St. Polis (F.R.S.-FNRS – ULg)

(based on joint research with
S. Rosmorduc, CNAM – France)

Towards a typology of hieroglyphic sign functions

Categorization and fluidity in the description of semiotic systems

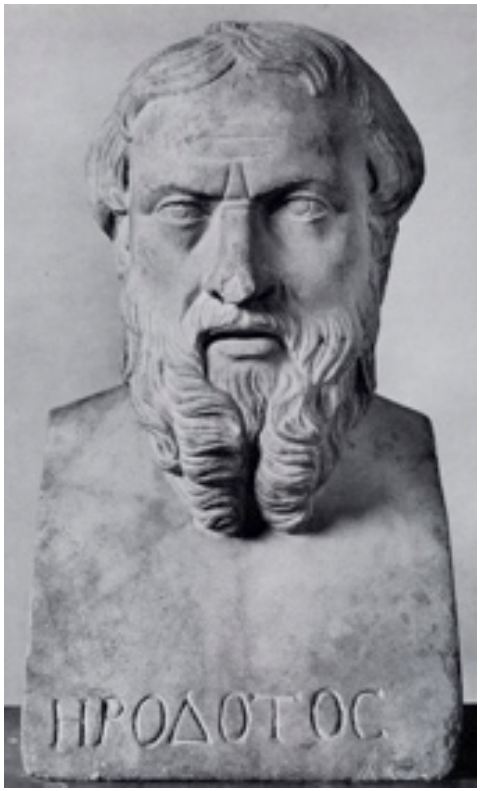
Outline of the talk

- Historical approach:
  The functions of hieroglyphic signs
  - Ancient authors (Herodotus, Clement of Alexandria, Horapollo, …)
  - The evolution of Champollion's description
  - The dual view (Sethe, Gardiner, etc.)
  - A triadic organization of sign functions (Erman, Kaplony, Vernus, Winand, etc.)
  - Schenkel's square of hieroglyphic functions (and Kammerzell's revision)
  - Morenz' tree of hieroglyphic functions
- Towards a new taxonomy
  - Combining the syntagmatic and paradigmatic dimensions
  - Definition of the categories and prototypical examples
- Categorization and fluidity
  - Pictograms in action
  - Logograms other semograms
  - Phonograms and radicograms

The functions of hieroglyphic signs

Ancient authors

- Herodotus (c. 485-425 BC; *Historia*, II,36)



The functions of hieroglyphic signs

Ancient authors

- Herodotus (c. 485-425 BC; *Historia*, II,36)
- Diodorus Siculus (c. 80-30 BC; *Bibliotheca historica*, I,81; III,3; etc.)

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- Clement of Alexandria (150-215 AD)

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- Clement of Alexandria (150-215 AD)
- Horapollo (5th cent. AD; *Hieroglyphica*)

ORVS

Comment & par quelles figures ilz ſignifioient laage & les ans du temps.

Pour denoter & ſignifier laage & le cours du temps ilz figuroient le ſoleil & la lune pource quilz ſont la reigle de compter & diſcerner le tẽps Aultrement ilz paignoient vng ſerpẽt appelle Baſiliſque couurãt ſa eueue du reſte de ſõ

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- Titus Flavius Clemens, a.k.a. Clement of Alexandria (150-215 AD)
  - Book V of his *Stromata* (lit. patchwork), 4,20-21 [Vergote 1941]

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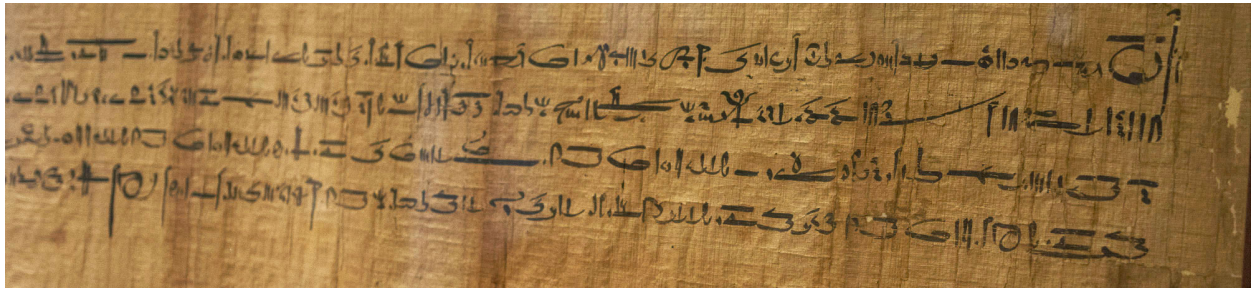
      - Epistolographic (= Demotic, cf. *sš (n) šꜥ.t*)



