

Title: Sources for the encoding of Egyptian Hieroglyphs
Source: Michael Everson
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Attached here is a printout of the UniKemet database, as described in the document “Towards a Proposal to encode Egyptian Hieroglyphs in Unicode”, as well as the source pages cited there, so that reviewers may verify the database. The sources are:

- Allen, James P. 1999. *Middle Egyptian: an introduction to the language and culture of Hieroglyphs*. Cambridge: Cambridge University Press. ISBN 0-521-77483-7
- Gardiner, Alan H. 1928. *Catalogue of the Egyptian hieroglyphic printing type, from matrices owned and controlled by Dr. Alan H. Gardiner, in two sizes, 18 point, 12 point with intermediate forms*. Oxford: Oxford University Press.
- Gardiner, Alan H. 1929. “Additions to the new hieroglyphic fount (1928)”, in *The Journal of Egyptian Archaeology* 15, p. 95. London: Egypt Exploration Society
- Gardiner, Alan H. 1931. “Additions to the new hieroglyphic fount (1931)”, in *The Journal of Egyptian Archaeology* 17, pp. 245-247. London: Egypt Exploration Society
- Gardiner, Alan H. 1953. *Supplement to the catalogue of the Egyptian hieroglyphic printing type, showing acquisitions to December 1953*. Oxford: Oxford University Press.
- Gardiner, Alan H. 1957. *Egyptian grammar: being an introduction to the study of hieroglyphs*. 3rd edition. London: Oxford University Press.
- Möller, Georg. 1909. *Hieratische Paläographie: die aegyptische Buchschrift in ihrer Entwicklung von der Fünften Dynastie bis zur römischen Kaiserzeit*. Erster Band: Bis zum Beginn der achtzehnten Dynastie, mit neun Tafeln Schriftproben. Leipzig: J. C. Hinrichs'sche Buchhandlung.
- Möller, Georg. 1927 (1965). *Hieratische Paläographie: die aegyptische Buchschrift in ihrer Entwicklung von der Fünften Dynastie bis zur römischen Kaiserzeit*. Zweiter Band: Von der Zeit Thutmosis' III bis zum Ende der einundzwanzigsten Dynastie, mit acht Tafeln Schriftproben. Neudruck der zweiten verbesserten Auflage. Osnabrück: Otto Zeller.
- Möller, Georg. 1936 (1965). *Hieratische Paläographie: die aegyptische Buchschrift in ihrer Entwicklung von der Fünften Dynastie bis zur römischen Kaiserzeit*. Dritter Band: Von der zweiundzwanzigsten Dynastie bis zum dritten Jahrhundert nach Chr., mit elf Tafeln Schriftproben. Neudruck der zweiten verbesserten Auflage. Osnabrück: Otto Zeller.

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CATALOGUE OF THE
EGYPTIAN HIEROGLYPHIC
PRINTING TYPE
FROM MATRICES OWNED AND CON-
TROLLED BY DR. ALAN H. GARDINER

IN TWO SIZES
18 POINT : 12 POINT
WITH INTERMEDIATE
FORMS

OXFORD
AT THE UNIVERSITY PRESS
1928

PREFACE

THE FORMS are mainly derived from Eighteenth Dynasty originals copied in the tombs of Thebes by Mr. and Mrs. de Garis Davies. The matrices have been cut by Mr. W. J. Bilton of Messrs. Bannerman & Son, Ltd., with whom they are deposited by Dr. Alan H. Gardiner, their owner and editor. The type for this catalogue has been cast, composed, arranged, and printed at the University Press, Oxford.

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INTRODUCTION

THE genesis of the present fount of Egyptian hieroglyphs is explained in the following extracts from the Preface to the earlier and far less complete Synopsis issued in December 1925 :

‘ The hieroglyphs contained in this synopsis were primarily designed for use in the present writer’s Egyptian Grammar, shortly to be issued by the Clarendon Press, but it is hoped that the new fount, the result of an amount of labour and research which few would accurately gauge, may come to be widely used by students of Egyptian philology. The services rendered by the Theinhardt fount, of which the catalogue, with a preface by Richard Lepsius, was published at Berlin in 1875, have been inestimable; but in two important respects, namely the size and the degree of palaeographical accuracy, the new Bannerman fount claims to possess important superior advantages. Take any book in which the Theinhardt hieroglyphs and European type are used side by side; so disproportionate are these to one another that unsightly blank spaces necessarily occur whenever two lines succeed one another with adjacent hieroglyphs. This defect could only be obviated by the employment of hieroglyphic type on the same-sized bodies as the romans chosen for use alongside them, as is the case with our new fount. Then again, the Theinhardt fount was avowedly based upon Twenty-sixth Dynasty originals. At the present day it is rightly felt that in printing Egyptian texts a less debased series of forms ought to be available, and the Eighteenth Dynasty tombs of Thebes seemed to offer the best and richest materials. The drawings for the matrices are the work of Mr. and Mrs. de Garis Davies, whose names are by-words for accuracy and skill in draughtsmanship. With unwearying perseverance they have sought for good originals amid the Theban necropolis, and it is upon these that, with few exceptions, the new types have been modelled. It is not to be denied that in a few cases, like the striking man, the frog, and the head-rest, other sources, or even the memory, have had to be depended upon, but such instances are fortunately few, and, on the whole, the forms shown in our type can be conscientiously recommended to the student as exact reproductions of Eighteenth Dynasty originals, modified only to that small extent which reduction to a small size rendered imperative. Should the new fount receive the welcome which is expected, we shall seek to supplement it from time to time by the addition of new signs; for the moment the 630 and more separate sorts will serve all ordinary needs.





‘ My indebtedness to my collaborators in this task is enormous. Without the help vouchsafed by Mr. and Mrs. de Garis Davies it could not have been accomplished at all; indeed, my own functions have been simply those of general supervision, criticism, and, I fear, an importunate exaction of the time and skill of others. Messrs. Bannerman have dealt with the undertaking in a spirit quite different from that of mere commercial enterprise, and the skill and care exerted by their very able assistant Mr. W. J. Bilton have been altogether beyond praise. Obviously it lay in the hands of the craftsman who was actually to cut the matrices whether these should turn out a success or not, and Mr. Bilton has never been content with anything short of perfection, so far as his models enabled him to achieve it.’

The Synopsis from which the above extracts are derived exhibited only those sorts which were to be used when printing in 12-point (pica). That size of type is, however, desirable



INTRODUCTION



only in books where hieroglyphs are being employed amidst European characters, as in grammatical or lexicographic treatises, in commentaries on Egyptian texts and the like. For the publication of hieroglyphic texts a larger size seems likely to prove less fatiguing to the eyes, and for this reason all the sorts have been cut in 18-point (3-line nonpareil) as well. The present Catalogue comprises all the matrices, both 18-point and 12-point, comprised in the fount down to the end of 1927. It is proposed to send out lists of additional matrices at the beginning of every year to all printing firms and institutions that have acquired the right to use the fount, so that they may be able to purchase type cast in these matrices from Messrs. Bannerman & Son, Ltd., with whom the matrices are deposited by Dr. Alan H. Gardiner, their owner. Printers who have Egyptological manuscripts to print are advised to examine them early so as to find out what additional sorts will be required. If these represent signs of sufficient frequency to justify the cutting of special matrices, a list of *desiderata* should be sent to Dr. Gardiner at 9 Lansdowne Road, London, W. 11, together with such drawings or other information as may be available. Every effort will then be made to adapt the drawings, or to produce new ones, so as to meet special requirements, and since the additional matrices will go to enrich the fount as a whole, their cost will be borne by its owner. It must be made clear, however, that the production of new matrices, involving research into the most suitable forms, &c., demands considerable time, so that the longest possible period should be allowed to the editor and to Messrs. Bannerman by the printer who prefers the request.

The various sizes contained in the following Catalogue are arranged so that those marked *a* are the normal full size to be used when printing in 18-point, and *c* the normal full size to be used when printing in 12-point.











Examples:  V 28, *a* in ;  V 28, *c* in 





The sorts marked *c* are in all cases two-thirds the size of those marked *a*, in accordance with the general relation of 12-point to 18-point. The *c*-size as a rule provides a satisfactory smaller size to be employed in 18-point when building up is necessary.

Example:  V 28, *c* in 

The corresponding smaller size for use when printing in 12-point is always marked *e*; example  V 28, *e* in . The size marked *e*, since it has to bear the same relation to *c* in 12-point printing as *c* bears to *a* in 18-point printing, is consistently two-thirds the size of the *c*-sorts.

It sometimes happens, however, that a size intermediate between *a* and *c* is required for 18-point printing, and a size intermediate between *c* and *e* for 12-point printing. Such intermediate sizes are labelled *b* and *d* respectively, and always agree in their proportions; in the majority of cases *b* is three-quarters size of *a*, and *d* three-quarters size of *c*.

Examples:  with  M 17, *b* and  W 25†, *b* looks better than  with  M 17, *c* and  W 25†, *c*. Similarly in 12-point  with *d*-forms for  and  looks better than  with *e*-forms.


Only in a very few cases, e.g.  G 54 (*c*) and  Aa 1 (*c*), are the *b* and *d* forms ( G 54, *d*;  Aa 1, *d*) to be generally used in preference to the *a* and *c* forms. These exceptions are due to later revision, the normal forms having originally been made too large. The remarks



Our fount has been devised with the deliberate intention of setting a higher standard in the printing of hieroglyphs. For this reason some remarks on the main principles to be observed will not be out of place.

[illegible]

The only common exception to the rule of ranging to top and bottom is in cases like \sqsubseteq , where the lower straight surface of \sqsubset provides a better line to range to than its curved upper part; \sqsubseteq does not look well. Combinations with the common sign \circ are peculiar. At the top of a line, as in $\sqsubset\circ$, the \sqsubset central looks better than $\sqsubseteq\circ$ or $\sqsupset\circ$, though at the bottom of the line \sqsubset should range to bottom, as in $\sqsubset\circ$.

The list is classified in accordance with the sign-list in my *Egyptian Grammar* (Oxford 1927), pp. 432-531. A section at the end showing a number of signs grouped according to their shape ought to make the finding of any given sign comparatively easy.































Signs marked with an *asterisk* * are additions to the list included in my grammar, when these additions seemed to demand a position within, and not at the end of, the signs already numbered. A few new signs, e.g.  E 35, have been placed at the end of their respective sections; in such cases the asterisk was naturally not required.

Signs marked with an *obelus* † are replacements of signs from earlier cut matrices which appeared to need improvement in one way or another. To render these improvements unmistakable to readers of my *Egyptian Grammar* a list of the rejected signs is appended at the end of the Catalogue. Authors should, for example, not accept D 4  as a rendering of the eye, but should demand D 4†  with a smaller and rounder pupil.

In conclusion, let it be emphasized that Mr. and Mrs. Davies who drew the signs, Mr. Bilton who cut them, and the present writer who edits the fount, are all conscious that results very far short of perfection have been obtained, and they would welcome any new fount which would really carry the knowledge of Egyptian palaeography and the printing of hieroglyphic texts yet farther forward. But until such a fount be organized, they would be grateful for any hints or suggestions which their colleagues might be disposed to offer to them. It is our intention to make the present fount a progressive thing, responsive to new needs or to the fresh recognition of palaeographic facts hitherto overlooked or ignored. Readers are requested to direct criticisms or materials for new signs to the undersigned at 9 Lansdowne Road, London, W. 11.

ALAN H. GARDINER.

THE EGYPTIAN ALPHABET IN 18-POINT

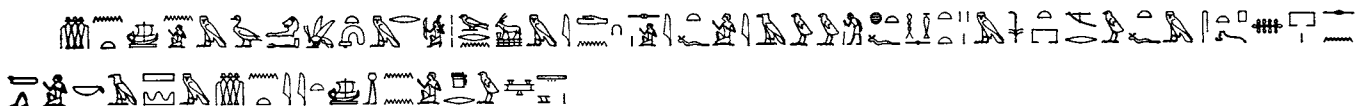
<i>j</i>  (G 1, <i>a</i>)	<i>h</i>  (V 28, <i>a</i>)
<i>i</i>  (M 17, <i>a</i>)	<i>h</i>  (Aa 1, <i>b</i>)
<i>y</i>  (M 17, <i>a</i>) or  (Z 4, <i>a</i>)	<i>h</i>  (F 32, <i>a</i>)
<i>r</i>  (D 36, <i>a</i>)	<i>s</i>  (<i>š</i>) (S 29, <i>a</i>) or  (<i>z</i>) (O 34, <i>a</i>)
<i>w</i>  (G 43, <i>a</i>) or  (Z 7, <i>a</i>)	<i>š</i>  (N 37, <i>a</i>)
<i>b</i>  (D 58, <i>a</i>)	<i>k</i>  (N 29, <i>a</i>)
<i>p</i>  (Q 3, <i>a</i>)	<i>k</i>  (V 31, <i>a</i>)
<i>f</i>  (I 9, <i>a</i>)	<i>g</i>  (W 11, <i>a</i>) or  (V 33, <i>a</i>)
<i>m</i>  (G 17, <i>a</i>) or  (Aa 15, <i>a</i>)	<i>t</i>  (X 1, <i>a</i>)
<i>n</i>  (N 35, <i>a</i>)	<i>t</i>  (V 13, <i>a</i>) or  (V 14, <i>a</i>)
<i>r</i>  (D 21, <i>a</i>)	<i>d</i>  (D 46, <i>a</i>)
<i>h</i>  (O 4, <i>a</i>)	<i>d</i>  (I 10, <i>a</i>)

SAMPLES OF HIEROGLYPHIC PRINTING

18-POINT



12-POINT



THE CATALOGUE


































SECTION A

MAN AND HIS OCCUPATIONS

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
1							22						'statue'
2							23						
3						Det. <i>hms</i>	24						
4							25						<i>hwi</i>
5							26						
6							27†						<i>in</i>
7†							28						
8							29						
9							30						
10						<i>skd</i>	31						
11						<i>hms</i> , O.K.	32						
12							32*						
13							33						
14							34						
15							35						
16						<i>kši</i>	36†						
17							37						
18							38						
19						<i>wr</i> , 'old'	39						
20						<i>šmšw</i>	40						
21						<i>šr</i>	41						














SECTION A (continued)

MAN AND HIS OCCUPATIONS

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
42							50						
43							51						
44							52						
45							53						
46							54						
47							55						
48						try	56						Det. <i>bik</i> , O.K.
49						'Syrian'	57						<i>htp-di-nsw</i> , <i>Urk.</i> iv. 46, 6
							58						<i>šid</i> , <i>Urk.</i> iv. 57, 3

























SECTION B

WOMAN AND HER OCCUPATIONS

NO.	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	NOTES	NO.	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	NOTES
1							4						
2							5						
3							6						

SECTION C

ANTHROPOMORPHIC DEITIES

NO.	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	NOTES	NO.	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	NOTES
1†							7†						
2							8						
3†							9						
4							10						
5							10*						Dyn. XIX
6†							11						

SECTION D

PARTS OF THE HUMAN BODY

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
1							26						
2							27						
3							27*						Rather commoner form of D 27
4†							28						
5†							29						
6†						Rare before Dyn. XIX. Use D5† earlier	30						
7†							31						
8							32						
8*						Better than D 8	33						
9†							34						cf Dyn. XVIII
10							34*						O.K. form of D 34
11							35						
12							36						
13							37						
14							38						
15							39†						
16							40						
17							41						'cease'
18							42						'cubit'
19						Often c better than a even in 18 point	43						
20							44						
21							45						
22							46						
23							46*						O.K. and Dyn. XII
24							47						drt
25													

SECTION D (continued)

PARTS OF THE HUMAN BODY

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
48						'palm'	56						
49							57						
50						<i>dbꜥ</i> , 'finger'	58						
51						<i>ꜥnt</i> , <i>dkꜣr</i>	59						
52						<i>mt</i>	60						
53							61						
54†							62						Less accurate form of D 61
55†							63						Exceptional Dyn. XVIII form of D 61

SECTION E

MAMMALS

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
1						<i>kꜣ, iḥ</i> , 'cattle'	20						
2†						<i>kꜣ</i> (in <i>kꜣ nḥt</i>), <i>šmꜣ</i>	20*						
3						<i>bḥs</i> , <i>mnmnt</i>	21						
4							22						
5							23						
6							24						
7							25						
8						<i>ib</i>	26						
9							27						
10							28						<i>mḥd</i>
11						O.K. form of E 10	28*						
12							29						<i>ghś</i>
13							30						<i>niw</i>
14							31						
15							32						<i>i'ni, ḥnd</i>
16							33						<i>gf</i>
17							34						Used in the combinations and
18							34*						
19						O.K. form of E 18	35						

SECTION F

PARTS OF MAMMALS

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
1							24						
2							25						
3							26						
4							27						
5						šš	28						
6						šš	29						
7						šyt	30						šd
8							31						
9					q		32						
10							33						
11						O.K. form of F 10	34						
12						wšr	35						
13							36						
13*						Less usual form of F 13	37						
14							38						
15							38*						Unusual Dyn. XVIII form of F 37 or F 38
16							39						
17							40						
18							41						
19							42						špr
20							43						
21							44						
22							45						
23							46						Best form for phr, dbn, wdb

SECTION F (continued)

PARTS OF MAMMALS

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
47	≡		≡				51	∩		∩			Occasionally used reversed ∩
48	≡		≡			dbn, Dyn. XVIII	51*	∩∩∩		∩∩∩			
49	≡		≡				51**	∩∩∩		∩∩∩			
50	⊕		⊕				52	∩		∩			O.K., faeces





































SECTION G

BIRDS

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
1						,	21						nh
2							22						dbt (dbt)
3†							23						rhyt
4						tyzw	24						rhyt
5†							25						
6†							26						
6*							27						dšr
7							28						gm
8							29						b:
9							30						
10							31						
11							32						
12							33						sd:
13							34						
14							35						rk
15							36						wr, ordinary form
16							36*						Lower form of last
17							37						'small', 'bad', ordinary form
18							37*						Lower form of last
19							38						Gb, 'goose'
20							39						sz (sz)
							40						

SECTION G (continued)

BIRDS

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
41							48						
42						<i>dfz, wšz</i>	49						
43							50						<i>rbty</i>
43*							51						
44							52†						<i>šnm</i>
45							53						
46							54						<i>b is best size for 18 pt., d for 12 pt.</i>
47													

SECTION H

PARTS OF BIRDS

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
1							5						
2						<i>mr̥, wšm, p̄kt</i>	6						
3						O.K. <i>p̄k̄</i>	7						
4						<i>nr</i>	8						

SECTION I

AMPHIBIOUS ANIMALS, REPTILES, ETC.

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
1							9						
2							10						
3							11						
4							11*						
5							12						
6							13						
7							14						Normal form
8							15						Less usual form of last

SECTION K

FISHES AND PARTS OF FISHES

NO.	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	NOTES	NO.	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	NOTES
1						<i>in</i>	5						<i>bs</i> , 'fish'
2						<i>bwt</i>	6						<i>nšmt</i> ; also used side-ways
3						<i>cd</i> (<i>cd</i>)	7						<i>špt</i>
4						<i>h</i>							

SECTION L

INVERTEBRATA AND LESSER ANIMALS

NO.	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	NOTES	NO.	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	NOTES
1							4						
2							5						
2*							6						
3							6*						The same, but reversed
							7						<i>šrkt</i>












SECTION M

TREES AND PLANTS

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
I							21						<i>śm, (śht)</i>
I*							22						
2							23						
3						Also vertically	24						<i>rs</i> , correct form
4							25						
5							26						<i>śm</i> , correct form
6							27						<i>śm</i>
7							28						
8						<i>śt, (t); h</i>	29						<i>nđm</i>
9						<i>śśn</i>	30						<i>bnr</i>
10						<i>nḥbt</i>	31						Det. <i>rd</i> , Dyn. XVIII
10*						Alternative form of last	32						M.K. form of M 31
11						<i>wdn</i>	33						
12							33*						
13							34						<i>bdt</i>
14							35						'heap'
15							36						<i>đr, dm</i>
16							37						O.K. form of M 36
17							38						O.K. det. <i>mḥt</i> 'flax'
18							39						Det. fruit
19							40						<i>is (iz)</i>
20						<i>śht, (śm)</i>							

SECTION M (continued)

TREES AND PLANTS

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
40*						Less common Dyn. XVIII form of M40	43						
41						Det. 'wood'	44						'thorn', <i>spd</i>
42													

SECTION N

SKY, EARTH, WATER

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
1							23						
2						'night', 'dark', Dyn. XVIII	24						
3						O.K. form of N2	25						Better form of this sign
4							25*						Lower form of last, used in building up
5							26						
6							27						
7							28						
8							29						
9							30						
10						Later (?) form of last	31						
11						'month', 'moon'. Also vertically	32						O.K., 'clay', 'dirt'
12						'moon'. Also ver- tically	33						
13							33*						Also vertically
14							34						
15							35						
16							36						
17							37						š, 'lake', 'sea'
18							38						Alternative form of last, O.K. and Dyn. XVIII
19						hty	39						O.K. form of N37 and N38
20						wdb	40						
21							41						hm, 'well'. Com- monest form in Dyn. XVIII
22						O.K. form of N20, and N21	42						Alternative form of N41. Also bi

SECTION O

BUILDINGS, PARTS OF BUILDINGS, ETC.

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
1							21						
2							22						
3							23						
4							24						
5							25						
5*							26						
6							27						
7							28						
8							29						Also vertically
9							30						To be used also reversed, thus:
10							30*						
11							31						Also vertically
12							32						
13						sbht	33						
14						sbht	34						
15							35						
16							36						Also horizontally
17						O.K. form of O 16	37						
18							38						
19							39						
20							40						
20*						Inferior form of O 20	41						
							42						































SECTION O (continued)

BUILDINGS, PARTS OF BUILDINGS, ETC.

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
43						O.K. form of <i>ztt</i> O 42	48						<i>Nhn</i>
44							49						
45							50						<i>sp (zp)</i>
46						O.K. form of <i>z</i> O 45, also found Dyn. XVIII	51						
47													


















SECTION P

SHIPS AND PARTS OF SHIPS

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
1						Also used inverted 	6						
2							7						
3							8						Also horizontally  and 
3*							9						
4						<i>wh</i>	10						
5							11						<i>mni</i>

SECTION Q

DOMESTIC AND FUNERARY FURNITURE

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
1							5						
2							6						
3							7						
4													

SECTION R

TEMPLE FURNITURE AND SACRED EMBLEMS

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
1						<i>hit</i>	13						O.K. form of R 14
2						<i>hit</i>	14						
3						<i>wdhw</i>	15						
4							16						<i>wh</i>
5						<i>k(i)p</i>	17						
6						O.K. form of R 5	18						
7							19						
8							20						
9							21						O.K. form of R 20
10							22						
10*							23						O.K. form of R 22
11†							24						<i>Nt</i> (Neith). Also vertically
12							25						O.K. form of R 24

SECTION S

CROWNS, DRESS, STAVES, ETC.

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
1							25						
2							26						
3							27						
4							28						
5							29						
6							30						
7							31						
8							32						<i>st</i>
9							33						
10							34						
11							35						
12							35*						Inferior alternative of S 35
13							36						
14							37						
15						<i>lhn</i>	38						<i>hkt</i> (<i>wt</i>)
16						O.K. form of S 15	39						<i>wt</i> (correct O.K. form)
17						Another O.K. form of S 15	40						<i>ws</i> (<i>dm</i>)
18						<i>mnit</i>	41						<i>dm</i>
19							42						<i>bt</i> , <i>shm</i> , <i>hrp</i>
20							43						<i>mdw</i>
21							44						
22						<i>stt</i>	45						
23						<i>dm</i>							
24													

SECTION T

WARFARE, HUNTING, BUTCHERY

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
1						<i>mn(w)</i>	19						
2							20						O.K. form of T 19
3						<i>hđ</i>	21						
4						<i>hđ</i> , alternative form	22						<i>śn</i>
5							23						Alternative Dyn. XVIII form of T 22
6							24						
7							25						
8							26						
9						<i>pđ</i>	27						O.K. form of T 26
10						Also vertically	28						
11							29						
12							30						'knife'
13							31						<i>śśm</i>
14							32						
15						O.K. form of T 14	33						O.K. form of T 31
16							34						<i>nm</i>
17							35						O.K. and alternative form of T 34
18													

SECTION U

AGRICULTURE, CRAFTS, AND PROFESSIONS

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
1						Ordinary form	22						
2						Alternative form of U 1 used in building up	23						<i>mr, vb</i>
3							24						<i>hm</i>
4						Ordinary form	25						O.K. form of U 24
5						Alternative form of U 4 used in building up	26						<i>wb</i>
6							27						O.K. form of U 26
7						Alternative form of U 6 used in building up	28						<i>d</i>
8						<i>hn</i>	29						Alternative, also O.K. form of U 28
9							30						
10						Less frequent form of U 9	31						Also vertically
11							32						
12							33						
13							34						<i>hsf</i>
14						O.K. form for <i>sn</i>	35						
15							36						
16							37						
17						<i>grg</i>	38						
18						O.K. form of U 17	39						
19						<i>nv</i>	40						
20						O.K. form of last	41						<i>th</i>
21						<i>stp</i>							

SECTION V

ROPE, FIBRE, BASKETS, BAGS, ETC.

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
1						'cord', '100'. Differs from 𐀀 Aa 7 for w	21						
2							22						mh
3							23†						O.K. form of 𐀀 V 22
4							24						wḏ, O.K. and M.K. form
5							25						wḏ, Dyn. XVIII form
6							26						ḥḏ. Also used ver- tically 𐀀
7						šn	27						O.K. form of 𐀀 V 26. Also verti- cally 𐀀
8						Alternative form of 𐀀 V 7	28						
9							29						
10							30						
11						dni, ph	30*						Lower form of 𐀀 V 30 used in building up
11*						Used for building up cartouches	31						
12							31*						Reversed form of 𐀀 V 31, rare in hieroglyphic
13							32						mšn, grw
14							33						ššr, g, 'tie'
15							34						Less useful form of 𐀀 V 33
16						si (zi)	35						O.K. form of 𐀀 V 33
17						si (zi)	36						hn
18						O. K. form of 𐀀 V 17	37						idr
19						mḡt, 'sack'	38						O.K. det. of 𐀀 'bandage'
20						'10'. Also sideways 𐀀							

SECTION W

VESSELS OF STONE AND EARTHENWARE

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
1						'oil', 'unguent'	14						
2						<i>bis</i> . Also horizontally	14*†						
3							15						
3*						Lower form of W 3, for use in building up	16						
4							17						Ordinary Dyn. XVIII form
5							18						O.K. form of W 17, common in M.K.
6						O.K. sign for <i>wh</i> t	19						
7						<i>mt</i> , 'granite'	20						'milk'
8						M.K. substitute for W 7. Also used as M.K. form of V 32	21						'wine'
9						<i>hnm</i>	22						
10							23						
11						<i>g</i> , <i>nst</i> , <i>dšrt</i>	24†						
12						O.K. form of W 11, <i>g</i> , <i>nst</i>	24*						
13						O.K. form of W 11, <i>dšrt</i>	25†						

SECTION X

LOAVES AND CAKES










NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
1							5						
2						'bread'	6						<i>pit</i>
3						Alternative, less useful form of Θ X ₃	6*						More detailed form of Θ X ₆
4							7						O.K. sign for half-loaf
4*						Exceptional form of Θ W ₄	8						

SECTION Y

WRITINGS, GAMES, MUSIC

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
1						Also vertically	5						
2						O.K. form of Υ 1. Also vertically	6						
3						Usual form at all periods	7						
4						Less usual form of Υ 3	8						

SECTION Z STROKES, SIGNS DERIVED FROM HIERATIC, GEOMETRICAL FIGURES

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
1							6						Det. 'death', 'enemy'
2						Also vertically 	7						w, differs from  V 1 for 'cord', '100'
2*							8						Det. 'circuit'
3							9	×		×		×	
4	∥		∥				10	×		×			O.K. form of × Z 9
5	↘		↘				11	+		+		+	
5*	↘		↘										

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
1						<i>b</i> should be normal form in 18 pt., <i>d</i> normal in 12 pt.	18						<i>ś</i>
2							19						<i>hr</i>
3							20						<i>pr</i>
4						O.K. <i>b</i>	21						
5						<i>hp</i>	22						
6						<i>tm</i> , different from S 23	23						<i>mdd</i>
7							24						O.K. form of Aa 23
7*						Reversed form of Aa 7	25						
8							26						Det. <i>sbl</i>
9						Det. <i>hwd</i>	27						<i>nd</i>
10						Det. <i>drf</i>	28						<i>hd</i>
11						Also vertically and	29						O.K. form of Aa 28
12						O.K. form of Aa 11	30						<i>hkr</i> . Also horizontally
13						<i>im</i> , <i>gs</i>	31						O.K. form of Aa 30
14						O.K. form of Aa 13	32						Also horizontally and reversed
15						Later form of Aa 13, to be used for Dyn. XVIII-XX <i>m</i>							
16													
17						O.K. and M.K. form of Aa 18							

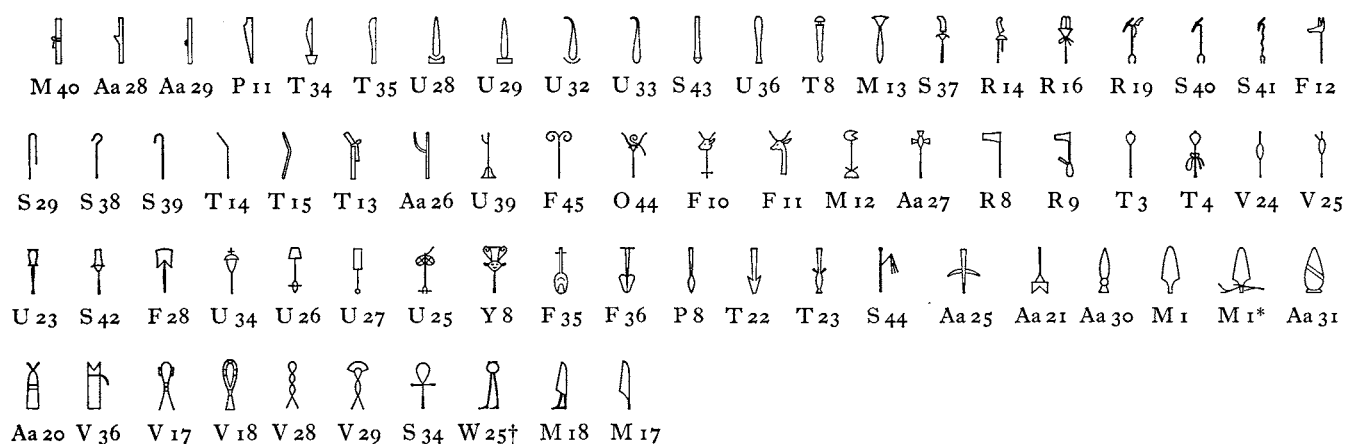
Bb. ERASURE SIGNS

N.B. These are employed to mark lacunae in the originals. They should always slope from top right to bottom left, thus :—

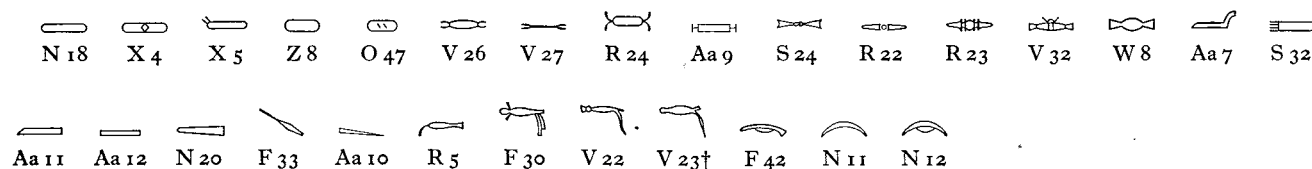


Cc. A SELECTION OF SIGNS GROUPED ACCORDING TO SHAPE

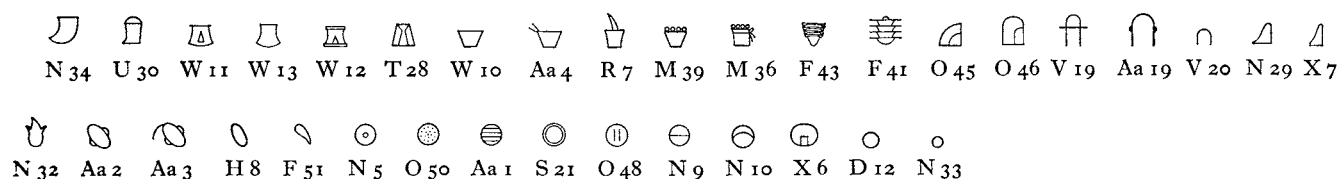
TALL NARROW SIGNS



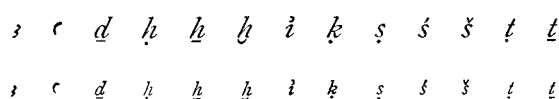
LOW BROAD SIGNS



LOW NARROW SIGNS



Dd. SYMBOLS USED IN TRANSCRIBING HIEROGLYPHIC WORDS



Ee. SUPERSEDED SORTS

N.B. These are signs previously used in the fount but subsequently replaced by others more satisfactory in drawing, thickness of line, or size. The sorts enumerated below should be carefully eliminated from the fount in favour of their substitutes, which in the above Catalogue are signaled as such by an *obelus* †

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
A 7							D 54						
A 27							D 55						
A 36							E 2						
C 1							G 3						
C 3							G 5						
C 6							G 6						
C 7							G 52						
D 4							R 11						
D 5							V 23						
D 6							W 14*						
D 7							W 24						
D 9							W 25						
D 39													

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1929

ADDITIONS TO THE NEW HIEROGLYPHIC FOUNT¹ (1928)

By ALAN H. GARDINER

During the past year (1928) only 10 new signs have been added, each in sizes *a* and *c*; accordingly 20 new sorts in all. A new category of signs (Section Ff) has been added in order to provide symbols for the transcription of hieratic, as set forth in my article appearing in the present number of the *Journal*. In the list below, the age, use, and source of the new signs are indicated. It will be remembered, of course, that Mr. and Mrs. Davies' drawings are adaptations, not exact facsimiles, of the models quoted; reduction in size, together with the need for a general conformity of appearance, makes certain modifications inevitable.

- | | | | | | |
|------|----------|--|----------|--|---|
| A 59 | <i>a</i> | | <i>c</i> | | Det. <i>šhr</i> "drive away." Dyn. XVIII, <i>Urk.</i> , iv, 618, 7. |
| A 60 | <i>a</i> | | <i>c</i> | | Det. <i>št</i> (<i>sti</i>) "sow." Dyn. XVIII, <i>Urk.</i> , iv, 615, 14. |
| B 7 | <i>a</i> | | <i>c</i> | | Det. queen. Dyn. XVIII, Thebes, tomb of <i>Hrwf</i> , no. 192. |
| I 5* | <i>a</i> | | <i>c</i> | | <i>šbk</i> . Dyn. V, Davies, <i>Ptahhetep</i> , i, Pl. 9, no. 157. |
| Z 12 | <i>a</i> | | <i>c</i> | | In <i>hwi</i> "strike." Ptolemaic, Edfu, Horus myth. |
| Ff 1 | <i>a</i> | | <i>c</i> | | For © Z7, ⊂ X1 and other signs. |
| Ff 2 | <i>a</i> | | <i>c</i> | | Substitute for Ɑ V7, cf. Möller, <i>Hier. Pal.</i> , II, no. 521. |
| Ff 3 | <i>a</i> | | <i>c</i> | | Initial Ɑ, cf. Möller, <i>Hier. Pal.</i> , II, no. 120. |
| Ff 4 | <i>a</i> | | <i>c</i> | | Ear as det., cf. Möller, <i>Hier. Pal.</i> , II, no. 159. |
| Ff 5 | <i>a</i> | | <i>c</i> | | Feather <i>šw</i> , cf. Möller, <i>Hier. Pal.</i> , II, no. 237. |

Owners of the Catalogue should add cross-references to the four last signs under Ɑ V7, Ɑ D54†, Ɑ F21 and Ɑ H6 respectively.

¹ *Catalogue of the Egyptian Hieroglyphic Printing Type from matrices owned and controlled by Dr Alan H. Gardiner.* Oxford. At the University Press. 1928.

THE JOURNAL
OF
EGYPTIAN ARCHAEOLOGY




























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LONDON
1931
























ADDITIONS TO THE HIEROGLYPHIC FOUNT¹ (1931)

By ALAN H. GARDINER

Since the last list was published in this *Journal* (xv, 95), the actual demand for additional signs has been small. The present series is mainly drawn from the temple of Sethos I at Abydos (Dyn. XIX) and from the temple of Medînet Habu (Dyn. XX). Scholars who employ the fount for their books or articles are reminded that, if suitable material be supplied and reasonable notice given, I am always ready to have new matrices cut, provided that the hieroglyphs in question cannot be adequately represented by existing forms, and that there is likely to be some future use for the signs required.

- A 14* a  c  Det. death, enemy. Medînet Habu, Dyn. XX.
- A 42* a  c  Det. king. Abydos, Sethos Temple, Dyn. XIX.
- A 61 a  c  Det. *cn* "turn back¹," and *msnh* "turn away (dazzled)²," Medînet Habu, Dyn. XX.
¹ Ex. inscr. year 5, l. 4. ² Ex. inscr. year 11, ll. 17, 30.
- A 62 a  c  Ideo. *wr* "Syrian" or "Asiatic prince¹," Dyn. XIX.
¹ Ex. Hittite Treaty, *passim*.
- A 63 a  c  Det. *hms* "sit," said of king¹. Abydos, Sethos Temple, stairway passage, Dyn. XIX.
¹ Also used as det. of *snḏm* "sit," when said of king. The insignia vary in different places.
- B 8 a  c  Det. women's names. Cairo Mus. no. 298, sarcophagus of Takhos. Ptolemaic.
- C 12 a  c  Ideo. or det. Amûn. Based on Leps., *Denkm.*, III, 180, Wâdî es-Sebûr, Dyn. XIX.
- C 13 a  c  Ditto, reversed.
- C 14 a  c  Monogram for the name *'Imn-hr-hpš.f*¹, consisting of  C 12, but with substitution of  T 16*² for  S 40.
¹ Ex. Leps., *Denkm.*, III, 224, b. ² Note that in the Theinhardt fount, C 14, the scimitar faces the wrong way.
- C 15 a  c  Ditto, reversed.
- C 16 a  c  Ideo. *Tm* "Atum¹." Medînet Habu, Dyn. XX.
¹ Ex. inscr. year 5, l. 39.
- C 17 a  c  Ideo. *Mntw* "Month." Medînet Habu, Dyn. XX.

¹ *Catalogue of the Egyptian Hieroglyphic Printing Type from matrices owned and controlled by Dr. Alan H. Gardiner.* Oxford. At the University Press. 1928.

T 36	a 	c 	Det. <i>ikm</i> "shield ¹ ." Medînet Habu, Dyn. XX. ¹ Ex. inscr. year 8, l. 37.
U 23*	a 	c 	Phon. <i>mr</i> , later form of  U 23. British Museum, sarcophagus of Ankhnasneferibrê, Dyn. XXVI.
V 23*	a 	c 	Phon. <i>mḥ</i> . Abydos, Sethos Temple, Dyn. XIX.
V 29*	a 	c 	Phon. <i>sk</i> , monogram consisting of  V 29 and  V 31. Common at Medînet Habu, Dyn. XX.
V 39	a 	c 	Ideo. or det. <i>tît</i> "knot-amulet" of Isis. Abydos, Sethos Temple, Dyn. XIX.
Aa 7**	a 	c 	Det. or phon. det. <i>skr</i> ; later equivalent of  Aa 7. Abydos, Sethos Temple, Dyn. XIX.
Ff 6	a 	c 	Ideo. in  <i>stj</i> "drag," derived from hieratic form of  V 2. Medînet Habu, Dyn. XX.
Ff 7	a 	c 	Phon. det. <i>smn</i> , <i>mn</i> , derived from hieratic form of  U 32. Abydos, Sethos Temple, Dyn. XIX.

SUPPLEMENT TO
THE CATALOGUE OF THE
EGYPTIAN HIEROGLYPHIC
PRINTING TYPE
SHOWING ACQUISITIONS TO
DECEMBER 1953

SECTION A

MAN AND HIS OCCUPATIONS

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
5*							62						
6*							63						
14*							64						
17*							65						
42*							66						
59							67						
60							68						
61													

SECTION B

WOMAN AND HER OCCUPATIONS

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
7							8						












SECTION C

ANTHROPOMORPHIC DEITIES

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
2*							16						
2**							17						
2***							18						
12							19						
13							20						
14							21						
15							22						













SECTION D

PARTS OF THE HUMAN BODY

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
31*							64						
48*							65						
52*							66						




SECTION E

MAMMALS

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
8*							36						
9*							37						
16*							38						













SECTION F

PARTS OF MAMMALS

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
1*							31						



SECTION G

BIRDS

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
7*							20*						
7**							26*						
11*							45*						





SECTION H

PARTS OF BIRDS

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
(6*)						See Ff 5							



SECTION I

AMPHIBIOUS ANIMALS, REPTILES, ETC.

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
5*							10*						
9*													













SECTION K

FISHES AND PARTS OF FISHES

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
8													








SECTION M

TREES AND PLANTS

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
1**							26						
3*							28*						
16*							31*						
24*													










SECTION N

SKY, EARTH, WATER

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
18*							34*						
18**							37*						

















SECTION O

BUILDINGS, PARTS OF BUILDINGS, ETC.

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
1*							24*						
10*							25*						
19*													













SECTION R

TEMPLE FURNITURE AND SACRED EMBLEMS

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
2*							26						
3*							27						
3**							28						
16*							29						
















SECTION S

CROWNS, DRESS, STAVES, ETC.

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
I					4		14**						
2*							17*						
6*							46						
14*													







SECTION T

WARFARE, HUNTING, BUTCHERY

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
3*							32*						
7*							33*						
8*							36						
9*							37						
















SECTION U

AGRICULTURE, CRAFTS, AND PROFESSIONS

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
6*							23*						
6**							29*						







SECTION V

ROPE, FIBRE, BASKETS, BAGS, ETC.






NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
7*							28*						
12*							29*						
12**							37*						
23*							39*						

SECTION W

VESSELS OF STONE AND EARTHENWARE



NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
9*							18*						
10*													

SECTION Z STROKES, SIGNS DERIVED FROM HIERATIC, GEOMETRICAL FIGURES

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
12							13						






















SECTION Aa

UNCLASSIFIED

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
7**													

SECTION Ff

















SIGNS FOR TRANSCRIPTION FROM HIERATIC

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
1							6						
2							7						
3							8						
4							8*						
5							9						

SECTION Nn:—Signs for the nomes or provinces of Egypt in correct numerical order: L stands for Lower Egypt, U for Upper Egypt.

NO.	a	b	c	d	e	NOTES	NO.	a	b	c	d	e	NOTES
L 1							L 19						
L 2							L 20						
L 3							U 1						
L 4							U 2						
L 5							U 3						
L 5*							U 4						
L 6							U 5						
L 7							U 6						
L 8							U 7						
L 9							U 8						
L 10							U 9						
L 11							U 10						
L 12							U 10*						
L 13							U 11						
L 14							U 11*						
L 15							U 12						
L 16							U 13						
L 17							U 14						
L 17*							U 15						
L 18							U 16						

SECTION Nn (*continued*)

NO.	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	NOTES	NO.	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	NOTES
U 17							U 20						
U 18							U 21						
U 18*							U 22						
U 19							U 22*						

EGYPTIAN GRAMMAR

BEING AN INTRODUCTION TO
THE STUDY OF HIEROGLYPHS

BY SIR ALAN GARDINER

THIRD EDITION, REVISED

Published on behalf of the
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LONDON

This method of writing is archaistically retained in many monumental inscriptions of the Middle and New Kingdoms. The phonetic spelling of the words often precedes the ideograms, which thus appear as determinatives (§ 23).

Exx. Plur. *srrw* officials. Dual *tynwy* pair of obelisks.

„ *nhwt* trees. „ *rty* pair of limbs.

2. On the same principle, words that are written purely phonetically may have their component sound-signs, or some of them, repeated. This again, so far as Middle Egyptian is concerned, is for the most part a consciously archaistic practice.

Exx. Sing.	Plur.	Dual
<i>ntr</i> god.	<i>ntrw</i> gods.	<i>ntrwy</i> pair of gods.
<i>rn</i> name.	<i>rnw</i> names.	_____
<i>hks</i> magic.	<i>hksw</i> magical spells.	_____

3. Towards the end of the Old Kingdom a **determinative of plurality**, consisting of three strokes , , or , more rarely of three dots , came into general use.¹ As a rule it accompanies some sign or signs which in earlier times would have been written thrice, and serves as substitute for the repetition.

Exx. *snw* 'brothers' for old *snw*
ntrw 'gods' „ „
prw 'houses' „ „

Sometimes, however, the 'plural strokes' stand independently as the mark of plurality, as in *nfrw* 'beautiful' (m. plur.); they may even accompany words that are plural only in meaning, not in grammatical form.

Exx. *sn* they. *rhyt* people, subjects. *r3* many.

