin N. 57029; O. Turin N. 57030; O. Turin N. 57035; O. Turin N. 57039; O. Turin N. 57056; O. Turin N. 57283; O. Turin N. 57432
3	Events	O. Berlin P. 10633; O. Berlin P. 12654; O. Berlin P. 14286; O. BM EA 50734 + O. BM EA 50742 + O. Ashmolean Musuem 99 + O. CGC 25673; O. DeM 571; O. DeM 890; O. Turin N. 57204
4	Progress reports	O. Berlin P. 9906; O. Berlin P. 10622; O. Berlin P. 10663; O. Turin N. 57036
5	Accounts of materials and equipment	O. DeM 882; O. DeM 932; O. Turin N. 57007 *recto*

continued on next page

No.	Categorical description	Texts
6	Name lists	O. Berlin P. 9901; O. Berlin P. 11289; O. Berlin P. 15292; O. DeM 262; O. DeM 565; O. DeM 598; O. DeM 612; O. DeM 706; O. DeM 914 *recto*; O. Turin N. 57015; O. Turin N. 57206; O. Turin N. 57256; O. Turin N. 57257; O. Turin N. 57382; O. Turin N. 57479

The texts with deliveries and/or deficits of products concern a variety of usually one or two products, which are: grain rations, wood, fish, bread and cakes, pottery, fat, dates, various (a combination of two or maximal three of the aforementioned), or other or unclear[13]. Accounts of absence or presence can be simple texts in which individual workmen are marked as being off work without reason. Or they can be more elaborate accounts in which reasons of absence and further information on the return to work are given. Texts recording events may relate to the lack of rations, the accession of a new king, a court case concerning the crew, the arrival of the vizier or the enemy, or a number of other eventful happenings. Progress reports may concern ongoing work or the start of a new project or assignment for which part of the crew was selected. Accounts of materials and equipment concern, for instance, lamps, rope or tools handed out to the crew for use during work and a calculation of the numbers of tools handed out or returned. Name lists are simple listings of personal names of workmen, with or without further marks such as dots or strokes, which presumably represent a counting or control system.

The combined categories consist of a mix of two or more of the single categories. Clearly, most documentary administrative texts in the current corpus concern a single category: a total of 125 texts (categories 1 to 6) against a total of 45 texts (categories 7 to 19). Table 2 shows that duty rosters are – logically – always combined with deliveries and deficits, but hardly ever with other categories, except for the mention of some absences and events. These absences and events are not given as list enumerations (which for absences at least is the case in single category 4 as well as in several of the combined texts). Rather, they are given as sporadic mentions in between the deliveries or deficits. Categories 18 and 19 represent the most complete reports but leave out duty rosters. Whereas deliveries and deficits of products can be combined with all other single categories, the combination with duty rosters (categories 10 to 12) appears as a separate subgroup with most texts within the current corpus assigned to it. Name lists as a category are in the current corpus not combined with other categories of text.

13 E. g. O. Berlin P. 9897: *Deir el Medine Online* suggests *ḳḏ* "Mörtel", but adds "Die Lesung ist allerdings fraglich". See https://dem-online.gwi.uni-muenchen.de/show_anmerkung.php?id=184&inventar_nr=Berlin+P+09897#u4 [29 July 2020].

Table 2: Combined categories of text

No.	Deliveries and/or deficits of products	Duty roster	Acc. of absence or presence	Events	Progress reports	Acc. of materials and equipment
7[14]	✓		✓			
8[15]	✓			✓		
9[16]	✓		✓	✓		
10[17]	✓	✓				
11[18]	✓	✓		✓		
12[19]	✓	✓	✓			
13[20]				✓		✓
14[21]			✓	✓		
15[22]			✓	✓		✓
16[23]					✓	✓
17[24]			✓		✓	
18[25]			✓	✓	✓	✓
19[26]	✓		✓	✓	✓	✓

One further group is category 20, which contains seven texts of which the contents cannot be allocated to a specific category due to their fragmentary or faded state or due to discussion concerning their contents. These texts are O. Berlin P. 10842;

14 O. DeM 604; O. DeM 895.
15 O. BM EA 50722 + O. CGC 25726 + O. BTdK 660; O. BM EA 50744; O. DeM 35; O. DeM 595.
16 O. DeM 55; O. DeM 900; O. Turin N. 57007 *verso*; O. Turin N. 57153.
17 O. Berlin P. 12625 + O. IFAO ONL 300; O. Berlin P. 12627; O. Berlin P. 12628 + 12641; O. Berlin P. 12639 + 14696 + O. DeM 33; O. Berlin P. 12642 + O. DeM 160; O. BM EA 5635; O. DeM 578;O. DeM 876;O. Turin N. 57393.
18 O. Berlin P. 12626 + O. DeM 41; O. Berlin P. 12629; O. Berlin P. 12631 a + b; O. Berlin P. 12633 a + b; O. Berlin P. 12640 + O. DeM 161 + O. Strasbourg H82; O. Berlin P. 12651 + O. DeM 45 + O. Vienna H. 4; O. DeM 32; O. DeM 40 + Strasbourg H42; O. DeM 42; O. DeM 44; O. DeM 46; O. DeM 148.
19 O. Berlin P. 12384.
20 O. Turin N. 57034.
21 O. Turin N. 57156 *recto*.
22 O. Turin N. 57033; O. Turin N. 57044; O. Turin N. 57047; O. Turin N. 57055.
23 O. Berlin P. 14255; O. Turin N. 57006; O. Turin N. 57366.
24 O. BM EA 50730 + 50745; O. DeM 899.
25 O. Turin N. 57031.
26 O. BM EA 5672 + O. CGC 25649.

O. Berlin P. 14233; O. DeM 759; O. DeM 776; O. DeM 893; O. Turin N. 57025; and O. Turin N. 57282. Table 3 shows the chronological spread of all categories.

Table 3: Chronological spread of the categories of text[27]

No.	Category description	Chronological spread
1	Deliveries and/or deficits of products	Seti I–Ramesses XI
2	Accounts of absence or presence	Seti II–Ramesses IV
3	Events	yr. 27 Ramesses III–Ramesses IX/XI
4	Progress reports	Ramesses III
5	Accounts of materials and equipment	Siptah/Tausret–Ramesses III
6	Name lists	Ramesses II–Ramesses IV
7	Deliveries and/or deficits of products Accounts of absence or presence	Ramesses III–Ramesses IV or V
8	Deliveries and/or deficits of products Events	Seti II–Ramesses IV
9	Deliveries and/or deficits of products Accounts of absence or presence Events	Seti II/Siptah–Ramesses III
10	Deliveries and/or deficits of products Duty roster	Seti II/Siptah–Ramesses IV
11	Deliveries and/or deficits of products Duty roster Events	yr. 25 Ramesses III–yr. 2 Ramesses IV
12	Deliveries and/or deficits of products Duty roster Accounts of absence or presence	yr. 2 Ramesses IV
13	Events Accounts of materials and equipment	yr. 2 Ramesses III
14	Accounts of absence or presence Events	Ramesses III
15	Accounts of absence or presence Events Accounts of materials and equipment	yrs. 22-26 Ramesses III
16	Progress reports Accounts of materials and equipment	Ramesses III–Ramesses IV or VII

continued on next page

27 Only secure dates or those mentioning a king's name are taken into account. Dates such as *dynasty 19 or 20* or *early dynasty 19?* were left out. For dating the ostraca, I followed the information and references in the *Deir el-Medina Database* and *Deir el Medine Online*.

No.	Category description	Chronological spread
17	Accounts of absence or presence Progress reports	Siptah(?)–Ramesses VI
18	Accounts of absence or presence Events Progress reports Accounts of material and equipment	yr. 25 Ramesses III
19	Deliveries and/or deficits of products Accounts of absence or presence Events Progress reports Accounts of materials and equipment	yr. 14 Ramesses IX
20	Unclear	Dynasty 19–Ramesses IV or V

Although we must keep in mind that the material is biased due to the fact that much more material from the reigns of Ramesses III and IV than before that time has been found, the table shows that the combined categories are generally dated somewhat later than the single categories, notably less often in the 19th dynasty. Where a date such as Seti II or Siptah has been given, it concerns only one text from the category, the remaining texts having been dated to mainly the reigns of Ramesses III and IV.[28] For the single categories, the number of texts from the reigns of Seti I to Tausret is much higher (40[29], against 73 from the 20th dynasty and 12 with an unsecure date in 19th or 20th dynasty). Notably for the categories 1, 2 and 5 we see that the administration started in 19th dynasty with single categories of text that were later combined into more elaborate forms.

Analysis 2: setup and layout of the texts

Of interest is now the question for layouts. A systematic description of layout was needed to be able to allocate types of layout to the texts in order to later compare

28 They are O. BM EA 5635 (10, Amenmesse-Siptah), O. DeM 595 (8, Seti II), O. DeM 899 (17, Siptah(?)) and O. DeM 900 (9, Seti II, Amenmesse or Siptah).

29 O. Berlin P. 10622 (4), O. Berlin P. 10840 (1), O. Berlin P. 14213 (1), O. Berlin P. 14218 *recto* (1), O. Berlin P. 14218 *verso* (1), O. Berlin P. 14614 (1), O. Berlin P. 15292 (6), O. BM EA 50728 (1), O. Turin N. 57080 (1), O. Turin N. 57469 = O. DeM 7 (1), O. DeM 1 (1), O. DeM 3 (1), O. DeM 4 (1), O. DeM 10 (1), O. DeM 15 (1), O. DeM 20 (1), O. DeM 26 (1), O. DeM 48 (1), O. DeM 75 (1), O. DeM 91 (1), O. DeM 346 (1), O. DeM 591 (1), O. DeM 594 (2), O. DeM 598 (6), O. DeM 611 (1), O. DeM 612 (6), O. DeM 621+829 *recto* (1), O. DeM 706 (6), O. DeM 837 (1), O. DeM 843 (1), O. DeM 846 (1), O. DeM 859 *recto* (1), O. DeM 859 *verso* (1), O. DeM 882 (5), O. DeM 889 (2), O. DeM 908 (2), O. DeM 910 (2), O. DeM 912 *recto* (2), O. DeM 913 *recto* (2), O. DeM 914 *recto* (6).

them to the categories of text. Several aspects of text-setup that caught attention were selected to come to a classification of layouts:

- First, the distinction between texts with horizontal lines, texts with columns and texts with a mix of horizontal lines and columns.
- Second, the presence of a year date, a month and/or day date or the absence of any date *at the start* of the text: was the text deliberately dated when the scribe started writing, or not? When a timeframe is mentioned later in the text, but no date occurs at the beginning, the text is considered undated from the point of view of layout.
- Third, the placement of keywords and dates. Here, dates within the text are meant, which can be day dates or only the phrase *hrw pn*, month dates, or a full regnal year date. Keywords can be:
  - *wnmy* and *smḫy*: words for the right and left sides of the crew. In several texts, deliveries or information concerning the right side of the crew follow the date directly, whereas the word *smḫy* followed by deliveries or information concerning the left side of the crew is explicitly written in a new line, even when there is ample space left for writing in the previous line (e. g. O. Turin N. 57026, O. Turin N. 57029). In other texts, the right and left sides follow each other directly in running lines of text (e. g. O. Turin N. 57007 *verso*, O. Turin 57056).
  - Words indicating totals, such as *dmḏ* and *jr(j).n*. These words can be deliberately written in a new line to put focus on the balance (e. g. O. Berlin P. 14614); in other cases, they simply follow directly in the middle or at the end of a running line of text (e. g. O. DeM 91).
  - Personal names. Especially in name lists and accounts of absence or presence, personal names can be placed as keywords at the start of a new line (e. g. O. BM EA 5634, O. Turin N. 57020, O. DeM 94), but there are also examples where they follow each other in running lines of text (e. g. O. Turin N. 57028).
  - Groups of persons, such as men, servants or chiefs. Especially in grain accounts, these groups are placed as keywords at the start of new entries (e. g. O. Berlin P. 11249, O. DeM 577).
  - Deliverers, sometimes including the introduction *m ḏr.t* or *jn.w m ḏr.t*, are in a few cases deliberately placed at the start of a new line (e. g. O. Berlin P. 14666).
  - Words for products that have been delivered can, especially in the deliveries and/or deficits of products, act as keywords at the start of new entries. In these cases, the deliveries and/or deficits rather have the character of inventories of what has (not) been delivered (e. g. O. DeM 1, O. DeM 3, O. DeM 15).

The role such keywords or dates play in the way the text is built up was studied. Were they placed at the start of a new line to put them into focus or are they simply enumerated in running lines of text? Here, the surface of the ostracon is taken into consideration, for the choice to start a new line or entry depends of course as well on the space available for writing.[30] These aspects of text-setup led to a classification of layouts with codes that consist of three components (table 4).

Table 4: Components in the codes of the layouts

A	Horizontal lines		
B	Columns		
C	Mix of horizontal lines and columns		
	1	Texts with a full year date	
	2	Texts with a full year date followed by the phrase *hrw pn*	
	3	Texts with only a month and/or day date	
	4	Texts with only a month and/or day date followed by the phrase *hrw pn*	
	5	Texts without date	
	6	Damaged: uncertain whether there originally was a date	
		a	No consideration for keywords and/or dates: running lines of text cover the entire surface of the ostracon
		b	Inconsistent consideration for keywords and/or dates: These texts occasionally place keywords or dates at the start of a new line, even when there is space left to continue writing at the end of the previous line, but this is not consistently done.
		c	Full consideration for keywords and/or dates: These texts show list entries in which each keyword or date is a new entry.
		d	Mix: This occurs when a number of lines and/or a number of columns consistently show different degrees of consideration for keywords and/or dates then other lines and/or columns in the text.
		e	Unclear: When the text is fragmentary and the beginnings and ends of all or most lines are gone.
		f	Oneliner: When the text has one line or entry only.

30 Less than a week after the conference we learned about *ARU-Net*: a neural pixel labeler for layout analysis of historical documents by T. Grüning (Grüning 2020). It is a text line detection method, which represents each detected text line by its baseline. A deep neural network labels pixels to belong to one of three classes: baseline, separator or other. The separator class marks beginning and end of each text line. Further study is needed and will be reported upon in the publication of the module, for this could be a way to visualize the focus on keywords and/or dates also in our texts. See also Grüning et al. 2019.

The following types of layout were then identified (table 5 and figs. 2a–c):

Table 5: Types of layout found in the corpus and the texts allocated to them

A: Horizontal lines	
Code	**Texts**
A1a	O. Berlin P. 14213; O. BM EA 05672 + O. CGC 25649; O. BM EA 50730 + O. BM EA 50745; O. DeM 32; O. DeM 44; O. DeM 594; O. DeM 718; O. DeM 726; O. DeM 759; O. DeM 763; O. DeM 855; O. DeM 882; O. DeM 889; O. Turin N. 57007 *verso*; O. Turin N. 57028
A1b	O. Berlin P. 10840; O. Berlin P. 12626 + O. DeM 41; O. Berlin P. 12628 + O. Berlin P. 12641; O. Berlin P. 12631 a + b; O. Berlin P. 12639 + O. Berlin P. 14696 + O. DeM 33; O. Berlin P. 12651 + O. DeM 45 + O. Vienna H.4; O. Berlin P. 14302; O. Berlin P. 14666; O. DeM 40 + O. Str. H42; O. DeM 42; O. DeM 46; O. DeM 55; O. DeM 138; O. DeM 145; O. DeM 10299; O. DeM 10339 *recto*; O. Turin N. 57007 *recto*; O. Turin N. 57026; O. Turin N. 57034; O. Turin N. 57039; O. Turin N. 57044; O. Turin N. 57153
A1c	O. Berlin P. 12627; O. BM EA 5634; O. BM EA 5635; O. DeM 137; O. DeM 262; O. DeM 621 + O. DeM 829 *recto*; O. DeM 707; O. DeM 837; O. DeM 854; O. DeM 859 *recto*; O. Turin N. 57029; O. Turin N. 57031; O. Turin N. 57035; O. Turin N. 57047; O. Turin N. 57055; O. Turin N. 57469 = O. DeM 7
A1d	O. DeM 932
A1e	O. Berlin P. 9897; O. Berlin P. 14156; O. DeM 776; O. DeM 842; O. DeM 893; O. Turin N. 57204
A2a	O. Berlin P. 9906; O. Berlin P. 10633; O. Berlin P. 10663; O. Berlin P. 12654; O. BM EA 50722 + O. CGC 25726 + BTdK 660; O. BM EA 50744; O. DeM 578; O. DeM 10324; O. Turin N. 57366
A2b	O. DeM 899
A2c	O. DeM 76
A2e	O. Berlin P. 14657
A3a	O. Berlin P. 11272; O. Berlin P. 12633 a + b; O. DeM 595; O. DeM 604; O. DeM 890; O. Turin N. 57432
A3b	O. DeM 35; O. DeM 346; O. DeM 900; O. Turin N. 57025
A3c	O. Berlin P. 10654 *verso*; O. DeM 1; O. DeM 3; O. DeM 4; O. DeM 10; O. DeM 15; O. DeM 20; O. DeM 26; O. DeM 75; O. DeM 94; O. Turin N. 57393
A3d	O. DeM 617
A3e	O. Turin N. 57085 *recto*
A4d	O. Berlin P. 14255

continued on next page

A: Horizontal lines	
Code	**Texts**
A5a	O. Berlin P. 10622; O. Berlin P. 10632; O. Berlin P. 10839; O. Berlin P. 10842; O. DeM 598; O. Turin N. 57157; O. Turin N. 57479
A5b	O. Turin N. 57080
A5c	O. Berlin P. 11249; O. Berlin P. 14149; O. Berlin P. 14210; O. Berlin P. 14614; O. DeM 91; O. DeM 565; O. DeM 844; O. DeM 859 *verso*; O. Turin N. 57167
A5e	O. Turin N. 57036
A5f	O. Turin N. 57015; O. Turin N. 57206; O. Turin N. 57256; O. Turin N. 57257
A6a	O. Berlin P. 12629; O. Berlin P. 12640 + O. DeM 161 + O. Str. H82; O. Berlin P. 14286; O. BM EA 50734 + O. BM EA 50742 + O. Ashmolean Museum 99 + O. CGC 25673; O. DeM 571; O. DeM 851; O. DeM 876; O. DeM 10339 *verso*; O. Turin N. 57030; O. Turin N. 57056
A6b	O. Berlin P. 14264; O. DeM 148
A6c	O. Berlin P. 9901; O. DeM 869
A6e	O. Berlin P. 11248; O. Berlin P. 12384; O. Berlin P. 14218 *recto*; O. Berlin P. 14218 *verso*; O. Berlin P. 14233; O. Berlin P. 15292; O. BM EA 66412; O. DeM 591; O. DeM 846; O. DeM 908; O. DeM 910; O. Turin N. 57085 *verso*; O. Turin N. 57189; O. Turin N. 57282; O. Turin N. 57283; O. Turin N. 57470

B: Columns	
Code	**Texts**
B1c	O. Berlin P. 12632 + O. DeM 150; O. DeM 147; O. Turin N. 57033
B1d	O. Turin N. 57020
B3c	O. Berlin P. 1122; O. DeM 852
B5c	O. DeM 612; O. DeM 706; O. DeM 843; O. DeM 912 *recto*; O. DeM 914 *recto*; O. Turin N. 57382
B6c	O. Berlin P. 11289; O. DeM 913 *recto*
B6e	O. DeM 895

C: Mix of lines and columns	
Code	**Texts**
C1b	O. DeM 142
C1d	O. BM EA 50728; O. Turin N. 57006
C2c	O. DeM 611; O. Turin N. 57072
C5b	O. DeM 143; O. DeM 144

continued on next page

C: Mix of lines and columns	
Code	**Texts**
C5c	O. Berlin P. 12625 + O. IFAO ONL 300; O. DeM 48; O. DeM 577; O. DeM 863
C5d	O. DeM 52
C6a	O. Turin N. 57156 *recto*
C6b	O. Berlin P. 12642 + O. DeM 160

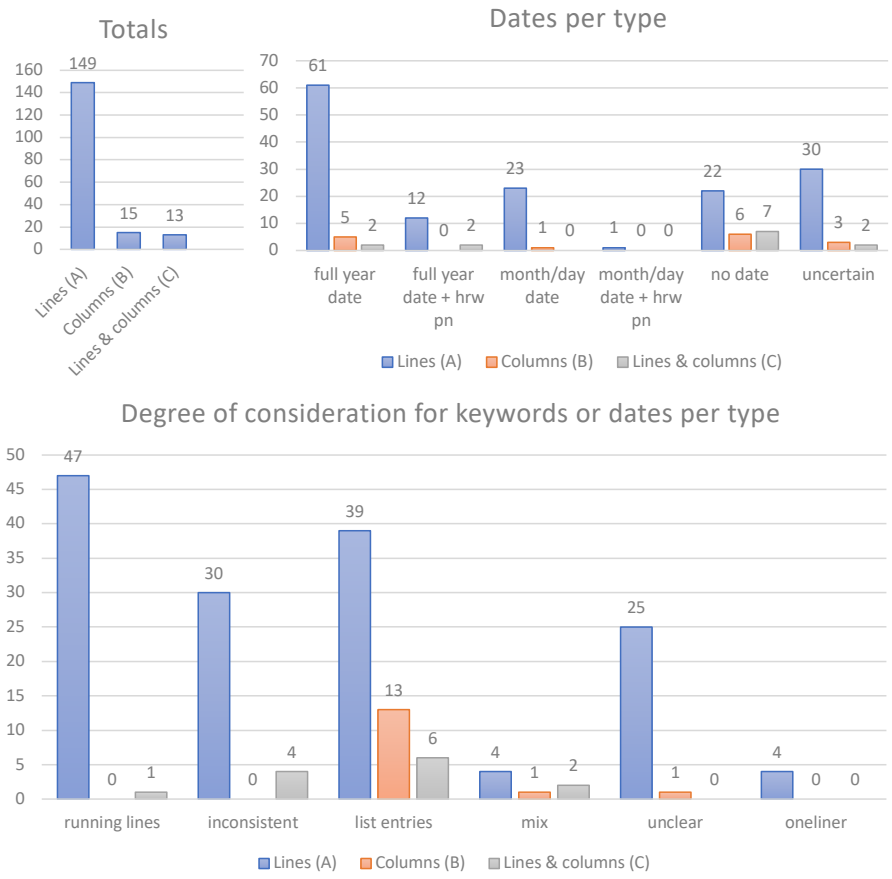

Fig. 2: Charts showing a) the totals per type of layout, b) the presence of a date per type of layout, and c) the degree of consideration for keywords and/or dates per type of layout

Examples are given in figs. 3 to 8. Fig. 3 shows O. BM EA 5634, a long text recording dates of, and reasons for, absence for a number of workmen (text category 2). The

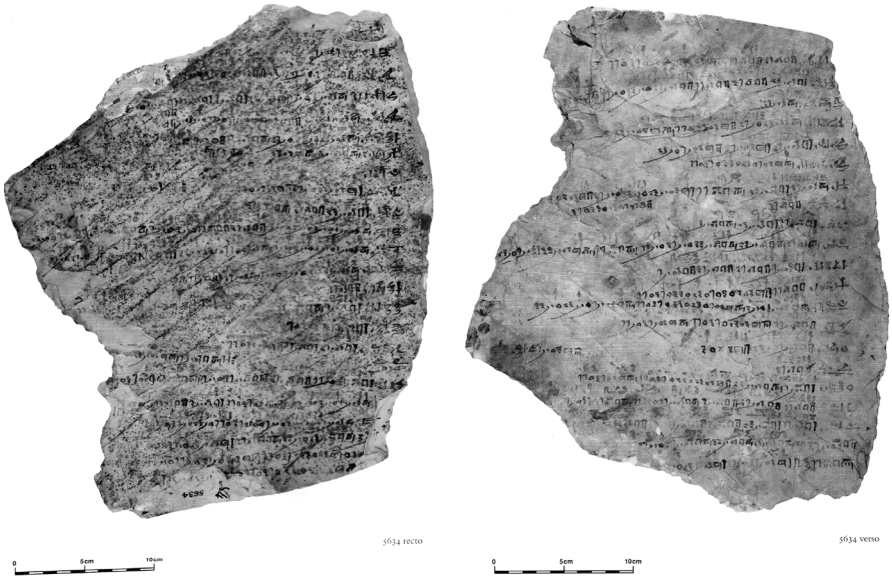

Fig. 3: O. BM EA 5634 *recto* (left) and *verso* (right) (Démaree 2002, pls. 25, 27; recent and detailed colour photos for study purposes are in the hands of the author)

text has been given the layout code A1c: it is written in horizontal lines (A), it has a full year date (1), and it is an enumeration with each personal name being a new list entry (c).

Fig. 4 shows O. Turin N. 57479, which has received the layout code A4a: the text is written in horizontal lines (A), it is undated (4), and the lines are running text (a), which is best seen when looking at the personal names Nakhu, Inherkhau and Horsheri, which are all broken off and spread over two lines due to lack of writing space. The text belongs to text category 6.

Fig. 5 shows O. Turin N. 57033, a text with an account of materials, absences and mention of events (text category 15), which has received the layout code B1c: the text is written in columns (B), it has a full year date (1), and its columns are list entries with each day being a new entry (c).

Fig. 6 shows O. Turin N. 57020, which recounts days of inactivity for three carpenters (text category 2). At first sight, the text seems to have been written in horizontal lines, yet it has been given the layout code B1d. When reading the text, one sees that in fact it has two columns (B), of which the first one starts with a full year date (1). This first column has regular entries with a note of absence for each carpenter in a new entry, followed by a note of going back to work in again a new entry. The second column on the left has extra information on the carpenter Kasa in

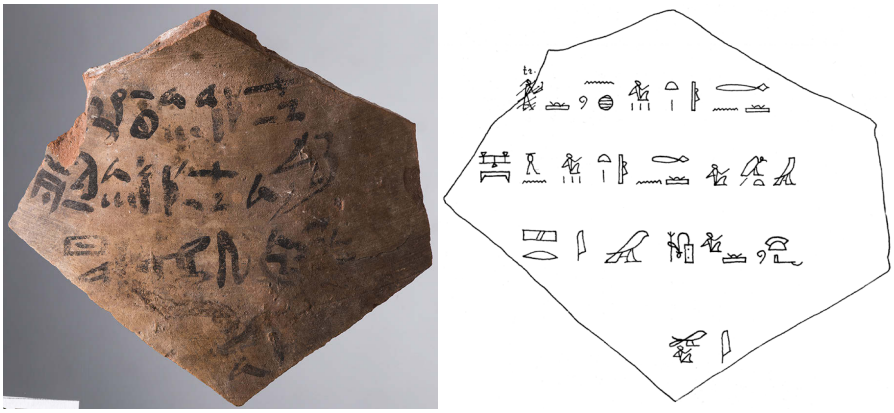

Fig. 4: O. Turin N. 57479 (photo: N. Dell'Acquila & F. Taverni; transcription: López 1984, pl. 163a)

four lines of running text, obviously a squeezed-in note for which there was hardly space. The two columns therefore both show different degrees of consideration for a list-like layout (d).

Fig. 7 shows O. DeM 611, which is an account of grain distributions (text category 1). It has received the layout code C2c: it is a mix of two horizontal lines above three columns (C), a full year date with *hrw pn* starts off the text in the first line (2), and it has list entries in both the lines and the columns (c). The first line contains a full year date, the second line the subject, acting as a title for the ostracon, after which the contents are summed up in the two columns, which are built around the personal names of workmen who receive grain.

Fig. 8 shows O. Turin N. 57006, a text with a progress report and an account of materials (text category 16). Its layout code is C1d: the text consists of four horizontal lines above two columns (C), with a full year date in the first line (1). The horizontal lines are running text, whereas the column entries are built around the personal name of a workman or a team of workmen. The lines and columns thus show different degrees of consideration for a list-like layout.

Table 5 and figs. 2a-c clearly show that most documentary texts concerning the administration of the Tomb were written in horizontal lines (149). Only few are in columns (15) or show a combination of lines and columns (13). For those texts written in horizontal lines, the majority has a full year date. The number of texts with a month and/or day date and texts without date is rather similar (23 and 22 respectively). Thirty texts are damaged or incomplete, which means that we cannot with certainty say whether they were dated or not. For those texts written in columns, there is an equal amount of texts with a (year or month/day) date and texts

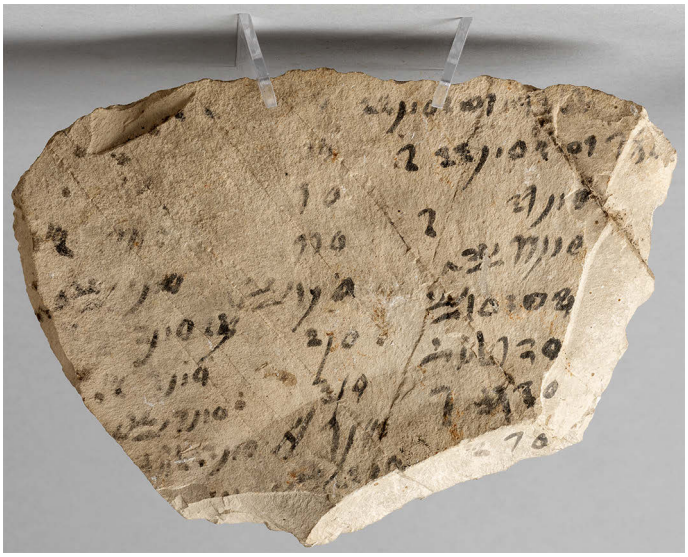

Fig. 5: O. Turin N. 57033 (photo: N. Dell'Acquila & F. Taverni)

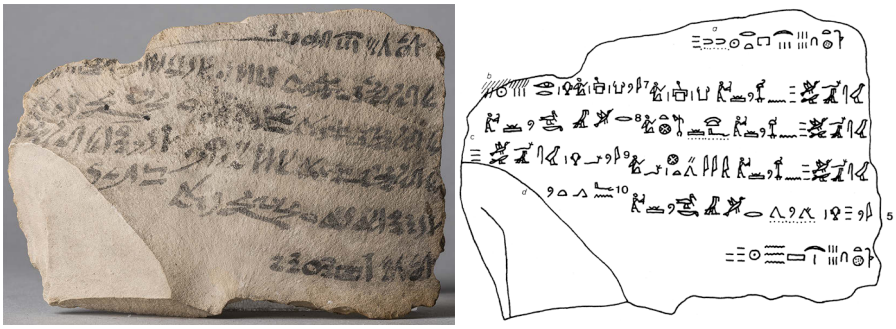

Fig. 6: O. Turin N. 57020 (photo: N. Dell'Acquila & F. Taverni; transcription: López 1978, pl. 12a)

without a date at the start. For those texts written in a mix of lines and columns there is even a slight preference for texts without a date (seven to four). The phrase *hrw pn* appears only in horizontal lines in types A and C. We cannot, however, draw conclusions from the above, since the presence of a year or month/day date was a prerequisite during the selection of sources. The data should be replenished with many more data to see what the presence of a date means regarding the topic of the 'necropolis journal'.

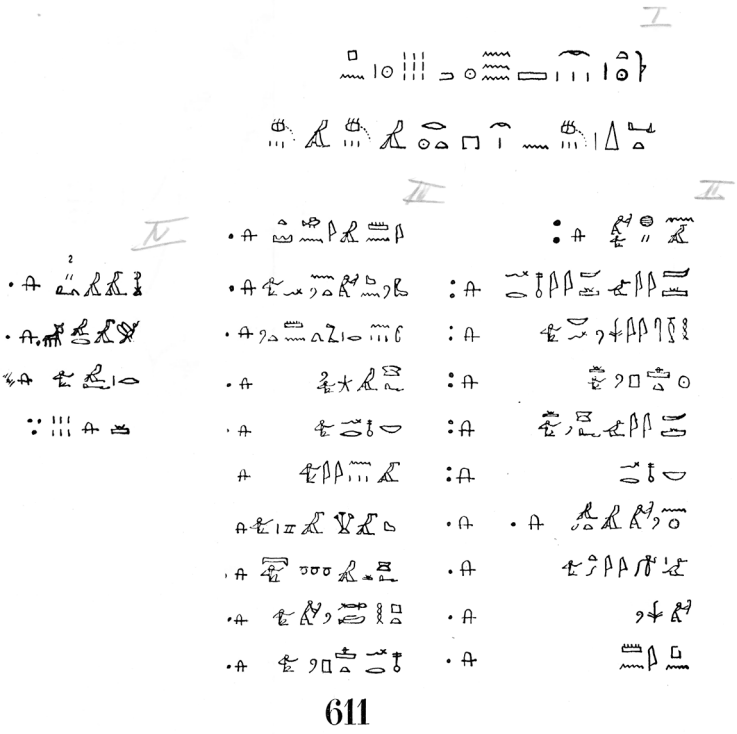

Fig. 7: O. DeM 611 (transcription by S. Sauneron in Sauneron 1959, pl. 28; column numbers in pencil by the hand of J. F. Borghouts; a photograph for study purposes is in possession of the author)

For those texts written in horizontal lines, the focus lies on running lines, that is, no consideration for keywords and/or dates (47 texts), but a close runner up are texts with list entries (39 texts). Third come texts with an inconsistent consideration for keywords and/or dates (30 texts). In 25 cases the texts are damaged at crucial points (the ends and beginnings of lines), and the degree of consideration remains unclear. Four texts are one-liners and as such do not show keywords or dates in focus. It will be no surprise that texts written in columns or in a mix of lines and columns have their focus on list entries. The columns mainly list persons, products or dates in tabular form. For those texts written in a combination of lines and columns, one has running lines and four show inconsistent consideration for keywords and/or dates. This occurs mainly in the lines, but also in the columns where lack of space does not allow consistency and the entries do not fit (e. g. O. DeM 142, O. DeM 143, O. DeM 144, O. Turin N. 57156 *recto*, O. Berlin P. 12642 + O. DeM

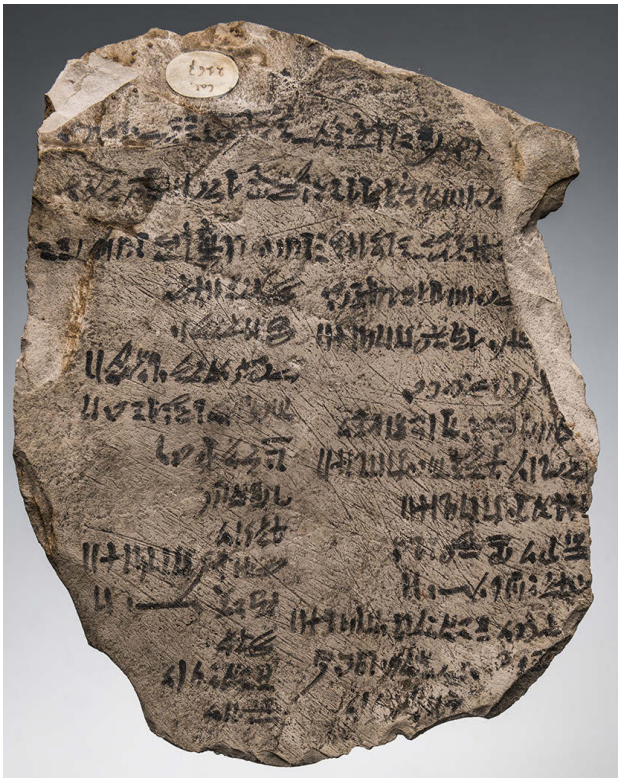

Fig. 8: O. Turin N. 57006 (photo: N. Dell'Acquila & F. Taverni)

160). Texts written in columns or in a combination of lines and columns showing a mix in the degree of consideration have one or more columns with consistent entries and one column with lines, hence the designation *mix* rather than *inconsistent consideration*. Not consistently documented at this point was the presence of dividing lines between columns or even a raster. In some cases, only one quick line was drawn only at the point where confusion might arise, in other cases dividing lines were quite consciously drawn. This factor will be included in the final study of the corpus.

The main conclusions from this classification of layouts are not surprising, but for the sake of being complete, they are:

- First, that most of the 'necropolis journal' texts in the corpus were written in horizontal lines, with only a small part including or consisting of columns.

- Second, horizontal lines are predominantly running text. Where columns are included, these mainly consist of list entries built around persons, products or dates.

As was done for the categories of text, we looked at the chronological spread of the types of layout (table 6):

Table 6: Chronological spread of the types of layout

A: Horizontal lines	
Layout	**Chronological spread**
A1a	Seti I–Ramesses IX or XI
A1b	Seti I–Ramesses IX or XI
A1c	yr. 3 Seti I–Ramesses IV or VI
A1d	Seti I or Ramesses II–Ramesses III
A1e	Ramesses III–Ramesses IV
A2a	Ramesses III–Ramesses VI or VII
A2b	Siptah (?)
A2c	yr. 4 Ramesses IV
A2e	yr. 1 Ramesses IV
A3a	Seti II–Ramesses III
A3b	Ramesses II–Ramesses III
A3c	Seti I–Ramesses IX
A3d	Ramesses IV
A3e	uncertain, dynasty 19 or 20
A4d	Ramesses III
A5a	Siptah-Tausret–Ramesses IV or V
A5b	Ramesses II
A5c	Seti I/Merenptah–Ramesses III/IV
A5e	yr. 24 Ramesses III
A5f	uncertain, dynasty 19 to 20
A6a	Seti II/Siptah–Ramesses IX or XI
A6b	Ramesses III
A6c	Ramesses IV
A6e	Ramesses II/Seti II–Ramesses IV

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B: Columns	
Layout	**Chronological spread**
B1c	Ramesses III
B1d	yr. 16 Ramesses III
B3c	before year 39 Ramesses III
B5c	Ramesses II–mid-20th dynasty
B6c	Siptah–mid-20th dynasty
B6e	yr. 2 Ramesses IV or V
C: Horizontal lines & columns	
Layout	**Chronological spread**
C1b	yr. 26 Ramesses III
C1d	Ramesses III or IV
C2c	Siptah–Ramesses III
C5b	first half of dynasty 20
C5c	Seti I–Ramesses III
C5d	dynasty 19
C6a	Ramesses III
C6b	yr. 1 Ramesses IV

Table 6 shows that layouts with horizontal lines, with columns and with a combination of lines and columns all occur throughout dynasties 19 and 20. To type A belong 35 texts that have been securely dated to dynasty 19. For type B this number is six, and for type C it is two. In dynasty 20 the numbers are 104 for type A, seven for type B, and ten for type C. This means that 18,6% of the texts from dynasty 19 include columns, whereas the percentage is 14% for the 20th dynasty. These numbers based on the present corpus are so close that they do not allow to conclude on a preference for columns in either one of the dynasties. They do show a clear preference for horizontal lines in both dynasties.

