Abstract: This paper presents a detailed explanation included the concept of Account-Lists appeared in ancient Egypt, and this is evidenced by the huge number of these documents written in hieratic and then demotic; The texts of this quality included (tax records, agendas, grain distribution tables, accounting tables, distribution records of wages and receivables, food orders, materials Lists of various items and materials, lists of the contents of the temples, documents for the transfer and delivery of materials and yields). Then presented the terms related to the mathematical text and similarly wages and taxes. The study concluded with the presentation of the written form of the texts Full detailed explanation followed by the conclusion.

Key Words: Account, List, Arithmetic, Mathematical, Wage, Daybooks, Tax.
The concept of Account-Lists in Ancient Egypt

Will discuss the issue through several points:

- Terminology.
- Computational reporting.
- Daybooks.
- Wages records & income of individuals.
- Tax reports.
- Categories.
- General Form.

Terminology:

Although there is no term describing or refer to the Arithmetic or Statistical form in some papyri, there are expressions that refer to the different mathematical and statistical forms as titles\(^1\):

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<tr>
<th>Term</th>
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<th>Transcript</th>
<th>Remarks</th>
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</thead>
<tbody>
<tr>
<td>(\text{hsb})</td>
<td>A- Abu- sir Papyrus</td>
<td>(Wb), III, 166</td>
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<td>B- Boulaq Papyrus 18</td>
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<td>Ranier Hannig, (Handworterbuch), KAW, Band 64, (Berlin: Philipp von zebern 1995), 1554</td>
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<td>E- Kahun Papyrus</td>
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<td>B- Mosco Papyrus Mathematical</td>
<td>Faulkner, CD, 47</td>
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<td>C- Kahun</td>
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1 Mohamed Sherif, "A collection of administrative hierarchies in the Egyptian Museum comparative linguistic study" (unpublished MA thesis, Cairo University, Faculty of Archeology, 1989) 8
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<table>
<thead>
<tr>
<th><strong>Papyrus</strong></th>
<th><strong>Hieratic Ostraka</strong></th>
<th><strong>List quantities or List the amount or A known account</strong></th>
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</thead>
<tbody>
<tr>
<td><strong>Rḫt</strong></td>
<td><strong>A- Thothmosis III Annuals in Karnak</strong></td>
<td><strong>Wb, II, 448 CD, 152. LD, I, 68.</strong></td>
</tr>
<tr>
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<td><strong>B- Raizner Papyrus II</strong></td>
<td><strong>Names list Sometimes <em>rn</em> is written only in the demotic accounts by these two forms</strong></td>
</tr>
<tr>
<td></td>
<td><strong>C- Boulaq Papyrus II</strong></td>
<td><strong>D- Egyptian Museum Papyrus No 58072</strong></td>
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<td><strong>E- New kingdom Ostraca</strong></td>
<td><strong>F- Kahun Papyrus</strong></td>
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</tbody>
</table>

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<thead>
<tr>
<th><strong>Tmy-rn.f</strong></th>
<th><strong>A- Kahun Papyrus</strong></th>
<th><strong>Wb, I, 74,15 CD,19 LD, III, BL, 12,c Haning,Wb 1434 CDD, 47 Er. Glossar. 249.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>B- Raisner Papyrus I</strong></td>
<td><strong>Names list</strong></td>
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<tr>
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<td><strong>C- Raisner Papyrus II</strong></td>
<td><strong>Sometimes <em>rn</em> is written only in the demotic accounts by these two forms</strong></td>
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<td><strong>D- Anstasi Papyrus IV</strong></td>
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<tr>
<th><strong>ẞs</strong></th>
<th><strong>A- Louvre Papyrus E 3226</strong></th>
<th><strong>an document and translated when it appears in a</strong></th>
</tr>
</thead>
</table>
The concept of Account-Lists in Ancient Egypt

<table>
<thead>
<tr>
<th>Reference</th>
<th>Document Details</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Faulkner, CD, 154.</td>
<td>statistical registration &amp; The material is statistically recorded</td>
<td></td>
</tr>
<tr>
<td>Wb, V, 419</td>
<td>Rdyt A- Boulaq Papyrus II B- Louvre Papyrus E 3226</td>
<td>An arithmetic expressions means &quot;summary&quot; or &quot;abbreviated&quot;</td>
</tr>
<tr>
<td>Faulkner, CD, 154.</td>
<td>Wb, IV, 10-14 An arithmetic expressions means a memorandum or a total statement.</td>
<td></td>
</tr>
<tr>
<td>Wb, IV, 232</td>
<td>sh3 A-Louvre Papyrus E 3226 An arithmetic expressions means</td>
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</tr>
</tbody>
</table>

1 Sherif, A collection of administrative hierarchies in the Egyptian Museum, 13.
3 Mounir Magally, Notion de comptabilité à propos du papyrus E3226 du Musee du Louvre (Cairo: Institut français d'archéologie orientale 1977), 54, 61-63.
The concept of Account-Lists in Ancient Egypt

<table>
<thead>
<tr>
<th>snn</th>
<th>A-Egyptian Museum Papyrus No 58085</th>
<th>Wb, III, 460, 1-4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B- Egyptian Museum Papyrus No 58082</td>
<td>Faulkner, CD, 232.</td>
</tr>
<tr>
<td>km- kmnt</td>
<td>A- Raisner Papyrus 1</td>
<td>Wb, V, 128, 8-11</td>
</tr>
<tr>
<td></td>
<td>B- Formal Letter Middle kingdom</td>
<td>Faulkner, CD, 286.</td>
</tr>
</tbody>
</table>

An arithmetic expression means "paid", it comes at the beginning of the lists of multiple things or materials paid from a person or person to someone.

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The concept of Account-Lists in Ancient Egypt

Discussion:

\[
\text{hsb}
\]

Is one of the words that are described by some arithmetic or that mean some arithmetical texts, and this word has been received since the old kingdom\(^1\) means the word in the old Egyptian verb (calculated) and the name (account) and use this word as a term in the arithmetic texts, The calculation itself or in the sense of the most precise process\(^2\) (accounting settlement) or (budget) Therefore, the text that is described or described as \text{hsb} or the prefix with the word \text{hsb}, were able directly to make sure that the text in it is a mathematical text or an arithmetical balance, not just a general census list\(^3\), and also a calculation of income (income) as the title of the arithmetic form at the beginning The papyrus, as mentioned in Boulaq papyrus 18\(^4\) as read:

\[
\text{hsb }\overline{\text{k}w\ n\ nb\ (i)}\ \text{\overline{n}h\ \overline{w}d\overline{3}\ s\text{n}b\ n\ \text{r}\text{mp}\text{t}-\text{sp} \ 3\ 3\text{bd}\ 2\ \text{sw}\ 28}
\]

To calculate the income of (my) lord in order to live and recover and enjoy the health of the third year, the second month of the flood season (today) 28.

As in Anastasi papyrus IV use \text{hsb} with the word \text{nis} in this form \text{nis-\hsb}\text{w}

\[
iw.k\ [r] \text{nis }\hsb\text{w}
\]

You (do) to form calculations

As in Bologna Papyrus No 1094, as read\(^6\):

\[
lh\ dl.k\ \text{hsb }r-\text{bw}
\]

I will give you a good account

As for the meaning of statistics, find it as read\(^7\):

---


\(^2\) Magally, Notion de Combliblites , 38, 53- 55.

\(^3\) Sherif, "A collection of administrative hierarchies in the Egyptian Museum", 8- 9

\(^4\) Alexandre Scharff, "Pap. Boulaq 18", ZAS 57 (1922), PL. 8, XXI, 1.

\(^5\) P. Anastasi, V, A 23, 4 = A. Gardiner, LEM, 69.

\(^6\) P. Bolomga 1094, 1, 2 = A. Gardiner, LEM, 1; LEM, 3.

The concept of Account-Lists in Ancient Egypt

\[ lw \ imy-r \ tjswt \ r \ hsb \ c3 \]
(He attended) supervisor of the groups for the great census

And find also in the sense of the census within the administrative titles as read\(^1\):

\[ hsbw \ s8 \ hp \]
Records of census accountants

Use this word permanently for this determinative Which appeared in various forms\(^2\), 1, 1 Simpson\(^3\) and Moruno\(^4\) Both agree in translating the word hsbw into Humans who have been counted, while Helck\(^5\) Translation to Workers engaged in forced labor as read\(^6\):

\[ Imny \ \text{snb} \ hnt.n.i \ m \ hsbw \ 400 \ m \ stpw \ nb \ n \ m\tilde{s}.i \ lw \ m \ htp \ nn \ nhw.sn \ in.n.i \ nbw \]
Amini live and recover and enjoy the health for him I have sent 400 selected workers, most of them from my army, and they have returned in peace without losing any of them, I have brought the gold.