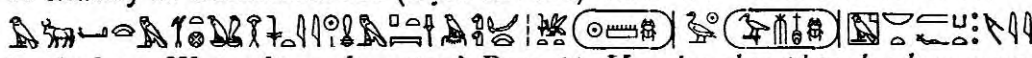
4. The sign , less frequently , which is seen in the dual endings *-wy* and *-ty* (§ 72), was originally a mark of duality employed, like the plural strokes , to obviate the repetition of ideograms; thus the archaic writing *snwy* 'pair of sisters' was at first no more than an abbreviation of *snwy*. Since, however, Old Egyptian orthography habitually omitted the *-y* of the dual endings *-wy* and *-ty*, the substitute of the original pair of ideograms soon came to be interpreted as that semi-vowel. By the beginning of the Middle Kingdom, accordingly, had ceased to be a special mark of duality and had become a sound-sign for *-y*, with a use restricted to the terminations of words. Henceforth 'pair of sisters' is written *snty*, where is *y* and where the determinatives have to be added.

OBS. The sign originally represented consonantal (semi-vocalic) *y*, but at the beginning of some words it seems to have possessed a value indistinguishable from ; hence it is transliterated *i*. At the end of words *y* is written or , but not as a rule interchangeably; may occur as last letter but one, see above § 20.²

¹ Superstition, as well as motives of abbreviation, helped in the development; see *Rec.* 35, 73; *AZ.* 51, 18.


² On this question see *Verbum*, I, §§ 109 foll.

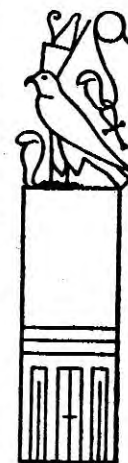
A titulary of Tuthmosis III (Dyn. XVIII) from Sinai is similar in form :


*Hr k3 nht hr m Wist, nbty wsh nsyt mi Rē m pt, Hr nbw shm phty dsr hrw, n-sw-
 bit Mn-hpr-Rē, s3 Rē Dhwtj-ms-nfr-hpr(w), mry Hthr nbt mfkst* Horus 'Strong-
 bull-arising-in-Thebes', Two Ladies 'Enduring-of-kingship-like-Rē-in-heaven',
 Horus of gold 'Powerful-of-strength, holy-of-diadems', King of Upper and Lower
 Egypt 'Menkheperre' ['the form of Rē remains (?)'], Son of Rē, 'Tuthmosis
 ['Thoth is born'] beautiful-of-forms', beloved of Hathor, lady of the turquoise.¹

¹ *Sinai* 196; after the first cartouche is a longstring of epithets not belonging to the name. Both the titularies quoted conclude with epithets not belonging to the names ('may he be granted life', etc. and 'beloved of Hathor', etc.). These are so typical that it seemed advisable to retain them.

The comparison of these two titularies discloses five elements common to both; these common elements are followed by names that are variable in the case of every king. The underlying idea is that the king, while being the re-incarnation of Horus, or protected by the goddesses called the Two Ladies, or appearing as the golden Horus, reveals his individuality by exhibiting the divine nature under some aspect peculiar to himself; thus Sesostri I is the Horus who infuses life into all who are born, Tuthmosis III is the golden Horus who is powerful of strength and whose diadems are holy. Similarly, the names in the two 'cartouches' or 'royal rings' describe the nature of the king in his capacity of 'King of Upper and Lower Egypt' and of 'Son of Rē' respectively. Whereas an Englishman distinguishes two different kinds of name, Christian and family name, the Egyptian kings distinguished five, which we term the Horus name, the *nbty* name, the golden Horus name, the *prenomen* and the *nomen*. These we shall now consider in turn.

1. The **Horus name**, less suitably called banner-name or *ka*-name, represents the king as the earthly embodiment of the old falcon-god Horus, who early became the dynastic god of Egypt, and as such was identified with the sun-god Rē, himself also at some very early period the dynastic god. This name is frequently written within a rectangular frame, at the bottom of which is seen a design of recessed panelling such as we find in the façades of early brick tombs and in the false doors of Old Kingdom *maṣṭabas*; ² on the top of the rectangular frame is perched the falcon of Horus, in more elaborate Dyn. XVIII examples crowned and accompanied by sun and uraeus; ^{2a} see the annexed figure. It is not quite certain whether the building symbolized by the rectangle and façade (together termed the  *srh*) ³ was the king's palace or his tomb. The former alternative is the more probable, since in the oldest times the Horus name was the commonest designation of the king, and it is unlikely that a purely sepulchral name should have been chosen for the purpose. Still, its associations with the *ka* or 'spirit' came to be very close. On the whole, we may conclude that the Horus name denotes the aspect of Horus worn by the king whilst dwelling in the palace.




² *Seas.* pp. 21-2;

^{2a} On these symbols see *JE.A.* 30, 50-1.


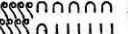
³ *AZ.* 34, 167.


LESSON XX



NUMBERS¹


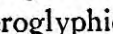
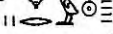


§ 259. **The writing of the numerals.**—A vertical stroke  is used for the units, and special signs for the various powers of ten. The seven signs employed are as follows:—





1		10,000	
10		100,000	
100		1,000,000	
1,000			

The higher values are written in front of the lower, and to indicate the numbers between 1 and 10, and between any power of ten and the next higher power, the signs in question are repeated as many times as is necessary. Hence we find  for 152,123,²  for 966.³

The word for 'million'  *hh*, which was also used for 'many' (§ 99), early fell into disuse; probably as a consequence of this loss, a new method of expressing the higher values was occasionally employed.

Exx.  100,000 × 101 = 10,100,000.⁴  (100,000 × 4) + (10,000 × 7) = 470,000.⁵

In hieratic the tens and units, when referring to the days of the month, are invariably laid on their side, ex.  *sw 18* 'day 18'.⁶ Traces of a similar use, though as regards the units only, are sometimes found in Middle Kingdom hieroglyphic, exx.  *tpy (n) iht sw 18* 'first (month of) inundation, day 18';⁷  *hryw rnpt, sw 5* 'the 5 (days) upon the year, day 5' i.e. the fifth epagomenal day,⁸ beside .⁹ The horizontal position becomes thus associated more with ordinal than with cardinal meaning; in hieratic texts this position is apt to be found in the words for 'third', 'fourth', etc., ex.  *3-nw sp* 'the third time'.¹⁰

§ 260. **The names of the numbers.**¹¹—Very few of these are written out in Middle Egyptian, though an example of  *snw* 'two'¹² and another of  *hmt* 'three'¹³ may be cited. Since, however, derivatives involving the names of the numbers sometimes occur, e.g.  *ifdt* 'a four', 'a quartet',  *Hmnw* 'Eight-town', i.e. El-Ashmûnên in Upper Egypt, it is desirable for the student to become acquainted with them. The transcriptions given below are based on phonetic writings in the Pyramid Texts and elsewhere, or else on inferences from Coptic; a few details remain uncertain.

¹ See K. SETHE, *Von Zahlen und Zahlworten bei den alten Ägyptern, in Schriften d. Wiss. Ges. Strassburg*, 25. Heft, 1916.

² *Urk.* iv. 630.

³ *Urk.* iv. 666.

⁴ *Harris* 73, 5.

⁵ *P. Kah.* 8, 19.

⁶ *P. Kah.* 12, 6.

⁷ *Siut* 1, 283. *Sim. ib.* 277. 299.

⁸ *Siut* 1, 305. 312.

⁹ *Siut* 1, 297.

¹⁰ *Peas.* B 1, 139. *Sim. ib.* 194. 240. 266. 290; *Eb.* 86, 20.

¹¹ See *AZ.* 47, 1.

¹² *AZ.* 45, Pl. VI.

¹³ See, too, *JEA.* 16,

19, l. 8.

¹³ *AZ.* 45, Pl. VI,

13.

¹ See SETHE, *Pyr.* iii. p. 9, 121 c.

1 <i>wr(yw)</i>	10 <i>md(w)</i>	100 <i>št</i> orig. perhaps <i>šnt</i>
2 <i>šnw(y)</i>	20 [<i>ḏbrty</i> ? ?]	1,000 <i>ḥ</i>
3 <i>ḥmt(w)</i>	30 <i>mrḥ</i>	10,000 <i>ḏbr</i>
4 <i>fdw</i>	40 <i>ḥm</i>	100,000 <i>ḥfn</i>
5 <i>dšw</i> ¹	50 <i>diyw</i>	1,000,000 <i>ḥḥ</i>
6 <i>šršw</i> or <i>ššw</i>	60 <i>šr(šyw)</i> or <i>šš(šyw)</i>	
7 <i>šfḥ(w)</i>	70 <i>šfḥ(yw)</i>	
8 <i>ḥmn(w)</i>	80 <i>ḥmn(yw)</i>	
9 <i>psḏ(w)</i>	90 <i>psḏyw</i>	

The bracketed consonants fell away at different times, mostly early. All the units, except *šnw*, which is a dual, have a masculine ending *w*; from 3 upwards they were plurals, but in Middle Egyptian, having mostly lost the *w*, they are already treated as singulars (see below § 261). The tens, from 50 upwards, are plurals of the units. The word for 100 is fem. sing., but the higher numbers are masc. sing.

We know from various sources that the units had fem. forms as well as masculine. There existed also a set of collectives corresponding to the English 'triad', 'trio', 'quartet', etc.; an example from Middle Egyptian is *ḏtwt* 'a set of five'.²

The way in which combinations of tens and units (e.g. 'twenty-five'), etc., were expressed in spoken Middle Egyptian is largely a matter of conjecture, and cannot be discussed here.

Unlike the other numbers, 'one' is often written out, m. *wr*,³ f. *wrt*.⁴ Derivatives are: *wr(w)* 'be alone', *wrt* 'sole', 'unique', *wrt* 'privacy', 'solitude'.

§ 261. Construction of the cardinals.—The numeral follows the noun, which, as a general rule, exhibits the singular form.

Exx. <i>mh</i> 1 one cubit. ⁵	<i>s</i> 2 two men. ⁶
<i>msḏrf</i> 2 his two ears. ⁷	<i>rnpt</i> 20 twenty years. ⁸
<i>ḥfrw</i> 75 seventy-five snakes. ⁹	
<i>ḥnkt ds</i> 100 one hundred jugs of beer. ¹⁰	
<i>dmi ḥ</i> a thousand towns. ¹¹	
<i>s ḏbr</i> ten thousand men. ¹²	

Frequently, however, the noun shows the plural form; not, however, (a) with the numbers 1 and 2, (b) nor yet, as a rule,¹³ in indications of *time* or of *measure*.

Exx. <i>spw</i> 4 four times. ¹⁴	<i>st-ḥmw</i> 20 twenty women. ¹⁵
<i>ḥw</i> 618 six hundred and eighteen (head of) cattle. ¹⁶	

³ *Peas.* B 1, 161; *Urk.* iv. 18, 1. 3; 19, 13.
⁴ *Sin.* B 266; *Eb.* 4, 8; 11, 1.

⁵ *Siut* 3, 13; *Westc.* 10, 10.
⁶ *Adm.* 12, 14.
⁷ *Eb.* 100, 2.
⁸ *P. Pet.* III 16 A, 58.
⁹ *Sh. S.* 127.
¹⁰ *Westc.* 4, 13.
¹¹ *Urk.* iv. 660.
¹² *P. Pet.* III 16 A, 101.
¹³ Exceptions: *rnpt* 54, *AZ.* 47, Pl. I, 6; *hrw* 4, *Hearst* 10, 4, 13.
¹⁴ *Hearst* 11, 14. *Sim. Rhind* 41.
¹⁵ *Westc.* 5, 9.
¹⁶ *Urk.* iv. 688. *Sim.* 17. 698, 7; 699, 5. 6.

When the noun and numeral are accompanied by a demonstrative or possessive adjective, this adjective is made to agree with the noun in gender, though it always shows singular number, even when the noun has the plural form.

Exx. *pꜣ s 2* the two men.¹

hrw 3 pꜣn these three days.²

ts it hꜣst 6 the six *hekāt* of corn.³ For see below § 266, 1.

pꜣi hrꜣw 4 my four children.⁴

When no noun is present, the adjective is singular and masculine.

Exx. *3 pꜣn* these three.⁵ *pꜣ 21* the twenty-one.⁶

Only in the case of the numbers 100 and 1,000 does the demonstrative follow the gender of the numeral, without reference to the gender of the thing that is numbered.

Exx. *ts t 100* the hundred loaves.⁷ *Št* is feminine.

pꜣ t 1,000 the thousand loaves.⁸ *Hꜣ* is masculine.

What has been said above of the demonstrative applies equally to the word for 'other'.

Exx. *ky nhꜣsy 6* another six Nubians.⁹

kt št r-sꜣ kt št one hundred (years) after another hundred.¹⁰

The explanation of the puzzling facts set forth above is given by Old Egyptian and Coptic. It thence becomes clear that the method of writing the numeral after the word denoting the thing numbered was purely graphic; doubtless it was borrowed from book-keeping, just as £6 is the regular symbol in English account-books for 'six pounds'. It is just possible that Egyptian measurements like *mḥ 4* were sometimes read as *mḥ fdw*, lit. 'cubit, four'; but if so, this manner of reading was merely derivative and a reflection of the manner of writing.

From the evidence which we possess it is plain that in actual speech the number always preceded the noun numbered. The only exception is *snw* 'two', which was pronounced after its noun, cf. Coptic *p-son snau* 'the two brothers'. In all other cases the noun indicating the thing numbered came at the end. When the number is relatively small, the noun is in the plural and in apposition to the word denoting the number; with the highest numbers (see below § 262, 2) the noun numbered is in the singular and introduced by *m* or *n*. The word denoting the number is in all cases a singular noun (the units were originally plural, but early became singular, § 260), and hence the accompanying demonstrative and possessive adjectives and the word for 'other' are always singular. The variability in gender which they exhibit when the number is a low one is due to the fact that the units had masc. forms when the following noun in apposition

¹ *P. Kah.* 13, 28. *Sim. Urk.* iv. 1106, 12.

² *Siut* 1, 296.

³ *Peas.* R 6. *Sim. Rhind* 77 (*pꜣ*).

⁴ *Urk.* iv. 1070. *Pꜣ* and plur. noun, *Westc.* 3, 17: 9, 7; *M. u. K.* vs. 4, 8.

⁵ *Peas.* B 1, 151.

⁶ *Rhind* 62.

⁷ *Rhind* 65.

⁸ *Rhind* 76.

⁹ *Semnah Disp.* 1, 12.

¹⁰ *Siut* 4, 25.

was masc., and fem. forms when that noun was fem. The rules for the demonstrative, etc., become intelligible when we realize that what is written *pr-i hrdw 4* was read *pr-i fdw, hrdw* 'my masculine four, (namely) children'; 'my four cows' would have been *ty-i fdt, ihwt* 'my feminine four, namely cows', though written *ty-i ihwt* (or *ihl*) 4. On the other hand, with the hundreds the demonstrative is always fem., since *št* 'hundred' is an unchangeable fem. noun; *h* 'thousand' is, on the contrary, masculine, and consequently any adjective agreeing with it would have to be masculine likewise.

§ 262. The construction of the lowest and highest numbers.—

1. The word for 'one', when written phonetically, as a rule follows its noun.

¹ *Urk.* iv. 1069.

Exx. *dmī wr* one city.¹

² *Peas.* R 46.

wst-f wrt its one side.²

Or else it precedes it and is connected with it by the genitival adjective.

³ *Urk.* iv. 650.

Ex. *wr n mtn* one road.³

At a later stage of the language, the last-named construction gives rise to the **indefinite article**; an early example is *wrw n hkrw* 'a ship'.⁴

⁴ *Westc.* 8, 3. Sim. *ib.* 6, 3.

'One of (several)' is expressed by *wr m*.

⁵ *Peas.* B 1, 9. Sim. *ib.* 81-2; *Siut* I, 287.

Exx. *wr m n n* one of these asses.⁵

⁶ *Siut* I, 288. Sim. *ib.* 285.

wr im-tu nb every one of you.⁶

For the use of *wr* to convey superlative meaning see above, § 97, end; and for its meaning 'one' as contrasted with 'other' see § 98.

2. The words for 1,000 and 1,000,000 are sometimes written before their noun, which is usually in the singular, and are connected with it either by the *m* of predication or by the genitival adjective. The same doubtless held good of the words for 10,000 and 100,000, but here we have no evidence

⁷ *Cairo* 20003. Sim. *ib.* 20006. 20009, 2. 20011. 20012. 20053.

Exx. *h m t hnt* a thousand of bread and beer.⁷ Abbreviated writing *h k pn n rnpt* this thy thousand years, lit. of year.⁸

⁸ *Cairo* 20004. Sim. *ib.* 20007. 20012, 2. 20046.

m h h pn n rnpt in this million of years.¹⁰

⁹ *Urk.* iv. 539; 1058, 15. Sim. *h h f n k* (sing.) *LAC. TR.* 78, 9.

Similar writings occur where the word for 100 is involved.

¹⁰ *Urk.* iv. 306.

Exx. *120 nt h-t* one hundred and twenty thousands-of-land (a land-measure).¹¹

¹¹ *Sebekn.* 7. Sim. *Urk.* iv. 893, 15 with *n* for *nt*.

t 365 n ntr the 365 gods.¹²

¹² *P. Turin* 137, 3.

In late Egyptian the construction with *n(y)* has been extended also to the tens.

Sporadic examples may be found from Dyn. XII onwards.

Ex. *35 n rnpt* 35 years.¹³

¹³ MARUCCHI, *Gli Obelisch*, 1. Sim. *Ann.* 29, 7, 8, 13 *n hrw*; *B. of D.* ed. NAV., ch. 125, Intr. 3, some MSS, *p 42 n ntr*.

§ 263. The ordinal numbers.—1. For 'first' *tpy*, varr. *tp*, the adjective from *tp* 'head', is used and follows its noun.

¹⁴ *Urk.* iv. 175.

Exx. *sp tpy* the first time.¹⁴ *wdyt tpt* the first campaign.¹⁵

¹⁵ *Urk.* iv. 740.

¹ Cf. perhaps *sp* 2
'a second time', *Peas.*
B I, 88.

² *Sebekkhu* 17. Sim. *ib.* 13; the sense seems guaranteed by the late *Abbott* 4, 15.

^{2a} *JEA*, 25, 167; for *m* 'together with' see § 162, 7A.

^{2b} *Zahlworte*, p. 60.

^s *Siut* 1, 302. *Sim.*
Sinai 139, 8.

² VARILLE, *Karnak*
I, Pls. 27. 28. See
further *Zahlworte*, p.
98.

³ Rhind 34.

⁴ Rhind 34.

⁵ Rhind 42.

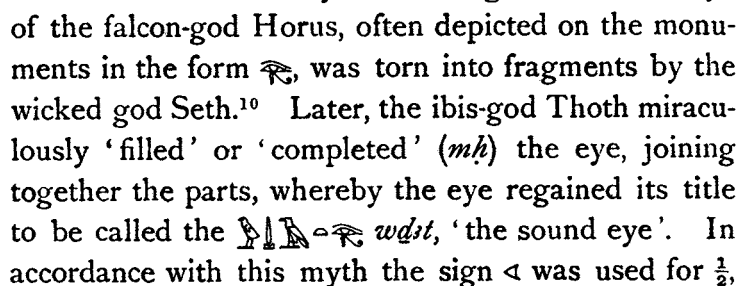
⁶ *Sicut* 1, 285.

⁷ Rhind 41.

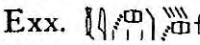
⁸ *Rhind* 46.

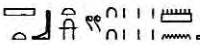
⁹ See in general *PSBA.* 14, 421-35; *SETHE, Zahlworte* 80; *MÖLLER, Hieratische Paläographie*, i. pp. 66-7; ii. p. 62. Later discussions, *ÄZ.* 65, 42; 66, 33.


¹⁰ See *ÄZ.* 48, 99.


















¹⁰ See *ÄZ.* 48, 99.

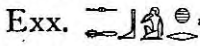
Exx.  *bn(r)i hēst hsr 20 2* dates, quadruple *hekat*, 20 sacks and 2.¹ A somewhat strange way of expressing $(4 \times 20) + 2 = 82$ quadruple *hekat*.

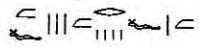

 *stbt 226, mnt hēst 1 + 1/2 + 1/4 + 1/8, ir n hsr 105 3 1/2 + 1/4* crates (?), 226, content $1\frac{7}{8}$ *hekat*, making (§ 422, 3) 105 sacks and $3\frac{3}{4}$ *hekat*.²


It seems evident that the 'sack' (*hsr*) of Dyn. XVIII was a modification of the  *hsr* 'sack' of 5 quadruple, or 20 single, *hekat* mentioned in the Rhind mathematical papyrus.³


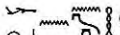
A jar  *hnw* 'hin' used for liquids (beer, milk, honey, etc.),⁴ but apparently also for grain,⁵ is shown by the Rhind papyrus to have contained $\frac{1}{10}$ *hekat*; actual inscribed examples average about .503 litre.^{6a} Other vessels employed as liquid measures were named  *ds* (especially for beer),⁷  *hbnt* (wine, incense),⁸  *st* (a very small measure for beer),⁹  *mn*,¹⁰ var.  *mni*¹¹ (oil, incense); the size of these has not been determined.


2. **Measures of length.**¹²—Measurements of small objects are given in terms of the cubit of about 20.6 inches = 523 millimetres¹³ and its subdivisions, 1 cubit being equal to 7 palms or 28 digits. 'Cubit' is  *mh*, abbrev.  ¹⁶  ¹⁷ or  ¹⁸; 'palm', i.e. palm-breadth, is  *sp*,¹⁹ abbrev.  ²⁰  ^{20a}; 'digit', i.e. finger-breadth, is  *dbc*. A much less often mentioned linear measure is the  *nbw* 'nebiu', lit. 'pole', perhaps equal to $1\frac{1}{4}$ or $1\frac{1}{2}$ cubit.^{20b}

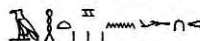
Exx.  *shb-hr-f mh 1 sp 3 m mw crw* then it (the serpent) swallows 1 cubit and 3 palms of the great waters.²¹


You are to make $\frac{1}{2} + \frac{1}{4}$ of a cubit  *gs-f 3 1/2, r 4 f 1 1/2 1/4*; *dmd*, *sp* 5, *dbc* half of it is $3\frac{1}{2}$ (palms), one-fourth of it is $1\frac{1}{2} \frac{1}{4}$ (palms); total, 5 palms and a digit.²² Here the digit is represented in hieratic by .

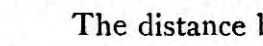
 *mh 4, sp 4, dbc 2* four cubits, 4 palms and 2 digits.²³

The chief multiple of the cubit was the  *ht* 'rod' of 100 cubits, also called  *ht n nwh* 'rod of cord'.

Exx.  *swsh-n-i wst n wdhw-i m ht n nwh 21* I made a wide road (lit. made wide a road) for my offerings consisting of 21 rods of cord, i.e. 2,100 cubits.²⁴

 *sht n ht 10 r ht 2* a field of 10 rods by 2 rods.²⁵

A much larger linear measure was the  *itrw* 'river-measure',²⁶ the Greek 'schoenus', now estimated on good grounds at 20,000 cubits = 10.5 km.^{26a} However, in one place a smaller *itrw* occurs in conjunction with the *ht* 'rod', and with two fractions of this which we shall find below as measures of area:—

The distance between stela and stela on the hill east of Akhetaten  *irw n itrw 6 ht rmn hsb mh 4* makes 6 *itrw*, $1\frac{3}{4}$ rods and 4 cubits.²⁷ For *irw n* 'makes' see § 422, 3.

¹ *P. Louvre 3226*, 4, 9. *Sim. P. Pet.* 1116 A, vs. *passim*. In hieroglyphic *Urk.* iv. 667, 14.

² *P. Louvre 3226*, 29, 2.

³ *Rhind 41*, 43.

⁴ *Peas. B 1*, 94; *P. Kah.* 5, 11. 32. 33; *Eb.* 53. 10.

⁵ *Rhind 83*.

⁶ *Rhind 80*, 81.

^{6a} *Ann.* 40, 80, a recent computation.

⁷ *Siut 1*, 302; *Peas. B 1*, 84; *P. Kah.* 26, 3. 13; *Rhind 71*.

⁸ *AZ.* 45, Pl. 8; *Rekh.* 6; *Urk.* iv. 718, 6.

⁹ *Siut 1*, 302; *P. Kah.* 26, 4. 14.

¹⁰ *Urk.* iv. 699, 15; 718, 7.

¹¹ *Urk.* iv. 712, 15.

¹² *PSBA.* 14, 493; MÖLLER, *Hieratische Paläographie*, i. p. 65.

¹³ See *JEA.* iv. 136.

¹⁴ *Hamm.* 114, 14.

¹⁵ *Urk.* iv. 425, 17; 459, 9.

¹⁶ *Bersh.* i. 14, 1.

¹⁷ *Urk.* iv. 640.

¹⁸ *BH.* i. 26, 200; *Urk.* iv. 373, 9.

¹⁹ *AZ.* 59, 44*; *Rhind 56*, 58.

²⁰ *P. Kah.* 23, 30.

^{20a} See the Sign-list, under D 48.

^{20b} *Cen.* p. 93; *Wb.* II, 243, 9; 244, 2; HAYES, p. 36.

²¹ *AZ.* 59, 47*. *Sim. P. Boul.* xviii. 4.

²² *Rhind 58*.

²³ *AZ.* 59, 44*. *Sim. Arm.* 93.

²⁴ *Urk.* iv. 133.

²⁵ *Rhind 49*. *Sim. AZ.* 59, 44*.

²⁶ See *AZ.* 41, 58. ^{26a} BORCHARDT in *Festschrift . . . Lehmann-Haupt (Janus, 1921)*, 119; see also *JEA.* 30, 33.

²⁷ *Amarna v.* 26, 18-19, see *ib.* p. 33, n. 8. According to BORCHARDT, here perhaps an *itrw* of 5,000 cubits.

¹ See *PSBA.* 14, 410; *SETHE, Zahlworte* 74; *MÖLLER, Hieratische Paläographie*, i. p. 65.

² *Urk.* iv. 6, 8, 15.

³ *Siut* 1, 313.

⁴ *Sebekn.* 7, qu. § 262, 2.

⁵ *Siut* 1, 313. *Sim.* ib. 325.

⁶ *P. Kah.* 21, 3. *Sim. Rhind* 48, 53.

⁷ *P. Kah.* 21, 19. *Sim. Rhind* 54, 55.

⁸ See *PSBA.* 14, 435.

⁹ *MAR. Karn.* 34, 30-1; the same sign reversed, *D. el B.* 81

¹⁰ *Berl. AI.* i. 72, O. K.

¹¹ *Peas.* B 1, 166. *Sim. Cairo* 31, 652, see *WEIGALL, Weights*, pl. 6.

¹² *Urk.* iv. 692. *Sim.* ib. 630, 637, 638.

¹³ See *SPIEGELBERG, Rechnungen aus der Zeit Setis I* (Strassburg, 1896), Text, p. 87.

¹⁴ *Rhind* 62.

¹⁵ *AZ.* 43, 45. Confirmed by a papyrus in author's possession.

¹⁶ *AZ.* 43, 35. *Sim.* ib. 43, 39; *P. Boul.* 11.

3. **Measures of area.**¹—A set of fractions obtained by halving, like the fractions of the corn-measure, was used in connection with the \square *stst*, the Greek 'aroura', varr. $\frac{1}{2}$,² $\frac{1}{4}$; this was a measure of 1 square *khet* (see above, 2), or 100 cubits squared, i. e. 2735 square metres, or roughly $\frac{2}{3}$ acre. The fractions of the *stst* are \rightarrow *rmn* = $\frac{1}{2}$ *stst*, \times *hsb* = $\frac{1}{4}$ *stst* and $\frac{1}{8}$ *stst*; in Middle Egyptian they have been found only in hieratic, but of the three hieroglyphic forms derived from Ptolemaic texts two, namely \rightarrow and \times , certainly were used in Middle Egyptian, since they occur as measures of length (see above, 2). Smaller parts of the aroura are expressed in terms of the \rightarrow *mh* 'cubit', i. e. a strip of land 100 cubits in length with a depth of 1 cubit = $\frac{1}{100}$ *stst*. A measure of ten arouras is written $\frac{1}{10}$ *hs*, lit. 'thousand', more fully $\frac{1}{10}$ (*hs-ts*);⁴ an abbreviated writing is 1.

Exx. $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ *stst hs* 2, *stst* 2 twenty-two arouras of field.⁵

$\frac{1}{10}$ $\frac{1}{10}$ \rightarrow (*hs?*) 4 *stst* 2 *rmn* forty-two and a half arouras.⁶

$\frac{1}{10}$ \rightarrow $\frac{1}{10}$ \times $\frac{1}{10}$ \times *stst* 8 $\frac{1}{2}$ $\frac{1}{4}$ $\frac{1}{8}$ *mh* 10 $\frac{1}{2}$ $\frac{1}{4}$ $\frac{1}{8}$ arouras, 10 $\frac{3}{4}$ cubits; or 89,825 square cubits.⁷

4. **Weights.**⁸—From Dyn. XVIII onwards the weight employed for metals of all sorts was the \equiv *dbn* 'deben', (originally \equiv ,⁹ less correctly \equiv , phonetically \rightarrow \equiv ¹⁰) of 10 $\frac{1}{10}$ *kd* 'kitē'; actual weighing shows it to have amounted to about 91 grammes, or a little more than 1,400 grains.

Ex. $\frac{1}{10}$ \equiv $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ *hd dbn* 761, *kd* 2 silver, 761 *deben* and 2 *kitē*.¹¹

For weights smaller than the *kitē* the ordinary fractions were used.¹²


The values of different articles were in Ramesside times expressed in terms of *deben* and *kitē* of gold, silver or copper.¹³ For Dyn. XVIII there is not much evidence of the kind, but in one or two documents we find articles valued in terms of the *deben* and the 'seal' $\frac{1}{10}$ (once written phonetically $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ *stty*¹⁴); the latter was equivalent to $\frac{1}{12}$ *deben*.¹⁵


Ex. $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ *ih* 1, *irw n stty* 8 1 ox, making 8 seals.¹⁶


VOCABULARY

\square \times \parallel *psš* divide.
 $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ *hs* measure (vb.)
 $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ *sbh* cry out.
 $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ *kf* uncover.
 $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ *rw* length.


$\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ *Imn* Amūn, the god of Thebes.
 $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ *Wsd-wr* the sea, lit. the great green.
 $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ *kw* provisions, revenue.
 $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ *kyw* members of household.
 $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ *wdpw* butler.


 *enhw* victuals.


 *dzt* (or *wdzt*) remainder, balance.


 *mnt* quantum, fixed ration.



 *mnt* nurse.


 *rht* amount, number (m.).


 *hfw* snake.


 *hnt* (for *hnt*¹)
harim.


 *shw* breadth (from stem *wsb*).


 var.  *stp-s* palace.


 *snr* ergastulum, magazine.

 *thn* obelisk.

 *dmd* (old *dmd*) total.

 *ds* jug, beer-jug.

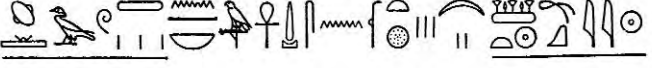





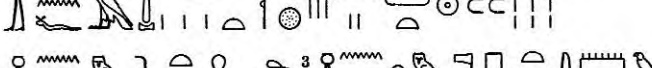


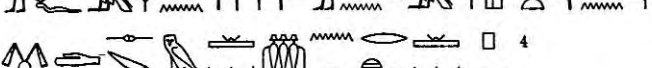


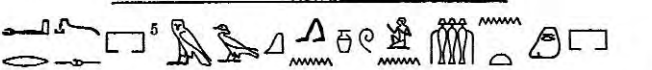


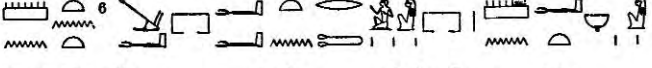


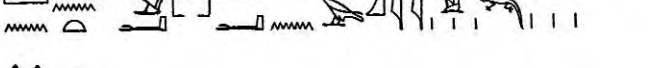





 *d'm* fine gold.


 *shn* various (adj.).

¹ In this and the perhaps identical word for 'prison' (above, p. 146) the spellings vacillate between *hnt* and *hnt*, partly owing to the similarity of hieratic *hnt* and *hnt*. Both words are probably derived from *hnr* 'restrain'.


EXERCISE XX


(a) Study the following excerpt from a papyrus of accounts relating to the Royal Court (Dyn. XIII):²

² *P. Boul. XVIII*, 31, printed exactly as in the original. Words there written in red are here underlined. Several readings are disputed, the hieratic containing difficult ligatures. ³ Rather uncertain on account of the unexpected .

⁴ This rubric is the heading to what follows and was inserted after the word for 'total' in order to economize space.

⁵ Others read .

⁶ Others read .

⁷ An error for 144.

⁸ An error for 1.

Exerc. XX

EGYPTIAN GRAMMAR

	<i>t šbn rkw</i>	<i>hnkt ds</i>
<i>hsb rkw n nb</i> (r. w. s. § 313, end) <i>n hst-sp 3 (šbd) 2(-nw n) šht, rky.</i>		
<i>rht rkw n nb</i> (r. w. s.) <i>n hst-sp 3 (šbd) 2(-nw n) šht, rky</i>	1680	135
<i>in</i> (§ 422, 1) <i>n-f m dšt nt hst-sp 3 (šbd) 2(-nw n) šht, sw 29</i>	200	
<i>in</i> (§ 422, 1) <i>n-f m rnhw(?) nsw innw</i> (§ 369, 4) <i>m hwt-ntr nt 'Imn</i>	100	10
<i>dmd. Šm hnt rht pn.</i>	1980	145
<i>dšw</i> (§ 422, 1) <i>r stp-s(i) m rē n wdpw n hnt</i>	625	45
<i>mnt(?) nt šnr ddt</i> (§ 369, 4) <i>n rmt pr mncwt</i>	630	61
<i>mnt(?) nt šnr ddt</i> (§ 369, 4) <i>n rkyw ršw</i>	525	38
<i>dmd</i>	1780	143 (<i>sic</i>)
<i>dšt t</i>	200	2 (<i>sic</i>)
ACCOUNT OF THE REVENUE OF THE LORD (l. p. h.) of yr. 3, second month of inundation, last day.	various kinds of bread, loaves	beer, des-jugs
Amount of the revenue of the Lord (l. p. h.) of yr. 3, second month of inundation, last day	1680	135
Was brought to him as balance of yr. 3, second month of inundation, day 29	200	
Was brought to him as king's victuals (?) which are brought from the temple of Amūn	100	10
Total.	1980	145
EXPENDITURE OUT OF THIS AMOUNT.		
Was given into the palace at the entry of the butler of the harim	625	45
Ration of the ergastulum which is given to the people of the house of the nurses	630	61
Ration of the ergastulum which is given to the ordinary members of the household	525	38
Total	1780	143 (<i>sic</i>)
Balance	200	2 (<i>sic</i>)

(b) Write in hieroglyphs and in transliteration:

- (1) It happened (on) one of these days I heard a noise and uncovered my face and found it was (*pw*) a snake of (*ny-sw*, lit. it was of) 10 cubits in its length.
 (2) Thou (*ntk*) shalt divide for them $1\frac{31}{32}$ *hekat*¹ of corn. (3) Year 7, first month of summer, day 1 under the Majesty of the Horus 'Great of Might' (*r bšw*), King of Upper and Lower Egypt, Nema²rēt, Son of Rēt, Ammenemes,² tribute of the prince (*wr*) of the Medjay, 265 *deben* of gold (lit. gold, 265 *deben*).

¹ $hkpt 1 + \frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \frac{1}{16} + \frac{1}{32}$.

² For these royal names see above, p. 74, bottom.

(4) He went to the door a fourth time, and found no one there. (5) He gave her three-fifths of all his possessions (*h*l). (6) The twelfth hour of the night. (7) They cried out with one voice (lit. mouth). (8) He was the third of these three (write 'third' and 'three' phonetically).


EXCURSUS C

The Divisions of Time and Method of Dating.¹

The Egyptian year ($\{\overset{\circ}{\text{r}}\text{ npt}\}$) was divided into 12 months ($\{\overset{\circ}{\text{x}}\text{ sbd}\}$) of 30 days ($\{\overset{\circ}{\text{h}}\text{ hrw}\}$), completed to 365 days by the addition of the five so-called epagomenal or 'added' days ($\{\overset{\circ}{\text{5 h}}\text{ hryw r npt}\}$, § 259). Though for dating and calendrical purposes generally the year of 365 days perforce served as the basis, there was clearly a tendency to regard the year as of only 360 days; thus for purposes of calculation the daily income of a temple is stated as $\frac{1}{360}$ of the yearly revenue.² In dating, the year was further divided into three 'seasons' ($\{\overset{\circ}{\text{f}}\text{ tr}\}$) of four months each: 1. $\{\overset{\circ}{\text{3}}\text{ sht}\}$, var. $\{\overset{\circ}{\text{3}}\text{ sht}\}$, 'inundation'; 2. $\{\overset{\circ}{\text{p}}\text{ prt}\}$ 'winter', presumably the season of the 'emergence' (pr) of the fields from the water; 3. $\{\overset{\circ}{\text{3}}\text{ smw}\}$ 'summer', daringly guessed to mean 'deficiency (wšr) of water'. The word for 'day' used in dates seems from Coptic to have been sw , not hrw ;³ the plural $\{\overset{\circ}{\text{3}}\text{ sww}\}$ (?) is not infrequently found written out in Middle Egyptian with the meaning 'dates'.⁴ Similarly the word for 'year' used in dates is not $\{\overset{\circ}{\text{r}}\text{ npt}\}$, which never has \circ as a determinative, but $\{\overset{\circ}{\text{3}}\text{ sp}\}$, which we now know to read hst-sp ; in hst-sp the round sign is the ideogram of $\{\overset{\circ}{\text{3}}\text{ sp}\}$ 'occasion'; only at a late period is the ordinary determinative of time \circ substituted in this word for \circ . We shall have more to say about the meaning of hst-sp below.

The way in which the numerals are indicated in dates has been studied above in §§ 259. 264. We may now give one or two examples:—

hst-sp 2 (zbd) 3(-nw n) zht sw I, hr hm n n-sw-bit
N-mrt-Rr year 2, third month of inundation, day one under the Majesty of king
Nema^crē (i. e. Ammenemes III).⁵

 *m hst-sp 24 (ibd) 2-(nw n) prt, crky, hrw-hb mh-10 n' Imn m' Ipt-swt* in year 24, second month of winter, last day, tenth festival-day of Amun in Ipet-sut (i. e. Karnak).⁶ Note that, as often, the king (Tuthmosis III) is not mentioned. This date occurs in the midst of a sentence ; at the beginning of a text the preposition *m* is never used.

𓂏𓂐𓂑𓂒𓂓𓂔 *tpy* (n) *šht*, *wpt-rnpt*, *hb Hnmw* first month of inundation, opening of the year (= day 1), feast of Chnum.⁷

Very rare writings of the regnal year are seen in { $\overset{\circ}{\underset{\circ}{n}}$ } *hst-sp* 30 ‘year 30’;⁸
 { $\overset{\circ}{\underset{\circ}{n}}$ } *hst-sp* 44 ‘year 44’;⁹ { $\overset{\circ}{\underset{\circ}{n}}$ } *hst-sp* 33 ‘year 33’.¹⁰

¹ See in general K. SETHE, *Die Zeitrechnung der alten Aegypten im Verhältnis zu der der andern Völker*, in *Nachrichten d. k. Gesellschaft d. Wissenschaften zu Göttingen, Phil.-hist. Klasse*, 1919-20.

² See *Sint* 1, 285, qu. § 265.

³ Not *ssw* as formerly read; see the writings *Wb.* iv, 57.

⁴ *Adm.* II, 4; *Urk.* iv. II 2, 12.

⁸ Hamm. 43.

⁶ *Urkk.* iv. 836.

⁷ *Urk.* iv. 823.

⁸ Cairo 20516.

⁹ Leyd. V 4; sim.
Urk. iv. 606, 6.

¹⁰ *Rhind*, title.