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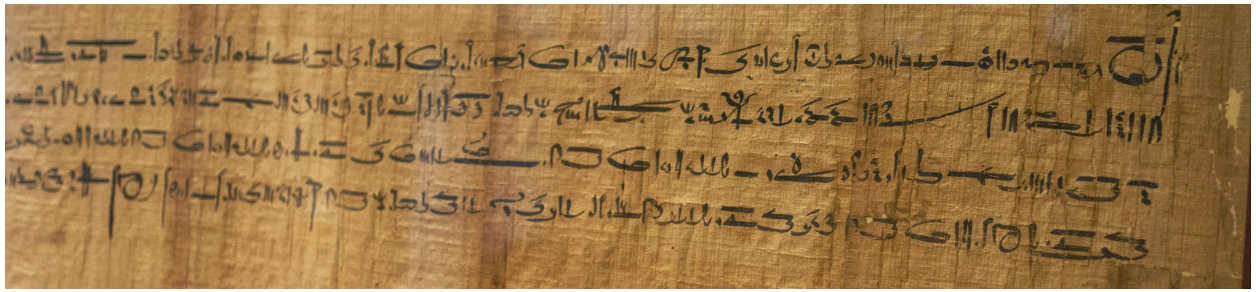
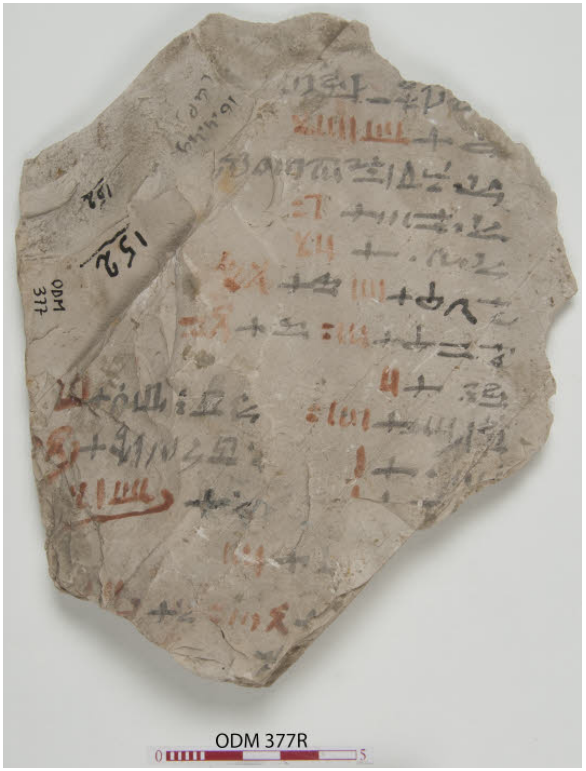
      - Hieratic





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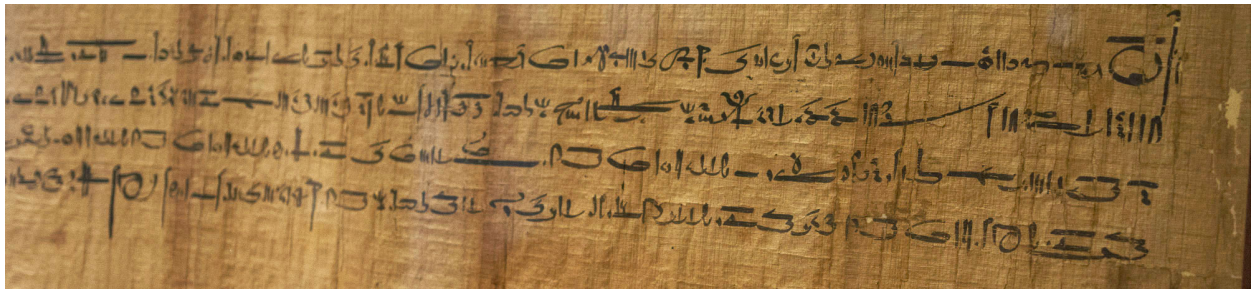
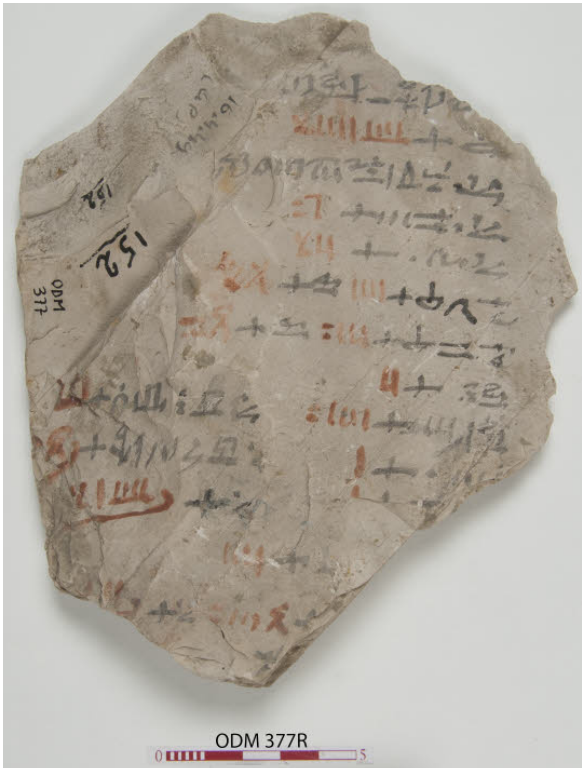
      - Hieroglyphic





