A New Interpretation of the Early Dynastic so-called ‘Year’ Labels. ‘Balm Labels’ and the Preservation of the Memory of the King

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Abstract
Inscriptions on Early Dynastic ‘oil labels’ that refer to events have long been thought to contain a ‘year-name’ that dated the oil. During the last two decades, new evidence has become available which suggests that such events referred to what had been characteristic for the regnal period of a deceased king rather than for a specific year. The labels were funerary-ceremonial rather than administrative artefacts. In addition, it can now be argued that they were balm labels rather than oil labels. Moreover, high officials of the Early Dynastic court appear to have used the labels increasingly to record their own activities in providing the precious balm.

Keywords
Early Dynastic Period, year labels, history writing, mumification balm, annal stone fragments

Introduction
The Early Dynastic so-called ‘year’ labels – flat rectangular objects with inscriptions, made of ivory or ebony, varying in size from c. 9 × 7 cm (‘Aha I’) to c. 1 × 1 cm (Engel 2017: 213.43), and with a hole in the upper right corner – have been known since the end of the nineteenth century. Most of them were found in royal tombs of the First Dynasty at Abydos, and some were discovered in tombs of high officials of the same period at other sites. The labels are generally supposed to have been attached to jars with oil. New finds have been added from time to time, some even quite recently.

The inscriptions characteristically contain: firstly, the name of a king, nearly always the Horus-name in a serekh;
secondly, the hieroglyph \( \text{ḥt} \) – mostly interpreted as referring to oil\(^7\) – with some additional information, often including a quantity; and, thirdly, references to ‘events’, mostly ceremonial or religious activities of the king, sometimes a political event, and additionally economic or administrative activities of high officials.

Figure 1 shows how the structure of the inscriptions gradually evolved from two or more ‘horizontal’ registers towards two or more vertical columns. They will be considered here as consisting of two main sections. For the sake of brevity, the part that includes the \( \text{ḥt}-\text{t}-\text{section} \) – initially the small lower part, later the increasingly larger left part, of the labels – will be called the \( \text{ḥt}-\text{t}-\text{section} \), although, over time, it also contained the royal name, the names and titles of one or two officials, and signs representing institutions. The other part will be called the ‘event section’. This section – which mostly refers to more than one event – starts from the reign of King Djed with the sign \( \text{ḥt} \), commonly interpreted as \( \text{ṛnp.t} \) (year), to which the labels owe the name ‘year’ labels.

Egyptologists generally assume that the ‘event section’ contained a ‘name-giving’ event, resulting from the administrative wish to be able to identify the production year of the oil.\(^8\) This is not really convincing as no ‘year’ labels are known for wine, a common royal tomb gift as well,\(^9\) and it is not evident why it might have been deemed important to date oil and not wine.\(^10\) Baines remarked already that it is unlikely that they were administrative ‘in a narrow way’, because they are more elaborate than would be needed to identify a year uniquely, and because objects made of ebony and ivory ‘were probably not used for everyday writing’.\(^11\)

The inscriptions are the oldest ones known that contain verbs denoting human activities (in the form of ‘narrative infinitives’\(^12\)) instead of only names, numerals and nouns, or pictures representing nouns.\(^13\) As such, they might even be viewed as the earliest attempts at ‘history writing’ in the world. The ‘administrative’ interpretation required, however, the assumption that years were given a name immediately at the start of a new year, which would imply that the inscriptions could only have referred to ‘pre-planned’ events.\(^14\) Nevertheless, many scholars remained convinced that the inscriptions indeed referred, partly, to historical events.\(^15\)

Despite this ambiguity, no doubts have ever been expressed regarding the hypothesis that at least one of the events on the labels gave a year its name.\(^16\) It will be argued here, that it is now possible to assume that these labels should rather be viewed as ‘regnal’ labels\(^17\) that show events that were remarkable for the reign of a

\(^{7}\) Once \( \text{ḥt} \) instead of \( \text{ḥt}-\text{t} \), see column 1 in fig. 7 for ‘Djet 2’.

\(^{8}\) J. Kahl, Frühägyptisches Wörterbuch (Wiesbaden, 2004), III, 284; \( \text{Wh.} \) III, 21.4.

\(^{9}\) First proposed by K. Sethe, ‘Die Entwicklung der Jahresdatierung bei den alten Aegypten’ in K. Sethe, Beiträge zur ältesten Geschichte Agyptens (UGAA III; Leipzig, 1905), 61; same assumption still in E. Hornung, R. Krauss, and D. Warburton (eds), Ancient Egyptian Chronology (HdO 83; Leiden, 2006), 20, 45; and J. Baines, ‘Writing and society in early Egypt’, in J. Baines (ed.), Visual and Written Culture in Ancient Egypt (Oxford, 2007), 124; Piquette, An Archaeology of Art and Writing, 27 expresses some hesitation.

\(^{10}\) T. Wilkinson, Royal Annals of Ancient Egypt: The Palermo Stone and its Associated Fragments (London, 2000), 63; D. B. Redford, Pharaonic King-Lists, Annals and Day-Books: A Contribution to the Study of the Egyptian Sense of History (Mississauga, Ontario, 1986), 87.

\(^{11}\) Once \( \text{ḥt} \), see footnote 7.

\(^{12}\) For a search for the \( \text{ṛnp.t} \)-sign (M4) in Regulski’s database (see footnote\(^7\)) resulted in five hits among 949 inscribed vessels, two First Dynasty vessel-inscriptions and three of the Second and Third Dynasty (resp., source nos 1848, 1849 and 2124, 2125, 3097) all made of stone, however, whereas ‘wine jar’ were usually made of pottery; G. Dreyer, ‘Drei archaisch-geißelschriftlichen Gegenständen aus Jahresnamen aus Elephantine’, in J. Osing and G. Dreyer (eds), Form und Maß: Beiträge zur Literatur, Sprache und Kunst des alten Agypten. Festschrift für Gerhard Fecht (ÄA 12; Wiesbaden, 1998), 90–109, published three vessel inscriptions on pottery vessels with a \( \text{ṛnp.t} \) sign, but they post-date Djoser and had been used for storing papyrus rolls rather than for wine; one First Dynasty label with a \( \text{ṛnp.t} \) sign (‘Den 41’) did not refer to oil, but probably to meat (Dreyer, et al., MDAIK 56, 115); yet another Den label - Fig. 115 in Dreyer, et al., MDAIK 73, 101 - with (part of) a \( \text{ṛnp.t} \)-sign had no \( \text{ḥt-t} \)-section (Dreyer called it a ‘Festtielchen mit Jahresname’).

\(^{13}\) B. Koura, Die ‘7-Heiligen Öle’ und andere Öl-und Fettinschriften. Eine lexiographische Untersuchung zu den Bezeichnungen von Olen, Fetten und Salben bei den alten Agyptern von der Frühzeit bis zum Anfang der Ptolemäerzeit (von 3000 v. Chr. – ca. 305 v. Chr.) (AegMonast 2; Aachen, 1999), 3, called oil a product ‘dass seine Qualität nicht mit der Zeit verliert’.

\(^{14}\) J. Baines, ‘On the evolution, purpose, and forms of Egyptian annals’, in E.-M. Engel, U. Hartung, and V. Müller (eds), Zeichen aus dem Sand. Straßflechter aus Aegyptischen Geschichte zu Ehren von Günter Dreyer (MENES 5; Wiesbaden, 2008), 23; see also D. Wengrow, ‘Limits of decipherment: Object biographies and the invention of writing’, in B. Midant–Reynes and Y. Tristant (eds), Egypt at its Origins II: Proceedings of the International Conference ‘Origin of the State: Predynastic and Early Dynamic Egypt’ (OLA 260; Louvain, 2008), 1021; even Sethe, Beiträge, 64 thought it already ‘twozehthauf (…) in wie weit diese Begebenheiten wirklich nur zur Datierung genannt sind. Es besteht hier die Möglichkeit, dass das aufgeführte Ereignis (…) selbst verwirgt werden solle’.

\(^{15}\) The term is used in G. Dreyer, ‘Frühe Schriftzeugnisse’, in G. Dreyer and D. Polz (eds), Begegnung mit der Vergangenheit. 100 Jahre in Ägypten. Deutsches Archäologisches Institut Kairo 1907–2007 (Mainz am Rhein, 2007), 216.

\(^{16}\) For a discussion of Dreyer’s claim that the labels found in tomb U-j in Abydos (dating from c. 3200 BCE) show the start of Egyptian hieroglyphic script, see J. Baines, ‘The earliest Egyptian writing: Development, context, purpose’, in S. D. Houston (ed.), The First Writing: Script Invention as History and Process (Cambridge, 2004), 172; and A. Stauder, ‘The earliest Egyptian writing’, in C. Woods (ed.), Visible Language: The Invention of Writing in the Ancient Middle East and Beyond (reprint of 2010 orig., OIP 32; Chicago, 2015), 137.

\(^{17}\) Dreyer, in Osering and Dreyer (eds), Form und Maß, 109; Wilkinson, Royal Annals, 63; Dreyer, in Dreyer and Polz (eds), Begegnung mit der Vergangenheit, 216.

\(^{18}\) M. Baud, ‘Le format de l’histoire’, in N. Grimel and M. Baud (eds), Évenement, récit, histoire officielle. L’écriture de l’histoire dans les monarchies antiques (EE 3; Paris, 2003), 271; P. Tallet, ‘Le roi Den et les fouinouis. Les Égyptiens au Sud-Sinaï sous la 1ère dynastie’, Archéo-Nil 20 (2010), 97; Dreyer, MDAIK 56, 116; G. Godron, Études sur l’Horus Den et quelques problèmes de l’Égypte archaïque (COr 19; Geneve, 1990); E. Endefelder, Beobachtungen zur Entstehung des althögyptischen Staates (BAES 14; London, 2011) 52.