On the strength of the testimony already quoted the student will have concluded that the Egyptians dated their inscriptions by the years of their kings' reigns; throughout the whole of the Pharaonic history no use was ever made of a continuous era. Even the numbering of the regnal years was, however, a secondary development.¹ In the earliest Dynasties each separate year was named after some conspicuous event that happened in it, e.g. 'the year of fighting and of smiting Lower Egypt'. In the Fifth and Sixth Dynasties this ancient method of dating survived in a modified form; an event which occurred biennially was the census of the cattle, and this became the standard event by which the years were dated. Examples are {𐀀𐀁𐀂𐀃𐀄𐀅𐀆𐀇𐀈𐀉𐀊𐀋𐀌𐀍𐀎𐀏𐀐𐀑𐀒𐀓𐀔𐀕𐀖𐀗𐀘𐀙𐀚𐀛𐀜𐀝𐀞𐀟𐀠𐀡𐀢𐀣𐀤𐀥𐀦𐀧𐀨𐀩𐀪𐀫𐀬𐀭𐀮𐀯𐀰𐀱𐀲𐀳𐀴𐀵𐀶𐀷𐀸𐀹𐀺𐀻𐀼𐀽𐀾𐀿𐁀𐁁𐁂𐁃𐁄𐁅𐁆𐁇𐁈𐁉𐁊𐁋𐁌𐁍𐁎𐁏𐁐𐁑𐁒𐁓𐁔𐁕𐁖𐁗𐁘𐁙𐁚𐁛𐁜𐁝𐁞𐁟𐁠𐁡𐁢𐁣𐁤𐁥𐁦𐁧𐁨𐁩𐁪𐁫𐁬𐁭𐁮𐁯𐁰𐁱𐁲𐁳𐁴𐁵𐁶𐁷𐁸𐁹𐁺𐁻𐁼𐁽𐁾𐁿𐂀𐂁𐂂𐂃𐂄𐂅𐂆𐂇𐂈𐂉𐂊𐂋𐂌𐂍𐂎𐂏𐂐𐂑𐂒𐂓𐂔𐂕𐂖𐂗𐂘𐂙𐂚𐂛𐂜𐂝𐂞𐂟𐂠𐂡𐂢𐂣𐂤𐂥𐂦𐂧𐂨𐂩𐂪𐂫𐂬𐂭𐂮𐂯𐂰𐂱𐂲𐂳𐂴𐂵𐂶𐂷𐂸𐂹𐂺𐂻𐂼𐂽𐂾𐂿𐃀𐃁𐃂𐃃𐃄𐃅𐃆𐃇𐃈𐃉𐃊𐃋𐃌𐃍𐃎𐃏𐃐𐃑𐃒𐃓𐃔𐃕𐃖𐃗𐃘𐃙𐃚𐃛𐃜𐃝𐃞𐃟𐃠𐃡𐃢𐃣𐃤𐃥𐃦𐃧𐃨𐃩𐃪𐃫𐃬𐃭𐃮𐃯𐃰𐃱𐃲𐃳𐃴𐃵𐃶𐃷𐃸𐃹𐃺𐃻𐃼𐃽𐃾𐃿𐄀𐄁𐄂𐄃𐄄𐄅𐄆𐄇𐄈𐄉𐄊𐄋𐄌𐄍𐄎𐄏𐄐𐄑𐄒𐄓𐄔𐄕𐄖𐄗𐄘𐄙𐄚𐄛𐄜𐄝𐄞𐄟𐄠𐄡𐄢𐄣𐄤𐄥𐄦𐄧𐄨𐄩𐄪𐄫𐄬𐄭𐄮𐄯𐄰𐄱𐄲𐄳𐄴𐄵𐄶𐄷𐄸𐄹𐄺𐄻𐄼𐄽𐄾𐄿𐅀𐅁𐅂𐅃𐅄𐅅𐅆𐅇𐅈𐅉𐅊𐅋𐅌𐅍𐅎𐅏𐅐𐅑𐅒𐅓𐅔𐅕𐅖𐅗𐅘𐅙𐅚𐅛𐅜𐅝𐅞𐅟𐅠𐅡𐅢𐅣𐅤𐅥𐅦𐅧𐅨𐅩𐅪𐅫𐅬𐅭𐅮𐅯𐅰𐅱𐅲𐅳𐅴𐅵𐅶𐅷𐅸𐅹𐅺𐅻𐅼𐅽𐅾𐅿𐆀𐆁𐆂𐆃𐆄𐆅𐆆𐆇𐆈𐆉𐆊𐆋𐆌𐆍𐆎𐆏𐆐𐆑𐆒𐆓𐆔𐆕𐆖𐆗𐆘𐆙𐆚𐆛𐆜𐆝𐆞𐆟𐆠𐆡𐆢𐆣𐆤𐆥𐆦𐆧𐆨𐆩𐆪𐆫𐆬𐆭𐆮𐆯𐆰𐆱𐆲𐆳𐆴𐆵𐆶𐆷𐆸𐆹𐆺𐆻𐆼𐆽𐆾𐆿𐇀𐇁𐇂𐇃𐇄𐇅𐇆𐇇𐇈𐇉𐇊𐇋𐇌𐇍𐇎𐇏𐇐𐇑𐇒𐇓𐇔𐇕𐇖𐇗𐇘𐇙𐇚𐇛𐇜𐇝𐇞𐇟𐇠𐇡𐇢𐇣𐇤𐇥𐇦𐇧𐇨𐇩𐇪𐇫𐇬𐇭𐇮𐇯𐇰𐇱𐇲𐇳𐇴𐇵𐇶𐇷𐇸𐇹𐇺𐇻𐇼𐇽𐇾𐇿𐈀𐈁𐈂𐈃𐈄𐈅𐈆𐈇𐈈𐈉𐈊𐈋𐈌𐈍𐈎𐈏𐈐𐈑𐈒𐈓𐈔𐈕𐈖𐈗𐈘𐈙𐈚𐈛𐈜𐈝𐈞𐈟𐈠𐈡𐈢𐈣𐈤𐈥𐈦𐈧𐈨𐈩𐈪𐈫𐈬𐈭𐈮𐈯𐈰𐈱𐈲𐈳𐈴𐈵𐈶𐈷𐈸𐈹𐈺𐈻𐈼𐈽𐈾𐈿𐉀𐉁𐉂𐉃𐉄𐉅𐉆𐉇𐉈𐉉𐉊𐉋𐉌𐉍𐉎𐉏𐉐𐉑𐉒𐉓𐉔𐉕𐉖𐉗𐉘𐉙𐉚𐉛𐉜𐉝𐉞𐉟𐉠𐉡𐉢𐉣𐉤𐉥𐉦𐉧𐉨𐉩𐉪𐉫𐉬𐉭𐉮𐉯𐉰𐉱𐉲𐉳𐉴𐉵𐉶𐉷𐉸𐉹𐉺𐉻𐉼𐉽𐉾𐉿𐊀𐊁𐊂𐊃𐊄𐊅𐊆𐊇𐊈𐊉𐊊𐊋𐊌𐊍𐊎𐊏𐊐𐊑𐊒𐊓𐊔𐊕𐊖𐊗𐊘𐊙𐊚𐊛𐊜𐊝𐊞𐊟𐊠𐊡𐊢𐊣𐊤𐊥𐊦𐊧𐊨𐊩𐊪𐊫𐊬𐊭𐊮𐊯𐊰𐊱𐊲𐊳𐊴𐊵𐊶𐊷𐊸𐊹𐊺𐊻𐊼𐊽𐊾𐊿𐋀𐋁𐋂𐋃𐋄𐋅𐋆𐋇𐋈𐋉𐋊𐋋𐋌𐋍𐋎𐋏𐋐𐋑𐋒𐋓𐋔𐋕𐋖𐋗𐋘𐋙𐋚𐋛𐋜𐋝𐋞𐋟𐋠𐋡𐋢𐋣𐋤𐋥𐋦𐋧𐋨𐋩𐋪𐋫𐋬𐋭𐋮𐋯𐋰𐋱𐋲𐋳𐋴𐋵𐋶𐋷𐋸𐋹𐋺𐋻𐋼𐋽𐋾𐋿𐌀𐌁𐌂𐌃𐌄𐌅𐌆𐌇𐌈𐌉𐌊𐌋𐌌𐌍𐌎𐌏𐌐𐌑𐌒𐌓𐌔𐌕𐌖𐌗𐌘𐌙𐌚𐌛𐌜𐌝𐌞𐌟𐌠𐌡𐌢𐌣𐌤𐌥𐌦𐌧𐌨𐌩𐌪𐌫𐌬𐌭𐌮𐌯𐌰𐌱𐌲𐌳𐌴𐌵𐌶𐌷𐌸𐌹𐌺𐌻𐌼𐌽𐌾𐌿𐍀𐍁𐍂𐍃𐍄𐍅𐍆𐍇𐍈𐍉𐍊𐍋𐍌𐍍𐍎𐍏𐍐𐍑𐍒𐍓𐍔𐍕𐍖𐍗𐍘𐍙𐍚𐍛𐍜𐍝𐍞𐍟𐍠𐍡𐍢𐍣𐍤𐍥𐍦𐍧𐍨𐍩𐍪𐍫𐍬𐍭𐍮𐍯𐍰𐍱𐍲𐍳𐍴𐍵𐍶𐍷𐍸𐍹𐍺𐍻𐍼𐍽𐍾𐍿𐎀𐎁𐎂𐎃𐎄𐎅𐎆𐎇𐎈𐎉𐎊𐎋𐎌𐎍𐎎𐎏𐎐𐎑𐎒𐎓𐎔𐎕𐎖𐎗𐎘𐎙𐎚𐎛𐎜𐎝𐎞𐎟𐎠𐎡𐎢𐎣𐎤𐎥𐎦𐎧𐎨𐎩𐎪𐎫𐎬𐎭𐎮𐎯𐎰𐎱𐎲𐎳𐎴𐎵𐎶𐎷𐎸𐎹𐎺𐎻𐎼𐎽𐎾𐎿𐏀𐏁𐏂𐏃𐏄𐏅𐏆𐏇𐏈𐏉𐏊𐏋𐏌𐏍𐏎𐏏𐏐𐏑𐏒𐏓𐏔𐏕𐏖𐏗𐏘𐏙𐏚𐏛𐏜𐏝𐏞𐏟𐏠𐏡𐏢𐏣𐏤𐏥𐏦𐏧𐏨𐏩𐏪𐏫𐏬𐏭𐏮𐏯𐏰𐏱𐏲𐏳𐏴𐏵𐏶𐏷𐏸𐏹𐏺𐏻𐏼𐏽𐏾𐏿𐐀𐐁𐐂𐐃𐐄𐐅𐐆𐐇𐐈𐐉𐐊𐐋𐐌𐐍𐐎𐐏𐐐𐐑𐐒𐐓𐐔𐐕𐐖𐐗𐐘𐐙𐐚𐐛𐐜𐐝𐐞𐐟𐐠𐐡𐐢𐐣𐐤𐐥𐐦𐐧𐐨𐐩𐐪𐐫𐐬𐐭𐐮𐐯𐐰𐐱𐐲𐐳𐐴𐐵𐐶𐐷𐐸𐐹𐐺𐐻𐐼𐐽𐐾𐐿𐑀𐑁𐑂𐑃𐑄𐑅𐑆𐑇𐑈𐑉𐑊𐑋𐑌𐑍𐑎𐑏𐑐𐑑𐑒𐑓𐑔𐑕𐑖𐑗𐑘𐑙𐑚𐑛𐑜𐑝𐑞𐑟𐑠𐑡𐑢𐑣𐑤𐑥𐑦𐑧𐑨𐑩𐑪𐑫𐑬𐑭𐑮𐑯𐑰𐑱𐑲𐑳𐑴𐑵𐑶𐑷𐑸𐑹𐑺𐑻𐑼𐑽𐑾𐑿𐒀𐒁𐒂𐒃𐒄𐒅𐒆𐒇𐒈𐒉𐒊𐒋𐒌𐒍𐒎𐒏𐒐𐒑𐒒𐒓𐒔𐒕𐒖𐒗𐒘𐒙𐒚𐒛𐒜𐒝𐒞𐒟𐒠𐒡𐒢𐒣𐒤𐒥𐒦𐒧𐒨𐒩𐒪𐒫𐒬𐒭𐒮𐒯𐒰𐒱𐒲𐒳𐒴𐒵𐒶𐒷𐒸𐒹𐒺𐒻𐒼𐒽𐒾𐒿𐓀𐓁𐓂𐓃𐓄𐓅𐓆𐓇𐓈𐓉𐓊𐓋𐓌𐓍𐓎𐓏𐓐𐓑𐓒𐓓𐓔𐓕𐓖𐓗𐓘𐓙𐓚𐓛𐓜𐓝𐓞𐓟𐓠𐓡𐓢𐓣𐓤𐓥𐓦𐓧𐓨𐓩𐓪𐓫𐓬𐓭𐓮𐓯𐓰𐓱𐓲𐓳𐓴𐓵𐓶𐓷𐓸𐓹𐓺𐓻𐓼𐓽𐓾𐓿𐔀𐔁𐔂𐔃𐔄𐔅𐔆𐔇𐔈𐔉𐔊𐔋𐔌𐔍𐔎𐔏𐔐𐔑𐔒𐔓𐔔𐔕𐔖𐔗𐔘𐔙𐔚𐔛𐔜𐔝𐔞𐔟𐔠𐔡𐔢𐔣𐔤𐔥𐔦𐔧𐔨𐔩𐔪𐔫𐔬𐔭𐔮𐔯𐔰𐔱𐔲𐔳𐔴𐔵𐔶𐔷𐔸𐔹𐔺𐔻𐔼𐔽𐔾𐔿𐕀𐕁𐕂𐕃𐕄𐕅𐕆𐕇𐕈𐕉𐕊𐕋𐕌𐕍𐕎𐕏𐕐𐕑𐕒𐕓𐕔𐕕𐕖𐕗𐕘𐕙𐕚𐕛𐕜𐕝𐕞𐕟𐕠𐕡𐕢𐕣𐕤𐕥𐕦𐕧𐕨𐕩𐕪𐕫𐕬𐕭𐕮𐕯𐕰𐕱𐕲𐕳𐕴𐕵𐕶𐕷𐕸𐕹𐕺𐕻𐕼𐕽𐕾𐕿𐖀𐖁𐖂𐖃𐖄𐖅𐖆𐖇𐖈𐖉𐖊𐖋𐖌𐖍𐖎𐖏𐖐𐖑𐖒𐖓𐖔𐖕𐖖𐖗𐖘𐖙𐖚𐖛𐖜𐖝𐖞𐖟𐖠𐖡𐖢𐖣𐖤𐖥𐖦𐖧𐖨𐖩𐖪𐖫𐖬𐖭𐖮𐖯𐖰𐖱𐖲𐖳𐖴𐖵𐖶𐖷𐖸𐖹𐖺𐖻𐖼𐖽𐖾𐖿𐗀𐗁𐗂𐗃𐗄𐗅𐗆𐗇𐗈𐗉𐗊𐗋𐗌𐗍𐗎𐗏𐗐𐗑𐗒𐗓𐗔𐗕𐗖𐗗𐗘𐗙𐗚𐗛𐗜𐗝𐗞𐗟𐗠𐗡𐗢𐗣𐗤𐗥𐗦𐗧𐗨𐗩𐗪𐗫𐗬𐗭𐗮𐗯𐗰𐗱𐗲𐗳𐗴𐗵𐗶𐗷𐗸𐗹𐗺𐗻𐗼𐗽𐗾𐗿𐘀𐘁𐘂𐘃𐘄𐘅𐘆𐘇𐘈𐘉𐘊𐘋𐘌𐘍𐘎𐘏𐘐𐘑𐘒𐘓𐘔𐘕𐘖𐘗𐘘𐘙𐘚𐘛𐘜𐘝𐘞𐘟𐘠𐘡𐘢𐘣𐘤𐘥𐘦𐘧𐘨𐘩𐘪𐘫𐘬𐘭𐘮𐘯𐘰𐘱𐘲𐘳𐘴𐘵𐘶𐘷𐘸𐘹𐘺𐘻𐘼𐘽𐘾𐘿𐙀𐙁𐙂𐙃𐙄𐙅𐙆𐙇𐙈𐙉𐙊𐙋𐙌𐙍𐙎𐙏𐙐𐙑𐙒𐙓𐙔𐙕𐙖𐙗𐙘𐙙𐙚𐙛𐙜𐙝𐙞𐙟𐙠𐙡𐙢𐙣𐙤𐙥𐙦𐙧𐙨𐙩𐙪𐙫𐙬𐙭𐙮𐙯𐙰𐙱𐙲𐙳𐙴𐙵𐙶𐙷𐙸𐙹𐙺𐙻𐙼𐙽𐙾𐙿𐚀𐚁𐚂𐚃𐚄𐚅𐚆𐚇𐚈𐚉𐚊𐚋𐚌𐚍𐚎𐚏𐚐𐚑𐚒𐚓𐚔𐚕𐚖𐚗𐚘𐚙𐚚𐚛𐚜𐚝𐚞𐚟𐚠𐚡𐚢𐚣𐚤𐚥𐚦𐚧𐚨𐚩𐚪𐚫𐚬𐚭𐚮𐚯𐚰𐚱𐚲𐚳𐚴𐚵𐚶𐚷𐚸𐚹𐚺𐚻𐚼𐚽𐚾𐚿𐛀𐛁𐛂𐛃𐛄𐛅𐛆𐛇𐛈𐛉𐛊𐛋𐛌𐛍𐛎𐛏𐛐𐛑𐛒𐛓𐛔𐛕𐛖𐛗𐛘𐛙𐛚𐛛𐛜𐛝𐛞𐛟𐛠𐛡𐛢𐛣𐛤𐛥𐛦𐛧𐛨𐛩𐛪𐛫𐛬𐛭𐛮𐛯𐛰𐛱𐛲𐛳𐛴𐛵𐛶𐛷𐛸𐛹𐛺𐛻𐛼𐛽𐛾𐛿𐜀𐜁𐜂𐜃𐜄𐜅𐜆𐜇𐜈𐜉𐜊𐜋𐜌𐜍𐜎𐜏𐜐𐜑𐜒𐜓𐜔𐜕𐜖𐜗𐜘𐜙𐜚𐜛𐜜𐜝𐜞𐜟𐜠𐜡𐜢𐜣𐜤𐜥𐜦𐜧𐜨𐜩𐜪𐜫𐜬𐜭𐜮𐜯𐜰𐜱𐜲𐜳𐜴𐜵𐜶𐜷𐜸𐜹𐜺𐜻𐜼𐜽𐜾𐜿𐝀𐝁𐝂𐝃𐝄𐝅𐝆𐝇𐝈𐝉𐝊𐝋𐝌𐝍𐝎𐝏𐝐𐝑𐝒𐝓𐝔𐝕𐝖𐝗𐝘𐝙𐝚𐝛𐝜𐝝𐝞𐝟𐝠𐝡𐝢𐝣𐝤𐝥𐝦𐝧𐝨𐝩𐝪𐝫𐝬𐝭𐝮𐝯𐝰𐝱𐝲𐝳𐝴𐝵𐝶𐝷𐝸𐝹𐝺𐝻𐝼𐝽𐝾𐝿𐞀𐞁𐞂𐞃𐞄𐞅𐞆𐞇𐞈𐞉𐞊𐞋𐞌𐞍𐞎𐞏𐞐𐞑𐞒𐞓𐞔𐞕𐞖𐞗𐞘𐞙𐞚𐞛𐞜𐞝𐞞𐞟𐞠𐞡𐞢𐞣𐞤𐞥𐞦𐞧𐞨𐞩𐞪𐞫𐞬𐞭𐞮𐞯𐞰𐞱𐞲𐞳𐞴𐞵𐞶𐞷𐞸𐞹𐞺𐞻𐞼𐞽𐞾𐞿𐟀𐟁𐟂𐟃𐟄𐟅𐟆𐟇𐟈𐟉𐟊𐟋𐟌𐟍𐟎𐟏𐟐𐟑𐟒𐟓𐟔𐟕𐟖𐟗𐟘𐟙𐟚𐟛𐟜𐟝𐟞𐟟𐟠𐟡𐟢𐟣𐟤𐟥𐟦𐟧𐟨𐟩𐟪𐟫𐟬𐟭𐟮𐟯𐟰𐟱𐟲𐟳𐟴𐟵𐟶𐟷𐟸𐟹𐟺𐟻𐟼𐟽𐟾𐟿𐠀𐠁𐠂𐠃𐠄𐠅𐠆𐠇𐠈𐠉𐠊𐠋𐠌𐠍𐠎𐠏𐠐𐠑𐠒𐠓𐠔𐠕𐠖𐠗𐠘𐠙𐠚𐠛𐠜𐠝𐠞𐠟𐠠𐠡𐠢𐠣𐠤𐠥𐠦𐠧𐠨𐠩𐠪𐠫𐠬𐠭𐠮𐠯𐠰𐠱𐠲𐠳𐠴𐠵𐠶𐠷𐠸𐠹𐠺𐠻𐠼𐠽𐠾𐠿𐡀𐡁𐡂𐡃𐡄𐡅𐡆𐡇𐡈𐡉𐡊𐡋𐡌𐡍𐡎𐡏𐡐𐡑𐡒𐡓𐡔𐡕𐡖𐡗𐡘𐡙𐡚𐡛𐡜𐡝𐡞𐡟𐡠𐡡𐡢𐡣𐡤𐡥𐡦𐡧𐡨𐡩𐡪𐡫𐡬𐡭𐡮𐡯𐡰𐡱𐡲𐡳𐡴𐡵𐡶𐡷𐡸𐡹𐡺𐡻𐡼𐡽𐡾𐡿𐢀𐢁𐢂𐢃𐢄𐢅𐢆𐢇𐢈𐢉𐢊𐢋𐢌𐢍𐢎𐢏𐢐𐢑𐢒𐢓𐢔𐢕𐢖𐢗𐢘𐢙𐢚𐢛𐢜𐢝𐢞𐢟𐢠𐢡𐢢𐢣𐢤𐢥𐢦𐢧𐢨𐢩𐢪𐢫𐢬𐢭𐢮𐢯𐢰𐢱𐢲𐢳𐢴𐢵𐢶𐢷𐢸𐢹𐢺𐢻𐢼𐢽𐢾𐢿𐣀𐣁𐣂𐣃𐣄𐣅𐣆𐣇𐣈𐣉𐣊𐣋𐣌𐣍𐣎𐣏𐣐𐣑𐣒𐣓𐣔𐣕𐣖𐣗𐣘𐣙𐣚𐣛𐣜𐣝𐣞𐣟𐣠𐣡𐣢𐣣𐣤𐣥𐣦𐣧𐣨𐣩𐣪𐣫𐣬𐣭𐣮𐣯𐣰𐣱𐣲𐣳𐣴𐣵𐣶𐣷𐣸𐣹𐣺𐣻𐣼𐣽𐣾𐣿𐤀𐤁𐤂𐤃𐤄𐤅𐤆𐤇𐤈𐤉𐤊𐤋𐤌𐤍𐤎𐤏𐤐𐤑𐤒𐤓𐤔𐤕𐤖𐤗𐤘𐤙𐤚𐤛𐤜𐤝𐤞𐤟𐤠𐤡𐤢𐤣𐤤𐤥𐤦𐤧𐤨𐤩𐤪𐤫𐤬𐤭𐤮𐤯𐤰𐤱𐤲𐤳𐤴𐤵𐤶𐤷𐤸𐤹𐤺𐤻𐤼𐤽𐤾𐤿𐥀𐥁𐥂𐥃𐥄𐥅𐥆𐥇𐥈𐥉𐥊𐥋𐥌𐥍𐥎𐥏𐥐𐥑𐥒𐥓𐥔𐥕𐥖𐥗𐥘𐥙𐥚𐥛𐥜𐥝𐥞𐥟𐥠𐥡𐥢𐥣𐥤𐥥𐥦𐥧𐥨𐥩𐥪𐥫𐥬𐥭𐥮𐥯𐥰𐥱𐥲𐥳𐥴𐥵𐥶𐥷𐥸𐥹𐥺𐥻𐥼𐥽𐥾𐥿𐦀𐦁𐦂𐦃𐦄𐦅𐦆𐦇𐦈𐦉𐦊𐦋𐦌𐦍𐦎𐦏𐦐𐦑𐦒𐦓𐦔𐦕𐦖𐦗𐦘𐦙𐦚𐦛𐦜𐦝𐦞𐦟𐦠𐦡𐦢𐦣𐦤𐦥𐦦𐦧𐦨𐦩𐦪𐦫𐦬𐦭𐦮𐦯𐦰𐦱𐦲𐦳𐦴𐦵𐦶𐦷𐦸𐦹𐦺𐦻𐦼𐦽𐦾𐦿𐧀𐧁𐧂𐧃𐧄𐧅𐧆𐧇𐧈𐧉𐧊𐧋𐧌𐧍𐧎𐧏𐧐𐧑𐧒𐧓𐧔𐧕𐧖𐧗𐧘𐧙𐧚𐧛𐧜𐧝𐧞𐧟𐧠𐧡𐧢𐧣𐧤𐧥𐧦𐧧𐧨𐧩𐧪𐧫𐧬𐧭𐧮𐧯𐧰𐧱𐧲𐧳𐧴𐧵𐧶𐧷𐧸𐧹𐧺𐧻𐧼𐧽𐧾𐧿𐨀𐨁𐨂𐨃𐨄𐨅𐨆𐨇𐨈𐨉𐨊𐨋𐨌𐨍𐨎𐨏𐨐𐨑𐨒𐨓𐨔𐨕𐨖𐨗𐨘𐨙𐨚𐨛𐨜𐨝𐨞𐨟𐨠𐨡𐨢𐨣𐨤𐨥𐨦𐨧𐨨𐨩𐨪𐨫𐨬𐨭𐨮𐨯𐨰𐨱𐨲𐨳𐨴𐨵𐨶𐨷𐨹𐨺𐨸𐨻𐨼𐨽𐨾𐨿𐩀𐩁𐩂𐩃𐩄𐩅𐩆𐩇𐩈𐩉𐩊𐩋𐩌𐩍𐩎𐩏𐩐𐩑𐩒𐩓𐩔𐩕𐩖𐩗𐩘𐩙𐩚𐩛𐩜𐩝𐩞𐩟𐩠𐩡𐩢𐩣𐩤𐩥𐩦𐩧𐩨𐩩𐩪𐩫𐩬𐩭𐩮𐩯𐩰𐩱𐩲𐩳𐩴𐩵𐩶𐩷𐩸𐩹𐩺𐩻𐩼𐩽𐩾𐩿𐪀𐪁𐪂𐪃𐪄𐪅𐪆𐪇𐪈𐪉𐪊𐪋𐪌𐪍𐪎𐪏𐪐𐪑𐪒𐪓𐪔𐪕𐪖𐪗𐪘𐪙𐪚𐪛𐪜𐪝𐪞𐪟𐪠𐪡𐪢𐪣𐪤𐪥𐪦𐪧𐪨𐪩𐪪𐪫𐪬𐪭𐪮𐪯𐪰𐪱𐪲𐪳𐪴𐪵𐪶𐪷𐪸𐪹𐪺𐪻𐪼𐪽𐪾𐪿𐫀𐫁𐫂𐫃𐫄𐫅𐫆𐫇𐫈𐫉𐫊𐫋𐫌𐫍𐫎𐫏𐫐𐫑𐫒𐫓𐫔𐫕𐫖𐫗𐫘𐫙𐫚𐫛𐫜𐫝𐫞𐫟𐫠𐫡𐫢𐫣𐫤𐫦𐫥𐫧𐫨𐫩𐫪𐫫𐫬𐫭𐫮𐫯𐫰𐫱𐫲𐫳𐫴𐫵𐫶𐫷𐫸𐫹𐫺𐫻𐫼𐫽𐫾𐫿𐬀𐬁𐬂𐬃𐬄𐬅𐬆𐬇𐬈𐬉𐬊𐬋𐬌𐬍𐬎𐬏𐬐𐬑𐬒𐬓𐬔𐬕𐬖𐬗𐬘𐬙𐬚𐬛𐬜𐬝𐬞𐬟𐬠𐬡𐬢𐬣𐬤𐬥𐬦𐬧𐬨𐬩𐬪𐬫𐬬𐬭𐬮𐬯𐬰𐬱𐬲𐬳𐬴𐬵𐬶𐬷𐬸𐬹𐬺𐬻𐬼𐬽𐬾𐬿𐭀𐭁𐭂𐭃𐭄𐭅𐭆𐭇𐭈𐭉𐭊𐭋𐭌𐭍𐭎𐭏𐭐𐭑𐭒𐭓𐭔𐭕𐭖𐭗𐭘𐭙𐭚𐭛𐭜𐭝𐭞𐭟𐭠𐭡𐭢𐭣𐭤𐭥𐭦𐭧𐭨𐭩𐭪𐭫𐭬𐭭𐭮𐭯𐭰𐭱𐭲𐭳𐭴𐭵𐭶𐭷𐭸𐭹𐭺𐭻𐭼𐭽𐭾𐭿𐮀𐮁𐮂𐮃𐮄𐮅𐮆𐮇𐮈𐮉𐮊𐮋𐮌𐮍𐮎𐮏𐮐𐮑𐮒𐮓𐮔𐮕𐮖𐮗𐮘𐮙𐮚𐮛𐮜𐮝𐮞𐮟𐮠𐮡𐮢𐮣𐮤𐮥𐮦𐮧𐮨𐮩𐮪𐮫𐮬𐮭𐮮𐮯𐮰𐮱𐮲𐮳𐮴𐮵𐮶𐮷𐮸𐮹𐮺𐮻𐮼𐮽𐮾𐮿𐯀𐯁𐯂𐯃𐯄𐯅𐯆𐯇𐯈𐯉𐯊𐯋𐯌𐯍𐯎𐯏𐯐𐯑𐯒𐯓𐯔𐯕𐯖

of the civil calendar. It must have been early recognized that the Nile began to rise afresh about the same time (near July 19th of the Julian calendar) that the brilliant star Sirius (the dog-star), after having been invisible for a prolonged period, was first again observed in the sky shortly before sunrise. Consequently this latter event, described by modern astronomers as the heliacal rising of Sirius and by the Egyptians as $\overline{\text{pr}}\text{t}$ Spdt 'the going up of (the goddess) Sothis', came to be regarded as the true New Year's Day (wpt-rnpt 'the opening of the year'), i. e. $\overline{\text{tpy}}$ (n) shw I 'first month of inundation, day 1'. Had this event always formed the beginning of the Egyptian civil year, the Inundation season (shw) would have corresponded roughly to middle July—middle November, Winter (pr t) to middle November—middle March, Summer (shmw) to middle March—middle July. Owing to the above-mentioned defect in the civil year, it sometimes happened that the real summer fell in the winter of the civil calendar, and *vice versa*. We know on the authority of Censorinus that a coincidence of the civil New Year's Day and the heliacal rising of Sirius took place in A. D. 139, and thence it is calculated¹ that a similar coincidence must have occurred in B. C. 1317 and 2773. In the period covered by this book three records of Sothic risings have come down to us, namely from an unspecified year of Tuthmosis III (11th month, day 28),² from year 9 of Amenophis I (11th month, day 9),³ and from year 7 of Sesostris III (8th month, day 16).⁴ Combination of these dates with those previously mentioned yields as the approximate corresponding years B. C. 1469, 1545, and 1877; the two first dates fit in admirably with other considerations, but the third has been thought by some to allow too small an interval between the Twelfth and the Eighteenth Dynasty.

In the Aramaic papyri of the Persian period and in the subsequent Greek and Coptic documents from Egypt the twelve months are no longer numbered and allotted to one or other of the three seasons, but receive names derived from certain feasts. The month-names in their Greek forms are Thōuth, Phaōphi, Athyr, Khoiak, Tybi, Mekhir, Phamenōth, Pharmouthi, Pakhōn, Payni, Epiph, and Mesorē. To translate $\overline{\text{tpy}}$ $\overline{\text{shw}}$ $\overline{\text{pr}}\text{t}$ as 'the 5th of Pharmouthi', as many scholars still do, is a gross anachronism, the more reprehensible since some of the originating feasts were in Dyns. XVIII–XX celebrated not in the month to which they gave their name, but on the first day of the following month.⁵ Thus Dyn. XVIII inscriptions inform us that the feast of Ernūtet, who gave her name to Pharmouthi, took place on the 1st day of the 1st month of summer,⁶ not in the 4th month of winter. A calendar from year 9 of Amenophis I gives the entire series of month-names in similarly advanced positions,⁷ whereas another calendar of Ramesside date⁸ shows the names in the places accorded to them in Greek times. Unsolved problems present themselves in connexion with these facts.⁹ Clearly the only scientific course is to render $\overline{\text{tpy}}$ $\overline{\text{shw}}$ $\overline{\text{pr}}\text{t}$ as 'fourth month of winter'.¹⁰

¹ The figures here given are taken from Winlock's article in *Proc. Amer. Philol. Soc.*, 83, 447, where most of the recent literature is quoted.

² *Urk.* iv. 827.
³ *Eb.*, calendar at beginning.

⁴ *AZ.* 37, 99.

⁵ See *AZ.* 43, 136.
⁶ *Düm. Kalender-inschr.* 38; cf. *L. D. Text*, iii. 283..

⁷ Above, n. 3.



⁸ *Ann.* 43, 179.


⁹ See my discussion in *Rev. d'Ég.* 10, 9–31, a reply to R. PARKER in *The Calendars of Ancient Egypt*, Chicago, 1950. An additional piece of evidence *JEA.* 41, 123.


¹⁰ It may sometimes be convenient to abbreviate as '8th month' or simply 'viii'.






Excurs. C







EGYPTIAN GRAMMAR

The Egyptians were the first to divide the day into 24 hours ( *wnwt*, var. ); there were twelve hours of the day and twelve hours of the night.

Exx.  *wnwt mht-10 nt hrw* tenth hour of the day.¹



 *wnwt 4-*nwt* nt grh* fourth hour of the night.²



These hours, which had their own religious names, were used mainly for religious and astronomical purposes.³ Ordinary parlance made shift with such phrases as  *m dw* 'in the morning';⁴  *nw n sty-r* 'the time of perfume of the mouth', i.e. time for the mid-day meal;⁵  *msyt* 'supper';^{5a}  *r tr n hwy* 'at time of night'.⁶ The Egyptians seem to have had no very precise instruments for measuring the hours, and the hours of the day were longer in the summer than in the winter.⁷ Still less was it possible to fix the length of a short space of time to which the name  *st* 'minute', 'moment' was given.

In conclusion, reference must be made to the 'decans', the 36 constellations, or parts of such, which rise at particular hours of the night during the 36 different periods of ten days constituting the year. These periods or 'decades' are named according to the calendar months in which they occur, with the addition 'first decade', 'middle decade', and 'last decade', exx.  *(sbd) 3(-nw n) iht*, *hrw (?) 10 tpy*,  *hrw (?) 10 hry-ib*,  *hrw (?) 10 hr-phwy*.⁸ The various decans have their own names, which have survived in Greek;⁹ examples are  Gk. Σμάτ,  Gk. Χών,  Gk. Ἐρῶ.

LESSON XXI

THE VERB (INTRODUCTORY)¹⁰

§ 267. **Verbs of different classes.**—In dealing with the *šdm-f* (§ 39) and *šdm-n-f* (§ 67) forms it served our purpose to regard these as built up from unchangeable verb-stems, to which the necessary inflexions were appended as suffixes. Only in the case of the verb *wnn* 'be' were we compelled to admit (§ 118) the existence of different forms of the *šdm-f*, namely  *wnn-f* and  *wnf*, each with its own particular range of meaning. It has now to be learnt that, while unchangeable stems are in the majority, they are by no means universal; in other words, that *wnn* is no isolated case.

A classification of Egyptian verbs is therefore required, and the basis of this must be the *mutability* or *immutability* of the stem. A second mark serving to distinguish the different verbal classes is the gender of the infinitives, some classes having masculine infinitives like  *cnh* 'to live', while others have infinitives showing the feminine ending *-t*, ex.  *mst* 'to bear', 'to give birth'.

¹ *D. el B.* 114.

² *D. el B.* 116.

³ Exception, *Urk.* iv. 655, 14.

⁴ *Eb.* 18, 2.

⁵ *Eb.* 50, 20; *T. Carn.* 14. See, too, *AZ.* 71, 86.

^{5a} STRICKER in *Oudh. Med.* 1948, 57, n. 2.

⁶ *Sin.* R 20.

⁷ L. BORCHARDT, *Altägyptische Zeitmessung*, Berlin 1920, in E. VON BASSERMANN-JORDAN, *Die Geschichte der Zeitmessung und der Uhren*; a brief account, R. W. SLOLEY in *JEA.* 17, 166.


⁸ CHASS. *Ass.* p. 146.




⁹ S. SCHOTT, *Die altäg. Dekane*, in *Stud. d. Bibliothek Warburg*, pt. 19; see, too, SETHE, *op. cit.* p. 98.

¹⁰ See SETHE, *Das ägyptische Verbum*, Leipzig, 1899-1902, and for the present lesson especially vol. i. §§ 314-482. General theory, see *Some Aspects*, 4 ff.

Sign-list








EGYPTIAN GRAMMAR

F 41  vertebrae conventionally depicted


Rarely det. in  ¹ *psd* 'back'. As det. of  ² *šrt* 'lust for blood' from an old sign  ³ depicting stalks of flax tied together and the bolls cut off.⁴

¹ *D. el B.* 116. ² *Urk.* iv. 18, 5; also *šrd* 'cut off', *Urk.* iv. 894, 11. ³ *Pyr.* 763, 1212. ⁴ See the scene *Paheri* 3.

42  rib


Ideo. or det. in  ¹ var.  ² *spr* (*špr*) 'rib'.³ Hence phon. *spr* (*špr*) in  *spr* 'approach' and derivatives. Similar signs with which  is liable to be confused are  D 24,  N 11, and  N 12.







¹ *P. Boul.* xi. vs. 8. ² *Siut* 1, 30. ³ *Pyr.* 81.

43  ¹ ribs of beef


Det. in  ² *špht* 'ribs of beef'.



¹ *Meir* iii. 25; see the picture *ib.* i. 10. ² *Meir* iii. 21.


44  leg-bone with adjoining meat (two different, seldom distinguishable, signs)


(1) Det. in  ¹ *iwr* 'thigh (of beef)', 'femur';² hence phon. det. or phon. *iwr*, exx.  *iwr* 'inherit';  *iwt* 'heritage'. (2) Det. in  ⁴ *swt* (*šwt*) 'leg of beef', 'tibia';² hence phon. *išw* (*išw*) in  ⁵ var.  ⁶ *išw*, 'exchange'.










¹ *Siut* 1, 276; cf. *Pyr.* 1546. ² See LORTET-GAILLARD, *La faune momifiée*, p. ix. ³ *BH.* i. 32. ⁴ *D. el B.* 107, 110; cf. *Pyr.* 64. ⁵ References, p. 132, top. ⁶ *Urk.* i. 2, 8.

45  bicornuate uterus of heifer¹







Ideo. or det. in  ² var.  ³ *idt* (?)⁴ 'vulva', 'cow'.

¹ *PSBA.* 21, 277; verified together with Griffith in an Oxford laboratory. ² *P. Kah.* 5, 2. ³ *Eb.* 96, 5. ⁴ For this reading, not *hmt*, see on  N 41.

46  ¹ intestine

Ideo. in  ² *kšb* 'intestine'; hence semi-ideo. in  *m-kšb* 'in the midst of' (§ 178);  *k(?)b* 'double'. Ideo. and later phon. also in  ³ var.  *phr* 'turn', 'go round' and derivatives;  ⁴ var.  *dbn* 'go round' and derivatives. Det. (from Dyn. XII) in  *wdb*, var.  ⁵ *wdb*, 'turn' and derivatives.

¹ That this, rather than any of the forms F 47-49, is the correct form is shown by its frequency in good hieroglyphic texts and by the hieratic evidence, see MÖLL. *Pal.* i. no. 183. Hieroglyphic exx.: *m-kšb*, *Paheri* 9, 11; *phr*, O.K., *Gem.* i. 11; M.K., *Cat. d. Mon.* i. 155; Dyn. XVIII, *D. el B.* 62, 154; *Paheri* 9, 7; *dbn* 'deben-weight', O.K., Berl. *Al.* i. 72 (no. 8032); *Sagg. Mast.* i. 2; Dyn. XVIII, *Puy.* 36; NORTHAMPT. 1, 21; *wdb* 'cloth (?)', *D. el B.* 109; *wdb* 'shore', *Paheri* 9, 24. ² *Eb.* 42, 12. ³ *Sinai* 139, 10.



























47  ¹ alternatives to last
(47)  ² (N.B. No confusion
(46)  with  ⁴ M 11 before
48  ³ the Amarna period)
49  ³

Use as last.


















¹ Varies with F 46 for *phr* in *Pyr.*; *Urk.* iv. 270, 7; *D. el B.* 10, 45; *dbn*, *D. el B.* 81. ² Ex. *phr*, *D. el B.* 11. ³ Regularly for *dbn* 'deben-weight' in the Annals of Tutmosis III, exx. *Urk.* iv. 699, 718, 733; contrast *phr*, *Urk.* iv. 655, 9, 14. Exceptionally also *phr*, *Rekh.* 3, 21. ⁴ In *wdb*, *Amarn.* iii. 20. Probably never in *kšb*, *phr*, or *dbn*.

BIRDS

Sign-list


































- F 50**  combination of  F 46 In  ¹ *sp̄hr*, var. O.K.  ² *šp̄hr*, 'copy', 'write out'.
and  S 29 ¹ Rhind, title. ² WEILL, *Décr.*, Pl. 4, 1.
- 51**  piece of flesh (also Det. limb, flesh, exx.  *rt* 'limb';  *hr* 'flesh'; parts of the body, exx.  *nhbt* 'neck', 'shoulder';  *mist* 'liver'; meat, ex.  *iwf* 'meat'. As abbrev.  ¹ is found for  *hrw* 'members', 'body'; and  ³ for  *kns* 'vagina'. Possibly a different sign is  ⁴ as phon. *is* or *ws* in  *3st* 'Isis' and  *Wsr* 'Osiris', writings found on the M.K. coffins for some superstitious reasons; the former has as rare variant  ⁷. In Dyn. XIX or before  changes into the egg  H 8 and subsequently  becomes a generic det. for goddesses.
- ¹ *Urk.* iv. 959, 2. ² *Id.* 9. ³ *Eb.* 94, 5. 8, cf. 93, 21. ⁴ Note the position. It has been proposed to derive this phonetic sign from *isw* 'testicle' (*Wb.* i. 131), see NORTHAMPT. p. 9*; another possibility is that it is an adaptation of the hieratic sign for 'son' (*st*), which is likewise later shown in hieroglyphic as the egg; see on H 8. ⁵ LAC. *TR.* 2, 81; LAC. *Sarc.* ii. p. 129. ⁶ *AZ.* 46, 94. ⁷ PETRIE, *Gizeh and Rifeh* 13 F; CAPART, *Recueil de Monuments* i. 20.
- 52**  ¹ excrement (Pyr.) Det. in Pyr.  *hs* 'excrement'.
¹ *Pyr.* 127. Later replaced, first by  N 32 and then by  Aa 2.























Sect. G. Birds

- G 1**  Egyptian vulture (*Neophron percnopterus*)¹ Ideo. in Pyr.  ² 'vulture'; hence phon. *z*. Often indistinguishable from  (*tyw*) G 4.
¹ *Hier.* p. 19. ² *Pyr.* 1303; sim. *ib.* 1729. In the more general sense 'bird', Louvre C 14, 10.
- 2**  two vultures  G 1 as Phon. *z*, ex.  *ms* 'see'.
monogram
- 3**  combination of  G 1 and  U 1 Phon. *ms*, ex.  *mswy* 'renew'.
- 4**  ¹ the long-legged buzzard (*Buteo ferox*) Phon. *tyw*, exx.  *hrtyw-ntr* 'necropolis workmen';  *i-tywn(y)* 'welcome ye!' (§ 313). Reading, see § 79. Often indistinguishable from  (*y*) G 1.²
¹ A brown bird, with head rounded and breast more prominent than in G 1, see *Hier.* 1, no. 1; cf. SHELLEY, *Birds of Egypt*, Pl. IX. ² Ex. Cairo 20046, qu. § 488.
- 5**  falcon (exact species not determined¹) Ideo. in  var. Pyr.  ² *Hrw* '(the falcon-god) Horus'.
¹ So KEIMER; taken to be *Falco peregrinus* by LORET, *Bull.* 3, 1; BÉNÉDITE, *Faucon ou épervier*, in *Monuments Piot*, 1909. ² *Pyr.* 1690.
















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
EGYPTIAN GRAMMAR













- G 6**  falcon with flagellum  Det. in   ¹ *bik* 'falcon'.
S 45 ¹ *Urk.* iv. 159, 13.
- 7**  falcon of Horus on the standard  R 12 Det. in the O.K. writing  ¹ *Hr(w)* 'Horus'. Hence in O.K. and later often archaistically det. of gods, ex.  *Imn* 'Amūn', or of the king, ex.  *nsw* 'king'. So too regularly in hieratic, while hieroglyphic prefers  A 40. Also ideo. in pronouns of 1st pers. sing. when the king is speaking, exx.  ² *i*,  ³ *wi* 'I', 'me'.
¹ *Urk.* i. 132, 3. ² See p. 39, n. 3. ³ *Urk.* iv. 158, 16.
- 7***  falcon in boat ¹ Ideo. for the god of the XIIth nome of Upper Egypt, whose name  has been inferred from somewhat complicated data to read 'nty' 'Anty', meaning perhaps literally 'he with the claw(s)'. This god occurs also in other parts of Upper Egypt, particularly in the XVIIIth nome, where his name was possibly read differently. Closely connected was also a biune god 'ntywy' 'Antywey' worshipped in the Xth nome and elsewhere, whom the Greeks equated with their mythical giant Antaeus.²
- 7****  variant form of G 7* ¹ ² For the sources of these forms see *JE.A.* 17, 246. ² Full discussions in *AEO.* ii., see the Index p. 317 under 'Anty' and 'Antywey'.
- For  as old symbol of the West, see R 13. For  see O 10.
- 8**  falcon of Horus on the sign for gold  S 12 In title of the king  *Hr* (or *bik*?) *n nbw* 'Horus (or falcon?) of gold'.¹
¹ See p. 73 above.
- 9**  falcon of Horus bearing the sun  N 5 on head In  ¹ *Rc-Hr-šhty* ' (the composite god) Rēc-Harakhti'.
¹ In cartouche of the Aten, SETHE, *Göttinger Nachrichten*, 1921, 109, n. 1, cf. *Urk.* iv. 144-5. The sun behind the falcon of Horus in royal titularies was perhaps not read, cf. *Urk.* iv. 211, 15 with *ib.* 4.
- 10**  ¹ falcon on a special sacred bark Det. in  ² *Skr (Zkr)* ' (the god) Sokar'.^{2a} Also det. in  ³ *hnw* 'the *hnw*-bark (of Sokar)'.
¹ Leyd. *Denkm.* i. 17 (*Zkr*). ² *Dend.* 8; BUDGE, p. 38, 13. ^{2a} The often used Sokaris appears to be a spurious classical form; it is doubtful whether Σωχαρίης as personal name is derived from that of the god, see *AEO.* ii. 124.* ³ *NAV.* ch. 1, 21. *Sim. Pyr* 138.
- 11**  archaic image of a falcon Det. in  *šm* (also *šm*, *šm*) 'divine image'; also in  ¹ *šnbt* 'breast'.
¹ *Urk.* iv. 612, 4.
- 12**  archaic image of falcon with flagellum  A S 45 Like  G 11, det. in  *šm* 'divine image'.¹
¹ BRUGSCH, *Thes.* 1078.

- K 3**  ¹ a fish (*Mugil cephalus*; Arabic *bûri*) ² Det. in  ³ *cdw* 'the *bûri*-fish'. Hence phon. *cd* (*cd*?) in the title  ⁴ *cd* (?) -*mr*, var.  ⁵ *cd-mr*, 'administrator (of a province)', probably lit. 'excavator of canal(s)'.
¹ *D. el B.* 109. ² GAILLARD 93. ³ *Eb.* 82, 9. ⁴ Dyn. XVIII, *D. el B.* 109; O.K., *Urk.* i. 5, 17; II, 10. ⁵ *Urk.* iv. 952, 13. The writing *cd* in GARD. *Sin.* 152 is not quite conclusive for the O.K. reading.
- 4**  ¹ oxyrhynchus fish (*Mormyrus kannume*) ² Ideo. in  ³ *hst* 'oxyrhynchus'. Hence phon. *h*, ⁴ exx.  var. Pyr.  ⁵ *hst* 'corpse';  ⁶ *hst*, var.  ⁷ *hst*, 'widow'.
¹ *D. el B.* 152. ² GAILLARD 26. ³ *Ti* III, fem.; the *t* is written in the tomb of Mereruka, A 13, east wall. ⁴ Reading, *Verbum* i. p. 156, top. ⁵ *Pyr.* 474. ⁶ *BH.* i. 8, 20. ⁷ *Sint* 3, 5.
- 5**  ¹ a fish (*Petrocephalus bane*) ² Phon. det. *bs* (*bz*) in  ³ *bs*, var. O.K.  ⁴ *ibz*, 'introduce', 'enter'. A very similar fish is used as generic det. fish, ex.  ⁵ *rmw* 'fish'; fishy smell, ex.  ⁶ *hns* 'stink'.
¹ Ex. *Rekh.* 10. ² GAILLARD 17. The characteristics are shown in earlier forms, *Bull.* 11, 41. ³ *Urk.* i. 87, 17. ⁴ *Urk.* iv. 954, 7. ⁵ *Hearst* 2, 17.
- 7**  a fish (*Tetrodon fahaka*) ¹ Det. of  ² *spt* 'be discontented'.
¹ GAILLARD 97. ² Brit. Mus. 159.
- 6**  ¹ fish-scale (also written ) Ideo. or det. in  ² var.  ³ *nšmt* 'fish-scale'.
¹ Leyd. *Denkm.* ii. 5; not to be confused with  L 6. ² *M. u. K.* 1, 2; see *Rec.* 38, 62. ³ Leyd. *Denkm.* ii. 5.

Sect. L. Invertebrata and Lesser Animals



- L 1**  dung-beetle (*Scarabaeus sacer*) Ideo. in  ¹ var. Pyr.  ² *hpr* 'dung-beetle'. Hence phon. *hpr* in  var. Pyr.  ³ *hpr* 'become' and derivatives.
¹ *Eb.* 88, 13. ² *Pyr.* 697. ³ *Pyr.* 212.
- 2**  bee Ideo. in  ¹ *bit* 'bee'; also in  ² *bit* 'honey'. Hence phon. *bit* ³ in  var. Pyr.  ⁴ *bit(y)* 'king of Lower Egypt'. For  *n-sw-bit* 'king of Upper and Lower Egypt' see § 55 and p. 73.
¹ *P. Kah.* 3, 2. ² Coptic *ebiō*. ³ Reading, *AZ.* 30, 113. ⁴ *Pyr.* 724.
- 3**  fly Det. in  ¹ *ff* 'fly'.
¹ From a gold fly given as an honorific decoration, BISSING, *Thebanische Grabfunde* 6; see *PSBA.* 22, 167. ² *Urk.* iv. 39, 1; 893, 12; see *AZ.* 48, 143.
- 4**  common locust (*Acridium peregrinum*) Det. in  ¹ *snhm* (Pyr. *znhm* ²) 'locust'.
¹ SCHIAPARELLI, *Relazione . . . lavori d. Miss. Arch.* ii. p. 171, fig. 156. ² *Pyr.* 891.