And also as read\(^7\):

\[ \text{sn} \ n \ niwt \ [i] \ ir.i.n.Hbs \ m \ q3a \ it \ rdi \ mwy \ m \ h-	ext{ib} \ hrw \]
Life for the city, he ordered the workers to empty the grain and give water (to them) in the first day

As mentioned in the Kahun Papyrus as read\(^8\):

---

\(^1\) Perci Newberry, *EL- Bersheh*, II (London: Heidelberg University Library 1895), PL. VIII.
\(^2\) Islam Amer, "Census of Cattles in ancient Egypt until the end of the era of the new kingdom" (unpublished MA thesis, Alexandria University, Faculty of Arts, 2011), 81.
\(^3\) Simpson, *Papyrus Reisner*, II (Boston: Boston Museum of Fine Arts 1965), 34.
\(^5\) Wolfgang Helck, "Frodienst", *LA* II (1977), sp. 333.
\(^6\) Urk, VII, 15, 4–5.
\(^7\) Sutt, V, Pl. 15, 5.
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\[ hsbw \text{ ith } htp \text{ snwsrt } m3t \text{ hrw } \text{ rmn m prfr } \ldots \; h3r \; 321 \; ini \; ss \; hm3t \; ht \; 50 \; ini \; m \; pr-hq \; rdi \text{ pfr } \ldots \; 15 \; im-s3 \; n \; hpr \; k3t \; m \text{ snb} \]

The emulators (who) are conducting the stones: Hetep Snosert Sadiq say 25 pieces were placed and remained in the barn ... 321 pouch brought from the salt county swamps 50 stick brought from the treasury department and given to the barn ... 15 from im-s3 to business manager seneb

Simpson commented on term \( hsibw \) is that it sometimes describes the type of workers who prepare for work assignments, and an expression \( hsibw \; m3t \)
Describes the additional workers of the list, or means the workers of the new list, and in any case, the word \( hsib \) as an act directly refers to a statistic as previously or calculate (arithmetic list) as read\(^1\):

\[ s\; ikr \; n \; wn \; m3t \; tp-hsib \; n \; ht \; nbt \; di \; n \; hh \; hsib \; n \; h3 \; \ldots \; dm\; n \; hfr \; hfn \; s\; th \ldots \]

The excellent writer, presented the list of real account for each property, he has made hundreds of thousands, and counted hundreds of all his plants and tens of thousands (for) nobles...

It also expresses the enumeration of individuals as read\(^2\):

\[ hsib \; m \; 3h \]
Counting of the soul

Or farmland or Cattles\(^3\) and their own titles as read\(^4\):

\[ hsib \; 3ht \; nt \; wfr \; hr \; s3w \]
Counting the field of the priest regarding the guard (battalion)

\[ In \; imy-r \; pr \; hsib \; lhw \; snbni \; wfr \; mht \]
By overseer of House of the cattle farmers Sinini for the northern region

\[ ss \; hsib \; it \; imn \; m \; h3t \; hsib \; it \; imn \; m \; h3t \; imy-r \; pr \; hsib \; mrt \]
The writer accountant of grain \( imn-m\; h3t \), the grain

---

\(^1\) CG 583, 5 = L. Borchardt, 'Statuen und Statuetten von Konigen und Privatleuten', Bd, I (Berlin: Museum von Kairo, 1919), 135.

\(^2\) Urk, V, 105.

\(^3\) Amer, "Census of Cattles in ancient Egypt", 92.

\(^4\) P. Kahun- Garob, II, PL. 12, 2, I, 52.
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| account | innn-m-ḥ3t the supervisor of house, counting of the people |

As for the counting of numbers and time, they are received as read:  

<table>
<thead>
<tr>
<th>3bd iri hrw ḥsb wnwt nb</th>
<th>I have done (in this) month (and in this) today a count for all the hours.....</th>
</tr>
</thead>
<tbody>
<tr>
<td>ḫnкт ḥsb ʿr ṭṇwt ḥh ...srд</td>
<td>I am accountant of reeds and counted thousands of trees</td>
</tr>
</tbody>
</table>

When the word ḥsb comes with the word tp in this form Refer to an account or arithmetic list as read:  

| iw.f ssм.f ssв r tp-ḥsb | I’ve guided him to the account list clerks |

This term expresses the total amount of delivery and often relates to the quantities of grain and always comes in the charts of the charts of the hieratic charts. As for the examples of ĕḥ found in the era of the Twelfth Dynasty - the Middle Kingdom, the thirteenth Dynasty where the term is mentioned in the Kahun Papyrus as read:  

| ĕḥ hr х3 | Concerning counting of thousand |

In the seventeenth Dynasty, in the Rind Mathematical Papyrus, in addition to most of the records of the new kingdom era and also in the Moscow sporty papyrus, and in the texts of the new kingdom, ĕḥ‘t, ĕḥ meaning (amount, quantity, number) as read in Boulaq:  

---

1 Urk, IV, 105, 10- 13.  
3 CG 583, P.137, 3.  
4 Urk, IV, 20. 1.  
5 Megally, Notion de comptabilité, 56- 57.  
6 Kahun- Gurob, II, 119.  
7 Megally, Notion de comptabilité, 57.
The concept of Account-Lists in Ancient Egypt

The most important terms used as the title of some statistical forms or forms of arithmetic, and this word came from the era of the old kingdom and it refers specifically to the meaning of (a list of numbers or quantities or amount)\(^2\) and therefore they lead or mean statistical forms are lists or abstract statistics Without reference to the same calculation\(^3\); As I mentioned in the annals of King Tuthmosis III in Karnak as a tribute list as read\(^4\):

\[
\text{rxt inw iny n b3w Hm =f in wrw nw rīnw}
\]

The income list to His Majesty (because of the power of His Majesty) by the heads of Ritno

The word rxt is a feminine term of indirect words that are related to the process of statistics and help in the completion of the inventory and statistics process where it is mentioned in wb as a list or statement, ie, a paper that lists names or objects in a row for the purpose of inventory\(^5\), Lesko\(^6\) mentioned that this word came in the form of "list" in some texts as well as in other texts to refer to a statement with payment information, and often rxt comes with the letter n in case of direct addition to indicate a list of\(^7\).... As read\(^8\):

\[
\text{rxt n di [ di.t snn ]}
\]

List of progress for snn

---

1. ZAS, 57 (1922) 193.
5. Wb, II, 448; Faulkner, CD, 152; Hannig, Wb, 1434.
7. Amer, "Census of Cattles in ancient Egypt", 93.
The concept of Account-Lists in Ancient Egypt

accompanying the list of properties in the first month of the flood season, Day 15, and in the third month of the flood season, Day 5, due to each year, a list of offerings for millions and hundreds of thousands of years (coming) of the King of Upper Egypt and the Lower Master of the double Earth.

Sometimes it means "list" or "statement" with payment information as in the second Kahun papyrus as read:

For example, you may mean; (1) a list for delivery or deposit as read:

As well as in Kahun Papyrus as read:

(2) List of cereals or legumes as read:

The harvest list (which) was brought by His Majesty from the fields of Megiddo: four times the $h\dot{k}3t$ of grain $207,300$

---

1. KRI, I, 90, 14-16.
5. Urk, IV, 664, 17.
7. Wb, II, 448, 15.
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(3) A list of individuals or persons as read:\textsuperscript{1}:

\begin{equation}
\textit{rht msw srw ini m rnpt tn s 36 hm hmt 181}
\end{equation}

The list of children of leaders (who) were present this year: 36 men, 181 men

And when you come merged with this word \textit{iri} it means a list of something, a list of it, a list of this thing ... "as read:\textsuperscript{2}:

\begin{equation}
\textit{wn m.\textsuperscript{5} p3 sip n it rht iry}
\end{equation}

(Which) is in the hands ... handed to \textit{it} a list of it

\begin{equation}
\textit{r\textsuperscript{4}t} n rdi.n n.i nb.i nbw hs\textit{wt rht iry nbw \textsuperscript{7}by 2 w\textsuperscript{4}}
\end{equation}

I have made to my favorite gold sidi (his) list of gold: two decades and four rings\textsuperscript{3}.

It also came in some texts in the sense of size as read:\textsuperscript{4}:

\begin{equation}
\textit{Ink iw r smi n.i r Dd iri.tn n.i rx aS3 m it m pS m p3y.i 3Ht}
\end{equation}

A servant came to tell me that you made a large quantity / amount of barley in a part of my field

In the first Reisner papyrus, it came in the sense of arithmetic, accounting, or arithmetic\textsuperscript{5} as read:\textsuperscript{6}:

\begin{equation}
\textit{rht hmt htr 3dyt hn} \ldots .\ldots .\ldots \\
\end{equation}

Calculation or statement of collection of copper

\begin{equation}
\textit{r\textsuperscript{7}h bw in inn im}
\end{equation}

List or statement of places (that) brought (of them) those there\textsuperscript{7}.

In addition to used \textit{rht} to describe some mathematical forms such as balancing \textit{hsb} and this type of use is due to the middle kingdom\textsuperscript{1} in the papyrus of the Egyptian Museum No. 58072 as read\textsuperscript{2}:

\begin{footnotesize}
\begin{enumerate}
\item\textsuperscript{1} Urk. IV. 667, 13- 14.
\item\textsuperscript{2} P. Kahun- Gurob, II, Pl. 37, 21, I, 82- 83.
\item\textsuperscript{3} Urk, IV. P. 893, 10- 11.
\item\textsuperscript{4} P. Anstasi, V, 27, 4.
\item\textsuperscript{5} P. Reisner, II, Lexical Index, 30.
\item\textsuperscript{6} P. Reisner, I, B 31, PL. 5 A, 27.
\item\textsuperscript{7} P. Reisner, I, 31.
\end{enumerate}
\end{footnotesize}
The concept of Account-Lists in Ancient Egypt

The expression has been used "to cause to know" and means (list) at the beginning of some statistical lists since the second half of the new kingdom in one of the appendices as read:

The word \( rht \) is included with the word \( hsb \) in one paragraph of Papyrus 18, where \( hsb \) describes the arithmetic form or the balancing process, while \( Rht \) refers to quantities of different materials as read:

The account of lord s servants year 3 month 2 winter session bread, beer the account of lord s servants year 3 month 2 winter session 1680 beer 135 treasury 1980 beer 145 Balance 200 finish.