\(^{19}\) Also J. Baines, ‘History and historiography in the material world: Ancient Egyptian perspectives’, in J. Baines, H. van der Bloom, Y. S. Chen, and T. Rood (eds), Historical Consciousness and the Use of the Past in the Ancient World (Bristol, 2011), 111 refer to the labels as ‘tags associated with individual years of kings of the First Dynasty’. B. Menu, ‘Mise à mort cérémonielle et prélèvements royaux sous la 1ère Dynastie (Nâmrêr–Den)’, Archéo-Nil 11 (2001), 168 was convinced that ‘ces tablettes jouent avant tout le rôle de marquesurs des événements d’un règne’, but she did not mention the common assumption that the labels were ‘year’ labels.

\(^{20}\) I am obliged to Elizabeth Betts who suggested the term.
king rather than for a year. Additionally, it will be argued that they became increasingly used, however, by high officials to record their ability to supply the main product required for a royal funeral, namely mumification balm.

The new interpretation offered here was triggered, firstly, by the possibility – existing since 2000, but hardly explored – of comparing information on labels from the reign of King Semerkhet with that on one of the Fifth Dynasty ‘annal stone’ fragments;21 secondly, by the publication of the large number of labels found in the tomb of King Qa’a;22 and, thirdly, by neither new research results on predynastic mumification practices.23

Piquette’s recent dissertation on 427 Predynastic and Early Dynastic labels and label fragments focused on external and material characteristics rather than on the content of the inscriptions. It called for a ‘contextual’ approach and for considering the labels as the result of a meaningful social practice.24 It will be suggested here that the subset of c. 105 labels and label fragments25 used to be characterized as ‘year’ labels or ‘annalistic’ labels,26 that should be considered, indeed, as ‘funerary’ rather than as ‘administrative’ artefacts. This is not only because they were found in a funerary context and were made of precious materials, but also because of their inscriptions.

Not all of these inscriptions will be discussed – not even all 21 different inscriptions that are more or less completely preserved.27 The argument will mainly be based on a discussion of three general aspects: 1) the rmp.t-sign, 2) a comparison of ‘events’ on labels and on annal stone fragments, and 3) the ‘h3.t-section’. The conclusion will briefly return to the question of to what extent the inscriptions can be seen as a form of ‘history writing’.

Hieroglyph for year or picture of a tally?

The hieroglyph ⲁ – known from later periods as a determinative or an ideogram for rmp.t ‘year’28 – shows a ‘palm-branch stripped of leaves and notched (…) to serve as tally’.29 The early stage in the development of the hieroglyphic script makes it possible that it was here not yet the hieroglyph, but still represented the object itself: a tally notched to count years.30 Depictions from the Middle and New Kingdom showing this tally were usually accompanied by texts such as smn.n.t gn.t.k m ir hḥ n sdw ‘I established your memory as a celebrator of a myriad of sd-festivals’.31 That the palm rib was

20 For the way of referring to the source of these illustrations, see footnote; in the cases of ‘Semerkhet 5’, the recent drawing of Engel (2017) 211.2 and Engel (2017) 215.4 were preferred instead of the pictures offered on Rafaele’s site.
21 ‘Cairo Fragment 1’; Wilkinson, Royal Annals, fig. 4.
22 Engel, Das Grab des Qa’a, 316–37.
23 J. Jones, et al., ‘A prehistoric Egyptian mummy: Evidence for an embalming recipe’ and the evolution of early formative funerary treatments’, Journal of Archaeological Science 100 (2018), 191–200.
24 Piquette, An Archaeology of Art and Writing, 67.
25 See the Appendix at the end of this article.
26 P. Kaplony, Die Inschriften der ägyptischen Frühzeit. Band I (AA 8; Wiesbaden, 1963), 286 called them: ‘diejenige ūl-Êtiketten, die sich aus einem annalistischen Teil und einem Êtiketteint zusammensetzen’; see for his painstaking categorisation of all label types pages 284–6 and Band III Tables 143–5; for a summary, see Endesfelder, Beobachtungen, 52 <http://www2.rz.hu-berlin.de/mlus/net-publications/ibaes14/publikation.html> accessed 14.03.2020.
27 Excluding ‘duplicates’; see the labels in bold font in the Appendix.
28 Wb. II, 429; the Thesaurus Lingvarum Aegyptiae (TLA) refers to the Fifth Dynasty tomb of Senedjemib Inti in Giza (G 2370) for an attestation of the use as ideogram for year.
29 A. Gardiner, Egyptian Grammar (3rd edn revised; Oxford, 1966), 479. Gardiner referred to P. E. Newberry, Beni Hasan: Part I (EES ASM 1; London, 1893), 8 for an attestation of a version of the hieroglyph with notches; see also Wb. II, 432.
30 Redford, Pharaonic King-Lists, 68 (and many other examples on 68–73); Wb. V, 173.5 translates gn.t as ‘Andenken (in schriftlicher Aufzeichnung) oder ähnliches, des Königs bei den Menschen (…)’.

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Fig. 1. Examples of so-called ‘year’ labels with the names of the First Dynasty kings and, since King Djet, with names of officials.20

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originally especially used to count years, is plausible from its later use as a hieroglyph for ‘year’.

A possible objection might be that several labels show, in addition to the palm rib, also the sp-sign (O50) plus a number\(^{32}\) which has been called ‘the never failing constituent of the expression for “regnal year”’.\(^{33}\) One may wonder, therefore, if the sp-sign on labels, when accompanied by a number, should not be regarded as a prelude to naming years by referring to a recurrent activity, like the biennial ‘cattle counts’ (\(pt\, wn\)) at the time of the Second Dynasty King Ninetjer.\(^{34}\)

Dreyer was convinced, indeed, that ‘sp 6’ in the ‘event section’ of labels like ‘Qa’a 2’, ‘Qa’a 9’ and ‘Qa’a 15’ (fig. 2a) referred to the ‘sixth’ year in which a wood inspection \((m\, t\, s)\) had been performed, whereas Helck translated ‘sp 6’ as ‘six times’.\(^{35}\) For Dreyer, the fact that three Qa’a labels mention a ‘wood-inspection without the addition of sp (like ‘Qa’a 12’ in fig. 2b)\(^{36}\) was sufficient proof that these three labels referred to the first year of such inspections.

This reasoning is no longer convincing because none of the 54 Qa’a-labels known at present mention a second, third, fourth or fifth time of a wood inspection.\(^{36}\) In addition, the activities mentioned on the labels without sp and those on the ones with sp 6 were not the same (respectively figs 2b and 2a offer an example of both).\(^{39}\)

Among the 22 Qa’a labels that mention an inspection \((m\, t\, s)\) of wood, the four without a sp sign (Engel (2017) 212.1–3 and 212.5) mention ‘the inspection of \(dt\) wood’.

At least thirteen, of the sixteen \(sp\, 6\), mention ‘the bringing and inspecting of \(hm\, r\) wood’ (Engel (2017) 215.1–5, 216.3–4, 217.1–2, 218.1–2, 219.4), the remainder refer to the bringing and inspection of both types of wood (Engel (2017) 214.1–2, 219.1). It is more probable, therefore, that sp 6 denotes the number of times that an expedition had been organized to obtain precious foreign wood during the reign of King Qa’a, than that it referred to a year in which this had been done ‘for the sixth time’ (or that the inspection of wood six times during one year would have been the ‘pre-planned’ name of a year).

Therefore, the presence of sp plus a number near the picture of a palm rib on labels cannot be regarded as an indication that the palm rib was already a hieroglyph meaning year. It is quite possible that these Early Dynastic objects show a tally, and therefore indicate a regnal period rather than a year. The next section will argue that this is not only possible, but probable.

**‘Year’(?)-labels and annal stone fragments**

On the ‘Palermo stone’ and the other Fifth Dynasty annal stone fragments, the \(rnp\, t\)-sign is visible at the start of each of their ‘year-compartments’ in a way very similar to the labels.\(^{40}\) The meaning ‘year’ is certain here, because of the added information on the yearly inundations of the Nile in the lower section of these compartments. This seemed to justify attempts to assign specific labels to specific years by comparing them to these year-compartments.\(^{41}\) That these attempts remained nevertheless rather disappointing seemed understandable, too, because only about one third of the expected original number of year-compartments for the First Dynasty\(^{42}\) is preserved on the known fragments.

Den’s ‘Sed-festival’ mentioned in the third register of the recto of the ‘Palermo stone’ (see fig. 3a, the small horizontal frame on the left),\(^{43}\) is the event most often cited as being also visible on a label, namely on ‘Den 1’ (fig. 3b, large frame on top).\(^{44}\) More events than just this are visible in both cases, however, and they were not the same on both. That is why it has been suggested that only one of the depicted events determined the name of a year.\(^{45}\) As the stone was made about four centuries later than the label, and most likely with different aims, it might be suggested that

\(^{32}\) See, for instance ‘Qa’a 2, 5, 9, 14, 15, 19, 20’.

\(^{33}\) G. Fecht, ‘Die Lesung von \(fi\) “Regierungsjahr” als \(rnp\, t\)-zp’, in Ägypten – Dauer und Wandel. Symposium anlässlich des 75jährigen Bestehens des Deutschen Archäologischen Instituts Kairo (SDAIK 18; Mainz am Rhein, 1982), 85–96, 86 (quoting Gardiner).

\(^{34}\) The compartments on the Palermo stone mentioning the \(pt\, wn\) (cattle counts) during Ninetjer start with sp 4 in the second completely preserved compartment and end with \(sp\, 9\) in the second last; Wilkinson, Royal Annals, fig. 1, ‘Palermo stone’, fourth register.

\(^{35}\) W. Helck, Untersuchungen zur Thinitenzzeit (AA 45; Wiesbaden, 1987), 164; Dreyer, et al., MDAIK 52, 74; Engel, Das Grab des Qa’a, 334, follows Dreyer.

\(^{36}\) Also ‘Qa’a 17’ and Engel, Das Grab des Qa’a, 322 (fig. 212.3).

\(^{37}\) On label ‘Den 31’ \(tpy\) was added to \(sp\, t\)-text: \(sp\, t\)-isbt; \(first\, time\, of\, striking\, the\, Easterners\); but this label does not belong to the set of labels discussed here, because it does not have the palm rib nor the \(hs\, t\)-sign.