M 3  branch

Ideo. in  *ht* 'wood', 'tree'; hence phon. *ht*, exx.  *htyw* 'terrace';  *nht* 'strong'. Det. wood, ex.  *hbny* 'ebony'; wooden objects, exx.  ¹ *wht* 'column';  ² *knw* 'palanquin'. Vertically  in  ³ *qr*, var.  ⁴ *qr*, 'search out', lit. perhaps 'harpoon' (vb.); ⁵ here  is probably corruption of an old sign  or .




¹ *Urk.* iv. 765, 13. ² *Westc.* 7, 12. ³ *Urk.* iv. 384, 12. ⁴ Thebes, tomb 110.














⁵ Cf. *qr mw* 'spear fish', *P. Kah.* 33, 16. ⁶ *Pyr.* 1105 in *qr bw* 'curly'.

4  palm-branch stripped of leaves and notched (rare var. ¹) to serve as tally^{1a}




Det. in  *rnpt* 'be young', 'vigorous'. Hence *rnpt* in  var. *Pyr.*  ^{1b} *rnpt* 'year', with  ideographically as symbol; with similar sense ideo. in  *hst-sp* 'regnal year' (p. 204) and in  ^{1c} *snf* (from *sn-nw-f* 'its second') 'last year'. Possibly ideo. of time (if not phon. det.) also in  ² *tr* 'time', 'season', where it usually appears in the form  M 5 or  M 6. Elsewhere also  is an occasional substitute for  M 5,  M 6, or  M 7.³








¹ *BH.* i. 8. ^{1a} *JEA.* 34, 119, cf. HORAPOLLO I, 3 *φολύκη*; in pictorial representations always with many notches, e.g. *JEA.* 4, Pl. 4; 30, Pl. 4; MORET, *Royaume Pharaonique*, figs. 17, 18, 19. ^{1b} *Pyr.* 965, as designation of Sothis; Coptic *rompt* 'year'. ^{1c} *Adm.* p. 102. ² Written *trw*, *Urk.* iv. 195, 4. ³ In *ptr* 'see', *Siut* 1, 220; Cairo 20538, i. c 3; *rnpt* 'vegetables', 'fruit', *ib.* ii. c 25.

5  combination of  M 4 and  X 1

With sportive ideographic intention (palm-branch planted in  in *Pyr.*  *tr*, var.  *t(i)*, 'season'.¹ Hence  (see on M 4 for ) becomes in M.E. characteristic det. in  ² abbrev.  *tr* 'season'. However,  M 6 is a commoner substitute for , though  interchanges with  in some uses really belonging only to the latter, exx.  ⁴ *pr* 'battlefield';  ⁵ *Tr-mri* 'Ta-meri', i.e. Egypt.

¹ SETHE, *Pyramidentexte* iv. § 132. ² *Urk.* iv. 384, 9. Sim. plur. *itr(w)*, *Sinai* 90, 19. ³ *Sinai* 90, 3, 11; *Ikhern.* 14. ⁴ *Urk.* iv. 32, 10. ⁵ *Urk.* iv. 102, 11.











































6  combination of  M 4 and  D 21

With sportive ideographic intention in *Pyr.*  ¹ *tr* 'season'. In M.E. det. in  ² abbrev.  *tr* 'season'. Hence phon. det. *tr*, *t(i)*, exx.  *tr* 'pray' (§ 256);  ⁴ *htr* 'assess' (taxes); also phon. det. *ri*, exx.  ⁵ *pr* 'battlefield';  ⁶ *Tr-mri* 'Ta-meri', i.e. Egypt.

¹ SETHE, *Pyramidentexte* iv. § 132, where a word *rr* 'season' is perhaps unnecessarily assumed. ² *Urk.* iv. 343, 13. ³ *Urk.* iv. 195, 8. ⁴ *Rekh.* 3, 28. ⁵ *Urk.* iv. 38, 11. ⁶ *Urk.* iv. 325, 15. (*Pt*)-*tr-mri* is Πτ(μ)ρις in a fragm. of Ephorus, there wrongly given as a name of the Delta only, GARD. *Sin.* 81.








































TREES AND PLANTS

Sign-list

- M15**  clump of papyrus with buds bent down Det. papyrus and watery regions, exx.  *idhw* 'swamps' (of the Delta);  *dyt* 'papyrus-marsh'. Phon. det. *wsh* in  *wsh(y)* 'hall of the Inundation' from the Pyr. stem  *ishi*, whence  *sh* 'thicket' (of papyrus). Hence phon. *sh* (or ideo.?) in  var. Pyr.  *sh-bit* 'Chemmis' (a Delta place), possibly understood as 'Papyrus-thicket of the King of Lower Egypt'.^{3d} Det. in  varr.  *Tz-mhw* 'Lower Egypt', 'the Delta',⁴ whence  *mh-s* 'the crown of Lower Egypt'.
- ¹ *Bull. Metr. Mus. New York*, 1914, 219. ² *AZ.* 40, 48. ³ *Pyr.* 280.
^{3a} Coffins, S 2 C 207. ^{3b} *ERM. Hymn.* 15, 1. ^{3c} *Pyr.* 2190; without inversion, *JEA.* 24, Pl. II, 3. 6. ^{3d} See, however, *JEA.* 30, 54, n. 3.
⁴ *AZ.* 44, 10. ⁵ *Ib.* 20.
- 16  clump of papyrus Phon. *hs*, exx.  var.  *hs* 'would that!' (§ 238);  *hsh* 'capture'. In group-writing (§ 60)  or  is *h*.² As O.K. det. in  *Tz-mhw* 'the Delta' and related words  is often replaced in M.E. by  M 15, but exx. with  are still fairly common,⁴ exx.  *Tz-mhw* 'the Delta';  *mh-s* 'crown of Lower Egypt'.
- ¹ *Brit. Mus.* 562, qu. § 364. ² BURCHARDT § 94. ³ *Urk.* i. 64, 8; 101, 11.
⁴ *AZ.* 44, 10. ⁵ Louvre C 172; *Urk.* iv. 583, 7. ⁶ *Brit. Mus.* 574, 6.
- 17  flowering reed Ideo. in  *i* 'reeds'. Hence phon. *i*. For  *y* see § 20.² In group-writing (§ 60)  corresponds to Hebr. י,  to י.³
- ¹ *Bersh.* ii. p. 19. *Sim. Eb.* 49, 2. ² See the full discussion *Verbum* i. §§ 121-4. ³ BURCHARDT, § 16; cf. ALBRIGHT, *Vocalization*, pp. 33-4; 36-7.
- 18  combination of  M 17 and  D 54 In  *ii* 'come' and the related words.
- 19  heaped conical cakes between reed  M 17 and sign like  U 36⁰ Det. in  *abt* 'offering', 'pile of offerings' and the related verb.³
- ⁰ *DAV. Rekht.* Pl. 49; p. 44, n. 5. ¹ *LAC. TR.* 14, 7. ² *Urk.* iv. 769, 3.
³ *Wb.* i. 167.
- 20  reeds growing side by side Ideo. or det. in  varr.  *shy* (*shy*)¹ 'marshland', 'country' and its derivative  *shy* 'peasant'. Occasionally phon. *sm* (*sm*) like  M 21, ex.  *sm* 'occupation', 'pastime'.
- ¹ *Pyr.* 275. ² *Urk.* iv. 462, 13. *Sim. sm* 'succour', *Dend.* 15, 15.









































Sign-list

EGYPTIAN GRAMMAR

- M 21**  like the last, but with a loop at the side
 Ideo. or semi-ideo. in ¹ *sm*, var. Pyr. ² *sm*, 'herb', 'plant'. Hence phon. *sm* (*sm*), ex. ³ *sm* 'succour'.
¹ *Urk.* iv. 775, 15. ² *Pyr.* 1722. ³ *Brit. Mus.* 1164, 1, where the form is almost like D 61. But see *Pyr.* 892.
- 22  rush with shoots⁰
 Cf. Pyr. ¹ *nhbt* 'germination', 'shooting up'. Hence phon. *nhb* in  var. Pyr. ² *Nhbt* 'the vulture-goddess) Nekhbet'.
⁰ According to LORET in *Griff. Stud.* 308 the marsh club-rush (*Heliocharis palustris*). ¹ *Pyr.* 4; *Sah.* Text, p. 109. ² *Pyr.* 1229.
- (22)  two rushes with shoots
 Cf. Pyr. ¹ *nnt* 'rushes'. Hence  is phon. *nn*, exx.  var.  *nn* 'this' (§ 110); ² *nni* 'be weary'.
¹ *Pyr.* 557.
- 23  plant regarded as typical of Upper Egypt (probably form of  M 26, but without flowers)
 Ideo. in ¹ *swt* (*swt*) 'the *swt*-plant'.¹ Hence phon. *sw* (*sw*),² ex.  *swt* 'but' (§ 254). The word  var. ³ 'king of Upper Egypt' probably originally read *nšwt* 'he who belongs to the *swt*-plant', but before M.K. had become  *nsw* (*nsw*);  'kingship' is perhaps to be read *nsyt*. For  *n-sw-bit* 'king of Upper and Lower Egypt' see § 55. Sometimes  is inaccurately used for  M 24 or  M 26.⁴ In group-writing (§ 60)  stands for *s*.⁵
¹ *AZ.* 49, 18. ² Reading from O.K. varr. of *šmšw* 'elder'; also from other words cited *Wb.* iv. 60, 2; 65, 13; 74, 2; cf. too the exceptional writing of *swšh* 'make broad', *Ikhern.* 24. ³ *AZ.* 49, 15; *Rec.* 38, 69. ⁴ *AZ.* 44, 22. ⁵ BURCHARDT § 106.
- 24  combination of  M 23 and  D 21
 With sportive pictorial intention (plant *swt* growing from mouth *r*),¹ phon. *rsw* in Pyr. ² *rswt* 'South' and the related words.³ In M.E. 'South' is  *rsy*.
¹ SETHE, *Pyramidentexte* iv. § 132. ² *Pyr.* 470. ³ *AZ.* 44, 1.
- 25  confusion of  M 24 and  M 26¹
 Faulty writing either for words connected with ² *rswt* 'South', ex. ³ *rsyw* 'southerners', or for words connected with  *šmꜥw* 'Upper Egypt', ex. ⁴ *it šmꜥ* 'Upper Egyptian corn'.
¹ *AZ.* 44, 22. ² *Urk.* iv. 909, 3. ³ *PSBA.* 18, 196.

Sign-list

EGYPTIAN GRAMMAR

- N 6  sun with uraeus (Dyn. XVIII)
 Ideo. or det. in ¹ var. ² *rr* 'sun'.
¹ Westc. II, 5. ² Ex. p. 291.
- 7  combination of ☉ N 5 and T 28
 Abbrev.¹ for  *hrt-hrw* 'day-time', 'course (of day)', lit. 'what belongs to the day'.
¹ Ex. Urk. iv. 992, 4.
- 8  sunshine
 Det. (or ideo.) sunshine, exx. ¹ var. ² *ishw* (Pyr. *ishw*) 'sunshine'; ³ *psd* 'shine';  var. ⁴ *wbn* 'rise'. From this last, phon. *wbn* in ⁵ var. ⁶ *wbnw* 'wound'. Phon. *hnmmt* in ⁷ var. ⁸ var. Pyr. ⁹ *hnmmt* 'the sun-folk' of Heliopolis.
¹ Urk. v. 55, 9. ² Urk. iv. 19, 11. ³ Urk. v. 55, 4. ⁴ Urk. iv. 585, 12.
⁵ Eb. 107, 5. ⁶ Eb. 67, 1. ⁷ Urk. iv. 17, 7. ⁸ Cairo 20498. ⁹ Pyr. 139.
- 9  moon with its lower half obscured (Dyn. XVIII)¹
 Ideo. or det. in ² *psdntyw*, varr. ³ *psdn*, var. Pyr. ⁴ *psdtyw*, 'New-moon festival'. Hence phon. det. *psd* in ⁵ *psdt* 'divine ennead', 'company of nine gods'. This sign is liable to confusion with the loaf ☉ X 6.
¹ Cairo 34002 = LACAU, Pl. 3. Sim. BH. i. 24, 1. ² Urk. iv. 177, 9. ³ Urk. iv. 27, 4. ⁴ Urk. iv. 836, 1. ⁵ Pyr. 794. ⁶ Reading, AZ. 47, 8.
- 10  alternative form of last (Dyn. XVIII)¹
 Use as last.
¹ Möll. Pal. ii. no. 573.
- 11  crescent moon (also vertically)¹ or (² when used as det.)
 Ideo. or det. in  varr. , *ih* 'moon'; hence phon. det. or abbrev. in ³ var. ⁴ *wch* 'carob beans'. Combined with ★ N 14, ideo. in  var.  *ibd* 'month'; for the reading cf. an O.K. personal name ⁵ *ibdw* and Sa'idic *eböt* 'month'; in dates abbreviated as , ex.  *ibd* 3 'month 3' (§ 264). In  abbrev. *šp* 'palm' (as measure § 266, 1) the sign has doubtless a different pictorial origin.⁶ In some inscriptions is written for *spr*, F 42.⁷
¹ Pyr. 732. ² Pyr. 1104; Urk. iv. 813, 5. ³ Rec. 25, 155. ⁴ Rek. 12; cf. Eb. 14, 8. ⁵ See Wb. i. 8; nevertheless the usual reading *ibd* is retained *ib*. i. 65.
⁶ Möll. Pal. i. no. 680; ii. no. 680. ⁷ Pakeri 5, row 3.
- 12  alternative form of last (Dyn. XVIII)
 In ¹ varr. ² *ih* 'moon'.
¹ Urk. iv. 808, 4. ² Urk. iv. 12, 15; 14, 7. ³ Urk. iv. 30, 4. 13.
- 13  combination of half of  N 11 and ★ N 14
 Ideo. in ¹ var. ² . . . *nt*³ 'half-month festival'.
¹ Urk. iv. 112, 8. ² BH. i. 24. ³ Reading unknown, see Wb. ii. 198, 2; iv. 147, 1.







Sign-list



















































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


























- N 33** ○ grain of sand, pellet, or like. (For similar signs cf. ○ D 12 and the circle, see after Z 8)
- Det. sand, in 'sand'; metal or mineral (often repeated ...), exx. *nbw* 'gold'; *msdmt* 'black eye-paint', 'kohl'; medicaments, incense, etc. exx. *ṭ* 'pellet'; *phrt* 'medicine', 'prescription'. A sign of like appearance rarely takes the place of dangerous signs such as A 14 in religious documents, ex. *ḥftyw* 'enemies'; this practice dates from Pyr.² Sometimes ... or is substituted for the plural strokes , exx. *gnwt* 'annals'; *šsrw* 'bags'.
¹ D. el B. 10. ² AZ. 51, 18. 63. ³ Urk. iv. 86, 3. ⁴ Urk. iv. 1143, 13.
- 34** ¹ ingot of metal (Dyn. XVIII; in Dyn. XI the sign resembles W 13;² in Dyn. III–V it resembles X 3³)
- Ideo. in 'copper', early perhaps read *bṯ* and later *ḥmt* (?).⁴ Det. objects of copper or bronze, exx. *ṇḥ* 'mirror'; *ḥrw* 'weapons'; *mṯb* 'axe'.
¹ Puy. 38. ² JEA. 4, Pl. 9. ³ Medum 13; Palermo stone 5, 4; rather different, Gebr. i. 13, reg. 3. ⁴ AZ. 53, 51, n. 2. The reading *bṯ* would be confirmed for early times if the compound word written with this sign JEA. 4, Pl. 9, l. 10 proved to be really *bṯ-rwḏ*, the Coptic *barōt* 'copper'. The supposed later reading *ḥmt* (?) is based solely on Coptic *homent*, *homt*.
⁵ Adm. 8, 5. ⁶ Urk. iv. 656, 2. ⁷ GARD. Sin. 51. 159.
- 35** ripple of water (rarely vertically)¹
- Cf. *nt* 'water'.² Hence (?) phon. *n*. Perhaps phon. *n* too when used as a substitute for D 35 both in *n* 'not' and in *nu* 'not' (§ 104). In group-writing (§ 60) , , and are all used for *n*,³ while appears, as does also in Dyn. XIX, to correspond to *l*,⁴ ex. *ṣḥt inr* 'Field-of-Reeds'. In *ḏt* 'serf' replaces the sign of land = N 17, a curious substitution (or error of transcription?) found also in Pyr.⁷
¹ Louvre C 1. ² SETHE, *Alphabet* 153. ³ BURCHARDT §§ 67. 69. 71. ⁴ *Ib.* § 81. ⁵ Urk. iv. 1194, 2. ⁶ Cairo 20161. ⁷ Pyr. 1217 (*ṯ*); 1713 (*ṣkr*).
- (35)** three ripples
- Ideo. in *mw*¹ 'water'. Hence phon. *mw*, exx. *šmw* 'summer'; var. *mw* 'muu-dancers';² *hdmw* 'footstool'; phon. *m* in group-writing (§ 60), ex. *Ynm* 'Yenoam', Palestinian place-name. Det. water, liquid, exx. *wrw* 'wave'; *fdt* 'sweat'; actions connected with water, exx. *iri* 'wash'; *sw(r)i* 'drink'. The composite det. (in hieroglyphic also) for rivers, lakes, seas comes into vogue in Dyn. XVIII, exx. *itrw* 'river'; *ḥnw* 'brook'.
¹ Coptic *mow*. Cf. *mw* 'semen', phonetically Pyr. 123. ² GARD. Sin. 70. ³ Urk. iv. 744, 6. ⁴ DÉV. *Graphies*, no. 9. ⁵ Urk. iv. 655, 13. ⁶ *Sim. ib.* 3, 10.

Sign-list








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- O 29  wooden column¹ (also found vertically ) Cf. ² 'column'. Hence phon. *ʕ*, exx.  *ʕ* 'great'; ³ var. Pyr.  *ʕ* 'infant'. In group-writing (§ 60)  or  is phon. *ʕ*, exx.  *Tʕmt* 'Taʕmetj', f. personalname;  *Ynʕm* 'Yenoam', Palestinian place-name.
- ¹ As support of the booth O 22, *Medum* 10. ² *P. Kah.* 13, 2. ³ Louvre C 1, 10.
⁴ *Pyr.* 1105. ⁵ BURCHARDT, § 26. ⁶ *Urk.* iv. 11, 9. ⁷ *Urk.* iv. 744, 5.
- 30  supporting pole Ideo. or det. in  var.  ¹ *shnt* (*zhnt*)² 'support' of heaven. For a similar sign, but reversed , see after U 12.
- ¹ Four times repeated, 'the four supports', *Urk.* iv. 843, 2. ² Reading with *s*, *Pyr.* 1559; *Harh.* 365.
- 31  door Ideo. or det. in  var. ² 'door'; hence very rarely phon. *ʕ*, ex.  *ʕmt* 'Asiatic woman'. Det. open, exx.  *wn* 'open';  *sn* 'open'.
- ¹ *Pyr.* 54; see the picture PETRIE, *Deshasheh* 21. ² In the title *ʕy-ʕ* 'door-keeper', Cairo 20103, 1; 20184, k. ³ *Urk.* iv. 743, 4.
- 32  gateway Det. door, gateway, exx.  ¹ abbrev.  *sb* (*šb*) 'door';  *sh* 'gateway'.
- ¹ *D. el B.* 137. ² *Urk.* iv. 845, 13.
- 33  façade of palace or tomb Det. in  *srh* 'banner' for the Horus name (p. 72).
- ¹ *Urk.* iv. 160, 12.
- 34  bolt Ideo. in  ¹ *s* (*z*) 'bolt'. Hence phon. *s* (*z*). Also as substitute for  R 22 in ² var. Pyr.  *Hm* 'Letopolis', the modern Ausim NW. of Cairo.⁴
- ¹ *Urk.* iv. 498, 11. ² Cairo 20498; *Harh.* 535. Det. with the shrine O 20, Cairo 20738. ³ *Pyr.* 1670. ⁴ From Dyn. XIX onward, however,  is often actually written at the beginning of this place-name (GAUTHIER, *Dict. géogr.* V 45), which appears from the Gk. personal name Πετεαβουσιος (gen.) = Πι-δι-Ἡρ-νδ-Σην really to have read *Shm* or *Shn* (SPIEGELBERG, *Äg. u. gr. Eigennamen*, 28*, no. 198 a).
- 35  combination of  O 34 and  D 54 In a number of words implying motion and having *s* (*z*) as a characteristic radical, exx.  *sb* 'go', 'pass', 'send';  *si* 'perish', later replaced by  *sb*;  rare var.  *ms* 'bring', 'offer';  *is* 'go' (imperative, § 336);  var.  var. Pyr.  *sy* (*zy*) 'who?', 'what?' There is much confusion in the value of , owing to the tendency (1) to write  alone for *sb*, and (2) to write  for simple *s*.²
- ¹ *Pyr.* 438. ² *ÄZ.* 48, 31.
- 36  wall⁰ (occasionally horizontally ) Ideo. or det. in  var.  ¹ *inb* 'wall'. Det. wall, exx.  ² *sbt* 'surrounding wall';  ³ *wmt* 'bulwark', 'fortification';  ⁴ *snb* 'overleap' a wall.
- ⁰ In the earliest times perhaps plan of a brick enclosure with buttresslike projections, but later certainly interpreted as a wall, cf. A 35 and O 37. See SCHARFF, 18.
¹ *Urk.* iv. 764, 9. ² *Urk.* iv. 765, 7. 16. ³ *Urk.* iv. 661, 5. ⁴ *Sin.* R 141.



- P 2  ship under sail Det. in  *hnti* 'sail upstream'.
- 3  sacred bark (details vary greatly in different cases)¹ Ideo. or det. in  var.  *wi* 'sacred bark'. Det. divine boats, exx.  *mndt* 'bark of the dawn';  *nsmt* 'the *neshmet*-bark', i.e. the sacred boat of Abydos. Also det. sail, when divine journeys are meant, ex.  ² *di* 'cross' sky, said of Rē.
- ¹ For different forms see *Ikhern.* 14. 23 (*nsmt*); Cairo 20024 = *Mus. ég.* i. 17 (*mndt*, *mskt*); *Urk.* iv. 366, 6. 7 (*mndt*, *mskt*). ² *D. el B.* 114.
- For  see G 7*. For  see G 10.
- 4  fisherman's boat with net Semi-ideo. in  *wh* 'fisherman', plur.  ¹ *whw*, together with the related words.
- ¹ *Bersh.* ii. 16 without the plural strokes. Cf. Sādic *ortge* 'fisherman'.
- 5  sail Ideo. or det. in  var.  *trw*¹ 'breath', 'wind'. Det. wind, exx.  *mhyt* 'north wind';  *drw* 'storm'; sail, in  ² *htrw* 'sail'. Ideo. also in  var.  *nfw* 'skipper', late var.  *nfy*.²
- ¹ Reading, *Pyr.* 309; see *ÄZ.* 24, 86. ² DÜMICHEN, *Kalenderinschriften* 35, 49. ³ LEPSIUS, *Todtenbuch*, ch. 99, 23. Coptic *neef*.
- 6  mast⁰ Phon. *ch*¹ in  var.  *ch* 'stand' and derivatives.
- ⁰ For the problem of the form (also in P 5, 7) see *Sah.* II, p. 161. ¹ That *h* forms part of the reading is shown by a late spelling of *h'w* 'limbs', BRUGSCH, *Wörterbuch*, Suppl. 272.
- 7  combination of  P 6 and  D 36 Use as last, ex.  ¹ *ch'w* 'ships'.
- ¹ *Urk.* iv. 702, 15.
- 8  oar (also often horizontally in  § 55) Det. oar, exx.  ¹ *wsrw* 'oars';  ² *hpt* 'oar'. Perhaps from a word  ³ var.  ⁴ 'oar' known only from the king's name  ⁵ *Nb-hrw(?)*-*Rc* 'Nebkherurē' phon. *hrw*, exx.  var.  *hrw* 'voice';  *hrwy* 'enemy'.
- ¹ NAV. 99, 23. ² A secondary word, see *ÄZ.* 62, 4. ³ Value deduced only from phonetic use. ⁴ *D. el B.* (XI) iii. Pl. 11. ⁵ Now recognized as distinct from king Nebhepetrē, see *Stud. Aeg.* I 38-41; also *ÄZ.* 62, 3.
- 9  combination of  P 8 and  I 9 In  var.  *hr(y)fy* 'says' (§ 437).
- 10  steering oar Det. in  *hmw* 'steering oar';  *hmy* 'steersman'.
- 11  mooring post Det. in  ¹ *mnit* (*minit*) 'mooring post' and the related words. In hieratic often indistinguishable from  T 14 and consequently so usually transcribed.²
- ¹ *Brit. Mus.* 574, 14. ² See MÖLL. *Pal.* i. nos. 457. 472.

- R 17**  wig, with fillet and plumes, on pole¹ (Dyn. XVIII) Fetish of Abydos, ideo. or det. in  var. — ² *T3-wr* 'the nome of Abydos or This'.
- ¹ See WINLOCK, *Bas-reliefs from the temple of Rameses I at Abydos*, p. 15.
² *Urk.* iv. 111, 13.
- 18**  variant form of last Use as last.
- 19**  the *was*-sceptre  S 40 with fillet and feather As emblem of the Upper Egyptian nome of Hermonthis and its town, ideo. in  *W3st* (*W3st*),¹ var. Dyn. XX ² *Ws(r)*, 'Thebes'. For  *istt* 'milk' see on S 40.
- ¹ Reading further proved by demotic, see MÖLLER, *Die beiden Totenpapyrus Rhind*, p. 76*, no. 538. Cf. -ois in the name *Xaouis* = *Hc-m-W3st*, GRIFFITH, *Stories of the High Priests of Memphis*, p. 2, n. 2. ² *Brit. Mus.* 303.
- 20** ¹ conventionalized flower (?) surmounted by horns As emblem of the goddess of writing ideo. in ² *S3st*, var. Pyr. ³ *S3st*, late var. ⁴ *S3t*, 'the goddess) Seshat'.
- ¹ *D. el B.* 55. ² *Urk.* iv. 19, 14. ³ *Pyr.* 616. ⁴ *Louvre A97*, qu. *PSBA.* 16, 252.
- 21** ¹ O.K. form of last Use as last.
- ¹ *Saqq. Mast.* i. 1 (Dyn. III-IV).
- 22** ¹ two fossil belemnites?¹ As emblem of the god of Panopolis (Ekhnim) and of Coptus (Kift) ideo. in — varr.  var. Pyr. ² *Mnw* 'the god) Min', Greek *Mw*.³ The name of Letopolis (Ausim) in the Delta ⁴ reads *Hm*, as the var. Pyr. ⁵ shows; from M.K. onwards — O 34 is often substituted for —, ex.  see on O 34. Hence phon. *hm* in  var. ⁶ *hm* 'shrine'.
- ¹ *Annals of Archaeology and Anthropology* (Liverpool) 3, 50. The earliest exx. resemble a double-headed arrow. ² *Pyr.* 424. ³ PLUTARCH, *De Iside* 56.
⁴ *Cairo 20221*; sim. *Pyr.* 1270. ⁵ *Pyr.* 1670. For the localization at Ausim see *Ann.* 4, 91; *Rec.* 26, 144. ⁶ *Urk.* iv. 96, 4. This word has no connexion with the Gk. town-name Chemmis and its modern descendant Ekhnim, the Egyptian original of which was *Hnt-Mnw*, see *AZ.* 62, 92; *AEO.* ii. 40*.
- 23** ¹ O.K. form of last Use as last.
- ¹ *Saqq. Mast.* i. 8.
- 24** ¹ two bows tied in a package² (sometimes also vertically ) As emblem of the goddess of Sais, ideo. or det. in ³ varr. ⁴ *Nt* (*Nrt*, *Nit*)⁵ 'the goddess) Neith'.
- ¹ *D. el B.* 116. ² *Ancient Egypt* 1921, 35. ³ *Urk.* iv. 414, 5. ⁴ *D. el B.* 116.
⁵ Reading, *AZ.* 43, 144. The Gk. form *Nnith* suggests a medial *i* or *r*.
- 25** ¹ O.K. form of last Use as last.
- ¹ *Ti* 46.






T 7  axe¹


Det. in O.K.  ² *mibt* 'axe', which is undoubtedly related to M.K.  ³ var.  ⁴ *minb* 'axe'. Det. in  ⁵ *mdh*, var.  ⁶ *mdh*, 'hew', and ideo. in the related word  ⁷ var.  ⁸ *mdh(w)* 'carpenter', 'shipwright'.



¹ Ex. O.K., DAV. *Ptah*. i. 13, no. 280. This type was used alike for battle and for hewing wood, WOLF, *Bewaffnung* 8. ² *Ti* 119. ³ *Sin*. R 160. ⁴ LAC. *Sarc.* ii. 13, no. 20 (collated), beside picture of an axe. See GARD. *Sin*. 51. 159. ⁵ *Urk.* iv. 778, 14. ⁶ See under S 10. ⁷ Cairo 20268, a; 20528, h. ⁸ See under S 10.

7*  axe of more recent type¹ Det. in  ² *ikhw* 'axe'.







¹ From Dyn. XII onward, WOLF, *Bewaffnung*, Pl. 3. ² *Urk.* iv. 39, 1; also without handle, *ib.* 39, 3.

8  dagger of archaic type¹ Det. of  ² *mtpt* 'dagger'.² Phon. in  var.  ³ *tpy* 'chief', 'first', 'being upon' (§ 80), value probably derived from an obsolete word *tp* 'dagger' found only once (written  ³) and obviously related to *mtpt* mentioned above.



¹ JÉQ. 195; WOLF, *Bewaffnung*, Pl. 13 (= Pl. 4, 1); worn, *Sinai*, Pl. 1. As hieroglyph, PETR. *Eg. Hier.* nos. 757-61; outstanding features the -shaped knob and rib-less blade. ² Legend to picture on M.K. coffins, exx. LAC. *Sarc.* i. Pl. 43, nos. 264, 265, 269; *Wb.* ii. 170, 6 renders 'dagger-sheath' probably on account of the formative *m-*. ³ *Mitt.* viii. Pl. 5.

8*  dagger of M. K. and later type¹ Det. in  ² *b(s)gsw* 'dagger'.²








¹ JÉQ. 197; WOLF, *Bewaffnung*, Pl. 4, nos. 6 ff.; often with crescent-shaped or pierced circular top and ribbed blade. ² *Urk.* iv. 38, 15; also as picture with legend *m(g)sw = b(s)gsw* on M.K. coffins, LAC. *Sarc.* i. Pl. 43, nos. 255, 257, 259, 261, there often contrasted with the dagger *mtpt*, see above T 8.

9  bow consisting of oryx horns joined by a wooden centre-piece¹ Ideo. or det. in  ² var.  ³ *pdt* 'bow'. Hence phon. (semi-ideo.) or phon. det. *pdt*, later *pdt*, in Pyr.  ⁴ var. Dyn. XVIII  ⁵ *pdt*, later var.  ⁶ *pdt*, 'stretch' and the related words.

¹ WOLF, *Bewaffnung* 15, 27; actual specimens in Dyn. I tombs, PETR. *RT.* ii. Pl. 7 A (p. 26); Pl. 36, 35-6 (p. 38). ² LAC. *Sarc.* ii. 161. *Sim. Pyr.* 673. ³ *Sin.* B 127. This bow regularly in hieratic. ⁴ *Pyr.* 650. ⁵ *Urk.* iv. 977, 2. ⁶ BUDGE, p. 38, 7.

9*  better O. K. form of Use as last.
 T 9¹










¹ DAV. *Ptah*. i. 15, no. 338 = ii. 23. Also among det. of *chzw* 'weapons', *Sah.* 17. The curved ends suggest the horns of a gazelle rather than those of an oryx, but see T 9, n. 1.

10  composite bow with middle tied to bow-string when out of use¹ Det. in Pyr.  ² *iwnt* 'bow'. From Dyn. XII on preferred to  T 9 in the hieroglyphic writing of  ³ var.  ⁴ *pdt* 'bow', 'foreign people', 'troop';  ⁵ *pdt* 'bowman', while  is preferred for phon. *pdt*, *pdt*.⁶

¹ WOLF, *Bewaffnung*, 14, 26. Of Asiatic origin and at first reserved for the king and high personages. So depicted already BISSING, *Rz-Heiligtum* ii. 13. ² *Pyr.* 1644. ³ *Amada* 3. ⁴ *BH.* 1. 7 (*pdt* 9 'Nine Bows'). ⁵ *Amada* 3. ⁶ See particularly *Urk.* iv. 977, 2.











Sign-list

EGYPTIAN GRAMMAR

- (Aa 32)  archaic type of bow¹ (sometimes written , from Dyn. XVIII also )² Ideo. or det. in ³ *T3-St(i)*, varr. Pyr. ⁴, ⁵ *T3-Zt(i)*, 'Nubia'; ⁶ var. ⁷ *sty*, a Nubian mineral.⁸ Also as var. of  T II with value *sšr* and obscure sense in offering-list.⁹











¹ MONTET, *Kémi* 6, 43; SCHARFF, 38, 139; depicted QUIBELL, *Hierakonpolis*, I, Pl. 19; II, Pl. 58; CAPART, *Débuts de l'Art*, Pl. 1. Later apparently surviving only in Nubia. ² *Urk.* iv. 7, 3, qu. Exerc. XXXII, (a). ³ *ÄZ.* 45, Pl. 6, 7. ⁴ *Pyr.* 994. ⁵ *Pyr.* 1867; see too *ÄZ.* 45, 128. ⁶ BUDGE, p. 284, 12. ⁷ *Urk.* iv. 1099, 11. ⁸ See *Rec.* 39, 22. ⁹ *Kémi* 6, 57.

T II arrow

Det. in ¹ *c/h* 'arrow'; ² *šsr* (*ššr*)³ 'arrow'; from the latter, phon. det. in ⁴ *šhr* 'overlay'. Doubtless from an obsolete *zīn*, *zwn* 'arrow', phon. or phon. det. *sīn*, *swn* (*zīn*, *zwn*), exx. ⁵ *swn*, var. Pyr. ⁶ *zīn*, 'perish'; ⁷ var. ⁸ *swnt* 'sale'; ⁹ 'physician' *swnw*, var. O.K. ¹⁰ *zīnw*(?), the M.E. reading *swnw* on the evidence of a var. ¹¹ *wr swnw* 'chief of physicians', but Coptic has *sacīn*.





¹ *Urk.* iv. 190, 12. ² *P. Kah.* 1, 4. ³ *Pyr.* 1866. ⁴ *Adm.* 5, 2. ⁵ *Pyr.* 617. 725; *o* may here read *in*, see *Sitz. Berl. Ak.* 1912, 962. ⁶ GRIFFITH, *Kahun Papyri*, p. 35. ⁷ *Wb.* iii. 427, 13.

12 bow-string¹

Ideo. or det. in ² *rwd*, varr. Pyr. ³, ⁴ *rwd*, 'string', 'bow-string'. Hence phon. or phon. det. *rwd*, *rwd*, exx. ⁵ *rwd*, var. Pyr. ⁶ *rwd*, 'be hard', 'firm'; ⁷ var. ⁸ *rwdt*, 'sandstone'. Ideographic det. in ⁹ *ir* 'restrain'; hence phon. det. *ir*, *ī*, exx. ¹⁰ *mī(r)* 'wretched'; ¹¹ *dī(r)*, abbrev. ¹² *dīr*, 'subdue'.

¹ WOLF, *Bewaffnung* 48. See *ib.* 56-7 against the theory, supported *PSBA.* 22, 65, that the sign as represented depicts a sling. ² *P. Kah.* 1, 5 certainly meaning 'bow-string'. ³ *Pyr.* 2080. ⁴ *Pyr.* 684. ⁵ *Pyr.* 197. ⁶ *Urk.* iv. 845, 14. ⁷ *Sin.* B 50, cf. *ib.* R 74; *Sh. S.* 132.









13 pieces of wood joined and lashed at the joint¹

Semi-ideo. (?) in ² var. ³ *rs* (*rs*)⁴ 'be wakeful', 'vigilant' and derivatives; phon. *rs* in ⁵ var. ⁶ *rst* 'foreign hordes'.

¹ *Rekh.* 22. O.K. form *Ti* 80. For a later degraded form due to hieratic see U 40. ² Associated with the bow in *Pyr.* 921, 1245 and evidently part of the bowman's equipment. On the other hand, from writings like *Pyr.* 502, 597, 1502 several appear to form a shelter. A set of four, with names *pd-ḥt*, *nw-n-ḥt*, *ir(y)-ntr*, *qbt-ntr*, is depicted on M.K. coffins. One may perhaps compare the mantlet or shelter used by the Babylonian archers. Discussed JÉQ. 223. ³ For *ś* see *Pyr.* 126. ⁴ *Amada* 5. *Sim. Ann.* 39, Pl. 25, 2; *Urk.* iv. 200, 17. ⁵ Louvre C 14, 10.

ROPE, FIBRE, BASKETS, BAGS, ETC.

Sign-list

- V 26 ¹ netting needle filled with twine² Ideo. in ³ var. ⁴ *rd*, also ⁴ *rd*, 'spool', 'reel'. Hence phon. or phon. det. *rd*, later *rd*, ex. ⁵ *rd*, var. ⁶ *rd*, 'be in good condition'; also *rnd* or *rnd*,⁷ proved only in the case of ⁸ *rndt*, var. Pyr. ⁸ *rndt*, 'the morning-bark' of the sun-god.

¹ *Rekh.* 2, 6; *Puy.* 20, 6.

² See the picture *BH.* ii. 4 = *Bull.* 9, 5.

³ BUDGE, p. 391, 2.


⁴ NAV. ch. 153, 15.

⁵ *BH.* i. 8, 15.

⁶ *Sh. S.* 7.


⁷ See *Sitz. Berl. Ak.* 1912, 958.



⁸ *Pyr.* 335. 336; sim. *ib.* 661.

- 27 ¹ O.K. form of last

Use as last.

¹ *Medium* 13. Sim. *Sagq. Mast.* i. 1.

- 28 ¹ wick of twisted flax


Cf. with a similar sign, ² *hct* 'wick';² hence³ phon. *h*. As late det. once in ⁴ *tk* 'candle'.⁴









¹ Detailed ex., *Sagq. Mast.* i. 40, no. 68. See too the picture CAPART, *Rue* 37.

² Dyn. XIX, *Wb.* iii. 39; a hieroglyphic ex. in the Hypostyle Hall, Karnak (Nelson).

³ *AZ.* 73, 8, n. 2; *Ann.* 43, 309.

⁴ MOGENSEN, *Musée nat. Copenhagen*, Pl. 24; see SETHÉ, *Zur Geschichte der Einbalsamierung*, 11*.

- 29 ¹ swab made from a hank of fibre (down to Dyn. XVIII identical for all uses²)

Det. in O.K. ³ *sk* 'wipe'; hence phon. *sk* (*sk*), ex. ⁴ *ski* 'perish'. For unknown reason, phon. or phon. det. *wsh*, ex. ⁴ var. ⁵ *wsh* 'place', 'endure'. Also det. in ⁵ *hsv*, var. Pyr. ⁶ *hsv*, 'ward off'. As corruption of a sign resembling ⁷ M 1, det. in ⁷ *mr* 'fortunate'.

¹ Detailed ex. *Tf* 132 (*wsh*).

² *Wsh* and *sk* in proximity, see O.K. *Gem.* i. 22; Dyn. XVIII, *Rekh.* 2.


³ *Rec.* 28, 178; cf. *Sah.* 39. The interpretation as a swab depends on the meaning of *sk* and on its other determinatives in Pyr.






⁴ *Peas.* B 1, 209.

⁵ *Urk.* iv. 269, 7.

⁶ *Pyr.* 908.

⁷ *Amada* 8.

- 30 ¹ wickerwork basket


Ideo. in ¹ var. Pyr. ² *nbt* 'basket'. Hence phon. in a few words reading *nb*, exx. ³ var. O.K. ³ *nb* 'lord'; ³ *nb* 'every', 'all'.

¹ *Urk.* iv. 896, 10.


² *Pyr.* 557.

³ *Urk.* i. 126, 9.

For  see O 9.




















- 31 ¹ wickerwork basket with handle

For unknown reason, phon. *k*.



















- 31* ¹ the last, but with handle on opposite side


















Regularly in hieratic except in rare O.K. examples.¹

¹ MÖLL. *Pal.* i. nos. 511, 511 B. Hieroglyphic exx. have not been sought, but must be extremely rare; in Dyn. I-II the few exx. have handle as in V 31, PETR. *Eg. Hier.* nos. 975-9.

- V 34  ¹ alternative form of last (Dyn. XVIII) Use as last.
¹ *D. el B.* 94 (*sty* 'perfume').
- 35  ¹ O.K. form of last (rarely also Dyn. XVIII)² Use as last.
¹ *DAV. Ptah.* i. 14, no. 318 = (*E.R.A.*) 37, in *imy-r šsr* 'overseer of linen'. This form of the bag is carried by an attendant, *Ti* 115; cf. too *L. D.* ii. 22, *b*. Other O.K. exx. of the same form of the sign, in *šsr* 'thing', 'concern', *Urk.* i. 136, 5; *WEILL, Décrets*, Pl. 2. ² In *šsr* 'corn', *Urk.* iv. 372, 14, qu. under V 33, n. 11.
- 36  receptacle of some kind Det. in  ¹ *hn* (*hnt*?), name of a receptacle given to a temple. Hence (?) phon. or phon. det. *hn*, exx.  ² var.  ³ *hnt* 'occupations';  ⁴ var.  ⁵ *hnty* 'period', 'end' (§ 77, 1).
¹ *MAR. Ab.* i. 10, *b*. ² *Rekh.* 16. ³ *Paheri* 3. ⁴ *Urk.* iv. 364, 12.
⁵ *Urk.* iv. 369, 15.
- 37  ¹ bandage (?) Det. in  ² *idr* 'bandage', 'bind'. Phon. or phon. det. *idr* in  ³ var.  ⁴ *idr* 'herd'; note that  ⁵ appears to read  ⁶ *ks n idr* 'bull of the herd'. For the confusion of  and  N 41 see *AEO.* ii. 258*.
¹ Karnak, Tuthmosis III unpublished. Rather different, Dyn. XII, *Bersh.* i. 18.
² *Sm.* 9, 8, 10, 21. ³ *Bersh.* i. 18. ⁴ Cairo 20001. ⁵ *Urk.* iv. 699, 13.
⁶ *Urk.* iv. 195, 10; 196, 1.
- 38  ¹ bandage (O.K.) Det. in  ² *wt* 'bandage', 'mummy-cloth'. Later replaced by  Aa 2.
¹ *Pyr.* 1202 (N 1197).


















Sect. W. Vessels of Stone and Earthenware




- W 1  sealed oil-jar Det. oil, unguent, exx.  ¹ var.  ¹ *mrht* 'unguent';  ² *mdt* 'ointment'.
¹ *Urk.* iv. 914, 9; for the reading cf. Cairo 20720, a 3.
- 2  sealed oil-jar, like W 1, but not showing tied ends Det. in  ¹ *bs* (*bs*) 'jar'. Phon. *bs* (*bs*) in  ² *Bstt*, var. O.K.  ³ *Bstt*, '(the cat-goddess) Bastet'.
¹ *LAC. Sarc.* ii. 13, no. 23. ² *Ex. Urk.* iv. 432, 9. ³ *Ti* 23.
- 3  ¹ basin of alabaster as used in purifications² Det. in O.K.  ³ var.  ⁴ *šš* 'alabaster' (p. 172). Perhaps on account of the purifications characteristic of feasts, det. in  var. Dyn. XVIII  ⁵ *hb* 'feast'; hence semi-ideo. or phon. *hb* in  ⁶ *hb* 'mourn'. Abbrev. of  ⁷ *hbt* 'ritual book' in  W 5. Det. feast, exx.  ⁸ *psdntyw* 'New-moon festival';  ⁹ *Wig* 'Wag-festival'.
¹ Showing the markings of alabaster, *Hier.* 2, no. 9; 9, no. 178; *Kopt.* 9.
² *Rec.* 39, 54. ³ *Sin.* B 142. ⁴ *BH.* i. 24. ⁵ *Siut* i. 299. *Sim. BH.* i. 25, 90-5.


- X 8**  conical loaf? (in M.E. more often replaced by  D 37) Ideo. give, in  *rdi*,  *di* 'give' (§ 289, 1) and also in Pyr.  rare varr.  ¹  ² for the more usual imperative  var. M.E.  *imi* 'give' (§ 336). The use in both stems seems conclusive for the ideographic character of the sign.³ Possibly the earliest reading of the later stem *rdi* was *rdi*, cf. the personal name  var.  ⁴ and the Pyr. var.  ⁵ for  *rdw* 'efflux'; but verb-forms with repetition of the sign (ex. ) doubtless indicate the reading *dd*; so in Pyr. already ^{6a} and see above § 289, 1. From the same stem, phon. *d* (very rare), ex.  ⁶ *dk(r)* 'fruit'. The word  ⁷ 'provisions' probably reads *di*; in hieratic the inner markings are not shown, so that the sign there resembles , see before Z 9, and the word has, therefore, often been read *špd*.⁸



















¹ Pyr. 381. ² Pyr. 392. ³ Verbum i. § 454. ⁴ AZ. 39, 135.
⁵ Pyr. 788. ^{6a} Pyr. 608, 716, 824. ⁶ Cairo 20350, a. ⁷ Sebekn. 7, 13;
 Urk. iv. 64, 1; Haremhab, right side 9; see GARDINER, *Egyptian Hieratic Texts*, i.
 16*, n. 7. ⁸ So still *Wb.* iv. 112.