Means a list of names or literally (name - by name) and was often used as a list of lists to record or name the names of the workers assigned to a work, as mentioned in the initial Raisner papyrus as read:

---

1. P. Reisner, II, pl. 6 a, 1.
2. Egyptian Museum Papyrus No. 85072 (Public Record), First line.
3. Jroslav Cerny, Alan Gardiner, Hieratic Ostraca (Oxford: Griffith Institute at the University Press, 1957); pl. xviii, 3, 1; XXI, 2,1; LXXII, 1, rt, 1.
6. Abd el- Mohsen Bakir, Egyptian Egistolography (Cairo, Bibliotheque d’ Etude 48, 1979), 67f.
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This expression is closely related to the census and census of the population, whether they are workers, soldiers or slaves, as they are listed in the "wb"² (list of names) as translated by Faulkner³, the list of names as in the Kahun Papyrus as read⁴:

As in the Heiratic texts of the British Museum No. 5646 as read⁵:

Which come as a note in Anastasi Papyri IV as read⁶:

It is clear from this text that this expression refers to the process of calling on the names of soldiers or workers, where he says or calls the commander or observer on the name of the person responds to the person who was calling for his name, and this procedure was intended to make a census of workers or soldiers or prove their Presence or absence, and when this term is associated with a word⁷ ird by this form:

I have given him three workers (and this) a list of their names⁸

1. P. Reisner I, PL. 2.
2. Wb, I, 74, 15.
3. CD, P. 19.
5. ZAS 6 (1868), 41.
7. Wb, I, 74, 16.
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It is also clear from previous texts that the expression "imy -rn.f" is closely related to the conduct of the census process, whether it is a population, a worker or a soldier. Haning referred to it as a book of names or a directory of names, as in the Ryzner papyrus II, as read:

\[
\text{List of copper holders}
\]

It is actually associated with "shni" and this term literally means "whose name is ...." i.e. it is used as a descriptive name or as a sign of existence, and Dominique Valbelle states that this combination appeared from the dynasty 12 meaning sign or restrict. Scientists confirm that this expression means a list of names or a directory of names as Lepsius stated that this expression came as the title of the list of names.

The old Egyptian used to start recording his statistics and accounts, especially those that are recorded for official operations carried out by certain departments and by officials responsible for them in terms of the beginning of the statistical registration and refers to the statistical process in terms of nature and vary according to the difference and also the difference of registration and may be the most famous words are "rdyt". Derivative of the verb "rdi" Meaning (gives) or also verb "di". The Term "rdyt" is mentioned in many texts and refers to a material that is statistically recorded as being given by one part to another part.

It means a written document and is translated when it is presented in a statistical address with an arithmetic document or a list as it appears in the papers of Heka Nakht as read:

---

1 Amer, "Census of Cattles in ancient Egypt", 113.
2 Haning, Wh, 1434.
4 Dominique Valbelle, Joniv Hoson, State and Institutions in Egypt since the Pharaonic age to the Roman Emperors (Cairo: Dar al- Fikr, 1992), 113.
5 LD, III, BL, 12, c.
7 Sherif, A collection of administrative hierarchies, 13-14.
8 Sherif, A collection of administrative hierarchies, 13.
9 Amer, "Census of Cattles in ancient Egypt", 68.
As for concerning the terms used on the census process were found as follows:

<table>
<thead>
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<th>Texts</th>
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</thead>
<tbody>
<tr>
<td>( Tp )</td>
<td>A- Raisner Papyrus I</td>
<td>Wb, I, 66 CD, 16.</td>
<td><img src="image1" alt="Account or Count" /></td>
<td>Account or Count Continue until the Coptic language it wrote</td>
</tr>
<tr>
<td></td>
<td>B- Anstasi Papyrus I</td>
<td>Hannig, Wb, 1554. LD, 29.</td>
<td><img src="image2" alt="(\overline{3})" /></td>
<td>(\overline{3})</td>
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<tr>
<td></td>
<td>C- Anstasi Papyrus IV</td>
<td>CDD, I, 89 Er.Glossar.28</td>
<td><img src="image3" alt="CDD I 89 Er.Glossar.28" /></td>
<td>As for (ipt, ipw) written in Coptic by this form</td>
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<td></td>
<td>E- CG Papyrus 20025</td>
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<tr>
<td></td>
<td>F- Sallier Papyrus I</td>
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<td><img src="image5" alt="Sallier Papyrus I" /></td>
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</tr>
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<td>( \text{tnwt} )</td>
<td>A- Harris Papyrus I</td>
<td>Wb, v, 379, 5-7 CD, 305.</td>
<td><img src="image6" alt="Harris Papyrus I" /></td>
<td>Counting Quantity Numerical amount</td>
</tr>
<tr>
<td></td>
<td>B- Ostraca CG 42185</td>
<td></td>
<td><img src="image7" alt="Ostraca CG 42185" /></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C- Inscription one of Barcha Tombs</td>
<td></td>
<td><img src="image8" alt="Inscription one of Barcha Tombs" /></td>
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</tbody>
</table>
### The concept of Account-Lists in Ancient Egypt

<table>
<thead>
<tr>
<th>Type</th>
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<tbody>
<tr>
<td><strong>D</strong></td>
<td>Inscriptions one of a rock tomb in Deir al-Jabrawy</td>
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<tr>
<td><strong>irw</strong></td>
<td>A- Kahun Papyrus</td>
<td>Wb, I, 114. CD, 27.</td>
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<td><strong>irw</strong></td>
<td>B- Coffin Texts</td>
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<td>C- Inscriptions of the tomb of Ibi in dir al-Jabrawi</td>
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<tr>
<td><strong>wpwt</strong></td>
<td>A- Kahun Papyrus</td>
<td>Wb, I, 303 Faulkner, CD, 59</td>
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<tr>
<td><strong>wpwt</strong></td>
<td>B- Sallier Papyrus IV</td>
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<tr>
<td><strong>šnhi</strong></td>
<td>A- Anstasi Papyrus IV</td>
<td>Wb, IV, 167 CD, 233</td>
</tr>
<tr>
<td><strong>šnhi</strong></td>
<td>B- Anstasi Papyrus V</td>
<td>LD, III, 64. Haning, Wb,</td>
</tr>
</tbody>
</table>

**Counting of Cattle**

**Account Statement**

**Digital data**

**Counting of Individuals**
The concept of Account-Lists in Ancient Egypt

The verb *ipt* is derived from the verb *ip* and means counting or estimating. Doxey\(^1\) points out that when an *ip* is used as a noun or a noun means counting, counting, counting, counting, imposing or calculating a tax, and this verb is constant in the context of your speech. The economic aspect and that the names are:

A- *ip* means the art or science of accounting and interpretation and also means a census or calculation of taxation.

B- *ipt* means count.

C- *ipw* means payments or inventories.

When talking about *ip* and its derivatives *ipt*, *ipw* in ancient Egyptian texts, we find many similar examples in the second Raisner papyrus as read\(^2\):

\[Ip= i st m \text{ hmnw} \text{ irt wst h}k3t m wst h}k3t\]
I will take it at the seat of government, and I will make weight of Heka
like the weight of the new Heka
Ostraca No.CG 20025 as read\(^3\):

\[Nb \text{ hmnw di ip t}nw \text{ ht=f}\]
The lord of Ashmonien (who) provided a census of his various
properties
Sallier papyrus I as read\(^4\):

\[tw. \text{ i ipt n. sn smw mnt}\]
Count (or allocate) their grass daily
Anastasi papyrus I as we read\(^5\):


\(^3\) CG 20025, 29- 30.

\(^4\) P. Sallier, I, 4, 10.

\(^5\) P. Anstasi. I, 17, 5.
The concept of Account-Lists in Ancient Egypt

Who counts many people for you, who know everything small for them...?

In Anastasi papyrus V as read¹:

The leadership told us, they do in order to count the people, we tell him to read aloud to us the names that (in) the lists of names.

In this last example, we note the existence of ipt with imy-rn.f in one example.

The first is used for the last and last names list, as mentioned earlier, but if it is associated with the word nsw, it means the Royal Statistics House and also the main economic center Prepositions; And came with the letter n to express the count or count or allocate something to someone as mentioned in the texts of the pyramids as read²:

Perhaps he has counted (or dedicated) their hearts to you, and I have brought you all the gods immediately.

It is also used with the uppercase letter to express counting or counting on a person or a debt account as read³:

I have counted the mayors and the rulers of the villages (through) the messengers of the registrants of the territories, their books and their field accountants.