\(^{38}\) Engel, Das Grab des Qa’a, 321–37 offers the illustrations, and her transliterations and translations of the 32 labels or label fragments with the \(rnp\, t\)-sign and/or an ‘event section’ and/or a \(hs\, t\)-section.

\(^{39}\) My transl(iter)ations of the ‘event-sections’ in the labels of Figure 2 would be: ‘Qa’a 15’: \(m\, t\, s\, n\) (? or: \(ir\, n\)?) \(ns\, s\) (? \(m\, t\, s\, 6 \(m\, n\, h\, b\, j\, h\, b\, \dot{s}\, m\, n\, h\, b\, j\, h\, b\, \dot{s}\, m\) )’ ‘\(hm\, r\)’s wood’ (Engel (2017) 215.1); the two royal (for the king as \(hs\, t\)-king); (contributions of?) Upper and Lower Egypt. ‘Qa’a 12’: \(m\, t\, s\) (? or: \(ir\, n\)?) \(m\, n\, h\, b\, j\, h\, b\, \dot{s}\, m\, n\, h\, b\, j\, h\, b\, \dot{s}\, m\) ’ ‘\(hm\, r\)’s wood’ (Engel (2017) 215.1); the two royal (for the king as \(hs\, t\)-king). (NB Section ‘The officials, the man with the vessel and the \(m\, n\, h\, b\, j\, h\, b\, \dot{s}\, m\) ’ below discusses the translation of \(m\, n\, h\, b\, j\, h\, b\)."

\(^{40}\) Wilkinson, Royal Annals, figs 1, 4 and 10; see for details figs 3 and 4 here below.

\(^{41}\) Helck, Thinitenzzeit, 144–67; Baines, Visual and Written Culture, 125, 128.

\(^{42}\) E. Hornung, R. Kraus, and D. Warburton, ‘Royal annals’, in E. Hornung, R. Kraus, and D. Warburton (eds), Ancient Egyptian Chronology (HdO 83; Leiden, 2006), 25 mention ‘c. 164 years’ for the First Dynasty and Wilkinson, Royal Annals, counts 59 year-compartments.

\(^{43}\) Godron, Études sur l’Horus Den, 105, 121 (Planche XVIII).

\(^{44}\) Helck, Thinitenzzeit, 157–9; Godron, Études sur l’Horus Den, 41; Wilkinson, Royal Annals, 107; Tallet, Archéo-Nil 20, 99: ‘peut-être une fête-sed’; however, Endeßfelder, Beobachtungen, 259, regarded the picture on the label as a coronation ceremony, because it does not have the double stairs of the Sed-festival as visible fragment ‘Den 5’.

\(^{45}\) Already in Sethe, Beiträge, 64.
differences were just the result of different choices from the recorded events. It would imply the assumption that the Early Dynastic archives that must have been the source for the annal stone contained more events per year than could be copied on labels. However, the increasing width of the year-compartments for later dynasties suggests that, for the period of the First Dynasty, only a few events per year had been recorded in these archives.

Moreover, yet another objection against the idea that the events on ‘Den 1’ refer to one specific year is possible: the event that has been interpreted as the ‘smiting (skr) of the ivntf ḫw’ (fig. 3b small lower frame), is mentioned on the Palermo stone in another year-compartment than the ḫb–sd (fig. 3a large vertical frame). It has to be conceded that only nineteen year-compartments for Den’s reign have been preserved, while he may have reigned for more than 40 years. This implies that it cannot be completely excluded that the ḫb–sd as well as the skr ivntf ḫw had each occurred twice during Den’s reign and may have been present together in a year-compartment that was not preserved, but this seems a rather far-fetched possibility.

The period of King Semerkhet on the so-called ‘Cairo Fragment 1’, may be seen as more appropriate for an attempt to try to assign labels to a specific year than the very incomplete range of year-compartments for Den on the ‘Palermo stone’, as Semerkhet’s reign is the only one for the First Dynasty for which all years are preserved. However, these year-compartments have long been thought to be practically illegible. The reason why a comparison is now possible is that in 2000 a drawing of this fragment, made in Cairo in 1948 by I. E. S. Edwards (1909–96), was found and published by Wilkinson, which showed much more than Wilkinson had seen in 1995. Until now, this has not yet led to a detailed comparison with all label (fragment)s from the same period.

The five (nearly) complete labels and five label fragments of the Semerkhet period, known at present, contain two different label inscriptions. One of them is to be found on the labels ‘Semarkhet 1’ and ‘Semarkhet 2’ (fig. 4), that were more or less duplicates of each other, although slightly different in composition. They show Semerkhet’s nḥty-name Iry and they were found in the tomb of this king in Abydos already by Petrie. ‘Semarkhet 6’, that was found in a tomb near Helwan (fig. 4), was yet another such ‘duplicate’ and two fragments found in the 1980s in the tomb of Qa’a (‘Semarkhet 7 and 8’) seem to have belonged to yet two more ‘duplicates’. The second inscription is on the two nearly complete labels ‘Semarkhet 3’ and ‘Semarkhet 5’, also ‘duplicates’ of each other. These were found in the tomb of Qa’a. They show a serekh with Semerkhet’s Horus-name, and also – probably on both – a small serekh with Qa’a’s Horus-name near the hole in the upper right corner.

Figure 4 makes a comparison possible of the label-inscription on ‘Semarkhet 1, 2 and 6’ with the Semerkhet section on what is known as ‘Cairo Fragment 1’ of the annal stone.

46 From G. Dreyer, ‘Königsgräber ab Djer: Wege zur Auferstehung’, in G. Dreyer and D. Polz (eds), Begegnung mit der Vergangenheit (Mainz am Rhein, 2007), 216 (courtesy of the DAIK).
47 See Wilkinson, Royal Annals, fig. 1.
48 Godron, Études sur l’Horus Den, 53 (he notes that his ḫw has also been read as ḫm).
49 Hornung, et al., Ancient Egyptian Chronology, 24: minimum 34, maximum 42 years.
50 Dreyer, et al., MDAIK 52, 73 ‘zwar vollständig aber sehr unleserlich, so dass der Jahresname sich nicht identifizieren lässt’; for a photo taken in 1915, see <http://www.ancientpages.com/wp-content/uploads/2016/04/palermostonecairo12.jpg> accessed 12.07.2020. M. Nuzzolo and K. Piquette are preparing a new edition of the stone fragments with new photos, based on ‘Reflectance Transformation Imaging’ (see discussion in present volume: Nuzzolo, JEA 107); they could not yet show me their results for the Semerkhet part.
51 Wilkinson, Royal Annals, figs 4–6; it had been sent by Edwards to the S. R. K. Glanville (1900–56) at the British Museum, with a personal letter that somewhat belittled its possible importance (Wilkinson, Royal Annals, 181).
52 Iry-nḥty, ‘Belonging to the Two Ladies’(?); a seal-inscription in W. M. F. Petrie, Royal Tombs of the First Dynasty: Part II (MEEF 21; London, 1901), 14 and pl. 28.72 [hereafter RT II]; it makes plausible that this was his nḥty-name indeed.
53 Helck, Thinitenzeit, 163; Endesfelder, Beobachtungen, 262–3, 284.
54 An illustration was published in P. Kaplony’s review of Z. Y. Saad’s, Excavations in Helwan (Cairo, 1969) in Bibliotheca Orientalis 28, 1–2 (1971) 43–9, 44. The name of the owner of the tomb is not known, perhaps it was the official Henuka mentioned in the label-inscription?
55 Semerkhet’s tomb contained usurped artefacts from predecessor King Adjib as well, see T. Wilkinson, Early Dynastic Egypt (London, 2001), 79.
The top right event on these labels is šms Hr, the ‘following of Horus’, probably a journey of the king and his court along the Nile, perhaps related to tax collection and/or administering justice.\(^{56}\) This event is mentioned four times in the upper part of year compartments on the annal stone fragment, every other year, but it is never accompanied by the sp-hieroglyph with a number. The first conclusion from the comparison in figure 4 may be, therefore, that this ‘šms Hr event’ cannot have been a ‘name-giving event’ identifying a specific year.

The presence of the šms-Hr-sign on the Semerkhet label may denote instead that during Semerkhet’s reign, the activity of šms-Hr was again dutifully performed every second year, as had been the case during the reigns of Aha and Djer, and again during the reign of King Ninetjer of the Second Dynasty. The nineteen preserved year-compartments of Den’s reign on the ‘Palermo-stone’ and ‘Cairo Fragment 5’, in contrast, depict no šms-Hr. It may have been a memorable characteristic of Semerkhet’s reign, therefore, that he returned to a tradition which had been neglected under the long reign of King Den, and perhaps also still under King Adjib.\(^{57}\)

The other event in this Semerkhet-label-inscription is denoted by the hieroglyphs for ḫwr.w (‘shrine of the Great Ones’) followed by a baboon and a boat with a falcon. This puzzling inscription is reminiscent of a relief found beneath Djoser’s Step Pyramid (see fig. 5) showing that the inscription ḫ(h-hḏf) wr.w and the baboon form a fixed combination. It has been translated as: ‘the plurality of ancestors’,\(^{58}\) a translation that may find some support in the statue of a squatting baboon in the museum in Berlin bearing the name of Narmer on its pedestal, which may represent Narmer as the eldest ancestor of the First Dynasty kings.

The combination on the label of the phrase ḫ wr.w and the baboon with a boat, could refer, therefore, to one or more visits of Semerkhet to Abydos to honor his royal ancestors.\(^{59}\)

If this had really been a name-giving event for a specific year instead of a remarkable feature of his reign, it is hard to understand why this event would not have been chosen for this year for the annal stone.\(^{60}\) The two damaged parts on ‘Cairo Fragment 1’ that Edwards had also not been able to read, were evidently not large enough to have contained the cluster of signs involved (see fig. 4). It cannot be completely excluded, of course, that events which had been thought memorable during the First Dynasty were perhaps no longer deemed worth mentioning during the Fifth Dynasty.