Sect. Y. Writings, Games, Music



- Y 1**  papyrus rolled up, tied, and sealed (from Dyn. XII on also vertically ) Ideo. in  ¹ var. Pyr.  ² *mdst* 'papyrus-roll', 'book'. Hence phon. *mdst* ³ in  ⁴ varr.  ⁵  ⁶ *mdst* '(sculptor's) chisel'. Det.⁷ writing and things written, exx.  *ss* 'write';  *m(w)dt* 'word';  *hks* 'magic'; also abstract notions, exx.  *mst* 'truth';  *mzw(y)* 'be new';  *rh* 'know';  *r* 'great'. In mathematical books and accounts  is often abbrev. for  *dmd* 'total'.⁸
- ¹ *Eb.* 30, 7. ² Pyr. 491. ³ *PSBA.* 21, 269. ⁴ *Two Sculptors* 8.
⁵ Leyd. *Denkm.* iv. 14. ⁶ Common in Dyn. XIX. XX. ⁷ Old uses,
AZ. 57, 75. ⁸ Compare *P. Kah.* 8, 13, 14. with *ib.* 8, 62. Sim. *P. Louvre* 3226,
 10, 8. This use arises from the habit of separating  from the phonetic signs for *dmd* in M.K. papyri, see Exerc. XX, (a), end.

- 2**  ¹ O.K. form of last (also vertically  from Pyr. on in specific cases)² Use as last.
- ¹ DAV. *Ptah.* i. 15, no. 341. Sim. in Dyn. XI, exx. Brit. Mus. 614; Louvre C 14. In Dyn. XII, one thread is apt to be shown, not none as here, nor yet on each side as in  Y 1, exx. Brit. Mus. 581; Louvre C 1. ² Pyr. iv. § 131; Dyn. XI, POL. § 29.



Aa 8  (continued)

phon. *kn*,⁹ exx. ¹⁰ *kn* 'complete', 'be complete'; ¹¹ *kn* 'mat'. In hieratic  stands not only for itself but also for certain other signs, whence confusions have resulted both in modern transcriptions and in actual hieroglyphic texts. Thus  is found (1) for ¹² N 24 in hierogl. ¹³ *spst* 'district'; (2) for  V 26 in hieratic ¹⁴ var. ¹⁵ *cd* 'desert edge' which hierogl. varr. show should be equated with ¹⁶ and ¹⁷ respectively. Possibly through some confusion with  O 34 ¹⁸ is found in Dyn. XVIII hieroglyphic for ¹⁹ *smt* 'desert', 'necropolis', as a mediating var. ²⁰ proves; for this reason the name of king ²¹ var. ²² is possibly to be read *Zmty* rather than *Hsty*,²³ the writing  on the Table of Abydos and the *Oὐσαφαις* of Manetho being probably due to mistaken interpretation of the hieratic.




¹ BH. i. 30. 35. ² BH. i. 29. ³ Bersh. i. 18. See GRIFFITH, *Kahun Papyri*, p. 31. ⁴ Bersh. i. 27. ⁵ Peas. B 1, 24; P. Kah. 11, 21; 15, 63. ⁶ Peas. R 66. ⁷ Rekh. 3, 18. ⁸ Ti 121. ⁹ Reading from Boh. *kēn* 'finish', 'cease' = Eg. *kn* 'complete', see next note; also from varr. of a very late word *kn* 'throne', compare CHASSINAT, *Mammisi* 76 with ROCHEMONTAIX, *Edfou* i. 375. ¹⁰ Pt. 269. Common in L.E., see BRUGSCH, *Wörterbuch*, Suppl. 1251. ¹¹ Adm. 10, 5. Sim. Rekh. 2, 1. ¹² Not in MÖLL. *Pal.* i. ii; perhaps only found Peas. R 66, see above n. 6. ¹³ Urk. iv. 484, 2. The reading of  *Sebekkhu* 1 is more doubtful. ¹⁴ Sin. B 9. ¹⁵ Sin. R 34. ¹⁶ Cf. Louvre C 1, vert. 7. ¹⁷ Cf. Hamm. 48, 9. ¹⁸ Especially in the title of Hathor, *hrt-tp smt* 'chief over the desert', ex. Cairo 588 compared with *ib.* 593; see too Urk. iv. 1003, 5. ¹⁹ Rec. 28, 169. ²⁰ Eb. 103, 2. ²¹ BUDGE p. 145; cf. the dual *smty* 'the two deserts', Urk. iv. 383, 15. ²² Unt. iii. 24; GAUTHIER, *Lièvre des Rois*, i. 6. ²³ Sethe and Gunn, however, preferred *Hsty*, see *Ann.* 28, 155.





9  ¹ doubtfulDet. in  ¹ *hwd* 'rich'.

¹ Exx. *D. el B* 110; *Rifeh* 7, 22. Černý conjectures that this may be an abbreviated form of the O.K. sign for *hwdt*, 'portable chair', *Wb.* iii. 250, 3.


10  ¹ doubtfulDet. in  ¹ *drf* 'writing'.

¹ Exx. BH. i. 7. Rather different forms, *Siut* 1, 263; *Urk.* iv. 776, 10.

11  ¹ doubtful (sometimes vertically  or 



For an unknown reason, phon. *msr* in  var.  *msrt* 'truth' and the related words. Note specially often the writing  *msr-hrw* 'true of voice' (§ 55). As a pedestal det. in  ¹ *tntt* 'raised platform', a unique writing (?).




¹ Neither the form nor the value suits the identification with the flute (*msr*) sometimes upheld. According to Kristensen (*Het leven uit den dood* 71) and others (*Griff. Stud.* 45; *Kēmi* i. 127) a platform or pedestal. ² *Urk.* iv. 200, 9.




12  ¹ O.K. form of last


Use as last.




¹ Leyd. *Denkm.* i. 5. Also in Dyn. XII, Leyd. V 6 = *Denkm.* ii. 3. Often tapers from right to left, ex. DAV. *Ptah.* i. 17, no. 393.

For ,  see U 4. 5.

Aa 22  combination of  Aa 21 Use as last.
and  D 36

For  Aa 23 and  Aa 24 see after  U 35.

25  ¹ doubtful ^{1a}


Ideo. (?) in  ² var.  ^{2a} *smz*, var. O.K.  ³ *s(mz?)*, ⁴ title of a priest whose function consisted in clothing the god (Min, Horus, etc.), cf. Gk. *στολιστής*.



¹ Ex. *Sah.* 32.

^{1a} According to Grdseloff (*Ann.* 43, 357) a phallus sheath conventionalized; but the connexion with the word *smt* (*Urk.* iv. 2, 16) is very far from certain.

² *Ikhern.* 16. Sim. *Siut* 1, 268.


^{2a} Cairo 20538, ii. c 6, confirmed by the writing *smz-tz* of the later form of the word *smty*, GARDINER, *Late-Eg. Miscellanies* 112, 16. ³ *Annals of Archaeology* (Liverpool), iv. 103. ⁴ On account of *s* apparently not derived from the stem *zmz* 'unite'.









26  ¹ doubtful

Phon. det. *sbi* (*sbi*) in  ² *sbi* (*sbi*) 'rebel'. Often replaced by  T 14.

¹ *D. el B.* 115. Sim. *Pyr.* 81, 1722.

² *D. el B.* 115. Sim. *MAR. Abyd.* ii. 29, 18.




27  ¹ doubtful ²



For an unknown reason, phon. *nd*, exx.  varr.  ³  ⁴ *nd* 'ask', 'inquire';  var.  ⁵ *ndnd* 'take counsel'. Except in  *ind hr* 'hail to' (§ 272)  is usually accompanied in M.E. by  W 24.

¹ Exx. O.K., *Medum* 11; DAV. *Ptah.* i. 17, no. 376; Dyn. XII, *Th. T. S.* ii. 14; Dyn. XVIII, *Rekh.* 2, 5.

² The view that the sign depicts a winder for thread (*Hier.* p. 61) is not supported by the earlier forms. It has also been thought to represent a porridge-stirrer, *Man* 1909, no. 96. ³ *Sin.* B 166. ⁴ *Rekh.* 2, 5.


⁵ *Sin.* B 113.

28  an instrument used by bricklayers? ¹ (different from  M 40 and  P 11)

Ideo. (?) in  var.  ² *kd* 'build', 'fashion (pots)' and related words.




¹ This view is favoured by the fact that the sign sometimes stands alone in the sense of 'builder', ex. *Sah.* 54. Other suggestions are a plasterer's float (*Hier.* p. 49) and a striker used in measuring corn (QUIB. *Sagq.* 1911-12, Pl. 17 and p. 26).



² *Siut* i. 236. Sim. *Dend.* 11.

29  ¹ O.K. form of last

Use as last.


¹ *Sah.* 54. Sim. DAV. *Ptah.* i. 13, no. 271.

30  ¹ ornamental *chevaux de frise* on tops of walls, cf.  O 11 ² (sometimes written horizontally  ³)

Ideo. or det. in  ⁴ *hkr* 'be adorned';  ⁵ *hkrw* 'ornament', 'adornment' and the related words.



¹ Ex. *Th. T. S.* iii. 12.

² See the picture BISSING, *Re-Heiligtum* ii. 9; in Dyn. I, PETER. *RT.* ii. 3, 4; 7, 8. Later shown as frieze in tombs. Discussions, *Ancient Egypt* 1920, 111; *Deutsche Literatur Zeitung* 1926, 1879; SCHARFF 22. However, the O.K. form of the hieroglyph (see Aa 31) is quite different. ³ Ex. *D. el B.* 60, 6. ⁴ *Bersh.* i. 14, 9. Sim. *D. el B.* 60, 6. ⁵ *Urk.* iv. 657, 6.

31  ¹ O.K. form of last

Use as last.

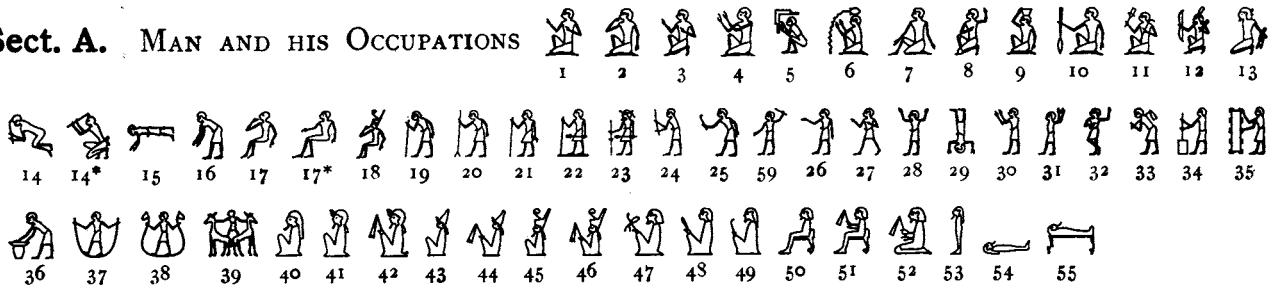
¹ DAV. *Ptah.* i. 17, no. 392. See *AZ.* 34, 162.

For  Aa 32 see after  T 10.

EGYPTIAN GRAMMAR

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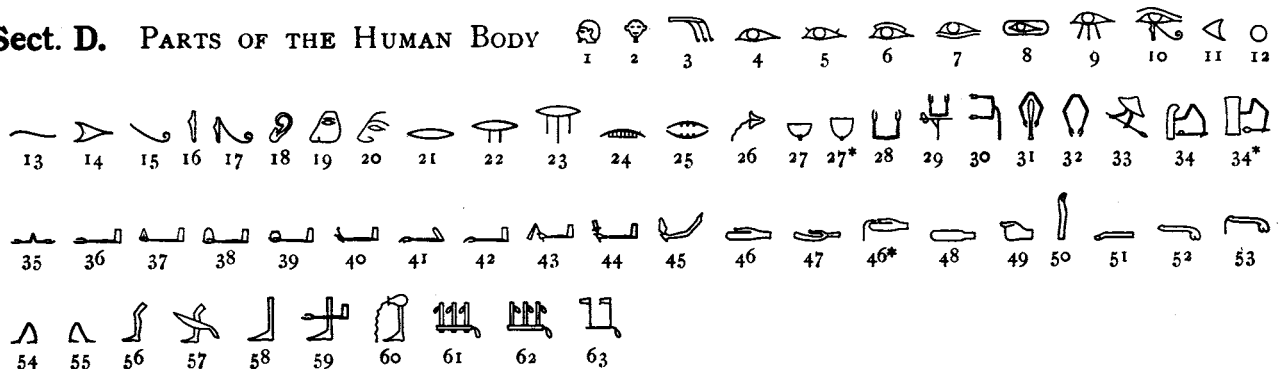
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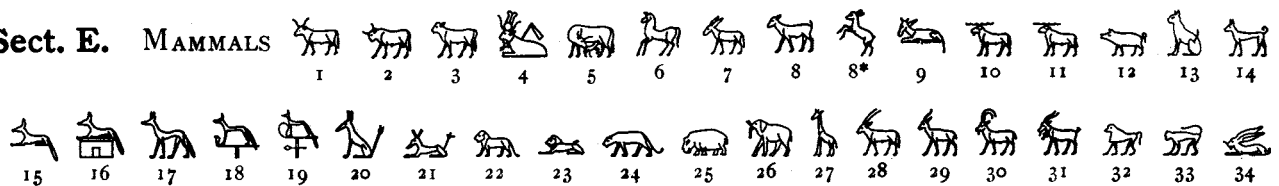
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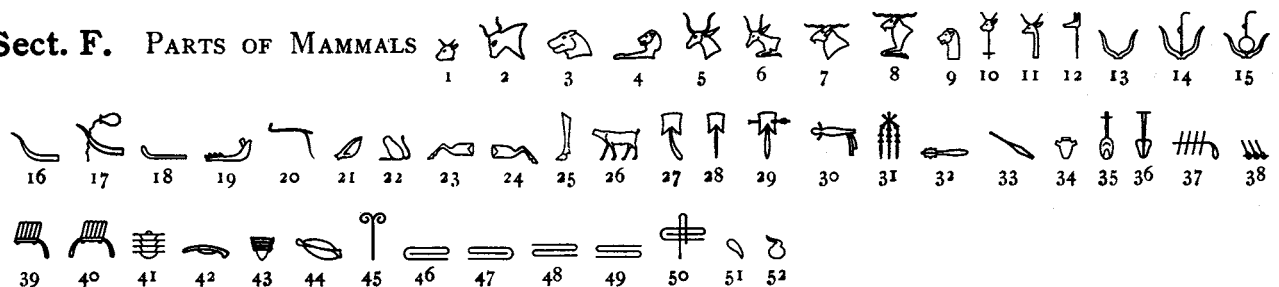
Sect. D. PARTS OF THE HUMAN BODY



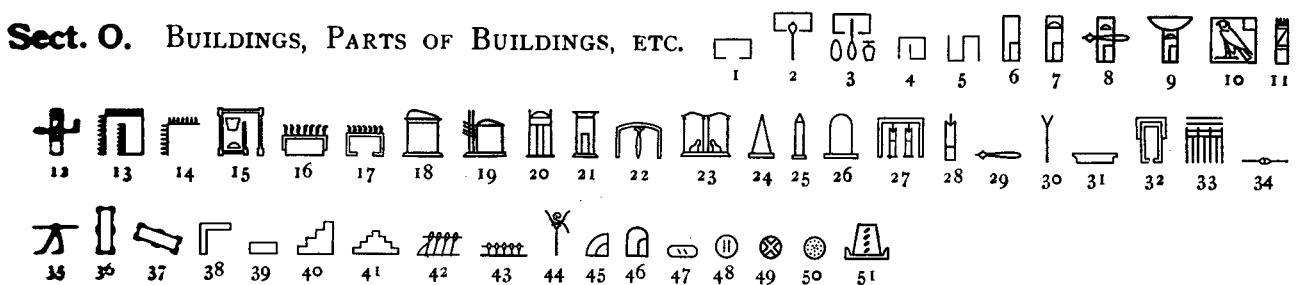
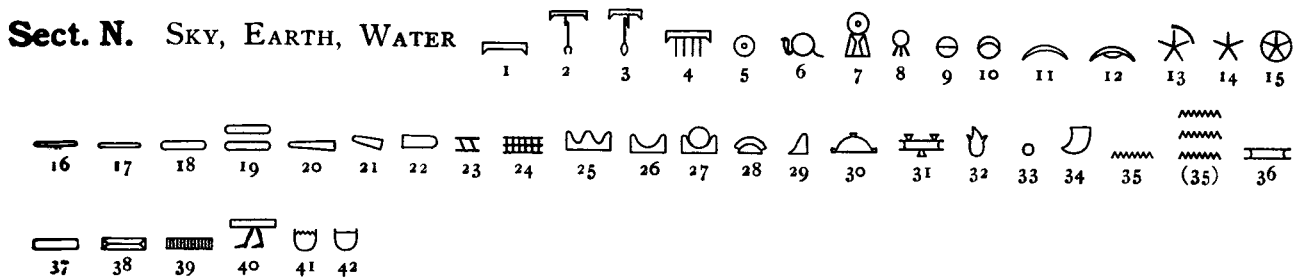
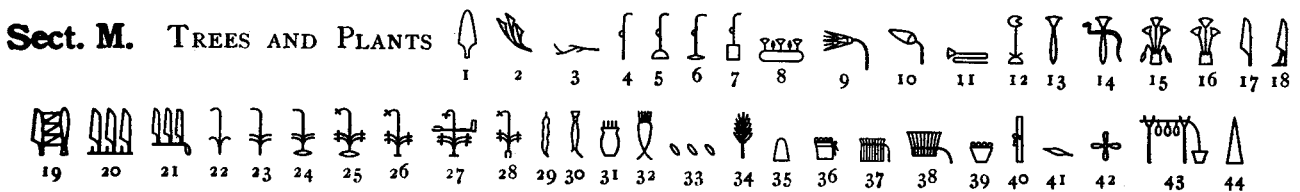
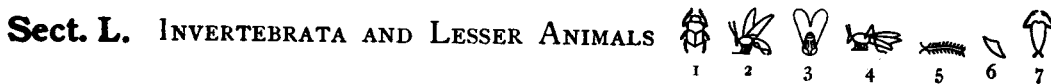
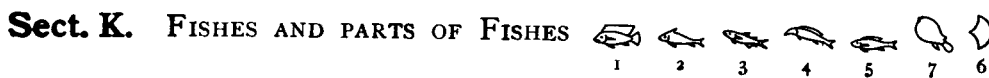
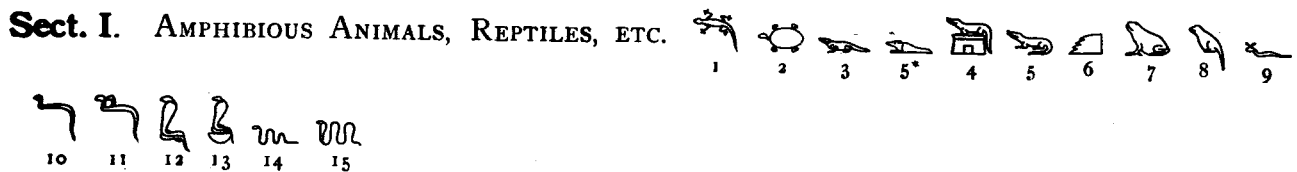
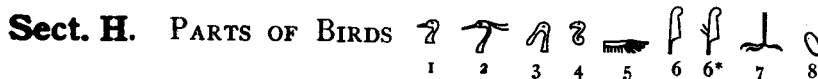
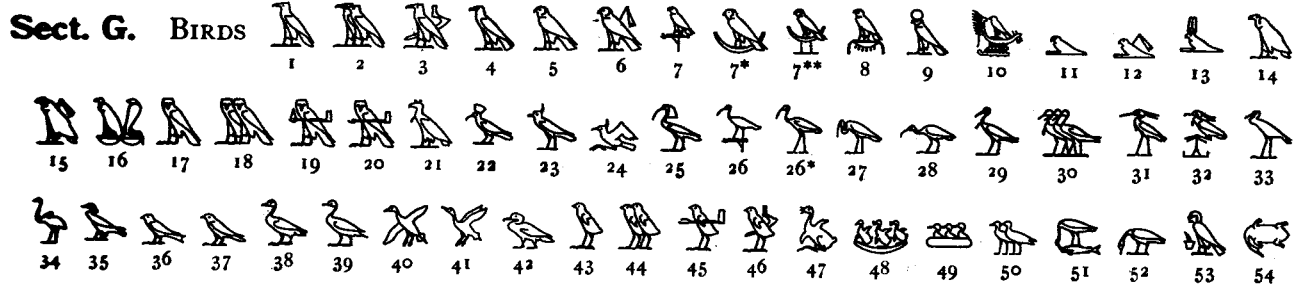
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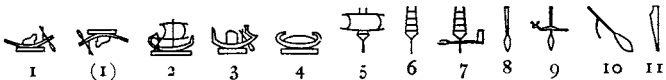
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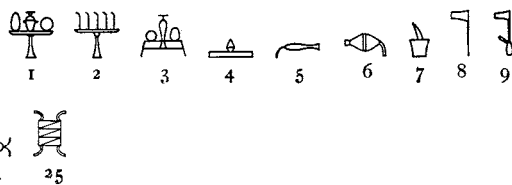
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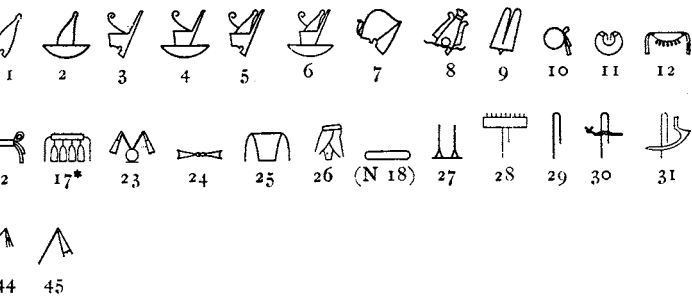


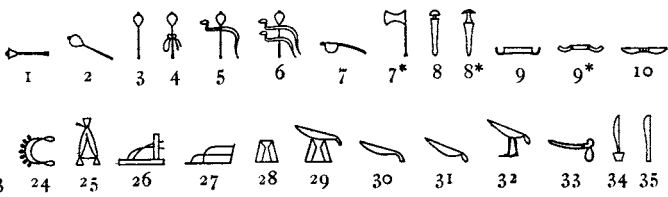
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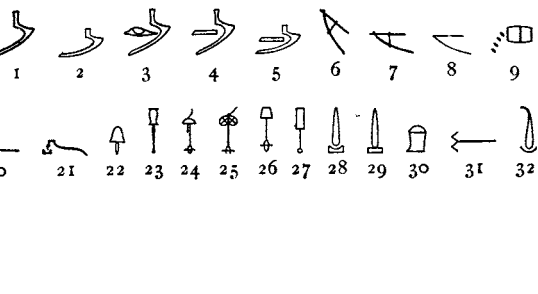
Sect. P. SHIPS AND PARTS OF SHIPS  1 (1) 2 3 4 5 6 7 8 9 10 11

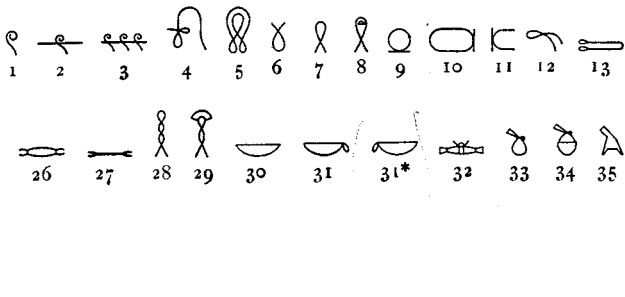
Sect. Q. DOMESTIC AND FUNERARY FURNITURE  1 2 3 4 5 6 7

Sect. R. TEMPLE FURNITURE AND SACRED EMBLEMS  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

Sect. S. CROWNS, DRESS, STAVES, ETC.  1 2 3 4 5 6 7 8 9 10 11 12 13 14 14* 15 16 17 18 19 20 21 22 17* 23 24 25 26 (N 18) 27 28 29 30 31 32 33 34 (V 39) 35 36 37 38 39 40 41 42 43 44 45

Sect. T. WARFARE, HUNTING, BUTCHERY  1 2 3 4 5 6 7 7* 8 8* 9 9* 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35










Sect. U. AGRICULTURE, CRAFTS, AND PROFESSIONS  1 2 3 4 5 6 7 8 9 10 11 12 (O 30) 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 (Aa 23) (Aa 24) 36 37 38 39 40 41

Sect. V. ROPE, FIBRE, BASKETS, BAGS, ETC.  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 31* 32 33 34 35 36 37 38

INDEX TO THE FOREGOING SIGN-LIST











Sect. W. VESSELS OF STONE AND EARTHENWARE           





























               














Sect. X. LOAVES AND CAKES         

Sect. Y. WRITINGS, GAMES, MUSIC        

Sect. Z. STROKES, SIGNS DERIVED FROM HIERATIC, GEOMETRICAL FIGURES    
























































         

Sect. Aa. UNCLASSIFIED               
            

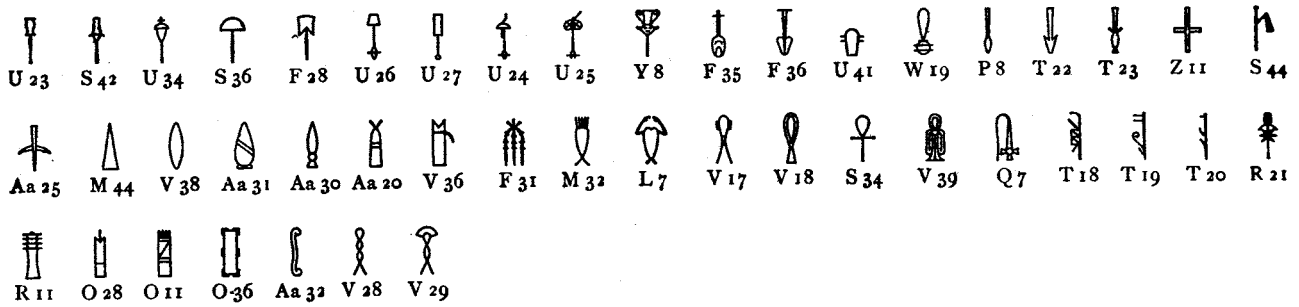
For reasons explained p. 442, top, the following signs have been removed from the place to which they were originally assigned and now stand at some distance from the positions indicated by the attached letter and number: A 59 , see after A 25; S 17* , see after S 22; V 39 , see after S 34; Aa 4 , see after W 10*; Aa 23 , Aa 24 , see after U 35; Aa 32 , see after T 10. A few hieroglyphs are treated in more than one place: M 44  also before Z 9; N 18  also after S 26 and X 4; N 33  (smaller than  O D 12) also after Z 8; O 30  also reversed  after U 12. Minor divergences of position like A 46* after A 47, instead of after A 46, need no further notice than is given to them in the Index above.

A SELECTION OF SIGNS GROUPED ACCORDING TO SHAPE

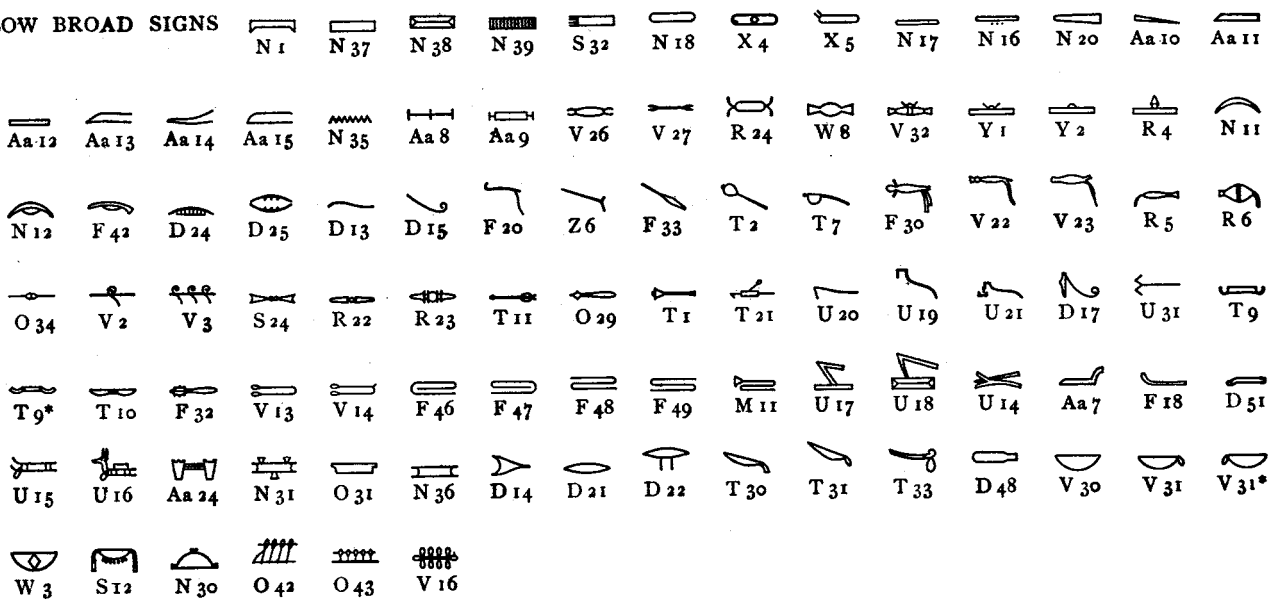
This list aims at facilitating the finding of particular signs in the Sign-list or the Index thereto. Hieroglyphs the subject of which is immediately recognizable, e.g. animals, boats, most buildings and some pots, have been excluded.

TALL NARROW SIGNS                
                   
                  

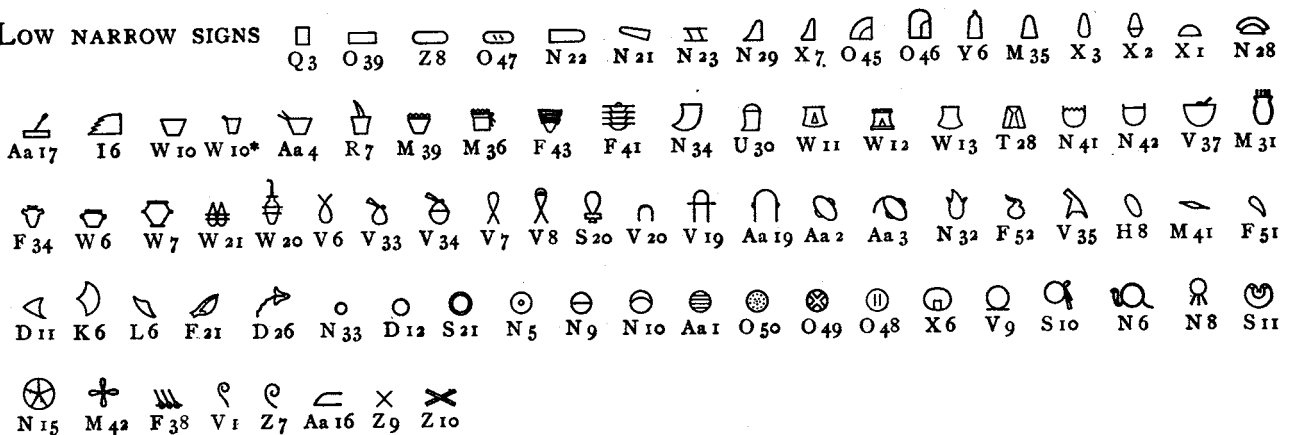
EGYPTIAN GRAMMAR



LOW BROAD SIGNS



LOW NARROW SIGNS



HIERATISCHE PALÄOGRAPHIE

DIE AEGYPTISCHE BUCHSCHRIFT

IN IHRER ENTWICKLUNG VON DER FÜNFTEN DYNASTIE

BIS ZUR RÖMISCHEN KAISERZEIT

DARGESTELLT

VON

GEORG MÖLLER

ERSTER BAND

BIS ZUM BEGINN DER ACHTZEHNTEN DYNASTIE

MIT NEUN TAFELN SCHRIFTPROBEN






















































































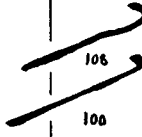









































LEIPZIG



































J. C. HINRICHS'SCHE BUCHHANDLUNG



























1909




















































Hierogl.	Abusir	Elephantine	Hatnub	Prisse	Illahun	Sinuhe	Bulaq 18	Math.	Westcar	Golen.	Ebers
AA Zahlen. a. Einer.											
614		 Berl. Abus. 04 Vs.	 Stb.2(Ba) Vcl.		 Gr. Kah.17(16) 22 h III in 2. Gr. Kah.11 Multi- plication	 Bauer(1)9.	 15,1,6.	 64,1. 66a1 als Multi- plication.	 4,15.		 51. im 1,2 101
615		 Berl. Abus. 04 Vs.	 P10523 Cr.	 14,10.	 P10005 h P10006 Gr. Kah. III,11 in 2. Multi- plication.	 Zahl. 106. Bauer(1)84	 17,1,6. 25.	 64,1 62,4. als Multi- plication 69c	 6,11		 52
616		 Berl. Abus. Kl. Fr.	 Stb.(A)1,1	 14,13	 P10005 h P10006	 298	 26 15,1,6	 Zahl. 2. als Multi- plication 69c	 11,4		 53
617		 Kairo Fr. u. Berl. Abus. 04 Rs.	 P10523 (L) 246	 14,1 (verkleinert) 17,7	 P10005 h P10006 Gr. Kah. III,11 in 2. Multi- plication.	 298	 25	 62,3 als Multi- plication 69c	 6,1.	 15,1	 54 11 41,2.
618		 Kairo Kl. Fr.	 Stb.(Ea)57	 19,1	 Gr. Kah.22, 57 h	 Bauer(1)226	 15	 45,1. 69c als Multi- plication			 55 75
619		 Kairo Fr. W.	 P10523 (H) 212.	 21,3.	 P10005 h P10006 Gr. Kah.17,9	 Bauer(2) 136	 32. 30,1, 24.	 58,3 14. 19. in Multi- plication 64,10.			 56 85,16
620		 Kairo Kl. Fr.		 25,2	 Gr. Kah. 17(16) 17 h P10006	 Bauer(2)21.	 28	 31,14. 69c als Multi- plication	 3,15		 57. 17 67
621		 Kairo Fr. W.	 Stb.(F)III.	 28,2 (verkleinert)	 P10005 h		 25	 31,3. 37.			 48 58.
622		 Berl. Abus. Kl. Fr.	 P10523 (Cm) 71.		 P10006 h Gr. Kah.23	 207 h	 24,3 41.	 24,1. 43,3. 43,5		 6,3 11,1 14,4	 49 69
Dyn. 5.		Dyn. 6.	Dyn. 10/11.	Dyn. 11/12	Dyn. 12.	Dyn. 12/13.	Dyn. 13.	Hyksoszeit b. Anfang d. Dyn. 18.			
1) -, = etc. s. Nr. 656ff — Brüche s. Nr. 667ff.											
2)											
3)											

Hierogl.	Abusir	Elephantine	Matnub	Prisse	Illahun	Sinuhe	Bulaq 18	Math.	Westcar	Golen.	Ebers
b. Zehner.											
628	 Syn. 3.	 Kairo Berl. Fr. a. 04Vs 1.	 Stal(A)1. St. 3f		 19,7.	 P10006 h P10005 h Rt. 1, E, 3.	 16 17. 2	 62,4 63,4	 6,11 7,2		 10. 17.
624	 	 Kairo Berl. Kl. Fr. 03Ra.	 P10523 12 (Cm) 71. (4) 236			 P10006 h P10005 h	 Bustar Ra. 12.	 16. 17	 62,6 16	 5,8	 26 20. 25
625	 	 Kairo Berl. Fr. a. 04Ra. 3	 P10523 (L) 236.			 P10006 h Gr. Kah 16,17	 23. 17,1,3.	 Tittel 2.			 35 32. 30
626	 	 Kairo Kl. Fr.				 P10006 h P10005 h	 Bustar Ra. 32.	 20. 18.	 69d 72,5		 43 48
627	 		 P10523 (G) 202.			 P10006 P10005 h h	 18	 56,3 39,1			 51 52.
628	 	 Kairo Fr. v.  Berl. 04 Ra.				 P10005 h	 25	 41,6 41,6			 61 60
629	 		 P10523 (G) 203	 14,13		 P10005 h	 18. 15,4, 9	 37,5 42,6			 73.
630	 	 Berlin 7/C V6.				 Gr. Kah 17,8 h	 16	 62,3 42,8 56,5			 81 89
681	 					 P10006 h P10005 h	 16	 57,4 42,6			 94 90
Dyn. 5.		Dyn. 6.	Dyn. 10/11.	Dyn. 11/12	Dyn. 12.	Dyn. 12/13.	Dyn. 13.	Hyksoszeit b. Anfang d. Dyn. 18.			
1) Diese Form der 10 ist schon in der ersten Dynastie (Royal Tomb I, 11) belegt:  2)  :  (Berl 13, 31, 7) 3) Eine ältere Form, die die Entstehung des hieratischen Zeichens erklärt, in einer Steinmetzaufschrift in Abusir:  (Berchaud Nefert 22-23, 6 54) 4) Berchaud gibt in der Festschrift für G. Ebers S. 14 für 90 die Form  . Ich habe sie in den Fragmenten des Mus. umr. zu Cairo nicht finden können. Erwarten würde man nur  .											

Hierogl.	Abusir	Elephantine	Hatnub	Prisse	Illahun	Sinuhe	Bulaq 18	Math.	Westcar	Golen.	Ebers
C. Hunderter.											
632	 Dy. 3	 Berl. Abusir 04 Ra			 19,7	 P10005 h P10006 h	 16	 69,4 69,4	 7,2	 106 100	
633	 Berl. 63 Ra.	 Kairo Tr. 2.	 Zeit des U10			 P10006 h Gr. Kah 8, 21	 16	 69,2			
634	 Berlin 04 Ra	 Berlin 04 Ra	 1. Hatnub 6,9 1			 P10005 h P10006 h	 16	 79,3 69c			
635	 P10005 h P10006 h					 P10005 h P10006 h	 25	 63,9			
636	 (spätere Form 999) 999	 (verkleinert) Hatnub 6,7			 Gr. Kah 8, 13 h P10006 h		 18	 45,3	 7,2		
637	 (spätere Form 999) 999	 (verkleinert) Hatnub 6,6	 (verkleinert) 13,2		 Gr. Kah 22, 25 h		 20	 69c			
638	 (spätere Form 999) 999		 2		 Gr. Kah 22, 31 h		 16	 45,4 63,4			
639	 Gr. Kah 22, 35 h				 Gr. Kah 22, 35 h		 18	 79,2 69c			
640	 Gr. Kah 10, 4 h				 Gr. Kah 10, 4 h		 18	 41,4			
Dyn. 5.		Dyn. 6.	Dyn. 10/11.	Dyn. 11/12	Dyn. 12.	Dyn. 12/13.	Dyn. 13.	Hyksoszeit b. Anfang d. Dyn. 18.			
1) Hatnub 1 aus der Zeit des (P10006), Hatnub 6 aus der Regierung des (U10)						2) Hatnub 99 (Regierung des Gausfürsten U10), Zeit zwischen Dynastie 6 und 10					

Hierogl.	Abusir	Elephantine	Matnub	Prisse	Illahun	Sinuhe	Bulaq 18	Math.	Westcar	Golen.	Ebers
d. Tausender.											
641	 Dyn. 3/4	 Kairo Boul. a. 47a	 (verkleinert) 6,6			 Gr. Kah 8, 18  Gr. Kah 23, 31		 15.	 76, 1.	 44, 6.	 6, 18.
642						 Gr. Kah 16, 15 h.		 28	 51a		
643	 Dyn. 5.		 Stuhl (A), 1			 Gr. Kah 22, 35. h.		 31.	 66, 3		
644						 Boul. M. 19. h.			 52a.		
645						 Gr. Kah 8, 15 h.			 79, 3		
646						 Boul. M. 19. h.			 79 a. 5		
647											
648						 Gr. Kah 8, 16 h.			 52a		
649						 Gr. Kah 8, 21 h.			 79 a. 6		
Dyn. 5.		Dyn. 6.	Dyn. 10/11.	Dyn. 11/12	Dyn. 12.	Dyn. 12/13.	Dyn. 13.	Hyksoszeit b. Anfang d. Dyn. 18.			
1) s. auch № 277.											

Hierogl.	Abusir	Elephantine	Matnub	Prisse	Illahun	Sinuhe	Bulaq 18	Math.	Westcar	Golen.	Ebers
e. Zehntausender.											
650	 Dyn 4.				 Gr. Kah 23, 32			 49			
651	 (20000)				 Gr. Kah 8, 15						
652	 (30000)	 Sta. I(A) 1.			 Berl. M. 19.						
653	40000.				 Gr. Kah 8, 20						
f. Hunderttausender.											
654	 Dyn. 5.	 Sta. I(A) 1.			 Gr. Kah 8, 21.			 49 a.			
g. Million.											
655	 Dyn 12.	 Sta. I(A) 1.									
BB Zahlen im Datum. ³⁾ (Monatstage)											
656	 Berl. Abus. 7/c Vo.	 P10523 (M) 259			 Berl. Jd. R. h. Gr. Kah 22, 12			 24, 11.			
657	 Kairo Abus. Kl. F.	 P10523 (Ba) 49			 Berl. Jd. R. h.  P10010 Jo. I 16			 49, 2, 14			
	Dyn. 5.	Dyn. 6.	Dyn. 10/11.	Dyn. 11/12.	Dyn. 12.	Dyn. 12/13.	Dyn. 13.	Hyksoszeit b. Anfang d. Dyn. 18.			
<div>1) Ebenso werden die übrigen höheren Zehntausender geschrieben, vgl. Gr. Kah VIII, 19 :  (70000)</div> <div>2) Die Hunderttausender von 200000 an analog den höheren Zehntausendern gebildet :  = 200000 Gr. Kah VIII, 21.</div> <div>3) Der Gebrauch der liegenden Zahlenschrift ist im älteren Hieratisch etwas ausgebreiteter als in der späteren Zeit, soz. B. dienen sie zur Schreibung der Ordinalzahlen.</div>											

Hierogl.	Abusir	Elephantine	Hatnub	Prisse	Illahun	Sinuhe	Bulaq 18	Math.	Westcar	Golen.	Ebers
658  1	 Boul Abu 7/c 8				 Boul It. R h	 Bauer (1) 139 h 8	 29, 1, 1.	 68, 5 8			
659 	 Kairo K15r				 P10010, 4 h	 Bauer (1) 31.	 29, 2, 12.	 68 d + 8			 67, 20 8
660 	 Kairo Tr. 8				 Boul. It. R h		 34, 3		 9, 15		
661 		 P10523 (Bc) 26			 P10010, 4 h	 Bauer (1) 290 8	 20, 1, 5				
662 		 P10523 (K) 234			 P10010 R. 7, 9 h		 35, 1.				
663 	 Kairo Tr. R.	 P10523 (U) 231	 23, 7 8		 Boul It R h	 Bauer (1) 290 8	 20, 1, 11				
664 					 Boul. It. R h		 23, 2				 Ebers Kal. 4.
665  Dyn. 5.	 P9907	 P10523 (M) 759			 P10010, 4 h	 G. Kal 31, 28	 35, 1.		 9, 15		
666  2	 Kairo Tr. 8 K15r	 P10523 (K) 234			 Boul It. R h		 24, 3	 87a. 1.			

Hierogl.	Illahun	Math.	Ebers	Hierogl.	Illahun	Math.	Ebers	Hierogl.	Illahun	Math.	Ebers
CC. Brüche.											
667					671				675		
$\frac{1}{2} = \frac{2}{3}$	$\frac{19}{10}$ P10005	$\frac{42,2}{57,3}$	$\frac{41,8}{20}$	$\frac{1}{5}$	P10005, 11.	54.		$\frac{1}{9}$	P10005, 20.	$\frac{42,8}{67,4}$	
668					672				676		
$\frac{1}{2}$	Gr. Kah 17(16) 17. P10005, 11. Gr. Kah 8, 25	$\frac{70,3}{51,2}$	$\frac{7,12}{62,11}$	$\frac{1}{6}$	(verkleinert) Gr. Kah 20, 4 P10005, 13	$\frac{42,2}{42,2}$		$\frac{1}{10}$	P10005, 12.	$\frac{45,4}{45,4}$	
669					673				677		
$\frac{1}{3}$	P10005, 20 Gr. Kah 15, 16 Gr. Kah 11, 52	$\frac{43,2}{42,7}$	$\frac{41,8}{41,8}$	$\frac{1}{7}$		$\frac{31,5}{31,5}$		$\frac{1}{11}$		$\frac{38,2}{38,2}$	
670					674				678		
$\frac{1}{4}$	Gr. Kah 8, 25	$\frac{32,13}{42,2}$	$\frac{6,3}{62,3}$	$\frac{1}{8}$	Gr. Kah 21, 28 h	$\frac{31,7}{31,7}$	$\frac{3,4}{3,4}$	$\frac{1}{14}$	Gr. Kah 10, 2	$\frac{31,12}{7,18}$	

DD. Maße.**a. Längenmaße.**

1 (Königl.) Elle (L) = 0,525 m = 7 Handbreiten (1 $\frac{1}{2}$ abgekürzt) zu 4 Fingerbreiten (1) = 100 Ellen = 1 m.

b. Flächenmaße.