It was used with m- preposition to express a count or continuous count of a person⁴ as read⁵:

Count of Coal by the mayor, who in his time

¹ P. Anstasi. V, 25, 8.
² Pyr. 590.
³ Urk, IV, 1129, 1- 2.
⁴ Amer, "Census of Cattles in ancient Egypt", 77- 78.
⁵ Fredric Griffith, The Inscriptions of Siut and Der Rifeh (London: Trubner, 1889), I, pl. 7, 294.
The concept of Account-Lists in Ancient Egypt

The express *tnwt*, which means census or census, is derived from the verb *tnw* in terms of counting or counting\(^1\), the express *tnwt* came in many texts. It is noticeable that that this word was the first expression of the census and census of the country's wealth of gold and fields for the purpose of limiting and to estimate taxes on them as read\(^2\):

\[hd\ hsb\ sp\ 2\ tnwt\]

The second year of the count of silver and lapis lazuli

\[Trt\ wd\ mdw\ tnwt\ pr-dt\ sš\ im3hw\ hr\ nb.sn\]

(Done) the matter of the census (related) property (by) scribes revered to their master\(^3\)

On the count of quantities or amount reported *tnwt* as read\(^4\):

\[ś3\ tnwt\ nt\ prt\ km3\ m\ ibw\ pšt\]

Count lots of grains and materials for human hearts

\[śmwt\ m\ 3\ sš\ hsb\ tnwt\ dmd\ sm3\ hh\ hfnw\ dbšw\ h3w\ štw\]

Record writing and computation of numbers in thousand categories, tens of thousands, thousands and hundreds\(^5\)

And sometimes found with the word *iri* to express a census\(^6\) or establish a count as read\(^7\):

\[Iwt\ m\ htp\ spr\ r\ sḥ\ n\ lrt\ tnwt\ *ś3t\ m\ idrw.f\ n\ zrt\ nsw\ ĥnś\ idrw.f\ dt\ m\ sp3wt\ wnīn\]

Arriving in peace and access to the tent, to conduct a general census of his livestock for the royal bulls and his livestock in the provinces of the rabbit province by the mayor

If the word *tnw* comes in some texts followed by the word *ḥšw* to mean (by appearance) as read\(^8\):

\[\]

---

\(^1\) Wh, V, 379, 5-7; Faulkner, CD, 305.
\(^2\) Urk, I, 235.
\(^3\) Davies, *The Rock Tombs*, PL. 8.
\(^4\) Urk, IV, 249, 2-3.
\(^5\) Urk, IV, 336, 5-6.
\(^6\) Amer, "Census of Cattles in ancient Egypt", 78-79.
\(^7\) Urk, VII, 52, 17-19.
\(^8\) CG 42185, 51.
The concept of Account-Lists in Ancient Egypt

The king who speaks to Amun according to his appearance

Offerings in front of you according to your appearance, and was provided with bread, beer, bulls, birds, wine, incense, fruit

The express \textit{irw} is in \textit{Wb} meaning cattle tax, the term \textit{irt irw} is translated into \textit{wb} in terms of the payment of cattle tax, and Faulkner translates the word \textit{irw} in the livestock tax\textsuperscript{3}, and there is certainly a difference between paying the tax and collecting The tax, and Anthes\textsuperscript{4} pointed out this express and translated into livestock accounts, while Montet\textsuperscript{5} that the word \textit{irw} refers to the census of cattle, as read\textsuperscript{6}:

This confirms that the term \textit{irt irw} means the new cattle production count, which supports the difference between \textit{tnwt} and \textit{irw} as two separate events or events, as stated in the text of the coffins as read\textsuperscript{7}:

Kruchten\textsuperscript{8} has analyzed this word through several examples\textsuperscript{9} feast and found that sometimes it is written \textit{iry}, \textit{irty}, or \textit{irrw}, and it differs from the ad. It is possible to have a papyrus, bull, mummy or three forms of pluralism. However, if the census is a public

\textsuperscript{1} P. Harris, I, 7, 4.
\textsuperscript{2} Faulkner, CD, 27.
\textsuperscript{3} Amer, "Census of Cattles in ancient Egypt": 93.
\textsuperscript{5} Pierre Montet, \textit{Les Scenes de la vie privee dans les tombes des egyptiens de l'Ancien Empire}: Chapter IV, le recen sement des troupeaux (Paris: Revue belge de Philologie et d'Histoire, 1925), 128.
\textsuperscript{6} Davies, \textit{The Rock Tombs}, PL.VII.
\textsuperscript{7} Anthony De Buck, \textit{The Egyptian Coffin Texts}, II (Chicago, 1938), 157.
\textsuperscript{9} Amer, "Census of Cattles in ancient Egypt", 94.
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and official event involving the state The work of the census of irw can be considered a personal work by the individual to know his personal property or for the body in which he works, and when the supervisor of the king's cattle is doing a census of the king's irw and not the individual property.1

\[ Wpwt \]

The term wpwt is derived from the verb wp in Wb2 which refers to information, information or data relating to arithmetic as an arithmetic term. Faulkner3 translated or translated and translated it as an "inventory" while Hanning4 List as read5:

Then he brought a list [of all his possessions], which he made ... of individuals ... and a rite in the tribal face and a lamb [and his donkey] [and cattle]

\[ Imy-r pr hn\* d3d3 wrt ntf iri wpwt m b3h ihw nb iri wpwt im.sn \]

The house supervisor with the great council made lists of all cattle, and provided the data by them6

Dominique valbelle7 see that means "digital data" as read8:

\[ Idr wp.t m \]

Stock (food) data here…….

In any case, wpwt is an arithmetic expression that means a list, statement or statement that is indirect words related to the conduct of statistics and in some cases referred to the census of individuals or population9 (as in the second Kahun Papyrus) as as read10:

1 Amer, "Census of Cattles in ancient Egypt", 95.
2 Wb, I, 303, 1-2.
3 Faulkner, CD, 59.
4 Hannig, Wb, 1434.
6 Urg, IV, P. 1115, 6-7.
7 Valbelle; Hoson, State and Institutions in Egypt, 111.
8 P.Kahun- Gurob , I, 46 .
9 Amer, "Census of Cattles in ancient Egypt", 97.
10 P. Kahun- Gurob, II, Pl. 9, 16, I, 221.
The concept of Account-Lists in Ancient Egypt

List of counting (individuals) House members (Relatives) Soldier Jhouti son of Hri 100

List of counting (individuals) House of free - love of the leader of Sinusrat honest sound

We must point out that when wpwt comes with this customization by this forms: It refers to several different meanings of the list of individuals as mentioned in the previous example or the meaning of individuals crowds as stated in the papyrus Salier IV as read:

For this reason, drums and crowds were knocked in front of them……

Since the twelfth dynasty, the lists of imy-rn.f names have already been associated with the "shni" (wb) meaning to register, bind, check and translate (Faulkner) to "register", "restrict" or "examine" while Haning mentioned as means a list or statement, statement, and Lesko is referred to as a census of the population. Dominique valbelle has made it closely linked to the process of counting individuals or workers. The appearance of this act has been linked to the lists of names since the 12th century, Registration is not just about calling or registering workers; But it also involves gathering the necessary workers and determining the nature of the tasks to be accomplished. shni is mentioned in many texts in terms of "recording" or "restricting" and often relating to individuals:

2. P. Sallier, IV, 1, 4.
5. Hannig, Wb, 1434.
6. Lesko, LED, III, 64.
7. Valbelle; Hoson, State and Institutions in Egypt, 113.
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(1) - workers as read¹:

\[
\text{snhi n.i t3 mrw r}'rt lw t3 .f t3 mrw lw.st m p3y.f dmit}
\]

We have registered weavers (textile workers) on the list, I took them away, (and) they are in my city

(2) Soldiers as we read²:

\[
sS mSa m-b3H Hm=f snhi D3mw n nfrw
\]

The army accountants in front of His Majesty records the young soldiers

\[
\text{iw.i Hr snhi mSa n (ti)-nt-Htr r-prw}
\]

I have counted the soldiers of the military vehicles of the temples³.

Caminos⁴ translated the word \textit{snhi} into a counting of individuals in the so-called men's assessment departments (\textit{prw hsbw rmT}) as read⁵:

\[
t3 st snhi p3y.k mS
\]

This is where your army is registered

The word \textit{snhi} also came to express the review of lists or lists of names⁶ as read⁷:

\[
\text{Tw=f hr hprw}'rt m hwt ntr ( R' msw mri imn ) 'nh wd3 snb
\]

He began a review of the lists of names in the Temple of \textit{R'} msw mri imn, so he would enjoy a miracle

Computational reporting

The main objective of accounting is to prepare financial information about the entity. Therefore, this information is summarized in accounting reports. The most important reports that the accounting system must provide are⁸:

¹ P. Anstasi. IV, 14.
² Urk. IV, 1006, 3- 4.
³ P. Anstasi, IV, 7, 8.
⁵ P. Anstasi. III, 7, 5- 6.
⁶ Amer, "Census of Cattles in ancient Egypt", 108.
⁷ P. Anstasi. IV, 15.
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Financial Statements:

It is the list that controls the recording, tabulation and analysis of transactions of financial value related to a unit held in a set of books and records with a view to determining the movement of funds, goods, goods or property. The list aims to provide financial information of all forms, whether agricultural, industrial, commercial, and service, to individual establishments or individuals. The main financial statements include:

(A) The budget or the statement of financial position
   This list includes all accounts in the public ledger.

(B) The income statement
   Includes statement of income and expenses and net profit or loss

(C) The distribution or retained earnings list.
   It includes an analysis of changes in the rights of account holders.

In addition to these main lists, there are other auxiliary or sub-lists to give details of some items, which appear briefly in the basic financial statements. These lists are often in the form of tables that give details of buildings, land or equipment, inventory.

In ancient Egypt, business-related accounting books were written day by day in most of Egypt's ancient commercial records, known as hrw or "rt hrw Notebooks "or" diary books or daybooks. The daybook is a daily record that contains several documents for the daily administrative work and its purpose was to register directly, it was found to be a complete and systematic archival reference, and Carmona & Ezzamel called it a daily extract and any new entry added to it called due today. As for the private sources of gnwt which means an archival record or book that gives a very early and primitive history and is neglected in the use of the Egyptian archives back to the Middle Kingdom era. The word gnwt is defined as a kind of daily record of daily business and written in the following forms:

1 Plank, Plank, Encyclopedia, 4-5.
3 Amer, "Census of Cattles in ancient Egypt", 85.
5 Chistopher Eyre, The use of Documents in Pharaonic Egypt (Oxford :Oxford Scholarship 2013), 315
6 Carmona, Ezzamel, Accounting Encyclopedia, 15.
7 Carmona, Ezzamel, Accounting Encyclopedia, 15- 16.
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The Egyptian derivation of *hrw* or *rt hrw* Which means diary books or books as previously noted but in the new kingdom that term was used more freely to be preferred to any type of (records) or (documents) because the traditional accounting books are working documents illustrating daily management practices but likely for a long time Term; The tables and standard lists are easy reference tools. For example, the table record of ritual equipment in the Abu Sir papyrus¹ was clearly used to inspect the equipment inventory for each month when the list of priests had to change but not true for archival records².