However, the small ‘Cairo Fragment 5’ (see fig. 4 bottom right), shows in the top right corner of the partly preserved ‘year-compartment’ of King Den that the recording of an event which required the addition of a baboon had been thought still important enough during the Fifth Dynasty to record it in a ‘year-compartment’.\(^{61}\) Thus, there are several indications that a second conclusion from figure 4 may be that the inscription with the baboon on Semerkhet-labels rather refers to a general characteristic of this king – probably his veneration for his royal ancestors – than to an event that had been characteristic for a specific year.

Figure 6 compares the inscription on ‘Semerkhet 3’ and ‘Semerkhet 5’, with the inscriptions in the year-compartments on the same stone fragment. The upper part of Semerkhet’s fifth year on the stone fragment mentions a pr.t nsw, an ‘appearance of the king as nsw-king’. The same event seems also to be visible in the vertical frame on the label, here in the form of a picture of the king with the white crown. In addition, they both show what appears to be a fortress, in the largest of the two horizontal frames on ‘Semerkhet 3’ and in the small horizontal frame in the fifth year-compartment.

A pr.t nsw can be found already in his third year on the stone fragment, however, and no ‘sp 2’ was added to pr.t nsw in his fifth year, or on the label, which makes it certain, again, that it cannot have been a ‘name-giving’ event identifying a specific year. It may be argued, instead, that his appearance twice as nsw-king on the stone fragment, during his comparatively short reign, is remarkable. The nineteen preserved compartments of Den mention no appearance at all as nsw-king, only one as bity-king and one as ‘dual king’.

\(^{56}\) Wilkinson, Early Dynastic Egypt, 220.

\(^{57}\) At least, in the form of a regular biennial event; a šms-Hr is mentioned on ‘Den 8’.

\(^{58}\) Wilkinson, Early Dynastic Egypt, 285.

\(^{59}\) A. Jiménez Serrano, Royal Festivals in the Late Predynastic Period and the First Dynasty (BAR IS 1076; Oxford, 2002), 97 saw it as the Sokar-bark, but it has only one falcon instead of two and it misses the characteristic rectangle representing the sledge on which this bark used to be pulled.

\(^{60}\) Helck, Thinitenzeit, 163; he interpreted the signs as a ‘Fest des hḏ-wr.w’.

\(^{61}\) Wilkinson, Early Dynastic Egypt, 241 and fig. 9.
In the six compartments where a royal ‘appearance’ was mentioned for King Ninetjer – among the fourteen preserved compartments on the fourth register of the ‘Palermo stone’ – only one was a nsw, one a ḫt nsw, and no less than four ḫt bity. This warrants the suggestion therefore, that Semerkhet’s appearance twice as nsw-king within a relatively short space of time, was seen as a noteworthy feature of his reign.

As to the presence of buildings on both the labels and the annal stone fragment, an important difference is that there are two buildings in Semerkhet’s fifth year on Cairo Fragment 1 (see fig. 6, below the hieroglyphs for ḫt nsw), not just one, as on the label, and that these two are accompanied by the signs for the ‘narrative infinitives’ ms and wp.t (see the small vertical frame in ‘year 5’ in fig. 6). This may refer to the ‘bringing into existence’ of the one and the ‘opening’ of the other building, that is recognizable as the ḫwt P-Hr-msn, an important Early Dynastic institution dating from at least King Djer, that had to supply royal tombs with tomb gifts. In contrast, the building on the two Semerkhet-labels is inscribed with the name ḫr ib ntr.w, a name not known from other Early Dynastic inscriptions. The smaller horizontal frame in ‘Sermekht 3’ in figure 6 shows that this building is, moreover, not accompanied by the signs wp or ms, but by the verb ϕhr ḫs, ‘circumambulate (around).’

In the year-compartments of the annal stone fragment, a building plus ϕhr ḫs does not occur in ‘year 5’, but in ‘year 1’ of Semerkhet (see the small square frame in this year-compartiment in fig. 6). Here it is not combined with the event of an appearance as nsw-king, but with the first of his three appearances as ‘dual’ king. The first year-compartiment of his successor Qa’a, on the left side of the same annal stone fragment (fig. 6), shows that a ‘circumambulation’ of what possibly represented the walls of Memphis, was apparently the normal event at the start of a new reign. It was something especially characteristic for the reign of Semerkhet, therefore, that he also ‘circumambulated’ a building named ḫr ib ntr.w later during his reign.

Therefore, not only are two of the events on label ‘Den 1’ seemingly recognizable in two different year-compartments on the annal stone. Moreover, a comparison of the ‘event section’ of the inscriptions on Semerkhet labels with the related year-compartments on ‘Cairo Fragment 1’ makes it quite probable that the events represented on these labels were characteristic for a reign rather than for one specific year.

The ḫ.s.t-section and the analysis of Predynastic mummy wrappings

Not only were the so-called ‘year’ labels more likely ‘regnal’ labels, it is also likely that they were more precisely ‘balm labels’ rather than ‘oil-labels’. It used to be assumed that the ḫ.s.t-oil to which the labels referred was meant for offerings. Petrie reported that the earth near the entrance of Semerkhet’s tomb – where label ‘Sermekht 2’ was found – was saturated to three feet (90 cm) deep with an ‘ointment’ that could still be smelled strongly at the time of the excavation; he thought that ‘hundredweights of it must be poured out here’. Such large quantities must likely point to a recurrent offering practice during a long period. As labels were mostly found inside the closed part of the tombs, it is unlikely that the oil mentioned on the labels was (only) used for offerings.

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62 E. M. Engel, ‘Das ḫwt P-Hr-w-msn.w’, in E.-M. Engel, U. Hartung, and V. Müller (eds), Zeichen aus dem Sand. Steinfundstücke aus Ägypten Geschichte zu Ehren von Günter Dreyer (Wiesbaden, 2008), 107–26.

63 Dreyer, et al., MDAIK 52, 73; and Wilkinson, Early Dynastic Egypt, 79 both ignored the hieroglyph ϕhr and read ḫs as ‘planning’. Engel, Das Grab des Qa’a, 318 agrees that ḫs elsewhere probably meant ‘planning’, but in this instance it probably did not because of the combination with ϕhr.

64 Wilkinson, Royal Annals, 195, 201.

65 Endesfelder, Beobachtungen, 137, 230–1.

66 W. M. F. Petrie, Royal Tombs of the First Dynasty: Part I (MEEF 18; London, 1900), 14 [hereafter RT I]; discussed in Endesfelder, Beobachtungen, 147.

67 Endesfelder, Beobachtungen, 230.
Recent research by Jana Jones and others (2018) has demonstrated that mummification by using balm – not only by natural desiccation and/or the use of natron – was practiced already in the Predynastic Period. Chemical analysis of the wrappings of a predynastic mummy in the Egyptian Museum in Turin (reg. no. S. 293) with a provenance in Upper Egypt (probably Gebelein, Qena or Luxor) and dating to Naqada IА–IIА (c. 3700–3500 BCE) showed the presence of a complex mixture of 1) plant oil/animal fat (96%); 2) aromatic plant extract (3%); 3) plant gum/sugar (0.5%); and 4) conifer resin (trace). Jones, et al. noted, in addition, that the ‘heated conifer resin’ in the wrappings was ‘non-native’ and most probably imported from ‘the Eastern Mediterranean’. The ‘relative abundances’ of the ingredients were said, moreover, to be ‘typical…’

Jones, et al., Jnl of Arch. Science 100, 191–200. 76 An earlier analysis of funerary textiles of predynastic mummies from Lower Egypt dating from Naqada IIB–C had shown similar results: J. Jones, T. F. G. Higham, R. Oldfield, T. P. O’Connor, and S. A. Buckley, ‘Evidence for prehistoric origins of Egyptian mummification in Late Neolithic burials’, PLoS One 9:8 (2014), [for] mummification throughout much of ancient Egypt’s 3000-year pharaonic history;73 although the found percentages did not have to be indicative for the original compositions due to the possibility of chemical changes over time.74

The single potential direct evidence of mummification during the First Dynasty – a wrapped arm found in the tomb of Djer at Abydos – is no longer extant.75 However, in the same tomb a cache was found with fourteen vessels ‘caked together by resins and (burnt) linen’.76 A chemical analysis by Serpico and White of residues in these vessels suggested not only the presence of ‘vegetable oil’ and ‘animal fat’, but also, in one jar, traces of conifer resin (‘probably of Lebanese origin’) and, in another jar, possibly ‘polysaccharide gums’.77

The presence of linen in the resin on the vessels, as assumed by Petrie, was doubted by them.78 Their suggestion that the jars contained a ‘food mixture’ is also doubtful, however, because there is no immediately obvious reason for the addition of a tasteless product like gum to a food mixture, as they noted.79 The presence in Djer’s tomb of ingredients similar to the five or six found in predynastic linen mummy wrappings (as subsumed under the four headings mentioned here above) can rather be regarded, therefore, as an indication for the practice of mummification not only in the Predynastic Period, but also during the First Dynasty.

73 Jones, et al., Jnl of Arch. Science 100, 198 refers to S. A. Buckley and R. P. Evershed, ‘Organic chemistry of embalming agents in Pharaonic and Graeco-Roman mummies’, Nature 413 (2001) 837–41.
74 Jones, et al., Jnl of Arch. Science 100, 196, Table 2 and footnote ‘a’ to this table.
75 S. Ikram and A. Dodson, The Mummy in Ancient Egypt (London, 1998), 109, 317; a picture in RT II, pl. I.
76 M. Serpico and R. White, ‘A report on the analysis of the contents of a cache of jars from the Tomb of Djer’, in J. Spencer (ed.), Aspects of Early Egypt (London, 1996) 128–39, 130 (reffering to RT I, 46).
77 Serpico and White, in Spencer (ed.) Aspects of Early Egypt, 138.
78 Serpico and White, in Spencer (ed.) Aspects of Early Egypt, 129.
79 Serpico and White, in Spencer (ed.) Aspects of Early Egypt, respectively 138, 134.
Fig. 6. ‘Semerkhet 3’ and ‘Semerkhet 5’ compared to the year-compartments on ‘Cairo Fragment 1’ of the annal stone.