As to keywords and dates within the texts, those texts with running lines occur throughout the 19th and 20th dynasties. If we compare all types of layout with *a*, they occur from Seti II to Ramesses IX or XI, but there clearly is a focus on the 20th dynasty, due, of course, to the bias of finds from that period: six texts date to dynasty 19, two texts possibly date to dynasty 19, 36 date to 20th dynasty from the reign of Ramesses III onwards. Texts with an inconsistent degree of consideration for keywords and/or dates also occur throughout the 19th and 20th dynasties, from Ramesses II to Ramesses IX or XI, and their distribution is similar with four texts dated to dynasty 19 and a clear focus on the reign of Ramesses III onwards. Texts with list

entries occur from Seti I to Ramesses IX, but in contrast to the texts with running lines and inconsistent consideration, texts from the current corpus with list entries occur much more often in the 19th dynasty: 24 texts have been dated to dynasty 19, three to the 19th or 20th dynasty, and the remaining 29 texts date to the 20th dynasty.

Of all 43 texts dated to dynasty 19 with certainty, 11 have a full year date, of which ten belong to type A and one to type C. Ten have a month and/or day date (all type A), and 12 have no date (six belong to type A, five to type B and one to type C). The remaining ten texts are damaged, which makes it uncertain whether a date was present. Of all 121 texts dated with certainty to the 20th dynasty, 68 have a full year date (61 belong to type A, four to type B, three to type C). Fifteen have a month and/or day date (14 belong to type A, one to type B), and 16 have no date (11 belong to type A, five to type C). These numbers suggest that it was more usual to date a text with a full year date in the 20th dynasty than it was in the 19th dynasty. The presence of the phrase *hrw pn* is mainly found in the 20th dynasty: 13 texts with *hrw pn* date dynasty 20 (12 texts with a full year date, one with only a month/day date), whereas two texts with *hrw pn* have been dated to the 19th dynasty. The latter concern O. DeM 899, which was tentatively dated to the reign of Siptah by Grandet[31], and O. DeM 611, which has been securely dated to year 1 of Siptah.

Analysis 3: A relation between categories and layouts?

The question is now: do specific categories of text show specific characteristics of layout, or do they show consistent formats? Table 7 lists the data on the basis of which we can state the following:

- Category 1 (deliveries and/or deficits of products) shows much variation in layout. The texts come in all formats: lines or columns, with date, without date, with running lines, list entries, etc. Yet, there seem to be two preferences: first a preference for the inclusion of a full year date (26 texts) against only a month/day date (14 texts) or no date (19 texts); second a preference for a focus on keywords and/or dates, either in the form of inconsistent consideration (13 texts) or list entries (37 texts). Only ten texts show no consideration for keywords or dates at all. On the whole, however, the variation is such that there is not one clear format, which – given the fact that it is the category of the 'necropolis journal' with most texts in it – does not speak for the existence of an actual journal. The variation is perhaps due to personal preferences; for this we must look at the scribes.[32]

31 Grandet 2003, 3, 71–73, 314–315.

32 The author hopes to do so in cooperation with Maren Goecke-Bauer, who works on a palaeography of scribes from Deir el-Medina.

- Accounts of absence or presence are predominantly written in horizontal lines (17 texts). Only three texts are in columns. Of those texts in horizontal lines, most show running lines (seven texts), with two texts showing an inconsistent degree of consideration for keywords and/or dates, and three texts showing list entries. In ten out of 20 cases the text has a year date, against two texts with a month/day date and one without date. The focus thus seems to lie on horizontal, running lines with a full year date.
- Events in the current corpus are exclusively written in horizontal lines and except for one unclear case always in running lines. There is a slight preference for the inclusion of a full year date (three out of seven cases), whereas one text has a month/day date and for three texts it remains unclear.
- A similar picture is seen with the progress reports: they are written in horizontal, running lines (except for one unclear case). Yet here, although the numbers are small, only 50% of the texts are dated, the other 50% are without date.
- The accounts of materials and equipment in the current corpus exclusively show horizontal lines as well, but there is no predominance for running lines. The number of texts is in fact too small to conclude on anything, but at least running lines, inconsistent consideration and list entries are all encountered. All three texts include a full year date. Also, when combined with other categories of text, accounts of materials and equipment are predominantly dated with a full year date (except for one case, which has a month/day date only). This is perhaps understandable in the context of keeping track of government materials.
- Name lists are predominantly written in horizontal lines, with five out of 15 texts written in columns. Most texts are without date (11 out of 15 texts), which leads to the idea that these lists were short-lived *aides mémoires* or checklists to see who were present/absent, after which they were discarded.[33] At least they do not speak for a "journal". In eight out of 15 texts the names are given as list entries, in two cases they are written in running lines, and in four cases we are dealing with one line or name only, which are name stones rather than lists.

For the combined categories, the number of texts is often too small to draw conclusions, but we can say a couple of things:

- The texts in category 10 (duty rosters including deliveries and/or deficits of products) are predominantly written in horizontal lines. Two texts are a combination of lines and columns. There does not, however, seem to be a preference for either running lines or list entries. Four out of nine texts show list entries, two texts show running lines, and three texts show lines with inconsistent con-

33 For the lack of information in documents within a village context where oral practice is the norm, see also Moezel 2014, 154–174.

sideration for keywords and/or dates. A date (year or month/day date) is in most cases present, except for two texts that are damaged and one text that is without date. The latter is O. Berlin 12625 + O. IFAO ONL 300, which is written in identity marks with pseudo-hieratic numerals, which would at least not be part of an official necropolis journal meant for officials outside of Deir el-Medina.

- Category 11 (deliveries and/or deficits of products, duty roster and events) also includes a larger number of texts (12 in total). They are exclusively written in horizontal lines and preferably include a date: a year date in eight cases, a month/day date in one case. In three cases the texts are damaged. Five texts show running lines, against seven texts showing some degree of consideration for keywords and/or dates, but list entries are thus far not encountered.
- Events, just as progress reports, were exclusively written in horizontal lines as single categories, but when combined with accounts of absence or presence and/or accounts of materials and equipment, columns do occur, albeit sparingly (see categories 14 to 16).
- In general, the fuller reports with combined categories make up 45 texts, of which 29 have a full year date (with or without the phrase *hrw pn*). Seven have a month and/or day date (with or without *hrw pn*). One text is without date (the marks' ostracon Berlin P. 12625 + IFAO ONL 300) and in eight cases there is damage and we cannot be certain about a date. Sixteen texts show running lines, 17 show an inconsistent degree of consideration, eight show list entries and two show a mix in the degree of consideration (with two texts remaining unclear). If these fuller reports were a journal, one would expect them to show more consistency in date and format.

As for the chronological spread of the layouts per category:

- Within category 1 (deliveries and/or deficits of products), texts with consideration for keywords or dates (either in the form of inconsistent consideration or list entries) seem to start a bit earlier, whereas the running lines date predominantly to the mid and later 20th dynasty. Yet the mixed texts (layouts A1d and C5d) occur again a bit earlier. Running lines do certainly not date only to later periods, which is also seen in several of the following categories.
- In category 2 (accounts of absence or presence), running lines and list entries both start in the 19th dynasty (Merenptah/Tausret and Siptah(?) respectively).
- In category 3 (events), we only have running lines, and all are dated to the reign of Ramesses III or later.

- In category 4 (progress reports) we also only have running lines. One text is dated to the early 19th dynasty (if not earlier[34]).
- In category 5 (accounts of materials and equipment) we have consideration for keywords and/or dates either already under Siptah or Tausret, or from Ramesses III on.
- Name lists (category 6) include mostly list entries from the reign of Ramesses II onwards, but also two texts in running lines from the reign of Siptah or Tausret onwards.
- The combined categories are generally dated somewhat later, to the reign of Ramesses III and onwards, although four of the 45 texts have a 19th-dynasty date. Of those four, three have an inconsistent degree of consideration for keywords and/or dates (one text of category 9, one of category 10, and one of category 17). One text with running lines dates to the 19th dynasty (O. DeM 595, category 8), and all texts with list entries date to year 22 of Ramesses III and onwards.
- Based on the current corpus, no relations can be seen between categories, layouts and their chronological development, except perhaps for a preference for consideration for keywords and/or dates in the earlier texts of category 1 and running lines in the later texts of that category.

Table 7: Types of layout per category, showing the texts and the chronological spread per type of layout

No.	Category	Layouts	Texts	Chronological spread
1	Deliveries and/or deficits of products	A1a	O. Berlin P. 14213; O. DeM 718; O. DeM 726; O. DeM 855	Seti I–yr. 3 Ramesses XI[35]
		A1b	O. Berlin P. 10840; O. Berlin P. 14302; O. Berlin P. 14666; O. DeM 138; O. DeM 145; O. DeM 10299; O. DeM 10339 *recto*	yr. 9 Seti I/Ramesses II–yr. 17 Ramesses IX or XI

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34 https://dem-online.gwi.uni-muenchen.de/show_beschreibung.php?id=187&beschreibung=%2Fproj%2FHODFG%2FOstrakaBerlinBeschr2%2Fb10622-beschr.jpg&inventar_nr=Berlin+P+10622 [29 July 2020].

35 Grandet 2000, 5, 21, 120.

No.	Category	Layouts	Texts	Chronological spread
		A1c	O. DeM 137; O. DeM 621 + O. DeM 829 *recto*; O. DeM 707; O. DeM 837; O. DeM 854; O. DeM 859 *recto*; O. Turin N. 57469 = O. DeM 7	yr. 3 Seti I–yr. 6 Ramesses IV or VI
		A1d	O. BM EA 50728	yr. 2 Seti I or Ramesses II
		A1e	O. Berlin P. 9897; O. Berlin P. 14156; O. DeM 842	yr. 24 Ramesses III(?)–yr. 5 Ramesses IV
		A2a	O. DeM 10324	yr. 25 Ramesses III
		A2c	O. DeM 76	yr. 4 Ramesses IV
		A2e	O. Berlin P. 14657	yr. 1 Ramesses IV
		A3a	O. Berlin P. 11272	Ramesses III
		A3b	O. DeM 346	Ramesses II
		A3c	O. Berlin P. 10654 *verso*; O. DeM 1; O. DeM 3; O. DeM 4; O. DeM 10; O. DeM 15; O. DeM 20; O. DeM 26; O. DeM 75; O. DeM 94	yr. 3 Seti I–Ramesses IX
		A3e	O. Turin N. 57085 *recto*	dynasty 19 or 20
		A5a	O. Berlin P. 10632; O. Berlin P. 10839; O. Turin N. 57157	Ramesses III
		A5b	O. Turin N. 57080	Ramesses II
		A5c	O. Berlin P. 11249; O. Berlin P. 14149; O. Berlin P. 14210; O. Berlin P. 14614; O. DeM 91; O. DeM 844; O. DeM 859 *verso*; O. Turin N. 57167	yr. 7 Seti I or Merenptah–yr. 7 Ramesses IV
		A6a	O. DeM 851; O. DeM 10339 *verso*	before yr. 39 Ramesses III–20th dynasty
		A6b	O. Berlin P. 14264	mid 20th dynasty
		A6c	O. DeM 869	yr. 6 Ramesses IV

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No.	Category	Layouts	Texts	Chronological spread
		A6e	O. Berlin P. 14218 *recto*; O. Berlin P. 14218 *verso*; O. BM EA 66412; O. DeM 591; O. DeM 846; O. Turin N. 57085 *verso*; O. Turin N. 57189; O. Turin N. 57470	yr. 40 Ramesses II to yr. 2 Seti II–Ramesses IV
		B1c	O. Berlin P. 1122; O. Berlin P. 12632 + O. DeM 150; O. DeM 147	19th/20th dynasty–yr. 29 Ramesses III
		B3c	O. DeM 852	before yr. 39 Ramesses III
		B5c	O. DeM 843	early Ramesses II
		C1b	O. DeM 142	yr. 26 Ramesses III
		C2c	O. DeM 611; O. Turin N. 57072	yr. 1 Siptah–yr. 29 Ramesses III
		C5b	O. DeM 143; O. DeM 144	first half of 20th dynasty
		C5c	O. DeM 48; O. DeM 577; O. DeM 863	yr. 3 Seti I–end Ramesses III
		C5d	O. DeM 52	end of 19th dynasty/beginning of 20th dynasty
2	Acc. of absence or presence	A1a	O. DeM 594; O. DeM 763; O. DeM 889; O. Turin N. 57028	yr. 8 Merenptah or Tausret–yr. 24 Ramesses III
		A1b	O. Turin N. 57026; O. Turin N. 57039	yrs. 23–24 Ramesses III
		A1c	O. BM EA 5634; O. Turin N. 57029; O. Turin N. 57035	Ramesses III
		A3a	O. Turin N. 57432	Ramesses III
		A3d	O. DeM 617	Ramesses IV
		A6a	O. Turin N. 57030; O. Turin N. 57056	Ramesses III
		A6e	O. Berlin P. 11248; O. DeM 908; O. DeM 910; O. Turin N. 57283	yr. 1 Siptah–Ramesses III
		B1d	O. Turin N. 57020	yr. 16 Ramesses III

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No.	Category	Layouts	Texts	Chronological spread
		B5c	O. DeM 912 *recto*	yr. 1 or 2 Siptah(?)[36]
		B6c	O. DeM 913 *recto*	yr. 1 or 2 Siptah(?)[37]
3	Events	A1e	O. Turin N. 57204	yr. 27 Ramesses III
		A2a	O. Berlin P. 10633; O. Berlin P. 12654	yr. 29 Ramesses III–yr. 2 Ramesses V or VI
		A3a	O. DeM 890	yr. 29 Ramesses III
		A6a	O. Berlin P. 14286; O. BM EA 50734 + O. BM EA 50742 + O. Ashmolean Museum 99 + O. CGC 25673; O. DeM 571	Ramesses III–Ramesses IX or XI
4	Progress reports	A2a	O. Berlin P. 9906; O. Berlin P. 10663	20th dynasty/Ramesses III
		A5a	O. Berlin P. 10622	early 19th dynasty?[38]
		A5e	O. Turin N. 57036	yr. 24 Ramesses III
5	Acc. of materials and equipment	A1a	O. DeM 882	yr. 7 Siptah/Tausret[39] yr. 5 Ramesses IV or later[40]
		A1b	O. Turin N. 57007 *recto*	yr. 28 Ramesses III
		A1d	O. DeM 932	yr. 29 Ramesses III(?)
6	Name lists	A1c	O. DeM 262	yr. 2 Ramesses IV
		A5a	O. DeM 598; O. Turin N. 57479	Siptah/Tausret–Ramesses III
		A5c	O. DeM 565	Ramesses III
		A5f	O. Turin N. 57015; O. Turin N. 57206; O. Turin N. 57256; O. Turin N. 57257	19th or 20th dynasty
		A6c	O. Berlin P. 9901	20th dynasty
		A6e	O. Berlin P. 15292	late 19th dynasty

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36 Grandet 2003, xvii, 4, 88–89, 340–343.
37 Grandet 2003, 4, 90, 344.
38 https://dem-online.gwi.uni-muenchen.de/show_beschreibung.php?id=187&beschreibung=%2Fproj%2FHODFG%2FOstrakaBerlinBeschr2%2Fb10622-beschr.jpg&inventar_nr=Berlin+P+10622 [29 July 2020].
39 Helck 2002, 192.
40 Grandet 2003, 3, 57, 281.

No.	Category	Layouts	Texts	Chronological spread
		B5c	O. DeM 612; O. DeM 706; O. DeM 914 *recto*; O. Turin N. 57382	Ramesses II–Siptah/Tausret
		B6c	O. Berlin P. 11289	mid 20th dynasty
7	Deliveries and/or deficits of products; Acc. of absence or presence	A3a	O. DeM 604	yr. 29 Ramesses III
		B6e	O. DeM 895	yr. 2 Ramesses IV or V
8	Deliveries and/or deficits of products; Events	A2a	O. BM EA 50722 + O. CGC 25726 + O. BTdK 660; O. BM EA 50744	yr. 5 Ramesses IV–yr. 1 Ramesses VI
		A3a	O. DeM 595	Seti II
		A3b	O. DeM 35	Ramesses III
9	Deliveries and/or deficits of products; Acc. of absence or presence; Events	A1a	O. Turin N. 57007 *verso*	yr. 29 Ramesses III
		A1b	O. DeM 55; O. Turin N. 57153	yr. 26–yr. 31 Ramesses III
		A3b	O. DeM 900	Seti II, Amenmesse or Siptah
10	Deliveries and/or deficits of products; Duty roster	A1b	O. Berlin P. 12628 + O. Berlin P. 12641; O. Berlin P. 12639 + O. Berlin P. 14696 + O. DeM 33	yr. 27 Ramesses III–year 1 Ramesses IV
		A1c	O. Berlin P. 12627; O. BM EA 5635	yr. 27 Ramesses III
		A2a	O. DeM 578	yr. 31 Ramesses III
		A3c	O. Turin N. 57393	yr. 2 Ramesses IV
		A6a	O. DeM 876	yr. 4 or 5 Seti II[41] yr. 3 or 4 Siptah[42]
		C5c	O. Berlin P. 12625 + O. IFAO ONL 300	yr. 31 Ramesses III

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41 Grandet 2003, 2, 51–53 , 272–273.
42 Collier 2004, 104–105, 158.

No.	Category	Layouts	Texts	Chronological spread
		C6b	O. Berlin P. 12642 + O. DeM 160	yr. 1 Ramesses IV
11	Deliveries and/or deficits of products; Duty roster; Events	A1a	O. DeM 32; O. DeM 44	yr. 25 Ramesses III–yrs. 1–2 Ramesses IV
		A1b	O. Berlin P. 12626 + O. DeM 41; O. Berlin P. 12631 a + b; O. Berlin P. 12651 + O. DeM 45 + O. Vienna H. 4; O. DeM 40 + Strasbourg H42; O. DeM 42; O. DeM 46	yrs. 1–2 Ramesses IV
		A3a	O. Berlin P. 12633 a + b	yr. 25 Ramesses III
		A6a	O. Berlin P. 12629; O. Berlin P. 12640 + O. DeM 161 + O. Strasbourg H82	yr. 26 Ramesses III–yr. 1 Ramesses IV
		A6b	O. DeM 148	Ramesses III
12	Deliveries and/or deficits of products; Duty roster; Acc. of absence or presence	A6e	O. Berlin P. 12384	yr. 2 Ramesses IV
13	Events; Acc. of materials and equipment	A1b	O. Turin N. 57034	yr. 2 Ramesses III
14	Acc. of absence or presence; Events	C6a	O. Turin N. 57156 *recto*	Ramesses III
15	Acc. of absence or presence; Events; Acc. of materials and equipment	A1b	O. Turin N. 57044	yr. 26 Ramesses III
		A1c	O. Turin N. 57047; O. Turin N. 57055	yr. 22–24 Ramesses III
		B1c	O. Turin N. 57033	yrs. 24–25 Ramesses III

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No.	Category	Layouts	Texts	Chronological spread
16	Progress reports; Acc. of materials and equipment	A2a	O. Turin N. 57366	yr. 1 Ramesses IV or later[43], or yr. 1 Ramesses VII[44]
		A4d	O. Berlin P. 14255	Ramesses III
		C1d	O. Turin N. 57006	Ramesses III[45] or yr. 2 Ramesses IV[46]
17	Acc. of absence or presence; Progress reports	A1a	O. BM EA 50730 + O. BM EA 50745	yr. 1 Ramesses VI
		A2b	O. DeM 899	Siptah(?)[47]
18	Acc. of absence or presence; Events; Progress reports; Acc. of material and equipment	A1c	O. Turin N. 57031	yr. 25 Ramesses III
19	Deliveries and/or deficits of products; Acc. of absence or presence; Events; Progress reports; Acc. of materials and equipment	A1a	O. BM EA 5672 + O. CGC 25649	yr. 14 Ramesses IX

Final remarks

Based on the current corpus there is no clear relation between category of text and type of layout. There are slight preferences, such as texts with events and progress re-

43 Janssen 1992, 107–122.
44 Helck 2002, 455.
45 López 1978, 18–19.
46 Helck 2002, 376–377.
47 Grandet 2003, 3, 71–73, 314–315.

ports predominantly showing running lines, or name lists often showing list entries (here obviously related to the nature of the texts). Notable are the accounts of absence or presence, which mainly occur as running lines or with some consideration for keywords and/or dates. Only few are actual lists of absence or presence. The layouts of these accounts show them to be reports rather than quick checklists used in the field of who was there and who was not; that would rather be a function fit for the name lists of category 6. Also conspicuous are the texts with deliveries and/or deficits of products. They prefer a horizontal layout, but otherwise show no clear preference for running lines, consideration for keywords and/or dates, or list entries. Such variation does not agree with the term 'journal'. Here it would still be interesting to conduct a study of scribes and look at handwriting to see whether individual scribes preferred one layout or the other. The observation that these delivery texts with a layout that shows some consideration for keywords and/or dates seem to date slightly earlier than delivery texts with running lines is most probably coincidence due to the composition of the relatively small corpus. A further observation is that the combined categories also focus on horizontal layouts and running lines. There is some consideration for keywords and/or dates, but only few are list entries, perhaps because list entries take up much more space and the combined accounts were already rather elaborate, often showing lack of space and squeezed lines.

The results from this study must not be understood as definitive conclusions or an endpoint. Of course, the author is well aware of the fact that 177 ostraca for both the 19th and 20th dynasties is a small corpus. It is a starting point, one which we hope will be complemented by our colleagues by uploading more sources in the AKU database. The AKU project is meant first of all to be a starting point, but a collective effort in the end. The author personally hopes that the data on administrative hieratic from the 19th and 20th dynasties will be complemented and the study on categories and layouts of documentary texts on the administration of the Tomb can be expanded. Only then, further questions can be asked, such as whether the text categories, types of layout and factors such as authorship, scribal habits and diachronic development can say something about the purposes of the texts and perhaps even the organization of the scribes.

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Kemit, writing-boards, and palaeographic studies[1]

Aurore Motte

Abstract

This paper is conceived as a case study to examine how relevant the Kemit script is for a better understanding of New Kingdom cursive scripts. In this perspective, I concentrate on the wooden tablets that bear extract(s) of this literary letter. After a concise description of each tablet, I consider its layout and its *mise-en-texte*. I then devote my attention to the recorded handwriting(s). To illustrate this point, I selected five signs: the  (M17),  (G17),  (E34),  (Aa1), and the weeping eye-sign with upper lid (D5–6+D9). I compare them with earlier, contemporaneous, and later witnesses of the Kemit written on ostraca or papyrus to provide a diachronic perspective and to draw some preliminary conclusions.

Introduction

The Kemit-book is usually known as a text written in old-fashioned cursive signs into evenly spaced and vertically ruled columns,[2] like on the well-preserved example kept in Brussels, on which Kemit §§ I–XIV have been arranged in 20 columns with red vertical dividing lines (see O. Brussels E 3208 in fig. 1).[3] However, the text is not always as nicely displayed, nor are the signs well formed.[4]

1 For the acknowledgements see the section at the end of this paper.

2 Goelet 2013, 114.

3 The O. IFAO cat. 1171 A and O. IFAO cat. 1171B are joined pieces of this artefact as we can see it in Posener 1951a, pl. 22. See https://www.ifao.egnet.net/bases/archives/ostraca/?id=19622 [29 July 2020] for color pictures of O. IFAO cat. 1171 A–B. O. IFAO cat. 1171 A bears the lower parts of col. 2–8 of O. Brussels E 3208 whereas O. IFAO cat. 1171 B displays the lower parts of col. 18–20 of O. Brussels E 3208, Kemit §§ XIVc–XV in the next two columns as well as the titles and name of the copyist ([…] *sš ḥ;y p(;)-n ʿ;-n-js.t ḥ;y* "[…] scribe Hay, he of the chief workman Hay", which has been written at a 90° rotation on the last line. See McDowell 2000, 227 about this colophon, the named copyist of which is also mentioned on O. IFAO cat. 1560 (Satire of Trades) and O. BM EA 29549 (unidentified literary text). About *p(;)-n* indicating filiation, in this case figuratively since the deputy Amennakhte was the real father of the scribe Hay, later deputy himself, see for instance Vernus 1981, 437, Černý and Groll 1984[3], § 3.6, Junge 2005[2], 54 and Neveu 2010[3], § 3.2.

4 See for instance O. IFAO cat. 1129 and 1134 in Posener 1951a, pl. 25; O. DAN hierat. 5 in Burkard 2003, pl. 20–22 or more recently Burkard 2018, pl. 4–5; O. IFAO cat. 1830, O. IFAO cat. 1833, O. IFAO cat. 1838, O. IFAO cat. 1854, and O. IFAO cat. 1856 in Gasse 2005, 104–

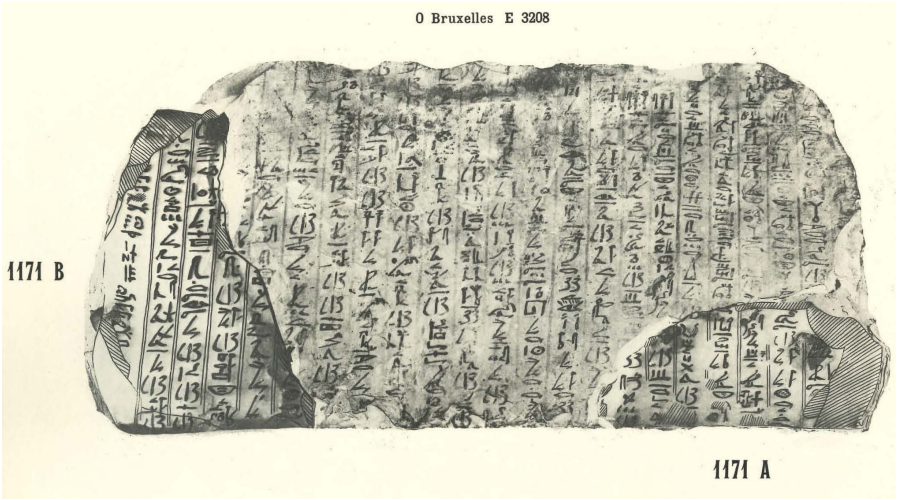

Fig. 1: O. Brussels E 3208 and O. IFAO 1171 A–B from Posener 1951, pl. 22 (© Institut Français d'Archéologie Orientale)

The Kemit, a letter-like composition made up of texts from different textual genres, was apparently used to teach New Kingdom scribes the conventions of classic textual genres. This text, whose composition date is still unknown,[5] was widely copied in excerpts on ostraca, tablets, and walls during the New Kingdom (1552–1069 BC) but is also known from a few earlier witnesses, such as P. London, UC 32271A (Late Middle Kingdom), which bears the final sections of the Memphite formula (§§ III–IV),[6] or O. DAN hierat. 5 (late 17th dynasty), on which not less than six paragraphs of the Kemit are preserved (§§ IIa–VIIc).[7] Up to now, 488 witnesses have been recorded (276 of them are still awaiting publication):

105, 109, 115–116, 136, 139; O. DeM 1168 or O. DeM C 2640 in Mathieu and Ritter 2008, pl. 13 and pl. 21. There are many more examples in the IFAO collection, some of which are currently under study by V. Ritter. May she find here my warmest thanks for letting me see the artefacts on which she is working.

5 It may likely have been composed at the end of the reign of Amenemhat I or Senwosret I. See Posener 1956, 5 and note 10; Parkinson 2002, 322; and Mathieu and Ritter 2008, 194.

6 Cf. Collier and Quirke 2004, 50–51 and Goelet 2013, 113.

7 Burkard 2003. A third early witness might be the Lisht North ostracon housed in the Metropolitan Museum of Art (Acc. No. 15.3.988), which shows part of Kemit section one (§ Ic–d). A dating cannot be provided by means of the palaeography. However, the sherd itself, the fabric of which is Marl C (Vienna System classification), can be dated from the 12th or 13th dynasties. For an overview of the settlement area at Lisht North, see Arnold 1996, 13–21. For more information on the Marl C fabric and the Vienna System classification, cf. Arnold and Bourriau 1993, 166–169 and 175–181 as well as Bader 2002. I would like to express my gratitude to S. Allen who shared her knowledge to provide a plausible date for this sherd. That said it

- 476 ostraca or limestone flakes
- 5 dipinti
- 5 writing-boards
- 1 papyrus
- and 1 scribe's palette, although this last witness might be an example of a model letter rather than another witness of the Kemit.[8]

This text is said to be written in an archaizing script imitating late Old Kingdom – early Middle Kingdom letters in the same vein as the documents from the Elephantine archive or the Heqanakht letters. Parkinson suggested that the script of the Kemit embodies a continuous textual tradition going back to a period when its form was very close to the cursive hieratic of literary manuscripts and letters.[9] A plausible explanation for this continuity is that the text was employed as a training text when

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cannot be fully excluded that the artefact was inscribed in later times, during the Ramesside period for instance. The excavations at Lisht have revealed ostraca with a Ramesside dating. As such, a similar date for Acc. No. 15.3.988 could seem likely according to R. Demarée (pers. comm.), whom I would like to thank for his time and his explanations. He suggested that the black vertical dividing lines could speak for a later date. As it will be discussed later in this paper (see for instance footnotes 43–44 below with further examples and references), such black ruled vertical lines are found on the previously mentioned P. UC 32271A as well as on later witnesses of the Kemit, unlike red-inked column lines, which seem to be present only on New Kingdom copies as far as we can tell in the current state of the documentation. In essence, an early dating might be possible but because of its unsecured dating, it is not further considered in this paper.

8 The previously mentioned Guimet palette (published in Drioton 1944) was identified as a Kemit witness by Posener in his appendix of van de Walle 1948, 42. The palette, now housed in the Louvre (AF 12725), bears as a matter of fact what might correspond to the first section (§ Ia–b) of the Kemit on the back-side. However, section § Ic does not follow. We read instead the imperative of *ỉwỉ*, *my* "come." This verbal form rather suggests the start of the second part of a (model-)letter. After the epistolary formula of conventional phrases of salutation, the real matter of the letter is introduced. On the structure of Middle Kingdom letters and their epistolary formulae, see for instance James 1962, Appendix D.

9 Parkinson 2002, 322. As for the Lahun letters, the vertical format tends to be supplanted by the linear mode on papyri. Cf. Goelet 2013, 114. See Luft 2006, pl. 1–37, which record many Lahun letters from the temple archive in which the columnar mode is still preferred. The material from the town also revealed a few letters with vertical lines of hieratic text but the linear mode is more frequent. See for instance Collier and Quirke 2002, 4–5 (P. UC 32092A–C), 18–19 (P. UC 32106G), 20–21 (P. UC 32109E), 36–47 (P. UC 32117–32120), 60–61 (P. UC 32124), 76–77 (P. UC 32149–32150), 114–117 (P. UC 32203), and 126–127 (P. UC 32207–32208). Goelet 2015a, 198, 206 and 210 also observed that the shift from a vertical, columnar mode to a horizontal, linear mode most likely occurred around the period from the reigns of Senwosret III and Amenemhat III whereas the linear format was already the preferred mode of text presentation from the First Intermediate Period on private stelae. As the Ramesseum papyri from the 13th dynasty onwards demonstrate, the columnar format become obsolete for literary documents, with the

the linear script was still in wide use; Fischer-Elfert noted that such old-fashioned hands were still used for administrative documents in provincial centres such as Elephantine well into the late 12th dynasty.[10]

These observations raised the following questions: is the allegedly archaizing script of the Kemit identical through time and space? Does the writing medium (and implements) have any impact on the shape of the signs? This led me to conceive this paper as a case study to examine the relevancy of the Kemit script for a better understanding of New Kingdom cursive scripts, which was the focus of this fourth *Ägyptologische „Binsen"-Weisheiten* edition. Examining all these witnesses to address this question obviously falls beyond the scope of a paper, but the five writing-boards provide a coherent sub-corpus and a workable sample.[11] This paper is structured as follows. After a concise description of each wooden tablet, I consider its layout and its *mise-en-texte*. I then devote my attention to the recorded handwriting(s). To illustrate this point, I selected five signs: the  (M17), (G17), (E34),  (Aa1), and the weeping eye-sign with upper lid (combination of Gardiner D5–6 and D9). I compare them with earlier, contemporaneous, and later witnesses of the Kemit written on ostraca or papyrus to provide a diachronic perspective and to draw some preliminary conclusions.

1 Corpus: five or three writing-boards?

At first sight, five writing-boards bear extracts of the Kemit-letter: T. Cairo CG 25367 (= JE 26442), the so-called "Puiemre board," T. Louvre AF 497, T. Carnarvon III (= Cairo JE 43217, SR4/694), and T. Luxor J 1001. The identification of the first Middle Kingdom tablet, T. Cairo CG 25367, is controversial (see Appendix).

The Puiemre board

The second Middle Kingdom tablet was found during the excavations of Puiemre's tomb (TT 39, el-Khokha) by N. de Garies Davies and his team on behalf of the Metropolitan Museum in the early 20th century. Several splinters of what was initially a wooden board covered with stucco were found during the clearance of the

notable exception of the Kemit. See *inter alia* https://projects.britishmuseum.org/research/publications/online_research_catalogues/rp/the_ramesseum_papyri.aspx [16 June 2020].

10 Parkinson 2002, 323 and Fischer-Elfert 2002, 214–215.

11 It is well understood that the obtained results could be compared with the other known witnesses of the Kemit-book or with contemporary texts, such as the ostraca from Edfu, graffiti, or Books of the Dead.

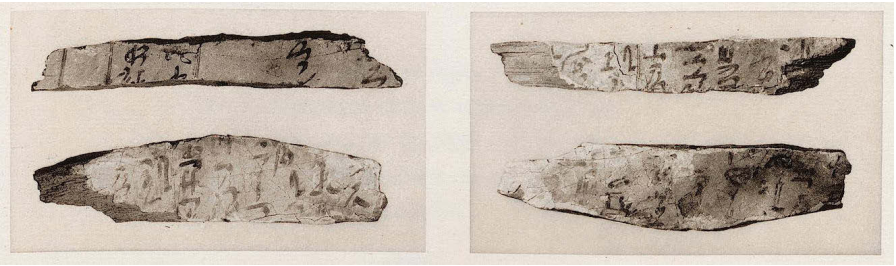


Fig. 2: Puiemre board (after De Garis Davies 1923, pl. 79a)

courtyard and its approach.[12] The original dimensions of this tablet are unknown, as no more fragments have been found. The artefact itself and the excavation context suggest a Middle Kingdom dating, even though such writing boards were still used by the end of the 18th dynasty.[13] The current location of these splinters of wooden board is unknown.[14] This artefact is henceforth designated as the "Puiemre board". Posener identified it as one of the earliest known witnesses of the Kemit.[15] Such a witness would thus be precious for the diachronic dimension of this paper. However, the two low-resolution published pictures do not allow for full examination of this artefact.

T. Louvre AF 497

In the Louvre museum is a wooden tablet (T. Louvre AF 497) layered with an originally white stucco, which has now turned a brownish colour. This tablet has

12 De Garis Davies 1923, 62 and pl. 79a.

13 Vernus 1984, col. 704. For a similar wooden tablet, dated from the 18th dynasty, see for instance Hagen 2013.

14 I am not aware of its current localisation. Even if these fragments were excavated by the Metropolitan Museum of Art, they were never accessioned (or intended to be brought out) of Egypt (N. Allon, pers. comm.). I thought the writing board could be in the Cairo Egyptian Museum but, after consultation of their database, for which I am indebted to the RMCDD (Registration, Collections Management and Documentation Department Egyptian Museum, Cairo) team to allow me to do so during my short stay in Cairo in the occasion of the 12th International Conference of Egyptologists in 2019, it seems not to be the case. It is possible that they are still stored in the MMA magazines or the Carter's magazine on the Thebes West bank. I am also indebted to N. Allon (Metropolitan Museum), E. Frood (Oxford University), Fr. Hagen (University of Copenhagen), K. Kapiec (Polish Academy of Sciences, Institute of Mediterranean and Oriental Cultures), Ch. Ragazzoli (Sorbonne Paris IV University), and C. Roehrig (Metropolitan Museum) who helped me in my search of the current location of this Puiemre board.