The functions of hieroglyphic signs

Ancient authors

- Titus Flavius Clemens, a.k.a. Clement of Alexandria (150-215 AD)
  - Book V of his *Stromata* (lit. patchwork), 4,20-21
    - Three 'writing systems'
    - Αὐτίκα οἱ παρ' Αἰγυπτίοις παιδευόμενοι πρῶτον μὲν πάντων τὴν Αἰγυπτίων γραμμάτων μέθοδον ἐκμανθάνουσι, τὴν ἐπιστολογραφικὴν καλουμένην, δευτέραν δὲ τὴν ἱερατικήν, ᾗ χρῶνται οἱ ἱερογραμματεῖς ὑστάτην δὲ καὶ τελευταίαν τὴν ἱερογλυφικήν
    - « The ones among the Egyptians who are educated first and foremost learn the writing system which is called *epistolographic*, in a second step the *hieratic*, which the hierogrammats use, finally and as the last one, the *hieroglyphic*…

The functions of hieroglyphic signs

Ancient authors

- Titus Flavius Clemens, a.k.a. Clement of Alexandria (150-215 AD)
  - Book V of his *Stromata* (lit. patchwork), 4,20-21
    - Three 'writing systems'
    - ὑστάτην δὲ καὶ τελευταίαν τὴν ἱερογλυφικήν… ἧς ἡ μέν ἐστι διὰ τῶν πρώτων στοιχείων κυριολογική, ἡ δὲ συμβολική
    - "finally and as the last one, the *hieroglyphic*… which, on the one hand, expresses things properly with the primary letters, and on the other hand uses symbols"

The functions of hieroglyphic signs

Ancient authors

- Titus Flavius Clemens, a.k.a. Clement of Alexandria (150-215 AD)
  - Book V of his *Stromata* (lit. patchwork), 4,20-21
    - Three 'writing systems'
    - Two types of hieroglyphic signs
      - Primary letters (⟹ consonants)
      - Symbols
        - Express things properly through imitation
        - Are like metaphors (ὥσπερ τροπικῶς γράφεται)
        - Are actual allegories, using enigmas (ἀλληγορεῖται κατά τινας αἰνιγμούς)

Interpretatio graecae
(figurative interpretation)

Outline of the talk

- Historical approach:
  The functions of hieroglyphic signs
  - Ancient authors (Herodotus, Clement of Alexandria, Horapollo, …)
  - **The evolution of Champollion's description**
  - The dual view (Sethe, Gardiner, etc.)
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  - Morenz' tree of hieroglyphic functions

The functions of hieroglyphic signs

Champollion (1790-1832)

- 1822

LETTRE

A M. DACIER,

SECRÉTAIRE PERPÉTUEL DE L'ACADÉMIE ROYALE DES INSCRIPTIONS ET BELLES-LETTRES,

RELATIVE A L'ALPHABET

DES HIÉROGLYPHES PHONÉTIQUES

EMPLOYÉS PAR LES ÉGYPTIENS POUR INSCRIRE SUR LEURS MONUMENTS LES TITRES, LES NOMS ET LES SURNOMS DES SOUVERAINS GRECS ET ROMAINS;

PAR M. CHAMPOLLION LE JEUNE.