In what follows, the hypothesis will be tested if the information on our labels also shows similarities to the mixture of ingredients found in predynastic mumification balm. Figure 7 offers an overview, published by Helck in 1987, of the hieroglyphs in the ḫst-t-section of 21 labels and label fragments, arranged chronologically by king.80 Helck was convinced that ‘es damal noch keine Mumifizierung gab’.81 Thus, neither the structure of his overview, nor his interpretations of details, can have been biased by the hypothesis that they refer to mumification balm. The information in the columns of his overview will be discussed in three sections, respectively for columns 1–2, 3–7 and 8–10. Where relevant, information from labels not yet known to Helck will be added.

‘Plant oil/animal fat’ and ‘aromatic plant extract’ (columns 1–2)

The ḫst-t-sign in Column 1, denoting ‘the foremost part of’, ‘the start of’ or ‘the best of’, is mostly considered to refer to ‘the best oil’.82 The proposal by Bardinet to translate it as ‘resin’83 is not very convincing, because he refers it to the inscription ḫst-t mt 𒊨 next to a picture of dark red bullets in a basket in Rekhmire’s tomb (TT100), c. 1500 years later. Fifth and Sixth Dynasty inscriptions mention ḫst-t mt 𒊨 as one of the ‘seven sacred oils’ (see fig. 10). They show vessels that must have contained more or less liquid or viscous products, whereas resin hardens very soon after having left the cones, or the bark, of a conifer.

The hieroglyph for ṭḥy (‘first’) before ḫst-t on the Semerkhet and the Ḫa’a labels suggests that there was a reason to emphasize the quality of what was already called ‘the best’. This makes more sense in the case of oil than of resin. Domestic oil was a common product in Ancient Egypt.84 Therefore, ṭḥy will have emphasized that it was really ‘top quality’ domestic plant oil. It may be assumed that the dominant presence of ‘plant oil/animal fat’ in the predynastic mumification balm indicates that this plant oil will also have been domestic oil.

Column 2 shows four instances of the hieroglyphs ḫ:length, Libya(n). The term appeared already earlier on a piece of ivory with Narmer’s name (‘Narmer 4’), where it probably referred to a victory over Libyan people. ḫ:length in the ḫst-t-section of labels will rather have referred to Libyan oil. Bardinet has argued convincingly that oil was made of the umbrella pine tree occurring in the Libyan Cyrenaica, about a thousand kilometers removed from Memphis, which did not grow naturally in Egypt.85 What looks like ṭḥ, ‘end, back’, on ‘Den 56’, may refer to ‘the most remote’ part of Libya.86

The term ḫ:length is also known for one of the ‘seven sacred oils’, mentioned on Fifth and Sixth Dynasty ‘ointment-slabs’,87 as is also the case for ṭḥ and ḫ:length in this column (see

80 Helck, Thinitenzeit, 173; N.B. ‘Den 56’ was a Djet-label according to Helck, but it is a Den-label according to Kahl, Das System, 259 (followed by Raffaele); Regulski’s database has ‘First Dynasty, not earlier than Djet’, based on ‘archaeological context’.
81 Helck, Thinitenzeit, 153; he does not mention the arm found by Petrie in Djet’s tomb, but he may have assumed that the use of wrappings did not have to imply the use of mumification balm.
82 Helck, Thinitenzeit, 171 assumed that the sign as such (transliterated by him as ḫst-t) refers to oil in the Early Dynastic period; Kahl, Frühägyptisches Wörterbuch, 284 and Wh. III, 19–21 both assume a following noun; Menou, Archéo-Nil 11, 167 proposed to translate it as ‘the beginning of the collection of royal taxes’ or ‘first fruits’ (‘début (prémices)’), although there is no indication that ḫst-t was ever used in this sense or that the European feudal duty of ‘first fruits’ was practiced.
83 Th. Bardinet, Relations économiques et pressions militaires en Méditerranée orientale et en Libye au temps de Pharaons. Histoire des importations égyptiennes des résines et des conifères du Liban et de la Libye depuis la période archaïque jusqu’à l’époque ptolémaïque (EME 7; Paris, 2008) 174.
84 J. M. Alba Gomez, ‘Oil press installations and oil production in ancient Egypt’, in J. M. Chyla, K. Rosińska-Balik, J. Dębowska-Ludwin, and C. Walsh (eds), Current Research in Egyptology 17 (Oxford, 2016) 186–208, 187; Koura, Die ‘7-Heiligen Öle’, 1.
85 Bardinet, Relations économiques, 190, 331 translates the ṭḥn ḫ:length as the ‘pin parasol de Libye, nom du genévrier–macarocarpa quand il pousse en Cyrénaïque’; Alba Gomez, in Chyla, et al. (eds), CRE 17, 188–91, gives a list of sixteen Egyptian oil plants.
86 I am obliged to one of the reviewers for the suggestion; the TLA gives ‘the far north’ for ṭḥ-w (for later periods).
87 Koura, Die ‘7-Heiligen Öle’, 40–1 (for notations without ḫst-t see p. 193).

88 Fritschi, Relations économiques et pressions militaires en Méditerranée orientale et en Libye au temps de Pharaons. Histoire des importations égyptiennes des résines et des conifères du Liban et de la Libye depuis la période archaïque jusqu’à l’époque ptolémaïque (EME 7; Paris, 2008) 174.
‘Semerkhet 2’ and ‘Qa’a 2’). Oil made from pine trees has a strong woody smell, indeed. So, ṣnw refers here most likely to imported Libyan oil, as an ingredient to be added in small quantities to ḥšt-t-oil to improve its smell, instead of being an adjectival qualification of ḥšt. It should be noted that a sign for fragrance was even explicitly added to the hieroglyph for ‘ﲣ’. The mention of precious oils in combination with ḥšt t. recalls the very small quantities of ‘aromatic plant extract’ found in predynastic mummy wrappings as additions to comparatively very large amounts of ‘plant oil/animal fat’.

The sign ḳ (V27), ḳ, that is present on ‘Qa’a 1’ in addition to ṣnw, can refer to animal fat from a mammal or a bird. The labels ‘Semerkhet 5’ (see fig. 6) and Engel (2017) 212.1–5 (among them ‘Qa’a 12’ and ‘Qa’a 17’), not yet known to Helck, also show attestations of ḳ. Three other possible references to animal fat are, firstly, the calf in ‘Qa’a 3’ and 7 in figure 7, that is known from later script phases as the determinative not only of ḥšš, calf, and ḥḥḥw, dehorned cows, but also of ḥḥ( h), ointment. Secondly, the addition of ṣpt, bird, to mrḥt on the rear side of ‘Semerkhet 5’ and on many ḳ-a-labels – Engel suggests that, at that time, ‘bird fat’ (perhaps of a goose?) was a normal addition to mrḥt, ointment, 84 which itself may have been the term for the combination of ingredients to which the recto referred. Thirdly, column 4 contains likely references to ‘animal fat’, too, as will be argued below. That animal fat or bird fat are not always mentioned on the labels may be due to the fact that it was not a precious ingredient and that it instead was a normal addition to ḥšt t-oil to make it into ointment or balm.

We may conclude that the information contained in the first two columns of Helck’s overview from 1987, in combination with that on labels that were found later, offers sufficient indications that the labels refer not only to ḥšt-t-oil, but probably also to an ‘aromatic plant extract’ from Libya and to ‘animal fat’.

‘Plant gum/sugar’ and ‘conifer resin’ (columns 3–7)

Column 3 in figure 7 shows nine examples of a combination of three hieroglyphs which have been read as ḳ ḳ ḳ, ‘fragrance of Horus’ (or: ‘royal fragrance’) 85, but also as ḱf ḱf ḱf, ‘the Stairs of Horus’, 86 a toponym used for the Cyrenaica (фа = East Libyan) forest-zone dominated by the Jebel Akhdar (Green Mountain). 87

88 Gardiner’s sign D46 (a ‘hand letting drops fall’) refers to this label (ṣrt ṭ t. 17.26); Helck, Thinitzeit, 171 translated, less convincingly, ‘Öl zur Handwaschung’, for ḳ see Kahl, Das System, 613 n. 1439.

89 Wb. I, 239.11–14: ‘tierisches Fett (…) eines Säugetiers oder Vogels’; the TL A has 79 attestations for ḳ with the meaning ‘animal fat’, and only two with a vegetable meaning, namely: ḳ- (![\text{q}]-, conifer resin (referring to Wb. I, 239.14) and ḳ-ḏjk (with a reference to Koura, Die ‘7-Heiligen Öle’, 208); Kahl, Wörterbuch, 96–7 has ‘Fett’.

90 Engel, Das Grab des Qa’ a, 319, 327–34 (figs 211.2 and 215–19).

91 Kaplony, Inschriften I, 311: ‘Horusduft’.

92 M. Begon, ‘Un fragment d’étiquette de la Ire dynastie conservé au Musée du Louvre (inv. E 30463)’, RdE 65 (2014) 165–77, 169.

93 Bardinet, Relations économiques, 132 mentions the export of the wood of this tree and its fruits (the pine–nuts, which are the seeds in the cones); he added (p. 24) that the ‘pin parasol (…) est moins bon fournisseur de résine que le pin d’Alep’.