15 De Garis Davies 1923, 62 and Posener in van de Walle 1948, 42.

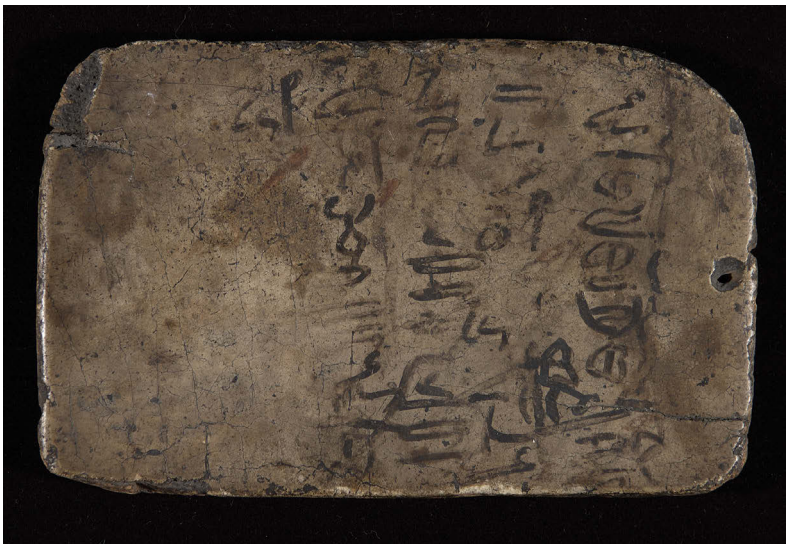


Fig. 3: T. Louvre AF 497 (© Musée du Louvre, dist. RMN-Grand Palais/Christian Décamps)

a smaller size. It measures 10.1 cm in height by 15.5 cm in width.[16] Little is known about this small writing-board: both its provenance and circumstances of discovery are unknown.[17] However, based on palaeographical criteria and despite the so-called archaizing aspect of the script, Barbotin offers a likely date between the end of the 17th dynasty and the very start of the 18th dynasty[18] for this apprentice board containing the first paragraph of the Kemit.

T. Carnarvon III (T. Cairo JE 43217, SR4/694)

The Carnarvon writing board (T. Cairo JE 43217, SR4/694) was discovered in 1911 by the Earl of Carnarvon and Howard Carter in a re-used *saff* tomb of the late Middle Kingdom, east of Deir el-Bahari temple (Carnarvon Tomb 37).[19] It was found

16 For another small tablet, even though this one is a bit larger than T. Louvre AF 497, see T. Vienna 3924 (14,8 cm × 18,5 cm × 0,75 cm) on http://www.globalegyptianmuseum.org/record.aspx?id=4921 [11 April 2020].

17 Barbotin 1997, 247, n. 1.

18 Barbotin 1997, 249.

19 Hayes 1948, 3. See also Hagen 2020, 1 and Lilyquist 2020a for a recent recontextualisation of all the Carnarvon boards as well as the online publication of the Carter excavations hosted by Chicago University ("Excavations at Thebes: The Earl of Carnavon and the Metropolitan Museum of Art at Carnarvon Tomb 62 and Surrounds"): Lilyquist 2020b.

among the stones covering the floor of chamber C with T. Carnarvon IV.[20] More importantly, though, they were next to the coffins of Djehuty and his wife Ahhotep, and near a basket of scribal equipment.[21] It is a unique and rare case where a board can plausibly be linked to a historic individual.[22] This gessoed board has inscriptions on both sides: sections I to VIII of the Kemit on the *recto*, while the reverse bears extracts of § Iab and § VIId, as well as a list of names,[23] which has been written at a 180° rotation.[24] The board, broken in two halves, measures 48 cm by 26.5 cm.[25] The tablet is probably to be dated to the first years of the 18th dynasty.[26] Both the archaeological context and the location of the tomb support this dating and provide a *terminus ante quem*.[27] The board, previously in the Cairo Egyptian Museum, has been transferred to the GEM (Grand Egyptian Museum) in Giza.[28]

T. Luxor J 1001

From 2002 to 2004, the Spanish-Egyptian mission at Dra Abu el-Naga found in the disturbed sand of the courtyards of TT 11, TT 12, and tomb 399 several splinters of a board made of wood, wrapped in linen and covered with a fine coat of stucco.[29] In total, 18 fragments have been uncovered.[30] The tablet (T. Luxor J 1001), when complete, would have measured 45.8 cm by 31 cm.[31] It bears drawings on both sides but only the right-hand side of the so-called *recto* shows an inscription, being the first paragraph of the Kemit written three times, side by side.[32] This board was probably part of the funerary equipment of Djehuty, owner of TT 11 and a high official under

20 Cf. Lilyquist 2020b, Essay 2.
21 Lilyquist 2020a, table 1 and Hagen 2020, table 1 and footnote 17.
22 Fr. Hagen (pers. comm.). About the social context in which the Carnarvon boards might have been written, see Hagen 2019, Essay 25.
23 Being a narrative or an exercise according to Lilyquist 2020a, table 1.
24 See Lilyquist 2020b, fig. 52 for a color photograph of T. Carnarvon III reverse.
25 Carnarvon and Carter 1912, 77. 48 × 27 cm according to Lilyquist 2020a, table 1.
26 Hayes 1948, 3.
27 Carnarvon and Carter 1912, 70. Lilyquist 2020a, 2 and 12 highlights the fact that the tomb was probably covered during the construction of the valley temple of Hatshepsut.
28 I would like to thank Marwa Badr el-Din from the RCMDD for letting me know about this recent transfer.
29 Galán and el-Bialy 2004, 38–39.
30 Galán 2007, 1.
31 Galán and el-Bialy 2004, 39.
32 Repeating a text on the same manuscript is not very common. Galán nevertheless identified another example among the Turin ostraca, in which § Ia–b has been written twice. See Galán 2007, 16, n. 49 and O. Turin 57054 in López 1978, pl. 29. This example is also mentioned in Hagen 2013, 85, footnote 53.

Fig. 4: T. Luxor J 1001 (© Proyecto Djehuty, previously published in Galán and el-Bialy 2004 and Galán 2007)

Hatshepsut.[33] This and the likely depiction of Hatshepsut[34] on it indicate an early 18th dynasty dating (Hatshepsut – Thutmose III).[35]

A concise overview

The table below summarizes the main information of each writing board (table 1).[36] It may not be out of place to note here that the Puiemre board is problematic. Its preservation state and its unknown current location prohibit any detailed study of the layout and *mise-en-texte* (section 2). This board will only be discussed when useful for palaeographic comparisons (section 3).

2 Layout and *mise-en-texte* of the Kemit tablets

At first glance, the boards have a size roughly similar to a full sheet of papyrus during the Middle Kingdom and the Hyksos period.[37] The Louvre tablet is of a much smaller size, perhaps with a view to imitating a quarter-height papyrus sheet, which ranged from 6 cm to 9 cm at that time[38] and from 8 cm to 12 cm during the New Kingdom.[39] As a matter of fact, Barbotin links this small tablet to one of the Carnarvon tablets (JE 43216) based on the pictures available in the book of Earl of Carnarvon and H. Carter.[40] However, this tablet, which lists several names just like the reverse of T. Carnarvon III, is longer than it looks in the photo.[41] This tablet initially was roughly the same size as T. Carnarvon III and was later broken in half.[42]

None of the boards has an identical layout, even if each of them bears one extract of the Kemit-book, written in columns from right to left as expected. In case of a short extract, it may be combined with text or drawing on the same side of the tablet as we can see on T. Luxor J 1001 (cf. table 1). T. Louvre AF 497 reveals that

33 Galán 2007, 19.
34 Galán 2007, 6–7 and 12–13.
35 Galán 2007, 1.
36 T. Cairo CG 25367 has been withdrawn from this table given its controversial status. Cf. Appendix – T. Cairo CG 25367 below.
37 See for instance Erman 1901, 5; Möller 1909, 6–7; Černý 1952, 8 and 15; Vernus 1984, col. 704; Parkinson and Quirke 1995, 16; Allen 2002, 76; and Hagen 2013, 82.
38 Černý 1952, 15.
39 Parkinson and Quirke 1995, 16–17.
40 Barbotin 1997, 247, footnote 2.
41 Carnarvon and Carter 1912, pl. LXXVI (1–2).
42 I would like to warmly thank Fr. Hagen, who kindly gave me more information on this board during the conference (pers. comm.).

Table 1: The Kemit writing boards

	Puiemre board	**T. Louvre AF 497**	**T. Carnarvon III (Cairo JE 43217, SR4/694)**	**T. Luxor J 1001**
Dimensions	Unknown	15.5 cm × 10.1 cm	48 cm × 26.5 cm	45.8 cm × 31 cm
Provenance	El-Khokha, TT 39	Unknown	Deir el-Bahari (tomb n° 37)	Dra Abu el-Naga, in the courtyards of TT 11, TT 12 and tomb 399
Dating	Middle Kingdom?	Late 17th dynasty – early 18th dynasty	Early 18th dynasty	Early 18th dynasty (Hatshepsut – Thutmose III)
Kemit §§	§ IIa and § VIIa?	§ I	§§ I–VIII (ro) and § Iab + VIId (vo)	§ I (x3)
Other text(s) preserved	Impossible to say	No	Yes, list of names (vo)	No, but drawings on both sides instead

a short extract can also stand by itself on a writing-board, leaving an empty space. Short extracts are written with unruled, more or less evenly spaced columns. In the longer version on the *recto* of T. Carnarvon III, the scribe used black-inked column lines, while the short repetitions on the reverse are not framed with such vertical lines. While black ruled lines are also found on the earlier P. UC 32271A,[43] they tend to be replaced by red lines in the Ramesside period.[44]

The use of black ink is prevalent on all of them, even though we know of earlier and later witnesses with rubrics, such as the incipit of the text, specific clauses or the first paragraphs of the letter.[45] The exclusive use of black ink is not unique to these tablets, as we know of other copies of the Kemit being written only with black ink.[46] It might be linked either to the writing medium itself, a wooden board, or its purposes – i. e. writing medium meant for exercises, drafts, preliminary copies – or even both.

Red ink is found only on T. Louvre AF 497, where it is used only for paratextual marks,[47] just as the 17th dynasty O. DAN hierat. 5 and several Ramesside copies.[48]

43 See Collier and Quirke 2004, 50–51.

44 See *inter alia* O. CGT 57551–57552 in López 1978, pl. 177; O. Prague P 2034, O. Prague P 3824 and O. Prague P 3826 in Fischer-Elfert, Navrátilová, Onderka and Toivari-Viitala 2018, pl. 8–10; or O. IFAO cat. 1824–1826 in Gasse 2005, 92–96. Black vertical lines are, however, still attested during the Ramesside period. See for instance O. IFAO cat. 1828 in Gasse 2005, 98–99 or O. Prague P 3830 in Fischer-Elfert, Navrátilová, Onderka and Toivari-Viitala 2018, pl. 9. Ruled vertical lines are also attested in several 18th dynasty ostraca. See for instance O. EA 329 and 330 from Amarna in Pendlebury 1951, pl. 97. Since red ink is usually noted in the other plates of Pendlebury's volume, we may assume that the vertical lines are in this case black. In addition to these examples of long extracts written in ruled columns, there are also Kemit copies without any vertical lines, such as O. DAN hierat. 5, one of the earlier witnesses. See Burkard 2018, pl. 4–5.

45 For a concise overview, see for instance the synoptic edition in Posener 1951a, pl. 1–21 and Petersmarck 2012, 115–140, to which Mathieu and Ritter 2008 should be added for the last sections of the Kemit.

46 See *inter alia* O. IFAO cat. 1837, O. IFAO cat. 1844 or O. IFAO cat. 1852 in Gasse 2005, 113, 125 and 134 or O. UC 31927 on the Petrie Museum website http://petriecat.museums.ucl.ac.uk/ [19 April 2020].

47 For other tablets with red-inked paratextual signs and marginal annotations, see *inter alia* T. BM EA 5646, T. Louvre N 693, T. MMA 28.9.4, and T. CG 25224. In a very few cases, red ink may also be used for rubrics on writing-boards. See for instance T. Prague P 7228.

48 See e. g. O. IFAO cat. 1828–1829, O. IFAO cat. 1840–1841, O. IFAO cat. 1863, O. IFAO cat. 1870–1871 in Gasse 2005, 99–101, 120–121, 147, 157–158; O. Cairo JE 54949, O. DeM 1159, O. DeM 1164, and O. DeM 1166 in Mathieu and Ritter 2008, pl. 1–2, pl. 6, and pl. 9–11. It should also be noted that a couple of Ramesside Kemit copies are written entirely in red ink. See for instance O. IFAO cat. 1854, in which not only the vertical lines but also the text itself are in red, in Gasse 2005, 136 for an example among the published material. Posener 1951b provides an excellent synthesis on red ink uses in ancient Egyptian manuscripts.

Three red dots have been added as a means of punctuation,[49] or verse-divider,[50] as in many other literary compositions copied from the very late Middle Kingdom until the end of the New Kingdom.[51] It is striking, though, that the longer version of T. Carnarvon III does not contain any punctuation marks. On T. Louvre AF 497, each dot is inked close to the cursive text, in the right margin (see fig. 3). The first dot, in the first column, separates § Ia (*bꜣk ḏd ḫr nb.f*) from § Ib (*mrrw.f ʿnḫ.f*), which continues into the next column. The second dot has been inked slightly before § Ic (*wḏꜣ.f snb.f*), in between the verbal form *ʿnḫ* and its third-person suffix pronoun. The end of § Ic corresponds with the end of the column, and no dot was added there. A third dot is then used to separate § Id (*m ꜣwt ḏt r nḥḥ*) from § Ie (*mi mrr bꜣk im*) in the middle of column four.

In addition, the Louvre writing-board reveals a red oblique stroke, which appears to mark the end of the first Kemit paragraph (see fig. 3). This stroke, which I will henceforth refer to as an ending mark, must be linked to the *grḥ*-sign (D41) on several New Kingdom copies of the Kemit and on the 17th dynasty O. DAN hierat. 5 as well.[52] This sign is used to mark a separation between two sections of text.[53] To the best of my knowledge, this kind of ending stroke is rather infrequent, unlike the previously mentioned *grḥ*-sign or even the red (or black) horizontal strokes coming from the *ḥwt*-sign (O6) as early as the 5th dynasty in the Pyramid Texts of Unas.[54] I could find one similar mark on O. Berlin P. 11297, which dates from the Hyksos period (see fig. 5). On this roughly contemporaneous administrative text, several lines have been crossed out. A long horizontal black line marks the beginning of this crossed-out section, while an oblique stroke has been written next to the last line to be deleted. This mark is strikingly similar to the oblique stroke of T. Louvre AF 497.

49 Not to be confused with the checking dots, for example on O. IFAO cat. 1828 and O. IFAO cat. 1840 described in the footnote above.

50 See for instance the early 18th dynasty Ashmolean board 1948.91 in Hagen 2013 for another example of such punctuation marks on a writing board.

51 See for instance Motte and Sojic 2020, 60, note 211, which list previous bibliography. *Inter alia:* Grapow 1936, 52–53; Posener 1951b, 27–48; Burkard 1983; Buchberger 1993, 22–24; Fecht 1993; Winand 1998; Tacke 2001; Parkinson 2002, 115–117; Gohy 2012, 55–56; Goelet 2015b; Landgráfová and Mynárová 2016.

52 See e. g. O. Fitzwilliam E.GA.4758.1943 in Hagen 2011, pl. 117; O. Munich ÄS 3402 in Schoske and Wildung 2009, 35; or O. Michaelides 32 and 78 in Goedicke and Wente 1962, pl. 12–14.

53 On the 17th dynasty pottery, the sign is misplaced. It is expected in column 9, between paragraphs IV and III but the scribe added it erroneously in the middle of column 2 within paragraph VI. Cf. Burkard 2018, pl. 4–5.

54 About this *ḥwt*-sign, see for instance de Halleux 1986, 90; Allam 2007, 30. As a side note, the red-inked O. CGT 57549 v° has small black horizontal lines. Black-inked text with black strokes are also found on e. g. O. BM EA 5641 r° in Demarée 2002, pl. 36–37, or even O. Strasbourg BNU H 137, in which a red *grḥ*-sign is added at the end of § II. See Koenig 1997, pl. 74 and 127.

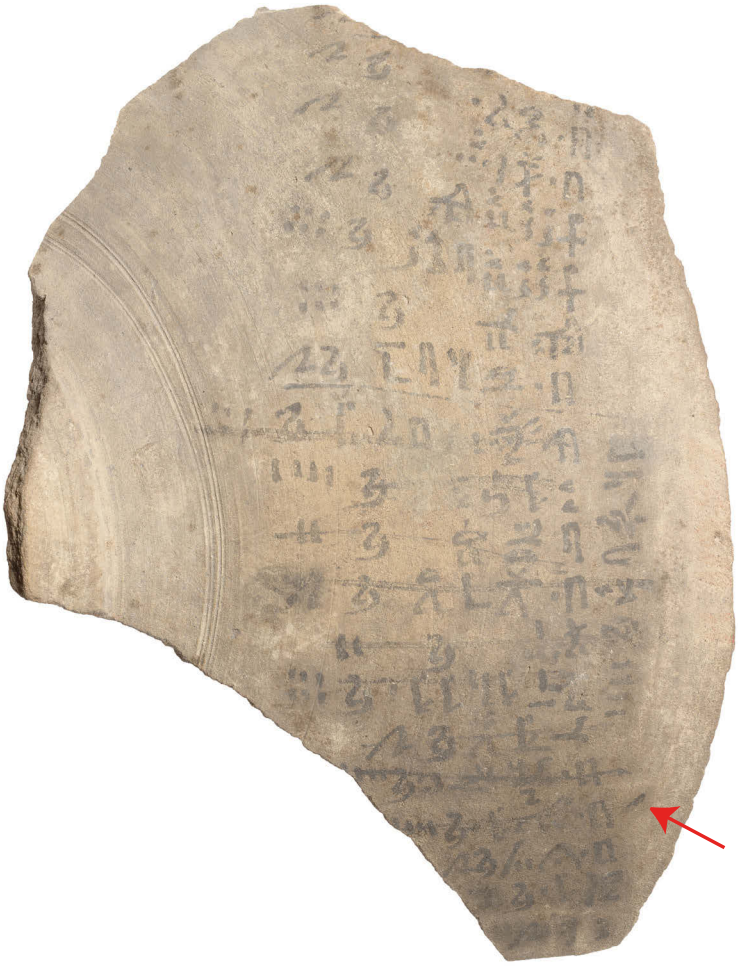


Fig. 5: O. Berlin P. 11297 (© Staatliche Museen zu Berlin – Ägyptisches Museum und Papyrussammlung, Inv. Nr. 11297, Foto: S. Steiß)

Both strokes in O. Berlin P. 11297 and T. Louvre AF 497 seem to be paratextual marks indicating the end of a section, but we cannot exclude another meaning and/or use. Strokes are found in earlier texts. Among the documentary material from the Lahun settlement, for instance, are mathematical papyri in which one or several strokes have been added in the right margin.[55] Such strokes are understood as checkmarks attesting a didactic practice and are somehow related to the attendance

55 See for instance P. UC 32134A or P. UC 32160 in Collier and Quirke 2006, 74–77 and 84–89.

Fig. 6: T. Luxor J 1001, right-side upper part (© Proyecto Djehuty, previously published in Galán and el-Bialy 2004 and Galán 2007)

marks on the Lahun accounts.[56] This didactic aim echoes the likely purpose of the Kemit writing-boards. Therefore, one cannot exclude this possibility of a checkmark for the stroke on T. Louvre AF 497, especially as this board is said to be the product of an apprentice.[57]

T. Louvre AF 497 is not the only Kemit tablet with paratextual marks. T. Luxor J 1001 bears three diagonal black strokes in between the upper parts of the columns (cf. fig. 6). They look similar to the stroke used as a substitute for unusual or complicated signs in hieratic (𓏺, Z5).[58] In this case, the strokes should not be understood as terminal marks. As mentioned above, this board includes three copies of the Kemit's first paragraph, each being written in two columns. If this stroke had a similar function as the red one found on the Louvre tablet, we should have expected to see them at the end of each pair. Yet, they are found between the two columns of each pair.[59] In such a position, I suggest instead a linking function, to show, in case it wasn't clear enough, that the two columns in each pair should be read together as the Kemit opening paragraph. Here again, the didactic context, in which this text has been written, might explain the *raison-d-être* of these linking strokes.

56 About the Middle Kingdom attendance marks in Lahun material, see for instance Di Teodoro 2018, 83–91.
57 Cf. Barbotin 1997.
58 Galán 2007, 13.
59 Galán 2007, 13.

Handwritings and apprentice context

The recorded handwritings on T. Louvre AF 497, T. Luxor J 1001, and T. Carnarvon III also suggest training practices.[60] Barbotin previously pointed out the clumsy handwriting of T. Louvre AF 497 (see for instance the bird-signs G17 ( ), G29 ( ), and G21 ( )), the few hesitation marks showing the tentativeness of the writer, the messy layout due to which columns are not easily distinguishable from one to another, and the uneven size and the irregular inking of the signs.[61] All of this made him conclude that this board was written by an apprentice, a junior scribe unsure of the script.[62]

On T. Luxor J 1001, the presence of two hands next to each other with a clear difference in the handwriting strongly suggests a practice board and therefore an apprenticeship context. As Galán noted, in the first pair of columns, the handwriting is neat, small and tight, while the signs of the two other versions are larger and disconnected and show imprecision and hesitancy in their writing.[63] This led him to say that the first pair of columns (copy A) was probably written by a senior scribe and accordingly used as a model for the two others (copy B–C). He further noticed that the second time the model was copied (copy C), the handwriting improved significantly as we can see for instance with the signs of the seated man (A1), the *f*-sign (I9) or the *d*-sign (D46). Additionally, there are no blots and inky fingerprints anymore. For these reasons, he assumed that the other two copies were made by an apprentice.

The Carnarvon board is a further telling example in favour of a didactic context for the Kemit tablets. The handwriting is compact and as clumsy as on T. Louvre AF 497, and many signs are ill-formed (e. g. the writing of *mrr* in the first sections of the text). The size of the cursive signs is erratic. Even though a columnar guideline has been drawn before the text to ease the vertical writing, the scribe (or rather the apprentice scribe) did not write its text carefully, as suggested by several signs that cross over these lines (fig. 7).

The repetition of § Iab and § VIId on the reverse is, in my opinion, another clue of an apprentice context. The handwriting is different. The script is more flexible and well mastered.[64] A first telling example is the quail chick (G43), made of two

60 The fragmentary state of the Puiemre board prevents us of drawing any conclusion for this witness. About the classical literature, part of the New Kingdom scribe curriculum, being transmitted in a variety of contexts, not only in school, see for instance Hagen 2013, 85.

61 Barbotin 1997, 247.

62 On the other hand, the text does not seem to contain any grammatical or lexical mistakes. Cf. Barbotin 1997, 249.

63 Galán 2007, 14.

64 See e. g. A1-sign or the hoe-sign (U7) in fig. 7–8.

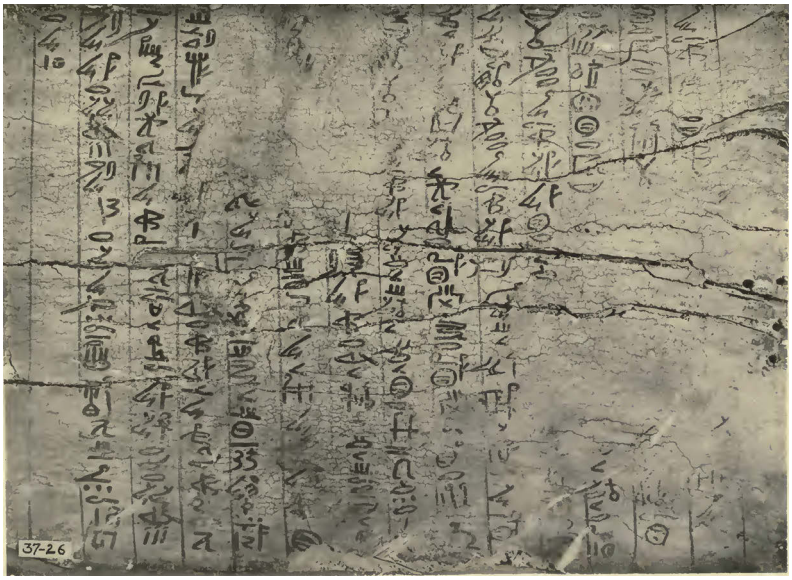


Fig. 7: T. Carnarvon III, reverse (© Carnarvon and Carter 1912, pl. 76)

brushstrokes.[65] It has a different shape on both sides of the board. On the reverse, the first part of the ductus is systematically tilted and the diagonal stroke is quite close to the second part of the ductus,[66] while on the obverse the quail chick (G43) has a rather vertical shape. Another indicative example is the group *ḏd* (). The first sentences of the Kemit are not well preserved on the *recto* and, as such, this prevents us from taking into consideration the same section on the verso. However, the verb *ḏd* is visible in column 12, as part of § VIII. The sign group here has a narrow size; the *ḏ*-sign (I10 ) has an elongated shape and a small oblique stroke form the hand-sign (D46 ) with the horizontal line from below. On the reverse, on the other hand, the group is stretched on a vertical axis. The curve of the snake's back is more pronounced, and the hand-sign (D46) is made of two strokes more or less equivalent in size. In short, the two columns on the reverse reveal the hand of a master scribe whereas the obverse is the pupil's exercise.[67]

65 This is often the case. See for instance the Heqanakht papyri palaeography in Allen 2002, 201.

66 Like the Heqanakht documents, the signs are drawn from top to bottom and from left to right. See Allen 2002, 77.

67 While the possibility of a school exercise is mentioned in Carnarvon and Carter 1912, 90, nothing is said about the different hands, and no mention of a teacher and an apprentice is made.

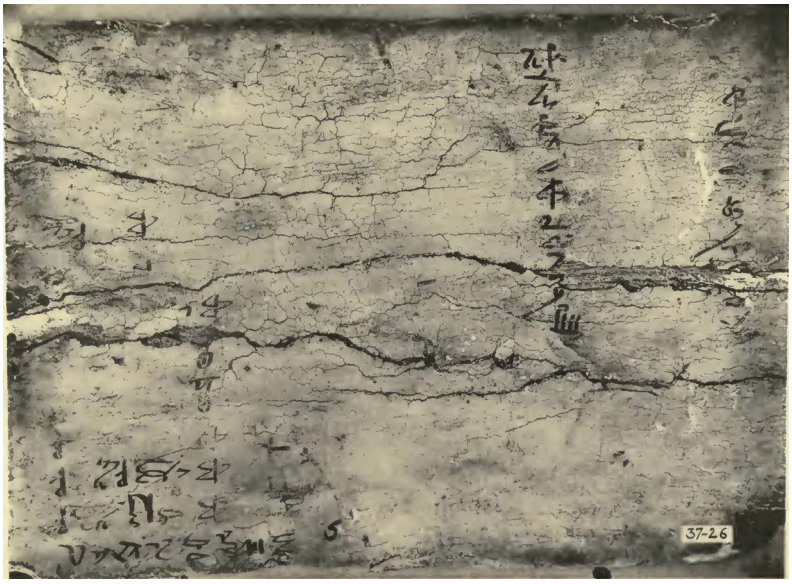


Fig. 8: T. Carnarvon III, obverse (© Carnarvon and Carter 1912, pl. 76)

To sum up, the three early New Kingdom writing boards bear conclusive evidence of an apprenticeship context for the Kemit tablets.[68] They are valuable artefacts to study the forms, as well as the agents ("teacher" versus "student"),[69] of the New Kingdom cursive scripts.

3 Handwritings and palaeography

Barbotin and Galán have previously discussed the palaeography of T. Louvre AF 497 and T. Luxor J 1001 respectively, with short mention of T. Carnarvon III.[70] More can be said on the handwritings of these three boards, in comparison with earlier, contemporaneous, and later Kemit copies, in order to shed light on the particularity of the Kemit-script at that time and, at the same time, to give a diachronic perspective. In this respect, I first discuss two of the most common signs in the Kemit: the owl

68 It should be noted that not all the writing boards are evidence of an apprenticeship context. See for instance Hagen 2013, 82–85 and Hagen 2020, 31 about the social context and the material culture of writing boards, which can also be part of the basic equipment of fully trained scribes as he pointed it out.

69 Cf. the "teacher-student" paradigm in Hagen 2013.

70 Cf. Barbotin 1997 and Galán 2007, 16–17.

(G17 𓄡) and the reed-leaf (M17 𓇋). Both are considered by Galán, but only the reed-leaf (M17) is mentioned in Barbotin, who relies on its shape in T. Louvre AF 497 to offer a likely dating. I then study two cursive signs whose shape evolves characteristically over time according to the available palaeographies: the hare-sign (E34 𓃹) and the *ḫ* (Aa1 𓐍).[71] I conclude my short discussion of the Kemit palaeography with the eye with flowing tears and painted upper lid (D5–6+D9), which appear, with regard to the Kemit tablets, only on T. Carnarvon III, in the hand of the apprentice. This sign is another telling example for comparing handwritings and discussing palaeographic features. These five selected signs enable me to determine whether the archaizing script of the Kemit is identical through time and space.

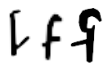
The reed-leaf sign (M17 𓇋)

Both Barbotin and Galán discussed the single reed-leaf for the *yodh* (M17), which, as a characteristic sign, is useful for the dating of an artefact.[72] During the Second Intermediate Period, the upper part of the sign is drawn with a short loop because, as Möller observed, "the characteristic of the manuscripts of the Hyksos period is a certain predilection for the rounded forms, sometimes somewhat ornamented, which however differ according to the texts."[73] Such a rounded version of the reed-leaf sign (M17) is indeed found on 17th dynasty papyri such as P. Ebers or P. Westcar.[74] This form is found in T. Carnarvon III and T. Louvre AF 497, which is why a late 17th dynasty and/or early 18th dynasty dating has been suggested (see table 2). On the earlier P. UC 32271A, the reed-leaf (M17) has a straight layout in the same way as any other kind of Middle Kingdom cursive texts (see fig. 9).[75]

During the Ramesside period, on the other hand, several Kemit copies feature the 17th dynasty loop, along with less rounded version.[76] This reappearance of the rounded *yodh* (M17) raises (new) questions about the Ramesside scribes' conception of the archaizing script of the Kemit. That said, as Hagen pointed it out, the vertical stroke with the loop could be a more exaggerated version of the sign without the loop.[77]

71 See signs 132 and 574 in Möller 1909–1912 for a concise diachronic overview.
72 Barbotin 1997, 249 and Galán 2007, 16–17.
73 Möller 1909, 11*. O. MMA 35144 and 36112 have a similar handwriting style. See e. g. the *aleph* (G1) at the end of col. 6, the *ỉb*-sign (F34) at the beginning of col. 4, or even the eye-sign (D4) in col. 2–3 and 6–7 of O. MMA 35144 in Hayes 1948, pl. 1.
74 See for instance the recent text edition, including photographs, of Scholl 2002 and Lepper 2008.
75 Collier and Quirke 2004, 50–51.
76 See for instance O. Brussels E 3208 and O. Cairo CG 56842 in Posener 1951a, pl. 22–23 or O. Brussels E 7627 in Posener's Appendix in van de Walle 1948, pl. 3–4.
77 Cf. Fr. Hagen (pers. comm.).

Table 2: Palaeographic table of the yodh (M17 𓇋)

T. Louvre AF 497, drawing based on Barbotin 1997, 247	
T. Carnarvon III, drawing based on Carnarvon and Carter 1912, pl. 76	
T. Luxor J 1001 © Proyecto Djehuty, previously published in Galán and el-Bialy 2004; Galán 2007	
O. DAN hierat. 5, drawing based on photos by G. Burkard and DAI Kairo	
O. Brussels E 3208, drawing based on Posener 1951a, pl. 23	
O. Brussels E 7627, drawing based on van de Walle 1948, pl. 3–4	

This sign might deserve further study considering a wide range of texts, administrative and literary, in a diachronic perspective to address more fully this issue.[78]

While T. Carnarvon III and T. Louvre AF 497 share the common feature of the shape of the reed-leaf sign, a peculiarity must be noted for T. Luxor J 1001. In the fourth column, a small horizontal stroke crosses the middle of the sign, as if it was the rush sign with shoots (M22 𓆑).[79] This occurs neither on T. Louvre nor on T. Carnarvon,[80] but it can be seen on the 17th dynasty Dra Abu el-Naga ostracon.[81] This peculiarity might be linked to the shape of this sign in documentary texts. As a matter of fact, the type b in Wimmer's palaeography of 19th–20th dynasty non-literary texts is strikingly similar to the reed-leaf examples in T. Luxor J 1001 and O. DAN hierat. 5.[82]

78 Such a study obviously falls beyond the scope of this paper, which is a short case study.

79 Sign 289 in Möller 1909.

80 That said, the two rushes with shoots for *nn* (𓈖) in the seventh column of T. Carnarvon III allow us to compare it with the peculiar sign of T. Luxor J 1001.

81 As observed by Galán 2007, 17.

82 Wimmer 1995, 184–185 (vol. 1) and 181 (vol. 2); Wimmer 2001, 288.

Fig. 9: P. London, UC 32271A (courtesy of the Petrie Museum, UCL)

The owl-sign (G17 𓅓)

From Old Kingdom to early 18th dynasty, two cursive versions of the owl-sign (G17) coexist, before the more abbreviated form, frequent in groups and ligatures, takes precedence over the other.[83] All the Kemit tablets display the cursive form closer to

83 See for instance sign 196 in Möller 1909–1912 for a concise diachronic overview.

the owl hieroglyph. However, none of them has identical owl-signs. For instance, as Galán noted, the upper part of the sign is quite unusual on T. Luxor J 1001; it closely resembles the way the scribe of O. Brussels E 3208 (Ramesside period) drew his owl-signs (G17) on this copy.[84] They are not, however, exactly identical (see table 3). The upper parts are indeed composed of tilted stroke(s) but they are different. While in O. Brussels E 3208 the ear tufts of the owl are rather long, in the Luxor board they are shorter, and the ductus is even rounder in the apprentice's first trial (cf. end of col. 4, copy B). The lower parts, on the other hand, are less similar in T. Luxor J 1001 and O. Brussels E 3208. In the Luxor apprentice board, the owl-signs (G17) end with a pronounced loop. A similar ending loop is found in one of the owl-signs (G17) in T. Louvre AF 497, but in O. Brussels E 3208 this loop has a different layout. It is smaller and crosses below the horizontal line. A closer look at T. Louvre AF 497 reveals that the owl-signs (G17) have another similarity with the Luxor board. The upper part is tilted as well, even though it is made of one single stroke in this case. While these two boards share common features in the drawing of the cursive owl-signs (G17), T. Carnarvon III has another form, closer to the contemporaneous Kemit copies on O. MMA 35144 (e. g. in col. 3–5 and 7), O. MMA 36112 (e. g. in col. 9–11 and col. 23), and O. DAN hierat. 5 (e. g. in col. 9 and 13). The ear tufts of the owl are made in two brush strokes: one for the left ear and another for both the right ear and the body of the owl. Further strokes are then drawn for the owl legs. As regards T. Louvre AF 497, the lower part of the owl-signs (G17) seems to be an intermediary version between the Luxor board example on one hand and the examples in T. Carnarvon III, O. MMA 35144+36112, and O. DAN hierat. 5 on the other hand. In short, this highly characteristic old-fashioned sign of the Kemit-script is subject to a slight variation from text to text, be it diachronic evolution and/or peculiarities due to the script unfamiliarity.

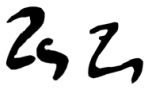
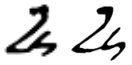
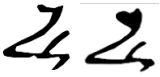
Next to the elaborate form, T. Carnarvon III presents the abbreviated form (see table 4). It happens in § VII only. At the end of column 10, the word *ḫnm.w* "smell" (Erman and Grapow 1926–1931, 3: 293.2–6) is written with the phonogram *nm* (T34) alongside with its phonetic complement, the owl-sign (G17). In this case, far from being close to the hieroglyphic form, the sign is cursively written as in the contemporary hieratic documents.[85] Few Kemit copies display this paragraph.[86]

84 Galán 2007, 16.

85 Cf. sign 585 in Möller 1909.

86 See for instance Posener 1951a, pl. 7, who lists O. IFAO cat. 1114, O. IFAO cat. 1115, O. IFAO cat. 1126, O. IFAO cat. 1132, O. IFAO cat. 1133, O. IFAO 1135, O. IFAO cat. 1136, O. Cairo JE 56842, O. Brussels E 3208, O. EA 330, O. MMA 36112, and T. Carnarvon III; and Petersmarck 2012, 128, who adds O. CGT 57060, O. CGT 57546, O. CGT 57552, and O. DAN hierat. 5 to this list.

Table 3: Palaeographic table of the owl-sign (G17)

T. Louvre AF 497, drawing based on Barbotin 1997, 247	
T. Luxor J 1001 © Proyecto Djehuty, previously published in Galán and el-Bialy 2004; Galán 2007	
O. Brussels E 3208, drawing based on Posener 1951a, pl. 23	
T. Carnarvon III, drawing based on Carnarvon and Carter 1912, pl. 76	
O. MMA 35144, drawing based on Hayes 1948, pl. 1	
O. MMA 36112, drawing based on Hayes 1948, pl. 2–3	
O. DAN hierat. 5, drawing based on photos by G. Burkard and DAI Kairo	

A close look reveals two ways of doing: one with the elaborate form and another with the abbreviated form.

Two contemporary witnesses of T. Carnarvon III (O. MMA 36112 and O. DAN hierat. 5) display the classical owl-sign with the easily recognizable ear tufts.[87] However, it should be noted here that a drawing of O. MMA 36112 could not be included in table 4 due to the low resolution of the black-and-white picture and the faded ink of the word *ḫnm.w* on this artefact (cf. fig. 10, second half of the first column).

The 18th dynasty O. EA 330 and the Ramesside O. CGT 57552 present the elaborate version as well.[88] The other Ramesside copies such as O. IFAO cat. 1114,

87 See Hayes 1948, pl. 2 and Burkard 2018, pl. 4–5 respectively.

88 See O. EA 330 in Pendlebury 1951, pl. 97; O. CGT 57552 in López 1984, pl. 177–177a. O. IFAO cat. 1133, the ink of which is extremely faded, seems to display the elaborate version too. See on: https://www.ifao.egnet.net/bases/archives/ostraca/?id=19581 [28 July 2020]. I would like to thank the IFAO Archives for sending me high-resolution pictures of this ostracon, allowing me to examine the cursive signs.

