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### ON THE USE OF "CHECK MARKS" IN CUNEIFORM WRITING1

In cuneiform writing, there is a little-studied category of signs known as "check marks" (German *Merkzeichen* or *Archivvermerke*, French *coches* or *marques de contrôle*). They have the shape of simple horizontal, vertical, oblique and angular wedges or scratches, their repetitions, combinations or impressions of the round end of the stylus. The functions of the check marks may be divided into intratextual and extratextual ones. The intratextual marks helped the scribe to proofread the text after it had been composed. The extratextual marks pointed at some relation between the text and the real world. The check marks of both kinds appear as early as in archaic texts of Uruk, at the turn of the 3<sup>rd</sup> millennium BC, and remain in use until the 1<sup>st</sup> millennium BC. The first part of the study shall provide a brief overview of the check marks that were in use in different cuneiform corpora. The second part shall describe the use of check marks in a particular cuneiform corpus, the archives of Mari (Tell Hariri) dating to the early 18<sup>th</sup> century BC.

Keywords: Ancient East, Mesopotamia, cuneiform, palaeography, history of accounting and bookkeeping

In cuneiform writing, most signs function as either logograms, syllabograms or determinatives. In certain corpora and genres, cuneiform signs consisting of one or two wedges can serve as "punctuation marks," i.e., word dividers, paragraph markers, word or column joining signs, gloss markers, and repeat signs<sup>2</sup>. In addition, various simple impressions of the stylus were used as so-called "check marks" (German *Merkzeichen* or *Archivvermerke*, French *coches* or *marques de contrôle*). In the first part of the present study, I shall provide a brief overview of the check marks that were in use in different cuneiform corpora. This overview is intended as a selection of examples rather than a synthesis. In the second part, I shall describe the use of check marks in a particular cuneiform corpus, the archives of Mari (Tell Hariri) dating to the early 18<sup>th</sup> century BC.

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For an overview of cuneiform "punctuation marks" see: Taylor 2011. P. 16–18; for individual signs see: Borger 2010. No. 576, 577, 592, 748, 825.

The check marks have the shape of simple horizontal  $\vdash$ , vertical  $\uparrow$ , oblique  $\uparrow$  and angular  $\checkmark$  wedges or scratches, their repetitions (e. g.,  $\checkmark$ ), combinations (e. g.,  $\hookleftarrow$ ) or impressions of the round end of the stylus ( $\triangleright$ ,  $\bullet$ ,  $\bullet$ ). Those of the check marks that are identical in shape with logosyllabic cuneiform signs are often transliterated as the respective logograms (see below), though in most cases the identity of the shapes is a coincidence<sup>3</sup>.

The functions of the check marks may be divided into intratextual and extratextual ones. The intratextual marks helped the scribe to proof-read the text after it had been composed. The extratextual marks pointed at some relation between the text and the real world. The check marks of both kinds appear as early as in archaic texts of Uruk, at the turn of the 3<sup>rd</sup> millennium BC, and remain in use until the 1<sup>st</sup> millennium BC.

#### Intratextual marks

Lexical lists from archaic Uruk have check marks  $\triangleright$  at the beginning of each line, probably as "visual and memory aids in counting the number of lines inscribed on tablets so as to be able to collate line totals on original and copies" (Englund 1998. P. 83)<sup>4</sup>. The mark is an oblique impression of the round end of the stylus, identical in shape with the sign for the number 1.

The practice was continued in the archaic texts from Ur (the early 3<sup>rd</sup> millennium) and expanded from lexical lists to literary texts in the Fara period (the mid-3<sup>rd</sup> millennium)<sup>5</sup>. Some scribes of the Fara period marked each line with round impressions of the stylus ●, which elsewhere rendered the number 10 (Krebernik 1998. P. 314)<sup>6</sup>.

Except for the use of the angle wedge as the number 10 for counting lines or objects, see below.

<sup>&</sup>lt;sup>4</sup> An example is ATU 3. P. 36 (a photograph is available online in the CDLI database, no. P000014).

Krecher 1973. P. 164. In texts of the Fara period, line markers are identical with the signs for 60, which have the same shape as the sign for 1 but are larger (Englund 1998. P. 83, note 179).

<sup>&</sup>lt;sup>6</sup> An example is Fara 2, no. 20 (see the photograph in CDLI, no. P010595).

in literary compositions and school exercises<sup>7</sup>, or every tenth item in accounting documents (see the section on Mari texts).