Bardinet translated this group of hieroglyphs on ‘Aha 3’ (see fig. 7), in combination with the hieroglyphs in column 5 of figure 7, as: ‘(Ointment with) resin and 100 pieces of wood from “the Stairs of Horus”, (products) arriving in Lower Egypt in two boats’. 94

It will be argued however, that the hieroglyphs in column 3 and 5 of figure 7 do not refer to one product (wood from the Stairs of Horus), but to two products (wood and a ‘Stairs-of-Horus-product’), and that the sign for wood in column 5 refers to Eastern Mediterranean rather than to Libyan wood. This would allow a translation like: ‘The best (domestic) oil, “Stairs of Horus”- (product), and 100 pieces of wood;95 contributed by Lower Egypt (in) two vessels’. 96

A possible candidate for the ‘(product from) the Stairs of Horus’ is the Libyan resin or gum silphium. Silphium became world famous in antiquity for its unique fragrance and sweetness (and as a panacea for all kinds of ailments) following its ‘discovery’ in 631 BCE by Greek colonizers, in the region where they founded the city of Cyrene. Its sweet fragrant gum could be extracted by making incisions in the root. It was even depicted on Libyan coins from the sixth to the fourth century BCE (fig. 8b). Attempts to cultivate it in other parts of the Mediterranean world failed. According to Pliny the Elder (23–79 CE) the plant had nearly completely disappeared by the first century CE, probably due to over-exploitation as well as to an increase in farming goats in Cyrenaica. 97

As the conifers, from which the Libyan oil, mentioned in column 2, was made, grew also in this eastern region of Libya, it is quite probable that the Egyptians knew of the existence of this remarkable plant already by the Early Dynastic Period. As the sap of silphium is described as a ‘translucid gum-resin’ which hardens quickly in the sun, 98 it evokes ‘the difficulty of removing melted resin’ from the wooden label ‘Den 1’ which was reported by Petrie; 99 Lebanese resin with its red color will not have been ‘translucid’. The sweetness of silphium recalls the ‘plant gum/sugar’ mentioned by Jones, et al. as the third ingredient in the predynastic mummy-wrappings and of the ‘saccharide gum’ in one of the vessels in Djer’s tomb mentioned above. They concluded in their report that further research was needed, focusing ‘specifically on the sugar/gum component’, for which they had not been able to establish a possible source. 100 This is understandable, if the gum came from a plant that is now extinct.

It may be added that two puzzling objects in the center of label ‘Djet 1’ (fig. 8d) were once interpreted as pictures of the thick root of this famous plant with its aromatic gum,
because of the characteristic curving and horizontal growth of its small lower end. Helck preferred to interpret them—in combination with the ms.t sign at the top—as the ‘Geburt zweier Lotosknospenzeichen’, although the ms.t sign stands above what looks like two symbols for fortresses, which makes the ‘bringing into existence’ of these two buildings a more likely interpretation.

Figure 8 shows why the older interpretation of these two puzzling objects is more trustworthy. The bud of a waterlily (often called a lotus in Egyptology) is not characterized by a stalk growing horizontally right under the bud, as to be seen on label ‘Djet 1’ (fig. 8d) and in the case of the silphium root (see fig. 8b–c).

The provenance of ‘Djet 1’ is unknown, but the similar label ‘Djet 2’, with a more schematic drawing of the two objects (without the horizontally growing root) was found in the large ‘palace façade’ mastaba tomb no. 3504 in Saqqara. This tomb probably belonged to the official Sekhemkashef, whose name is mentioned on several other objects found in this tomb and also some in Djet’s tomb in Abydos. The inscription of ‘Djet 2’ does not have the ḥꜣt-sign for oil, but the wḥm-sign, which has been supposed to refer to ‘repeated pressing’ and, therefore, perhaps to a lower oil quality. The possible presence of silphium-roots on a label found in this non-royal tomb might show that for this funeral, too, a precious—perhaps at that time new—product like silphium was used.

Column 3 includes, for the labels ‘Semerkhet 2’ and ‘Qa’a 1’, a term transliterated by Engel as ḫ.tˇsḥ rw, which is also present on ‘Qa’a 12’ and ‘Qa’a 17’ (Engel (2017) 212.1–5). She translated it—referring to Helck—as Baumgarten des Palastes. In fact, however, Helck proposed Baumgarten des Horus, which fits better into Bardinet’s convincing suggestion that the term referred to the forested Cyrenaica region. It is certain that the Cyrenaica was inhabited from at least c. 8000 BCE, but unfortunately no archeological remains are known for the region, not even for

Fig. 7. Overview of the hieroglyphs in the ‘ḥꜣt-section’ of 21 labels (from Helck, Thinitenzeit, 173, with added column numbers and references to electronically accessible illustrations).

101 V. Vikentiev, ‘Études d’épigraphie protodynastique. II. Deux tablettes en ivoire (I dyn.) etc.’, ASAE 56 (1959) 1–13, 11–12.
102 Helck, Thinitenzeit, 155 (he did mention the article of Vikentiev, but did not discuss his interpretation).
103 I do not understand the ḫnt-sign next to ms; Helck read it as ‘cellar’, Vikentiev as ‘in front of’.
104 The Latin name of the waterlily is nymphaea lotus; T. Pommerening, E. Marinova, and S. Hendrickx, ‘The Early Dynastic origin of the water-lily motif’, CdE 8 (2010), 14–40.
105 Source nos 0843, 0987–91, 0994–5, 0997–1001 (‘Djet 7, 10, 11’) and four in Djet’s tomb in Abydos (source nos 0646, 0936–7, 0939).
106 Helck, Thinitenzeit, 171; Regulski’s database shows that this is the only known label (fragment) with wḥm (F25); Sekhemkashef’s own tomb also contained six small oil-labels, that indicate that he had enjoyed the honor of receiving ḥꜣt-oil from the pr-ḥḏ for his funeral: W. Fritschy, ‘The pr–ḥḏ and the Early Dynastic state’, JEA 104:2 (2018), 161–76, 172 source nos 1117–22.
107 Baumgarten des Palastes: Engel, Das Grab des Qa’a, 317; Helck, Thinitenzeit, 171.
much later periods when Libyan contacts with Egypt are well known from Egyptian sources.\textsuperscript{108}

Column 4 shows for three labels the head of a horned mammal. Kaplony proposed to interpret it as the antelope called \textit{nwkw},\textsuperscript{109} in order to be able to read the sign as \textit{nw}, ointment. Helck disagreed, because the horns are not like \textit{nwkw} horns (see fig. 9 below right).\textsuperscript{110} He did not suggest an alternative, but the horns clearly resemble those of the oryx antelope (\textit{mh-hd}; see fig. 9.)

The \textit{Wörterbuch} added ‘as an animal to be fattened’ to its translation for \textit{nwkw}, an addition which again recalls the ‘animal fat’ in the mumification balm found in predynastic mummy wrappings. Figure 9 depicts a particularly fat \textit{mh-hd} which suggests that also the \textit{mh-hd} was fattened.\textsuperscript{111} This would make it probable that the hieroglyph of the oryx head refers to animal fat as well, which could mean that the ‘\textit{ḏ} of ‘\textit{Qa-a}’ and the calves of ‘\textit{Qa-a} 7 and 3’ in column 2 would belong in the same column as the horned animal heads.

Column 5 shows the wood-sign \textit{ḥt}, often combined with hieroglyphs for ‘hundred’ or even ‘thousand’. The amount of wood involved was apparently something to be vaunted, which suggests that it was precious, imported wood, most likely Lebanese conifer wood (cedar or fir), that was imported into Egypt already by the Predynastic Period.\textsuperscript{112}

It is possible to produce oil by pressing foliage, roots, and wood of coniferous trees.\textsuperscript{113} The character of the vessel discussed in column 9 suggests that the production process of the oil-product that is mentioned on the labels may have involved heating. This recalls the presence of ‘heated conifer resin’ as reported for the predynastic mummy wrappings, because resin dissolves in oil when heated.\textsuperscript{114}

Column 6 shows combinations of the hieroglyphs for \textit{ḏḥt} (‘provisions’), \textit{ḥsw} or \textit{ḥm}, respectively, ‘what has come from’, ‘revenue from’) and \textit{swn} and/or \textit{mhsw} (‘Upper and Lower Egypt’).

It has been suggested that this indicates that oil was the main item paid as taxation in Egypt.\textsuperscript{115} Even low-status workers received wheat, oil and wine every month to support their families.\textsuperscript{116} This indicates that it is possible that the king received domestic oil as tax payment indeed and that this most likely was common oil for daily use in cooking and lighting, rather than \textit{ḥt.t}-oil. Given the character and the funerary context of the labels, a mixture of \textit{ḥt.t}-oil and other ingredients will more likely have been a special, ritual contribution to the royal funeral, and it seems likely that it was designated as having contributed by Upper and/or Lower Egypt for ceremonial reasons.\textsuperscript{117}

It should be added here, that the sign \textit{ḥḏt} of Gardiner’s Z10, in the ‘ḥt.t-section’ of ‘Semerkhet 3’ and ‘Semerkhet 5’ (see fig. 6) is often read as \textit{ḥsh}, and translated as ‘accounting official’ or ‘tax official’.\textsuperscript{118} This reading ignores, however, the following sign ( ) Gardiner’s V38, known from later texts as a determinative for \textit{ḥt} ‘mummy cloth’, which makes it interesting that Gardiner noted that Z10 was an earlier form of Aa2, \textit{ḥḏt}, known as a determinative of \textit{ḥt} ‘embralmer’.\textsuperscript{119} Therefore, this would rather suggest ‘the one who adds the balm to the mummy wrappings’ as translation for these two hieroglyphs.

Column 7 shows that, on most of the earlier labels, the range of products in the upper rows of figure 7 ends with a vessel. This supports the interpretation that the inscriptions indicate a number of ingredients which were mixed into one product.

\textbf{The officials, the man with the vessel and the \textit{mmḥl}–sign (columns 8–10)}

From the reign of King Djed onward, the information in the \textit{ḥt.t.-section} no longer ends with a vessel plus a numeral. Columns 8–10 show that, from then on, information was added about officials and institutions involved in the supply of the oil-product.