Table 4: Palaeographic table of the group *ḫnm* from Kemit § VII

T. Carnarvon III, drawing based on Carnarvon & and Carter 1912, pl. 76	
O. DAN hierat. 5, drawing based on G. Burkard and DAI Kairo	
O. EA 330, drawing based on Pendlebury 1951, pl. 97	
O. CGT 57552, drawing based on photos by Nicola Dell'Aquila and Federico Taverni/Museo Egizio	
O. IFAO cat. 1115, drawing based on photos © Institut Français d'Archéologie Orientale	
O. IFAO cat. 1132, drawings based on photos © Institut Français d'Archéologie Orientale	
O. CGT 57060, drawing based on photos by Nicola Dell'Aquila and Federico Taverni/Museo Egizio	
O. Brussels E 3208 + O. IFAO 1171A, drawing based on Posener 1951a, pl. 22	

O. IFAO cat. 1115, O. IFAO cat. 1132, and O. CGT 57060 have the abbreviated form, in the same vein as T. Carnarvon III.[89] It might be surprising at first sight,

89 See O. IFAO cat. 1114 on https://www.ifao.egnet.net/bases/archives/ostraca/?id=19561 [28 July 2020]; O. IFAO cat. 1115 on https://www.ifao.egnet.net/bases/archives/ostraca/?id=19562 [03 May 2020]; O. IFAO cat. 1132 on https://www.ifao.egnet.net/bases/archives/ostraca/?id=19580 [03 May 2020]; and O. CGT 57060 in López 1978, pl. 35–35a. O. Brussels E 3208 and O. IFAO cat. 1171 A, which are in fact two joined pieces of the same artefact, display another example of the cursive *m*, partly written on both fragments. See Posener 1951a, pl. 22 (end of column 8).

especially since the other owl-signs (G17) occurring on these copies correspond to the elaborate version (see fig. 11 and table 3).[90]

Kemit § VII reveals in fact a unique phenomenon. The few early witnesses display several spellings of *ḫnm.w*, resorting either to the cursive form closer to the owl hieroglyph or the abbreviated form. From late 18th dynasty onwards, the copies tend to favour the abbreviated form despite the fact that such a form is not expected in an old-fashioned cursive script.[91] In my view, the explanation is to be found in the group writing and in the scribal habits. As early as 12th dynasty, the forms of the biliteral sign *nm* (T34 ) and its phonetic complement (G17 ) look alike in hieratic. Yet, both can be distinguished by means of an additional dot above the cursive sign of *nm*.[92] The presence of all these cursive owl-signs is thus nothing more than a *lapsus calami* induced by the habit of writing these two similar signs together.[93]

O. Cairo JE 56842, picture of which is published in Posener 1951a, pl. 23, presents on the other hand the first tradition, i. e. with the elaborate owl-sign, but caution is advised due to partial lacuna. Only the end of the word *ḫnmw* is preserved on O. CGT 57546, preventing any observation regarding the owl-sign (G17). See López 1984, pl. 175–175a.

90 It should be noted here that in O. Brussels E 3208, as well as the joined pieces O. IFAO cat. 1171 A/B, the abbreviated form is used four more times in place of the expected elaborate version. In § VIIa (column 8 on O. Brussels E 3208), the preposition *m* has been written cursively. In this case, the following *ayin* (D36) might have induced a *lapsus calami*. In § VIII (column 10 on O. Brussels E 3208), the verb *rmi̯* "to weep" (Erman and Grapow 1926–1931, 2: 416–417.10) has been systematically erroneously written with the butcher knife *nm* (T34) and the uniliteral sign *m* (G17). Posener himself already observed this. See Posener 1951a, pl. 7, note f–f and pl. 9, note f. The fourth abbreviated version appears in the word *nmḥw* "orphan" (Erman and Grapow 1926–1931, 2: 268.4–8) of § Xc (column 13 on O. Brussels E 3208). The explanation for the presence of the more cursive form is similar as for the word *ḫnmw*. In contrast, § Xa (column 13 on O. Brussels E 3208) reveals a hypercorrection. The verb *nḏm* has strikingly been written by means of two elaborate owl-signs. If the second corresponds to the phonetic complement *m*, the first stands for the triliteral sign *nḏm* (M29 ), the form of which looks like the abbreviated version of the owl-sign, with an extra dot above (from 13th dynasty onwards), in the same vein as the hieratic sign for *nm* (T34). Compare signs 296 and 585 in Möller 1909. Posener 1951a, pl. 11 (note a) previously observed this sign distortion.

91 As I said in footnotes 88–89 above, Ramesside witnesses like O. Cairo JE 56842 and O. IFAO cat. 1133 seem to display the version close to the hieroglyphic sign, indicating that both ways of drawing the owl sign co-existed even during the Ramesside Period.

92 See sign 585 in Möller 1909. Such a disambiguation is found on O. Brussels E 3208 for instance. See the end of column 10 on fig. 1.

93 Similar explanation applies for the erroneous writing of *rmi̯* in O. Brussels E 3208. In the other Kemit copies, the verb is written with two owl-signs (G17) next to each other, which could have led to a confusion with the cursive spelling of *nm-m*, signs of which are written alongside, just like the spellings of *rmi̯* in § VIII in the other Kemit versions.

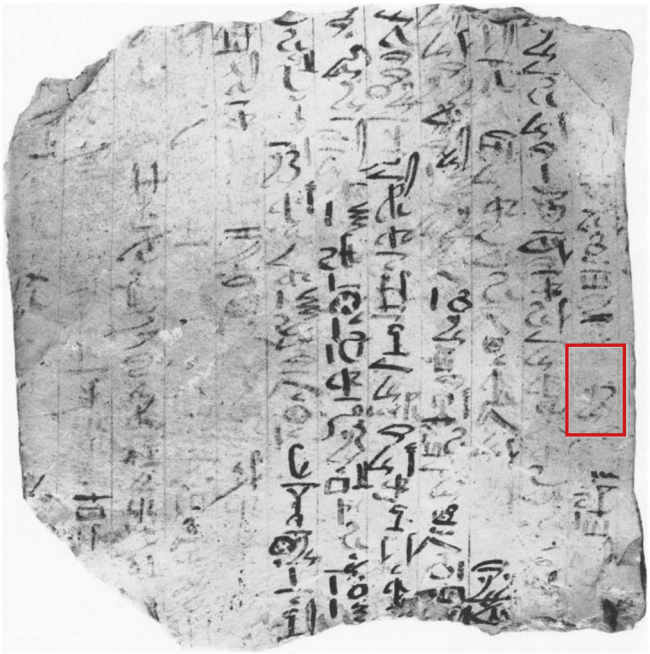


Fig. 10: O. MMA 36112 (Hayes 1948, pl. 2)

The hare-sign (E34 𓃹)

Möller outlined an evolution of the hare ductus from the Old Kingdom to the Roman imperial period.[94] On the securely identified Kemit writing boards, the sign is nowhere to be found except on T. Carnarvon III, where it occurs twice (see table 5). The ears are made of two long horizontal strokes, in an early Middle Kingdom way. As such, they can be paralleled with the Puiemre writing board, as long as the relevant fragment is in fact an extract of the Kemit (§ VIIa?). On the contemporary O. MMA 36112, the hare-sign has a similar shape on both sides (r° col. 8 and v° col. 22).[95] During the 19th and 20th dynasties, some ostraca have the old ductus with two long ears, such as the O. IFAO cat. 1855 or O. CGT 57552,[96] but

94 See for instance sign 132 in Möller 1909–1912 for a concise diachronic overview.

95 Hayes 1948, pl. 2. The 18th dynasty O. EA 329 also has the hare-sign (E34), whose form seems to be consistent with the 18th dynasty examples in Möller 1909, sign 132. See Pendlebury 1951, pl. 97. O. DAN hierat. 5 has been put aside as the two examples of the hare-sign (in col. 5 and 9) are not easily readable due to the partly faded ink. See Burkard 2018, pl. 4–5.

96 See Gasse 2005, 137 and López 1984, pl. 177–177a respectively. O. IFAO cat. 1124 and O. IFAO cat. 1127 are further examples. See https://www.ifao.egnet.net/bases/archives/ostra-

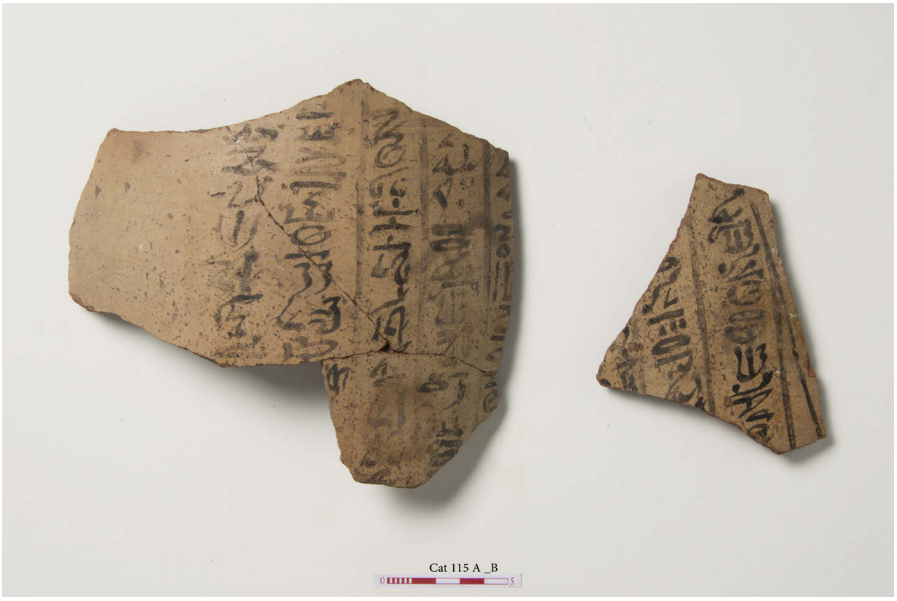


Fig. 11: O. IFAO cat. 1115 (© Institut Français d'Archéologie Orientale)

there are also many examples of shorter ears in the Ramesside style like O. IFAO cat. 1115 (fig. 11).[97] Both forms even sometimes appear on the same artefact, such as on O. Brussels E 3208.[98]

The early Kemit witnesses have thus a consistent way of drawing the hare-sign (E34), resorting to the early Middle Kingdom ductus with the two long ears. Ramesside copies, on the other hand, reveal an influence of the contemporary hieratic, in which the short ears hare-sign is the usual form. The co-existence of both *ductus* on a same copy could suggest slips from a scribe less familiar or unpractised with the cursive script of the Kemit.

ca/?id=19572 and https://www.ifao.egnet.net/bases/archives/ostraca/?id=19575 for colour photographs [21 April 2020].

97 See for instance O. IFAO cat. 1115 on https://www.ifao.egnet.net/bases/archives/ostraca/?id=19562 [21 April 2020], O. CGT 57060 in López 1978, pl. 35–35a, or O. Cairo JE 56842 in Posener 1951a, pl. 23.

98 See Posener 1951a, pl. 23.

Table 5: Palaeographic table of the hare-sign (E34 𓃹)

Puiemre board, drawing based on De Garis Davies 1923, pl. 79a	
T. Carnarvon III, drawing based on Carnarvon and Carter 1912, pl. 76	
O. MMA 36112, drawing based on Hayes 1948, pl. 3	
O. IFAO cat. 1855, drawing based on Gasse 2005, 137	
O. CGT 57552, drawing based on photos by: Nicola Dell'Aquila and Federico Taverni/Museo Egizio	
O. CGT 57060[99]	
O. Cairo JE 56842, drawing based on Posener 1951a, pl. 24	
O. Brussels E 3208, drawing based on Posener 1951a, pl. 23	

The third h (*ḫ*, Aa1 𓎛)

The third h (*ḫ*, Aa1) is another indicative sign for this case study. Based on available palaeographies,[100] the cursive sign drawn on one fragment of the Puiemre writing board has a Middle Kingdom form, just like the examples recorded on P. UC 32271A (see fig. 9 above, col. 4–5 and table 6).[101] Similarly, its shape on T. Louvre AF 497 suggests a 17th dynasty dating. The sign is drawn in three strokes, two curved and one vertical, and is similar to other known examples from Second Intermediate Period documents.[102] Two Second Intermediate Period copies of Kemit, O. DAN hierat. 5 and O. MMA 35144, reveal further shapes: empty circles drawn from top to bottom on the jar stand and circles made of two curved strokes with an *antilambda*

99 In this case I based my drawing on the ostracon facsimile in López 1984, pl. 177a instead of the colour pictures kindly sent by S. Töpfer (Egizio Museo, Turin). Something partly covers the hare-sign (E34), making it hardly recognizable now.

100 Möller 1909–1912 (sign 574); Wimmer 1995, 396–403; Wimmer 2001, 286 and 288–290. See also Janssen 1997, 343 for a review of the Aa1 sign in Wimmer 1995, in which he adds an uncommon form with a clockwise curl.

101 Collier and Quirke 2004, 50–51. Compare with Allen 2002, 216.

102 Compare with Möller 1909, sign 574.

Table 6: Palaeographic table of the *ḫ* (Aa1 𓄤)

Puiemre board, drawing based on De Garis Davies 1923, pl. 79a	
T. Louvre AF 497, drawing based on Barbotin 1997, 247	
O. DAN hierat. 5, drawing based on pictures by G. Burkard and DAI Kairo	
O. MMA 35144, drawing based on Hayes 1948, pl. 1	
O. MMA 36112, drawing based on Hayes 1948, pl. 2–3	
T. Carnarvon III, drawing based on Carnarvon and Carter 1912, pl. 76	
T. Luxor J 1001 © Proyecto Djehuty, previously published in Galán and el-Bialy 2004; Galán 2007	
O. Brussels E 3208, drawing based on Posener 1951a, pl. 23	
O. IFAO cat. 1112 © Institut Français d'Archéologie Orientale	
Dakhla ostracon, drawing based on Kaper 2010, 117	
O. Brussels E 6768, drawing based on van de Walle 1948, pl. I	
O. CGT 57286, drawing based on photos by: Nicola Dell'Aquila and Federico Taverni/Museo Egizio	
O. Prague P 2034 © Fischer-Elfert, Navrátilová, Onderka, Toivari-Viitala, and Demarée 2018, pl. VIII	
O. Prague P 3830 © Fischer-Elfert, Navrátilová, Onderka, Toivari-Viitala, and Demarée 2018, pl. XI	
O. IFAO cat. 1847, drawing based on Gasse 2005, 128	

inside it on the MMA ostracon.[103] Yet no examples of these forms are recorded in Möller.

T. Carnarvon III and T. Luxor J 1001, on the other hand, show a shape closer to the hieroglyph itself. The sign is a circle traced as a single stroke, with one or two horizontal lines inside. These examples have parallels in several Ramesside copies, such as O. Brussels E 3208, O. IFAO cat. 1112 and the Dakhla ostracon (see fig. 1 and table 6).[104] Both of these also have cursive signs very close to the hieroglyph, but their inside strokes are oblique. Ramesside ostraca display even more variation. For instance, on O. Brussels E 6768, the *ḫ*-sign (Aa1), which is no longer visible because of a modern restoration, is written like the Ramesside examples recorded in Möller.[105] O. CGT 57286 has a more elaborate version, with two extra dots inside the sign.[106] O. Prague P 2034 has an almost complete circle with two dots inside, while O. Prague P 3830's is made of two curved strokes in the same way as T. Louvre AF 497 and O. MMA 35144, except that the signs are filled with dots or what looks like a left angle bracket instead of strokes.[107] In contrast, other witnesses, like O. IFAO cat. 1847, display a ductus similar to the contemporary documentary cursive script.[108] Without detailing all the recorded *ductus* in the later copies, these examples, including those recorded on the Kemit tablets, suffice to show the absence of a single and unique form common to all the known witnesses. Some are helpful evidence to date or confirm the dating by comparison with the existing palaeographies. Many others have not been listed in these useful tools and would deserve inclusion for a more comprehensive understanding of the co-existing practices.[109]

103 Such an *antilambda* sign is also found on O. Cairo CG 54949 for instance. See Mathieu and Ritter 2008, pl. 1.

104 For O. Brussels E 3208, see Posener 1951a, pl. 22; for O. IFAO cat. 1112, see https://www.ifao.egnet.net/bases/archives/ostraca/?id=19559 [16 April 2020] and for the Dakhla ostracon, see Kaper 2010, 117.

105 Compare Möller 1909, sign 574 and Posener's Appendix in van de Walle 1948, pl. 1.

106 See López 1980, pl. 91–91a.

107 See Fischer-Elfert, Navrátilová, Onderka, Toivari-Viitala and Demarée 2018, pl. 8 and 11; Barbotin 1997, 246–247; and Hayes 1948, pl. 1 respectively.

108 According to the white and black picture in Gasse 2005, 128, it seems to me that the sign has been drawn in one stroke. Compare Gasse 2005, 128 and Wimmer 1995 (vol. 2), 396–397 (version a of Aa1).

109 The remark made about the *yodh* sign (M17), namely that the sign might deserve further study considering a wide range of texts, administrative and literary, in a diachronic perspective to address more fully the question, is also applicable here.

The weeping eye-sign with upper lid (D5–6+D9)

Before concluding this short case study, I consider the eye-sign with painted upper lid (as in D5  or D6 ) and with flowing tears (as in D9 ).[110] It appears twice on the reverse of T. Carnarvon III. At first sight, they look ill-formed and are larger than the other signs (see table 7). Far from being only clumsy signs, they are rather evidence of scribal practices of the Second Intermediate Period, when the writing of cursive signs is sometimes more rounded and/or ornate.[111] The weeping-eye-sign is not frequent in the Kemit; it is present only in § VIII.[112] One could have assumed that (apprentice) scribes paid close attention when drawing this sign in an old-fashioned way due to its infrequency. This sign shows instead an interesting variation across time and place. For instance, the well-preserved Brussels ostracon (O. Brussels E 3208) has a very nicely drawn D6+D9 eye. This sign that looks like a calligraphic style has nothing to do with the other known examples in the Kemit-texts. As a matter of fact, the shape of the weeping eye with upper lid (D5-6+D9) lacks consistency within the Kemit copies. On the 17th dynasty O. MMA 36112,[113] the upper part – the painted upper lid – is narrow and small, whereas on the Ramesside ostraca they are rather horizontal and more spaced out. They are even linked by means of a (ornamented) curved stroke on O. Brussels E 6768, O. Cairo JE 56842 A/B, and O. IFAO cat. 1161 for instance.[114] On O. Brussels E 3208, the upper lid is decorated with multiple very small strokes.[115] The lower part, namely the so-called flowing tears, is just as variable on each copy. The tears are symbolized through three oblique, vertical, or wavy lines,[116] some of which are ornamented with one or two small oblique strokes. O. Brussels E 3208 is again a bit different, with only two vertical tear strokes.

110 Such a sign *per se* is not recorded in Möller but compare with signs 83 and 85 in Möller 1909–1912.

111 Cf. Möller 1909, 11*.

112 For a recent commentary on this specific paragraph of the Kemit, with a new interpretation, see Klotz 2009.

113 Hayes 1948, pl. 2–3.

114 See Posener's Appendix in van de Walle 1948, pl. 1; Posener 1951a, pl. 23–24; and https://www.ifao.egnet.net/bases/archives/ostraca/?id=19611 [21 April 2020] respectively.

115 Posener 1951a, pl. 22.

116 The two examples on O. IFAO cat. 1138 have three vertical lines, connected to the eye-part. See on https://www.ifao.egnet.net/bases/archives/ostraca/?id=19587 [16 April 2020].

Table 7: Palaeographic table of the weeping eye-sign (D5–6+D9)

T. Carnarvon III, drawing based on Carnarvon and Carter 1912, pl. 76	
O. MMA 36112, drawing based on Hayes 1948, pl. 2	
O. Brussels E 3208, drawing based on Posener 1951a, pl. 23	
O. Brussels E 6768, drawing based on van de Walle 1948, pl. 1	
O. Cairo JE 56842, drawing based on Posener 1951a, pl. 23	
O. IFAO cat. 1161, drawing based on Posener 1951a, pl. 24	

Conclusion

This short case study was exploratory to address the relevancy of the Kemit script for a better understanding of (early) New Kingdom cursive scripts. Each board is a product of its time. In this way, Middle Kingdom *ductus* have been recorded on the Puiemre board. T. Carnarvon III and T. Louvre AF 497 have characteristic features of a 17th dynasty script based on the available material for comparison, whereas T. Luxor J 1001 is consistent with 18th dynasty scripts. These wooden boards, though few in number, enable several observations. They have been shown to be further cases of scribal exercises. T. Carnarvon III even revealed the coexistence of two distinct handwritings on a single artefact – one belonging to a master scribe, another to an apprentice – similar to T. Luxor J 1001. The apprenticeship context is also noticeable through the handwritings themselves, the hesitancy marks, as well as the presence of the unique black linking strokes on the apprentice board T. Luxor J 1001.

On these tablets, short extracts of the Kemit are written with unruled, more or less evenly spaced columns, while the longer version on T. Carnarvon III is framed

with black-inked column lines. In both cases, the extracts are mostly written in black ink. The use of red ink is limited to paratextual marks on the small T. Louvre AF 497 only. Its ending mark, which can be linked to the *grḥ*-sign (D41) and the later short horizontal lines, is evidence of scribal practices, with parallels in contemporary documents.

The recorded handwritings are just as informative. Even though the Kemit is said to be written in an old-fashioned or archaizing style, the copies display variation across time and/or space. The earlier witnesses (P. UC 32271A and Puiemre board) have a consistent Middle Kingdom style, whereas the 17th dynasty and early 18th dynasty witnesses (T. Carnarvon III, T. Louvre AF 497, O. DAN hierat. 5, O. MMA 35144, and O. MMA 36112) present a typical 17th dynasty or early 18th dynasty style, with a more elaborate and ornamented script, despite the clumsiness of the apprentice scribes. They would deserve more comparisons with contemporary documents, like the late 17th – early 18th dynasty material from Edfu or 18th dynasty Books of the Dead. Ramesside copies, however, show a combination of contemporary sign forms and earlier ones. The studied copies have revealed sporadic influence or slips from the contemporaneous hieratic, be it administrative or not, indicating incidentally that both administrative and literary texts have not such distinctive scripts. The owl-sign (G17) is highly telling in this regard. Commonly written with the elaborate form, closer from the hieroglyphic version, this sign appears in his abbreviated, more cursive form in group writings only, being a *lapsus calami* from the scribe unease or unpractised with the Kemit script.

T. Carnarvon III, T. Louvre AF 497, and T. Luxor J 1001, alongside with the contemporary copies on ostraca, remain a source of ideas for the study of social context and the agents behind these texts at the dawn of the New Kingdom. Comparisons with earlier and later copies of the Kemit made appear how valuable this old-fashioned script is. Far from being a uniform style throughout time and space, with fixed ductus for each sign, variety and peculiarities have arisen. More study should be deserved – and will be in the future – but the Kemit-book seems to present a range of archaizing styles. This literary letter has promising avenues of research for the palaeography, the scribal practices, and the scribal training.

Appendix – T. Cairo CG 25367, a witness of the Kemit-book?

T. Cairo CG 25367 (= JE 26442), today kept in the Egyptian Museum, dates to the 12th-dynasty (38th regnal year of Senwosret I)[117] and was found in Akhmim according

117 According to James 1962, 120, the traces of the letter on the right-hand side of the board are probably earlier in date than the list of names on the left-hand side. But the shape of the

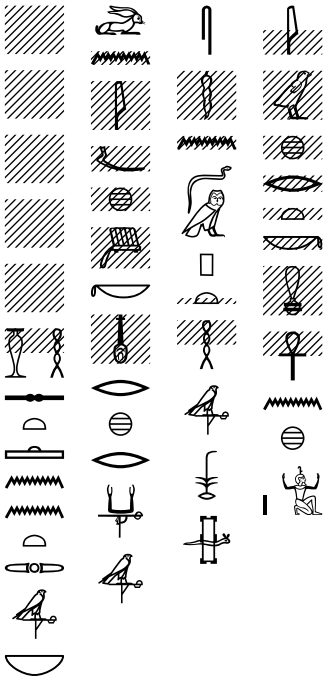


Fig. 12: Hieroglyphic transcription of T. Cairo CG 25367

to the Catalogue Général.[118] It measures 46.5 cm × 25 cm. It is covered with plaster and gum[119] but this layer is partly left out on the obverse. The tablet is inscribed on both sides. On the reverse are mathematical exercises,[120] while the front side has a list of auxiliary personnel on the left side[121] and what might be an extract of the epistolary formula of the Kemit on the right side.

This section is the most damaged part of the writing-board. Those damages and losses in the right-side text are severe hindrances but the remaining content and the palaeography are helpful evidence for this controversy.

Although this letter-extract on the right side of the board has many lacunae, it is immediately obvious that the signs have a characteristic shape. In the first three

handwriting could have induced this remark.

118 Daressy 1901, 95. It was found with another tablet bearing a similar name-list of *smdt* as well as mathematical exercises on the other side: T. Cairo CG 25368. See Daressy 1901, 96.

119 Cf. Daressy 1901, 95.

120 See for instance Peet and Woolley 1923, Daressy 1906, and Vymazalova 2002.

121 Valbelle 1991.

columns, some signs are extremely elongated and have a neat, elegant ductus.[122] The writing, which could be described as uncial, is characteristic of initial greeting formulas in the formal correspondence of the early Middle Kingdom.[123] A comparison with the third letter of Heqanakht (P. MMA 22.3.518),[124] or the so-called letter of Meketre (P. MMA 22.3.524), which is more likely a writing exercise,[125] makes it obvious.[126] James observed that such elongation is especially found with the long upright signs *yodh* (𓇋, M17), *waw* (𓅱,G43), *mi* (𓇌, W19), *ꜥnḫ* (𓋹, S34).[127] Its purpose was, according to him, to give greater dignity and formality to the opening lines of a letter. Hayes, on the other hand, suggested that it might be for a decorative purpose.[128] On T. Cairo CG 25367, the *yodh* (M17) and the *ꜥnḫ*-signs (S34) are indeed large and calligraphic, just as the phonogram *s* (S29) on the upper part of column 2, the god with upraised arms (C11), the falcon on the standard (G7) and the *kꜣ*-sign combined with the standard (D29) on the lower part of the three first columns.[129] Such a stylized handwriting with elongated signs is not characteristic of Kemit.

Neither do the textual contents suggest that T. Cairo CG 25367 bears an excerpt of Kemit (see transcription below). Column one might match with § IIIa in the Kemit. Yet the lacuna in the introductory phrase of the greetings formula prevents us from reading the preposition *m* (G17) as in the Kemit (*ỉw ḫrt.k m ꜥnḫ ḥḥ n sp* "your condition is as (that of) one who (truly) lives a million times") or rather *mi* (W19) as in the regular letters (*ỉw ḫrt.k mi ꜥnḫ ḥḥ n sp* "your condition is like living a million times"). Sections IIIb–c are then absent. The absence of the sentence *ỉry n.k mnṯw nb wꜣst* (§ IIIb) is all the more crucial, since in the early Middle Kingdom letters this sentence gives the name of another deity, Harsaphes, lord of Heliopolis.[130] Its presence on the board would have enabled us to identify the literary letter with certainty. Column two starts with what could be Kemit § IV, and whose end is written in the subsequent column. Again two sections (IVb–c) are missing. The lacuna following the *wn*-sign (E34) in column three is another obstacle to the text's identification as only the Kemit-text has a superfluous *r*-sign (D21) in between the

122 James 1962, 80.
123 James 1962, 48.
124 See for instance Allen 2002, pl. 12–13. James 1962, 46 wrote "the letter begins with the long formal introduction found in letters of the 11th-dynasty, but which Heqanakht neglected in the less formal letters to his family (I and II)."
125 According to James 1962, 81. See James 1962, pl. 21 for a picture of the papyrus.
126 See also, for instance P. BM 10567 and P. Cairo 91061 (= CG 58045) in James 1962: pl. 26 and pl. 28.
127 Cf. James 1962, 120.
128 Cf. Hayes 1948, 2.
129 See Daressy 1905, pl. 62.
130 See for instance the Appendix D in James 1962, 122 and 124.

hare-sign (E34) and the word *ỉmꜣḫ* (*wn {r} ỉmꜣḫ.k nb nfr ḫr kꜣ n mnṯw nb wꜣst*).[131] Furthermore, the column ends with the word *kꜣ*, without specifying which god's Ka is meant. Letters would have Harsaphes, Lord of Heliopolis, whereas the Kemit has Montu, lord of Waset.[132] Finally, after the threefold greeting, the Akhmim tablet has the following partially restored sentence *[ỉw.k m] ḥst nt mnw nb [ỉpw]* "[You are in] the favour of Min, god of [Akhmim]", which is still readable at the end of column four. However, such a sentence is nowhere to be found in the Kemit.

In essence, this tablet should be cast aside from the Kemit-corpus. It is rather a writing exercise in the early Middle Kingdom epistolary style and its pro forma.[133] For this reason, the Akhmim writing-board hasn't been considered for this paper.

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131 Cf. Appendix D of James 1962, 123 for a synthetic view of Middle Kingdom letters.

132 Cf. James 1962, 123–124.

133 Parkinson 2002, 325 does likewise and interprets it as a model letter. As such, he lists parallels T. MMA 28.9.4, T. MMA 26.3.277AB, O. Cairo JE 49911, Jar Nag ed-Deir, and P. UC 32196.

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Any news from Dahshur? Recording Ramesside secondary epigraphy in the South Temple of Senwosret III

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Abstract

Following the report on graffiti in the precinct of Senwosret III at Dahshur, and an endorsement of the Memphite secondary epigraphy as a significant resource for New Kingdom hieratic studies, researches in the pyramid complex at Dahshur and its graffiti have continued. New excavations as well as a new home for previous finds literally helped to bring more graffiti and dipinti to light, and expanded particularly the Ramesside corpus of both textual and figural epigraphy. Materially, these are a rather varied group in terms of dimensions and appearance, and thus in regard to writing techniques and tools used for their production, and in terms of location and visibility. The contents of the Ramesside secondary epigraphy material are equally diverse, from devotional subject matter to delivery dockets related to demolition of the pyramid precinct, and imply therefore a variable and multidimensional status of the Middle Kingdom building in the latter part of its New Kingdom history. Given current changes in recording practices, this contribution focuses on identifying sustainable working methods for recording this type of secondary epigraphy. The task may prove to be a challenge, but the interpretive prospects opened by the Ramesside graffiti and marks in pyramid complexes may indicate it is worth the effort.

Introduction

Following a preliminary report on the 1992 to 2012 research of graffiti in the precinct of Senwosret III at Dahshur[1], and an endorsement of the Memphite secondary epigraphy in general as resource for New Kingdom hieratic studies[2], researches in the Middle Kingdom pyramid complex at Dahshur and its graffiti have continued.[3] The present paper addresses two issues. First, although new finds are mentioned as well, the contribution highlights the results of revisions concerned with an already excavated material, either because of better conditions of access, or new technologies becoming available for their recording and study. Whilst this may be an obvious

1 Navratilova 2013.

2 Navratilova 2015a following Megally 1981, see also Ragazzoli 2017a.

3 A brief outline of the ongoing complex research in Arnold and Oppenheim 2015, recent seasons e. g. Arnold, Chen and Oppenheim 2018.

matter, an opportunity for revisiting the original record, although it is historically a fairly visible part of the hieraticists' work[4], is not always provided for in the highly time-demanding excavation process, and it may require some encouraging. The need to revisit the record and/or the site is also setting requirements for recording methods, with digital photography and photogrammetry records providing an opportunity for repeated virtual collations.[5] Second, the contribution focuses on discussing and identifying sustainable working methods for recording secondary epigraphy as encountered in the pyramid precincts in the Memphite area.

Both aspects, an encouragement for revised collations, and a discussion of recording methods, may contribute to a growing recorded corpus of highly contextualised hieratic texts offering insights in forms and functions of hieratic writing, as well as in the ancient writing practice and its actors.

New finds of secondary epigraphy in Dahshur

New secondary epigraphy finds at Dahshur were identified in seasons 2014, 2017 and 2018.[6] A large number of secondary epigraphy finds was identified in the area of the so-called South Temple, or cult temple of Senwosret III. This temple structure appears to be the largest hitherto known Middle Kingdom temple building.[7] Although it is excavated only in part, it hosts well over a quarter of known graffiti and dipinti fragments[8] from Senwosret's pyramid precinct. Its colonnades, and possibly a hypostyle hall, were probably still extant, or at least in part still accessible to its New Kingdom visitors, given the presence of secondary epigraphic layers on the column stems from the South Temple.[9] The temple's size, status and owner may offer an explanation for its popularity with visitors.[10]

4 Frequent collations and revisiting were practiced by Jaroslav Černý (Griffith Institute Archive, University of Oxford, Collection Černý, Cerny Mss. 17), as well as Battiscombe Gunn, including in cooperation with J. Černý (Griffith Institute Archive, University of Oxford, Collection Gunn, Gunn Mss. III).

5 Further see Urcia et al. 2018, Prada and Wordsworth 2018, compare also Lowe 2005.

6 Unpublished report on secondary epigraphy research in the complex of Senwosret III at Dahshur for season 2018, H. Navratilova, Department of Egyptian Art, the Metropolitan Museum of Art, New York.

7 About the structure, Arnold, Chen, and Oppenheim 2018, 44.

8 Preliminary report Navratilova 2013 identified about a quarter of graffiti known to date as from the South Temple or neighbouring areas, and the new finds are predominantly from this area to the south of the pyramid.

9 For column reconstruction see Arnold 2002, suggested locations of colonnades and the columned hall in Arnold, Chen, and Oppenheim 2018, passim.

10 Compare Navratilova 2017a.

A significant number of mostly dipinti was also identified on material from previous seasons, now hosted in the new Metropolitan Museum of Art Research Center and storeroom at Dahshur.[11] The new storeroom proved critical for pursuing the secondary epigraphy study, as it provided improved observation and recording conditions. The additional secondary epigraphy features were mainly identified due to better lighting conditions and access to fragments of reliefs and architectural elements housed in the new storeroom.

The graffiti logbook of activities in season 2017 registered almost 100 new and/or revised entries; some entries contain multiple fragments of clustered graffiti and dipinti. New identifications on previously excavated material were made on fragments from the 1990s to the 2010s, from across the pyramid precinct. Most of these identifications were textual dipinti made in black ink, a smaller number in red ink. Red ink specimens were represented both by textual and figural evidence. Dipinti identified on dados and doorframes agree with a pattern of distribution previously identified in the corpus.[12] Fragments of incised figural graffiti were also identified both in the revised, and in the new material. An identification of motivations behind choices of a subtractive or additive method for executing secondary epigraphy is as yet inconclusive.

New joins were made between new and previous finds, including on blocks with secondary epigraphy features. An illustrative example of new data and interpretive possibilities becoming available is the joining of fragments 17.302 and 94.989. Thanks to Adela Oppenheim's analysis[13], the large and heavily graffitied doorframe 94.989 is now joined with a piece of relief-decorated neighbouring wall, which bears not only graffiti, but also a copyists' grid. The clusters of textual dipinti were thus located in an immediate vicinity of an artist's interaction with the Middle Kingdom decoration.

Challenges at Dahshur

One of the most significant challenges at the pyramid precinct of Senwosret III is the fragmentary state of most of the monument's original surfaces. This difficulty is alleviated by a very close cooperation of the epigrapher with archaeologists and artists in the MMA team. The archaeological context of graffiti has continuously proved to be an essential component in their interpretation.[14] In short, graffiti without the context of their walls become a disembodied text or figure, which is an

11 Oppenheim 2017.
12 Cf. Navratilova 2013.
13 Personal communication, October 2018.
14 Articulated by Caminos 1976.

antithesis of what they were historically – artefacts embodying human experience of the space, which had been chosen as a specific location for the epigraphic performance.[15]

Another challenge is represented by the demands of the recording process, which has to be as efficient and as fast as possible, and produce durable, verifiable, and "archivable" records. The recording demands and expectations are naturally not limited to graffiti study and are widely debated in the epigraphy community.[16] In the case of secondary epigraphy – as indeed in the case of rock texts and art – the aspect of vulnerability of our evidence is increasingly emphasised. The vulnerability has been recognised to have a complex character – both the epigraphic layers and the surface that carries them are fragile, which may lead to a complete phase-out of contact epigraphic methods, such as tracings. However, advantages and disadvantages of diverse epigraphic processes may be contextual and will be discussed further below.

Recording[17]

In season 2018 at Dahshur, recording of new finds from seasons 2014 to 2018 and of new identifications from earlier seasons used a combination of hand-tracing and photography. The pencil hand tracing (pencil on *Mylar*™) was followed by inking of select textual and figural graffiti on a separate sheet. The pencil tracing was done in contact with the original surface whilst observing conservation expert advice; inking was done by overlaying the pencil tracing on *Mylar*™ with tracing paper, and consulting the original[18], as direct inking on the original is not recommended.[19] Photography record was also provided. As a large number of graffiti and dipinti fragments is located on surfaces of small fragments of walls (there are no complete outstanding walls in the superstructure of the pyramid precinct of Senwosret III), photogrammetry has not yet been considered as generally applicable, but it is being considered specifically for larger column fragments. Its use is planned for complex larger blocks

15 Cf. Frood 2013, Navratilova 2013, 2015b, Ragazzoli 2018a, 2013, Pelt and Staring 2019, Verhoeven 2013, 147

16 Dorman 2008, and the upcoming Davies and Laboury eds. 2020.

17 The recording aspect has been addressed more closely in the preliminary report (H. Navratilova, Department of Egyptian Art, the Metropolitan Museum of Art, New York).