The Competent Group, which receives the requirements for the stores and delivers them to the author to make a note and record each individual requirement called "Departing Phyle". The registration of the inputs was done by a team called Incoming Phyle. Both teams prepare reports on delivery of roses Called Shift Delivery³.

It should be noted that the publication of individual books, which include records or accounts tend to be regular reference to the late but distinctly the tools of work for periodic accounts and not documents final statement of long-term term so far as enormous list as in the Wilbur papyrus Wilbour papyrus "Which recorded the responsibility for revenues for grain harvesting and appears to be the annual business documents, not a record for records. It is similar to the diary books of the Roman era in the monastery of Medina, which used the tools of work for the various administrative parts of the cemetery, not the same archival documents⁴.

It also took the more common characteristic of "administrative papyrus" written by the right author for the daily entries of receipts, income, expenses, and daily business and again seemed to be business and not long-term reference lists⁵.

We can note in the documents of Deir Al Madina⁶ that there is simple evidence of the method of writing documents for the cemetery (records, letters, reports) for the so-called workshop accounts⁷ that were saved or used as reference and not in those texts in the administrative house or the private archive or The keeper of the writings, it seems to be similar to those kept by the proper scribes to write themselves either at home or at work⁸.

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It seems that the administrative books that were carried out by the appropriate clerks who could not reach the main institution took it upon themselves to convey that accurate information to the failure of the current documents for the final statement due to the sale. The administrative letters that were dealt with by the departments on the basis of their employees and are of an administrative nature are divided into several types as follows: (A) Letters of order (b) Letters are reports (c) Letters exchanged between departmental staff. (D) Letters of information or communication. (E) Letters of official or friendly complaints. (F) Receipts taking the form of rhetoric.

These are the types of talks about receipts and the type of letters recorded on papyrus or ostraka, which are receipts either by taxes or receipt of a particular commodity or the payment of debt, and Mattha sees that the receipt of tax receipts, which took the form of letters continued on papyrus during the Ptolemaic and even Roman era.

Wages records & income of individuals
The expression of pay in the ancient Egyptian language was as follows:

<table>
<thead>
<tr>
<th>Term</th>
<th>Text</th>
<th>Source</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>b3kw</td>
<td>A- Kahun Papyrus⁴</td>
<td>Faulkner, CD,18</td>
<td>Wage</td>
</tr>
<tr>
<td></td>
<td>B- Inscriptions of the tomb of Rakhmi Ra⁵</td>
<td>Lesko., LD, 127</td>
<td>Wages</td>
</tr>
<tr>
<td></td>
<td>C- Resolutions of a Hur-Moheb⁶</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>D-Resolutions of Nuri⁷</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2 Soaad Abdel Aal, "Correspondence through Demotic Documents" (unpublished MAThesis, Cairo University, Faculty of Archeology, 1983) 56-57.
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| $Fnhw$ | A- A text for Rakhmi Ra works with the builders in the Temple of Amun | Wb, 576 Faulkner, CD, 98 Urk, IV, 1151, 4 | Wage |
| $hsf-r$ | A- An engraving of a worker from the reign of Tuthmosis II | Faulkner, CD, 197 Urk, IV, 138, 10 | Wage strike |
| Mint | A- the story of Snohi | Faulkner, CD, 104. GNS, 14 | Daily fare Daily food |

The linguistic aspect:

The use of $b3kw$ as a typical expression as a wage means the value or price of the work practiced by man or animal\(^1\) and I have written in many forms of writing can be reviewed as follows:

And the difference between them and the word $htri$, which means the salary (tax estimated) mentioned in the salaries of the workers of Deir- ElMadina\(^2\) and by comparing both terms we see that the $htri$ means the obligation to pay the salary continuously even if the person does not work or $b3kw$ is paid as a fee in exchange for performing the work so If this is not done, do not pay the $b3kw$\(^3\).

Discussion:

The wages of workers in ancient Egypt were paid for cereals, which were used to make bread, wine or directly paid for bread\(^4\) and wine, which were the main elements of their food. The monthly quota of workers was four wheat $bd$ It is bread grains and one and a half outside of the barley $\text{I'}$. Barley, wine, while presidents

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\(^1\) Zeinab Mahrous, "Taxation in Ancient Egypt to the End of the new kingdom" (unpublished Master Thesis, Cairo University, Faculty of Archeology, 1986), 185.
\(^3\) Mahrous, "Taxation in Ancient Egypt", 191.
\(^4\) For the kinds of bread see: Iman El Mahdi, Bread in Ancient Egypt, Egyptian General Book Authority (Cairo: Egyptian General Book Authority, 2009).
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and clerks receive more. The average workers and a large sector of their superiors paid them for their daily bread. They used these surplus shares to swap for other goods.

The story of Khufu and the Magicians told us that barley was used as a grain in the payment of wages. He gave the priest Ra and the secret of the gods who helped his wife in the process of giving birth a few pints of barley as a reward for them:

I hope that you will give this measure of barley to your bearer and take it for yourselves in your pots as wage.

These may be meant to be used in the storage of grain and others, and must be utensils containing barley, from which beer and wine are made; Bread has also been used as a means of paying wages. In the texts of Ankh Chashnki, he says:

He gives the observer bread for inspection, and if he does not do the inspection, the bread is cut off.

Ankh Chashanki identified the amount of bread that the worker gets and takes a loaf as a reward for him while the supervisor takes him or who leads him with two loaves because he is the highest ranking and in this he says:

The payment of wages has an economic effect on the employer, where the worker makes more effort in his work, which results in an increase in production, says Ankh Chashanqi:

1 Mona Saleh, "Economic Life through Ancient Egyptian Literature" (unpublished PhD thesis, Alexandria Alexandria University, Faculty of Arts, 2013), 197.
2 Saleh, "Economic Life Through Ancient Egyptian Literature", 197.
8 Ritner, The Instruction of Onchsheshonqy, 5, 23.
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Mi w*r p3y.k ipt t3y 2 n n3y.f hps.w  
Give the worker a loaf that takes two loaves from the shoulders of him.

The standard wage in the real economic life of the simple laborer was ten kilos of bread, along with the equivalent of about 20 bars of beer a day, the lowest wage possible, while the highest wage was twice the wage of the worker².

Wine as wages for workers:

Wine was part of the wages of soldiers and farm workers and there is a reference in O. Egy. Mus. No. 25504 attributed to the seventh year of the reign of Merneptah, which we know that 50 bottles of wine were allocated to the workers of Deir-Elmadina³, An account of the goods and supplies of the vine growers where he wrote, "Delivery of bread to vine growers daily⁴.

These wages have helped to buy goods or barter in the consumer goods markets outside the official system, thus enabling the individual to pay his needs through paid work⁵.

In any case, there were complaints made especially in the failures of the delivery of wages, the appropriate administrative conditions can supply the quantity of grain already, but the wages of other goods were irregular, which called for workers representatives to look at the administrative documents and provide information by tracking them and then highlighted the accounts Annual accounts of those receivables⁶ preserved in the Turin papyrus No. 1903⁷.

In that regard, he found many complaints⁸, which spoke of a lack of income levels of individuals, including official and friendly in what is now known (strike action).

Tax receipts:

The tax, as defined by Janssen⁹, is a contribution imposed by the State on its nationals of a specific nature. The tax is paid by the State to fulfill its obligations to its nationals, whether at home or abroad.

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² Saleh, "Economic Life Through Ancient Egyptian Literature", 198.
³ O. Egy. Mus. No. 25504
⁵ Saleh, "Economic Life Through Ancient Egyptian Literature", 198.
⁶ Eyre, The use of Documents, 320.
⁹ Jac Janseen, "Prolegomna to the study of Egypt economic History During the New kingdom", SAK 3
The concept of Account-Lists in Ancient Egypt

In the modern sense, they are reports on the amount of money imposed by governments on activities, expenses, jobs and income of individuals or enterprises in order to obtain financial support for the services provided\(^1\).

As for taxation in ancient Egypt, it represents an important aspect of economic life as it represents one of the sources of state resources. It also reveals the extent to which the administrative administration has the ability to manage and regulate the economic aspects and taxes\(^2\).