Einheit: \square (= $\frac{1}{4}$ [Metengrab E 13], spätere Schreibung $\frac{1}{4}$ u. Var.) = 1 \square (s. Nr 682) (nach Griffiths, Proceedings XIV, 410 ff)

Hierogl.	Illahun	Bulaq 18	Math.	Hierogl.	Illahun	Math.	Hierogl.	Illahun	Math.
679				683				687	
Elle (Syn. 5)		$\frac{15,2}{4}$ (1 $\frac{1}{2}$)	$\frac{56,3}{120}$	$\frac{1}{2}$	P10005 16	54. 55,1	$\frac{1}{2}$	Gr. Kah 21, 19 ib 2, 18	$\frac{54}{54}$ (Ptolemäische Schreib- ung [Ephr.] $\frac{1}{2}$)
680				684				688	
$\frac{1}{2}$	Gr. Kah 23, 38	$\frac{15,2}{4}$	$\frac{56,3}{120}$ 1 Hand- breite 5 Hand- breiten	$\frac{1}{2}$	Syn. 3.	Gr. Kah 21, 3	$\frac{54}{54}$ u. s. f. bis (mit dem gewöhnlichen Zahlen $\frac{1}{2}$ nicht belegt)	$\frac{1}{2}$	P10005 c. $\frac{55,4}{55,4}$ Jahann P10005
681				685				689	
$\frac{1}{2}$		$\frac{56,4}{120}$ = 1 $\frac{1}{2}$ Hand- breite 1 Fingerbreite	$\frac{54}{120}$	$\frac{1}{2}$		$\frac{53,6}{6}$	$\frac{1}{2}$	Gr. Kah 21, 18	$\frac{54}{54}$ (Ephr.: $\frac{1}{2}$)
682				686				690	
$\frac{1}{2}$		$\frac{49}{51}$	$\frac{51}{51}$	$\frac{1}{2}$		$\frac{53,2}{53,2}$	$\frac{1}{2}$	Gr. Kah 21, 18	$\frac{55,4}{55,4}$ $\frac{1}{100}$

1) Siehe auch Nr 328

2) U. s. f., bei Brüchen, deren Nenner eine zusammengesetzte Zahl ist, steht der Punkt stets über der höchsten Ziffer.

3) Vergl. Lepsius Elle und Griffiths Aufsatz in d. Proceedings XIV, 449 ff

4) Sonstige $\frac{1}{2}$, was sowohl von (Nr 101) wie der Längenmaße: $\frac{1}{2}$ (Nr 107) sein kann. Doch bei (n. Weidmann) son. Maße von 5 bzw. 4 Handbreiten nicht in der Zusammenhang.

Klefter, als Schiffmaße, (Syn 6) af. Palermosin Völz 6, Una 41

Hierogl.	Illahun	Math.		Hierogl.	Illahun	Math.		Hierogl.	Illahun	Math.	
691			$\frac{10}{100} = \frac{1}{10}$	692			$\frac{1}{200}$	694			$\frac{1}{500}$

c. Hohlmaße .

Grundeinheit: $1 \text{ } \Delta \text{ } \square = 10 \text{ } \overline{\text{Hohl}} \text{ } \square = 320 \text{ } \square$ (s. Griffiths, Proceedings XIV, 423 ff)

Hierogl.	Illahun	Bulaq 18	Math.	Hierogl.	Illahun	Bulaq 18	Math.
695			$\frac{1}{20}$	701			$\frac{1}{20}$
696			$\frac{1}{40}$	702			$\frac{1}{40}$
697			$\frac{1}{80}$	703			$\frac{1}{80}$
698			$\frac{1}{160}$	704			$\frac{1}{160}$
699			$\frac{1}{320}$	705			$\frac{1}{320}$
700			$\frac{1}{640}$	706			$\frac{1}{640}$
Dyn. 12.				Dyn. 13.			
Hyksoszeit				Hyksoszeit			
1) Tafel (föhl- haft, cf. Griffiths 9SBA) auch XIV, 441				2) Abgehängt aus Bul. 18, 49, I 13			
3) Ausgeschnitten: Math. 82, 11.				4) 50, 33, 25			

Hierogl.	Illahun	Bulaq 18	Math.	Ebers	Hierogl.	Illahun	Bulaq 18	Math.	Ebers
Bruchteile vom									
707	 ($\frac{3}{4}$) [7]	 Bul. 95r 2, 2 h. [163]	 82, 11 64, 5		713	 (Dyn 20) $\frac{1}{64}$ [164]	 95r 1, 2 Gr. Kal 6, 10	 81c 82, 9 44, 12.	
708	 (Dyn 20) $\frac{1}{2}$ [165]	 Gr. Kal 21, 22 h.	 29, 2, 15. 64, 5 82, 6		714	 $\frac{1}{320}$ [166]	 95r 1, 2, 2	 69f3 68, 5	
709	 (Dyn 20) $\frac{1}{4}$ [167]	 18, 13. 15, 1, 4.	 82, 12 82, 9	 25, 2	715	 * [168] $\frac{2}{320} = \frac{1}{160}$ [169]		 69f4, 70a2	
710	 (Dyn 20) $\frac{1}{8}$ [170]	 3 95r 2, 15, 1, 4.	 82, 6 64, 5 64, 2	 24, 5 25, 2	716	 * [171] $\frac{3}{320}$ [172]	 95r 1, 2, 5.	 83a 69f2	
711	 (Dyn 20) $\frac{1}{16}$ [173]	 95r 1, 2 95r 1, 3 95r 2, 3	 81, 4 64, 5	 44, 12.	717	 * [174] $\frac{4}{320} = \frac{1}{80}$ [175]		 82, 15. 69f5	
712	 (Dyn 20) $\frac{1}{32}$ [176]	 Gr. Kal 18, 13 95r 2, 3 1, 2, 3	 82, 6 83a 44, 7 24, 12		718	 $\frac{1}{2}$ [177]	 95r 1, 2, 2	 43, 5 83a	 24, 5 41, 8. [3]
Dyn. 12.		Dyn. 13.	Hyksoszeit b. Dyn. 18.				Dyn. 12.	Dyn. 13.	Hyksoszeit b. Dyn. 18.
1) Ligatur aus $\frac{1}{8} + \frac{1}{4} = \frac{3}{8}$, $\frac{5}{8} (\frac{1}{8} + \frac{1}{2})$, $\frac{7}{8} (\frac{1}{8} + \frac{1}{4} + \frac{1}{2})$ werden analog gebildet (s. f. aus Nr 709 und 708/4 + 1/2 graphischen Gründen voranzustellen): $\sqrt{\frac{3}{8}} = \frac{3}{8}$, $\sqrt{\frac{5}{8}} = \frac{5}{8}$, $\sqrt{\frac{7}{8}} = \frac{7}{8}$ (Math. Pap. 64, 5).									
2) U. s. f., die gewöhnlichen Bruchzeichen, s. Nr 670 ff.									
3) Zur Quantitätsangabe im ganzen 5 Male ausschließl. - ferner 44, 17 lich für Konif, 12, 21 beides wohl nicht Maßzeichen, sondern Abkürzungen von Worten (s. Griffith, SBA XIII, 299).									

HIERATISCHE PALÄOGRAPHIE

DIE AEGYPTISCHE BUCHSCHRIFT

IN IHRER ENTWICKLUNG VON DER FÜNFTEN DYNASTIE

BIS ZUR RÖMISCHEN KAISERZEIT

DARGESTELLT

VON

GEORG MÖLLER

ZWEITER BAND

VON DER ZEIT THUTMOSIS' III BIS ZUM ENDE DER EINUNDZWANZIGSTEN DYNASTIE

MIT ACHT TAFELN SCHRIFTPROBEN
























































Neudruck der zweiten verbesserten Auflage










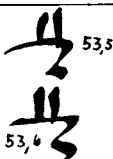




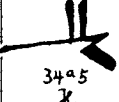


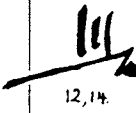



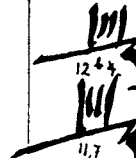
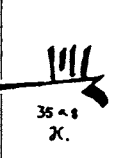

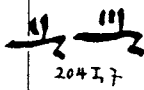
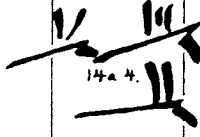

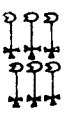


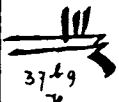


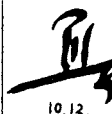
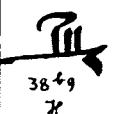


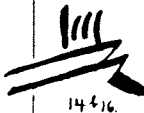
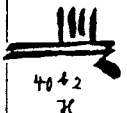




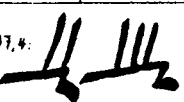
1927

OSNABRÜCK
OTTO ZELLER
1965

Hierogl.	Louvre 3226	Lederha.	Gurôb	P. Rollin	Ennene	Pentoere	Harris Th.	Harris H. M.	P. Abbott	Ném-t
AA Zahlen a Einer.										
614										
	Dyn. 18 1.	14 37,5	P 9785, 12	20547 209, 9	NA 6, 5		10, 5	33a8 53a2 K M	21, 3	But 14a.4
615										
	Dyn. 18 2.	25, 1 36, 5 4, 2	a. 1, 9. P 9784, P 9783, 5 6	204, 2	Orb 6, 8	III S 4, 9	14 a 2	32a3 54a5 K M	2, 13	9, 2
616										
	Dyn. 18.	2, 1 1, 9.	Till Amarna 72. P 9784, 20	209 I, 11	Orb 13, 5	III S 1, 1	14 a 5	33a3 52a2 K M	4, 15	12, 4
617										
	Dyn. 18	25, 4 23, 3	P 9785, 1	205 c 5	NA 7, 3	I S 4, 4	14 a 2	32a1 54a3 K M	4, 16	11, 5
618										
		1, 2 38, 6 39, 1. 9, 5	6 2	I, 1, 16 204 II, 4 16 13	NA 9, 2		11, 11	34, 5 54a6 K M	5, 17	Mm R. 560 Rogers 16
619										
	Dyn. 18.	24, 2 37, 4 2, 5	P 9785, P 9784, 8	209 V, 4 205 c	NA 16, 12	III S 5, 4	14 a 16	35a9 52a13 K M	4, 11	Mm R. pl. 84
620										
		14, 5 41, 4	P 9784, 1	209 N, 17	Orb 9, 8 NA 7, 2		10, 13	41a6 31, 5 K K	Harris 3, 10	2, 7 12, 4
621										
	Dyn. 18.	1, 5 1, 7	P 9784, 7	211 a 5	NA 24		11, 7	32a10 K	Umherat 2, 10	Mm R. 538
622										
	Dyn. 18	36, 4 4, 3 16, 7 52, 2	a 4	I, 2, 16 I, 1, 16 204 V, 11		III S 11, 9	14a10 14a16 K K	33a7 27, 5 K K	3, 16	Orb 36
Thutmosis III. Amenophis II. Amenophis III/IV. Sethos I. Menephtah, Sethos II. Ramses IV. Ramses IX. 21. Dynastie										
¹⁾ —, = etc. s. N° 656 ff — Brüche s. N° 667 ff ²⁾ 88 in 11 s. N° 403.										

	Hierogl.	Louvre 3226	Lederhs.	Guröb	P. Rollin	Ennene	Pentoere	Harris Th.	Harris H. M.	P. Abbott	Ndm-1
b. Zehner.											
623											
624											
625											
626											
627											
628											
629											
630											
631											
		Thutmosis III.	Amenophis II.	Amenophis III/IV.	Sethos I.	Menephtah/Sethos II.		Ramses IV.		Ramses IX.	21. Dynastie

Hierogl.	Louvre 3226	P. Rollin	Ennene u. Pentoere	P. Harris	P. Abbott	
C. Hunderter.						
632	 Dyn. 18	 56,4 59,2	 209 I, 4	 NA 4,4 (Ennene) I S 7,11 (Pentoere)	 13 410 (Jh)  37 612 (Jh)	 2,2
633	 Dyn. 18	 19,2 1,2	 209 I, 10	 NA 12,12 (Ennene)	 10,14 (Jh)  37 68 (Jh)	
634	 Dyn. 18	 53,3	 208 a 8.	 NA 12,12 (Ennene)	 11,5 (Jh)  32 64 (Jh)	
635	 Dyn. 18	 52,5	 209 a 7.		 11,6 (Jh)  37 611 (Jh)	
636	 Dyn. 18	 52,6	 209 Ro III, 5	 NA 7,4 (Ennene) I S 3,9 (Pentoere)	 14 16 (Jh)  37 a 5 (Jh)	
637	 Dyn. 18	 32,8	 208 a 4.	 NA 4.	 10,5 (Jh)  37 a 6 (Jh)	
638	 Dyn. 18	 36,7	 209 Ro III, 5	 1 A 14,2.	 11,3 (Jh)  38 61 (Jh)	
639	 Dyn. 18	 52,7	 204 I, 5	 1 A 17, 4.	 10,9 (Jh)  38 65 (Jh)	
640	 Dyn. 18	 48,12.	 204 I, 6	 1 A 17, 4.	 12 43 (Jh)  37 69 (Jh)	
	Thutmosis III.	Sethos I.	Menephtah/Sethos II.	Ramses IV.	Ramses IX.	
1) Leyden 350 N. 26:  (Zeit Ramses' IX.)						

Hierogl.	Louvre 5226	Lederhs.	Gur6b	P. Rollin	Enene	Pentoere	Harris Th.	Harris H. M.	P. Abbott	Ndm-1
d. Tausender.										
641	 Dyn. 18.	 4,7 16,8		 209 Ru II, 5	 Na 14,1	 I S 9,7	 14,4	 37 a 13 K.		 Buz 13,17
642	 Dyn. 18.	 53,5 53,6		 208 A 11.	 Na 14,1	 II S 3,9	 21 C 11	 34 a 5 K.		
643	 Dyn. 18.			 211 Ru a 7.			 12,14.	 38 a 8 K.		
644	 Dyn. 18.			 204 I, 9			 12 a 3 11,7	 35 a 8 K.		
645	 Dyn. 18.			 204 I, 7			 14 a 4.	 35 a 13 K.		
646	 Dyn. 18.			 204 I, 9			 14 a 14	 37 a 9 K.		
647	 Dyn. 18.			 204, 1.			 10,12.	 38 a 9 K.		
648	 Dyn. 18.			 204 I, 6.			 14 a 16.	 40 a 2 K.		
649	 Dyn. 18.			 204 I, 5			 15 a 10	 37 a 8 K.		
Thutmosis III. Amenophis II. Amenoph. III/IV. Sethos I. Menephtah, Sethos II. Ramses IV. Ramses IX. 21. Dynastie										
¹⁾ Ia 17,4. 										

Hierogl.	P. Rollin	Pentoere	Harris Th.	Harris H.	Harris M.	Hierogl.	P. Rollin	Harris Th.	Harris H.	Harris M.
e f. Zehntausender und Hunderttausender.										
650 10 000 Dyn 18	 204 2,3	 204 2,8	 12 a 10	 35 46	 56 a 4	653 C 60 000	 204 Obere Zehntausen- rechnung 2	 11,7	 37 412	
651 20 000	 204 Obere Zehntausen- rechnung 3		 11,5	 37 a 4	 56 a 2	653 D 70 000		 19 46	 37 48	
652 30 000	 204 2,8		 21 48	 36 a 9	 53 41	653 E 80 000	 204 erste Zehntausen- rechnung 4	 11,4	 38 49	
653 40 000			 16 42	 37 411	 55 415	653 F 90 000	 204 Untere Zehntausen- rechnung 2	 17 411	 37 47	
653 B 50 000			 15 48	 37 48		654 100 000 Dyn 18.	 204 Untere Zehntausen- rechnung 3 u. Obere Zehntausen- rechnung 2	 15 48	 37 49	 54 a 5

g. Million.

	Louvre 3226	Lederhs.	Guröb	P. Rollin	Ennene	Sallier IV	Harris Th.	Harris H.	P. Abbott	Ndm-t
655 1000000 2								 34 49		

**B B. Zahlen im Datum.
(Monatstage)**

656	II	1,4 31,11	c5	206, 8.	17 Ra 42.			7,1.	Mm R 520	
656	=	2 1,3. 2 44,2		3 206,16.	2 17 Ra 43			2 Abb 8 a 1.	3 Rogues 16.	
		Thutmosis III.	Amenophis II.	Amenoph.III/IV.	Sethos I.	Menephtah/Sethos II.		Ramses IV.	Ramses IX.	21. Dynastie

















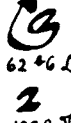
1) u. s. f. 300 000 Rollin 204 un- ter- Zehntausenrechnung (3h). Karr. 12 43	2) 2 000 000: Karr 18 a 4 (3h)	 620 000 Karr 72, 5 (5)	 10 100 000: Karr 73, 5 (5)
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Hierogl.	Louvre 3226	Lederhs.	Gur6b	P. Rollin	Ennene	Sallier IV	Harris Th.	Harris H. M.	P. Abbott	Ndm-t
658										
659										
660										
661										
662										
663										
664										
665										
666										

Thutmosis III.	Amenophis II.	Amenoph. III/IV.	Sethos I.	Menephtah/Sethos II.	Ramses IV.	Ramses IX.	21. Dynastie
1) in	2) in	3) in	4) in				

Hierogl.	P. Rollin	Harris	Hierogl.	P. Rollin	Harris	Hierogl.	P. Rollin	Harris	Hierogl.	P. Rollin	Harris
----------	-----------	--------	----------	-----------	--------	----------	-----------	--------	----------	-----------	--------

CC. Brüche .

667		$\frac{1}{1\frac{1}{2}} = \frac{2}{3}$		208 c 3		$\frac{32}{10}$ K	1		$\frac{1}{2}$		$\frac{211}{16}$ 204, 13		$\frac{69}{5}$ $\frac{13}{4}$ Jh.	672		$\frac{1}{6}$		$\frac{52}{10}$ m	676		$\frac{1}{10}$		$\frac{204}{16}$ 16	3		$\frac{69}{5}$ S.	
								670		$\frac{1}{4}$		$\frac{208}{10}$ 208 + 10		$\frac{32}{10}$ $\frac{68}{5}$ S	674		$\frac{1}{8}$		$\frac{208}{6}$		$\frac{62}{12}$ + 6 L 2 $\frac{12}{9}$ Jh.	1					

DD. Maße .

a. Längenmaße .

Eine (Königl.) Elle (—) = 0,525 m = 7 Handbreiten (— $\frac{1}{7}$, abgekürzt —) zu 4 Fingerbreiten (— $\frac{1}{4}$)


















679		Elle		$\frac{211}{16}$		$\frac{34}{62}$ K		$\frac{209}{10}$	680		$\frac{211}{21}$		$\frac{34}{62}$ K	681		$\frac{211}{66}$		$\frac{52}{11}$ m.
680		$\frac{211}{18}$		$\frac{211}{11}$		$\frac{52}{11}$ m.		$\frac{211}{4}$ c 4.	680		$\frac{211}{66}$ c 6.		$\frac{52}{11}$ m.					

b. Flächenmaße .




Einheit : 1 — (ἀγούρα) = (100 Ellen)² = 100 — (alt — — griech. πῆχες)
a. Griffith Proceedings XIV, S 41 ff.

Hierogl.	P. 3047	Harris	Hierogl.	P. 3047	Harris	Hierogl.	P. 3047	Harris
683		$\frac{27}{27}$		$\frac{11}{7}$ Jk.	$\frac{1}{2}$ ἀγούρα (Ptol. Schreibung [δῆ]) [δῆ])	688	$\frac{32}{3}$ K.	$\frac{1}{2}$ ἀγούρα (Ptol. Schreibung [δῆ]) [δῆ])
687		$\frac{31}{31}$		$\frac{32}{3}$ K.	$\frac{1}{2}$ ἀγούρα (Ptol. Schreibung [δῆ]) [δῆ])	689	$\frac{27}{27}$	$\frac{1}{2}$ ἀγούρα (Ptol. Schreibung [δῆ]) [δῆ])
	Ramses II.	Ramses IV.		Ramses II.	Ramses IV.		Ramses II.	Ramses IV.
<p>1) Ligatur $\frac{2}{3} + \frac{1}{6} = \frac{5}{6}$: </p> <p>2) Form der 18. Dyn. : </p> <p>3) Zusammengesetzte Bruchzahl : </p> <p>4) Vergl. Lepsius Elle und Griffith Aufsatz in d. Proceedings XIV, 404 ff.</p> <p>5) Zeit Ramses II (46. u. 47. Jahr)</p> <p>6) u. Var. Weitere Formen : </p>								

Grundeinheit: $1 \square \triangle \square (\Sigma) = 10^8 \tilde{\square} \square \square$ (s. Griffiths Proceedings XIV, 423 ff)

		Louvre 3226	P. Rollin			Louvre 3226	P. Rollin	Harris			Louvre 3226	P. Rollin	Harris	
695	1 	 1, 5	 204(A) 1.	696	2  ()	 6, 8	 208 c 5	 209 R 2, 7	 54 a 11	697	3  ()	 1, 3  4  6, 1	 8, 7  2 205 4 13	 37 4 12 K

1) $\square \rightarrow A$, $A \rightarrow B$, $B \rightarrow C$. - $A \rightarrow C$. № 471. \vdash : $(\text{Louve } 3226, 9)$ $(il. 32, 7)$ $(il. 40, 4)$ $(Rollin 206, 7)$ - eq. \vdash :

111 (P9784,7)  Harris 1243 (JK)  il 37⁴/₁₂ - zu 1, später an 1 angeglichen, vergl Bd I, S 66, Anm. 3.  2) 1 1/2 □ (Z): Z Z Z
Louvre 3226, 5, 11 il 6, 2 il 9, 8

3) $\frac{3}{4} \left(\frac{1}{8} + \frac{1}{2} \right) \square \cdot \left(\frac{0}{2} \right) : \frac{5}{2} \frac{5}{2} \text{ B2 I, 707.}$
Loure P3226, 15, 2 u 5

4) $\frac{3}{8} \left(\frac{1}{8} + \frac{1}{4} \right) \square \cdot \left(\frac{0}{0} \right) : \frac{5}{2} \frac{5}{2}$
Loure P3226, 21, 5

5) $\frac{5}{64} \square \cdot \left(\frac{1}{16} + \frac{1}{64} \right) : \frac{5}{2} \frac{5}{2} \frac{5}{2}$
Med. Tap 3035, 11, 16, 19, 10

6) + ist im med. Tap 3035 zu einer Grundein

heit geworden, die in folgenden Verbindungen belegbar ist:

$$\begin{array}{c} + \\ | \\ 19,2 \end{array} + \begin{array}{c} + \\ | \\ u \end{array} = 1+; \quad \begin{array}{c} + \\ + \\ 18,11 \end{array}, \begin{array}{c} + \\ + \\ u, 19,5 \end{array} = 2+; \quad \begin{array}{c} || \\ | \\ 16,10 \end{array} + \begin{array}{c} + \\ | \\ u, 19,1 \end{array} = 3+; \quad \begin{array}{c} || \\ || \\ 16,8 \end{array} = 4+; \quad \begin{array}{c} || \\ || \\ 16,1 \end{array} + \begin{array}{c} + \\ | \\ 11,7 \end{array} = 6+; \quad \begin{array}{c} || \\ || \\ 20,4 \end{array} = 8+$$

$\text{𐤆} = \frac{1}{2} +$, $\text{𐤆} = 1\frac{1}{2} +$. S. Bd III Nr 713. — Vgl. Griffith, Proceedings XIII, 5526 ff. — Die Bruchteile vom $\frac{1}{2}$ werden durch

durch die gewöhnlichen Bruchzahlen (S.N.: 667ff) ausgedrückt. ζ (Kannu 38 a 13 [H]) ist wohl Verkürzung für $0 \mid \frac{1}{4} = \frac{1}{4} 04_{10}$

HIERATISCHE PALÄOGRAPHIE

DIE AEGYPTISCHE BUCHSCHRIFT

IN IHRER ENTWICKLUNG VON DER FÜNFTEN DYNASTIE

BIS ZUR RÖMISCHEN KAISERZEIT

DARGESTELLT

VON

GEORG MÖLLER

DRITTER BAND

VON DER ZWEIUNDZWANZIGSTEN DYNASTIE BIS ZUM DRITTEN JAHRHUNDERT NACH CHR.


















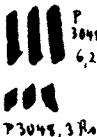












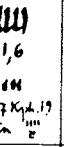


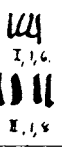


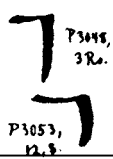








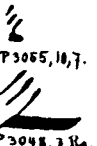



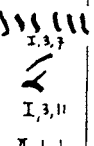


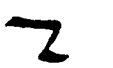
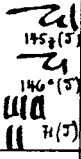

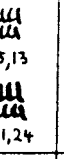
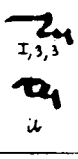











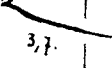
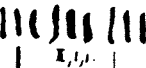


















MIT ELF TAFELN SCHRIFTPROBEN

Neudruck der zweiten verbesserten Auflage

1936

OSNABRÜCK
OTTO ZELLER
1965

AA. Zahlen a. Einer.

Hierogl.	Takelothis	Graffito	P. Rylands	Leinwand	P. Bremner	Isis-N.	Ritual	Leiden J. 32	Tanis	P. Rhind	P. 3030.	P. 3135
AA. Zahlen a. Einer.												
614	 Dyn. 26	 P 3048, 3 Re.	 Louvre 815,3	 145 U. (5)				 2,9		 I, 2,1		
615	 Dyn. 26	 P 3048, 3 Re.	 Louvre 815,3	 147,7.	 26,5 64 in 8 17 Kph. 18.	 66.	 4,6	 4,24.		 I, 3,4.	 in 8	
616	 Dyn. 26	 P 3048, 3 Re.		 22,9	 18 (5)	 26,5 64 in 8 17 Kph. 4	 68.	 2,17.		 I, 1,1.	 in 8	
617	 Dyn. 26	 P 3055, 27,1	 Louvre 815,2.	 22,9	 15,41	 1,6 17 Kph. 19 in 8	 2,13	 4,2		 I, 1,6 II, 1,8	 in 8	
618	 Dyn. 26	 P 3048, 3 Re. P 3053, 12,8.	 1.	 28 (5)	 23,9	 46.		 7,7.	 P 7809, 55	 I, 7,3.		
619	 Dyn. 26	 P 3055, 10,7. P 3048, 3 Re.		 131 (5)	 23,8 20,12	 44.				 I, 3,7 I, 3,11 II, 1,1	 1,19	
620	 Dyn. 26	 P 3048, 3 Re.		 145,2 (5) 146,4 (5) 71 (5)	 24,7. Schmitt			 5,13 1,24		 I, 3,3 II, 1,1		
621	 Dyn. 26	 P 3048, 3 Re.		 74 (5)	 23,8.	 67		 7,31.		 I, 1,12.		
622	 Dyn. 26	 P 3048, 3 Re.		 82 (5)	 20,13			 3,7.		 I, 1,1.	 1,14	
	22. Dyn.	26. Dyn.	Perserzeit	30. Dyn.	um 320 v. Chr.	2. Jahrh. v. Chr.	um 20 v. Chr.	um 60 n. Chr.	um 100 n. Chr.	9 v. Chr.	1-2 Jahrh. n. Chr.	2-3 Jahrh. n. Chr.
<p>1 In  angezeichnet an N° 560: P 3048, 5,2  8,14  I Rhind P 3135, 8,6  4,24</p> <p>2 Aus 2 d. i.              </p>												

III 628-681

Hierogl.	Abusir	Elephantine	Matnub	Prisse	Illahun	Sinuhe	Bulaq 18	Math.	Westcar	Golen.	Ebers
b. Zehner.											
628	 Dy. 3.	 Kairo Boul. J. a. 04 Vs. 1.	 Soul (A) 1. Soul 2f		 19, 7	 P10006 P10005	 16 17	 62, 4 63, 4 6, 11 7, 2	 6, 11 7, 2		 10 17
624	 Kairo Boul. Kl. J. 03 Ra.	 P10523 12 (Gm) 71. (L) 236			 P10006 P10005	 Boul. Ra. 12.	 16. 17	 62, 6 66	 5, 8		 26 20. 25
626	 Kairo Boul. J. a. 04 Ra.	 P10523 (L) 236.			 P10006 G. Kahl 16, 17.		 23. 17, 1, 3.	 Fidel 2.			 35 32 30
628	 Kairo Kl. J. a.				 P10006 P10005	 Boul. Ra. 32.	 20. 18.	 69 d 72, 5			 43 48
627	 Kairo Boul. Kl. J. a.	 P10523 (G) 202.			 P10006 P10005 L A		 18	 56, 3 39, 2			 51 52
628	 Kairo J. a. Boul. 04 Ra.				 P10005 A		 25	 41, 6 41, 6			 61 60
629	 Kairo Boul. Kl. J. a.	 P10523 (G) 203	 14, 13		 P10005 L		 18. 15, 4, 9	 37, 5 42, 6			 73
630	 Berlin 7/C Vc.				 G. Kahl 17, 8 A		 16	 62, 3 42, 8 56, 3			 81 89
631	 Kairo Boul. Kl. J. a.				 P10006 P10005 A		 16	 51, 4 42, 6			 94 90
Dyn. 5.		Dyn. 6.	Dyn. 10/11.	Dyn. 11/12	Dyn. 12.	Dyn. 12/13.	Dyn. 13.	Hyksoszeit b. Anfang d. Dyn. 18.			
1) Diese Form der 10 ist schon in der ersten Dynastie belegt: (Royal Tomb I, 19, 11) 2)  (Boul 18, 32, 3) 3) Eine ältere Form, die die Entstehung des hieratischen Zeichens erklärt, in einer Steinmetzaufschrift in Abusir: (Borchardt, Hefen-erke-2, S. 54) 4) Borchardt gibt in der Festschrift für G. Ebers S. 14 für 20 die Form  . Ich habe sie in den Fragmenten des Mus. um zu Cairo nicht finden können. Erwarten würde man nur  .											

Hierogl.	Takelothis	P. Rhind	Hierogl.	Takelothis	P. Rhind
c. d. Hunderter und Tausender.					
632 	 P 3048, 10 R.		638 	 P 3048, 8 R.	
633 	 P 3048, 10 R.	 I, 3, 7	639 		
634 	 P 3048, 10 R.		640 		
635 	 P 3048, 8 R.		641 	 P 3048, 10 R.	
636 	 P 3048, 8 R.		642 	 P 3048, 10 R.	
637 	 P 3048, 10 R.				






BB. Zahlen im Datum. (Monatstage)

Hierogl.	Takelothis	Graffito	Br. 10474	Leinwand	P. Bremner	Isis-W.	Ritual	Leiden J. 32	Tanis	P. Rhind	P. 3030.	P. 3135
656 		 1. Louvre 815	 3, 1. 2, 1	 2								
657 			 2, 2. 3, 2		 1, 2							
	22. Dyn.	26. Dyn.	Perserzeit	30. Dyn.	um 320 v. Chr.	2. Jahrh. v. Chr.	um 20 v. Chr.	um 60 n. Chr.	um 100 n. Chr.	9 v. Chr.	1-2 Jahrh. n. Chr.	2-3 Jahrh. n. Chr.
















1] Zur Erklärung der Zeichenform vgl. Bd I (2) nicht = 106, es steht in der Gruppe 74) = 550
2] Pap. Brit. Mus. 10474 (Egyptian hieratic Papyri Taf. 31) etwa aus der Perserzeit.
3] Also durch 11 (615) vertreten. 1 statt - schon neuhieratisch.

III 658-666

Hierogl.	Takeothie	Graffito	Br. 10474	Leinwand	P. Bremner	Isis-N.	Ritual	Leiden J. 32	Tanis	P. Rhind	P. 3030.	P. 3135
658		 P 3048, 8. R.	 3, 5, 3			 3						
659			 5, 3, 4									
660			 5, 5 6, 5									
661		 P 3048 R.	 2, 6	 1, 5	 1, 2			 P 3009, 5, 5 in 8	 I, 1, 1			
662			 4, 27.							 I, 1, 1. Comitum!		
663	 Dyn. 26		 5, 28							 I, 2, 1		
664			 5, 19									
665		 P 3048, 8	 5, 16. 7, 15							 I, 2, 1		
666		 P 3048, 8 R.	 5, 29 2, 24		 1, 2	 3				 I, 1, 1		





	22. Dyn.	26. Dyn.	Perserzeit	30. Dyn.	um 320 v. Chr.	2. Jahrh. v. Chr.	um 20 v. Chr.	um 60 n. Chr.	um 100 n. Chr.	9 v. Chr.	1—2 Jahrh. n. Chr.	2—3 Jahrh. n. Chr.
1	S. Ann. 2 auf voriger Seite.	2 In 	3 Die liegenden Datierungszahlen werden im Klerastischen zu Beginn der Ptolemäerzeit durch die gewöhnlichen Zahlzeichen (Nr 614-624) fast völlig verdrängt. Die liegenden Zahlen schon um die 26. Dyn.	4 Im Stadtnamen  (u. Varr.):  P 3009, 5, 6  P 3135, 2, 4  ib. 3, 26. P 3030, 6, 21								

CC. Brüche.

Hierogl.		Med. Rub.	Hierogl.		Med. Rub.	Hierogl.		Med. Rub.	Hierogl.		Med. Rub.	Hierogl.		Med. Rub.	Hierogl.		Med. Rub.				
		1																			
667		 Kl. Fr.	668		4  Kl. Fr.	670		 7 5  4	674		$\frac{1}{16}$ $\frac{1}{8}$	678		 Kl. Fr.	678		 X, X, X 4	678		 quat $\frac{1}{64}$	 12
		$\frac{2}{3}$			$\frac{1}{2}$			$\frac{1}{4}$			$\frac{1}{8}$			$\frac{1}{16}$			$\frac{1}{32}$			$\frac{1}{64}$	









DD. Maße.
a. Längenmaße.²⁾

Eine (Königl.) Elle (—) = 0,525 m = 7 Handbreiten (— , abgekürzt —) zu 4 Fingerbreiten (1)













680	 B	 10,7	681	 10,8	 10,6
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c. Hohlmaße.⁴⁾

Grundeneinheit: 1 — (—) = 108 — (—) (s. Griffith, Proceedings XIV, 423 ff)

695	 abgekürzt	 P 3081, 5	696	 P 3081, 5,1	697	 P 3081, 3,6	703	 10 —	 P 3081, 5,2	704	 20 —	 P 3081, 5,1
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Bruchteile vom —

Hierogl.	P 3081	Med. Rub.	Hierogl.	P 3081	Med. Rub.	Hierogl.	P 3081	Med. Rub.
708	 Dyn. 30	 P 3081 5,1.	710	 Dyn. 30	 $\frac{1}{2}$ —	712	 Dyn. 30	 Kl. Fr.
709	 Dyn. 30	 5,2 5,6 P 3081	711	 Dyn. 30	 Kl. Fr.	713	 Dyn. 30	 7,3 7,4 P 3081
22. Dyn.		um 300 v. Chr.	22. Dyn.		um 300 v. Chr.	22. Dyn.		um 300 v. Chr.

¹⁾ Bruchstücke von zwei Handschriften medizinischen Inhalts, die aus den Gräbungen Rubensohns für die Kgl. Museen zu Berlin stammen. Sie gehören dem vierten Jahrh. v. Chr. an.

²⁾ Vgl. Lepsius' Elle und Griffiths Ar. mit JSBA XIV, 404 ff.

³⁾ M 680³ und 681 nach dem Kikal-Demot. Papyrus zu Wien (etwa 3 Jahrh. v. Chr.)

⁴⁾ Die Zeichen für die Flächenmaße kennen sich späthierat. nicht.

⁵⁾ P 3081. Rechnungs papyrus in Berlin

⁶⁾ Vgl. Az. Bd. 48, 99f.

⁷⁾ Ligatur aus M 711 + 713: — (Med. 37 Rubensohn 41)

Middle Egyptian

An Introduction to the Language and Culture
of Hieroglyphs

James P. Allen



CAMBRIDGE
UNIVERSITY PRESS

Other Egyptian expressions of ownership use adjectival phrases. The *nfr hr* construction usually has this connotation, and can normally be translated by an English “have” expression. This is true of all the examples cited in § 6.5, above:

nfr hr “one good of face” = “one who has a good face”

𐎗𐎓𐎗𐎠 *zrw* “one many of sheep” = “one who has many sheep”

nfrwt nt ḥꜥw.sn “ones beautiful of their bodies” = “women who have beautiful bodies”

zh3w jqr n dbꜥw.f “a scribe skilled of his fingers” = “a scribe who has skilled fingers.”

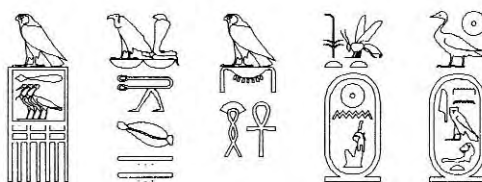
In each case, Egyptian assigns the adjectival quality to the owner rather than the thing owned, whereas English normally does the reverse.

Another means of indicating possession involves the genitival adjective *n* (§ 4.13.2). This is actually a nisbe, meaning “belonging”; it therefore has the masculine singular ending *-j*, like other nisbes (*nj*), although the ending is hardly ever shown in the writing of this word. Because it is an adjective, *n(j)* is not limited to expressing just the genitive. One example of its adjectival use is the noun 𐎗𐎓𐎗𐎠 *nswt* “king” (§ 4.15): this is actually a compound word *n(j)-swt*, which probably means “he who has the sedge” (the emblematic plant of Upper Egypt) — literally, “the belonging one of the sedge.” We will meet more examples of this use of *n(j)* in the next lesson.

ESSAY 6. THE KING’S NAMES

The king was not only the pinnacle of Egyptian society but also the link between human beings and the gods, since he was human himself yet embodied a divine power (see Essay 3). This dual nature is reflected in many of the king’s attributes, particularly in his official titulary, which also reflects his rule over both parts of Egypt, Upper and Lower (see Essay 2).

From the Fifth Dynasty onward, every Egyptian king had five official names, though not all of these are known for every king. Here is the fivefold titulary of the pharaoh Amenemhat III of Dynasty 12:




The first part of the titulary is known as the **Horus** name. It is the oldest of the five names, and consists of three elements: (1) a falcon perched on (2) a schematic rendering of the archaic palace, within which is (3) the king’s name. The falcon is emblematic of Horus, the god of kingship. The schematic palace is known as a *serekh* (Egyptian 𐎗𐎓𐎗𐎠 *srḫ*, from the word *srḫ* “make known”). Its lower part represents the niched façade of early mudbrick palaces, and its upper part is a rudimentary ground plan of the palace. Together, the three elements are a hieroglyph meaning “The divine power of kingship (Horus) is incarnated in the individual who resides in the palace.” The Horus name of Amenemhat III is 𐎗𐎓𐎗𐎠 *b3w*, a *nfr hr* construction (§ 6.5) meaning “He whose impressiveness is great” — literally, “great of impressiveness.”





9. Numbers


9.1 Numerals


Ancient Egyptian used a decimal system of counting, as we do in English: that is, in ones, tens, hundreds, thousands, and so forth. Like English, too, Egyptian normally wrote numbers with **numerals** (numerical symbols) rather than by spelling out the words for each number. The two languages differ, however, in their approach to written numbers.

In English we use ten numerals (0–9) and a positional system of notation: the numeral 3, for example, means “three” if it is used by itself, but “thirty” if it is followed by another numeral (for instance, 36), “three hundred” if it is followed by two numerals (e.g., 328), and so forth. Egyptian uses six numerals and a repetitional system of notation. The six numerals are the following:


	1 — for units		1,000 — for thousands
	10 — for tens		10,000 — for ten-thousands
	100 — for hundreds		100,000 — for hundred-thousands.

In hieroglyphic, each of these numerals is repeated the necessary number of times to indicate the number: for example, 11 2,  3,000,  70,000.¹ The smaller signs (for 1, 10, and 100) are usually arranged in groups: for example,  5,  600. Numbers that combine more than one numeral are always arranged from the largest numeral to the smallest: for example,


 152,123 (= 100,000 + 5×10,000 + 2×1,000 + 100 + 2×20 + 3×1).


In texts written from left to right, like this example, the numerals follow the same order as English numerals; in those written from right to left, the order is the opposite: e.g.,  2,603.



In addition to the repetitional method of indicating numbers, Middle Egyptian sometimes employed a true multiplication system for numbers above 10,000:

 470,000 — i.e., 4×100,000 + 7×10,000.

This system was also used to indicate numbers in the millions:


 10,100,000 — i.e., 101×100,000.

Originally there was a separate sign  for 1,000,000, but this is more common in Middle Egyptian as a number of indefinite rather than precise value: “many,” “a million.”







As this system makes clear, the Egyptians had no regular symbol for zero. When subtractions resulted in zero in accounts and mathematical texts, scribes either left a blank space or wrote the sign , an abbreviation for the word  *nfrw* “depletion.”



¹ Hieratic developed separate signs for some of the multiples: i.e., one sign for 20 “20” and another for 30 “30.” These are transcribed into hieroglyphic using the repetitional notation.

In a few cases the formation of Egyptian compound numbers seems to have been different from that of their English equivalents. The cardinals from eleven to nineteen were compounds: for example, *mdw-w*^c “eleven” (m), *mdw-hmtt* “thirteen” (f). Although *štj* “two-hundred” was a single word (originally dual), the words for “two thousand” (*ḥ3 snwj*) and “twenty thousand” (*ḏb^c snwj*; literally, “two ten-thousand”) were compounds, with a word-order the reverse of that of other compounds. Since Egyptian uses different words for the thousands and ten-thousands, the compounds of the cardinals for ten thousand and higher are different than their English counterparts: for example, *djw ḏb^c* “fifty thousand” (“five ten-thousand”), *mdw-snwj ḏb^c* “one-hundred-twenty thousand” (“twelve ten-thousand”). In keeping with the system noted at the end of § 9.1, above, the cardinal for “two million” was *štj ḏb^c* (literally, “two-hundred ten-thousand”); the original word is unknown, but was probably either *ḥḥwj* or *ḥḥ snwj*.





It is not necessary to learn all these number words in order to read hieroglyphic texts, since the cardinal numbers are usually represented in hieroglyphs by numerals. In transcription they are normally represented by English numerals rather than by the corresponding Egyptian number word: for example,  ⁿⁿ *mḥ* 30 (instead of *mḥ m^cb3*) “30 cubits.”





9.3 Ordinal numbers

Words used to indicate numerical order in a series are called **ordinal** numbers: in English, *first*, *second*, *third*, etc. To form ordinal numbers in English, we add the ending *-th* to the cardinals except for the numbers 1 to 3, for which there are special words. In Egyptian, there is a special word only for “first,” which is always spelled out: masculine *tpj* (, , ) , feminine *tpt* (, , ). This is actually the same word as the prepositional *tpj* “standing atop” (§ 8.5.12).




The ordinals from “second” to “ninth” are formed by adding the endings *-nw* (, masculine singular) and *-nwt* (, feminine singular) to the **root** of the cardinal numbers:

<i>snw</i> , <i>snnwt</i>	“second”	<i>sjsnw</i> , <i>sjsnwt</i>	“sixth”
<i>hmtnw</i> , <i>hmtnwt</i>	“third”	<i>sfh^cnw</i> , <i>sfh^cnwt</i>	“seventh”
<i>jfdnw</i> , <i>jfdnwt</i>	“fourth”	<i>hmnnw</i> , <i>hmnnwt</i>	“eighth”
<i>djnw</i> , <i>djnw^t</i>	“fifth”	<i>psdnw</i> , <i>psdnwt</i>	“ninth.”

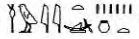

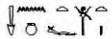

These are usually written with numerals plus the ending (e.g.,  *znw* “second,”  *ḥnwt* “sixth”), but they can also be spelled out: for example,  *snw²* “second,”  *hmtnw* “third.”


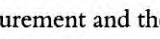
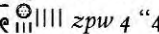
The rest of the ordinals, from “tenth” upwards, are formed by adding the words *mḥ* (, masculine singular) and *mḥt* (, feminine singular) before the cardinal number: for example,  *mḥt-10* “tenth,”  *mḥ-200* “two-hundredth.”


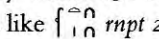
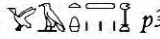
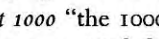
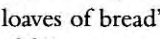
9.4 Use of the numbers



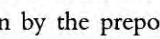
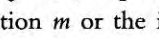
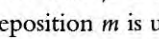
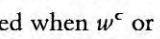

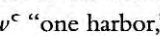
The cardinal numbers are grammatically nouns, and can be used by themselves and modified like other nouns: for example,  *pn* “these 3,”  *kt 100* “another 100.” The ordinal numbers are adjectives, but like other adjectives they can also be used by themselves as nouns: for example,  *ḥr znwt.s* “upon its second one.”

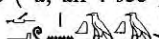
² When the same two consonants came together in an Egyptian word without a vowel between them, they were written only once in hieroglyphs. Since *snnw* “second” is written *snw*, it was apparently pronounced *sVnnVw (where V stands for a vowel). We will meet this rule again in Lesson 13.