18 A technique developed and perfected at the IFAO and used at the *Académie hiératique*, a specialized workshop organized by the IFAO and the CNRS, with instalments in 2015, 2016, 2017, 2018 and 2019 so far.

19 Provisional inking in season 2018 used *Mylar*™, which gives acceptable results, but is technically problematic as the ink takes rather long to dry out due to the non-absorbent qualities of *Mylar*.

with several layers of epigraphic activity, and particularly for the rounded surfaces of column fragments.[20]

All tracings are intended for scanning and digital inking. In that context, the hand inking may appear as redundant, but I would like to make a case for a complex recording approach, especially for significant dipinti. Although contact methods, such as hand-tracing, are increasingly phased out in Egypt, and now banned in rock inscriptions recording,[21] a detailed examination that is helped by the hand-tracing process is thus far difficult to replace for ostraca and ink-written dipinti. However, it is recognised that the conservation aspects, and a protection of the artefact must be given a priority when necessary.

The reasons for a seemingly reduplicated workflow rest in a specific aim of each of the recording methods.[22] The pencil drawing and its digital version should aim at reconstructing the technique of writing, and indicate the brushstrokes' direction, composition and, if possible, sequence,[23] whilst the hand-inked version offers a more accurate rendering of the preservation of the ink, as nuances of shading of and damage to the ink can be captured relatively accurately. The analysis of a sign construction, or sign formation, has been shown to provide data on text production and on palaeography.[24]

Further experimenting is needed for a development of accurate digital inking that would be capable of reproducing the fading and damage to ink in corresponding detail and accuracy.[25] This was thus far possible mainly in hardcopy inking, but it would be desirable to transfer this accuracy also to a digital format.[26]

A development of extensive and varied recording techniques aims to provide not only a publishable record, but also a quality archival record that will offer verifiable data for future researchers and will have sufficient archive quality. Photography also allows for the use of digital colour manipulation, including the decorrelation stretch (with *DStretch®* plug-in).[27] Good results have been obtained on Ramesside red ink texts and figures in Dahshur using this method.

20 A. Oppenheim, personal communication.
21 Urcia et al. 2018, following Curci et al. 2012.
22 On challenges of graffiti recording on different surfaces now also Salvador 2020, in detail.
23 Compare Ragazzoli 2017b.
24 Recently Regulski 2018, with further references.
25 The options were amply discussed by the participants of the conference *Clamour from the Past,* held at the IFAO in June 2019.
26 See Urcia et al. 2018, following Curci et al. 2012. Note, however, that these complex methods require a dedicated team, equipment, and consequently a substantial expense. They may, however, become an epigraphic necessity following the elimination of contact copying.
27 Evans and Mourad 2018, Gourdon and Enmarch 2017.

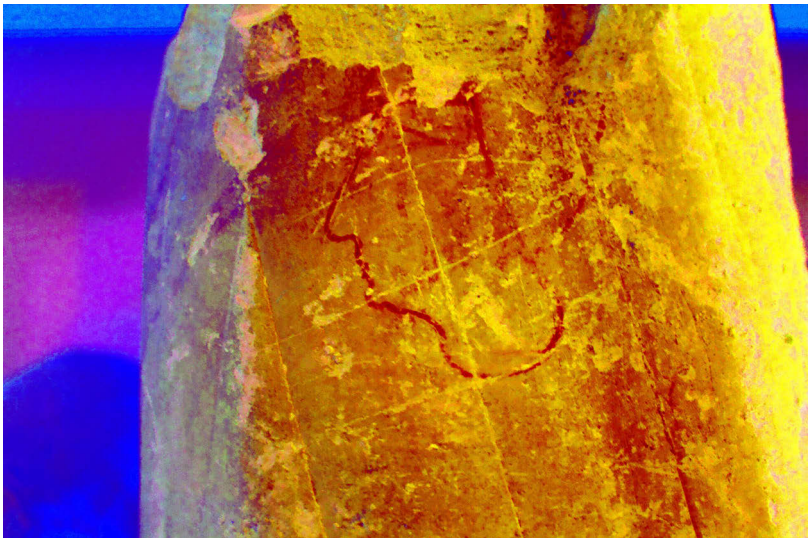

Fig. 1: *DStretch*®-adjusted image of a royal head, probably Ramesside. Fragment of a column from the South Temple of Senwosret III (© The Metropolitan Museum of Art; photo Hana Navratilova)

For future reference, digital modelling of the surface and epigraphic features, using orthophotography and photogrammetry,[28] could be used for the dipinti in pyramid precincts as well, with some profit, provided that archival standards for the digital data and an archival infrastructure adjusted to hold them would be available.

Dino-lite

The *Dino-lite* portable microscope was also used on ink dipinti. The *Dino-lite* provides additional level of detail and is especially useful for small and faded signs. Microscopes have been used with profit for a study of written texts on papyri (e. g. by James P. Allen in his publication of the Heqanakhte papyri[29]). However, using the microscope during fieldwork presented potential obstacles. *Dino-lite*, being portable, resolved most difficulties. During the 2018 season at the Metropolitan Museum of Art excavation in the pyramid complex of Senwosret III at Dahshur, the *Dino-lite* was used on ink-written New Kingdom dipinti, in particular on fragment 94.989.

The large fragment no. 94.989 used to be a part of a painted doorframe from one of the shrines in the pyramid complex of Senwosret III. The doorframes were often

28 Wordsworth and Prada 2018, Salvador 2020.

29 Allen 2002, and further Regulski 2018.

used to host New Kingdom secondary epigraphy in this Middle Kingdom pyramid complex. There were several texts written in black ink on the doorframe's painted thickness. They contained dipinti that identified the pyramid owner and praised the temple as "the most beautiful among all the temples".

Individual hand-writing styles can be seen on the doorframe. But the individual signs have small dimensions and present some difficulty for reconstructing how exactly the individual signs looked like. The detail no. 1 (fig. 2) shows an outline of the hieratic signs as gleaned from a hand-tracing collated with photography record. The detail no. 2 (fig. 3a, b) shows the same part of the text copied from a *Dino-lite* shot, clearly outlining the individual strokes of the scribe's pen.

Recording workflow options

The ideal workflow in a setting comparable to Senwosret III would include epigraphic recording work to follow after a registrar's work and an interpretive perspective on the primary epigraphy layers. During fieldwork at Dahshur, this system is already practised by the MMA team. Photography, and other photographic techniques, are applied, as well as a hand-tracing. The latter could be replaced with a Chicago-style tracing on a digital photograph, inclusive using enhanced digital record if required, and followed by a collation with the original.[30]

Photogrammetry and further adjustments of resulting digital images, including *DStretch®* have brought considerable results elsewhere,[31] and parallel developments experimenting with Reflectance Transformation Imaging, photogrammetry, and other digitally supported and enhanced technologies have been applied to rock art and rock inscriptions,[32] demonstrating the potential of these methods.

The workflow is naturally different in an extant monument with large square footage of graffitied walls,[33] when compared to the fragmented surfaces such as in Dahshur. Although the basic requirement of accurate, "archivable", and revisable record must remain the same, it may be easier to adopt the digital "Chicago" method as shown by K. Vértés, as large and fragile wall surfaces may prove increasingly difficult to trace by any other method.[34] On the other hand, it is evident that a complex and time consuming process including all the digital enhancements cannot be applied to all secondary epigraphy finds routinely. This is where the hand tracings

30 Vértés 2020, Der Manuelian 1998, outline for graffiti Navratilova 2015b.
31 Worsdworth and Prada 2018.
32 Urcia et al. 2018.
33 Compare Bell 1987 and Traunecker 1987.
34 See also Gülden 2018.

Fig. 2: A detail from door thickness 94.989, as traced by hand (© The Metropolitan Museum of Art; tracing and digital retracing Hana Navratilova)

Fig. 3a, b: A detail from door thickness 94.989, a *Dino-lite* snapshot with tracing and digital inking (© The Metropolitan Museum of Art; tracing and digital retracing Hana Navratilova)

and hand inking of select dipinti, collated immediately on site, may be helpful, being conducive to an attentive observation.[35]

A recorded, well-described and contextualised fragment, ideally already inserted into its approximate location and placement in the architectural and decorative scheme, would then be analysed as a secondary epigraphy artefact, and a result of an epigraphic performance[36].

Why attention to secondary epigraphy?

The recording techniques and processes as outlined above are time- and skill-consuming, expensive, and not seldom all of the above. They clearly offer advantageous new data on epigraphic layers that were either not observed before or documented relatively cursorily. However, it could be still suggested that the results of secondary epigraphy research on fragmentary corpora, as opposed to well-preserved texts and figures in their original setting (such as in the case of Theban material,[37] or indeed the Djoser chapels[38] in Saqqara, not to mention impressive square footage of temple graffiti[39]), are not sufficiently informative and do not necessarily contribute to the broader perspectives of Egyptian archaeology and history.

On the example of the South Temple of Senwosret III at Dahshur, it may be argued that this is not the case. The following lines will offer a summary, outlining the changing character of secondary epigraphy in Dahshur's precinct of Senwosret III throughout the New Kingdom and its contribution to an interpretation of the temple's history. The characteristic New Kingdom phenomenon of visitors' inscriptions is not isolated and it did not remain unaffected by historical developments. Secondary epigraphy channelled the cultural and social concerns of diverse periods. As is gradually attested[40], the Thutmoside texts at Dahshur were frequently thematising historical knowledge and also political concerns as articulated within the Egyptian elites. They constitute part of a body of the Thutmoside dipinti evidence in the Memphite area that was concerned with the representation of contemporary kingship by non-royal persons.

The Eighteenth dynasty inscriptions developed a particular style, and the Eighteenth dynasty Memphite secondary inscriptions – like their counterparts elsewhere

35 Compare Gasse 2015.

36 Cf. Ragazzoli 2017c.

37 Ragazzoli 2017a, 2017b, 2013. All three contributions are concerned with man-made spaces; on rock graffiti see Dorn 2014 with references to previous work on the graffiti in the Theban mountain.

38 Navratilova 2015b.

39 Frood 2013, Salvador 2016, Cruz-Uribe 2016, Dijkstra 2012.

40 Navratilova 2013.

in Egypt – were already prone to a standardised formulaic structure with narrative markers[41] – the rather well-known *ỉw.t pw-* style inscription.[42] They began with a dating formula, more or less elaborate, that was continued by a variation on a historical text. The historical text inserts that are concerned with activities of Thutmose III, and which also have Abusir, and Medum[43] parallels, expanded the formulaic scheme. The Dahshur examples on fragments 94.1413, and 94.1411[44] are comparable to Saqqara and Abusir examples in the Step pyramid[45] and in the Userkaf Sun temple.[46] The Userkaf Sun temple graffito is better preserved than its Dahshur counterparts:

1. *[... ḫr ḥm n nswt] bjty (mn-<ḫpr>-rˁ) sꜣ rˁ (ḏḥwtj-msw nfr-ḫpr.w) ˁnḫ ḏ.t r nḥḥ ỉs.t ḥm=f ḥr ḏꜣḥj [...]*	1. [date under the Majesty of the King of Upper] and Lower Egypt, Men<kheper>re, Son of Re, Thutmose Neferkheperu, living for ever and ever. As His Majesty was in Syria […]
2. *[... tꜣ.w fn]ḫ.w ḫbḫb ḫꜣ.w ḥr s.t=sn ḫr wḏ ỉtỉ=f ỉmn-rˁ nswt nṯr.w*	2. [As he trampled the lands of the Fen] khu and Hurrians in their place according to the command of his father, Amun-Re, King of gods (Amonrasonther).
3. *[ỉw.t pw ỉr.n] wḥm.w nswt ỉꜣmw-nḏḥ r mꜣ; m(ḥ)r pn pꜣ ˁtḫ ḥnˁ nꜣ n ḫrj.w n ˁt [...] sḫꜣ ?*	3. [There came] the royal herald Amunedjeh to see this pyramid. The Brewer and those of bread [production] … scribe ?
4. *[...]-m-p.t ỉmn-ḥtp sḫꜣ mntw-ḥtp sḫꜣ ḏḥwtj-m-ḥꜣ.t ḥwmš*	4. […]-m-pet, Amenhotep, Scribe Mentuhotep, Scribe Djehutiemhat, Humesh,
5. [remnants of signs] […] *sḫꜣ*	5. [traces of names and a title…] scribe?

In all three locations: Abusir, Saqqara and Dahshur, the graffiti appear to share a following structure, although not every graffito demonstrated all surviving parts:

41 Summed up by Ragazzoli 2013, Verhoeven 2012.
42 Ragazzoli 2013, Megally 1981, Navratilova 2015b.
43 Navratilova 2011.
44 Navratilova forthcoming.
45 See Navratilova 2015b, 140–141.
46 Navratilova 2015b, 61–63 with further references.

a) Official date.
b) Activities of the king, at which the writers/visitors perhaps did not participate directly but relate them, and relate to them as deeds of the king, whom they serve, affirming their own social position.[47] Location of the king (best preserved in Amunedjeh's specimen in Abusir) could be included as well.
c) A gist of the visitors' inscription with a short visitors' formula.
d) List of accompanying or subsequently arriving (?) personnel.[48]

As most of hitherto known epigraphic features on the decorated surfaces of the South temple of Senwosret III appear to be datable to the Eighteenth dynasty, it may be suggested that this was also a possible date for other secondary features on the decorated surfaces, such as abovementioned copying grids. These grids appear on a number of monuments in Egypt and are increasingly being recognised as a secondary epigraphy feature.[49] The Eighteenth dynasty material attests thus to a relationship to an extant monument, which became a space of self-representation and representation, and quite possibly a link in the artistic tradition.[50]

There is another element suggesting that training of artists and/or artisans involved them in visits to sites such as pyramid temples. One larger fragment with painted surface bears the opening of the "book of Kemyt" (03.467).[51] The first words of the so called "Memphite" letter formula – certainly obsolete in New Kingdom letter writing – were applied on a wall or a fragment of a wall. Dating of this piece is of course debatable, but its New Kingdom provenance is a possibility. In that case, it would contribute to the collection of Kemyt copies attested in the milieu of workmen employed at or frequenting a necropolis.[52]

The Ramesside epigraphic material, assumed to come mostly from the Nineteenth dynasty (but still open to further dating adjustments), also appears on decorated surfaces (e. g. cartouche showing *stp-n-rˁ* on 96.461 from the Pyramid Temple), but a rather conspicuous part is attested on undecorated plain and chiselled stone surfaces, suggestive of a change in material circumstances. The new finds from the South temple uncovered a broader range of Ramesside secondary epigraphy

47 Di Biase-Dyson 2015, 2019. See also Navratilova 2019.
48 In detail, Navratilova forthcoming.
49 R. Enmarch, personal communication June 2019, grids observed in tombs.
50 Cf. Navratilova 2017, compare Theban material – Ragazzoli 2017a.
51 Thanks to Aurore Motte for discussing this piece. On the work - selection of recent publications and discussions follows: Burkard and Thissen 2003; Parkinson 2002, Petersmarck 2012; Posener 1951; Barta 1978, Brunner 1957. Compare also Verhoeven 2012.
52 Goelet 2013.

than previously attested. Ramesside epigraphic production in the temple of Senwosret III differs from Ramesside graffiti in other locations.[53]

The new finds from the South temple are particularly remarkable given a larger presence of figural graffiti and dipinti, datable to the Ramesside period. These, similarly to other graffiti ensembles, consist of divine, royal, human, and animal figures, symbols, such as the eye of Horus, and ceremonial fans. One group of Ramesside textual dipinti is accompanied by a divine image of a ram-headed deity (fragment 17.43), combining text and figure.

Dating some figural graffiti comes with its own challenges[54], but the Ramesside human and royal figures are reasonably certain, due to characteristic style of dress and accessories. A South temple column fragment (no. 389 from season 2017, subject to *DStretch®* adjustment, see fig. 1) bears an outline of a royal head with a Blue crown and an uraeus, drawn in red ink and with a Ramesside-looking profile.[55] There are also varied fragments of drawn and incised human figures in what is most likely a Ramesside dress.

The figures *per se* would be open to varied interpretive speculations, but their context is suggesting some key elements of the Ramesside use of the temple. First, the temple appears to have had its decorated surfaces damaged after the Eighteenth dynasty (cf. above). Second, another category, namely the Ramesside texts containing demolition dockets probably indicated the expected destinations of stones after parts of the temple had been dismantled. As further dockets had been identified after a rearrangement of finds in the new magazine at the MMA Research Center at Dahshur, is increasingly possible to reassess the growing evidence of the Ramesside use and eventually also at least partial destruction of the precinct. The Ramesside chapter of the temple history is captured in secondary epigraphy as a decisive link in the *chaîne opératoire*, in the biography of the temple that ended being largely commodified as a resource of stone.

Diverse characteristics of the dockets, having been previously identified, may now be put in a more reliable comparative perspective. There are at least two scribal hands and two destinations written as large dockets, and further hands that wrote smaller dockets. The docket uses as well as typology raises, however, also further queries regarding organization of the demolition and removal process. The docketed finds appeared in diverse parts of the precinct. A practical use of the dockets is also pointing toward a literate presence on site. Obviously, there were scribes who had written them, but also the responsible personnel who read them – either other scribes (administrators), or literate foremen of the workmen who were employed at

53 In general terms, both Memphite graffiti in pyramid precincts and their relatives elsewhere demonstrate changes in time, and adaptations to different spaces, cf. Dorn 2014.

54 Staring 2011.

55 Compare Ramesside ostraca e. g. Louvre N 498, or MMA 14.6.191 and 29.2.22.

the demolition site. The qualifications of some of the demolition staff allowed, as is shown in the above outlined growing number of figural graffiti, also some more or less sophisticated expression of their interests and experiences. Remarkably, not every figural graffito author either had or had decided to use a writing kit, as there are also carved and scratched examples, despite the fact that writing kits must have been present on site.

The physical aspect of moving of the stone through and out of the pyramid complex is attested by intrusive fragments from other parts of the pyramid complex that were identified in the causeway area[56]. The research in the South temple/causeway area is likely to bring more evidence for the nuances of the New Kingdom re-use of the pyramid complexes as attested by the example of the precinct of Senwosret III at Dahshur.

Secondary epigraphy evidence in the precinct of Senwosret III is also complemented by other, especially material culture finds datable to the New Kingdom. As has been already shown, the secondary epigraphy interpretation rests largely on an extended contextualisation with site conditions and other finds. In the pyramid precinct of Senwosret III, there is no shortage of contextual information, as the New Kingdom finds include also pottery, and possibly some tools that might have been used in the temple demolition (?). The pottery[57] indicates New Kingdom Eighteenth dynasty activity, possibly including ritual. The New Kingdom cult interest appear also to be attested by stelae. One stela fragment is possibly dedicated to Khaka(u)re, Senwosret III (the find dated October 22, 2018, no inventory number assigned yet). Later, probably Ramesside corpus of pottery may appear less distinctive, but still allowing to expect a cultic use of the complex, with decorated fine pottery, preceding or overlapping with the repurposing of most of its limestone.

Conclusions

The interpretation of secondary epigraphy has been expanded and articulated in the last decade, making this particular ancient writing practice an important element in understanding the aspects of personal experience of the ancient individual, and collective concerns of the ancient communities. It is increasingly accorded a role in the interpretation of an emic understanding of sites that have become subject to modern archaeological research[58].

The paper presented the role of secondary epigraphy as a vital witness to the monument biography, revealing diverse actors on site. An appreciation of the pyr-

56 A. Oppenheim and Di. Arnold, personal communication.

57 Consulted with Susan Allen, see also Allen 2000 and 2004.

58 Ragazzoli 2018b.

amid complex as a meaningful space[59] alongside its re-use for building material is suggestive of an understanding of the necropolis as a dynamic "urban" space open to diverse uses and re-uses, confirming the Ramesside tension between an image of a tomb as a stable memorial and lived experience of the fragility of the monuments. The fragility was articulated in the Ramesside text of Papyrus Chester Beatty IV.[60]

Given the value of secondary epigraphy evidence, it is argued that its recording and archiving secures essential material. The recording processes are constantly evolving in response to new requirements of research, but also of conservation. A close observation remains irreplaceable, favouring a continued use of hand-tracings, if allowable in context of conservation. However, all methods are open to continuous revision and development.

Addendum

Concerning several aspects of documentation, space distribution and historical development of textual and figural ink graffiti (dipinti) in Asyut, cf. also the recently published edition Verhoeven (ed.) 2020.

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59 Cf. Theban tombs examples, see Ragazzoli 2017a.

60 Papyrus British Museum EA 10684, paragraph 4. Lichtheim 1976, 175–178.

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The messy scribe from Deir el-Medina. A palaeographical journey through the texts of a draughtsman, scribe, and poet from the 19th dynasty: Pay (i)

Stéphane Polis*

Abstract

This paper gathers a number of texts that it argues were written by a single scribe from Deir el-Medina who lived during the first half of the 19th Dynasty and who was active mostly during the reign of Ramesses II. The identification of these texts takes as its point of departure the archeological context of 'Maison G/J', situated north of the Ptolemaic temple and to the east of the *Grand Puits*. Based on palaeographic, orthographic, and thematic evidence, the paper shows that this scribe wrote a series of hymns to Amun that are expressive of a vivid personal piety. By correlating certain features of this scribe's handwriting, it further argues that the same scribe was also responsible for hymns addressed to the deities Mut, Taweret, and Iaret, as well as for a hymn to Thebes. Outside of the literary realm, the same hand is attested in administrative documents, including letters that allow us to situate the scribe in question within a family of draughtsmen. The paper identifies this polygraph as Pay (i) – the first of this line of draughtsmen from Deir el-Medina – to whom dozens of hieratic texts can be attributed.

1. Introduction

Jaroslav Černý queried[1] "[w]hether, and how far it will be possible to classify the variety of hands occurring in the documents of the Tomb, and to link the handwritings to individual scribes".[2] The present paper aims to provide a first answer to these questions, delegated by Černý to future scholars, though the pitfalls attendant upon

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1 See van den Berg and Donker van Heel 2000, 13.

2 Černý 2001, 222–223.

such an endeavor are well-known. There is, on the one hand, the significant degree of variation[3] – both synchronic[4] and diachronic[5] – that can be observed within the hieratic texts of a single hieratic hand, depending on the medium and written registers.[6] And conversely, the resemblances between hands of the same period, which allow us to date witnesses based on palaeographic features,[7] are actually a hindrance when one wishes to single out an individual hand.[8] Finally, the difficulties in attributing specific hands to particular scribes are substantial when compositions are not accompanied by colophons[9] or 'signatures'.[10]

Despite these complications, recent years have witnessed major progress in the field.[11] Clusters of documents written by specific hands have been identified[12] and a number of texts have been attributed to individual scribes.[13] Crucially, these studies do not rely solely on palaeographic features – whether on the level of isolated signs or on the broader level of ligatures, words, and even entire phrases – but complement the identification of these essential features with observations about the provenance of the inscribed objects, their genre (journals, letters, hymns, etc.) and date of composition (usually based on prosopographic information), and the layout and general appearance of the texts.[14] These multiple factors are always intertwined to an extent, and it can be difficult to find a satisfactory way to present all of the data and the reasoning that lie behind the identification of a specific hand.[15]

In the present case, after careful deliberation, I decided that the most efficient way to convey my (highly provisional) reconstruction of the body of texts written by the 'messy polygraph' from Deir el-Medina was to tell a story – the story of my own journey through places, collections, and essays that led to my current understanding of this scribe's *dossier*. Rather than a rational account of the palaeographic,

3 Polis 2020, 552–559.
4 Janssen 1987 and 2000; Sweeney 1998.
5 Dorn 2015.
6 Dorn and Polis 2016, 67–73; Polis 2018a, 74–78; Vernus 2019, 12–14.
7 For the Ramesside period, see Wimmer 1995, 1998, and 2001, with Janssen 1997; Dorn, this volume.
8 Eyre 1979, 86–87.
9 McDowell 2000; Lenzo-Marchese 2004.
10 Burkard 2013 and 2014; Dorn 2017; Hassan 2017; Polis 2018b, 97–98; Dorn and Polis 2019, 20–21.
11 Fischer-Elfert 2020, 654–660.
12 van den Berg and Donker van Heel 2000; Donker van Heel and Haring 2003, 39–82; McClain 2018.
13 Dorn 2006; Ragazzoli 2012; Demarée 2018a and 2018b, 10–12; Hassan and Polis 2018; Kamal and Sojic 2019.
14 Gasse 1992.
15 In the present case, I wondered whether I should even publish the data at all, knowing that I could in truth deal only with the tip of the iceberg within the framework of an article.

diplomatic, orthographic, linguistic, and stylistic features of the writings of this scribe, presented *en bloc*, I hope the reader will bear with me as I trace the steps that led me to cluster together dozens of texts written in Deir el-Medina during the 19th Dynasty and to attribute these texts to a single scribe.[16]

2. A first encounter: *La Maison* 'G' (or 'J') as a point of departure

In recent years, archeological context has increasingly been taken into account in philological analyses of written materials from the community of Deir el-Medina. Annie Gasse[17] and Andreas Dorn[18], for example, have demonstrated the kind of results that can be achieved when one takes into consideration the provenance of Ramesside ostraca from Western Thebes, while Hans van den Berg and Koen Donker van Heel[19] have shown that archaeological data can be a valuable point of departure for grouping texts written by the same hand. Stimulated by these findings, Andreas Dorn and I proposed to prepare for publication some literary ostraca from Deir el-Medina based on their specific find-sites within the village. Drawing upon the marks used by the excavators, we set out to investigate those ostraca stamped with 'Maison G' and 'K 290', two locations north of the village, on the northern and southern side of the Ptolemaic temple respectively. Several ostraca found in these two places turned out to have been written by the same distinctive hand; these stimulated my interest in this scribe and his idiosyncratic writing habits.[20]

'Maison G' is the name given by Bernard Bruyère in his *Journal* of the 1946–1947 excavation season (p. 6, left) to a three-room structure (G, G', G" in fig. 1) which he identified as a house. The structure is located between Chapel F and Chapel G, five meters south-east of the ramp leading to Chapel G, in proximity to the *Grand Puits*. It was excavated between the 17th and 19th of January 1947 (fig. 1, blue) and was later renamed 'Maison J',[21] evidently to avoid confusions with the aforementioned Chapel G.

16 Annex 1 represents a table of the ostraca (detailing their text genres and provenances) that are firmly attributed to the 'messy polygraph' in the framework of this study. The corpus is preliminary; I do not intend to list here all the published texts written by this scribe, as other witnesses to this hand are currently being gathered and form part of a larger endeavor whose scope far exceeds the limits of this paper.

17 Gasse 2000.

18 Dorn 2011.

19 van den Berg and Donker van Heel 2000.

20 The results of my and Dorn's research will be presented in a volume of the *DFIFAO*. In the present paper, I focus exclusively on documents that have been published.

21 Bruyère 1952, 33–34, pl. I and VI, left.

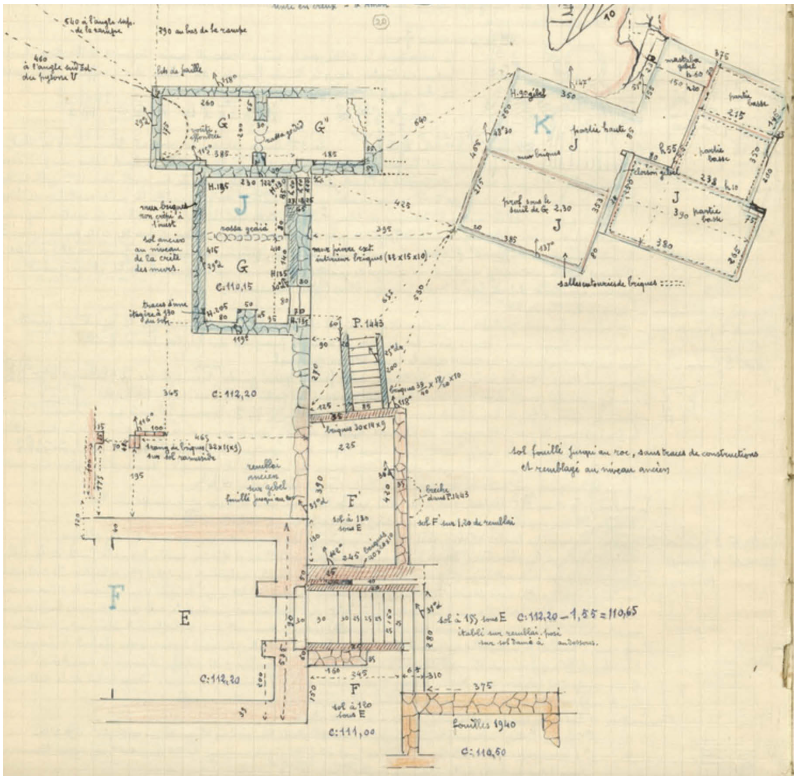


Fig. 1: Maison G/J in Bruyère's Journal (MS_2004_0163_011)

Among the hieratic ostraca found within Maison G/J[22] was an intact prayer to Amun (O. IFAO inv. 2181). This was published by Georges Posener in a paper entitled 'Amon juge du pauvre' (fig. 2).[23, 24]

Posener connected this ostracon to another ostracon bought in Western Thebes by Ludwig Borchardt, which he knew from a photograph given to him by Černý (fig. 3).[25] He established the link between the ostraca on thematic grounds[26] – both

22 See already Bruyère 1952, pl. XII–XIV.

23 Posener 1971.

24 Throughout this paper, I use photographs whenever possible and resort to black and white facsimiles when the quality of the photographs at my disposal is not sufficient or the ink too faint to allow for proper palaeographical assessments.

25 Curiously, this document is now part of the IFAO collections, though its detailed history is not recorded.

26 Note the intertextual connection discussed by Posener with O. Wilson (Wilson 1933) = O. London BM EA 29559 (Demarée 2002, pl. 86–87; formerly numbered 5656a). The hand-

Fig. 2: Doc. A = O. IFAO inv. 2181 (© IFAO, Archives)

texts are intercessory prayers to Amun on behalf of the poor at a tribunal[27] – though he also noted the resemblance between the handwriting on the two ostraca.[28]

Indeed, there is not much doubt that the two texts were penned by the same scribe, as they share most (if not all) palaeographical features:

- The hand is untidy and smudged, characterized by "un pinceau défectueux et une encre trop épaisse".[29] The ductus is fast, with round but jerky movements, and lacks precision. Also very noticeable is the variation in terms of ink density that characterizes this hand: from dark black to light grey, the quantity of ink varies significantly from sign to sign, and traces of dipping[30] are clearly visible throughout the texts.

writing on O. Wilson shares several features with the hand of the 'messy scribe', but nonetheless looks decidedly different.

27 Vernus 1993, 183–187; Quack 2013, 164–165.

28 Posener 1971, 61.

29 Posener 1971, 59.

30 Allen 2002, 193–242.

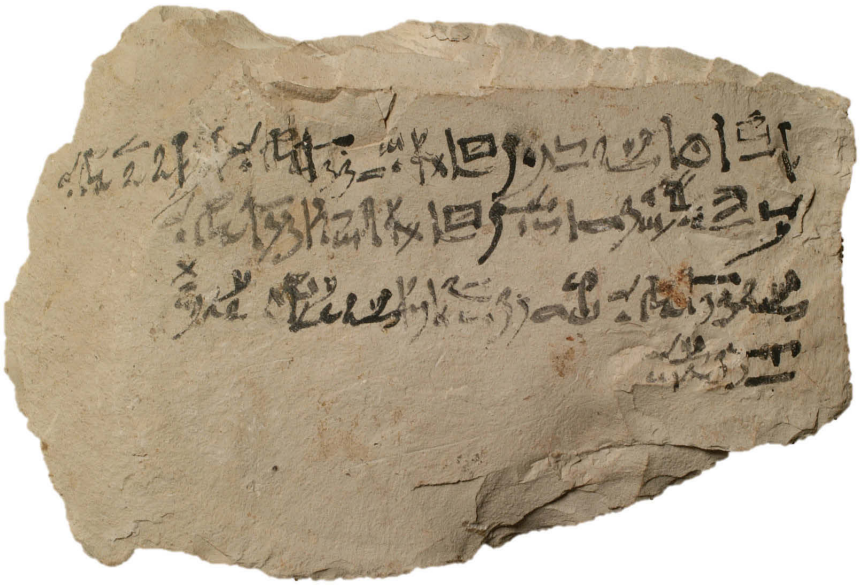


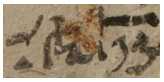
Fig. 3: Doc. B = O. Borchardt (© IFAO, Archives)

- In terms of layout, interlinear spacing is limited (corresponding globally to less than half the height of the written line). Horizontal spacing between signs ('kerning') is small, with occasional overlaps between individual signs (table 1a, a–b), a phenomenon which scribes usually tend to avoid. These features contribute to the crowded appearance of this scribe's texts. Note that the signs inside a line quite often progress upwards in a stair-like fashion (table 1a, c–d) before returning to the baseline.

Table 1a. Palaeographical features of Docs. A and B (part 1):

(a) A,2 (b) B,3 (c) A,5 (d) B,1

Table 1b. Palaeographical features of Docs. A and B (part 2):

			
(a) A,4	(b) B,3	(c) A,7	(d) B,2

- Spelling habits and the ductus of entire words are also shared by the two texts. One may compare, for instance, the words *nmḥ* 'poor' (table 1a, d; 1b, a–b) and *ḳnb.t* 'tribunal' (table 1b, c–d) that occur on both ostraca.[31]
- Zooming down to the level of individual groups of signs and signs, the following features shared by the two documents can be observed.[32] The group  *mn* is quite distinctive, with a squarish form and a large (dotted) loop on top (table 1c, a–b). The definite article *pꜣ*  is distinctive as well (table 1c, c–d): the wings of the *pꜣ*-bird are drawn as two small converging strokes, and the following aleph is tall and may be almost as high as the *pꜣ*-bird. The  -sign (A2) is yet another 'marker' of this hand (table 1c, e–i): the strokes representing the 'hand to the mouth' and 'legs' are drawn in the upper part of the sign, while the vertical stroke – which stands for the body – extends downwards, not infrequently below the baseline. Finally, note the  -shape (A1, ) that the hieratic can take, for instance, in table 1c (j) in the words *nb.t* and *mḥ.t*, as well as the frequent highly abbreviated form of  as a simple dot, as in table 1c (h).

Besides the palaeographical features discussed above, three spellings from Doc. A are worth observing at this point. First, the 2sg.m independent pronoun is written  (A,2, A,8) – like a conjunctive with the 2sg.m suffix pronoun – rather than  (or the like), as is usually the case in hieratic texts of the New Kingdom. The negative relative *jwtj* is spelled phonographically  (A,5), with a classifier borrowed from the homophone *jꜣd* 'to suffer', and the verb *dm* 'to pronounce' (A,7–8) is written  , without the  -classifier (see Doc. C,r4), a spelling which

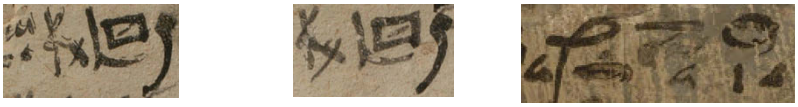
31 O. Gardiner 45 (= *HO* 8.2) is also an appeal to Amun for help, made by a man standing in front of the court. It will not be analyzed here, but the spelling of *ḳnb.t* is identical to the spelling in Docs. A and B, and it shares the palaeographical features identified here. It was most probably written by the same scribe. See already Posener (1971, 61), who remarked that it was "inscrit par une main qui ressemble à [O. IFAO inv. 2181]".

32 I focus here on a selection of palaeographical commonalities, but other key features of the hand that are attested in these texts will be discussed in the following sections.

Table 1c. Palaeographical features of Doc. A and B (part 3):

(a) A,5 (b) B,1 (c) A,3 (d) B,1

(e) A,1 (f) A,4 (g) A,8



(h) B,1 (i) B,2 (j) A,1

is not exceptional for this verb in New Kingdom hieratic. We shall see throughout this paper that such non-standard orthographies are quite typical of this scribe.

3. Amun leads the way: hymns by the same hand

If one is willing to accept the conclusion of Section 2, namely that Docs. A and B were most likely written by the same scribe, there are different avenues to be explored when it comes to identifying other texts by the same hand. The most obvious path might be thematic. Because this scribe appears to have been an adherent of Amun, it is possible to hypothesize that other hymns and prayers to this god from Deir el-Medina might have been penned by him. And indeed, there are several other religious compositions on ostraca from Deir el-Medina that invoke Amun as the main divinity, and these are – beyond reasonable doubt – by the same scribe.