<table>
<thead>
<tr>
<th>Tax</th>
<th>Text</th>
<th>Source</th>
<th>Category</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>(\textit{$msw hr, $nt$h})</td>
<td>A- Palermo Stone(^3) \newline B- Queen Abbott compartment(^4) \newline C- Inscriptions of the Temple of King Neusar Ra(^5)</td>
<td>Wb, IV, 485, 4-5 \newline Wb, V, 379, 5-7</td>
<td>General Tax</td>
<td>Those terms are two equal events that serve the same purpose as the counting</td>
</tr>
<tr>
<td>(\textit{$r$w})</td>
<td>A- Inscriptions of the tomb of Sennab(^6) \newline B- Inscriptions of the Tomb of Iby(^7) \newline C- Wehem- Ka Tomb(^8)</td>
<td>Wb, I, 114, 4-5 \newline Faulkner, CD, 27</td>
<td>Cattle Tax</td>
<td>literally \newline In effect and thus refers to the product or production of cattle</td>
</tr>
</tbody>
</table>

\(^2\) Mahrous, \textit{Taxation in Ancient Egypt}, p. C- D.
\(^4\) Heinrich Schaffler, \textit{Ein Bruchstuck Altagyptischer Annalen} \newline (Berlin: akademie der wissenschaften, 1902).
\(^8\) Hermann Junker, "Giza 5. Die Mastaba des Snb (Seneb) und die umliegenden Gräber. Akademie der Wissenschaften", \textit{Wien Philosophisch-historische Klasse Denkschriften} 71 \newline (Leipzig: Hölder- Pichler- Tempsky 1941), 76.
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| (htr) | A- Chesterbity Papyrus $^2$ | Urk, IV, 1236, 16 | Amount Tax | Means the amount of the tax in particular, regardless of the quality of the tax |
|       | B - The house of the governor of the reign of Rameses II $^3$ | KRI, II, 197, 10 |          |                                              |

| (šmw,b3kw) | A- Wilpour Papyrus $^4$ | Faulkner, CD, 267 |
|            | B- Louvre Papyrus E 3226 $^5$ | URK, IV, 499, 4 |
|            | C- Griffith Papyrus $^6$ | Grain Tax | The tax is estimated according to the extent of land use from the flood water and the impact on the productivity of the land |
|            | D- Valancy Papyrus $^7$ |          |          |                                              |
|            | E- Turin Papyrus $^8$ |          |          |                                              |
|            | 2006+1896 |          |          |                                              |
|            | F- British Museum |          |          |                                              |

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<table>
<thead>
<tr>
<th></th>
<th>Papyrus No.1044¹</th>
<th></th>
<th></th>
<th>Occupational tax</th>
<th>Is the estimated or in-kind taxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>(§³ṣyt)</td>
<td>A-Neferty prophecy²</td>
<td>Wb,IV,402,8 Wb,IV,403, 9-10</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>B-Renni Tomb³</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(93kw)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A-Leiden Papyrus No.344⁴</td>
<td>Wb, I, 427 Faulkner, CD156</td>
<td></td>
<td>Production Tax</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B-Turin Papyrus No.1874⁵</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C- Ghwty- ms Letter⁶</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(tp- drt)</td>
<td>A-Turin Papyrus No.1874⁷</td>
<td>Meeks., Lexicograph, 793396</td>
<td></td>
<td>Head tax</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B-The text of the priest Amenhotep⁸</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mb³wt</td>
<td>A- Barcha Text⁹</td>
<td></td>
<td></td>
<td>Customs duties tax</td>
<td>This tax is collected in the form of funds only, but their value</td>
</tr>
<tr>
<td></td>
<td>B- Siti – Decision-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹ Megally, Notion de Comptabilites, 42.
² Mahrous, Taxation in Ancient Egypt, 152,176, 325.
⁴ Jon Taylor, Wall Painting and Monuments of EL-Kab IV, The Tomb of Renni (London: Quaritch, 1900), Pl. iii, iv.
⁵ Mahrous, "Taxation in Ancient Egypt", 170, 326.
⁷ KRI, II, 819.
⁹ Davies, The tomb of RKH- MI-RA, 52.
The concept of Account-Lists in Ancient Egypt

<table>
<thead>
<tr>
<th>Category</th>
<th>Text</th>
<th>Source</th>
<th>Mean</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B- Chesterbity Papyrus (^3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(nmhyw)</td>
<td>A- Pharaoh's decree Hur-Moheb</td>
<td>Wb, II, 268, 4, 5.</td>
<td>Private taxpayers</td>
</tr>
<tr>
<td></td>
<td>B- Dakhla Stela (^4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(smdt)</td>
<td>A- First intermediate Stela (^5)</td>
<td>Faulkner, CD, 229. URK, IV, 94, 4</td>
<td>Young users</td>
</tr>
<tr>
<td></td>
<td>B- A Text for a</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

With regard to the competent authority to pay taxes and found as follows\(^2\):

---

\(^1\) Alan Gardiner, the Royal Canon of Turin, Griffith Institute (Oxford: Griffith Institute at the University, 1959), Pls. V- IX.

\(^2\) Mahrous, "Taxation in Ancient Egypt", E -G.

\(^3\) P. Chester Beatty, V, rt.7, 12- 8.


The concept of Account-Lists in Ancient Egypt

<table>
<thead>
<tr>
<th>( \text{Swtyw} )</th>
<th>Cemetery worker (^1)</th>
<th>( \text{Wb, IV, 434, 1-4} )</th>
<th>Merchants</th>
<th>They are divided into three categories: (A) a class working for the temples. (B) A category that works for individuals. (C) A class that exercises self-employment in favor of its own profit.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A- Harris Papyrus I (^2)</td>
<td>( \text{Meeks, Lexicograph, 792951.} )</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B- Boulaq Papyrus II</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C- Lancing Papyrus (^3)</td>
<td>( 4, 8-10 )</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Categories:**

The main task of the clerks was the registration and statistics operations. Some clerks who carried out the census were called \( \text{hshb} \). Each administration was distinguished by separate accounts, with a specific number of clerks and accountants. The accountants were found in the private administration under the supervision of the Chief of Accounts \( \text{imy-r pr hsbw} \) \(^4\). In addition to these special account clerks, some of the clerks held the title of accountant \( \text{sS hsb} \) \(^5\). In general\(^5\), as the officials responsible for recording the statistics are mainly accountants; this is done through their specialization as follows\(^6\):

A- Cattle Scribes \(^7\).

---

1 Jarsolav Cerny, *Community of Worken in Thebes in the Ramesside Period* (Cairo: Bibliothèque d'études IFAO, 1937), 183 ff.
2 P.Harris, *I*, 46, 2.
5 Ali, "Titles and civil functions in the era of the new kingdom", 311.
# The concept of Account-Lists in Ancient Egypt

<table>
<thead>
<tr>
<th>Title</th>
<th>Texts</th>
<th>Source</th>
<th>Mean</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>sš ḣšb ihtw n t3 mnmnt</td>
<td>Inscription of byai tomb</td>
<td>Lefebvre., <em>Histoire des grand pretres d’Amon de Karnak</em>, (Paris: Cambridge University Press, 1929) 131.</td>
<td>scribe and accountant of herd bulls</td>
<td>Tomb No.263 Sheikh abd el-korna</td>
</tr>
<tr>
<td>sš nfrw</td>
<td>Inscription of amon- em-ubet tomb</td>
<td>KRI, I, 385 (6)</td>
<td>Cows scribe</td>
<td>Tomb No.265 Deir el-madina</td>
</tr>
<tr>
<td>sš nsw ḣšb ihtw</td>
<td>Inscription of Sa- mut tomb</td>
<td>KRI, III, 334 (10)</td>
<td>Royal scribe accountant of bulls</td>
<td>Tomb No.409 Assassif</td>
</tr>
</tbody>
</table>
The concept of Account-Lists in Ancient Egypt

| iny- r ḫsb ḫw | Inscription of Sa-mut tomb | Abdel kader Muhammed, "The Hittite Provincial Administration of Conquered Territories", ASAE, 59, (1966), PL. XXXIV | The overseer of bulls accounts |
| r ḫsb ḫsw | Inscription of Sa-mut tomb | KRI, III, 334 (8) | The overseer of calves accounts |
| ss nsw iny- r ḫbw iw3 | Inscription of Sa-mut tomb | Muhammed, *The Hittite Provincial*, PL. LXXIII | The royal scribe, overseer of oxen account |
| ss nsw iny- r ḫbw ḫw n šm’w ṣḥw | An inscription of conical for the priest amon- ms | KRI, III, 334 (4) | Muhammed, *The Hittite Provincial*, PL.xxxvi. | The royal scribe, overseer of calves accounts of North and South gods | Tomb No.9 Deir el-madina |

In ancient Egypt, the census of cattle was carried out periodically - usually every two years. This process was sometimes linked to the imposition of a specific tax for the government. It was conducted under the supervision of the head of the herd or the royal archivist and representatives of the government. Farms in the provinces, there is no doubt that the herd was included on all types of cattle of cows and bulls of different types besides small calves, and the process of counting livestock depends on the classification of these species and discrimination.

Urk iv: 1394 (3- 4)
2 Ali, "Titles and civil functions in the era of the new kingdom", 312.
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B-Birds scribes¹:

<table>
<thead>
<tr>
<th>Title</th>
<th>Texts</th>
<th>Source</th>
<th>Mean</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>sš hb</td>
<td>Inscription of Ghwty-nfr tomb</td>
<td>Georges Daressy, &quot;Receuil de Cones Funeraires&quot;, Mission archéologique française au Caire, 8 (1893), n.165</td>
<td>Birds scribe</td>
<td>Tomb No. 317 Sheikh abd el korna</td>
</tr>
<tr>
<td>sš hsb hw hw</td>
<td>Inscription of Ghwty-nfr tomb</td>
<td>Herny Gauthier, &quot;Rapport sur une campagne de fouilles à Drah abou’l Neggah&quot; BIFAO, 6 (1908), 124</td>
<td>The scribe and accountant of bulls and birds</td>
<td>—----------</td>
</tr>
</tbody>
</table>

The Karnak temple included the sheds for the raising of birds, poultry and geese to provide the sacred offerings of the temple's deities, and there was carried the post of writer and accountant of cattle and birds of Amun as mentioned above.