#### Extratextual marks

In accounting documents from archaic Uruk, a small oblique stroke \ used to be added to certain signs, acting "as an accounting check-off that the entry had been successfully carried over" (Englund 1998. P. 192)<sup>8</sup>. In an accounting text of the Fara period, the oblique wedge \, made with a stylus different from that of the text itself, marked several entries, probably to cross them off; in one case, it was used to emend a number 3 into 2 (Krebernik et al. 2005. P. 47–51). In another Fara document (Fara 3, no. 28), there is a similar oblique wedge in some entries between the numbers and the names of the recipients. The "deletion" of entries or amounts obviously served for accounting purposes, but its exact import (clearing outstanding amounts? cancelling scheduled transactions?) is hard to establish. This mark is similar, and perhaps related, to the oblique stroke of archaic Uruk.

In the Presargonic period (the 24<sup>th</sup> century BC), there appears a new check mark, the diagonal cross  $\not\sim$ . In accounting and legal documents, it was in use from the Presargonic at least to the Old Babylonian period<sup>9</sup>. The mark is conventionally transliterated as PAP or kúr (a reading of PAP), though it is hardly related to a meaning of the homographic sign PAP. In accounting documents, the marks, one or several per tablet, appear at the beginning or the end of a line, between the quantity and the recorded item, between the quantity and the recipient, or even inside a word. In Sargonic contracts, the mark is placed at the end of a document (Edzard 1968. No. 36, 56, 81)<sup>10</sup>. The cross marks are often smaller than the logosyllabic signs, and written above or below the other signs of the line. The marks were impressed on tablets that had been already dried up.

Krecher 1973. P. 165; Ludwig 2009. P. 10; see also the section on Mari texts below.

<sup>&</sup>lt;sup>8</sup> An example is MSVO 3, no. 11 (see the photograph in CDLI, no. P005322).

Gelb 1952. P. 44 (with a list of examples for all periods). A good example (Sargonic) for the use of cross marks is MAD 1, no. 330 (see the photograph in CDLI, no. P215157). For the Presargonic and Sargonic periods, see numerous additional references and a literature review in: Schrakamp 2010a. P. 346; Brumfield 2013. P. 121–123. For the Ur III period, BDTNS contains dozens of additional examples for a similar use of "PAP" (or "kúr"). For the Old Babylonian period, OECT 15, no. 122 and the Mari attestations (see below) are to be added to Gelb's list.

<sup>&</sup>lt;sup>10</sup> There is also at least one Sargonic accounting text containing the check mark after the last line (MDP 14, no. 85).

As for the meaning of the check mark ⋈, there is an agreement that it was used "to check off various entries in a list" (Gelb 1952. P. 44)<sup>11</sup>, but its functions in a given document have received different *ad hoc* explanations. Admittedly, scribes added a cross mark to point out that a transaction was entered into another account (Englund 1990. P. 103, note 328; Brumfield 2013. P. 123), a scheduled transaction was not executed (Selz 1993. P. 186), a scheduled transaction was executed (Selz 1999. P. 496), leased goods were restored (Schrakamp 2010a. P. 346), outstanding amounts were cleared (Schrakamp 2008. P. 697), a prisoner was released (Wilcke 2003. P. 118, note 385), or a legal case was closed (Schrakamp 2010b. P. 147).

The cross mark ★ was also used in literary and school texts. In catalogues of compositions, the marks ★ ("PAP") or ★ ("NU") may have indicated missing tablets (Michalowski 2011. P. 25; Maul 1994. P. 191). The large crosses appearing on two Old Babylonian school letters from Nerebtum may be the teacher's marks (Greengus 1979. No. 12, 20). In the 1<sup>st</sup> millennium BC, cross-shaped marks ★, ➤ and ➤, conventionally transliterated as PAP, BAD and NU, were put by teachers on the margins of literary and scholarly texts to signal errors committed by apprentice scribes (Borger 2010. No. 92, 112, with literature).