Fig. 4a: Doc. C,r° = O. Cambridge Fitzwilliam Museum E.GA.6134.1943, r°
(© Hagen 2011, pl. 40)

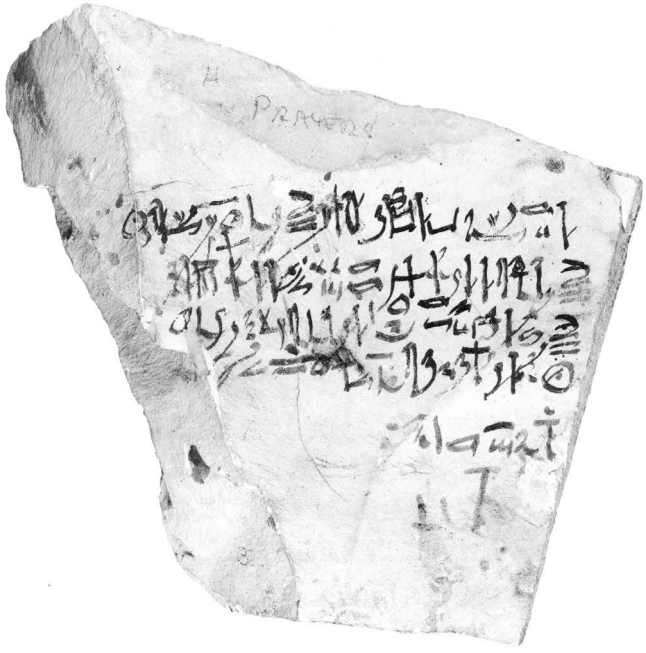


Fig. 4b: Doc. C,v° = O. Cambridge Fitzwilliam Museum E.GA.6134.1943, v°
(© Hagen 2011, pl. 42)

The most striking case – the easiest to identify and attribute to this hand – is probably O. Cambridge Fitzwilliam Museum E.GA.6134.1943.[33] This two-fold hymn to Amun features a prayer to Amun on the *recto*, and describes the beneficial effects that the god has on his follower on the verso. Both faces of the ostracon reflect the palaeographical features discussed above, from the global down to the specific. Besides the overall appearance of the hand (which will not be discussed further below, except in cases when it deviates significantly from previous observations), especially noteworthy are the lines that progress like stairs (passim); frequent horizontal overlaps between signs[34] (table 2a, a[35]–c), with a neat increase of the text density on the verso; the form of *Jmn* 'Amun', with the squarish, non-ligatured, and dotted *mn* (table 2a, d–f); the shape of the *pꜣ*, usually with a tall *ꜣ* (table 2a, g–h); and the  -sign, with the hands and feet positioned particularly high on the body stroke (table 2a, i–j). Note that we can also observe variants or allographs of the same signs: the ligature for *ḏr* has a broad and narrow variant (table 2a, k vs. l), while *šw* can be written both without (usual) and with (once) the two diacritic strokes (table 2a, c and m vs. n).

These palaeographical arguments can be further corroborated by noting the scribe's spelling habits and phraseological choices. The hymn opens with an invocation to Amun as a solar deity and reads[36] (C,11): •  •  *jb-ḫr.t m pꜣ šw wbn ° Jmn jsṯ ntk wbn °* "Thinking in the rising sun: Amun, for sure, you are the one rising!" As stressed by Hagen,[37] the spelling  has to be the 2SG.M independent pronoun in this context, just as in A,2 and A,8, used here as subject of a cleft-sentence.[38] The spelling thus plays a role in

33 Hagen 2011, 34–36, 98–101; Quack 2013, 169–170.

34 In Table 2a, a and c, note the almost complete overlap between the feather *šw* and the *ꜣ* of the *pꜣ*-bird. Though this could indicate a scribal correction (Hagen 2011, 35), it is actually a habit of this scribe, and it appers especially after he dipped his pen (see already Doc. B,3). In *recto* 3, emend the edition  to , the confusion deriving from overlapping signs.

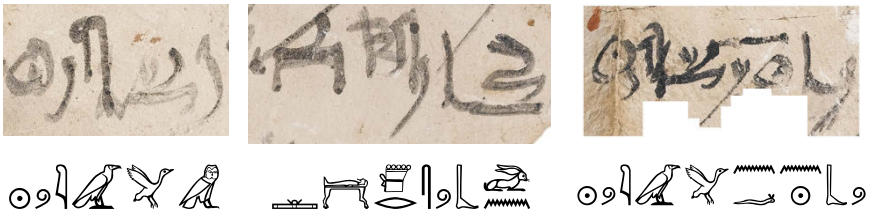
35 The signs above the first line must have been erased on purpose and may have represented (something similar to) *jb-ḫr.t* in l. 1 (probably not *dwꜣ [Jmn]*, as previously understood). The irregularities of the writing surface on the top right produced a series of ugly sign shapes that the scribe erased before starting anew on the flat surface below. A such, I number l. 2 in the edition here as l. 1.

36 The third sign in this line is definitely  (compare with Fischer-Elfert 1986, 65, n. d), not (Hagen 2011, 99). The confusion derives from strokes belonging to the (erased) line above.

37 Hagen 2011, 35.

38 Quack (2013, 169) translates "Ich dürste nach Bedarf in der aufgehenden Sonne, und du, Amun, bist noch aufgegangen." However, as we shall see below, *jb-ḫr.t* should be understood as a compound of the type *nḏ-ḫr.t* (Wb II, 373,12–20). Furthermore, the First Present pronoun *tw=k* would be the expected subject of *wbn*, used as a pseudo-participle, as suggested by Quack's translation.

Table 2a. Palaeographical features of Doc. C (part 1):



(a) C,r1 (b) C,r5 (c) C,v1

(d) C,r1 (e) C,r3 (f) C,v1 (g) C,r4 (h) C,v1

(i) C,v2 (j) C,v2 (k) C,r2 (l) C,r5 (m) C,r1 (n) C,r3

Table 2b. Palaeographical features of Doc. C (part 2):

(a) C,r2 (b) C,v2 (c) C,r5

(d) C,r3 (e) C,v1 (f) C,r1 (g) C,v3

the attribution of this hymn to the 'messy scribe'. In terms of common phraseological choices, one can observe the construction *p3 dm (nb) rn=k* 'the one who/whoever invokes your name' (both A,7–8 and C,r4).

At this point, some additional writing habits of our scribe should be highlighted in order to help add some other texts to his corpus of writings:

- When the text that he wrote is faint due to lack of ink, he touches it up after dipping his pen. He does not try to follow the faint signs precisely (e.g. C,r1), but instead redraws the entire sequence independently (table 2b, a).
- A *supra lineam* addition in the same hand shows that the scribe proofreads his texts directly after writing them, though he does not care much about overlaps between the supralinear additions and the signs belonging to the main line. As shown by table 2b (b),  overlaps with  and overlaps with  .
- Some words he wrote very quickly, and some signs he wrote in highly simplified fashion. Table 2b (c) is a case in point.[39] Here the evil-bird  on the edge of the ostracon is barely visible in the spelling of *ḥḳr* 'to be hungry', and all the more so because the subsequent  sign overlaps with it.
- In terms of spelling habits, the particle of thematization *jr* 'as for' is written as  (table 2b, d–e), instead of the usual  , which can be used as an additional hand-marker of this scribe.
- Finally, the uniliteral  *ẖ* (table 2b, f–g), with its distinctive <s>-shape, is a reliable marker of texts written during the 19th Dynasty.[40] As such, it can be used as an initial means to narrow down the dating of this hand, which Posener[41] situated between the mid-19th and mid-20th Dynasty. It likely belongs to the 19th rather than to the 20th Dynasty.

As should be clear from the foregoing, the identification of the 'messy' hand clearly relies on a cluster of interwoven features. Now that we are more accustomed to the visual appearance of this hand and the ways in which its features correlate, several other hymns to Amun that share the above-mentioned features can be rather straightforwardly attributed to our scribe. O. DeM 1409[42] is an obvious candidate. This elaborate prayer, followed by a numerical hymn to Amun,[43] was written by a man seeking to recover from blindness (*dj=k m3n=j psḏ=k nfr* 'may you let me see your beautiful light'), a fact that will be of great importance when trying to identify

39 See Quack 2013, 170, n. 55.
40 Wimmer 1995, 396a–aa; 1998, 1229; Dorn, this volume.
41 Posener 1971, 59.
42 Posener 1977a, 32 and pl. 17–17a.
43 Posener 1977b, 389, n. 23; Fischer-Elfert 1986, 63–67; Mathieu 1996, 212; Quack 2013, 165–166.

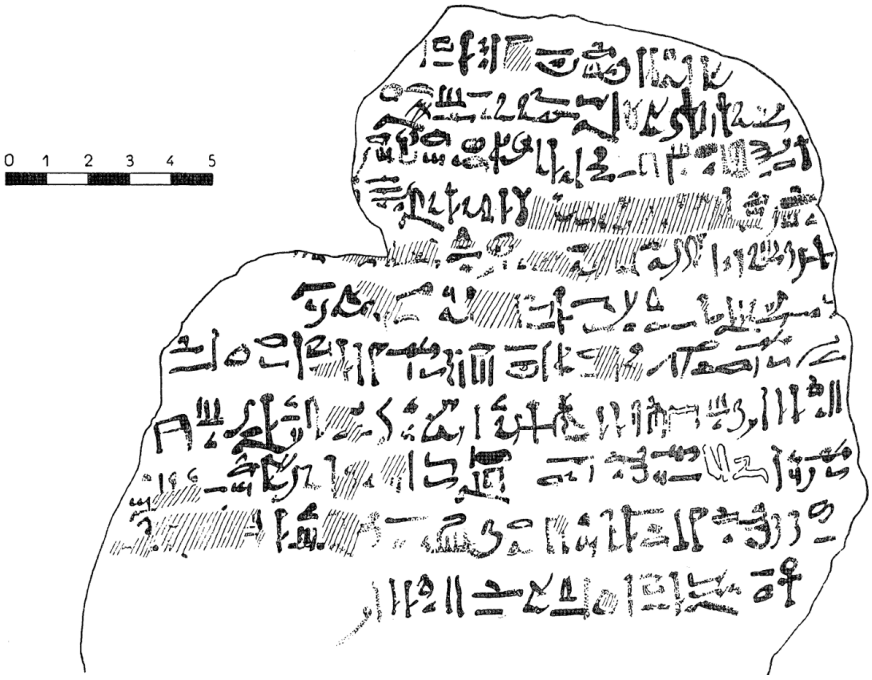


Fig. 5: Doc. D = O. DeM 1409 (© Posener 1977a: pl. 17a)

the scribe (Section 5). It also displays all of the features discussed so far; in addition, it also features the rare collocation *jb-ḫr.t* (l. 3, cf. n. 14), already attested at the beginning of Doc. C. Following Fischer-Elfert and Quack,[44] I understand this collocation to be a compound construction of the verb *jb* 'to think, to reflect, to surmise'[45] rather than of *jbi* 'to be thirsty'.[46] This is due to (1) the lack of the 𓈙-classifier, which would be expected, though it is not mandatory, for the verb *jbi* 'to be thirsty'; (2) the parallelism with the compound *nḏ-ḫr.t* 'to inquire after, to greet',[47] which is also a verb of intellection; and (3) the fact that a translation based on *jbi* 'to be thirsty' would be difficult to understand in other contexts in which it occurs.[48] Its general meaning seems to be in accordance with its etymology, with translations that include 'to meditate, to think or ponder', usually about future situations, with

44 Fischer-Elfert 1986, 64 and 65, n. d; Quack 2013, 166.
45 Polis and Stauder 2014, 203–206.
46 Wb I, 61,8–10.
47 Wb II, 373,12–20.
48 *Pace* Quack 2013, 169.

a nuance of either hope or fear. Here the text formulates a wish and reads *jb-ḫr.t ḫpr ḥtp[=k]* 'hoping that [you] be satisfied […]' (l. 3–4).

In line with what we have observed for Doc. A and C, the scribe tends to borrow classifiers from homophonic words, such as  'light' (l. 2), with  from *psḏ* 'back', or  'to link, to unite' or 'light' (l. 4), with  from *(mk)ḥ;* 'back (of the head)' (or sim.). Doc. D also allows one to highlight further habits of the ductus that are common to Doc. A–D. The group  has two distinctive features (table 3, a–c): (1) the top is shaped almost like the head of a hieratic bird (see table 3, b where it is touched up) and is not centered horizontally but tends to be positioned on the right-hand side of the group; (2) the bottom part displays two marked angles to the left, the first of which is particularly pronounced in each case, with a clear-cut alternance between oblique and horizontal strokes. The plural strokes  are also written in quite particular fashion (table 3, d–f), with the first two horizontal strokes closer to one another, while the bottom part of the sign has a characteristic <z>-shape. Of the three types of variants illustrated here, we shall see that (d) is the most individual to this hand.

Table 3. Additional palaeographical features of the hand:

(a) A,7

(b) C,r4

(c) D,3

(d) C,r3

(e) C,v3

(f) D,7

(g) D,10

(h) D,1

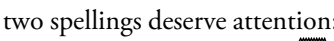
Finally, two spellings deserve attention: *snṯr* 'incense' is spelled  (table 3, g), with the highly unusual group in the middle, while the root *ḥtp* is written  , with the two phonetic complements *t* and *p* below the *ḥtp*-sign. This spelling is very 'hieroglyphic,' one might say, and calls attention to a definitional feature of this hand that we have not yet explicitly addressed: while the general appearance of the hand might be 'messy', individual groups and signs are often quite detailed and not greatly removed from the appearance of cursive hieroglyphic script. This point echoes the comments by Gasse about O. IFAO inv. 2971: "l'écriture est très serrée ;

Fig. 6: Doc. E = O. IFAO inv. 2971 (© Gasse 1992, 61)

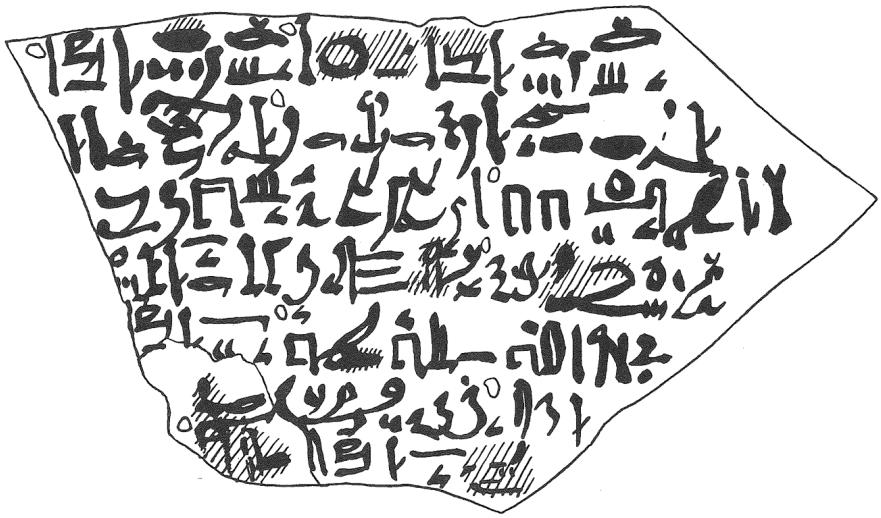


Fig. 7: Doc. F = O. Glasgow D.1925.88 (© McDowell 1993, pl. 31a)

les lignes ne sont pas régulières, non plus que l'encrage, ce qui confère au texte un aspect dense peu avenant alors que les signes sont plutôt sobres et réguliers"[49]. Even a glimpse at O. IFAO inv. 2971 (fig. 6) reveals that this ostracon assuredly belongs to the corpus of the messy scribe.

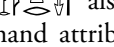
Before leaving Amun for other deities and text types, O. Glasgow D.1925.88[50] is worth considering. Indeed, the vocabulary of this hymn to Amun[51] in his solar forms of Ra and Horakhti (fig. 7) overlaps significantly with one of the texts that we have just examined. Even in facsimile, one quickly recognizes the general habits

49 Gasse 1992, 61.

50 McDowell 1993, 29–30, pl. 31–31a.

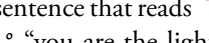
51 Note the strong intertextual links with 18th Dynasty visitor graffiti (Navrátilová 2011, 259).

of the scribe, e. g. the stair-like progression of signs and the way in which the signs collide horizontally (e. g. at the beginning of l. 5, with *tp* infringing upon *ḥr* in ).

Furthermore, the ductus of several common words in Doc. F is identical to that observed in other documents examined so far (compare, for instance, *Jmn* in l. 1 and 7 with table 2a, d–f, and  *p.t* 'sky' in l. 3 with Doc. D,8 [twice]). Finally, the spelling  of the verb *ḥtp* (l. 1) is identical to Doc. D,4, while the unexpected  group in  also appears in Doc. D,10 (cf. table 3, g). Taken together, these features demand attribution to our scribe. Interestingly, next to his preliminary transcription of this ostracon in his *Notebooks*, Černý wrote 'Pay's hand',[52] a laconic remark of the highest relevance, as we shall see in Section 5.

4. From Amun to Mut and the city of Thebes

The previous sections might give the impression that our scribe was exclusively a devotee of Amun, but O. DeM 1055[53] (fig. 8) offers a corrective to this idea as well as permitting a segue into discussion of other deities in our scribe's output. While the first five lines of this ostracon correspond to a hymn to Amun 'the warrior' (*pꜣ ʿḥꜣ.wtj*), a hymn to Mut follows directly in the same hand.[54]

The attribution of this text to our scribe is quite straightforward. Line 4 asserts the identity between Amun and the light, Shu (cf. Doc. D), as well as the identity between Amun and Pre, in a sentence that reads  *[n]tk pꜣ šw, ntk pꜣ Rʿ* ° "you are the light, you are Pre." As we have seen (Doc. A,2 and 8; Doc. C,11), the spelling  for the 2SG.M independent pronoun is a habit of our scribe. Further indicators of his hand include the characteristic shape of the *pꜣ*-article, with tall aleph (table 4, a–c); the ductus of *Jmn* (compare table 4, d–e with table 1c, a–b and 2a, d–f) and of  in the verbal prefix  (table 4, f), with the hands and feet appearing high on the body stroke (compare table 2a, i–j).

The occurrence of Ra in Doc. G (table 4, g) further allows me to comment on the ductus of two signs that have not yet been discussed. His  s are made up of two strokes: the first stroke almost takes the shape of a hieratic n and is usually very flat and horizontal (table 4, g–i) even though more curved variants occur (table 4, j–k), while the second stroke starts from the left and reflects a flattened loop down-

52 McDowell 1993, 29 (= Černý, *Notebook* 36, 74).

53 Posener 1938, 15 and pl. 30–30a.

54 Mathieu (1996, 240–241), who discusses the intertextual links between numerical hymns and love songs, considers the hymn to Mut on this ostracon to be a direct source of inspiration for several stanza found in the Chester Beatty Cycle.

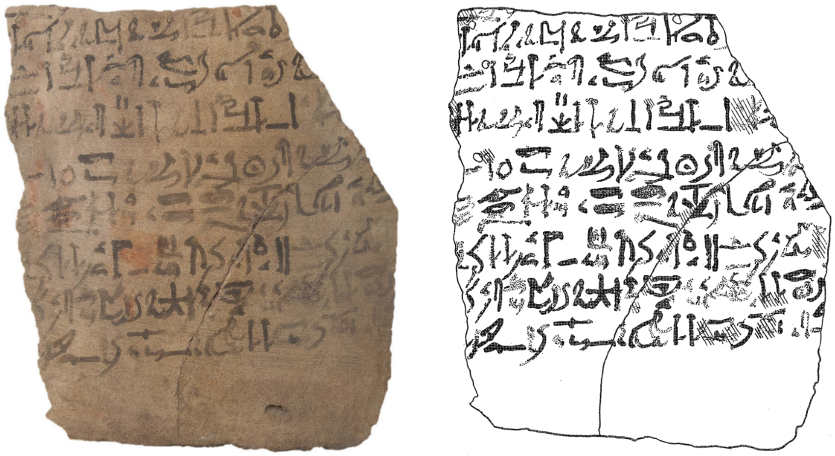
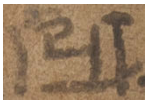
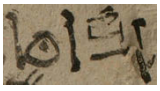


Fig. 8: Doc. G = O. DeM 1055 (© IFAO, Archives and Posener 1938, pl. 30a)

wards. The  is also noticeable: while the shape of this sign varies significantly in the cases where it is written and preserved, the stroke on top of the vertical line opens towards the left (table 4, k), and fairly often takes a slightly curved shape (table 4, l).

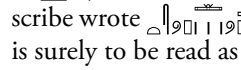
Table 4. Indicators of scribal hand in Doc. G and beyond:

					
(a) G,1	(b) G,4	(c) G,4	(d) G,2	(e) G,3	(f) G,5
					
(g) G,4	(h) A,8	(i) B,2	(j) C,r4	(k) D,7	(l) B,1

If the surface of the medium (pottery sherds vs. limestone) generally affects the overall appearance of the texts (with a slightly more fluid ductus on pottery sherds), the essential features of the hand are not deeply impacted by this variable. This is demonstrated by a comparison between Doc. G and the magical incantation on O. Cambridge Fitzwilliam Museum E.GA.6128.1943, v° (Fig. 9).[55]

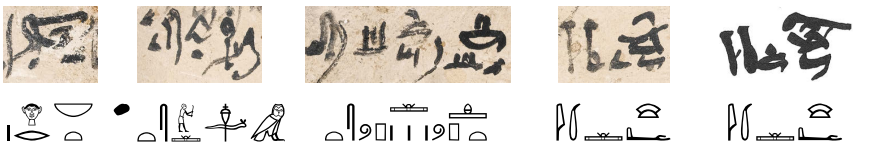
55 Hagen 2011, 25–26 and pl. 84–86.

Fig. 9: Doc. H = O. Cambridge Fitzwilliam Museum E.GA.6128.1943, v°
(© Hagen 2011, pl. 26)

In this magical spell, pronounced by 'The Great' – namely, Iaret 'the Uraeus' – it is possible to observe writing habits that are typical of our 'messy scribe' (while the drawings on top of the ostracon also reflect his scribal profile). The following features are readily recognizable: signs that overlap horizontally[56] (table 5, a), the stair-like progression of groups of signs (table 5, b–c), the typical two-stroke  -sign (table 5, f–h; cf. table 3, d–f), as well as a classifier exchange (with *ḫsf* 'to approach' written as  'to repel'[57]). Additionally, three points deserve further mention. First, the scribe wrote  (table 5, c, with his usual spelling of the group) for what is surely to be read as *ḥtp=s*.[58] This is certainly a means to graphically mark the final occlusive *p* at the end of *ḥtp* (much like  is used to mark the final occlusive *t*), as illustrated by his spelling of *ḫpr* as  in Doc. D,3. Second, the scribe seems to have struggled with the  -sign (table 5, d), resorting to six somewhat hesitant strokes. Interestingly, the same observation applies to Doc. F (table 5, e), where the sign is similarly formed and touched-up on top. Finally, note that the  -sign occurs several times in Doc. H (table 5, i-l) and that the scribe resorts to four strokes, adding a stroke at the bottom left, which sometimes extends quite significantly to the right (table 5, l).

56 Note here the variant of *ḥr* (compare with Table 3, a–c), with a dot instead of a ligature for *r*.
57 See Hagen 2011, 26.
58 Hagen 2011, 26.

Table 5. Some palaeographical features of Doc. H:



(a) H,1 (b) H,3 (c) H,4 (d) H,5 (e) F,2

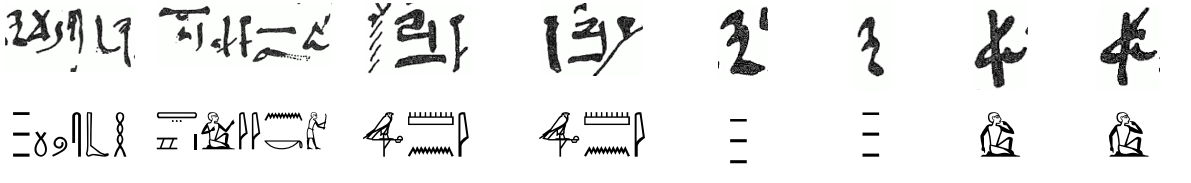
(f) H,3 (g) H,3 (h) H,3 (i) H,1 (j) H,2 (k) H,2 (l) H,3

Even if the ink is not particularly well-preserved, especially on the right-hand side of the ostracon, a final text will be discussed in this section in order to illustrate the variety of textual genres mastered by this scribe: the hymn to Thebes on O. DeM 1584.[59] Thanks to parallels on O. Petrie 39[60] and O. DeM 1641i–ii,[61] the beginning of the hymn – which has not been entirely understood so far – can be reconstructed as *[mk bw ỉ]b=j pr m Wỉs.t, šd wj ḥr ms[ḏ=j, jb-]ḫr.t=j wnn=j m ḥd, jw Njw.t m tp-mỉ[=j]* 'Look, I do not want to leave Thebes! Protect me from what I hate, when I think that I am travelling north, while the City is at my side (and …)'. The occurrence of the compound verb *jb-ḫr.t* (see Doc. C,r° 1 and Doc. D,3) is a first clue pointing to our scribe. The palaeographical features of the text further strengthen this attribution, for instance, the stair-like progression of certain groups of signs (table 6, a–b; compare [a] with *ḥbs.w* in Doc. C,v°3), the characteristic ductus of *Jmn* (table 6, c–d) and the plural strokes  (table 6, a, e–f), as well as the distinctive shape of  (with the body stroke extending downwards).

In addition, the occurrence of nb.t in l. 2 allows us to observe that this scribe resorts almost exclusively to the closed variant of (Table 6, i–p), with a horizontal stroke on top of the basket;[62] the only occurrence of the open variant in the texts examined so far appears in the temporal phrase *rˁ nb* 'every day' (table 6, q).

59 Posener 1977b, 391; 1978, 77, pl. 46–46a; Verhoeven 2005, 75; Ragazzoli 2008, 34–36.
60 *HO* 8.3.
61 Posener 1980, pl. 66.
62 Cf. Möller II, 510.

Table 6. Some palaeographical features of Doc. I:



(a) I,5 (b) I, 6 (c) I,4 (d) I,6 (e) I,4 (f) I,5 (g) I,2 (h) I,3

(i) I,2 (j) A,2 (k) A,3 (l) C,r3 (m) C,r4 (n) D,1 (o) D,7 (p) G,7 (q) C,v3

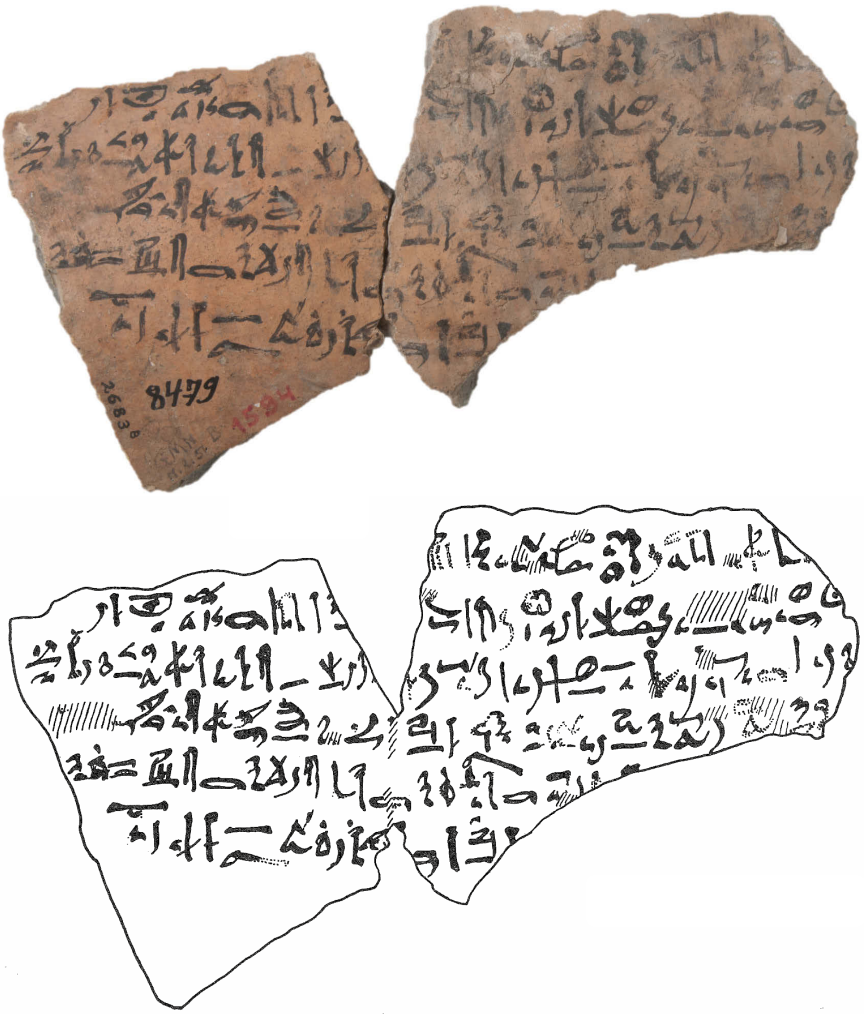


Fig. 10: Doc. I = O. DeM 1584 (© IFAO, Archives and Posener 1978, pl. 46a)

5. Towards an identification of the scribe: the letters sent by Pay (i)

While looking through the literary compositions by our scribe, various pieces of evidence that might help in narrowing down the number of possible individuals behind this hand have also been observed. The provenance of the ostraca makes clear that we should look inside the community of Deir el-Medina, while the spe-

cific ductus of some signs (e. g. 𓎛) clearly points to the 19th Dynasty. We further observed the writer's obvious attachment to Amun (Doc. A–D, F–G) – including a prayer asking for recovery from blindness (Doc. D) – and to the city of Thebes (Doc. I). We also noted the presence of drawings on one of the ostraca (Doc. H) as well as hieratic signs with cursive hieroglyphic shapes (Section 3). Finally, we have a comment by Černý concerning Doc. F that reads simply 'Pay's hand.'

In agreement with Černý's identification, the most obvious candidate for our 'messy scribe' is the draughtsman Pay (i), son of Ipuy (v), who was active in the community during the first part of the 19th Dynasty, and who is mostly attested during the early years of Ramesses II.[63] Pay (i) regularly bore the title 'draughtsman of Amun (in the Place of Truth)'[64] and probably worked with his father Ipuy (who was also a draughtsman) within Amun's temple precinct at Karnak before he was transferred onto the Deir el-Medina workforce. This could explain in part his devotion to Amun and to the city of Thebes. Pay (i) was the founder of a family dynasty of draughtsmen in Deir el-Medina: at least three of his sons and five of his grandsons followed in his professional footsteps. This profession may account for idiosyncrasies of his hand. This could account for idiosyncrasies of his handwriting. He may have passed away at a ripe old age, around year 47 of Ramesses II.[65]

As we shall see, the various features discussed above match what we know about his life and career but also what we know about his other scribal habits. In order to further concretize our identification of Pay (i) as the messy scribe, I turn to the letters sent by Pay (i). These are a sound point of departure, following the (somewhat positivistic but nonetheless realistic) hypothesis that, as a literate in the community,[66] he would have penned them himself. Within the published material, there are four different letters that were sent by Pay (i) (fig. 11–14). The best of these to begin with is O. Berlin P. 11247.[67] In this letter to one of his sons – either Prehotep (i) or Preemheb (i)[68] – he says that he is not doing well and is suffering due to a loss of sight. Amun has abandoned him,[69] he says, and he asks his son to provide him with

63 Málek 1979; Fábián 1997; Davies 1999, 149–155, Chart 10; Keller 1991, 63–65; Keller 2008; Davies 2018, 231–235; Menéndez 2019, 219–242.

64 E. g. Weiss 2015, 84 and 86.

65 If he is the Pay mentioned in O. Turin CGT 57062, ro 6. But his grandson Pay (ii) is a more likely candidate (see already Davies 1999, 150).

66 Baines 1983, Baines and Eyre 1983.

67 *Deir el Medine online* ID 290 (https://dem-online.gwi.uni-muenchen.de/fragment.php?id=209 [08 June 2021]).

68 Preemheb (i) is perhaps more likely because, where the name of the addressee is preserved in other letters (Doc. K and M), it is Preemheb (i) who is asked for help.

69 Luiselli 2011, 280–281.

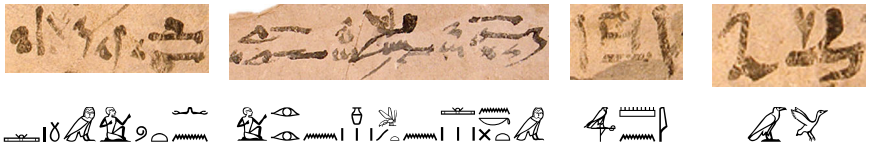
Fig. 11: Doc. J = O. Berlin P. 11247 (© Deir el Medine online)

honey and other products to serve as medicine for his ailing eyes.[70] The contents of this letter echo the prayer to Amun in Doc. D (l. 2: *dj=k mꜣn=j psḏ=k* 'may you let me see your light!'). Additionally, Goldwasser[71] has highlighted the literary Late Egyptian registers and style used in this letter, which would be expected of a scribe versed in literature.

70 In texts displaying personal piety, the divinity (here Amun) may be both punisher and savior (see Posener 1975, 202, n. 20 for a mention of this letter with previous references to the topic). Cf. for instance O. Cairo 12202, r° and v° (= Posener 1975, 196–201 and pl. 19) for an invocation of Amun from someone who has recovered from blindness.

71 Goldwasser 2001, 130–132.

Table 7. Some palaeographical features of Doc. J:



(a) J,r2 (b) J,v1 (c) J,r4 (d) J,r3

(e) J,r4 (f) J,v2 (g) J,v6 (h) J,r3 (i) J,v2

In terms of its hand, this letter exemplifies the palaeographical features identified in Section 2–4, from the more general – marked dipping, the occasionally stair-like progression of signs (table 7, a), and signs that collide horizontally[72] (table 7, b) – to the specific: *Jmn* conforms to the usual ductus (table 7, c), the *p;* adopts its typical shape with a tall aleph (table 7, d), the *nb*-basket is closed on top (table 7, e), the *ḫ* takes the expected *s*-shape table 7, f–g), and some signs are rendered in a 'hieroglyphic' fashion (table 7, h–i).

Taken together, the contents and formal characteristics of this letter seem to confirm that the messy scribe was indeed behind O. Berlin P. 11247. But is this letter an autograph? This would allow us to identify the messy hand with Pay (i). As I will show below, I think that we have every reason to answer in the affirmative, as these distinctive formal features occur in all of the letters sent by the draughtsman Pay (i). Instead of tediously rehearsing these palaeographical arguments for each of the next three letters, however, I will focus on some (a) stylistic and grammatical, (b) orthographical, and (c) palaeographical features that have not been discussed thus far. These appear in O. Černý 19[73] – a moving letter in which Pay (i) asks his son Preemheb (i) to help him acquire some commodities for the funeral of his wife and Preemheb's mother, Merytre (ii) – and in O. Cambridge Fitzwilliam Museum

72 Note that a *n* is to be added in the hieroglyphic transcriptions of v° 1 (see *Deir el Medine online* [08 June 2021]): it is visible below the front leg of the bee, but the scribe – following a habit of his – wrote over it almost entirely after dipping his brush. See Doc. M,r2 for another use of this phrase by Pay (i).

73 *HO* 16 and pl. 54.4–54a.4.

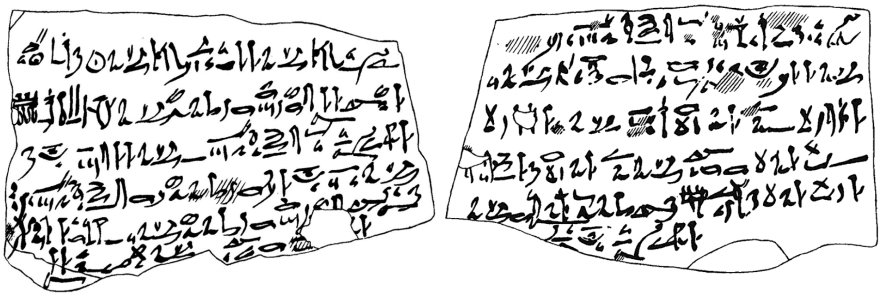


Fig. 12: Doc. K = O. Černý 19 (*HO* 54a.4)

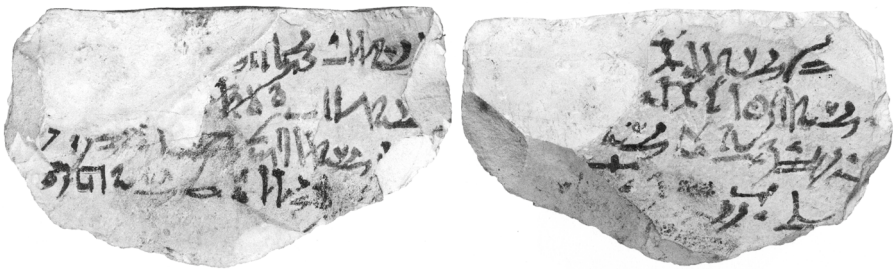


Fig. 13: Doc. L = O. Cambridge Fitzwilliam Museum E.GA.6135.1943
(© Hagen 2011, pl. 44–45)

E.GA.6135.1943[74] and O. DeM 10249[75] – in which Pay (i) again asks Preemheb (i) to bring him a series of goods.

In terms of written style, Grandet noted of O. DeM 10249 that: "[c]et emploi d'un vocabulaire rare ou original (…), et de tournures grammaticales recherchées (…), témoignent probablement de l'érudition de l'auteur du document."[76] He thus concurs with Goldwasser that the missives must have been written by a man of letters. Interestingly, it appears that *variatio delectat* when Pay (i) swears by a god. Instead of the typical *wꜣḥ Jmn (wꜣḥ pꜣ ḥkꜣ)* formula, he refers to several deities – *wꜣḥ pꜣ šw* (Doc. L,v2), *wꜣḥ Ptḥ* (Doc. M,4), *wꜣḥ pꜣ Rʿ* (Doc. M,13) – a rare feature in the corpus of oaths from Deir el-Medina.[77]

The morphological and orthographical choices in the letters are rather old-fashioned and conservative. Together, they are indicative of an (early) 19th Dynasty com-

74 Hagen 2011, 36–37 and pl. 44–45.
75 Grandet 2010, 131–134 and 358; Müller 2010, 312 and 317.
76 Grandet 2010, 133.
77 Polis 2011, 390–391.