C-Treasury scribes²:

<table>
<thead>
<tr>
<th>Title</th>
<th>Texts</th>
<th>Source</th>
<th>Mean</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>sš hwt- nwb</td>
<td>An inscription of conical for the priest Nefer Renbet</td>
<td>KRI, III, 330 (1)</td>
<td>The scribe of gold residence</td>
<td>—----------</td>
</tr>
</tbody>
</table>

¹ Ali, "Titles and civil functions in the era of the new kingdom", 322.
² Ali, "Titles and civil functions in the era of the new kingdom", 323.
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<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B-Inscription of amon-ms</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>sš prwy-ḥd</th>
<th>A- inscription of conical for the priest Nefer Renbet</th>
<th>KRI, III, 323 (4)</th>
<th>The scribe of dual treasury</th>
<th>A-This title, called Amon-Nekho Word, was Memorial inscription was given to the chief of the workers at Deir-Elmadina Medina</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B-The Memorial inscription No.1960 western Thebes</td>
<td></td>
<td>B- inscription of Hay tomb NO.328</td>
<td></td>
</tr>
</tbody>
</table>

The work of the workers inside the treasury was largely based on the category of clerks, where they concentrated on a lot of operations such as recording the quantities of raw materials used in artisans' workshops, recording the works that are finished by the manufacture. There is no lack of photocopying of the treasury or workshops of artisans there are a number of clerks holding their records the clerk of the treasury has some administrative tasks besides the calculations performed by the clerk of the treasury and many titles that show his assumption of the tasks of writing and accounts in the treasury

D-Sacred Seals Scribes:

<table>
<thead>
<tr>
<th>Title</th>
<th>Texts</th>
<th>Source</th>
<th>Mean</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>sš ḫmt- ntr ṭpy</td>
<td>Inscription tomb of po- m- ra</td>
<td>KRI, III, 225 (10)</td>
<td>The first scribe for divine treasury</td>
<td>Tomb No.39 Elkhokha</td>
</tr>
</tbody>
</table>

1 Ali, "Titles and civil functions in the era of the new kingdom", 323-327.
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<table>
<thead>
<tr>
<th>Title</th>
<th>Texts</th>
<th>Source</th>
<th>Mean</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>sš ḫmt- nṯr sn- nw</td>
<td>Inscription tomb of po- m- ra</td>
<td>PM, I, 393 (4)</td>
<td>The second scribe for divine treasury</td>
<td></td>
</tr>
<tr>
<td>sš ḫmt- nṯr</td>
<td>A- Inscription tomb of Nb- Kdnw</td>
<td>KRI, III, 358, (6)</td>
<td>The scribe of divine treasury</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B- Inscription tomb of Sr-Ws</td>
<td></td>
<td></td>
<td>B-Tomb No. 232 Draa Abu el naga</td>
</tr>
<tr>
<td>ḥtm ḥtmwašt nbt</td>
<td>Inscription tomb of aniny</td>
<td>Urk, iv, 68 (11)</td>
<td>The bigger of all seals</td>
<td>Tomb No.31 El-Hoza el ulya</td>
</tr>
<tr>
<td>imy-r ḥmt nbt</td>
<td>Inscription tomb of aniny</td>
<td>Urk, iv, 68, (15-17)</td>
<td>The overseer of all seals</td>
<td></td>
</tr>
<tr>
<td>ḥtm pr. wy-hd</td>
<td>Inscription tomb of Ghwty</td>
<td>Urk, iv, 429 (6), 436 (15-17)</td>
<td>The treasurer of dual treasury</td>
<td>Tomb No. 11 Draa Abu el naga</td>
</tr>
</tbody>
</table>

The title of the divine seal "sš ḫmt-nṯr" appeared in the old kingdom, and the title of the author of all the divine seals sš ḫmt-nṯr nbt was one of the titles carried by the priests and treasury workers in the new kingdom and the era of the Ramses. The task of seals writers was to register the foreign products of the country whether imported into the treasury such as precious metals, textiles and textiles; or other products such as cattle, monkeys, and leather and bird feathers.

E-The Barn Scribes:

<table>
<thead>
<tr>
<th>Title</th>
<th>Texts</th>
<th>Source</th>
<th>Mean</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>sš šnwt</td>
<td>Inscription tomb of Menna</td>
<td>Margret Murray, <em>Index of Names and Titles of the old kingdom</em>, (London: Office of British School of</td>
<td>The barn scribe</td>
<td>Tomb No. 69 El-Hoza el Ulya</td>
</tr>
</tbody>
</table>

1 Ali, "Titles and civil functions in the era of the new kingdom", 330.
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| A-Tomb No.96 | Murray, *Index of Names*, 64 | The scribe of barn accounts | B-Tomb No.17 |
| El-Hoza el Ulya | Urk, iv, 1049 | | Draa Abu el naga |
| B-Tomb No.17 | | also wrote in the inscriptions of the tomb of Amenmhat | |
| B-Tomb No.17 | | Tomb No. 53 at Sheikh abd el Korna | |

The barn scribes\(^1\) were assigned to the registration and calculation of yields and quotas. They can be categorized into three categories, beginning with clerks, supervised by the censor of the library clerks and headed by the supervisor of the library clerks. The clerks specialize in the fields in several fields. (Records) and supervised by the head of the archives of the archives of the Barn and have existed these specialties between the clerks of the Barn since the old and the middle and found the titles as mentioned above\(^2\).

---

1 For more details on this point, see: Khaled Awad, *Grain Stores in Ancient Egypt, Ain for Human and Social Studies and Research* (Cairo: Ain for human and social studies and research, 2007).

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F-Stores Scribe:

<table>
<thead>
<tr>
<th>Title</th>
<th>Texts</th>
<th>Source</th>
<th>Mean</th>
<th>Remarks</th>
</tr>
</thead>
</table>
| sš ḫsb ītw m šnwty ḫtp-nṯr | A- Inscription tomb of Neb-Amun
B- Inscription tomb of Ghwty- nfr | Urk, iv, 1050 (13,15), 1050 (3), 1052 (15-16) | The accountant scribe of crops in barn of offerings | ———— |
| sš n šn$†                | Inscription tomb of biay                   | KRI, III, 381(4-5), (7-8) | Stores scribe                        | ———— |
| sš wḏhw                  | Inscription tomb of Amwn- ḫtp              | Daressy, *Receuil de Cones*, Nos 264-266 | The offerings scribe                  | A-Tomb No.73 El-Hoza el Ulya |
| sš ḫtp-nṯr               | Inscription tomb of ḫmnw- ḫtp              | Norman Davies, "Some Representations of Tombs from the Theban Necropolisin" JEA, 24, (1938), fig.8 | The scribe of divine offerings | ———— |
| sš ḫsb ḫt                | Inscription tomb of Amwn-Htp
Inscription tomb of Nb-Amwn | Daressy, *Receuil de Cones*, n.47 | The scribe and accountant of bread    | ———— |
| sš n tš k3wš            | Inscription tomb of Inhr- ms               | Davies, Macadam, *A Corpus of Inscribed*, n. 430 | Works scribe                        | ———— |
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<table>
<thead>
<tr>
<th>$ss ; hmw; nbt$</th>
<th>Inscription tomb of Amwn- Htp</th>
<th>Davies, Macadam, <em>A Corpus of Inscribed</em>, n. 354</th>
<th>The scribe of all crafts</th>
</tr>
</thead>
</table>

In addition to this, a group of other employees, similar to their clerks, was found to be the surveyors who measured the area of grain fields before harvesting to estimate the quantity of the crop that would enter Shun As titles mentioned above\(^1\).

G- Secondary Administrative Departments Scribes:

<table>
<thead>
<tr>
<th>Title</th>
<th>Texts</th>
<th>Source</th>
<th>Mean</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ss ; pr ; md3t$</td>
<td>Inscription of a worker of Deir-Elmadina</td>
<td>Murray, <em>Index of Names</em>, PL. xxxviii</td>
<td>The scribe of books house</td>
<td></td>
</tr>
<tr>
<td>$ss ; st ; df3wt$</td>
<td>Inscription of a worker of Deir-Elmadina</td>
<td>Murray, <em>Index of Names</em>, PL. xxxvii</td>
<td>The scribe of food section</td>
<td>It emerged from the era of the Second Dynasty</td>
</tr>
<tr>
<td>$ss ; niwt ; m3wt$</td>
<td>Inscription of a worker of Deir-Elmadina</td>
<td>Abdel Moneim Abubakr, <em>Excavations at Giza, I</em> (Cairo: Government Press, 1953), 69, 75.</td>
<td>The scribe of new cities</td>
<td></td>
</tr>
<tr>
<td>$ss ; hwt$</td>
<td>Inscription of a worker of Deir-Elmadina</td>
<td>Paul Smither, &quot;A Tax-Assessor's Journal of the Middle Kingdom&quot; <em>JEA</em>, 27(1941), 74.</td>
<td>Fields scribe</td>
<td>Sometimes wrote $ss ; 3hwt$</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$ss\ gs\ wi3$</td>
<td>Inscription of a worker of Deir-Elmadina</td>
<td>Murray, <em>Index of Names</em>, PL. xxxviii</td>
<td>The ship scribe</td>
</tr>
</tbody>
</table>

The old Egyptian could express the function of the clerk of the departments or administrative departments or the author of the specialization depending on the circumstances surrounding each department and we can distinguish the administration by the titles taken by the writer, and can be limited in two types through the composition of verbal; The first type is that the first $ss$ has a close relationship with the names of the departments that are defined by the word $pr$, which means "house", the second type defined by the word $st$, the third type is defined by the names of regions, the fourth type is specific to specific jurisdictions, the fifth type is specific groups as mentioned above.¹

**General Form:**

The Ancient Egyptian has known a fixed system for recording his daily and public accounts. This is evident in the various texts written on the papyri and dioceses mentioned above. It seems that this system was started since the early ages. It is clear from us that seals and seals of books and cards written from the era of the first two families with a specific recording system for accounts.²

The statistical text usually consists of certain elements:

(A) The registered or registered material
(B) The unit of the article, i.e. the unit to which this article is attached.
(C) The quantity assigned to that unit.
(D) Some data on the recorded statistical process.