Column 8 shows for label ‘Den 1’ the name and the main title of Hemaka, the ‘seal bearer of the \textit{ḥt}-king’, whose huge ‘palace façade’ tomb in Saqqara (S3035) with its rich equipment is well-known.\textsuperscript{120} The presence of his name can be seen as an indication of the importance of the product mentioned on the label. ‘Den 13’ mentions another title, \textit{ḥr nfr}, ‘guard of Nekhen’, followed by the name Kasa (which occurs also on Den 18 and Den 27). This title \textit{nfrḥr} probably also indicates a high function because it is sometimes also found for Sekhemkasd (although not with the same hieroglyphs for \textit{ḥr nfr} as here), the probable owner of the large ‘palace façade’ tomb S3504 in Saqqara. He may have been Hemaka’s predecessor under Djer and Djed during a period for which the function \textit{ḥmr ḥt} is not yet attested.\textsuperscript{121}

Helck’s overview does not have the name of Sekhemkasd in column 8, apparently due to the fact that it was not in the ‘ḥt.t.-section’ of ‘Djet 1’ and ‘Djet 2’. The names of Hemaka and Nefer\textsuperscript{122} on the Semerkhet and Qu’a labels are, moreover, not in his column 8, but in column 10, probably because, unlike that of Hemaka, their names appeared always in the leftmost part of the label close to the title in column 10 that was mostly transliterated as \textit{ṃḥl–mḥl(w)-nswt}. On label ‘Qu’a 18’, not yet

\textsuperscript{108} D. Conwell, ‘On ostrich eggs and Libyans: Traces of a Bronze Age people from Bates’ Island, Egypt’, Expedition Magazine Penn Museum 29:3 (1987), 25–34; G. Lucarini, A. Radini, H. Barton, and G. Barker, ‘The exploitation of wild plants in Neolithic North Africa: Use-wear and residue analysis on non-knapped stone tools from the Haou Fteah cave, Cyrenaica, Libya’, Quaternary International 410 (2015).

\textsuperscript{109} Uph. II, 226.15–16; Kaplony, \textit{Inschriften I}, 308, accepted by Koura, \textit{Die ‘7-Heiligen Öle’}, 128; Begon, ‘Un fragment’, 169 n. 24; and Bardinet, \textit{Relations économiques}, 180.

\textsuperscript{110} Helck, \textit{Thinitenzeit}, 172.

\textsuperscript{111} Saqqara, tomb of Mereruka (LS10), Scene 4 on the South Wall of Chamber A6, pl. 51; I am obliged to Elizabeth Bettles for the reference.

\textsuperscript{112} J. Kahl, ‘Die frühen Schriftzeugnisse aus dem Grab U-1 in Umm el-Qab’, \textit{CdE} 78 (2003), 113, 134; Bardinet, \textit{Relations économiques}, 8.

\textsuperscript{113} <https://en.wikipedia.org/wiki/Cedar_oil> accessed 14.03.2020.

\textsuperscript{114} Pine oil is well known, even nowadays, as a solvent for gums, resins, and other substances <https://www.britannica.com/topic/pine-oil> accessed 14.03.2020.

\textsuperscript{115} Kaplony, \textit{Inschriften I}, 285: ‘(es ist) unsere Theorie (…) dass Oel die hauptsächliche Steuerabgabe darstellt’; still accepted by Helck, \textit{Thinitenzeit}, 173 (item 8), not by Endesfelder, \textit{Beobachtungen}, 147.

\textsuperscript{116} Alba Gomez, in Chyla, et al. (eds), \textit{CRE} 17, 194.

\textsuperscript{117} Cf. Endesfelder, \textit{Beobachtungen}, 147.

\textsuperscript{118} Engel, \textit{Das Grab des Qu’a}, 318.

\textsuperscript{119} Gardiner, \textit{Egyptian Grammar}\textsuperscript{1}, 538–9 and 527.

\textsuperscript{120} W. B. Emery, \textit{Excavations at Saqqara: The Tomb of Hemaka} (Cairo, 1938).

\textsuperscript{121} Wilkinson, \textit{Early Dynastic Egypt}, 146.

\textsuperscript{122} The spelling without \textit{f} in Engel (2017) 217.2 offers an argument to prefer the transliteration \textit{ṃḥl} instead of \textit{nfrḥ}.\textsuperscript{f}
known to Helck, the title htm bity appears also on the far left of the label, here with the name of – probably – Henuka. The last cell of column 8 (‘Qa’a 3’) will be discussed at the end of the comment on column 9.

Column 9 shows, on several labels, the picture of a man inside a building pounding or stirring in a large vessel. It is similar to Gardiner’s sign A34, hwst(i), ‘to pound’. Helck interpreted it as an Ölbereitungsanlage/Ölmühle (oil mill) because the representation may refer to the pounding of oil seeds. Endesfelder, however, suggested Salbenküche (ointment kitchen), which supports the interpretation proposed in this article that it is the ‘stirring’ of ḥst-i-oil with other ingredients that is represented.

The object inside the upper part of the ‘workshop’ (see column 9 of ‘Den 1’) is often read as nbw, ‘gold’, or even as nbj as used for ‘melting’ of gold and ore. The absence of the characteristic row of hanging beads of the nbw-sign (see also ‘Semarkhet 5’ in fig. 6) and the unquestioned references to oil in the inscriptions, make these meanings improbable, however. A more convincing reading is Ölpresssack (oil press bag). Oil can be extracted from conifers by means of distillation or by pressure. Pressure could be realized by filling a linen bag or cloth with chopped coniferous wood, foliage and cones, and then wringing it by turning the two loose ends at each side, a method not used to extract oil from seeds. Perhaps this wringing was done while dipping the bag periodically in a vessel filled with heated oil, as heating will have eased the extraction process because resin dissolves in heated oil.

Pictures from the Fifth Dynasty tomb of Jynery at Giza and from the Middle Kingdom tomb of the nomarch Khnumhotep I at Beni Hassan demonstrate how an ‘oil-press bag’ was used in later periods (fig. 10a–b). The vessels for the ‘seven sacred oils’ to the right show that these pictures represent the pressing of oil and not, for instance, that of grapes for wine.

The object below the ‘oil press bag’ on ‘Den 1’ in column 9, which is erroneously often transliterated as mdḥ, will be discussed in the section on column 10 below.

The addition of a hwst with a nsw-­sign to the ‘oil workshop’ on label ‘Den 1’ may indicate that the production process was under the supervision of a royal institution. On later labels, such as ‘Qa’a 2’ and ‘Qa’a 5’, the Salbenküche of column 9 is combined with the hwst P-Hr-msn that had to supply the tomb with gifts.

The text inside the building with the man and the vessel is:jp(w) mnw, ‘(the building called) “The counting of the god Min” or ‘(The building) considered as that of the god Min’, a rather puzzling name. The term appears on no less than sixteen of the ‘Qa’a labels’. The same words can also be found on label fragment ‘Qa’a 3’ in the last line of column 8 in figure 7, but here outside the building and preceded by the hieroglyphs for iḥr.i in the upper left corner; these words seem to have preceded a partly damaged title starting with mdḥ.

Column 10 shows, on many of the later labels, the enigmatic title that is usually transliterated as mdḥ-mdḥ(w)-nswt and mostly translated as ‘the leader of the carpenters of the king of

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123 Amigues, Journal des Savants 2, 199 fig. 1 (from E. S. G. Robinson, Cyrenaic Coins in the British Museum (London, 1927), pl. IX, 6 <https://www.persee.fr/doc/jds_0021-8103_2004_num_2_1_1685> accessed 14.03.2020.
124 Kahl, Das System, 426 proposed to read ti instead of hwst; the hieroglyphs above the man with the vessel in Qa’a 2 (Engel, Das Grab des Qa’a, 334 (fig. 219.2)) seem to be i and t, but the t-sign is unclear and may also have been a p-sign, like in ip(w). Engel maintained Kahl’s reading ti, but she read the hieroglyphs visible in the building containing the man with the vessel in her figs 217.1, 218.1 and 218.2 as jpw nmn.
125 Helck, Thinitenzeit, 170, 174; Kaplony, Inschriften I, 298; Endesfelder, Beobachtungen, 136–7; Koura, Die ‘7-Heiligen Öle’, 258.
126 Kaplony, Inschriften II, n. 1610 as quoted in LÄ IV, 552–5, 554; Wh. II, 236.
127 Engel, Das Grab des Qa’a, 319; I. Regulski, A Paleographic Study of Early Writing in Egypt (OLA 195; Leuven, 2010), 608–9 places both objects – with and without a lower row of beads – under Gardiner’s S12.
128 Helck, Thinitenzeit, 174.
129 Koura, Die ‘7-Heiligen Öle’, 35, referring to Germer in Lexikon der Ägyptologie IV, 555 Anm. 31: ‘Für das Auspressen des Öles aus den zerstossenen Samen ist eine Sackpresse nicht geeignet.’
130 The term balsam is often used for what is an ‘oleoresin’, a resin dissolved in plant oil <https://www.britannica.com/topic/balsam#ref188978> accessed 14.03.2020.
131 Engel, ‘Das hwst P-Hr-msn(w)’., 113–114.
132 Engel, Das Grab des Qa’a, does not offer a translation (see p. 334 and note 480).
Upper Egypt’, although Helck had suggested that it referred to ‘a master of the royal oil producers or the like.’ Since the reign of Qa’a, the presence of this title in the ‘ḥṣ.t-section’ of the labels is mostly combined with the presence in the ‘event section’ of the words mdḥ-bit-mdḥ-bit. Before discussing the mdḥ-mdḥ(?)-nswt, first the expression mdḥ-bit-mdḥ-bit will be discussed, in order to emphasize the difference between the two.

Mdḥ-bit-mdḥ-bit was translated by Engel (following Dreyer) as ‘the two carpenters of the king of Lower Egypt’. The fact that these hieroglyphs are in the ‘event section’ suggests, however, that they may rather belong to the ‘event’, which may have consisted of two types of cutting (of wood) for the bit–king as part of the inspection of ḫmn-ȝ and ḫt-ȝ wood (see fig. 2a-b). Helck proposed to read ḫt and ḫ as a shortened form of ḫntd, the term for acacia-wood. However, as there are two types of wood in Asia Minor that are often called ‘cedar’, the cedrus libani and the abies cilicica, both ḫmn-ȝ and ḫt-ȝ may refer to Egypt’s coniferous imports from the Eastern Mediterranean. On some labels a ḫt–sign, which may stand for ‘ḥt, conifer’, is present under ṣḏḥ m- with that of ṣḏḥ ḫt m- (see fig. 2a).