Fig. 14: Doc. M = O. DeM 10249 (© IFAO Archives)

position.[78] Three examples can be given to illustrate this point. (1) The old subjunctive morphemes of the verbs *jnj* 'to bring' and *mꜣꜣ* 'to see' – *t* and *n* respectively – are spelled out, for example, *jḫ-jnt=k* 'could you bring' (Doc. J,v1; Doc. M,2[79]) and *dj=k mꜣn=j* 'may you let me see' (Doc. D,2). (2) The 3PL suffix pronoun *=sn* is still employed for the *sḏm=f* constructions (Doc. B,2, Doc. H,4 & 5) and the possessive determiners (Doc. K,r3; Doc. L,r3), while the 3PL suffix *=w* is attested after nouns (Doc. K,r4) and the *jw* of the Third Future (Doc. F,2). (3) The predicative negation is usually written  *nn* (nominal predication = D, 7–8 & 11; G, 2 & 6; First Present = J, 2; existential = M, 5; infinitive = C3, v4). The Late Egyptian negation *bn* is limited to letters, for the subjunctive form (Doc. L,v4) and for the First Present pattern introduced by the rhetorical question marker *js bn*[80] (Doc. J,v5).

Zooming in on the spellings, three features are noticeable.[81] (1) The *sš-ḳd* 'draughtsman' title is sometimes spelled out in full and sometimes abbreviated, even in the same document (table 8, a vs. b). The choice between the two variants seems to have been motivated by the space available for the first lines of the letters, which contain – in all four letters discussed here – the complete names of the sender and of the addressee. (2) The preposition *ḥnʿ* 'with, and' is written  (table 8, c–d). This

78 Winand 1995.

79 See Winand 1992, 223 with Müller 2010, 312.

80 See Collier 2014, 19–20.

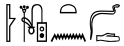
81 Note that *snṯr* 'incense' is written normally in Doc. K,r5, and not with the unusual spelling discussed at the end of Section 3.

Table 8. Orthographical and palaeographical features of the letters:

(a) M,1	(b) M,1	(c) K,v3	(d) M,3	(e) L,v3	(f) M,9	(g) M,12
						

(h) K,r1	(i) K,v1	(j) M,4	(k) M,13
			

spelling cannot be used in itself to identify a hand, though it is specific to a limited number of hands from Deir el-Medina during the 19th Dynasty, and particularly the reign of Ramesses II.[82] As such, it can be used as an efficient heuristic device for potentially identifying further texts written by the messy scribe. (3) In this respect, the spelling of the infinitive of *jnj* 'to bring' is noteworthy as well (table 8, e–f), with the unusual classifiers  .

Regarding the palaeographical features of individual signs, two habits of the ductus are noticeable. As observed in Section 2 (see table 1c, j), our scribe could write his hieratic much like a  . This is very clearly the case in the introductory formula  of Doc. K (table 8, h) and it has led to some faulty hieroglyphic transcriptions of this scribe's hieratic texts (e. g. *HO* 54.4). The  -sign (e. g. table 8, i–k) is also particularly distinctive,[83] especially as regards the four diagonal strokes added to the main vertical body of the sign.

As can be seen, the handwriting across the letters penned by Pay (i) is very consistent. It also perfectly mirrors the observations made above concerning the messy scribe of the literary compositions discussed in Section 2–4. As such, I believe it is reasonable at this stage to hypothesize that the messy scribe was indeed the draughtsman Pay (1). Before proceeding, however, it should be stressed that the corpus of letters sent by Pay (i) is obviously not limited to communications in which the name of the sender has been preserved. O. DeM 1011,[84] for example, possesses

82 According to the Ramses corpus (http://ramses.ulg.ac.be [08 June 2021]; see Polis et al. 2013, Winand et al. 2015), this spelling is attested 22 times as of the end of May 2021.

83 Compare with Möller II, 398–400 and Wimmer 1995, 398.

84 Grandet 2006, 112 and 311.

all the formal characteristics of a letter written by Pay (i), though the names of the sender and addressee of this letter are lost.

6. Negative evidence: letters from Nebre (i) and Khay (i), or, "not everything messy is Pay's"

So far, I have provided only positive evidence for the clustering of texts together based on their resemblances, but I have not contrasted the hand of our messy scribe with other hands. Put bluntly, an obvious criticism of the preceding attributions of texts to Pay (i) might read as follows: you are lumping together texts with similar hands, but in doing so, you have ignored aspects in which these texts vary; in fact, these texts may have been written by different scribes with similar hands.

In order to forestall such criticism, it is necessary to compare the hand behind the texts I have attributed to Pay (i) with other hands from the same time and place. In this respect, I have chosen ostraca that were penned by very similar hands: my *comparanda* take the form of letters sent by both his son Nebre (i) and his grandson Khay (i), two draughtsmen of the family.[85] Given what we know about scribal education in the village,[86] the transfer of scribal knowledge and the mediation of scribal practices are likely to have taken place to a large extent within the family, with a subsequent filiation of hands. Here I consider two letters sent by Nebre (i)[87] – one to his brother Preemheb (i) (O. Bruxelles MRAH E 6781[88]) and another to his son Nakhtamun (iii) (O. DeM 558[89]) – and two letters sent by by Khay (i) – one to his uncle (literally 'brother') Preemheb (i) (P. Grdseloff[90]) and the other to an unknown individual (O. DeM 581).[91]

A glance at the two letters by Nebre (i) (figs. 15–16) immediately reveals that we are dealing with the same family of hands, which share a dense organization of the text, a tendency for the neatness of the hand to deteriorate as the text unfolds, sim-

85 It would also have been possible to investigate letters sent by his son Prehotep (i), such as O. DeM 303, or his grandson Nebneteru (i), such as O. DeM 119 and 317, but I decided to limit my investigations to one branch of the family within the framework of this contribution.

86 McDowell 2000.

87 I disregard Nebre's model letter to the Vizier Paser on O. Toronto A 11, v° 13–25 (Gardiner 1913, *16d–e* and *m–n*; cf. Raedler 2004, 328), an ostracon which deserves a study of its own, and I set aside O. DeM 10250 (Grandet 2010, 134–135 and 359–360), a poorly preserved text that nonetheless conforms with my conclusions below.

88 K*RI* VII, 200,10–201,2.

89 Sauneron 1959, 3 and pl. 5.

90 Grdseloff 1940.

91 Sauneron 1959, 7 and pl. 16–16a.

Fig. 15: Doc. N = O. Bruxelles MRAH E 6781 (© MRAH, Bruxelles)

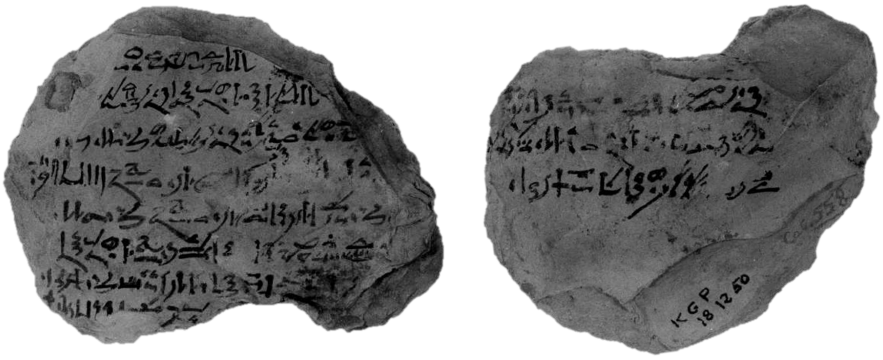


Fig. 16: Doc. O = O. DeM 558 (© IFAO, Archives).

ilar orthographical habits[92] (note, for instance, the preposition *ḥnʿ* written  in Doc. O,r7), and a similar ductus for individual signs. Consider, for instance,  () in Doc. N,3 (and compare it with table 2a, i–j; 4, f; 6, g–h) or the  that is closed on top (e. g. Doc. N,r1 & 2; Doc. O,r1).

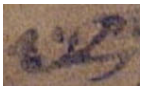
However, there are also features that we have not observed so far in the corpus of texts attributed to Pay (i). The most noticeable differences are as follows. (1) The inking of the texts is much more homogeneous in Docs. N–O; these texts do not feature the noticeable dipping effect that can be observed in the documents in Sec-

92 Conversely, some spelling habits are specific to Nebre (i) and were not observed above for Pay (i), like the orthography  for the demonstrative determiner *pȝy*. Note that O. DeM 784 (a short communication to Nakhtamun, like Doc. O) and O. DeM 790 (a letter to an unknown individual) display the same spelling of the demonstrative determiner and are most likely by the same hand.

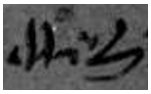
tions 2–5. (2) The lines are considerably straighter, without the stair-like progression that we documented in all of the texts above (except for Doc. G). (3) The general ductus is much smoother and more rounded. (4) Finally, some frequent hieratic signs and groups of signs deviate significantly from what we have observed so far.

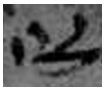
Table 9 (a–d) shows the different appearance of the group  in the two letters sent by Nebre (i). The aleph in these letters is always quite small, in stark contrast with what we saw in the texts attributed to Pay (i) (cf. table 9, e, for an extreme case; see further table 1c, c–d; 2a, g–h; 4, a–c, 7d). The group  in Nebre (i)'s letters knows two main variants: the fully ligatured version in the name of the *sš-ḳd Nḫt-Jmn*, for instance (table 9, f), and the non-ligatured version (e. g. table 9, g–h). The non-ligatured version appears at first glance to be quite similar to Pay (i)'s *mn* (table 9, i), but it actually features an additional horizontal stroke on top of the -sign. The *ḥr*-group is quite similar as well (table 9, j–k), but markedly narrower than in the texts attributed to Pay (i) (e. g. table 3, a–c). Lastly, note that the spatial organization of the signs sometimes differs as well: while the *f* is below the *w* in the sequence *jw=f* in the texts attributed to Pay (i) (e. g. table 9, l), it follows the *w* in Nebre (i)'s letters (e. g. Table 9, k).

Table 9. Comparison of some hieratic groups in documents attributed to Nebre (i) and Pay (i):

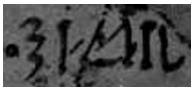

(a) N,r5


(b) N,R1


(c) O,r3

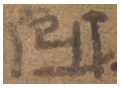

(d) O,7

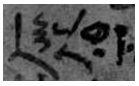

(e) C,r4


(f) O,r2


(g) N,r4


(h) N,r4


(i) G,3


(j) O,r2


(k) O,r5


(l) J,v2

Taken together, these observations are sufficient to postulate a filiation between the hands of Pay (i) and his son Nebre (i). At the same time, the comparison reflects numerous dissimilarities, suggesting that Nebre (i) was not the messy scribe who authored the literary compositions discussed in Section 2–4. The same conclusions hold for the two letters written by Khay (i) examined below (fig. 17–18).

Fig. 17: Doc. P = P. Grdseloff (© Grdseloff 1940, 533)

Table 10. Hieratic features of letters sent by Khay (i):

(a) Q,6	(b) Q,9	(c) P,r3	(d) Q,12	(e) Q,3	(f) Q,4	(g) Q,2	(h) P,r4

Unfortunately, these two documents are either short (fig. 17) or badly damaged (Doc. Q).[93] This obviously hampers a proper palaeographical comparison of these letters with the documents attributed to Pay (i). However, enough text is preserved to highlight both commonalities – such as the overall disorganised and messy appearance of the hand, the minimal horizontal spacing between signs (including some overlaps), the spelling  of the preposition *ḥnꜥ* 'with, and' (table 10, a–b) – and differences. As to the latter, we can observe in Doc. P the abbreviated form of the  (table 10, c) next to the *pꜣ* with tall aleph (table 10, d); the  -sign is also open on top (table 10, e–f); and the  -group is attested with an additional stroke in the middle of the *mn*-sign (table 10, g). These are features that do not occur in the texts attributed to Pay (i).

93 Sauneron 1959, 7 comments on the poor state of preservation of the text of O. DeM 581: "le texte entier a été lavé ou barbouillé d'encre après avoir après sa rédaction, de sorte que la surface est devenue d'un gris sale". As such, I refer only to the facsimile in this contribution.

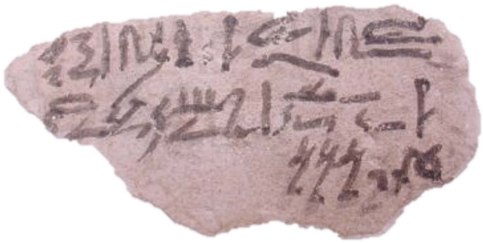
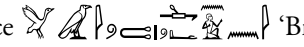
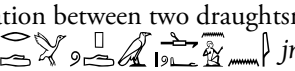


Fig. 18: Doc. R = O. London University College 32245 (© Petrie Museum)

The sentence  'Bring me a fledgling' (Doc. P,r°4–6) is interesting in at least two respects. First, from an orthographical point of view, the scribe employs a 'faulty' phonographic spelling of the verb *jnj* 'to bring'. Second, from a palaeographical viewpoint, the *yod* of this verb form is written with a relatively uncommon three-stroke ductus. These two features recall the habits of the scribe who penned the two Turin letters published in this volume[94] and suggest that we might viably consider Khay (i) to be their author. To the best of my knowledge, this phonographic spelling of the imperative of *jnj* occurs in just one other (also very short) communication between two draughtsmen, O. London University College 32245:[95]  *jn n=j wʿ ꜣpd rwḏ zp-2 zp-2 zp-2* 'Bring me a bird very, very, very quickly' (Doc. R,r2–3). The brevity of this letter prevents proper palaeographical judgement, but one can certainly not rule out a connection of some sort between the two hands.

7. Extending the corpus of texts attributed to Pay (i): Identifying and connecting documents

The palaeographical data surveyed in Section 6 demonstrate that – even within a family of hands – it is possible to isolate individuals by correlating an array of features. In this final section, I explore three more examples in order to illustrate different means by which we might attribute further texts to Pay (i). These examples were cherry-picked from amongst the writings that I deem most likely to have been written by Pay (i) and that I believe have the most potential to enrich his 'scribal profile.'

The first example (fig. 19a–b) shows that Sections 2–4 did not exhaust the corpus of texts by Pay (i) that feature prayers and hymns to Amun (and other deities). As

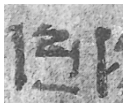
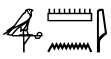
94 Demarée, Gabler and Polis, this volume, Section 5.
95 *HO* 34.3.

Fig. 19a: Doc. S = O. Strasbourg H. 188

Fig. 19b: Doc. T = O. Strasbourg H. 190

(© BNU Strasbourg)

Table 11. Palaeographical features of Docs. S–T:

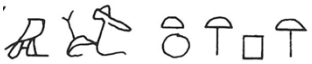
			
			
(a) S,1	(b) T,3	(c) T,4	(d) T,5

shown in table 11, two ostraca from the Bibliothèque Nationale Universitaire of Strasbourg – O. Strasbourg H. 188 and H. 190[96] – display the characteristic features of Pay (i)'s hand.[97] One can observe, for instance, (a) the ductus for *Jmn* (including the backward-facing  ; cf. Section 4); (b) the 'hieroglyphic' organization of *ḥtp* (cf. Section 3); (c) the tall-aleph *pꜣ*; and (d) the two-stroke plural marker (e. g. table 3, d–f).

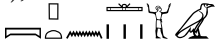
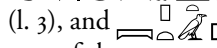
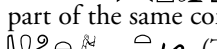
96 Koenig 1997, 15, pl. 97 and 134.

97 These two ostraca can be usefully contrasted with O. DeM 1262 (= Posener 1972, 42 and pl. 69–69a; Fischer-Elfert 1986, 68–69; Fischer-Elfert 1997, 117–120; Quack 2013, 166–167), which contains a hymn to Amun (r°, written in red ink) and a hymn to Thot (v°, written in black ink). While displaying some similarities with Pay (i)'s hand, typical hand-markers are not present and the ductus of some signs is decidedly different from the messy scribe's standards.

Table 12. Improved readings of Doc. T:

l. 1		
l. 2		
l. 3		⇒ 
l. 4		
l. 5		

A first advantage (and positive side-effect) of the emphasis on handwriting adopted in this paper is that one becomes familiar with the idiosyncrasies of a hand and can regularly enhance the hieroglyphic transcription of the *editiones principes* as a result. Table 12 shows the results of such an exercise for Doc. T.[98] Interestingly, *ḥp.tj* (l. 2) could be an early attestation of the word 'universe,' known from other texts from the Ptolemaic Period onwards,[99] while l. 4 is probably a phraseological parallel to Doc. D,4, with the nominal predication *ntf pꜣ Rʿ* 'He is Pre' (the unusual spelling of the 3SG.M independent pronoun *ntf* as  echoes what we observed for the 2SG.M, e. g. in Doc. A,2 & 8 and Doc. C,11).

A second advantage of this approach is that fragments that might belong to the same document can be clustered together more easily. In the present case, it quickly became obvious that O. DeM 1084[100] represents the left-hand side of O. Strasbourg H. 188 (fig. 20), since the first four lines read continuously:  (l. 1),  (l. 2),  (l. 3), and  (l. 4). Furthermore, Doc. T is likely to have been part of the same composition – if not the same document – since its l. 1 must read  (Table 12), which corresponds to the sequence of Doc. U,3.

98 See already the emendations suggested by Müller 2000, 284.

99 Wilson 1997, 639.

100 Posener 1938, 22 and pl. 47–47a.

Fig.20: Doc. U = O. DeM 1084 (© Posener 1938, pl. 47a) and O. Strasbourg H. 188

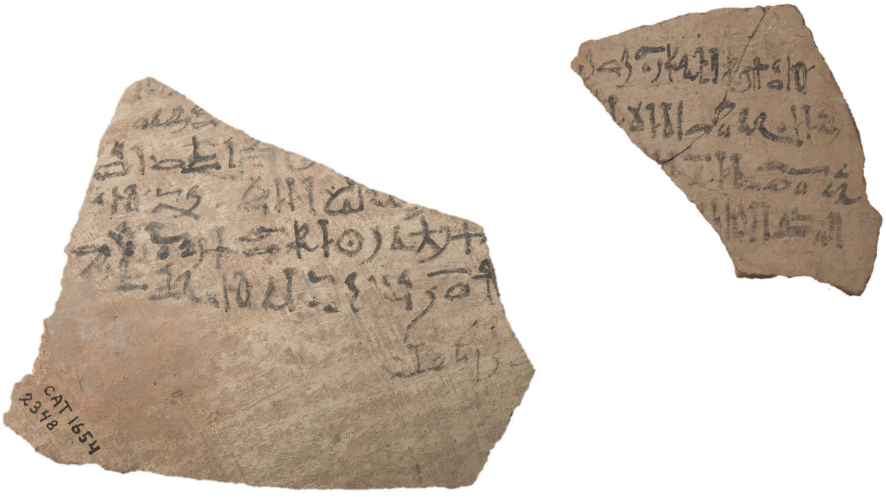


Fig. 21: Doc. V = O. DeM 1654 & Doc. W = O. DeM 1657 (© IFAO, Archives)

The second and third examples – O. DeM 1654[101] and O. DeM 1657[102] respectively – broaden the number of text genres that the messy scribe may be said to have had an interest in. According to Posener,[103] both these texts were copied on "tesson[s] de poterie gris verdâtre," but while the first is written parallel to the axis of the vase, the second is said to have been inscribed perpendicular to this axis, thereby excluding the possibility that they both belonged to a single composition. That said, both texts do appear to belong to the genre of 'Songs' and thematize the heart (lexicalized as both *jb* and *ḥꜣty*) as the center of emotions: *mk jb=j [...]* 'look, my heart […]' (Doc. V,4), *ḥꜣty=j r* […] 'my heart is towards […]' (Doc. V,5), *yꜣ jb=j ꜥṯp[...]* 'indeed my heart is loaded […]' (Doc. V,6), *jb=j r wnm* 'I want to eat' (Doc. W,1), *sy n ḫꜣ-jb* 'it is for the righteous' (Doc. W,4).

The palaeographic features of these ostraca argue for their unambiguous attribution to Pay (i). They show (a) the familiar alternation of dark and faint ink (*passim*); (b) the stair-like progression of groups of signs (*passim*), as well as colliding lines (Doc. V,5–6); (c) overlapping signs, in particular the group  over  in Doc. V,3, which does not appear to reflect an emendation (since *[s]ḏr ḥnꜥ=k* 'sleep with you' would make perfect sense); and (d) the characteristic shape of  (Doc. V,5 and Doc. W,1; compare with table 2a, i–j; 4, f; 6, g–h). If I am correct in attributing these additional texts to Pay (i), this shows that he was an actual polygraph, able to produce texts in various literary genres at a time when those genres were emerging within the corpus of texts from the community of Deir el-Medina.

8. Conclusions

Before concluding, I would like to stress once more that this contribution reflects only the tip of the iceberg – many more documents by the same hand have been identified in both the published and unpublished materials from Deir el-Medina – and a complete reconstruction of the corpus of texts written by the messy scribe represents a long-term project. The present contribution is thus more a proof-of-concept than an exhaustive endeavor. Nonetheless, in spite of the fledgling nature of this investigation, a series of preliminary conclusions may be drawn based on the palaeographical and – to a lesser extent – orthographical observations made in this paper:

1. Provided that we possess enough material written by a given scribe, it is possible to trace that scribe's hand across texts and genres – even when the com-

101 Posener 1980, 94 and pl. 74–74a.
102 Posener 1980, 95 and pl. 75–75a.
103 Posener 1980, 94–95.

positions are not 'signed,' as in the case of Amennakhte (v).[104] In order to successfully track a hand, a set of features specific to that hand have to be identified, while their co-occurrence can be used to distinguish between groups of similar hands (Section 6).

2. Shorter documents represent a challenge for handwriting analysis, as a sound attribution necessarily relies on a set of converging palaeographical and orthographical features. The shorter the text, the harder it is to assess whether or not it belongs to a given cluster of texts.
3. Although Pay (i)'s handwriting varies slightly from text to text, there is no correlation between the quality of the hand and the (literary or non-literary[105]) genre of the text. It is precisely the fact that his hand remains the same across genres that allows us to track this scribe.[106]
4. When available, data about provenance can help to cluster texts together. In Section 2, we saw that the discovery of several texts by the same hand in Maison G/J is what set the present research in motion. Annex 1 further shows that all of the texts for which we possess a precise provenance come from areas located north of the village (GMN, K 215, KGP, and Maison G/J).

The present case-study is certainly interesting in its own right, but – in my view – it should serve mostly as a foundation for studies in broader domains. In the field of literature, for example, Pay (i) may have represented one of the first 'authors' in Deir el-Medina, paving the way for a number of draughtsmen-scribes[107] – individuals who are known to have written literary compositions and sometimes ended up occupying the official role of scribe in the village – such as Menna (i),[108] Amennakhte (v),[109] Harshire (i),[110] and Amenhotep (vi),[111] to name the most famous exemplars. Pay (i)'s literary production suggests that the scribal environment of Deir el-Medina might have fostered a conceptual shift from *scriptor*[112] to *author*.[113] Indeed, the originality of Pay (i)'s compositions[114] shows beyond doubt that creativity flourished

104 See Dorn and Polis 2019, with previous references on the topic.
105 Note that Pay (i)'s hand seems to be attested in documentary texts dealing, for instance, with deliveries, but their analysis would require a study of its own.
106 The possible diachronic changes affecting Pay (i)'s hand is not straightforwardly visible.
107 See the discussion in Laboury 2016.
108 Fischer-Elfert 2006.
109 Černý 2001, 339–383; Polis 2018b, Dorn and Polis 2019.
110 Janssen 1982.
111 Keller 1984, 2003; Bács 2011.
112 Ragazzoli 2019.
113 Loprieno 2019.
114 See already the remark in Valbelle 1985, 340, n. 4.

in the literary works of the Deir el-Medina community long before the first official claims of authorship during the 20th Dynasty with their 'signatures'.[115]

This creativity in the literary realm appears to correlate with Pay (i)'s expressions of personal piety.[116] The hymns that he wrote evidently furnished an auspicious context in which he developed his individual style. Keller[117] devoted a study to the religious beliefs of Pay (i)'s family. Looking principally at Pay (i)'s stelae[118] and at the names he gave to his children, she highlighted his devotion to divinities with solar, astral, or celestial associations, and argued that we can observe a diachronic shift within the family's private pantheon, with increasing attention paid to the community's divine patrons. While this seems quite likely based on the available evidence, the profound and stable relationship between the members of this family and Amun have largely been overlooked. The hymns to Amun, Mut, and Thebes that I attributed to Pay (i) in this paper demonstrate his deep attachment to the Theban gods. Amun is identified with several deities in these hymns, including Shu (e. g. Doc. C) and Re-Horakhti (e. g. Doc. F). These are also the gods revered on his Stela Turin CGT 50042,[119] where he states: "I adore Re when he sets, oh god noble, beloved, and merciful, who hears the prayers, who hears the supplications of the one who calls him, who comes to the voice of the one who pronounces his name" (l. 2–5). Additionally, Khonsu-in-Thebes Neferhotep is the god praised on Stela Turin CGT 50052,[120] a stela that he dedicated to his mother Wadjetronpet (iii). On this stela, he calls for mercy regarding his blindness: "look, you made me see the darkness that you create. May you be merciful to me, who proclaims: 'How sweet is your mercy, oh Khonsu, to the poor of your town!'" (l. 3–5). This obviously echoes Doc. D, where Pay (i) asks Amun to let him see his light, as well as Doc. J, in which his son is to deliver him medicine for his ailing eyes.[121]

In the corpus of religious texts produced by subsequent generations of Pay (i)'s family, the Theban triad looms large as well. The best and most famous example is

115 Dorn 2017.

116 Luiselli 2011, 2014.

117 Keller 2008.

118 The attribution of Stela Liverpool Museum 1973.2.340 to Pay (i) – suggested by Criscenzo-Laycock (2011) – is highly debatable and is an attribution that I do not consider to be plausible.

119 Tosi and Roccati 1972, 76–77 and pl. 278.

120 Tosi and Roccati 1972, 87–88 and pl. 283 and Morgan 2004, 124–127.

121 *Contra* the traditional interpretation (i. e., physical blindness), Galán (1999; see also Luiselli 2011, 162–168) suggested a metaphorical explanation for this locution: "*[s]eeing darkness* is a metaphor used to refer to the situation in which the deceased finds himself after his Final Judgment and before he reaches the Hereafter, where god is" (Galán 1999, 29). In Pay (i)'s case, at least, what we know about his personal life (Section 5) assuredly argues in favor of the traditional interpretation.

certainly the so-called penitential hymn to Amun on Stela Berlin 20377.[122] In this hymn, Nebre (i), son of Pay (i), expresses his deep and humble gratitude towards Amun, who saved his son Nakhtamun (iii). The force of literary and religious tradition was strong within this family.

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122 Erman 1911, 1087–1097 and pl. 16; Wente 2003, 284–286; Luiselli 2011, 378–382 and pl. 11.

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Annex 1 – Ostraca attributed to Pay (i) in this paper

1	O. Berlin P. 11247	Letter	?
2	O. Černý 19	Letter	?
3	O. Borchardt	Prayer to Amun	Deir el-Medina?
4	O. DeM 1055	Hymn to Amun and Mut	Deir el-Medina
5	O. DeM 1084	Hymn to Amun	K 215 janv. 1929
6	O. DeM 1409	Prayer and numerical hymn to Amun	KGP (18.3.50 & 18.12.50)
7	O. DeM 1594	Hymn to Thebes	GMN 11.02.51 B
8	O. DeM 1654	Song	KGP 20.12.50
9	O. DeM 1657	Song	Deir el-Medina
10	O. DeM 10111	Letter	KGP 29.12.1950
10	O. DeM 10249	Letter	KGP 19.03.1950, 20.03.1950 & 21.03.1950
11	O. Cambridge Fitzwilliam Museum E.GA.6128.1943, v°	Invocation to Weret-Iaret	Deir el-Medina?
12	O. Cambridge Fitzwilliam Museum E.GA.6134.1943	Hymn to Amun	Deir el-Medina?
13	O. Cambridge Fitzwilliam Museum E.GA.6135.1943	Letter	Deir el-Medina
14	O. Gardiner 45	Prayer to Amun	?
15	O. Glasgow D.1925.88	Hymn to Amun	Deir el-Medina?
16	O. IFAO inv. 2181	Prayer to Amun	Maison G/J
17	O. IFAO inv. 2971	Report?	Deir el-Medina
18	O. Strasbourg H. 188	Hymn to Amun	Thebes West (1911)
19	O. Strasbourg H. 190	Hymn (to Amun?)	Thebes West (1911)

Hieratic in the tomb of Ameneminet (TT 277). Epigraphic survey and comparisons among the script typologies present in the tomb

Marina Sartori[1]

Abstract

Theban tomb 277, located in Qurnet Murai and belonging to Ameneminet, priest in the temple of Amenhotep III during the Ramesside period, houses a number of hieratic texts. A few of them are visitors' graffiti, possibly belonging to colleagues of the deceased, but most of them also play an important role as captions, as if to fill gaps in the incomplete decoration. This paper analyses some of the secondary hieratic and cursive inscriptions as well as their relationship to the primary texts, bringing to light the image of a strongly cohesive community, for which epigraphic activities represent almost an identity marker. It also establishes graphic and orthographic comparisons among the three main types of script (polychrome-painted hieroglyphs, cursive black hieroglyphs and hieratic) present in the tomb, in order to gain a deeper insight into the agency behind the different graphic registers.

1 The tomb-chapel of Ameneminet (TT 277) and its social context

The Theban tomb-chapel of Ameneminet, TT 277,[2] represents a treasure trove of material for the study of ancient Egyptian 'graphic registers' (fig. 1),[3] offering a particularly wide range of cursive to non-cursive inscriptions. The tomb is located in the south-west area of Qurnet Murai and dates to the Ramesside period.[4] It was dis-

1 The author is deeply grateful to Chloé Ragazzoli for kindly sharing her work on the tomb as well on the topic of graphic registers, and for her extremely helpful comments in the preparation of this article.

2 PM² I, 1, 353–55; Kampp 1996, 548–50, fig. 444. The hieratic inscriptions have also recently been documented and inventoried by Ragazzoli 2016, 261–274.

3 Expression coined by Ragazzoli and Albert, in preparation: "Graphic registers refer to the visual and material aspect of a writing apprehended through its script, its layout or the medium used, and the associated meanings."

4 Vandier d'Abbadie 1954, p. 1 and n. 4, dates it to the reigns of Seti I and Ramsesses II, based on the palaeographic analysis. This dating is supported also by Ragazzoli 2016, 222. Kampp 1996, 548 and Hofmann 2004, 50, instead, date the tomb to the 20th dynasty based on style. The

Fig. 1: Diagram of selected graphic registers present in TT 277 (© Universität Basel/LHTT; photo: Marina Sartori)

covered in 1917 for the IFAO by Lecomte du Nouÿ, but the publication by Vandier d'Abbadie appeared only in 1954.[5] The author personally re-investigated the decoration as part of her PhD research during the Spring 2018 season with the Swiss Mission in Sheikh Abd el-Qurna, under the patronage of the Swiss National Science Foundation.[6]

The small one-chamber chapel has an irregularly rectangular perimeter and uneven wall surfaces, which have been plastered in order to accommodate the paint. The floor level is carved lower than the entrance, so that water has flown in and damaged the bottom register of the decoration. The colours are otherwise very well preserved: as analyses have shown, the red paint comes, as it is most common, from haematite, the yellow one from goethite, and the black one from carbon.[7] The decoration and the inscriptions of the tomb are incomplete and, as Bács and Hofmann have argued, do not seem to be the work of the most skilled artisans of the time, as the imprecise proportions and the execution of pictorial details and

temple of Amenhotep III fell into disuse after an earthquake in 1200 BC, see Sourouzian 2015, 77. Despite this event, Bàcs 2011, 9 also supports the later dating, specifying that Ameneminet worked in "the still operational parts of the temple of Amenhotep III at Kom el Heitan". A definite solution is to be postponed until better light is shed on the life of the temple.

5 A brief report on the discovery appeared in Gauthier 1920. Foucart 1918 extensively described some of the scenes in the tomb. The tomb was also visited in 1924–25 by J. G. Wilkinson, who copied the scene of the Theban mountain with the statues of Mentuhotep II and Ahmes-Nefertari (MMA 30.4.124), during the Metropolitan Museum expedition to Egypt. Vandier d'Abbadie 1954.

6 Research conducted in the context of the SNSF-funded project "Life Histories of Theban tombs" (2015–19): https://lhtt.philhist.unibas.ch/.

7 Marey Mahmoud 2013, 783ff.

inscriptions show.[8] Independently from an aesthetic judgement, however, this confirms the somewhat informal context of the tomb preparation. In truth, evidence would point towards part of the inscriptions being added by autonomous scribes, possibly colleagues of the deceased, who wanted to contribute to the completion of the tomb.

Ameneminet was, in fact, a *wab* priest, lector priest, and divine father of Ptah-Sokar in the temple of Amenhotep III,[9] married to the chantress of Amun, Nefertari. Five children seem to be recorded in the tomb, but the preservation state of the inscriptions is insufficient to obtain clearer information. One of them, Kenamun, held the title of *wab* priest of Ptah as well.[10]

Ameneminet seems to have been very proud of, and attached to, his priestly office, as well as a generally pious man. That he considered his office an important identity marker is shown already by the area where he chose to be buried, as Qurnet Murai houses a cluster of tombs connected with the funerary temple of Amenhotep III in Kom el-Hittan,[11] TT 277 being located directly in its axis.[12] The desire to exhibit both his social identity as well as his piety comes out strongly in the decoration. Not only did he choose to have depicted, on the focal back wall, an imitation of the royal kiosk icon, housing Amenhotep III and queen Tiy,[13] but also to show the procession of statues of the two sovereigns on the north wall, clear reference to his office.[14] Other royal figures appear on the north wall, where Ameneminet is represented honouring the statue of Mentuhotep II, the founder of the Middle Kingdom. Behind this king, a queen Neferys is visible also, almost coming out of the mountain.[15] Despite the possibility that the queen might be Mentuhotep's royal

8 Bács 2018, 22; Hofmann 2004, 50, 110.

9 Cf. the inscription on the southern entrance thickness (Vandier d'Abbadie 1954, 28). The temple of Amenhotep III was dedicated to Amun-Ra and to Ptah-Sokar; it was to them that the two monumental stelae of the peristyle entrance were dedicated, as well as the stelae composing the back of the northern quartzite colossi (Sourouzian 2015, 86; 87).

10 Inscription on the niche lintel. Vandier d'Abbadie 1954, 29.

11 In particular: TT 271, belonging to Amenemwia, also *wab* priest and lector priest of Ptah-Sokar; TT 272, belonging to Khaemipet, who bears the same titles as Ameneminet (divine father of Amun in Thebes, *wab* priest, lector priest in the temple of Sokar); TT 275, Sobekmose, again divine father in the temple of Amenhotep III and in the temple of Sokar. For the relationship between location and funerary temple cf. also Bács 2011, 9. The area had been chosen in the 18th dynasty to host the tombs of the Viceroys of Kush, see Berenguer 2003.

12 Ragazzoli 2016, 222.

13 Vandier d'Abbadie 1954, pls. 19–20. Much/very common in 18th dynasty tombs, the royal kiosk icon (definition by Hartwig 2004) is also present in the nearby TT 222, as Bács noticed (Bács 2018, 9, n. 73).

14 Vandier d'Abbadie 1954, 17–20, pls. 10–11. Similar processions of statues are present in other early Ramesside tombs, such as TT 19 and TT 51: Foucart 1935; Davies 1927.

15 Vandier d'Abbadie 1954, pl. 14.

wife, Neferu, the connection with the Theban mountain and the black colour of the queen's skin would hint at an identification with Ahmes Nefertari, ancestress of the 18th dynasty kings. Ameneminet would therefore display his piety not only to the king in whose temple he served, but also to the institution of the Theban monarchy altogether, in the persons of the founding figure of the Middle Kingdom (Mentuhotep II) and of the New Kingdom (Ahmes Nefertari) respectively. Finally, on the left side of the focal wall, Ameneminet is shown offering to Harakhte.[16] The texts, as well, show Ameneminet's connection with the religious world. Although only few inscriptions were completed, a hymn to Osiris and Re fills the North entrance thickness, and the adoration of Ra-Harakhte runs on the stela depicted on the north wall.[17]

Ameneminet therefore strives to display his identity as member of a strongly cohesive community, composed by the *wab* priests of the temple. In fact, as this paper attempts to show, many of the additions to the texts and of the signatures left by visitors belong precisely to other members of the priesthood, which, as Den Doncker has pointed out, might have even been colleagues and friends of the deceased.[18] This strong sense of community could also explain why Ameneminet was able to prepare for himself a decorated tomb in the Qurnet Murai necropolis despite his relatively minor position.[19] The decoration is populated by *wab* priests and other figures related to the funerary temple of Amenhotep III. A *wab* priest and divine father Piay writes his name in sketched hieroglyphs in front of the face of a lector priest,[20] and probably also in a similar position in the miniature of the painted stela[21] (Inscriptions 5b and 5a, respectively). In more elegant literary cursive, still with hieratic elements, a *wab* priest Ptahmes is named between the two mummies (in the same hand is written the caption on the figure of Ameneminet's wife, Nefertari; Inscriptions 4a–b).[22] Accompanying the procession of the two royal statues are also a series of (apparently already deceased) priests: in monochrome hieroglyphs are mentioned a *sem* priest from the temple of Nebmaatre,[23] another *wab* priest Piay, his son,[24] a *wab* priest Userhat, and a divine father of Ptah-Sokar Ptahmes.[25] Two hieratic inscriptions almost work as captions and imply the presence of more *wab*

16 Vandier d'Abbadie 1954, pl. 6 no. 1.
17 Vandier d'Abbadie 1954, 28–29 and 34–35.
18 Den Doncker 2012.
19 The author thanks Chloé Ragazzoli for this interesting comment.
20 Vandier d'Abbadie 1954, 32, 3a.
21 Vandier d'Abbadie 1954, 35, [6]c.
22 Vandier d'Abbadie 1954, 33, [4]e.
23 Vandier d'Abbadie 1954, pl. 10.
24 Vandier d'Abbadie 1954, pl. 10.
25 Vandier d'Abbadie 1954, 33, 5a and 5b, respectively.

priests and of a divine father in the cortege of offering bearers.[26] Another priest affiliated to the temple of Sokar, Minmes, names himself in hieratic as *sem* priest libating on the offerings (Inscription 2a),[27] while yet another *wab* priest Piay left his hieratic inscription above the painted stela (Inscription 2c).[28] A "*wab* priest, divine father of Ptah-Sokar in the temple of Amun" makes offerings in front of a *wab* priest of Ptah (Ameneminet himself?) at the banquet in the lowest register of the north wall .[29] Chanters and chantresses of Ptah or Amun also make various appearances: a chantress of Amun named Takheret leaves her signature above the head of one of the lamenting women (Inscription 2d); a chanter of Ptah-Sokar, as well, adds his name in front of the depiction of a harpist (Inscription 1b). Finally, though slightly different from the other hieratic inscriptions, the two signatures on the southern wall belong again to two *wab* priests of the funerary temple of Amenhotep III (Inscriptions 3a–b). This overview already shows that the secondary epigraphy in the tomb is the work of the same social actors responsible for the first, to the point that only fuzzy boundaries divide the two ritual expressions.