There existed extratextual marks other than the cross. The vertical wedge T ("DIŠ") may have been used as a check mark in a couple of Presargonic accounting documents from Lagaš (Selz 1989. P. 181, 202). In an Old Assyrian list of persons (the 18th century BC), most personenkeils (vertical wedges at the beginning of personal names) are squashed by round impressions (Özgüç 1986. Pl. 61/3a-3b, no. kt 73/k 14). In two early 18th-century ration lists from Chogha Gavaneh (South-Western Iran), two kinds of check marks, small circles and angle wedges 4, were added in different combinations between the amounts of grain and the names of the recipients (Abdi-Beckman 2007. No. 40, 47). In a mid-18th-century Old Babylonian list of female prisoners, found in Uruk, most entries are marked by small round impressions (Rositani 2003. No. II 4). In a list of beer rations, from 17<sup>th</sup>-century Sippar, some entries are marked by horizontal wedges ⊢ (Van Koppen 2017. P. 92, no. BM 86452). In Ugarit (the 13th century BC), single (4) or double (44) angle wedges appear at the right end of the lines in a list of deities. These wedges may have been used for accounting purposes<sup>12</sup>.

The functions of the marks would thus be similar to those of other "checking-off" techniques such as erasing signs (Taylor 2011. P. 19; Bauer 1975. P. 192–193), crossing-off lines with red ochre (Charpin 1984; Durand–Marti 2004. P. 132) and criss-crossing a whole tablet side (YOS 5, no. 15).

<sup>&</sup>lt;sup>12</sup> For a recent discussion and literature review see: Tugendhaft 2010. P. 708.

A particular accounting practice was in use in Middle Babylonian Nippur (the 14<sup>th</sup> and 13<sup>th</sup> centuries BC). For the issuing of rations, recipient lists were prepared in advance. When the persons recorded in the list were receiving their rations, round • or oblique • impressions were made by the round end of the stylus in the respective entries (Clay 1906. P. 16)<sup>13</sup>.

Various "holes" (deep impressions) appear on late 2<sup>nd</sup>- and 1<sup>st</sup>-millennium literary and scholarly tablets. Their functions are unclear, part of the marks may have had to do with a tablet's status as invalid (Taylor 2011. P. 15–16, 19).

#### Check-marks on Mari tablets

Among intratextual marks, line markers were used in several school lists of personal names found in the so-called *Maison des Tablettes* of Mari (Nicolet 2016. P. 239–267). In these texts, each line contains one personal name preceded by a vertical wedge (*personenkeil*). Every tenth line was marked by an angle wedge '(identical to the U sign meaning 10) placed between the *personenkeil* and the personal name. In some of the tablets, apart from the marks '(in every tenth line, there are also light angular impressions in all other lines, because the scribes touched the lines with the stylus when they counted them. In a list of deities found in the Great Palace of Mari (ARM 24, no. 263), the tenth line is marked with an angle wedge.

The same method was also used in a few accounting tablets. Several ration lists show the marks 4 in front of the recipients' names (FM 4, nos. 9: iii 8'; 30: i 24', ii 9, 22; 34: 19; 35: 12)<sup>14</sup>. They mark every tenth person in each group exceeding ten persons rather than every tenth line of the text (Ziegler 1999. P. 201, note 762; p. 213, note 782; p. 214, note 783). In one list of personnel (ARM 24, no. 248), the tenth line of the reverse is marked with 4. Here the scribe counted neither the lines from the beginning of the text nor the persons recorded, because the running number of the line containing the mark 4 is 39, and the person mentioned is the 38th one.

<sup>&</sup>lt;sup>13</sup> Cf. most recently: Tenney 2011. P. 10, 25–30. An example is BE 14, no. 22 (see the photograph in CDLI, no. P259716).

The photographs are available in the edition (save for no. 30) and in the ARCHIBAB database (http://pix.archibab.fr/4Dcgi/40584D2118.jpg; http://pix.archibab.fr/4Dcgi/43629H7677.jpg; http://pix.archibab.fr/4Dcgi/40593H2946.jpg; http://pix.archibab.fr/4Dcgi/40594A6858.jpg).

A case apart is a ration list in which check marks were used as a calculation aid (FM 4, no. 16)<sup>15</sup>. Lines 13–33 of this tablet contain the list of persons who received 1/3 kor of grain each. In every third line in the list, there is a mark between the quantity and the name of the recipient. That is, the scribe hit every third line when counting the number of complete kors. These marks are carelessly impressed and have various shapes (sloppy horizontal wedges  $\vdash$  in most cases, but an angle wedge  $\checkmark$  in line 30 and what looks like  $\backsim$  in line 33). This shows that the shape of the marks was not important.