The mathematical and statistical documents had their distinctive form from other documents. However, this form differed and developed according to the age of the papyrus or the arithmetic document.³

---

Firstly: the old kingdom:

The most important characteristic of the arithmetic text in the old kingdom is the great detail in the recording of accounts and statistics. The scribes were keen to record their statistics within overlapping horizontal and vertical lines or in other words in square boxes resulting from horizontal and vertical lines.

The data for both of the various resources, units and quantities has been given to the arithmetic bar in the old kingdom a distinctive geometric shape in the presence of this tabular form1 (see Table 1). This complex geometric form, which distinguishes Abu sir papyrus as a model of the old kingdom calculations, Which is the size of the compass in the old kingdom in size between the size of the medium or new kingdom papyrus, where the height of 21- 24 cm, the red ink was used in public papyrus to indicate the quantities as well as the overall balance2, and wrote lines Writing horizontally and vertically while the vertical columns were predominant3.

Secondly: Middle kingdom:

In the Middle Kingdom, the detailed spirit of recording statistics and accounts was less than in the old kingdom, Some of the models that belong to that period- with the full shape of the table4 (horizontal and vertical lines)- are different from those in the old kingdom with relatively large volumes and thus the clarity of the words within the different cells5.

This is due to the large size of the statistical papyrus in the middle country than in any other era. Therefore, the pages came with a large quantity of accounts, as well as large margins on both sides6. The boxes or boxes disappeared little by little until there was no existence of these tables, there is also a horizontal line after each horizontal line of writing7, and there is a note on the accounts of the middle and old kingdom. It is concerned with writing the name of the unit used in the various articles. That among the statistical registers as follows:

(A) The name of the registered material.
(B) The name of the unit in which that article is directly attached.
(C) A custom form of the word indicating unity.
(D) Quantity use.

We note this also on some of the old kingdom paintings. The text of the article itself is written in a separate box, perhaps a reference to the unit assigned to that article8, and the red color was used in this period. It is used in the Raisner papyrus to denote the names of the absent workers.

Thirdly: New Kingdom:

The most characteristic of the new kingdom statistical records is the extreme simplification of all the different elements9. The most important observation of the

---

2 Posener Krieger, De Cenival, Abu Sir Papyri, 211.
3 Posener Krieger, De Cenival , Abu Sir Papyri, pls. xi, xii, xiii & passim.
4 Quirke, Administrative texts, 25.
5 Magally, Notion de Comptabilites, 2.
6 Simpson, Pap Reisner, passim.
8 Quirke, Administrative texts, 25.
9 Magally, Notion de Comptabilites, 4 ff.
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arithmetic corpus in this period, especially the 18 family is its small size as it is 18 cm high.
From the page and no longer leaves the large margins that we saw in the old and middle kingdom on both sides\textsuperscript{1}, as the writer completely away from the tables and lines became horizontal writing is always prevailing and became the form of the arithmetic parody near the form of the literary papyrus\textsuperscript{2}, meaning there is no vacuum Between the name of the article and quantity as it used to be; But the recording became consecutive as literary texts without spaces or detail in the line\textsuperscript{3}. The red color was used less than the old and middle kingdom, where it indicated the titles and some papyri\textsuperscript{4}, and continued as was previously used in the texts containing the the quantities of wheat and barley \textit{bdh- it} where the barley was written the quantity of the function in black and write the quantity of the function The wheat was red, and the same use continued in the new kingdom\textsuperscript{5}.

Fourthly: Demotic Accounts:
Demotic accounts are a type of text that takes the form of an account-lists list that records the amounts of money, grain, liquids, etc. These accounts start from the age of the 26th Dynasty and continued until the Greco-Roman era. We can confirm that it was used until the second century AD by discovering some papyrus\textsuperscript{6}.
Zauzich\textsuperscript{7} noted that the Demotic calculations were greatly extended in the Roman era. In comparison with the Ptolemaic calculations, Demotic calculations are the most written for everyday purposes Muhs\textsuperscript{8} sees that Demotic calculations have been extended extended to a Ptolemaic alike to the third century AD.
The overall average size of the demotic papyrus was 4.21 cm in length and 7.26 cm in width and the size of the ostarca was very varied with the form of the demotic account. The tabular form is no longer used in demotic calculations but we find it somewhat similar to the literary text as a result of the increase the need for Calculations the author took advantage of all the space in writing and the basic parts of writing the text of my arithmetic in demotic were as follows\textsuperscript{9}:

<table>
<thead>
<tr>
<th>Closing Formula</th>
<th>Body of the Account</th>
<th>Heading Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the basic construction of the account the introduction of the so-called entries, which are fixed elements such as goods or component prepared, measuring any number referred to by the quantity, the person who received or sold...... Etc\textsuperscript{10}.

\textsuperscript{1} Magally, \textit{Notion de Comptabilites}, 4- 5.
\textsuperscript{2} Magally, \textit{Notion de Comptabilites}, 5.
\textsuperscript{3} Sherif, "A collection of administrative hierarchies", 19.
\textsuperscript{4} Magally, \textit{Notion de Comptabilites}, 11
\textsuperscript{5} Magally, \textit{Notion de Comptabilites}, 6 Note. 4.
\textsuperscript{6} Eid Nagy, "Demotic Accounts" (Un Published MA Thesis, Cairo University, Faculty of Archeology, 2016) 6.
\textsuperscript{7} Karl Zauzich, \textit{Die Demotischen Dokumente, Textes et Langages de L'Egype Pharaonique cent Cinquante Annee de Recherches }, Bde 64/3, (1972), 93.
\textsuperscript{8} Brian Muhs, "Demotic and Greek Ostracka in the Third Century", \textit{SAOC} 51 (Chicago 1992): 249.
\textsuperscript{9} Nagy, "Demotic Accounts", 12.
\textsuperscript{10} Nagy, "Demotic Accounts", 11- 12.
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As for the use of inks, red ink was not used to distinguish some elements as before, but there were other ways of distinguishing by using a number of secondary elements are as follows¹:

<table>
<thead>
<tr>
<th>Terminal Marks</th>
<th>Stress Marks</th>
<th>Partition Marks</th>
<th>Checking Marks</th>
</tr>
</thead>
</table>

A- Checking Marks:
In six categories; Oblique Strock, Horizontal Police, Vertical Strock, Curved Strock, Dot, Opposition (cross)².

We have to remember that these signs usually fall in the beginning, but in some cases they are in the end and all those signs Used in accounts and most of them are used slanted police while others do not occur, sometimes used before the specified name or names may be the sum of money or any distinct element in the account.

B- Partition Indications
The first is the two categories of blank space, which are regular or irregular, vertical or horizontal, and the second lines are also used to separate an account from another account or to separate a section of the account from the other³.

C- Strict Marks
Are signs that exist to give more emphasis on the words or sentences within the texts for that purpose are found on some words or letters form circle or semi-circle and mostly used in the ostraka⁴, Monson⁵ that the drawing of a concentration on those elements ring found to distinguish certain elements from others.

(D) Terminal Marks:
In two categories; double oblique strock, cross mark these marks are usually used to fill gaps or gaps at the end of the account to give the chance of addition, especially on the ostraca⁶.

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¹ Nagy, "Demotic Accounts", 13.
³ Nureldin, "Checking Stress Marks", 56.
⁴ Nureldin, "Checking Stress Marks", 57-58.
⁶ Nureldin, "Checking Stress Marks", 81-82.
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Conclusion:

A- The unit that combines the texts and the lists and is included under the mathematical concept is a general unit in terms of the written appearance, but if we look at the internal classification we find that there are some species in the lists do not fall under the category of arithmetic such as inventories, names and orders of materials and clothing.

B- Differences between the tax records, daybooks, the distribution schedules, the accounting tables, the distribution of wages, dues, food orders and the lists of commodities. The tabular form was taken.

C- The arithmetic texts that were written in the era of the Old and Middle kingdom and the beginning of the modern kingdom took the tabular form. The late modern era and the period of the demotic and Coptic writing found the calculations in the form of accounting-lists form (see Table 2), which is close to the literary form, He wanted to occupy all the space for writing.

D- The diversity of titles carried by book guards in ancient Egypt reflects a more diverse character than the Coptic and Greek fonts.

E- The method of writing the arithmetic text in both the Old and Middle kingdom is more detailed and includes several elements, but in the Demotic and the Coptic it is based on the mention of three basic elements and detail, which is no longer the main concern.

F- We find the use of the marks of the check Checking Marks and we also find Partition Marks Stress Marks and Terminal Marks both and continued until Coptic.
List of Abbreviation

ASAE: Annales du Service des Antiquités de l'Égypte (SAE) (Cairo).
BdE: Bibliothèque d'Étude (IFAO, Cairo).
CENIM: Cahiers Égypte Nilotique et méditerranéenne.
DELCO: Dictionnaire étymologique de la langue Copte', by W. Vycichl, 1983.
JNES: Journal of Near Eastern Studies (Chicago).
KAW: Kulturgeschichte der Antiken Welt (Mainz am Rhein).
LED: Lesko, H., Late Egyptian Dictionary, 4 Vols, United States America, 1982.
LEM: 'Late- Egyptian Miscellanies', A. H. Gardiner, 1937 (Brussels; BAe 7).
MDIAK: Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo (DAIK) (Mainz/ Cairo/ Berlin/ Wiesbaden).
SAK: Studien zur Altägyptischen Kultur (Hamburg).
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Table 1
The scene represents the recording of some accounts of the sacrifices that were written in tabular form and illustrated on the southern wall of the main chamber of the Amini cemetery in Bani Hassan

Nagy, "Demotic Accounts", 238

Table 2
The landscape is a facsimile of Brooklyn 37.1647E, D (1) / 2
In which the arithmetic text was written in accounting-lists form

Nagy, "Demotic Accounts", 242.