When ordinal numbers modify a noun (or a noun phrase), they normally follow it, like other adjectives:  *wḏyt 6nwt* “the 6th expedition,”  *zp tpj* “the first occasion.” Occasionally, however, they come before the noun they modify: in that case, the noun either stands in apposition to the ordinal, or it is connected to it by an indirect genitive (§§ 4.11, 4.13.2): for example,  *snwt.f j3t* “his second office” (literally, “his second one, the office”),  *5nw n h3b* “the 5th festival” (literally, “the 5th one of festival”).


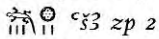


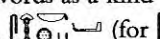
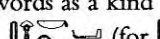
When cardinal numbers are used to modify a noun (or noun phrase), Egyptian writing normally uses what is called the “list form,” with the noun first and the numeral second: for example,  *rnpt 20* “20 years” (literally, “year, 20”). In measurements, the thing being measured is written first, followed by the unit of measurement and then the numeral:  *h(n)qt ds 100* “100 jugs of beer” (literally, “beer, jug, 100”). In measurements, both nouns are normally singular, as in this example. In other cases, however, the noun can also be plural (with numbers higher than 2): e.g.,  *zpw 4* “4 times.”

The writing conventions for cardinal numbers seem to have come from accounts; English normally writes \$50 rather than 50 dollars for similar reasons. As with \$50 in English, however, phrases like  *rnpt 20* “20 years” and  *zpw 4* “4 times” were probably pronounced with the number first: i.e., *mḏwt rnpt* and *jfdw zpw*. For this reason, demonstratives that modify such phrases are always singular, since they agree with the numeral (which is singular) rather than the noun: for instance,  *p3 t 1000* “the 1000 loaves of bread” (i.e., *p3 h3 t*);  *t3 t 100* “the 100 loaves of bread” (i.e., *t3 š t*);  *p3(y).j hrw 4* “my four children” (i.e., *p3y.j jfdw hrw*).

Egyptian can use the words *w^c* and *w^ct* “one,” and the numerals  (*h3*) 1,000 and  (*hh*) 1,000,000 before a noun, noun phrase, or pronoun. In that case, the number is connected to the following noun by the preposition *m* or the indirect genitive: for example,  *1,000 m t* “1,000 loaves of bread” (literally, “1,000 in bread”),  *hh n zp* “a million times” (literally, “a million of time”). With the words for “one,” these two constructions have different meanings. The preposition *m* is used when *w^c* or *w^ct* mean “one of many”:  *w^c m n3 n 3* “one of those donkeys,”  *w^c jm.tn* “one of you.” The indirect genitive with *w^c* or *w^ct* has the same sense as the normal construction in which the number modifies the noun directly:  *dmj w^c* “one harbor,”  *w^c n mjtn* “one path.”

In the spoken language this last construction was also used to express the singular indefinite article (“a, an”: see § 4.9); a few examples with this sense are found in the written language as well:  *w^c n q3q3w* “a boat” (literally, “one of boat”). This is a development common to many languages: the indefinite articles in English, German, and French, for example, all come from the words for “one” in those languages.



9.5 *zp 2* “twice”





The phrase  *zp 2* “two times, twice” is used in writing as a kind of “ditto” sign: for example,  *33 zp 2* “very often” (literally, “twice often”). In spoken Egyptian,  was apparently replaced by the repeated word or phrase: i.e., *33 33* “often, often.” The signs  can also be used in the spelling of single words as a kind of abbreviation, indicating that the preceding signs are to be repeated: for example,  (for ) *sksk* “destroy.”










 *dbn* "deben" = 12 rings, 10 qite.

The "ring" is apparently the earlier of the two, and is generally replaced by the qite after Dynasty 18. In the Middle Kingdom the deben had a lower value of only 0.48 oz (13.6 gm), and had no fractions. The change to the higher value seems to have occurred toward the end of Dynasty 12.





















4. Volume

The Egyptians had different systems for liquid and dry measures of volume, as we do today. Liquids were measured in various kinds of jars, such as the  *ds* for beer (see the example in § 9.4). The capacity of most of these is unknown, except for the  *hnuw* "hin," equal to about half a quart (0.48 liters).

The most common dry measure of volume was for grain. The standard unit of measurement was the  *hq3t* "hekat" (also written , , , equal to 10 hin (4.36 dry quarts, 4.8 l). It had several different multiples:

			<i>hq3tj</i> "double hekat"	=	2 hekat (8.72 dry quarts, 9.6 l)
			<i>jpt</i> "oipec"	=	4 hekat (17.44 dry quarts, 19.2 l)
			<i>h3r</i> "sack"	=	10 hekat (43.59 dry quarts, 48 l).

In the Second Intermediate Period, the capacity of the "sack" was changed from 10 heqats to 4 oipec (= 16 hekat: 69.74 dry quarts, 76.8 l).

Egyptian employed several numerical systems in conjunction with these grain measures. The simplest, found mostly in hieroglyphic texts, was based on the hekat, and used regular numerals and fractions: for example,                    

8 Dates: months and days

The ancient Egyptians divided their year (𓅓 , *rnpt*) into three seasons (𓅓 𓅓 𓅓 *tr*). The year began traditionally around mid-July, when the annual four-month inundation of the Nile started, and the names of the seasons reflect the Egyptian agricultural year: 𓅓 𓅓 𓅓 *3ht* "Inundation" (mid-July to mid-November), 𓅓 𓅓 *prr* "Growing" (literally, "Emergence," mid-November to mid-March), and 𓅓 𓅓 *šmw* "Harvest" (mid-March to mid-July). Each season was divided into four months (𓅓 𓅓 *3bd*) of thirty days each (𓅓 𓅓 *sw*).⁶

The months also had names, but these are rarely used in hieroglyphic texts (see the Addendum at the end of this lesson). Instead, the Egyptians employed a three-part numerical system for indicating months and days:

1. the sign 𓅓 (for *3bd* "month") followed by a number from 1 to 4;
2. the name of the season; and
3. the sign 𓅓 (for *sw* "day") followed by a number from 1 to 30

for example, 𓅓 𓅓 𓅓 𓅓 *3 3ht 7* "3 Inundation 7." The word 𓅓 *tpj* "first" was sometimes used instead of 𓅓 for "month 1," and the word 𓅓 *ꜣꜣ* "last" was normally used instead of the numeral 𓅓 for the thirtieth day of the month: for instance, 𓅓 𓅓 𓅓 *tpj šmw 16* "first of Harvest 16," 𓅓 𓅓 𓅓 *2 prr ꜣꜣ* "2 Growing last." The use of *tpj* "first (month)" and *ꜣꜣ* "last (day)" indicates that the numbers in dates were probably pronounced as ordinals rather than cardinals: i.e., 𓅓 𓅓 𓅓 *hmtnw 3ht šfhnw* "third (month) of Inundation seventh (day)."

The combination of Egyptian seasons, months, and days produced a year of 12 months (3×4) and 360 days (12×30). The ancient Egyptians recognized, however, that the year had 365 full days rather than 360. In order to accommodate this discrepancy, they added five extra days at the end of the year, after 4 *šmw* 30 and before 1 *3ht* 1. These were known as 𓅓 𓅓 𓅓 *hr(j)w-rnpt* "those over the year" (the number is a determinative; *hrjw* is a plural nisbe from the preposition *hr*); Egyptologists call them the "epagomenal" ("eppa-GOM-men-nal") days, meaning "added." Each epagomenal day was celebrated as the birthday of a particular god: (1) 𓅓 𓅓 𓅓 *mswt wsjr* "birth of Osiris," (2) 𓅓 𓅓 𓅓 *mswt hrw* "birth of Horus," (3) 𓅓 𓅓 𓅓 *mswt sth* "birth of Seth," (4) 𓅓 𓅓 𓅓 *mswt jst* "birth of Isis," and (5) 𓅓 𓅓 𓅓 *mswt nbt-hwt* "birth of Nephthys." In dates, these days could be recorded by their names, or by numbers: for example, 𓅓 𓅓 𓅓 *hr(j)w-rnpt 5* "epagomenal day 5." The first day of the year (𓅓 *wpt-rnpt* "opening of the year" = 1 *3ht* 1) was celebrated as 𓅓 𓅓 𓅓 *mswt r* "the birth of Re."

The Egyptian day was divided into 24 hours (𓅓 𓅓 𓅓 *unwt*), 12 for the day (𓅓 𓅓 𓅓 *hrw*) and 12 for the night (𓅓 𓅓 𓅓 *grh*). The Egyptian day began at sunrise. Until the New Kingdom, the hours were not fixed in length but varied with the seasons: thus, in winter an "hour" of the day would be shorter than an "hour" of night, and vice-versa in summer. The hours had names, but these are used mostly in astronomical texts. In normal texts the hours were counted with the ordinal numbers: for example, 𓅓 𓅓 𓅓 *unwt mht-10 nt hrw* "10th hour of the day" (about 4 PM); 𓅓 𓅓 𓅓 *unwt 4wt nt grh* "4th hour of the night" (about 10 PM).

6 This word means "day of the month." The word 𓅓 𓅓 *hrw* means "day" or "daytime" as opposed to night. Each month had 3 weeks of 10 days each; the word for "week" is unknown.

If a text records the rising of Sothis on a particular date of the Egyptian calendar in a king's regnal year, it is then a simple matter to calculate the actual date BC of this event (within four years) against these three fixed four-year periods. For pharaonic history there are only three such historical records. Two of these include the regnal year of a king as well as the month and day: on 2 Harvest 1 in Year 9 of Ptolemy III, and on 4 Growing 16 in Year 7 of Senwosret III. The first of these is 94 days before 1 Inundation 1: this dates Year 9 of Ptolemy III to the period between 240 and 237 BC ($4 \times 94 = 376$ years earlier than AD 136–39; the actual date, which can be calculated from other sources, is 238 BC). The second is 140 days before 1 Inundation 1, and places Year 7 of Senwosret III about 1873–1876 BC ($139 \times 4 = 556$ years earlier than 1317–1320).

Using these dates and other sources, Egyptologists are able to calculate the regnal years of most other ancient Egyptian kings in terms of actual years BC. The process is a complicated one, involving astronomy, king-lists, historical texts, biographical inscriptions, lunar dates of Egyptian festivals, and correspondences with Mesopotamian king-lists and the Hebrew Bible. Although Egyptian chronology is still the subject of much debate, most Egyptologists now agree that the dates of Egyptian pharaohs and dynasties from the Middle Kingdom onward are fairly certain, with a margin of error ranging from about 29 years in Dynasty 12 to near zero after 525 BC.

EXERCISE 9

1. Transliterate and translate the following list of booty from a military campaign of Thutmose III:

VOCABULARY:

<i>ju3</i> "ox"	<i>hm / hmt</i> "servant"
<i>jh</i> "cattle"	<i>hzj</i> "wretched"
<i>wndw</i> "short-horned cattle"	<i>k3 jdr</i> "herd bull"
<i>b3kw</i> "tribute"	<i>kš</i> "Kush" (northern Sudan)
<i>nbw</i> "gold"	<i>dmd</i> "total"

2. Transliterate and translate:

a. — *s3m-k3-r*: throne name of a 13th-Dynasty king

b. — *zp* "time"


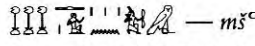
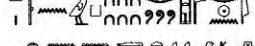
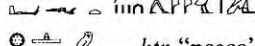
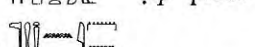
c. — *w3t* "path," *mw* "water," *jtj* "grain"

d. — *sh3j* "peasant"

e. — *nh3j* "Nubian"

f. — *hrw-h3b* "feast day, festival day"







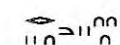




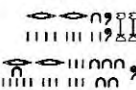
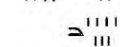
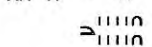
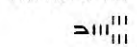
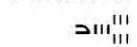
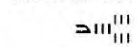

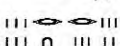




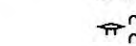
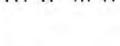
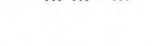



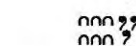
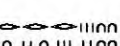
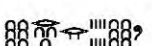



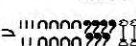
g. — *jmn* "Amun," *jpt-swt* "Karnak temple"

- h.  — *ms* "expeditionary force," *zj* "man"
- i.  — *jr* see § 8.2.7; *hrw* "day"
- j.  — *wdyt* "campaign," *nht* "victory"
- k.  — *htp* "peace"
- m.  — *jb* "heart"

3. Write in hieroglyphs the ordinal counterparts of the following cardinal numbers:

- a.  b.  c.  d. "
- e.  f.  g.  h. 

4. The following is an excerpt transcribed from a hieratic account in which amounts of something are tallied under the headings of certain kinds of cattle. Transliterate and translate it; in the translation, combine Egyptian fractions where necessary into a single fraction (i.e., $\frac{1}{3} \frac{1}{4} = \frac{7}{12}$).⁸ See if you can figure out mathematically how the rows and columns are related.

VOCABULARY:

















<i>jdr-mnjw</i> "tended herd" (literally, "herder's herd")	<i>htr</i> "team ox"
<i>wpt</i> "splitting"	<i>drt</i> "calf"
<i>(n)g(3)w</i> "steer"	<i>dmd</i> "total"
<i>hrj-db</i> "hornless cattle"	

⁸ To combine fractions with different denominators, find the lowest number into which all the denominators can be divided evenly, multiply the numerators by the number of times the denominator goes into this lowest number, then add all the numerators together. For example, to add $\frac{1}{3} + \frac{1}{5} + \frac{1}{6}$, change all the fractions to 30ths (30 is the lowest number into which 3, 5, and 6 can all be divided evenly): $\frac{1}{3} = \frac{10}{30}$, $\frac{1}{5} = \frac{6}{30}$, $\frac{1}{6} = \frac{5}{30}$. Then add the fractions: $\frac{10}{30} + \frac{6}{30} + \frac{5}{30} = \frac{21}{30}$.



































Sign List

















Listed below are the hieroglyphic signs most often found in Middle Egyptian texts, arranged into 27 groups on the basis of what they depict. The selection and order are those most commonly used by Egyptologists, based on the list in Gardiner's *Egyptian Grammar*, with some additional signs.¹ Each sign is identified as to what it depicts (as far as possible) and its uses, whether phonogram, ideogram, or determinative, arranged in order of frequency; words in SMALL CAPITALS indicate the class of words with which a sign is used as determinative. At the end of the sign list is a supplemental list of signs arranged by shape.

A. Human Beings, Male









- | | | | |
|----|---|----------------------------|--|
| 1 |  | seated man | Phonogram <i>j</i> (1s suffix pronoun). Determinative MAN; also in 1s pronouns <i>jnk</i> , <i>wj</i> , <i>.kw/kj</i> . Ideogram for <i>zj</i> "man" or <i>ḥw</i> "companion." With B1 and plural strokes, determinative PEOPLE and ideogram for <i>rmj</i> "people." |
| 2 |  | man with hand to mouth | Variants  (A68),  (A84). Determinative SPEAK, THINK, EAT, DRINK, and for emotions such as LOVE and HATE. |
| 3 |  | man sitting on heel | Determinative SIT. |
| 4 |  | man with hands raised | Determinative WORSHIP; also HIDE (for A5). |
| 5 |  | man hiding behind wall | Determinative HIDE. |
| 6 |  | A1 + W54 | Variant of D60. |
| 7 |  | fatigued man | Determinative WEARY, WEAK, SOFT. |
| 8 |  | man performing <i>hnw</i> | Determinative in <i>hnw</i> "jubilation." |
| 9 |  | man with basket on head | Variant  (A119) in <i>f3j</i> . Determinative LOAD, CARRY, WORK. Ideogram for <i>3tp</i> "load," <i>f3j</i> "carry, lift," <i>k3t</i> "work." |
| 10 |  | man with oar | Determinative SAIL, ROW. |
| 11 |  | man with scepter and crook | Determinative FRIEND. |
| 12 |  | soldier | Determinative SOLDIER. Ideogram with plural strokes for <i>mšc</i> "expeditionary force, army." |
| 13 |  | prisoner | Determinative ENEMY. |

¹ A number of signs that Gardiner placed in category Aa ("Unclassified") have since been identified. The sign R13 is included as a separate entry in G. The supplemental sign R61 is listed under I as well as R, and Y10 under M as well as Y. Additional signs are numbered, where possible, after the list in N. Grimal, J. Hallof, and D. van der Plas, eds., *Hieroglyphica* (Publications interuniversitaires de recherches égyptologiques informatisées, 1: Utrecht, Centre for Computer-aided Egyptological Research, Utrecht University, 1993). Such signs are placed where they belong in each group rather than in their numerical position: thus, for example, A359 after A28.






- 14  wounded man Variant  (A14a). Determinative DIE, ENEMY.
- 15  man falling Variant  (A97). Determinative FALL, DIE. Ideogram for *hr* "fall."
- 16  man bowing Determinative BOW.
- 17  child Variant  (A17a). Determinative CHILD, YOUNG; in hieratic also SIT (for A3), DIGNITARY (for A21). Ideogram for *hrd* "child." Phonogram *nnj* "child" in *nnj-nswt* "Herakleopolis."
- 18  child with Red Crown Determinative CHILD-KING.
- 19  old man with staff Determinative OLD, DISTINGUISHED. Ideogram for *j3w* "old," *smsw* "eldest," *ur* "great, chief." Phonogram *jk* in *jky* "miner" (from *j3k* "age"). In hieratic sometimes for A25.
- 20  old man with forked staff Variant of last. Determinative in *smsw* "elder," also ideogram for same.
- 21  dignitary Determinative DIGNITARY. Ideogram for *stj* "official." Also as variant of A11 and A22. In hieroglyphic not always distinguishable from A19-20.
- 22  statue on base Determinative STATUE. The form often varies.
- 23  king Determinative KING.
- 24  man striking Determinative FORCE, EFFORT. Ideogram for *nht* "victory."
- 25  man striking Determinative in *hwy* "hit," often  (striking the phonogram).
- 59  man threatening Determinative DRIVE OFF.
- 26  man beckoning Variant  (A366). Determinative CALL. Ideogram for *j* "oh!" and *ʕ* "call."
- 27  man running Phonogram *jn* in *jn* "by" (from *jn* "messenger").
- 28  excited man Determinative HIGH, JOY, MOURN, FRUSTRATION.
- 359  man with arms clasped Determinative in *hsj* "freeze." Also rare variant of A1 (man pointing to himself).
- 29  man upside down Determinative INVERT.
- 30  man worshipping Determinative WORSHIP, RESPECT.
- 31  man shunning Determinative TURN AWAY.
- 32  man dancing Determinative DANCE.
- 33  man with stick and bundle Variant  (A166). Determinative in *mnjw* "herdsman," also ideogram for same. Determinative WANDER, STRANGER.
- 34  man pounding Determinative in *hwsj* "pound, construct."
- 35  man building a wall Determinative in *qd* "build," also ideogram for same.
- 37  man in vat Variant  (A36). Determinative in *ʕfj* "brewer," also ideogram for same.
- 38  man with two animals Variant  (A39, with two giraffes). Ideogram for *qjs/qsj* "Qus" (town).














- 40  seated god Determinative GOD, KING. Variant of A1 for 1s pronouns when speaker is a god or the king.
- 41  seated king Variant  (A42). Determinative KING. Variant of A1 for 1s pronoun when the speaker is the king.
- 43  king with White Crown Variant  (A44). Determinative of *nsut* "king," also ideogram same. Determinative of *wsjr* "Osiris."
- 45  king with Red Crown Variant  (A46). Determinative of *bjtj* "king of Lower Egypt," also ideogram for same.
- 47  shepherd seated Determinative in *z3w* "guard," also ideogram for same. Ideogram for *mnjw* "herdsman." Sometimes variant of A48.
- 48  seated man with knife Phonogram *jr* in the nisbe *jtj* "pertaining to."
- 49  foreigner with stick Determinative FOREIGNER.
- 50  noble on chair Determinative DIGNITARY, DECEASED. Variant of A1 for 1s pronoun when the speaker is deceased. Also variant of A51.
- 51  noble on chair, with flail Determinative in *špsj/šps* "noble," also ideogram for same. Determinative DIGNITARY, DECEASED.
- 52  seated noble with flail Determinative DIGNITARY, DECEASED.
- 53  mummy standing Determinative MUMMY, STATUE, LIKENESS, FORM. Ideogram for *tu* "likeness, statue."
- 54  mummy recumbent Determinative DEAD.
- 55  mummy on bed Determinative LIE, DEAD. Ideogram for *sḏr* "lie down." The mummy is sometimes replaced by a man when used in/for *sḏr* "lie down."

B. Human Beings, Female























- 1  seated woman Variant  (B24). Determinative FEMALE. Rarely variant of A1 when the speaker is female.
- 2  pregnant woman Determinative PREGNANT.
- 3  woman giving birth Variant  (B4). Determinative in *msj* "give birth," also ideogram for same.
- 5  woman nursing Determinative in *mn^ct* "nurse."
- 6  nurse with child Determinative in *rnn* "rear, foster."
- 7  seated queen Determinative in queens' names.










































C. Anthropomorphic Gods














- 1  god with sun-disk Variant  (falcon-headed, C2). Determinative in *r^c* "Rc," also ideogram for same.
- 3  ibis-headed Determinative in *ḏhwtj* "Thoth," also ideogram for same.
- 4  ram-headed Variant  (C5). Determinative in *ḫnmw* "Khnum," also ideogram for same.

- 6  jackal-headed Determinative in *jnpw* "Anubis" and *wꜥ-wꜥwt* "Wepwawet," also ideogram for same.
- 7  Seth-animal-headed Determinative in *sth/stš* "Seth," also ideogram for same.
- 8  Min figure Determinative in *mnw* "Min," also ideogram for same.
- 9  goddess with horned disk Determinative in *hwt-hrw* "Hathor," also ideogram for same.
- 10  goddess with feather Variants  (C10a),  (C175a). Determinative in *mꜣt* "Maat" (as goddess), also ideogram for same.
- 11  *hh*-figure Ideogram for *hh* "million (§ 9.1)" and "Heh" (god supporting the sky).
- 12  Amun figure Determinative in *jnmw* "Amun," also ideogram for same.
- 17  Montu figure Determinative in *mntw* "Montu," also ideogram for same.
- 18  Tatenen figure Determinative in *tꜣ-tꜣnj* "Ta-tjenen," also ideogram for same.
- 19  Ptah figure Variant  (C20). Determinative in *pth* "Ptah," also ideogram for same.

D. Parts of the Human Body

- 1  head Ideogram for *tp* and *dꜣdꜣ* "head." Phonogram *tp* in *tpj* "first." Determinative HEAD.
- 2  face Ideogram for *hr* "face." Phonogram *hr*.
- 3  hair Determinative HAIR, SKIN, COLOR; also words associated with hair: BALD, MOURN, WIDOW. Ideogram for *wš* "missing."
- 4  eye Phonogram *jr*. Determinative for actions associated with the eye. Ideogram for *jrt* "eye."
- 5  eye with paint Variants  (D6) and  (D7a). Determinative for actions associated with the eye.
- 140  two eyes Determinative in *ptr* "see, look," also ideogram for same.
- 7  eye with paint Determinative ADORN. Also determinative in *ꜥn* "beautiful" and *ꜥnw* "Tura" (quarry near Cairo), from the Semitic root *ꜥjn* "eye."
- 8  eye enclosed Variant of D7 as determinative in *ꜥn* "beautiful" and *ꜥnw* "Tura."
- 9  eye weeping Determinative in *rmj* "weep," also ideogram for same.
- 10  eye with falcon markings Determinative in *wꜣꜣt* "Sound Eye (of Horus)," also ideogram for same.
- 11  part of D10 Ideogram for 1/2 heqat (§ 9.7.3).
- 12  part of D10 Ideogram for 1/4 heqat (§ 9.7.3). Also determinative in *dfꜣ* "pupil" and *mꜣꜣ* "see," the latter as variant of D4.
- 13  part of D10 Ideogram for 1/8 heqat (§ 9.7.3). Also determinative EYEBROW.
- 14  part of D10 Ideogram for 1/16 heqat (§ 9.7.3).
- 15  part of D10 Ideogram for 1/32 heqat (§ 9.7.3).
- 16  part of D10 Ideogram for 1/64 heqat (§ 9.7.3).
- 17  D15 + D16 Determinative of *tjt* "image," also ideogram for same.
- 18  ear Determinative in *msgr* "ear," also ideogram for same.
- 19  face in profile Variant  (D20). Determinative NOSE, FACE, and associated actions. Ideogram for *fnꜣ* "nose." Phonogram *hnt*. In hieratic not always distinguishable from U31 or Aa32.

21		mouth	Phonogram <i>r</i> . Ideogram for <i>r</i> "mouth."
154		mouth plus water	Determinative in <i>j^cw-r</i> "breakfast," also ideogram for same.
22		mouth plus 2 strokes	Ideogram for <i>rwj</i> ⅓ (§ 9.6).
23		mouth plus 3 strokes	Ideogram for <i>hmt-rw</i> ¼ (§ 9.6).
24		lip with teeth	Variant  (D24a). Determinative in <i>spt</i> "lip," also ideogram for same. Sometimes in error for F42.
25		two lips and teeth	Determinative in <i>sptj</i> "lips," also ideogram for same.
26		lips and water	Determinative SPIT, SPEW.
27		breast	Variant  (D27a). Determinative BREAST, NURSE. Ideogram for <i>mnd</i> "breast."
28		two arms	Phonogram <i>k3</i> . Ideogram for <i>k3</i> "ka" (variant  D29).
30		two arms and tail	Determinative in <i>nḥb-k3w</i> "Assigner of Kas" (a god).
32		two arms embracing	Variant  in hieratic. Determinative EMBRACE, OPEN.
31		D32 plus U36	Variant  . Ideogram for <i>hm-k3</i> "ka-servant" (mortuary priest).
33		arms and oar	Phonogram <i>hn</i> (from <i>hnj</i> "row").
34a		arms with shield and mace	Variant  (D34). Ideogram for <i>h3</i> "fight."
35		gesture of negation	Ideogram for <i>nj</i> "not" and phonogram <i>nj</i> or <i>n</i> (§ 8.2.6), especially in <i>nn</i> "not"; <i>jw</i> or <i>jwt</i> in <i>jwt</i> "that not" and <i>wtj</i> "which not" (§§ 12.9, 26.29.5). Determinative NEGATION.
36		forearm	Phonogram <i>c</i> . Ideogram for <i>c</i> "arm, hand." Often variant for D37–44.
36a		forearm	Ideogram for <i>cwj</i> "arms, hands."
212a		forearm with water	Determinative in <i>j^cj</i> "wash," also ideogram for same.
37		forearm with X8	Phonogram <i>dj</i> in forms of <i>rdj</i> "give." Also variant of D38.
38		forearm with bread	Phonogram <i>mj</i> or <i>m</i> . Determinative in <i>jmj</i> "give!" (§ 16.2.3).
39		forearm with pot	Determinative OFFER. Sometimes variant of D37–38.
218a		O43 + D36	Ideogram for <i>šzp</i> "receive."
40		forearm with stick	Determinative FORCE, EFFORT. Ideogram for <i>h3j</i> "measure, evaluate." Rarely variant of D37.
41		forearm with palm down	Determinative ARM and actions associated with the arm or hand. Ideogram <i>rmn</i> "shoulder." Phonogram <i>nj</i> .
42		forearm with palm down	Determinative in <i>mḥ</i> "cubit" (§ 9.7.1), also ideogram for same.
43		forearm with flail	Phonogram <i>hw</i> .
44		forearm with scepter	Determinative in <i>hwp</i> "manage," also ideogram for same.
45		forearm with brush	Variant  (D251). Determinative in <i>dsr</i> "sacred, clear away, raise the arm," also ideogram for same.
46		hand	Phonogram <i>d</i> . Ideogram for <i>drt</i> "hand."
46a		hand with water	Ideogram for <i>jdt</i> "fragrance."
47		hand	Determinative of <i>drt</i> "hand" when spelled with phonograms.
48		hand without thumb	Ideogram for <i>šzp</i> "palm" (§ 9.7.1).
49		fist	Determinative GRASP.
50		finger	Ideogram for <i>db^c</i> "finger" and <i>db^c</i> "10,000" (§ 9.1). When doubled, determinative ACCURATE.

- 51  finger
- 52  penis
- 53  penis with fluid
- 279  testicles
- 280a  pelvis and vulva
- 54  walking legs
- 55  legs walking backwards
- 56  leg
- 57  leg with knife
- 58  foot
- 59  D36 + D58
- 60  D58 + W54
- 61  stylized toes

Determinative for actions associated with the finger: *h3j* "measure," *t3j* "take," *dqr* "press." Determinative in *nt* "fingernail," also ideogram for same. Determinative FRUIT, FLOWER, also ideogram for *dqrw* "fruit," *q3w* "flour."

Determinative MALE. Phonogram *mt*. With E1, ideogram for *k3* "bull."

Determinative PENIS and associated actions, also MALE. Determinative of *b3h* in *m b3h* "in the presence of," *dr b3h* "since," *r b3h* "before," also ideogram for same.

Determinative in *hrwj* "testicles," also ideogram for same.

Phonogram *hm*. Ideogram for *jdt* "vulva, cow."

Determinative MOTION. Phonogram *jw* in forms of the verb *juj* "come." Ideogram for *nmtt* "step."

Determinative REVERSE.



Determinative FOOT and associated actions. Ideogram for *rd* "foot." Phonogram *pd* (from *p3d* "knee"). Ideogram for *wrt* "district" (from *wrt* "shin"), *sbq* "excellent" (from *sbq* "leg"), *ghs* "gazelle."

Determinative MUTILATE. Ideogram for *j3iw* "place of execution" and *s3tj* "cheater" (from *j3t* "short").
















Phonogram *b*. Ideogram for *bw* "place, thing."

Phonogram *b*.

Ideogram for *wcb* "clean, pure."

Variants  (D62) and  (D63). Determinative in *s3h* "toe; kick, touch with the foot," also ideogram for same.

E. Mammals

- 1  bull
- 166  bulls
- 177  two bulls joined
- 176  bull tied for slaughter
- 2  bull charging
- 3  calf
- 4  sacred cow
- 5  cow and calf
- 6  horse
- 7  donkey
- 8  kid
- 9  newborn bubalis
- 10  ram
- 12  pig
- 13  cat

Determinative CATTLE. Ideogram for *k3* "bull, ox" *jhw* "cattle."

Plural of E1.

Determinative in *hns* "go back and forth."

Determinative *rhs* "slaughter," also ideogram for same. Ideogram for *k3* "bull" as offering.

Determinative in *sm3* "wild bull." Ideogram for *k3* in *k3 nht* "victorious bull" (epithet of the king).


Determinative in *bhz* "calf" and *undw* "short-horned cattle."

Determinative in *hz3t* "sacred cow."


Determinative in *3ms* "solicitous."

Determinative HORSE. Ideogram for *ssmt* "horse."

Determinative in *3* (originally *j3*) "donkey."























Variant  (E8a). Phonogram *jb*. Determinative GOAT.

Phonogram *jw*.
















Variant  (E11). Determinative SHEEP. Ideogram for *b3* "ram," *hnmw* "Khnum."







































Determinative PIG.


Determinative in *mju/mjt* "cat."


- 14  dog (saluki)
 15  jackal recumbent
 17  jackal
 18  jackal on standard
 20  Seth animal
 22  lion
 23  lion recumbent
 128  two lions joined
 24  panther or leopard
 25  hippopotamus
 26  elephant
 27  giraffe
 28  oryx
 29  gazelle
 30  ibex
 31  goat with collar
 32  baboon
 33  monkey
 34  hare
- Determinative DOG.
 Variant  (D16). Determinative in *jnpw* "Anubis," also ideogram for same. Ideogram (D15) for title *hrj-sst3* "master of secrets."
 Determinative in *z3b* "jackal; dignitary," also ideogram for same.
 Variant  (E19). Determinative in *wp-w3wt* "Parter of the Ways (Wepwawet)," also ideogram for same.
 Variant  (E21). Ideogram for *sth/st3* "Seth." Determinative TURMOIL, CHAOS. In hieratic often for E7 and E27.
 Determinative in *m3j* "lion," also ideogram for same.
 Phonogram *rw* (from *rw* "lion"). In hieratic often for U13.
 Determinative in *3kr* "Horizon (god)," also ideogram for same.
 Determinative in *3by* "panther, leopard," also ideogram for same.
 Determinative HIPPOPOTAMUS.
 Determinative in *3bw* "elephant." Ideogram for *3bw* "Elephantine" (in modern Aswan).
 Determinative in *sr* "foretell." Determinative in *mmj* "giraffe," also ideogram for same.
 Determinative in *m3hd* "oryx."
 Determinative in *ghs* "gazelle."
 Determinative in *nj3w, nr3w, n3w* "ibex."
 Determinative in *s^ch* "privilege," also ideogram for same.
 Determinative BABOON, MONKEY, FURIOUS.
 Determinative in *gjf* "monkey."
 Phonogram *wn*.




F. Parts of Mammals

- 1  head of ox
 2  head of charging bull
 3  head of hippopotamus
 4  forepart of lion
 5  head of bubalis
 7  head of ram
 9  head of leopard
 11  head and neck of animal
 12  head and neck of jackal
 13  horns
- Variant  (F63). Ideogram for *k3* "cattle" (in offering formulas).
 Determinative in *gnd* "rage."
 Determinative in *3t* "power," and *3t* "moment," also ideogram for latter.
 Ideogram for *h3t* "front" and related words.
 Variant  (F6). Determinative in *ss3* "skilled," and related words, also ideogram for same. Determinative in *ss3* "prayer" and *bhnt* "pylon."
 Variant  (F8). Determinative in *3fyt* "worth" (from *3ft* "ram's head"), also ideogram for same.
 Determinative in *phjt* "strength," also ideogram for same (often doubled).
 Variant  (F10). Determinative NECK, THROAT and related actions.
 Phonogram *usr*.
 Phonogram *up*. Ideogram for *wpt* "brow." For  see O44.

- 14  F13 + M4
Variant  (F15). Ideogram for *wpt-mpt* "Opening of the Year" (New Year's Day).
Phonogram *ʿb*. Determinative HORN, also ideogram for same.
- 16  horn
Determinative in *ʿbw* "purification," also ideogram for same.
- 17  F16 + W54
Determinative TOOTH and associated actions. Phonograms *bh* and *hw*.
Determinative in words with root *bj3*.
- 18  tusk
Determinative in *ʿrt* "jaw."
- 19  jawbone of ox
Phonogram *ns*. Determinative for actions associated with the tongue.
Ideogram for *ns* "tongue" and *jmj-r* "overseer" (§ 8.9). Sometimes for Z6.
- 20  tongue
Phonograms *sdm* and *jdn*. Determinative EAR and associated actions.
Ideogram for *msdr* "ear" and *drd* "leaf"
- 21  ear of bovine
Phonogram *ph*. Determinative END, BOTTOM. Ideogram for *phuj* "end" and *kf3* "discreet" (from *kf3* "bottom").
- 22  hindquarters of feline
Variant  (F24). Determinative in *hpx* "strong arm; foreleg," also ideogram for same. Determinative in *mshtju* "Foreleg" (Ursa Major).
- 23  foreleg of ox
Phonogram *whm*. Ideogram for *whm/whmt* "hoof."
- 25  leg and hoof of ox
Phonogram *hn*. Ideogram for *hnt* "hide, skin."
- 26  goatskin
Determinative HIDE, MAMMAL. Sometimes for N2.
- 27  cowskin
Phonogram *s3b* in *s3b* "dappled." Sometimes for U23.
- 28  cowskin
Determinative of *stj* "shoot," also ideogram for same. Phonogram *st*.
- 29  cowskin with arrow
Phonogram *sd*.
- 30  water-skin
Phonogram *ms*.
- 31  three fox-skins
Phonogram *h*. Ideogram in *ht* "belly, body."
- 32  animal's belly and udder
Determinative in *sd* "tail," also ideogram for same.
- 33  tail
Ideogram for *jb* "heart." Determinative in *h3tj* "heart"
- 34  heart
Phonogram *nfr*.
- 35  heart and windpipe
Phonogram *zm3*.
- 36  lung and windpipe
Variants  (F38),  (F37b). Determinative BACK. Ideogram for *j3t* "back." Sometimes for M21.
- 37  spine and ribs
Determinative in *jm3h* "honor" (Essay 21), also ideogram for same. Determinative in *jm3h* "spinal cord," also ideogram for **same**. Occasionally for F37 as determinative.
- 39  spine and spinal cord
Phonogram *3w*.
- 40  spine and spinal cord
Variant of Y10. Determinative in *psd* "back."
- 41  vertebrae
Phonogram *spr*. Determinative in *spr* "rib," also ideogram for same.
- 42  rib
Determinative in *sph* "ribs."
- 43  ribs
Determinative in *juw* "inherit" and related words, also ideogram for same. Phonogram *jsw*. Determinative in *juw* "femur," *swt* "tibia."
- 44  joint of meat
Determinative in *jdt* "vulva, cow," also ideogram for same.
- 45  cow uterus
Variants  (F47),  (F48),  (F49). Determinative MIDST, TURN, INTESTINE. Determinative in *wdb* "shore" (from *wdb* "turn").
- 46  intestine
Phonogram *sphr*.
- 50  S29 + F46

51  piece of meat


52  excrement

Also , , . Determinative FLESH. Ideogram for *kns* "vagina" and (tripled) *h^cw* "body." Phonogram *js* in *jst* "Isis" and *ws* in *wsjr* "Osiris" in some Coffin Texts.


Determinative in *hs* "excrement."

G. Birds

1  Egyptian vulture


2  two vultures


3  U1 + G1


4  buzzard

5  falcon

6  falcon with flail


7  falcon on standard


R13  falcon on standard


7b  falcon in boat

8  G5 + S12


9  falcon with sundisk


10  falcon in Sokar bark

11  falcon image

13  falcon image with plumes

14  vulture

14a  vulture on basket


15  vulture with flail

16  G14a + I13

17  owl


18  two owls

20  G17 + D36

21  guinea-fowl

22  hoopoe


23  lapwing

25  crested ibis

Phonogram 3. Often distinguishable from G4 only by flatter head.

Phonogram 33.

Phonogram *m3*.


Variant  (G4a). Phonogram *tjw*. G4 often distinguishable from G1 only by rounder head.

Ideogram for *hrw* "Horus."

Determinative in *bjk* "falcon."

Determinative DIVINE. Also variant of A1 when the speaker is a god or the king.


Ideogram for *jmnt* "West" (older form of R14).

Variant  (G7a). Ideogram for *nmtj* "Nemti" (a god).

Ideogram for *bjk nbw* "Gold Falcon" (title of the king: Essay 6).

Ideogram in *r^c-hrw-(3htj)* "Re-Harakhti" (Essays 4, 12, 16).

Determinative in *zkr* "Sokar" (a god) and *hnw* "Sokar-bark."

Variant  (G12). Determinative in *hm/^csm/^chm* "idol" and *snbt* "breast"

Determinative in *spdw* "Sopdu" (a god). Ideogram for *hrw nhnj* "Horus of Hierakonpolis."

Phonogram *mjwt/mjt/mwt/mt*, most common in *mwt (mjwt)* "mother." Determinative in *nrt* "vulture" and words with root *nr*.


Determinative in *nhbt* "Nekhbet" (goddess).

Determinative in *mwt (mjwt)* "Mut" (goddess), also ideogram for same.

Ideogram for *nbtj* "Two Ladies" (title of the king: Essay 6).


Phonogram *m*.

Phonogram *mm*.
































Variant  (G19 = G17 + D37). Phonogram *mj, m*.

Phonogram *nh*. Ideogram for *nh* "guinea-fowl." Often with body like G1 or G43, but with "horns" and lappet of G21.

Phonogram *db/db* in *dbt/dbt* "brick."

Variant  (G24). Determinative in *rhwt/rhyt* "subjects," also ideogram for same.

Phonogram 3h.

- 26  ibis on standard
Variant  (G26a). Ideogram for *dhwtj* "Thoth." Determinative in *hbj* "ibis."
- 27  flamingo
Phonogram *dšr* "red." Determinative in *dšr* "flamingo."
- 28  black ibis
Phonogram *gm*.
- 29  jabiru
Phonogram *b3*.
- 30  three jabirus
Ideogram for *b3w* "impressiveness."
- 31  heron
Determinative HERON.
- 32  heron on a perch
Determinative in *b^chj* "inundate," also ideogram for same.
- 33  egret
Determinative in *sd3/sd3d3* "tremble."
- 34  ostrich
Determinative in *nju* "ostrich."
- 35  cormorant
Phonogram *q*.
- 36  forktailed swallow
Phonogram *wr*. Determinative in *mnt* "swallow."
- 37  sparrow
Determinative SMALL, BAD. Distinguished from G36 by the rounded tail.
- 38  goose
Phonogram *gb* in *gbb*, *gbw* "Geb." Determinative BIRD, INSECT. Variant of G39 as phonogram *z3*. Determinative in *wf3* "discuss," *wzf* "idle," *wdf* "delay," *htm* "perish, destroy."
- 39  pintail duck
Phonogram *z3*. Determinative in *zr/zrt/zj/zjt* "pintail duck." Often distinguishable from G38 only by more pointed tail.
- 40  pintail duck flying
Phonogram *p3*. Occasional variant of G41.
- 41  pintail duck landing
Phonogram *p3*, especially in hieratic. Determinative in *hnj* "land, alight" and other words with *hn*. Determinative in *shwj* "gather" and *qmyt* "gum." In combination with T14, determinative in *qm3* "throw," *qm3j* "create," and words with *tn*/*tn*.
- 42  fattened bird
Determinative in *wš3* "fatten," also ideogram in same. Determinative in *df3w* "food."
- 43  quail chick
Phonogram *w*. Ideogram for *w* "chick."
- 44  two quail chicks
Phonogram *uw*.
- 45  G43 + D36
Phonogram *w^c*.
- 46  G43 + U1
Phonogram *m3w*.
- 47  duckling
Phonogram *t3*. Ideogram *t3* "duckling."
- 48  ducklings in nest
Variants  (G48a),  (G49). Determinative in *zš* "nest," also ideogram for same.
- 50  two plovers
Ideogram for *htj* "washerman."
- 51  bird and fish
Determinative in *h3m/hjm* "catch fish."
- 52  bird picking up grain
Determinative in *snm* "feed."
- 53  human-headed bird
Ideogram for *b3* "ba."
- 54  plucked bird
Phonogram *snd/snd*. Determinative in *wšn* "wring the neck of birds."

H. Parts of Birds





- | | | | |
|---|--|------------------------|--|
| 1 | | head of duck | Ideogram for 3pd "bird" (in offering formulas). Determinative in wšn "wing the neck of birds." Variant of H2. |
| 2 | | head of a crested bird | Determinative in m3c "temple (of the head)," occasionally also m3c "correct, true, real." Phonograms p3q (variant of H3), wšm. |
| 3 | | head of spoonbill | Phonogram p3q. |
| 4 | | head of vulture (G14) | For G14 as determinative in nrt "vulture" and words with root nr. Ideogram for rmt "people." |
| 5 | | wing | Determinative WING and associated actions. |
| 6 | | feather | Variants (H6a), (H6b). Phonogram šw. Ideogram for šwt "feather." Determinative in m3c "Maat" (Essay 10), also ideogram for same. |
| 7 | | claw | Phonogram š3 in š3t "Shat" (a place). Determinative in j3ft "claw." |
| 8 | | egg | Ideogram for z3 "son" in proper names. Determinative in swht "egg." Determinative in p6t "the elite." |

I. Reptiles, Amphibians, and their Parts

- | | | | |
|-----|--|----------------------------|---|
| 1 | | gecko | Phonogram ʿš3. Determinative LIZARD. |
| 2 | | turtle | Determinative in štjw "turtle," also ideogram for same. |
| 3 | | crocodile | Determinative CROCODILE, AGGRESSION. When doubled, ideogram for jty "sovereign." |
| 4 | | crocodile on shrine | Variant (I5a, crocodile image). Determinative in sbkw "Sobek," also ideogram for same. |
| 5 | | crocodile with curved tail | Determinative in s3q "collect," also ideogram for same. |
| 6 | | crocodile scales | Phonogram km. |
| 7 | | frog | Determinative FROG. Ideogram for wḥm ʿnh "repeating life" (epithet of deceased). |
| 8 | | tadpole | Ideogram for hfn "100,000" (§ 9.2). Determinative TADPOLE. |
| 9 | | horned viper | Phonogram f. Determinative in jtj "father." |
| 10 | | cobra | Phonogram d. |
| R61 | | emblematic cobra | Determinative in tnjw "desert border," also ideogram for same. |
| 11 | | two cobras | Phonogram dd. |
| 12 | | erect cobra | Variant (I64). Determinative in jʿrt "uraeus" and names of goddesses. |
| 13 | | cobra on basket | Determinative in w3dt "Wadjet" (a goddess) and name of goddesses. |
| 14 | | snake | Variant (I15). Determinative SNAKE, WORM. |


K. Fish and Parts of Fish

- | | | | |
|---|--|--------|---|
| 1 | | bulti | Phonogram jn. Determinative in jnt "bulti." |
| 2 | | barbel | Determinative in but "abomination." |
| 3 | | mullet | Phonogram ʿd in ʿd-mr "district administrator." Determinative in ʿdw "mullet." |

- 4  oxyrhynchus
 5  pike
 6  fish scale
 7  blowfish








Phonogram *h3*. Ideogram in *h3t* "oxyrhynchus."

Determinative in *bzj* "introduce." Determinative FISH, FISHY.