As for the extratextual notation, at least one Mari document sticks to the tradition of cross marks. In a fragmentary list of vases kept in coffers (ARM 31, no. 154), most preserved lines contain  $\Leftrightarrow$  ("PAP") marks between the determinatives and the words for vases 16. According to the editor, the marks were put to check off the vases that actually were in the coffers during the inspection (Guichard 2005. P. 451). The absence of the mark would mean that a vase that had been expected to be in the coffer was not there.

In other texts, the horizontal wedge  $\vdash$  ("AŠ") must have functioned in a similar way. A list of chariots issued to Mari officials has  $\vdash$  in front of most names (ARM 32, no. M.5092)<sup>17</sup>. The marks are clearly absent from lines 12 and 19, while several lines are damaged. This may mean that the list had been prepared in advance, and the marks were added when the chariots were actually delivered to the recipients. The persons who were not checked off must have never received the chariots. In a list of vases, all preserved lines contain horizontal wedges  $\vdash$  between the numbers and the terms for vases (ARM 24, no. 91 = ARM 31, no. 214).

Two fragments of muster rolls have horizontal ⊢ and angle ∠ wedges in front of names (ARM 22, nos. 40 and 41)¹8. A fragmentary list of personnel contains horizontal wedges ⊢ in front of all preserved names but one or two (ARM 24, no. 223). A list of women displays angular marks ∠ with all names but one (M.7754, published in Durand 1985. P. 393). A list of palace servants has small round marks

<sup>15</sup> See Fig. 1. The photograph was published in the edition and ARCHIBAB (http://pix.archibab.fr/4Dcgi/40588W4363.jpg).

See the photograph in the edition and ARCHIBAB (http://pix.archibab.fr/4Dcgi/17700G6273.jpg; http://pix.archibab.fr/4Dcgi/17701A2452.jpg). All intact lines save II. 8', 9' and 5" have the marks.

<sup>&</sup>lt;sup>17</sup> See the photograph in ARCHIBAB (http://pix.archibab.fr/4Dcgi/22066V8128.jpg).

<sup>&</sup>lt;sup>18</sup> Perhaps fragments of the same tablet.

in front of each name (ARM 24, no. 221); this is also the case of all preserved lines of the fragments ARM 24, no. 222 and 224. It is not clear whether the shape of the marks is meaningful. As the majority of the names have the marks, they may have checked off the persons who were *present* at a roll call.

Horizontal wedges → were also put in front of some names in a list of female slaves sent as gifts to foreign rulers (ARM 22, no. 27<sup>+</sup>, see Bardet et al. 1984. P. 504–505). In two fragmentary lists of soldiers, some names are marked with angular marks 〈 (ARM 24, no. 229 and 256). In a short list of craftsmen, one name is marked with a cross ﴾ (ARM 21, no. 374: 3)<sup>19</sup>. As in these cases the names so marked are a minority, we may speculate that the marks checked off the persons which were *absent* in some way.

In other texts, the function of check marks is obscure. In a dowry list, lines 38–50 have careless horizontal or angular wedges between the numbers and the objects (ARM 22, no. 322: 38–50)<sup>20</sup>. It is not clear why only these items of the dowry were marked<sup>21</sup>. The fragment of a textile ration list has angle wedges in front of some names of the recipients (FM 4, no. 24: 3′–5′)<sup>22</sup>. Similar angle wedges are also present in some school copies of lists of personal names (Nicolet 2016. P. 270–272). In both cases, the marks are not line markers, because their placing does not correspond to multiples of ten. In a list of female palace personnel who took oaths of loyalty, some names are marked with double angle wedges <sup>44</sup> for no apparent reason (FM 4, no. 31: i 41, 58, ii 48, 60, iii 7′, 1″, 21″, 28″)<sup>23</sup>. In an inventory of belongings of a merchant, ARM 24, no. 212, there is an angle wedge mark <sup>4</sup> in line 2 mentioning a slave.

For one document containing check marks (ARM 21, no. 56)<sup>24</sup>, one may hypothetically reconstruct the editing history. The contents and the layout of the document are presented in the following table.

<sup>&</sup>lt;sup>19</sup> For the handcopy see TCM 5, no. 374.