2 Epigraphic survey

Among the elements that differentiate the two epigraphic moments is, when not the purpose, the choice of graphic registers. Despite all the secondary inscriptions being consistent in terms of the social status of their author, each of them presents a different writing style, as if the scribes purposely aimed at individualisation. The coexistence of a huge variety of script typologies in the whole of the decoration becomes visible through an epigraphic survey. The decoration can be divided in four areas: the entrance inscriptions, the continuous paintings in the northern area, the larger scale scenes, mostly unfinished, in the southern part, and finally the central niche.

2.1 Entrance outer doorjambs, entrance thickness

Engraved hieroglyphs divided in two columns and painted in red appear on the outer doorjambs. The entrance thickness, instead, supposed to welcome the visitor, has been inscribed with carefully executed polychrome hieroglyphs, a clearly purposeful choice. However, this type of hieroglyphs, a typical characteristic of Ramesside palaeography, does not present outlines nor inner detail-lines, but consists of patches

26 Vandier d'Abbadie 1954, 32, 4b–c.
27 Vandier d'Abbadie 1954, 33, [4]d.
28 Vandier d'Abbadie 1954, 34, 6a.
29 Vandier d'Abbadie 1954, 31, 1c–d.

of colour and is far from the 'picture writing' of the polychrome inscriptions in 18th dynasty tombs. In addition, it renounces the use of yellow, reducing the colour palette to blue, green, and red (fig. 1, top, second from right).[30]

2.2 South walls

The three walls of the south part are the least complete, yet they still present at least three different graphic registers. In the depiction of the royal kiosk, directly visible upon entrance in focal position, the titulary of the king and of queen Tiy have been written in monumental, polychrome hieroglyphs. Although this type of monumentalized script wants to imitate the inscriptions in temples and in the tombs of the 18th dynasty, a difference in quality is clear to the eye (fig. 1, top, right). In addition, the colour palette is again reduced, giving a different effect to the older models. The colours blue, green and red are preferred, with no yellow for the inner details of the sign Gardiner R4 ( , *ḥtp*). Peculiar is also the colour of the Gardiner S38 sign ( , *ḥḳꜣ*), which presents a blue base, instead of the more typical yellow with blue inner details.[31] Finally, an important feature that distinguishes them from the other examples of monumental hieroglyphs is the use of a blue outline for the signs, as opposite to the typical red outline. These characteristics show the influence of the new Ramesside polychrome hieroglyphs mentioned above and present in the entrance thickness; they also contribute to the general impression that the painters of the tomb might not have been completely familiar with this type of representation.

For the prayer dedicated by Ameneminet to the two rulers, the painter has adopted again the simplified polychrome hieroglyphs with no outline, and with only minor details precised through the use of different colours and not of red brushstrokes. Indeed, were it not for the use of more colours, these hieroglyphs would be much comparable with a cursive script. This inscription, written on a yellow background, follows the shape of the wall, so that one column is inserted in the curving corner between the South-East and the South wall. No inscriptions accompany the rest of the scenes in the south part of the tomb, but judging from the rest of the prepared yellow background, they were probably supposed to be of the same type. However, the possibility of a monochrome text cannot be excluded, when consid-

30 This type of reduced polychrome hieroglyphs appears starting from the early Ramesside period, and is one of the topics of the author's dissertation.

31 This is also the case in an older tomb in Deir el-Medina. Here, like in TT 277, the change seems ascribable to the little familiarity of the painters with their models. Cf. Sartori, in preparation.

ering the captions to the statues of Mentuhotep II and queen Neferys on the North wall, inscribed again on a yellow background.[32]

Finally, secondary inscriptions are present in the form of hieratic visitors' signatures. They appear both in front of a god, Osiris and Shu respectively, as if they were words coming out of the deity's mouth, despite not bearing any direct relationship to the scene. Another graffito has been inserted in the space between the sky line and the yellow inscription background. The longest graffito, however, figures in front of the libation water for the deceased royals in the kiosk, remarking, as it will be shown below, the predilection for leaving secondary inscriptions in scenes depicting ritual actions.

2.3 North walls

The long, continuous decoration on the north wall(s) is even more complex. Although there are no polychrome nor monumental inscriptions, a varied series of scripts, from less to more cursive, fills the wall. On one end, properly hieroglyphic inscriptions name the statues of Mentuhotep II and queen Neferu. Although their execution is already very simplified and mostly reduced to single brushstrokes, this choice is again indexical: hieroglyphs are necessary to address everything connected to the king. At the other extreme, various graffiti and captions written in hieratic take part in the decoration. In the middle between these two poles, however, at least two more types need to be mentioned. Firstly, an elegant cursive, the so-called 'literary cursive' (fig. 1, bottom, second from right; Inscriptions 4a–4b), used for a number of captions. Secondly, a more sketched cursive for the captions of the lower register as well as for two signatures, similar to that used for inscription drafts, but in black instead of in red ink (fig. 1 bottom, third and fourth from right; Inscriptions 5a–5b).

2.4 Niche

The central niche on the back wall shows not only different graphic registers, but also various stages of completion. Simplified polychrome hieroglyphs figure on the two vertical side inscriptions, which, curiously enough, were completed exactly up to the same point, leaving room to the preparatory drafts in the lower half of the columns, this time properly in red. The inscription on the lintel is written in very simple cursive hieroglyphs, prepared in red paint, but never overpainted in the usual final black.

32 Copy by Wilkinson: MMA 30.4.124.

2.5 Summary of graphic registers

Although much more precision would be needed in the definition of all the graphic registers present in the tomb, the inscriptions can be divided into three major groups, from more to less cursive: (1) hieroglyphs, (2) cursive scripts in their variety, (3) hieratic. A number of inscriptions also present mixed characteristics, with certain signs written in cursive hieroglyphs and others in hieratic, to the point where it is difficult to understand whether a difference between the two registers existed in the scribe's mind or not.

The three major types of script have different purposes. Use of monumental polychrome hieroglyphs is reserved, as mentioned, to the royal titulary of Amenhotep III and queen Tiy. The two longest hieroglyphic inscriptions, the religious and ritual texts found on the south-west wall and in the entrance, are instead in reduced polychrome hieroglyphs, as are (at least in part) the offering formulae delimiting the niche. Hieroglyphs therefore seem still to hold an essential connection to the formal religious context. Finally, monochrome hieroglyphs are also chosen for most of the captions. In fact, hieroglyphs still predominate in the general context of the tomb, making up 24 of the 50 inscriptions. However, the use of the other graphic registers seems to overlap with the use of hieroglyphs. Most of the cursive and hieratic inscriptions, despite being added at a later time to the original decoration, as they do not respect the most common formal choices of a tomb, are clearly meant as captions to the scene. This means that they try to fill in missing information that was considered necessary, this way carrying out the same role as the primary inscriptions, in addition to their purpose as witnesses of the scribe's personal interest in leaving their names. In the case of the hieratic inscriptions (18 in total), caption-style signatures are actually even more numerous (11) than proper, simple signatures (5), the textual genre for which this script typology is normally adopted. Hieratic is also used for two longer ritual inscriptions, one even reaching 13 lines and thus being the longest inscription in the tomb. Only 6 inscriptions – all captions or signature-captions, but longer than most hieratic texts – are written in sketched hieroglyphs, whereas the least represented graphic type is the literary cursive, used for only two (signature-?) captions. Finally, many of the secondary inscriptions are written in horizontal lines, instead of in columns, which again distinguishes them from the primary hieroglyphic inscriptions.

3 Hieratic, cursive-hieratic inscriptions

Setting aside the red, cursive drafts intended for the primary inscriptions, and therefore clearly ascribable to the first phase of work in the tomb, this paper focuses on

some of the hieratic, cursive, and mixed inscriptions, which appear mostly to be related to each other and to complete the decoration. Two categories of 'secondary' inscriptions will be analysed presently. A group of inscriptions playing between the role of signatures and of 'secondary' captions; and selected 'pure' signatures left by the priests of Ptah-Sokar or in general by figures active in the temple of Amenhotep III. In both cases, however, the inscriptions' location and orthography show how consciously and purposely their authors interacted with the decoration.

3.1 Hieratic inscriptions

3.1.1 Inscription 1a–1b

On the north wall, the representation of the goddess of the West presents, just in front of her emblem, a caption with her name (fig. 2). The position of the goddess is very precise: she appears just before the break in the wall (left open) leading to the burial chamber, as a clear indication of the entrance to the underworld, as well as welcoming the deceased back into the womb of the mountain and to his new life. The fact that this inscription is in black and not in red gives reason to believe that it was not intended as a draft for a hieroglyphic inscription, but that it was intended as final.[33] Behind its composition might therefore have been a scribe who considered hieratic either more familiar or bearing a specific ritual or identity value, but who nonetheless wanted to leave his contribution to the completion of the tomb.

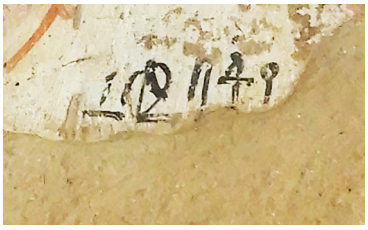
On the north wall again, in the register below the goddess of the West, the depiction of the harpist also features a hieratic inscription, but in a more delimited space, that is, between the man's arms (fig. 3). In this case, the inscription seems to be the signature of a singer. Despite only one line of the text being preserved, more were still visible to Vandier: the second line, in particular, would specify that a singer of Ptah-Sokar is represented here.[34] In this case, it would be another member of the priestly community of Ptah-Sokar, to which Ameneminet belongs. The choice of the place for a signature would surely make sense in connection to the figure of the singing harpist: the singer would have therefore inserted himself in the decoration of the tomb by making use of the depictions already present.

33 Ragazzoli 2016, 227 reaches the same conclusion.

34 Vandier d'Abbadie 1954, pl. 8.

Position: North wall, east part
Type: caption
Text (column): *Jmn.t wr(.t)*

Fig. 2: Inscription 1a. Hieratic caption in front of the goddess of the West(© Universität Basel/LHTT; photo: Marina Sartori)



Position: North wall, east part
Type: 'signature-caption'
Text (lines): (1) *ḥs(.w) n* (2) [*Ptḥ-ḥkr*]

Fig. 3: Inscription 1b. 'Signature-caption' of a singer of Ptah-Sokar, inserted between the hands of a harpist (© Universität Basel/LHTT; photo: Marina Sartori)

3.1.2 Inscriptions 2a–2d

The most inscriptions identifiable as 'secondary' figure in the two central registers on the North wall, where the performance of the burial rituals is shown (see also 3.2.1. and 3.2.2.; fig 4, table 1). However, as mentioned, in many cases it is challenging to understand whether an inscription is intended as signature or as caption, in particular when written in literary cursive. The definition of secondary therefore appears problematic, as it seems as if these inscriptions are not simply done for their author's sake, but also to contribute to finishing the incomplete decoration, for the deceased's sake.

Among these inscriptions, many belong to other members of the priesthood of Sokar or of Amenhotep III, and could therefore refer to colleagues of the deceased.

In one case, the mentioned person is a *sem* priest of the temple of Sokar (fig. 5a). As before, it is almost difficult to distinguish clearly between an inscription intended as caption and one intended as signature. The author of the inscription clearly played with this ambiguity, and once again fit his own name in a perfectly corresponding picture, that of the *sem* priest purifying the offerings. The same is done by a scribe named Piay (fig. 5b), who inserts his name just below, in front of the figure

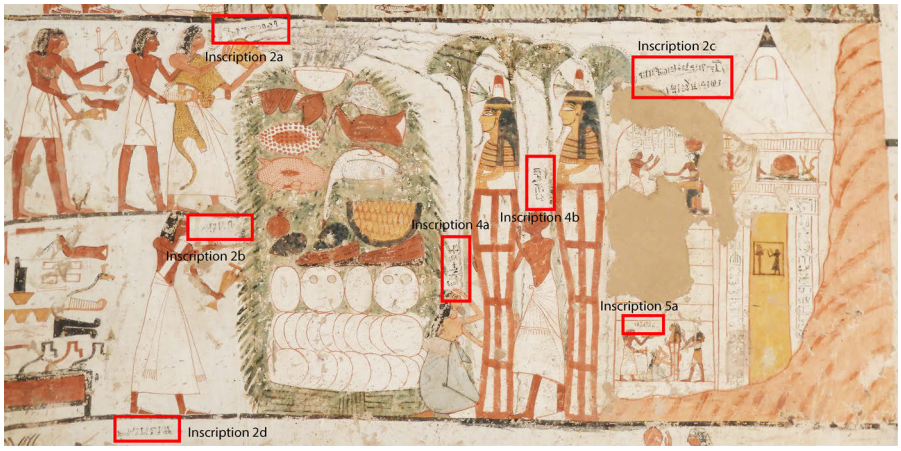
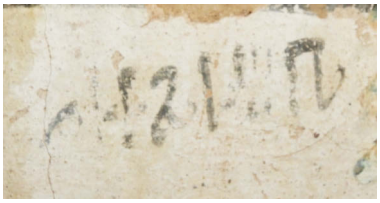


Fig. 4: TT 277, North wall. Cluster of secondary inscriptions in the ritual scenes in front of the mummy (© Universität Basel/LHTT; photo: Marina Sartori)

Position: North wall, centre
Type: 'signature-caption'
Text (line): *sm (n) ḥw.t Zkry Mnw-ms*

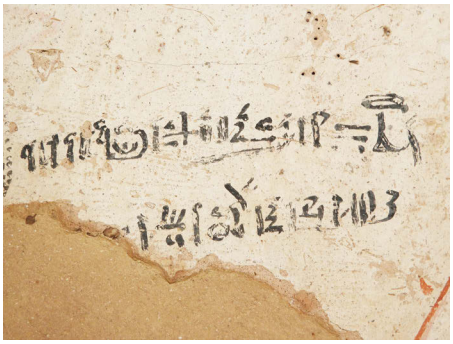


Position: North wall, centre
Type: 'signature-caption'
Text (line): *sš Pjꜣy*

Fig. 5a–b: Inscription 2a–2b. 'Signature-captions' of the *sem* priest Minmes (left) and of the scribe Piay (right) (© Universität Basel/LHTT; photo: Marina Sartori)

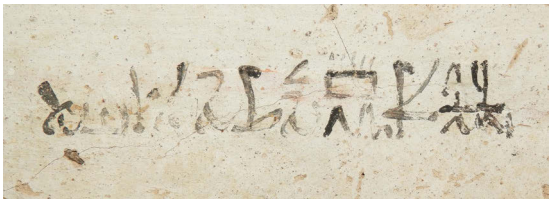
of an incensing priest, who would have otherwise remained anonymous among the innumerable religious figures on the wall.

More immediately understandable as a signature is the inscription of a *wab* priest also named Piay, since it is not strictly connected to a figure, but rather seems to be almost hanging on top of the depiction of the funerary stela (fig. 6). However, it confirms a predilection to leaving signatures in scenes that display ritual actions, as well as the social consistency of the secondary inscriptions' authors.



Position: North wall, centre
Type: signature
Text (lines): (1) *wʿb jt-nṯr n(y) tȝ ḥw.t nswt Nb-mȝʿ.t-Rʿ ʿ.w.s.* (2) *m pr Jmn ḥr Wȝs.t Pyj[ȝ]y ḏd n.f sš Jmn-m-jp.t]*[35]

Fig. 6: Inscription 2c. Signature of the *wab* priest and god's father Piay, above the depiction of the funerary stela (© Universität Basel/LHTT; photo: Marina Sartori)



Position: North wall, centre
Type: signature (prayer)
Text (line): *(n) kȝ n šmʿ.yt (J)mn tȝ-ḫȝrw(.t)*

Fig. 7: Inscription 2d. Signature of the chantress of Amun Takharet (© Universität Basel/LHTT; photo: Marina Sartori)

Similarly more recognizable as proper signature, given its opening formula (present only in this case), is the graffito left "for the ka of the chantress of Amun, Takharet" (fig. 7). Ameneminet's wife, Nefertari, was also a chantress of Amun, so that again this graffito seems to belong to the same community. In addition, despite the stronger separation between primary and secondary created by the opening (an offering formula for the sake of a person different from the tomb owner) this inscription shows the same strong connection to the depictions as the other signatures. It figures in front of a lamenting woman, and again, as in the last three cases, it is placed almost precisely below the register line, in order to give a formal appearance to the text.

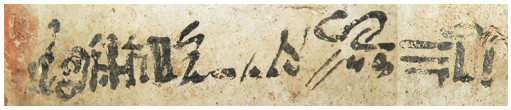
35 Vandier d'Abbadie 1954, pl. 12 shows more than what is visible today.

3.1.3 Inscriptions 3a–3b

This type of 'framed graffiti', as Chloe Ragazzoli has defined them,[36] is present also on the south wall. That these are proper signatures is confirmed by their position, as they name individuals that do not correspond to the figures depicted nor to the scene context. One signature is exactly framed by the blue colour band of the sky on top and by the yellow background of the planned inscriptions on the bottom (fig. 8); the second has been placed in front of the god Shu (fig. 9). However, they both belong to more members of the priesthood of Amenhotep III, and specifically two *wab* priests, who, according to Den Doncker, could/may have even known the deceased.[37]

Position: South wall, west part
Type: signature
Text (line): *wʿb sš Ptḥ-m-ḥb n(y) tꜣ ḥw.t nswt Nb-mꜣʿ.t-Rʿ ʿ. w. s.*

Fig. 8: Inscription 3a. Signature of the *wab* priest Ptahemheb (© Universität Basel/LHTT; photo: Marina Sartori)



Position: South wall, west part
Type: signature
Text (line): *wʿb Pḥty n(y) tꜣ ḥw.t nswt Nb-mꜣʿ.t-Rʿ*

Fig. 9: Inscription 3b. Signature of the *wab* priest Pehty (© Universität Basel/LHTT; photo: Marina Sartori)

The signatures therefore appear consistent in their context. A large proportion – 5 out of 8 – belong to members of the priesthood of Sokar and of the temple of Amenhotep III, that is, all people related to the same social milieu of Ameneminet. One, instead, belongs to a chantress of Amun, therefore related to the working environment of Ameneminet's wife. These individuals not only leave their names, for

36 Ragazzoli 2013, 274.
37 Den Doncker 2012, 24 and n. 15.

the sake of benefiting from the power of the depicted figures, but by adding their signature-captions, they implement the incomplete decoration, as is also shown by the choice to caption the goddess of the West, who would have already been otherwise recognizable by her emblem.

3.2 Cursive, mixed cursive-hieratic inscriptions

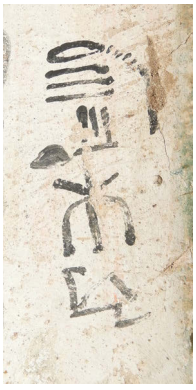
3.2.1 Literary cursive captions (Inscriptions 4a–4b)

Although not properly hieratic, these two inscriptions are remarkable for a number of reasons. They are written in an elegant cursive, the so-called literary cursive, and they report the names of the 'chantress of Amun, Nefertari' on the left (fig. 10a), and of a 'wab priest Ptahmes' on the right (fig. 10b). The first would fit perfectly as a caption of the depiction, as usually the woman lamenting at the feet of the mummy is the wife of the deceased, in this case precisely the chantress of Amun, Nefertari. However, this type of script is not used in any other part of the tomb; in addition, the mention of a *wab* priest, so close to the other signatures of *wab* priests, would almost hint at an inscription of the latter sort. Again, it would appear as if the secondary inscriptions are secondary only in a temporary sense, and not in purpose. The people of the inner circle of Ameneminet tried to fill in the gaps in the inscriptions by also adding themselves in the process, as an act of friendly piety. The choice of a different graphic register, among all the other secondary captions written in hieratic, probably hints at the desire to have the writer's identity stand out from the rest – maybe even show a more elegant penmanship. In fact, these are the most formal among the 'secondary' inscriptions, as they are also written in columns, instead of in lines like the majority of the others. This could surely be due to reasons of space, but it nonetheless reflects an awareness towards the official hieroglyphic captions found on the rest of the north wall.

3.2.2 Sketched hieroglyph inscriptions (Inscriptions 5a–5b)

To add to the variety of graphic registers, we also find two inscriptions in sketched hieroglyphs, both mentioning a man called Piay – in one case again a *wab* priest and divine father, just like Ameneminet (fig. 11b). Their presence in a mostly hieratic context is again quite surprising, and clearly points to a different agency behind it. The first inscription has been added in the miniature meta-scene on the stone stela depicted behind the two mummies (fig. 11a). In this case, the choice to add a caption in hieroglyphs, despite the quick writing style, might represent the effort to

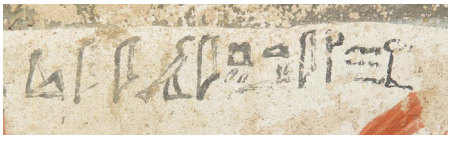
Position: North wall, centre
Type: caption
Text (column): *šmʿ.yt Nfr.t-jry*



Position: North wall, centre
Type: caption
Text (column): *wʿb Pt⟨ḥ⟩-ms*

Fig. 10a–b: Inscriptions 4a–4b. 'Signature-captions' in literary cursive: of the chantress of Amun Nefertari (left) and of the *wab* priest Ptahmes (right) (© Universität Basel/LHTT; photo: Marina Sartori)

Position: North wall, centre
Type: (signature?) caption
Text (line): *p? Pyjꜣy*



Position: North wall, centre
Type: (signature?) caption
Text (line): *wʿb jt-nṯr Pyjꜣy*

Fig. 11a–b: Inscriptions 5a–5b. 'Signature-captions' in sketched hieroglyphs, both mentioning a man called Piay (© Universität Basel/LHTT; photo: Marina Sartori)

fit in within the context of the stela, filled with (though little detailed) hieroglyphic inscriptions.

The second inscription, instead, appears more idiosyncratic, especially since it identifies the figure directly following the incensing priest captioned in hieratic as 'the scribe Piay' (Inscription 2b). This could probably hint at the will to again distinguish the writer from the homonymous person who had added his name to the figure in front. Whether this second Piay is the same *wab* priest and divine father who left the hieratic inscription on top of the stela (Inscription 2c) remains unclear.

3.2.3 Mixed use of sketched hieroglyphs and hieratic in captions to the same scene

Two other cases underscore this mixture of scripts all aimed at completing the decoration. The lower register depicts a series of banquet scenes. In the centre, captions to the figures have been added quite hastily in a sketched way. The style of the script is reminiscent of the draft inscriptions on ostraca, for example, and it also shows elements in hieratic, such as the name of Amun (fig. 12a). On the same register, at the extreme right, four female figures are shown attending the banquet, but their names have this time been added in hieratic (fig. 12b). This use, on the same register, of cursive and hieratic to express captions to the same scene is clearly remarkable, as it expresses the will to distinguish oneself through the choice of different graphic registers. Despite this, a perfect cohesion in Ameneminet's world is confirmed by the fact that, aside from the deceased and his family, only other *wab* priests of Ptah are attending the banquet.[38]

Position: North wall, bottom register, centre and east part
Type: captions

Fig. 12a–b: Captions in sketched hieroglyphs with hieratic elements (left) coexist on the bottom register of the North wall with purely hieratic captions, written in a much hastier way than other secondary inscriptions (© Universität Basel/LHTT; photo: Marina Sartori)

38 Vandier d'Abbadie 1954, 10.

4 On the agency and context of the 'secondary' inscriptions

4.1 Ritual and social context

This overview has shown that secondary inscriptions clearly belong to the same social world as the primary ones, and they appear to fulfil a duty dictated by personal friendship and religious piety. Ragazzoli has suggested that they could therefore have been added either already at the time of the funeral or during other rituals.[39] In fact, the preferred location of most of the analysed inscriptions is in the context of ritual scenes, as table 1 shows, or in connection to gods.[40] The majority relates to priests incensing or pouring libations on either the mummy or the offerings; to the lamenting women and to the priests taking care of the mummy or reading the liturgy from a papyrus. The two inscriptions on the south wall are closely related to the depictions of gods, whereas the longer inscription added on top of the painted stela could be connected to the religious text in honour of Ra-Harakhte present on the stela itself. Finally, also the two longer texts, not analysed in the paper, are positioned in two extremely important ritual scenes: the libation offered by Ameneminet to the royal figures in the kiosk, and the transport of the mummy. The predilection for ritual context would confirm the affirmation by Donnat[41] that the use of hieratic is embedded in ritual practice.

However, hieratic does not only play a ritual role. Ragazzoli has shown the important role that hieratic inscriptions take in monumental context as an identity marker.[42] The use of hieratic is indexical to the social status and training of the people who wrote them, specifically the members of the priesthood of the temple. This is evident in TT 277, where the writers of the secondary inscriptions had in mind the purpose to complete the decoration, yet they did not do so in the proper hieroglyphs expected in a tomb, but in the script they were most used to or that they considered most important to display their identity. This set them apart from the rest of the decoration, making their work stand out to the visitors of the tomb. The variety of different solutions (sketched hieroglyphs with hieratic elements, pure hieratic, literary cursive) in fact hints at the presence of more people animated by the

39 Ragazzoli 2016, 227. This type of 'secondary' epigraphic activity, difficult to distinguish from the 'primary' one, and also mostly connected to ritual scenes, has a strong parallel in the tombs of the Old Kingdom nomarchs in Meir, see Hassan and Ragazzoli, *in preparation*. In addition, relatives and friends of the deceased had various occasions, such as the numerous festivals in the Necropolis, to visit the tomb: Hartwig 2004, 10–15.

40 Den Doncker 2013, 24, reaches the same conclusion, though with focus only on the private signatures.

41 Donnat 2014, 230–231.

42 Ragazzoli 2016, 22–28.

Table 1. Location within the tomb of the analysed secondary inscriptions and figures mentioned

Inscription	Script	People mentioned	Location
1a	Hieratic	N/A	In front of the goddess of the West
1b	Hieratic	'the singer of Ptah-Sokar'	Between the arms of the harpist
2a	Hieratic	'the *sem* priest of the temple of Sokar Minmes'	In front of *sem* priest offering libation to the mummies
2b	Hieratic	'the scribe Piay'	In front of man incensing and purifying the pile of offerings
2c	Hieratic	'the *wab* priest, god's father in the temple of king Nebmaatre, in the house of Amun in Thebes Piay [called Ameneminet]	Above depiction of the painted funerary stela
2d	Hieratic	'the chantress of Amun Takharet'	In front of lamenting woman
3a	Hieratic	'the *wab* priest and scribe Ptahemheb of the temple of king Nebmaatre'	Between register lines in scene of worshipping (Shu and Tefnut)
3b	Hieratic	'the *wab* priest Pehty of the temple of king Nebmaatre'	In front of the face of the god Shu
4a	Literary cursive	'the chantress of Amun Nefertari'	Above the head of a lamenting woman, in front of the mummy
4b	Literary cursive	'the *wab* priest Ptahmes'	Above the head of a priest taking care of the mummy
5a	Sketched hieroglyphs	'Piay'	In front of man incensing and purifying the mummy, meta-scene on the depicted stela (cf. Inscription 2b)
5b	Sketched hieroglyphs	'the *wab* priest, god's father, Piay'	In front of priest reciting from a papyrus

same purpose, leaving their own imprint in the commemoration of their colleague or relative. The presence of the sketched hieroglyphs shows that at least some of the priests were more or less familiar also with this script, making them use a different graphic register in order to distinguish their contribution from the others. The respective choice of a different type of script clearly appears to be a statement.

Another fil rouge of these 'secondary' inscriptions is the name Piay. Five inscriptions (hieratic inscriptions 2b–2c, sketched hieroglyphs inscriptions 5a–5b and a monochrome hieroglyphic caption on the North-west wall)[43] mention a person with this name. The first, the primary caption in hieroglyphs, relates to a *wab* priest Piay, son of a *sem* priest Usermontu, again from the temple of Amenhotep III. This person, however, also bears the epithet of 'justified', which makes him unidentifiable with any of the authors of the secondary inscriptions. Two other inscriptions in sketched hieroglyphs mention the name, the first a *wab* priest and divine father Piay, and the second a simple Piay. Finally, the two hieratic signatures belong to a scribe Piay and to another *wab* priest and divine father. Although Piay is of course a very common name during the New Kingdom, the connection among these signatures is impossible to ignore. They are all clustered together, and they again mostly belong to *wab* priests; clearly, we are dealing here with a strongly cohesive community, with a deep sense of identity and emulation. It is remarkable, for example, that the two simplest inscriptions are even located in two perfectly comparable scenes: right near the head of a priest incensing and offering libations.

4.2 Orthographic variants and palaeography of single signs

The agency of most of these inscriptions therefore seems very consistent. A certain consistency is also present in the spelling. For example, the title of *wab* priest is often spelled with a combination of the Gardiner signs W54 ( , pouring jar) and N35a ( , three water ripples). This is the case not only in the few certain primary inscriptions, but also in some of the secondary ones, such as the inscription of the *wab* priest Ptahmes and of the sketched hieroglyph captions in the banquet scene on the lower register (fig. 13). To be precise, this variant is present only on the north wall, and on the north entrance thickness. If we consider that these inscriptions were added to complete the missing information on the scene, it is remarkable that the writers tried to fit in with the rest of the decoration by taking inspiration from the other completed inscriptions present on the wall.

The spelling with the sign Gardiner D60 (), instead, is present in primary inscriptions of the south wall, of the niche, and of the outer doorjambs, while figuring as well in various hieratic graffiti (fig. 14). Remarkably, whereas the former sign

43 Vandier d'Abbadie 1954, pl. 10.

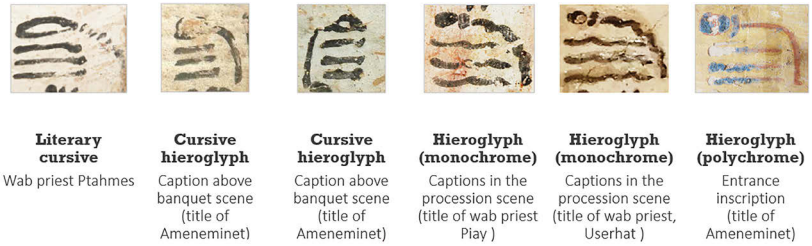


Fig. 13: Examples of the spelling of the word '*wab*' through the combination of Gardiner signs W54 and N35a (© Universität Basel/LHTT; photo: Marina Sartori)

Fig. 14: Examples of alternative orthography of the word '*wab*' through the Gardiner sign D60 (© Universität Basel/LHTT; photo: Marina Sartori)

showed less variety in its rendition, the D60 sign appears extremely changeable, to the point that there are no two overlapping versions. From the point of view of the visual study of the script, this exemplifies perfectly how difficult it is to find a proper definition for all these different renditions, and how individual they can be.

On the contrary, some signs can be visually less manipulated than others are, and maintain common characteristics throughout the various graphic registers (fig. 15). Although for example the Gardiner sign V28 (𓋴) appears much different in hieratic, the other versions of the sign seem quite consistent throughout the tomb: all present a big loop on top and a single vertical line with diverging ends at the bottom. The example of the Gardiner F35 sign (𓎛), instead, shows perfectly the evolution from "painted" to "purely written". If the polychrome hieroglyph has already lost much of the fine inner details found in the same sign during the 18th dynasty, and is now reduced to simple patches of colour, the next step in the simplification of the sign is to avoid completely filling in the single parts. Writing is no longer painting, but simply tracing a line with the ink.

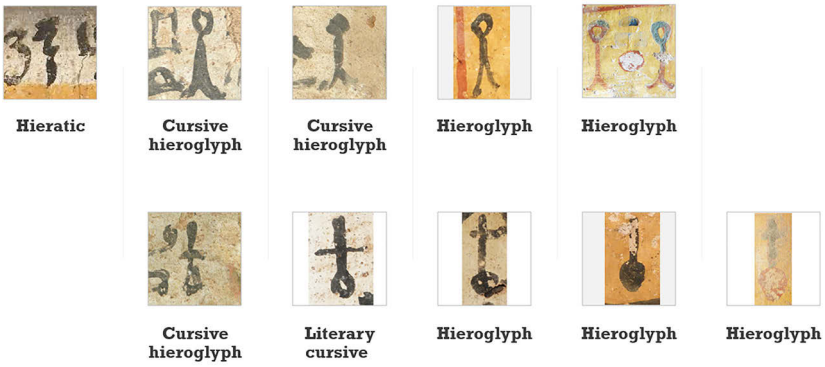


Fig. 15: Palaeographic examples of the Gardiner signs V28 (top) and F35 (bottom) (© Universität Basel/LHTT; photo: Marina Sartori)

5 Conclusions

The tomb of Ameneminet is a very complex monument, where script typologies mingle even in the same inscription genre and sometimes even within the same inscription. The secondary inscriptions take on the role not of simple signatures, but of captions to the figures and characters. They can take the form of sketched hieroglyphs, literary cursive or hieratic script, sometimes even in the same wall register. The choice of a different graphic register to leave one's own mark is a clear statement of identity and an index of the desire to stand out from the other inscriptions.

In fact, more than anything, the tomb is a *lieu de mémoire collective*, as Ragazzoli[44] and Verhoeven[45] have concluded also for TT 60 and for tomb N13.1 in Asyut, respectively. The inscriptions show a strongly cohesive community of priests connected to the temple of Amenhotep III and to the cult of Ptah-Sokar, to which Ameneminet belongs and which is bonded by a deep sense of identity. Even more so, epigraphy seems to be one of the social activities that bind the community together.[46] This community not only wants to be remembered, and to beneficiate from the power of the tomb depictions. It also contributes to the completion of the tomb, trying to fill in the gaps where important information is missing, and even trying to fit in with the 'writing style' of the original tomb inscription by adopting specific spellings, as in the case of the word '*wab*'. The inscriptions are perfectly included in the decoration and respond to each other, as is the case of the signatures bearing the name of 'Piay'. Two of these inscriptions are located in the same posi-

44 Ragazzoli 2013.
45 Verhoeven 2012; Verhoeven 2020, 323.
46 Ragazzoli, personal communication.

tion in two almost identical scenes, thus confirming the sense of emulation characterizing this closed group.

If they were indeed colleagues of the deceased, one could even talk of a sort of "friendly piety." This is also supported by the predilection of the writers to leave their mark in scenes displaying ritual actions, especially those connected to the funerary rites. The funeral might have therefore been precisely the occasion in which the colleagues of the deceased immortalized their presence and contributed to it. The next steps in the investigation will be a thorough study of the palaeography and of the language used in the tomb, to recognize possible hands and establish a relative chronology of the inscriptions.

In addition, due to the high amount of graphic variety, the tomb of Amenemineth offers an incredible amount of material to analyse how the ancient Egyptians exploited the visual possibilities of each sign and the interaction and evolution between the different scripts and sub-scripts. Some signs appear to be more unstable than others, meaning they can be manipulated in very different ways, underlining the level of arbitrariness present in the script. At the same time, TT 277 represents the perfect example of the Ramesside shift from the "picture writing" that characterized the extremely detailed inscriptions of the 18th dynasty tombs, to the properly "written".

Concluding, when we look at the enormous variety of graphic registers present in the tomb, we are faced with the difficulty of defining a proper scale. "Cursive" seems to be too generic a term, as we have at least three different subtypes of "cursive" in just this tomb. The study is therefore still ongoing, and will be aimed at completing a full typology of the various scripts present in the analysed Theban tombs, a typology that will do justice to the diversity of such a visual writing system.

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Indices

Tobias Konrad

Die Sortierung des Quellenindex erfolgte alphabetisch nach Sachgruppen und innerhalb der Sachgruppen nach Standort und Inventarnummer bzw. nach der Bezeichnung. Häufige Objektbezeichnungen wie „Dipinto", „Leichentuch", „Ostrakon" und „Papyrus" wurden entsprechend abgekürzt. Dem Zeichenindex liegt die Gardiner- bzw. die *JSesh*-Nummer[1] zu Grunde. In einigen Fällen wurden auch Zeichengruppen aufgenommen, die durch die Notation des *Manuel de Codage*[2] anhand ihrer *JSesh-Nummer* beschrieben werden.

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