Wood was used for lining the interior of the royal tombs at Abydos, and there is evidence now, from the analysis of wood remnants from excavations in Abydos, that not only native woods, like acacia and tamarisk, were used to this end, but also precious imported wood from Asia Minor. Besides this, as was argued above, imported wood could be used for oil production. Admittedly, Lebanese jars with an oil-residue were found in the tombs of Djer and Semerkhet, so conifer-oil was also a ready-made import product. Perhaps its domestic production started under King Qa’a, from the parts of the ‘cedar’ wood that were not used for building. The ‘inspection’ of precious wood upon arrival in Egypt as mentioned on Qa’a labels, may have involved making two types of cuts into imported wood, to assess its potential for these two types of ‘royal use’.

The main point to be made here is, however, that the second hieroglyph in what used to be transliterated as mdḥ-mdḥ(w) nswt in the ‘ḥṣ.t-section’ of the label cannot have had the same meaning as the first sign, because these two hieroglyphs are not identical in fact (see fig. 2b above). The first sign is, indeed, the axe mdḥ. Gardiner’s T7, ‘used in battle as well as for hewing wood’. The second sign, however, looks more like a small vessel with a broad strap that may have been used to collect resin or gum. The sign depicted below the ‘oil pressing bag’ in column 9 for ‘Den 1’ (fig. 3b) also resembles a small vessel with a strap more than an axe.

If it refers to the collecting of gum, the appearance of this sign on the labels may perhaps explain the lack of other attestations for the (probable) silphium-signs on Djet 2 and Djet 1. This would make it likely that mdḥ(...)-nswt was the title of the official that was on the one hand responsible for the chopping of wood necessary for the production of conifer oil and on the other hand for the supply of ‘plant gum’, the two most precious ingredients necessary for the production of mumification balm. A more probable translation of the function ‘ơḥ(...)-nswt than ‘leader of the carpenters’ might be, then, the ‘royal balm official’ (or, more precisely, the ‘balm official of the king in his role as ns–king’).

On ‘Den 1’ (fig. 1), Hemaka combined his function of royal seal bearer (ḥtm bit) with that of ‘royal balm official’. On ‘Qa’a 20’, Henuka had been the mdḥ(...)-nswt, on ‘Qa’a 15’, ‘Qa’a 5’ and other Qa’a labels, he and an official called Nefer both had this title. On ‘Qa’a 18’, Henuka was (probably) the ḫtm bit and an official called Senuhor (?) was the mdḥ(...)-nswt. Thus, the office of mdḥ(...)-nswt was important and apparently close to the high office of ḫtm bit. On ‘Semerkhet 3’ and ‘Semerkhet 5’ (fig. 6) the official Sen seems also to have had both functions (although the additional nsw is missing here) and, in addition, held the function of the ‘embalmer of the mummy wrappings’, as argued

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133 Endesfelder, Beobachtungen, 136; Dreyer, in Dreyer and Polz (eds), Begegnung mit der Vergangenheit, 216; Engel, Das Grab des Qa’a, 317, 321 and 322–37 throughout (the translation follows Dreyer and Wb. II, 190.8); it is present on 24 of these Qa’a-labels, most of them yet unknown to Helck in 1987.

134 Helck, Thinitzenzeit, 174; ten lines higher on the same page he has ‘Meistervorsteher des Königs’; Kaplon, Die Inschriften II, 1207 has ‘Hervorragendster der Zimmerleute des Königs’; Endesfelder, Beobachtungen, 136 has ‘derjenige, der für die Bereitstellung des Opfer-Öls zuständig war’; Kahl, Frühzeitliches Wörterbuch, 206 has ‘Zimmermann; Meister’; Wb. II, 190 warned ‘Die Lesung des Zeichens als mdḥ ist nicht immer sicher’.

135 Engel, Das Grab des Qa’a, 320, 327–34 (figs 215 and 215–19).

136 Cf. ḫt ḫḤ Hr, for ‘royal conifer-wood’ in the later labels of column 3.

137 Helck, Thinitzenzeit, 164; Wb. IV, 520–1 has no spellings without the n and no spellings starting with the ḫt.

138 Kahl, Das System, 613 n. 1439 and 806 n. 2854.

139 E. C. Köhler, ‘Abydos/Umm el-Qaab, Ägypten: Aufarbeitung der Arbeiten in den prädynastischen und frühzeitlichen Königgräbern. Die Arbeiten des Jahres 2015’, e-Forschungsberichte des Deutschen Archäologischen Instituts I (2017), 19–21, 20.

140 British Museum vessel EA 35548 from the tomb of Djer; Köhler, e-Forschungsberichte, 20 0 on those in Semerkhet’s tomb.

141 Similar interpretation in Endesfelder, Beobachtungen, 137.

142 K. Piquette, ‘A compositional approach to a First Dynasty inscribed label fragment from the Abydos tomb complex ascribed to Qa’a’, ZAS 137 (2010), 60 suggested the existence of two types of axes.

143 Endesfelder, Beobachtungen, 137.

144 Engel, Das Grab des Qa’a, 327–34 figs 215–19.
above. Thus, these labels show Sen with a string of three titles.

Lastly, it should yet be noticed that, by the reign of Qa’a, the label inscriptions appear to be completely dedicated to activities, institutions and persons related to the supply of the balm, no longer only in the ḫ3.t-section, but also in the ‘event section’ that had formerly referred to characteristic activities of the king.

Conclusion

There are sufficient indications that what used to be called ‘oil labels’ or ‘year labels’ were actually ‘balm labels’ and that the inscriptions on them recorded events that had been characteristic for regnal periods. Does this imply that these inscriptions should be seen as the oldest examples of history writing? The answer to this question depends, of course, on one’s definition of history writing, a theme that will not be elaborated upon here. Nevertheless, the existence of an ambition among the Early Dynastic intellectual court elite to give expression, somehow, to their awareness of what was remarkable for their time cannot be doubted. Famous objects like Narmer’s Palette and his decorated mace head show characteristics of Narmer’s reign by means of pictures and symbols, in an artistically admirable way, and these impressive artefacts will most probably have remained in a visible location for at least some time. The tiny labels are artistically poor, but intellectually impressive, because their inscriptions offer the earliest attestations of verbs denoting human activities. This was the first necessary step to make written history possible. Labels were mostly found in tombs, however, and therefore cannot have been meant to be read or seen after the funeral. As such they cannot be regarded as history writing.

The attempts to preserve not only the body, but also the memory of a king in his tomb – by summarizing what had been most characteristic for his reign in script – were not continued in any other way after the First Dynasty, although the Fifth Dynasty annal stone fragments demonstrate that Early Dynastic archives must have continued to be written. An answer to the intriguing question as to why the first step on the way to the writing of history headed down a blind alley, may be found in a shift in the content of the label inscriptions. Gradually more space was dedicated to the activities of high officials for the royal funeral, than to activities of the king during his reign.

From at least the reign of King Djet, names and titles of officials began to appear on the labels. By the time of King Qa’a, not only the ‘ḥ3.t section’ but also the ‘event section’ focused on memorable activities of officials. Some labels even showed a ‘string of titles’, as would become common in the inscriptions on stone stelae that are known since the end of the First Dynasty. Whereas the first attempts to characterize the reigns of kings came to nothing despite the new possibilities offered by the use of script, the ambitions of officials to preserve the memory of their own importance to the king would be continued in new and visible forms in stone.

By far not all known balm labels and label fragments could be discussed in this article in terms of the new

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145 From K. R and S. H. Weeks, Mastabas of Cemetery G 6000, including G 6010 (Neferbaapus); G 6020 (Iymery); G 6030 (Ity); G 6040 (Shepneskaanku) (Giza Mastabas 5; Boston, 1994), 36–7 and fig. 30.
146 From M. Lashien and A.-L. Mourad, Beni Hassan V: The Tomb of Khnumhotep I (Oxford, 2019), detail of pl. 71; I am obliged to the authors for this picture.
147 For important recent contributions, see L. Popko, ‘History writing in ancient Egypt’, in UCLA Encyclopedia of Egyptology (2014) <https://escholarship.org/uc/item/73v96940> accessed 28.01.2020; Baines, in Baines, et al. (eds), Historical Consciousness, 109–32.
148 Helck, Thinitenzeit, 225–89, see esp. 230–3 on the stela of Merka (the probable owner of palace façade tomb S 3505, next to that of Sekhemkashef); J. Baines, ‘Forerunners of narrative biographies’, in A. Leahy and J. Tait (eds), Studies on Ancient Egypt in Honour of H.S. Smith (EES OP 13; London, 1999) 23–37, 28 and 36.
interpretation offered here, and the last word will not yet have been spoken for many details of the ones that were. The Appendix below intends to be a useful tool for further research into these fascinating objects.\footnote{You can request a version in Excel-format from the author (j.m.f.fritschy@umail.leidenuniv.nl).}

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## Appendix

### Balm-labels and balm-label fragments by reign. A concordance of references for six label corpora

| Balm-label ascribed to a specific reign | Fragment of a balm-label ascribed to a specific reign | Fragment of a balm-label ascribed to a specific reign |
|----------------------------------------|------------------------------------------------------|------------------------------------------------------|
| Balm-label | Fragment of a balm-label | Fragment of a balm-label |

### Illustrations on websites

| Website | Illustrations | Database Referable |
|---------|---------------|--------------------|
| Website 1 | Illustration 1 | Database 1 |
| Website 2 | Illustration 2 | Database 2 |
| Website 3 | Illustration 3 | Database 3 |

### Tables

| Balm-label reference | Illustrations | Database Referable |
|----------------------|---------------|--------------------|
| Reference 1 | Illustration 1 | Database 1 |
| Reference 2 | Illustration 2 | Database 2 |
| Reference 3 | Illustration 3 | Database 3 |

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### Notes

1. A balm-label is a "balm label" if it has (or probably had) an inscription with a royal name, an "event section" and a "Yuk section".
2. A balm-label ascribed to a specific reign is a balm-label ascribed to a specific reign.
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