Lines 44, 47, 48 contain angle wedges, while the other lines are marked with horizontal wedges. See the photo in ARCHIBAB (http://pix.archibab.fr/4Dcgi/17235A2232.jpg; http://pix.archibab.fr/4Dcgi/17234U8282.jpg).

Two duplicates of this text, ARM 31, no. 27 and ARM 32, no. M.5237<sup>+</sup>, do not contain check marks.

<sup>&</sup>lt;sup>22</sup> See the photograph in ARCHIBAB (http://pix.archibab.fr/4Dcgi/43623F4250.jpg).

<sup>&</sup>lt;sup>23</sup> See the photograph in the edition and ARCHIBAB (http://pix.archibab. fr/4Dcgi/40591E3283.jpg). Line ii 60 seems to have ⊱ rather than ≪.

<sup>&</sup>lt;sup>24</sup> For the handcopy see TCM 5, no. 56.

Table 1. The structure of ARM 21, no. 56<sup>25</sup>

Line	Column			
number	I	II	III	IV
1	5 rams	2 clothes	1 silver vase	PN
2	2 rams	1 cloth		PN from GN
3	1 {x} <sup>26</sup> ram			PN
4	1 ⊢ ⊢			PN from GN
5	1 ⊢ ⊢			PN from GN
5-bis	1 ⊢			PN []
6	1 ⊢ ⊢			PN (from) GN
7	1 ⊢			PN
8	1 ⊢			PN from GN
9	1 [ ⊢]			PN []
10	1 ⊢			PN [(from)]
				GN
10-bis	1 ⊢			PN from GN
11	1 ⊢			PN (from) GN
12	1 ⊢			PN (from) GN
13	1 ⊢			PN
14				(from) GN
15	1 ⊢			PN
16				(from) GN
17	1			(erasure)
(indent)				
18				20 rams
19				3 clothes

The outward appearance of the tablet makes it clear that a draft of the text did not have lines 5-bis and 10-bis, and contained a personal name in line 17. In this draft, the number of rams matched the total recorded in line 18, i.e. 20 rams. At the issuing of rams, the persons who received them were being checked off with — marks. Lines 5-bis and 10-bis were inserted to take into account two persons who had not been on the draft list. The name of the person who eventually did not receive a ram was erased, and the check mark was not added to the line. As a result, the real number of the rams issued (21) did not come to match the draft total, which, however, was not corrected. It remains unclear, firstly, why

<sup>25</sup> PN = personal name, GN = geographic name. As lines 5-bis and 10-bis are very narrow, they must have been inserted between the lines that had been written earlier.

<sup>&</sup>lt;sup>26</sup> The number is followed by a weird combination of wedges or strokes.

the scribe used double horizontal wedges in lines 4, 5 and 6, and single wedges in the other lines (including the inserted line 5-bis), and, secondly, why the first three lines got no check marks<sup>27</sup>.



Fig. 1. FM 4, no. 16. © Archives royales de Mari

<sup>&</sup>lt;sup>27</sup> As the lines are densely written, the marks may be difficult to discern. There seem to be some unusual strokes in line 1 (in particular under the number 2) and in line 3 (see the previous footnote).

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## О «СЛУЖЕБНЫХ ОТМЕТКАХ» НА КЛИНОПИСНЫХ ТАБЛИЧКАХ

В клинописи существует слабо изученная категория знаков, которую можно определить как «служебные отметки». Такие знаки имеют вид простых горизонтальных, вертикальных, наклонных и угловых клинов или черточек, их простых комбинаций, а также оттисков круглого конца писцового стиля. По функциям «служебные отметки» можно разделить на внутритекстовые и внетекстовые. Внутритекстовые отметки помогали писцу проверить текст после записи. Внетекстовые отметки указывали на определенное отношение между содержанием текста и внешними обстоятельствами. Отметки обоих видов появляются уже в архаических клинописных текстах из Урука на рубеже IV—III тыс. до н.э. и используются по меньшей мере до середины I тыс. до н.э. Первая часть исследования представляет собой краткий обзор «служебных отметок», применявшихся в разных клинописных корпусах. Во второй части подробно рассматриваются «служебные отметки», встречающиеся на клинописных табличках из архивов города Мари (Телль-Харири) первой половины XVIII в. до н.э.

Ключевые слова: Древний Восток, Месопотамия, клинопись, палеография, архивоведение, история бухгалтерского учета