Variant . Determinative in *nšmt* "fish scale," also ideogram for **same**.

Determinative in *špt* "angry."

L. Insects and Invertebrates

- 1  scarab beetle
 2  bee or wasp
 3  fly
 4  locust
 5  centipede
 6  shell
 7  emblematic scorpion

Phonogram *hpr*. Determinative in *hpr* "scarab beetle," also ideogram for **same**.


Ideogram for *bjt* "bee; honey," and *bjtj* "King of Lower Egypt"

Determinative in *ʿff* "fly."














Determinative in *znhm* "locust."


Ideogram in *sp3* "Sēpa" (place near Heliopolis). Determinative in *zp3* "centipede."

Phonogram *h3* in *h3wt* "offering table."

Variant  (L7a). Determinative in *sqṯ* "Selket" (a goddess), also ideogram for **same**.

M. Vegetation

- 1  tree
 2  plant
 3  stick
 4  rib of palm branch
 5  M4 + X1
 6  M4 + D21
 7  M4 + Q3
 8  pool with lilies
 9  lily (lotus)
 10  lily (lotus) bud
 11  flower on stem
 12  lily (lotus) plant
 13  papyrus

Variant  (M1a, with M3). Determinative TREE; also in *mʿr* "fortunate." Phonogram *jm3*, often with only G17 *m* as complement = *jm(3)*.

Determinative PLANT. Phonogram *hn*. Determinative in *jzj* "light," *jz* "tomb," *js* "old" (from *jzw* "reeds"). Rarely for A1 as determinative or in 1s pronouns (from *j* "reed"). Occasional variant of T24.

Phonogram *ht*. Determinative WOOD. Ideogram for *ht* "wood, stick, tree, mast." Also vertically as determinative of *ḏʿr* "seek."

Ideogram for *rnpt* "year" and *hsbt* "regnal year" (§ 9.9). Determinative in *rnpi* "young." Determinative TIME in *tr* "time, season." When doubled, ideogram for *snf* "last year."

Determinative TIME in *tr* "time, season," also ideogram for **same**. Variant of M6.

Determinative TIME in *tr* "time, season," also ideogram for **same**. Determinative of some roots ending in *tr* and *tj*.

Determinative in *rnpi* "young," also ideogram for **same**.


Phonogram *š3*. Ideogram for *šht* "Inundation (season)" (§ 9.8). Ideogram for *š3* "pool, marsh."



































Determinative in *zšnj* "lily (lotus)," also ideogram for **same**.

Determinative in *nhbt* "lily (lotus) bud."




































Determinative in *wḏn* "dedicate, offer," also ideogram for **same**. Occasional variant of F46 as determinative in *wḏb* "shore."






























Phonogram *h3*. Ideogram for *h3* "1,000" (§ 9.1) and "lily (lotus)."

Variant  (M14, with I10). Phonogram *w3ḏ/w3ḏ*, also *wḏ/wḏ*. Ideogram for *w3ḏ* "papyrus column."














- 15  clump of papyrus with buds Determinative for *mḥw* "Delta," also ideogram for same. Determinative PAPYRUS, SWAMP. Phonogram *ḥt* in *ḥt-bjt* "Chemmis" (Delta town).
- 16  clump of papyrus Phonogram *ḥ3*. Variant of M15 in *mḥw* "Delta."
- 17  reed Phonogram *j*. When doubled, phonogram *y*. Occasional variant of A1. Ideogram for *j* "reed."
- 18  M17 + D54 Variant . Phonogram *j* in forms of *jj* "come."
- 19  emblem for offerings Determinative in *ʿ3b* "offer," also ideogram for same.
- 20  field of reeds Determinative in *ḥt* "field" and *ḥtj* "peasant," also ideogram for same. Occasional variant of M21.
- 21  reeds with root Determinative in *sm* "grass" and *sm* "help."
- 22  rush Phonogram *nḥb*. When doubled, phonogram *nn*.
- 23  sedge Phonogram *sw*. Ideogram for *nswt* "king." Ideogram for *swt* "sedge." Occasional variant of M24 and M26.
- 163  M23 + Aa1 Ideogram for *rh-nswt* "king's acquaintance."
- 24  M23 + D21 Variant  (M25). Ideogram for *rsu* "south."
- 26  flowering sedge Variant  (M27, with D36). Phonogram *šmʿ*. Ideogram for *šmʿw* "Nile Valley" (Upper Egypt).
- 28  M26 + V20 Ideogram in title *wr mḏw-šmʿw* "chief of the tens of the Nile Valley."
- 29  pod Phonogram *nḏm* "pleasant"
- 30  root Determinative in *bnr* "sweet," also ideogram for same.
- 31  rhizome Variant  (M32). Determinative in *rd* "grow," also in *rwḏ* "firm."
- 33  grain Variants . Ideogram for *jtj* "grain." Determinative GRAIN.
- 34  sheaf of emmer Ideogram for *btj* (originally *bdj*) "emmer," also determinative for same.
- 35  heap of grain Determinative HEAP.
- 36  bundle of flax Variant  (M37). Phonogram *ḏr*. Determinative in *dm3* "bundle."
- 38  bundle of flax Determinative in *mḥʿw* "flax" and *dm3* "bundle."
- Y10  bundle of stems Determinative in *šʿt* "murderousness" (from *šʿ* "cut").
- 39  basket of fruit or grain Determinative VEGETABLES.
- 40  bundle of reeds Phonogram *jz*.
- 41  piece of wood Determinative WOOD.
- 42  rosette Phonogram *um*. In hieratic indistinguishable from Z11.
- 43  grapes on trellis Variant  (M43a). Determinative VINE, WINE, GARDENER, FRUIT. Ideogram for *jrp* "wine" and *k3ny* "gardener."
- 43b wine or olive press Determinative in *šzmuw* "Shesmu" (god of the wine or olive press), also ideogram for same.
- 44 thorn Determinative in *spd* "sharp," also ideogram for same. Determinative in *srt* "thorn." Determinative in *t-ḥḏ* "white-bread" (as bread of this form).






































N. Sky, Earth, Water










- 1  sky
Determinative SKY, ABOVE. Ideogram for *hrj* "upper" (§ 8.6.7). Determinative in *rw* "gate" and *h3yt* "ceiling, portal," also ideogram for latter.
- 2  sky with scepter
Variants  (N3, with oar),  (N46b, with star). Determinative NIGHT. Ideogram for *grh* "night."
- 4  sky with rain
Determinative DEW, RAIN. Ideogram for *j3dt* "dew."
- 5  sun
Determinative SUN, DAY, TIME. Ideogram for *r^c* "sun, Re," *hrw* "day," and *sw* "day" (in dates: § 9.8).
- 5a  sun with two strokes
Variant  (N5 + N23). Determinative TIME.
- 6  sun with uraeus
Determinative in *r^c* "Re," also ideogram for same.
- 7  N5 + T28
Ideogram for *hrt-hrw* "daytime, course of the day."
- 8  sun with rays
Determinative SUNLIGHT. Phonogram *wbn* (from *wbn* "rise"). Ideogram for *hnmmt* "human beings."
- 9  moon
Variant  (N10). Phonogram *psd* in *psdt* "Ennead" and *psdntjw* "new-moon festival." Variant of X6 in *p3t* "origin."
- 11  crescent moon
Variant  as determinative. Determinative in *j^ch* "moon," also ideogram for same. Ideogram for "month" (*3bd*) in dates (§ 9.8). Occasional variant of F42. Determinative in *w^ch* "carob bean," also ideogram for same. Determinative in *šzp* "palm" (measure: § 9.7.1), also ideogram for same.
- 12  crescent moon
Variant  as determinative. Determinative in *j^ch* "moon," also ideogram for same. Occasional variant of F42.
- 64  N11 + N14
Ideogram for *3bd* "month."
- 13  half N11 + N14
Ideogram for *mddjwnt* "15th-day festival."
- 14  star
Determinative STAR, TIME. Phonogram *sb3* (from *sb3* "star"). Phonogram *dw3* (from *dw3* "morning"). Ideogram for *wnwt* "hour."
- 15  star in circle
Ideogram for *dw3t* "Duat" (Essay 2).
- 16  strip of land with sand
Variants  (N16d),  (N17). Ideogram for *t3* "land, earth, world." Phonogram *t3*. Determinative in *dt* "estate" and *dt* "eternity."
- 18  strip of sand
Ideogram for *jw* "island." Determinative DESERT, FOREIGN LAND. Ideogram for *st3t* "aroura" (§ 9.7.2).
- 19  two strips of sand
Ideogram for *3ht* "Akhret" (Essay 2) in *hrw-3htj* "Harakhti" (Essay 12).
- 20  tongue of land
Variant  (N22). Phonogram *wdb/wdb* in *wdb* "turn." Determinative LAND, especially in *wdb* "shore." Determinative in *h3b-sd* "Sed Festival."
- 21  tongue of land
Determinative LAND. Ideogram for *jdb* "bank," when doubled *jdbwj* "Two Banks" (a term for Egypt).
- 23  irrigation canal
Variants , . Determinative LAND, especially IRRIGATED LAND. Also used in variant of N5a. Ideogram for *gbb/gbw* "Geb."
- 24  irrigation canal system
Determinative of *sp3t* "nome," also ideogram for same. Determinative in names of nomes and divisions of Egypt, also in *h3p* "garden." Ideogram for *d3tt* "estate, farm."
- 25  mountain range
Ideogram for *h3st* "desert cliffs, foreign land." Determinative DESERT, FOREIGN LAND.
- 76  N25 on standard
Ideogram for *h3* "Ha" (desert god).

- 26  mountain
 27  sun rising above mountain
 28  sun's rays above hill
 29  sandy slope
 30  hill with shrubs
 31  path with shrubs
 32  lump of clay
 33  grain of sand
 34  ingot of metal
 35  ripple of water
 35a  three ripples of water
 36  canal
 37  basin
 40  N37 + D54
 41  well with water
- Phonogram *dw*. Ideogram for *dw* "mountain."
 Ideogram for *3ht* "Akhet" (Essay 2).
 Phonogram *h^c*, especially in *h^cj* "appear."
 Phonogram *q*.
 Determinative in *j3t* "mound," also ideogram for same.
 Variant  (N31e). Determinative for *w3t* "road," also ideogram for same. Determinative ROAD, DISTANCE, POSITION. Ideogram for *w3j* "tend, start" (from *w3t* "road"). Phonogram *hr* in *jn-hrt* "Onuris" (a god), *hrw* "Horus," and *hrw r* "except" (from *hrj* "go far away").
 Variant of Aa2 and F52.
 Variants , , , . Determinative SAND, MINERAL, PELLET. When single, occasional substitute for signs with bad connotations, such as A14 and Z6. When triple, occasional substitute for plural strokes. Determinative in words with *qd* (from *qdj* "go around").
 Variant  (N34a). Ideogram for *hmt* "copper, bronze." Determinative COPPER, BRONZE.
 Phonogram *n*.
 Ideogram for *mw* "water." Determinative WATER. Phonogram *mw*.
 Determinative BODY OF WATER. Phonogram *mr* and *mj*. Ideogram for *mr* "canal."
 Variants , ,  (N37a),  (N38),  (N39), etc. Phonogram *š*. Ideogram for *šj* "basin, pool, lake." Determinative of *š3t* "aroura" (§ 9.7.2), also ideogram for same. Variant of X4 as determinative of *zn* "open" and *znj* "pass." Variant of O36.
 Phonogram *šm* in forms of *šmj* "go."
 Variants ,  (N42),  (D280a). Determinative WELL. Determinative in *bj3* "cauldron, copper" and words with root *bj3*. Determinative in *phuw* "outer limits," also ideogram for same (tripled). Often for D280a.






















O. Structures and Parts of Structures

- 1  schematic house plan
 2  O1 + T3
 3  O1 + P8 + X3 + W22
 4  reed shelter
 5  winding wall
 6  plan of enclosure
 8  O7 + O29
 9  V30 + O6
 10  O6 + G5
 11  palace plan with battlements
 104  O11 + T3
- Proportions vary. Ideogram for *pr* "house." Phonogram *pr*. Determinative BUILDING, PLACE.
 Ideogram for *pr-hd* "treasury."
 Ideogram for *pri-hrw* "invocation offering."
 Phonogram *h*. Ideogram for *h(?)* "courtyard."
 Phonogram *nm*. Determinative in *mrrt* "street." Phonogram *mr* in *mr-wr* "Mnevis" (sacred bull of Heliopolis).
 Variant  (O7). Ideogram for *hwt* "enclosure."
 Ideogram for *hwt-3t* "Great Enclosure" (temple of Heliopolis).
 Ideogram for *nbt-hwt* "Nephthys."
 Ideogram for *hwt-hrw* "Hathor."
 Variant  (O12). Ideogram for *h* "palace."
 Ideogram for *h-hd* "White Palace" or "Palace of the Mace" (a shrine).








- 13  enclosure with battlements Variant  (O14). Determinative in *sbh* "wall in" and related words.
- 15  enclosure + W10 + X1 Variant  (O15a). Ideogram for *wsht* "broad hall."
- 16  cornice with cobras Variant  (O17). Determinative for *t3yt* "curtain," also ideogram for same and *t3jty* "he of the curtain" (title of the vizier). O17 variant of S22 in *t3-wr* "port"
- 18  shrine in profile Determinative in *k3r* "shrine," also ideogram for same.
- 19  shrine with poles Determinative in *pr-wr* "Great House" (original shrine of Upper Egypt at Hierakonpolis), also in *jtrt sm't* "Nile Valley Shrine" (same).
- 20  shrine Determinative SHRINE.
- 21  shrine façade Determinative in *zh* "booth," also ideogram for same.
- 22  booth with pole Determinative in *zh* "counsel, advice" and *zh* "tent, booth," also ideogram for latter.
- 23  double platform Determinative in *h3b-sd* "Sed Festival," also ideogram for same.
- 24  pyramid and enclosure wall Determinative PYRAMID.
- 25  obelisk Determinative in *thn* "obelisk," also ideogram for same.
- 26  stela Determinative STELA, also ideogram for *wd* "stela."
- 27  columned hall Determinative HALL. Determinative of *h3wj* "dusk" (from *h3* "office"), also ideogram for same.
- 28  column with tenon Phonogram *j(w)n*. Ideogram for *jwn* "columnn."
- 29  wood column Variant . Phonogram ʕ3.
- 30  support Determinative SUPPORT, also ideogram for *zhnt* "support"
- 31  door leaf Variant  (O31a). Variant  in ʕ3wj "door" (two door leaves). Determinative OPEN. Determinative in ʕ3 "door," also ideogram for same.
- 32  gateway Determinative DOORWAY, also ideogram for *sb3* "doorway."
- 33  palace façade Determinative in *srh* "serekh" (Essay 6).
- 34  doorbolt Phonogram z. Ideogram for z "doorbolt" Variant of R22.
- 35  O34 + D54 Phonogram z in *zj* "go away, perish," *zy* "which?" (§ 5.11), *zbj* "send away, go away," and *mz* "bring."
- 36  wall Determinative WALL. Ideogram for *jnb* "wall."
- 37  wall falling Determinative TOPPLE, TILT.
- 38  corner Determinative CORNER. Ideogram for *qnbt* "council." Determinative or ideogram for *tm* in the administrative title *hrj (n) tm* "chief of the *tm*."
- 39  stone block or brick Determinative STONE, BRICK.
- 40  stairs Determinative STAIRWAY, TERRACE. Ideogram for *rwd* "stairs" and *htjw* "terrace."
- 41  double stairs Determinative STAIRWAY, ASCEND.
- 43  fence Variant  (O42). Phonogram *šzp*, *šp*.
- 44  emblem of Min Variant  (O44a) Determinative in *j3t* "office," also ideogram for same.

- 45  domed structure Variant  (O46). Determinative in *jp3t* "private quarters," also ideogram for same.
- 47  enclosed mound Variant  (O48). Ideogram for *nḥn* "Hierakonpolis" and *mḥnt* "jasper."
- 49  area with intersection Variant  (O49a). Ideogram for *nwt* "town." Determinative TOWN, SETTLEMENT.
- 50  threshing floor with grain Phonogram *zp* in *zp* "occasion, event," *zpj* "be left over," and related words. Determinative in *zpt* "threshing floor."
- 51  pile of grain Variant  (O51b). Determinative in *ṣnwt* "granary," also ideogram for same.







































P. Ships and Parts of Ships

- 1  boat on water Variants  (P1c),  (P26). Determinative BOAT. Ideogram for "boat" (various readings: *dpt*, *h^cw*, *jmw*, *q3q3w*).
- 1a  boat capsized Determinative in *pn^c* "capsize."
- 2  boat under sail Determinative in *ḥntj* "sail upstream."
- 3  sacred boat Variants  (P30),  (P34). Determinative GOD'S BOAT. Ideogram for *wj3* "sacred bark."
- 3a  P3 + M23 Ideogram for *wj3-nswt* "king's bark."
- 4  boat with net Variant  (P4a). Phonogram *wh^c*.
- 5  mast with sail Determinative WIND, AIR. Ideogram for *t3w* "air" and *nḥw* "sailor."
- 5f  sail Determinative in *ḥt3w* "sail."
- 6  mast Variant  (P7). Phonogram *h^c*.
- 8  oar Variant  in  *m3^c* *ḥrw* "justified" (Essay 8). Phonogram *ḥrw*. Determinative OAR. Ideogram for *ḥjpt* "oar."
- 9  P8 + I9 Ideogram for *ḥr.fj* "says, said" (§ 22.18).
- 10  steering oar with rope Determinative in *ḥmw* "rudder" and *ḥmy* "steerer."
- 11  mooring stake Determinative in *mjnj* "moor, die" and related words. In hieratic often identical with T14.








Q. Domestic and Funerary Furniture





































- 1  seat Ideogram for *st* "seat, place." Phonogram *st*. Phonogram *ws* in *wsjr* "Osiris." Phonogram *ḥtm*.
- 2  portable seat Phonogram *ws* in *wsjr* "Osiris." Ideogram for *st* "seat."
- 3  stool Phonogram *p*.
- 4  headrest Determinative in *wrsu* "headrest."
- 5  chest Determinative CHEST, BOX.
- 6  coffin Determinative in *qrs* "bury" and related words, also ideogram for same.
- 7  brazier with flame Determinative FIRE. Ideogram for *stf* "temperature." When doubled, ideogram for *nsrst* "flame" in *ju-nsrst* "Island of Flame" (locality of creation and in the Duat).














R. Temple Furniture and Sacred Emblems

- | | | | |
|----|---|---------------------------|--|
| 1 |  | table with offerings | Variants  (R2),  (R36a). Determinative in <i>h3wt/h3yt</i> "altar," also ideogram for same. |
| 3 |  | low table with offerings | Determinative in <i>wdhw</i> "offering table," also ideogram for same. |
| 4 |  | bread loaf on mat | Phonogram <i>htp</i> . Ideogram for <i>htp</i> "offering slab." |
| 5 |  | censer | Variant  (R6). Phonogram <i>k(3)p</i> . Determinative in <i>k3p</i> "fumigate," also ideogram for same. |
| 7 |  | bowl with smoke | Determinative of <i>sntr</i> "incense," also ideogram for same. Variant of W10a/Aa4. |
| 8 |  | cloth wound on pole | Ideogram for <i>ntr</i> "god." Phonogram <i>ntr</i> . Determinative GOD. |
| 9 |  | R8 + V33 | Determinative for <i>bd</i> "incense," also ideogram for same. |
| 10 |  | R8 + T28 + N29 | Variants  (R10e),  (R50). Ideogram for <i>hrt-ntr/hrt-ntr</i> "necropolis." |
| 11 |  | reed column | Phonogram <i>dd</i> , also doubled with the same value. Ideogram for <i>dd</i> "djed-column/amulet." |
| 12 |  | carrying standard | Determinative in <i>j3t</i> "standard." Usually part of other signs. |
| 14 |  | feather on standard | Variant  (R13). Ideogram for <i>jmnt</i> "West" and <i>wnmj</i> "right" |
| 15 |  | spear emblem | Variant  (R15b). Ideogram for <i>j3b</i> "East, left." Variant of U23. |
| 16 |  | scepter with feathers | Determinative in <i>wh</i> (emblem of Qus), also ideogram for same. |
| 17 |  | wig with feathers on pole | Variants  (R17b),  (R18). Determinative in <i>t3-wr</i> "This" (nome of Abydos), also ideogram for same. |
| 19 |  | S40 with feather | Ideogram for <i>w3st</i> "Thebes" (town and nome). |
| 20 |  | Seshat emblem | Variant  (R21). Ideogram for <i>s3st</i> "Seshat" (a goddess). |
| 22 |  | Min emblem | Variants  (R22a),  (R23),  (R23a). Ideogram for <i>mnw</i> "Min" (a god). Without standard, phonogram <i>hm</i> in <i>hm</i> "shrine" and <i>hm</i> "Letopolis" (town in the Delta). |
| 24 |  | Neith emblem | Variants  (R24a),  (R24b),  (R24c),  (R25),  (R25a),  (R25b). Determinative in <i>njt</i> (originally <i>nrt</i>) "Neith," also ideogram for same. |
| 61 |  | emblematic cobra | Determinative in <i>tnjw</i> "desert border," also ideogram for same. |

















S. Regalia and Clothing
























- | | | | |
|-----|---|---------------------------|--|
| 1 |  | White Crown | Variant  (S2). Determinative WHITE CROWN. Ideogram for <i>hdt</i> "White Crown." |
| 47a |  | S1 on standard with flail | Determinative in <i>b3b3y</i> "Babay" (a god), also ideogram for same. |
| 3 |  | Red Crown | Variant  (S4). Determinative RED CROWN. Phonogram <i>n</i> . S3 variant of L2 as emblem of King of Lower Egypt. |
| 5 |  | Double Crown | Variant  (S6). Determinative in <i>shmtj</i> "Double Crown," also ideogram for same. Determinative CROWN. |

- 7  Blue Crown
Determinative in *hprš* "Blue (War) Crown," also ideogram for same.
- 8  Atef Crown
Determinative in *šf* "Atef Crown," also ideogram for same.
- 9  double plumes
Determinative in *šwtj* "double plumes," also ideogram for same.
- 10  headband
Phonogram *mdh*. Determinative in *wšhw* "wreath" and *mdh* "headband," also ideogram for latter.
- 11  broad collar
Determinative in *wšh* "broad collar," also ideogram for same. Phonogram *wšh*.
- 12  bead collar
Variant  (S12a). Ideogram for *nbw* "gold" and related words. Determinative PRECIOUS METAL.
- 13  S12 + D58
Phonogram *nb*.
- 14  S12 + T3
Ideogram for *hd* "silver."
- 14a  S12 + S40
Ideogram for *d^cm* "electrum."
- 15  faience pectoral
Variants  (S16),  (S17),  (S17a). Determinative in *thn* "sparkle" and related words, also ideogram for same. Ideogram for *šzmt* "malachite" and related words.
- 18  bead necklace
Determinative in *mnjt* "bead necklace, counterweight," also ideogram for same.
- 19  seal on necklace
Ideogram for *htm* "seal" and related words.
- 20  seal on necklace
Determinative SEAL. Ideogram for *htm* "seal" and *š(n)^ctj* "ring" (§ 9.7.3). Variant of E31.
- 21  ring
Determinative RING.
- 22  shoulder knot
Phonogram *s(3)t*. Determinative in *t3-wr* "port (of ship)," also ideogram for same.
- 23  knotted cloth
Phonogram *dmd/dmd*. Different from Aa6.
- 24  knotted belt
Phonogram *t3z*. Ideogram for *t3zt* "knot, vertebra."
- 25  garment with ties
Ideogram for *j^c3w* "guide, dragoman, interpreter."
- 26  kilt
Determinative in *šndyt* (originally *šndwt*) "kilt," also ideogram for same.
- 130a  strip of cloth
Determinative in *d3ju* "cloak," also ideogram for same.
- 27  cloth with two fringes
Determinative in *mnht* "cloth," also ideogram for same.
- 116  cloth with four fringes
Determinative in *jfdj* "four-ply linen," also ideogram for same.
- 118  cloth with six fringes
Determinative in *šjsj* "six-weave linen," also ideogram for same.
- 28  cloth with fringe + S29
Variant  (V48). Determinative CLOTH.
- 29  folded cloth
Phonogram *s*. Abbreviation for *snb* in  *nh.(w)-(w)d3.(w)-s(nb.w)* (§ 17.20.2).
- 30  S29 + I9
Phonogram in *šf* "yesterday."
- 31  S29 + U2
Phonogram *sm3*.
- 32  cloth with fringe
Phonogram *sj3*. Ideogram for *sj3t* "fringed cloth."
- 33  sandal
Determinative SANDAL. Ideogram for *tbt* "sandal," *thw* "sandalmaker."
- 34  sandal strap
Phonogram *nh*. Ideogram for *nh* "sandal strap" and "mirror."




















- 35  sunshade or fan Variant  (S36). Ideogram for *šwt* "shadow, shade." Determinative in *sryt* "fan," also ideogram for same. Doubled (S36), ideogram for *hjpwj* "Hepwi" (a god).
- 37  fan Determinative in *hw* "fan," also ideogram for same.
- 38  crook Phonogram *hq3*. Determinative in *hq3t* "scepter," also ideogram for same. Variant of S39.
- 39  shepherd's crook Phonogram *wt* in *wt* "flock" (from *wt* "crook").
- 40  animal-headed staff Phonogram *w3s*. Ideogram for *w3s* "staff" of this shape. Ideogram for *j3tt* "milk, cream" and "Iatet" (milk goddess). Doubled, phonogram *w3b* in *w3bwj* "Wabwi" (name of a nome) and *w3bwj* "Wabut" (a town). Variant of S41 and R19.
- 40a  S40 on standard Variant of S40 as ideogram for *j3tt* "milk, cream" and "Iatet."
- 41  animal-headed staff Phonogram *dcm* in *dcmw* "fine gold" (from *dcm* "staff" of this shape).
- 42  scepter Phonogram *shm*. Determinative in *hrp* "manage," also ideogram for same, especially in titles. Phonogram *b3*. Ideogram for *b3* "scepter" and "stela." Ideogram for *shm* "sistrum."
- 42a  lotus-bud scepter Determinative in *nhbt* "lotus-bud scepter," also ideogram for same.
- 43  staff Phonogram *md*. Ideogram for *mdw* "staff."
- 44  staff with flail Determinative for *3ms* "staff," also ideogram for same.
- 45  flail Determinative in *nh3h3w* "flail," also ideogram for same.





























T. Warfare, Hunting, and Slaughter

- 1  mace with flat head Phonogram *mn*.
- 2  T3 tilted Determinative SMITE.
- 3  mace with round head Variant  (T4). Phonogram *hd*. Ideogram for *hd* "mace" of this shape.
- 5  T3 + I10 Phonogram *hd*.
- 6  T3 + I10 + I10 Phonogram *hdd*.
- 7  axe Determinative AXE and related words.
- 7a  axe Determinative in *3qhw* "axe" of this shape.
- 8  dagger Phonogram *tp*. Determinative in *mtpt* "dagger" of this shape.
- 8a  dagger Determinative in *b3gsw* "dagger" of this shape.
- 9  bow Variants  (T9a),  (T10). Phonogram *pd/pd*. Determinative in *pd* "bow," also ideogram for same and words of the same root.
- 11  arrow Phonogram *zwn*. Determinative ARROW.
- 12  bowstring Phonogram *rwd/rwd*. Determinative in words with *3r* (*3j*, *3jr*, from *3r* "restrain"). Ideogram for *d3r* "subdue." Determinative for *rwd* "bow-string," also ideogram for same.
- 13  pieces of wood tied Phonogram *rs* in *rs* "wake" and related words.











- 14  throw-stick
Variant  (T15). Determinative with G41 in words with *tn/tn*. Determinative FOREIGN. Determinative in *qm3* "throw" and *qm3j* "create," also ideogram for same. Ideogram for *3m* "Asiatic," *thinw* "Libya." Ideogram for *hq3t* "heqat" (§ 9.7.4). Variant of D50 as determinative ACCURATE; of M3 as determinative in *d3r* "seek"; of P11 as determinative in *mjinj* "moor, die"; of S39 as phonogram in *wt* "flock"; and of T13 and Aa6.
- 16  scimitar
Determinative in *hps* "scimitar."
- 17  chariot
Determinative in *wrrt* "chariot," also ideogram for same.
- 18  crook with package attached
Phonogram *šms*.
- 19  bone harpoon head
Variant  (T20). Phonogram *qs*. Determinative BONE, TUBE. Determinative in *qrs* "bury," *twr* "pure" (from *twr* "tube"). Ideogram for *gmwt* "annals" and *gnwtj* "sculptor" (often double in the latter).
- 21  harpoon
Variant . Phonogram *wc* in *wc* "one" and related words.
- 22  arrowhead
Variant  (T23). Phonogram *sn*.
- 24  fishing net
Phonogram *h/jh*. Determinative NET.
- 25  reed float
Phonogram *db3/db3*.
- 27  bird trap
Variant  (T26). Determinative in *šht* "trap," also ideogram for same.
- 28  butcher's block
Phonogram *hr*.
- 29  T30 + T28
Determinative in *nmt* "slaughtering place," also ideogram for same.
- 30  knife or saw
Determinative KNIFE, SHARP. Ideogram for *dmt* "knife."
- 31  knife sharpener
Variants  (T32),  (T33). Phonogram *šm* in *šm* "guide" and related words.
- 35  butcher knife
Variant  (T34). Phonogram *nm*. Determinative in *nm* "butcher knife."


































U. Agriculture, Crafts, and Professions

- 1  sickle
Variant  (U2). Phonogram *m3*. Determinative REAP, CROOKED.
- 3  U1 + D4
Phonogram *m3* in *m3* "see."
- 4  U1 + Aa11
Variant  (U5). Phonogram *m3c* in *m3c* "true, correct," and related words.
- 6  hoe
Variants  (U7),  (U6a),  (U7a). Phonogram *mr*. Determinative HACK. Variant of U8.
- 8  hoe
Phonogram *hn* (from *hnn* "hoe").
- 9  grain-measure with grain
Determinative GRAIN. Ideogram for *hq3t* "heqat" and *jpt* "oipe" (§ 9.7.4).
- 10  M33 + U9
Ideogram for *jfj* "barley, grain." Variant of U9 as determinative.
- 11  S38 + U9
Variant  (U12). Ideogram for *hq3t* "heqat" (§ 9.7.4).
- 109  pitchfork
Variant  (U109a). Determinative (U109) in *sdb* "obstacle," also ideogram for same. Determinative in *bj* "collect" and *bt* "pitchfork."
- 13  plow
Variant  (U14). Phonogram *šn*. Phonogram *hb*. Determinative PLOW. Ideogram for *ppt* "seed."
- 15  sled
Phonogram *tm*.


- 16  loaded sled with jackal's head Determinative in *bj3* "wonder" and related words, also ideogram for same. Determinative SLED.
- 17  pick and basin Variant  (U18). Phonogram *grg*.
- 19  adze Variant  (U20). Phonogram *nuw*.
- 21  adze and block of wood Phonogram *stp/stp*.
- 22  chisel Determinative in *mnh* "functional." Determinative CARVE.
- 23  chisel Phonograms *3b* and *mr*.
- 25  drill for stone Variant  (U24). Ideogram for *hmwt* "craft" and related words.
- 26  drill for beads Variant  (U27). Ideogram for *wb3* and related words. Occasional variant of U24-25.
- 29  fire-drill Variant  (U28). Phonogram *d3*. Abbreviation for *wd3* in  "nh.(w)-(w)d3.(w)-s(nb.w)" (§ 17.20.2).
- 30  kiln Phonogram *t3*.
- 31  baker's rake Determinative in *hnr* "restrain" and related words, also ideogram for same. Determinative in *rth/jth* "restrain." Determinative in *rthtj* "baker," also ideogram for same. Variant of D19-20.
- 32  pestle and mortar Determinative in *smn* "set, fix" (from *smn* "flatten dough"). Determinative POUND, HEAVY. Determinative in *hzmn* "natron; bronze," also ideogram for same.
- 33  pestle Phonogram *tj/t*.
- 34  spindle Variant  (U35). Phonogram *hsf*. Determinative in *hsf* "spin."
- 36  launderer's club Phonogram *hm*.
- 37  razor Determinative in *h^cq* "shave."
- 38  scale Determinative in *m_h3t* "scale," also ideogram for same.
- 39  upright of scale Variants  (U40),  (U40a). Determinative in *w₁z* "hold up, carry, wear" and *tzj* "pick up."
- 41  plumb bob Determinative in *th* "plumb bob."
































V. Rope, Baskets, and Cloth

- 1  coil of rope Variant  (V1a). Determinative ROPE, TIE, COIL. Ideogram for *st* "100" (§ 9.1). Phonogram *sn* in *sn* "dispute." Different from Z7.
- 2  V1 + O34 Determinative in *st3* "pull" and *33* "hasten." Ideogram for *st3t* "aroura" (§ 9.7.2).
- 3  three V1 + O34 Ideogram *st3w* in *r-st3w* "necropolis" (of Giza).
- 4  lasso Phonogram *w3*.
- 5  looped rope Determinative in *sntj* "lay out," also ideogram for same.
- 6  cord with ends up Phonogram *ss* and *ssr*. Ideogram for *ssrw/ss* "linen." Variant of V33.
- 7  cord with ends down Variant  (V8). Phonogram *sn*.
- 9  round cartouche Determinative in *snw* "circuit" (of the sun), also ideogram for same. Determinative in *snw* "cartouche."




- 10  cartouche
Surrounding names of kings, queens, and some gods. Determinative in *šnw* "cartouche" and *rn* "name."
- 11  end of cartouche
Determinative in *dnj* "dam" and *ph3* "split." Ideogram for *ph3*, a kind of grain. Ideogram for *djw1/dyt* "shriek."
- 12  string
Determinative in *šh* "loosen," *ʿrq* "bind," *šfdw* "papyrus scroll," and other words associated with STRING. Determinative in *ʿrq* "swear" and *ʿrqy* "last day of the month" (§ 9.8) (from *ʿrq* "bind"), also ideogram for latter. Ideogram for *šh* "loosen." Determinative in *fnh1w* "Phoenicians."
- 13  hobble
Variant  (V14). Phonogram *t/t*.
- 15  V13 + D54
Phonogram *jt* in forms of *jtj* "take possession."
- 16  hobble for cattle
Variants  (V16a),  (V17, rolled-up tent),  (V18). Phonogram *z3* in *z3* "protection" and related words.
- 19  hobble for cattle
Determinative SHRINE in *k3r* "shrine," *qnj* "palanquin" (also *qnj* "sheaf"), *štyt* "Sokar shrine." Determinative in *tm3* "mat" and *tm3* "cadaster," also ideogram for latter. Determinative in *h3r* "sack" (§ 9.7.4), also ideogram for latter. Determinative in *mdt* "stable, stall," also ideogram for latter.
- 20  V19 without horizontal
Ideogram for *mdw* "10" (§ 9.7.1).
- 21  V20 + I10
Phonogram *md*.
- 23  whip
Variant  (V22). Phonogram *mh*.
- 24  cord wound on stick
Variant  (V25). Phonogram *wd/wd*.
- 26  spool with thread
Variant  (V25, without thread). Phonogram *ʿd/ʿd*. Determinative in *ʿd* "reel," also ideogram for same.
- 28  wick
Phonogram *h*.
- 29  swab
Phonograms *w3h* and *sk*. Determinative in *h3r* "ward off." Variant of M1 in *mʿr* "fortunate."
- 30  basket
Phonogram *nb*.
- 31  basket with handle
Variant  (V31a) in hieroglyphic transcriptions of hieratic texts, where the handle always faces the front. Phonogram *k*.
- 32  wicker satchel
Variant  (V96). Determinative in *g3wt* "bundle," hence also in *g3w* "absence, lack," hence also in *d3rw* "need." Determinative in *msnw* "harpooner." Phonogram *msn* in *msn* "Mesen" (a Delta town).
- 33  bag
Variants  (V34),  (V35). Determinative in *ʿf* "pack, envelop," *stj* "perfume," and *šs(r)* "fine linen." Phonogram *g* in a few words. Ideogram for *šrw* "grain." Determinative LINEN.
- 36  receptacle of cloth
Phonogram *hn*.
- 37  bandage
Determinative in *jdr* "herd," also ideogram for same. Determinative in *jdr* "bandage."
- 38  bandage
Determinative in *wt* "wrapping."
- 39  tie
Ideogram for *tjt* "Isis-knot" (amulet).







W. Stone and Ceramic Vessels

- 1  oil-jar
Determinative OIL. Ideogram for *mḥt* "oil."











- 2  W1 without ties
Phonogram *b3s* in *b3stt* "Bastet" (goddess). Determinative in *b3s* "oil jar." Variant of W1.
- 3  alabaster basin
Variant  (W4). Determinative FEAST. Ideogram for *h3b* "feast."
- 5  T28 + W3
Ideogram for *h7j-h3bt* "lector priest"
- 6  metal vessel
Determinative in *wh3t* "cauldron."
- 7  granite bowl
Variant  (W8). Determinative in *m3t* "granite" and *m3t* "proclaim." Determinative in *3bw* "Elephantine," also ideogram for same. Determinative in *3bt* "family."
- 9  stone jug
Phonogram *hnm*.
- 10  cup
Determinative in words with "b. Determinative in *ws3h* "wide" and related words, also ideogram for same. Phonogram *hmv* in *hmut* "mistress" (from *hnt* "cup"). Determinative CUP. Variant of N41 in words with *bj3*.
- 10a  pot
Variant  (Aa4). Phonogram *b3* in conjunction with E10 or G29.
- 12  jar stand
Variant  (W11). Phonogram *g* Determinative in *nst* "seat," also ideogram for same. Variant of W13 and O45.
- 13  pot
Determinative in *d3rt* "red-ware," also ideogram for same.
- 14  water jar
Phonogram *hz/hs*. Determinative in *hzt* "water jar" and *snt* "jar," also ideogram for former.
- 15  water jar with water
Variant  (W16). Determinative in *qbb* "cool" and *qbb* "cool, water," also ideogram for latter.
- 18  water jars in a rack
Variants  (W17),  (W18a),  (W17a). Phonogram *hnt*. Ideogram for *hntw* "jar-rack."
- 19  milk jug with handle
Phonogram *mj* (originally *mt*). Determinative in *mkr* "milk jug."
- 20  milk jug with cover
Variant  (W59). Determinative in *jrt* "milk."
- 21  wine jars
Determinative in *jrp* "wine."
- 22  beer jug
Variant  (W23). Determinative POT. Ideogram for *hnt* "beer" in offering formulas. Ideogram for *wdpw* "waiter."
- 24  pot
Phonogram *nw*. Phonogram *jn* in *jnk* (1s pronoun). Variant of N33 in words with *qd*. Determinative in *d3d3t* "council" and *nhbt* "Nekhet" (goddess), for unknown reasons. Often combined with Aa27 as phonogram *nd*. Variant of W22-23 as determinative.
- 24a  W24 + N35a
Ideogram for *m-hmw* "inside" = *m(w)-h(r)-nw*.
- 25  W24 with legs
Phonogram *ja* in forms of *jnj* "get, fetch, bring."
- 54  pot pouring water
Variant of D60 and A6.

X. Bread



















- 1  flat loaf of bread
Phonogram *t*. Ideogram for *t* "bread." Often phonogram for *(j)t(j)* "father," alone or in conjunction with I9.
- 2  tall loaf of bread
Variant  (X3). Determinative BREAD, FOOD. Ideogram for *t* "bread" in offering formulas. Ideogram for *dhwj* "Thoth." Variant of X1 as phonogram for *(j)t(j)* "father."

- 4  bread roll
Variants  (X4a), and  (X5). Determinative BREAD, FOOD. Determinative in words with *zn* (from *znw* "food offerings"). Variant of W3.
- 6  round loaf of bread
Determinative in *p3t* "origin" and related words; and in *p3t* "loaf"
- 7  half-loaf of bread
Determinative BREAD. Doubled, ideogram for *wnm* "eat."
- 8  bread mold
Phonogram *dj/d* (originally *dj*) in forms of *rdj* "give," rarely in other words.



Y. Writing, Games, and Music







- 1  papyrus scroll
Variants  (Y2),  (Y1a). Determinative WRITING, ABSTRACT CONCEPTS. Ideogram for *dmd* "total." Ideogram for *md3t* "scroll" and *md3t* "chisel."
- 3  scribe's kit
Variant  (Y4). Ideogram for *zh3* "write" and related words. Determinative in *n^{cc}* "smooth" and *tms* "ruddy" and related words, also ideogram for same. Determinative in *mnhd* "scribe's kit."
- 5  game board and pieces
Phonogram *mn*.
- 6  game piece
Determinative in *jb3* "game piece," also ideogram for same. Determinative in *jb3* "dance," also ideogram for same.
- 7  harp
Determinative in *bjnt* "harp."
- 8  sistrum
Determinative in *z3st* "sistrum." Variant of S42.
- 10  bundle of stems
Determinative in *3^{cc}t* "murderousness" (from *3^{cc}* "cut").




Z. Strokes and Figures


- 1  stroke
Used as ideogram of signs meant to be read as ideograms rather than phonograms (§ 3.3). Occasionally transferred to phonograms: for example,  *hr* "face" but also preposition *hr* "upon." Determinative in *w^c* "one," also ideogram for same. Written one to nine times as ideogram for numerals 1 to 9 (§ 9.1). Substitute for A1.
- 5  diagonal stroke
Replacement for complex or dangerous signs.
- 4  two strokes
Variant  (Z49). Phonogram *j* as ending. Determinative DUAL.
- 2  three strokes
Variants  (Z2c),  (Z3a),  (Z3),  and  (Z2a-b),  (N33a). Determinative PLURAL. Also used with words that are plural in meaning, such as collectives, food, and minerals, and with singular words ending in *w* or *wt* ("false plurals"): § 4.6. Determinative in *hmt* "think" (from *hmtw* "three").
- 6  hieratic variant of A13-14
Determinative DIE, ENEMY. Sometimes similar to F20.
- 7  from hieratic variant of G43
Phonogram *w*. Different from V1.
- 8  oval
Determinative ROUND, OVAL.
- 9  crossed sticks
Variant  (Z10). Determinative BREAK, CROSS, NUMBER. Phonograms *sw3/zw3* in *sw3j* "pass" and *zw3* "cut off," *sd* in *sd^t* "flame," *3bn* in *3bn* "mix" and related words, *hbs* in *hbsw* "cultivation," *wp* in *wp-st* "detail, breakdown," and *wr* in a few words.
- 11  crossed planks
Phonogram *jm*. Variant of M42.


Aa. Unclassified

- 1  placenta?
 2  pustule or gland


- 3  Aa2 with liquid emerging
 4  pot
 5  part of a ship
 6  unknown
 7  unknown
 8  irrigation channel?


- 9  unknown
 10  unknown
 11  platform


- 13  unknown


- 16  front half of Aa13


- 17  lid


- 19  unknown

- 20  bag for clothing


- 21  unknown


- 24  warp between stakes

- 25  unknown


- 26  unknown

- 27  spindle

- 28  builder's level

- 31  frieze element


- 32  bow

Variant . Phoneme *h*.


Determinative SWELLING, UNHEALTHY. Variant of a number of older signs: F52 and N32 as determinative EXCREMENT, CLAY; M41 as determinative in *ʕ* "cedar"; V32 as determinative in *g3w* "absence, lack" and *g3wt* "bundle"; V38 as determinative in *wt* "bandage" and related words, and *srwt* "treat," also ideogram for former; W6 as determinative in *wh3* "cauldron," also phonogram *wh3* in same and in *wh3t* "oasis"; W7 as determinative in *m3t* "granite" and *3bw* "Elephantine"; Z10 as determinative in *hsb* "count," also ideogram for same.

Variant of Aa2 as determinative SWELLING, UNHEALTHY.

Variant of W10a.

Variant  (Aa5a). Phonogram *h(j)p*. Ideogram for *hjpt* "oar."




Determinative in *tm3* "cadaster" and *tm3* "mat." Different from S23.



Variant . Determinative in *sqr* "smash."

Phonogram *qn*. Determinative of *sp3t* "estate, farm," also ideogram for same. Determinative of *d3d3t* "council." Variant of N24 as ideogram in *sp3t* "nome"; O34 as phonogram *z* in *zmjt* "desert"; V26 as phonogram *d*.


Determinative in *hwd* "rich."

Determinative in *dft* "writing."

Variants , ,  (Aa12). Phonogram *m3c*. Determinative in *tnt3t* "platform."


Variants  (Aa14),  (Aa15, with horizontals parallel). Phonograms *jm* and *m*. Variant of Aa16.


Ideogram for *gs* "side, half," phonogram *gs*.

Variant  (Aa18). Phonogram *s3*. Ideogram for *s3* "back."

Determinative in *hr* "prepare" and *hrj* "terrified" and related words. Determinative in *t3r* "secure."

Phonogram *cpr*.


Variant  (Aa22). Phonogram *wdc*. Ideogram for *wdcw* "judged one" (term used in place of *sth/sts* "Seth").


Variant  (Aa23). Determinative in *mdd* "puncture, press, adhere" and related words, also ideogram for same.


Ideogram in *zm3* "stolist" (priest's title).

Determinative in *sbj* "rebel."

Phonogram *nd*. Often used in conjunction with W24.

Variant  (Aa29). Phonogram *qd*.

Variant  (Aa30). Determinative in *hkr* "adorn" and related words, also ideogram for same.

Variant . Phonogram *stj/stj* in *t3-stj* "Nubia" and *stj* "ocher."