A PARIS,

CHEZ FIRMIN DIDOT PÈRE ET FILS,

LIBRAIRES, RUE JACOB, N° 24.

M. DCCC. XXII.

BIBLIOTHÈQUE NATIONALE SERVICE DES PRÊTS PARIS

The functions of hieroglyphic signs

Champollion (1790-1832)

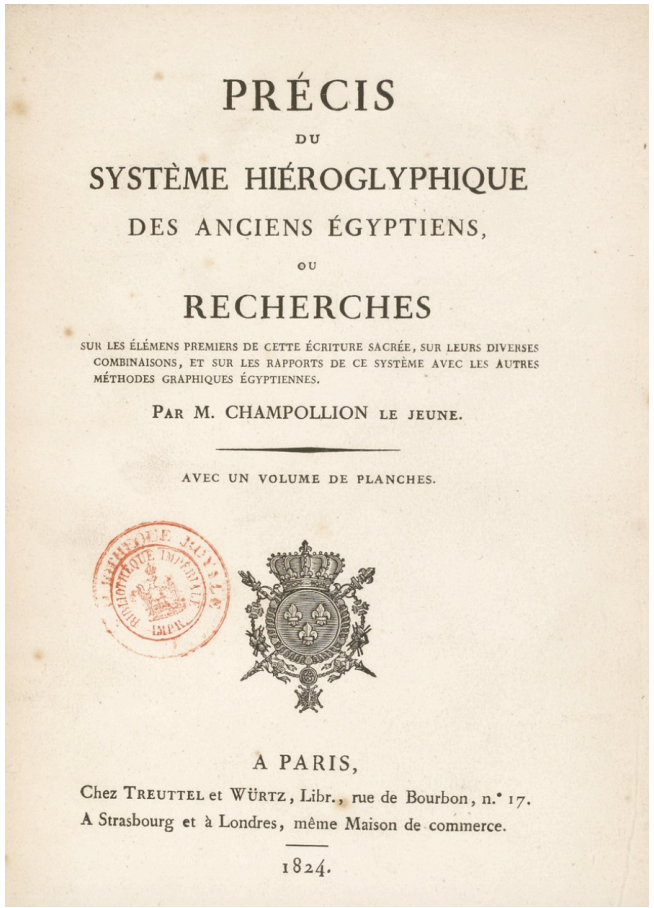
- *Lettre à M. Dacier* (1822, p. 3)

de l'Égypte : car il s'agit de la série des *hiéroglyphes* qui, faisant exception à la nature générale des signes de cette écriture, étaient doués de la faculté d'*exprimer les sons* des mots, et ont servi à inscrire sur les monuments publics de l'Égypte, les *titres*, les *noms* et les *surnoms des souverains grecs ou romains* qui la gouvernèrent successivement. Bien des certitudes pour l'histoire de cette contrée

The functions of hieroglyphic signs

Champollion (1790-1832)

- *Lettre à M. Dacier* (1822, p. 3)
- 1824



PRÉCIS

DU

SYSTÈME HIÉROGLYPHIQUE

DES ANCIENS ÉGYPTIENS,

OU

RECHERCHES

SUR LES ÉLÉMENS PREMIERS DE CETTE ÉCRITURE SACRÉE, SUR LEURS DIVERSES COMBINAISONS, ET SUR LES RAPPORTS DE CE SYSTÈME AVEC LES AUTRES MÉTHODES GRAPHIQUES ÉGYPTIENNES.

PAR M. CHAMPOLLION LE JEUNE.

AVEC UN VOLUME DE PLANCHES.

BIBLIOTHÈQUE IMPÉRIALE

A PARIS,

Chez TREUTTEL et WÜRTZ, Libr., rue de Bourbon, n.° 17.

A Strasbourg et à Londres, même Maison de commerce.

1824.

The functions of hieroglyphic signs

Champollion (1790-1832)

- *Lettre à M. Dacier* (1822, p. 3)
- *Précis du système hiéroglyphique* (1824, p. xiv)

Il était naturel d'adopter, pour la *transcription des mots et des formules hiéroglyphiques*, l'alphabet *copte*, c'est-à-dire l'alphabet que les Égyptiens devenus chrétiens empruntèrent aux Grecs en abandonnant pour toujours leurs anciennes écritures nationales, puisque c'est avec ce même alphabet que sont écrits les livres qui nous ont transmis la langue égyptienne elle-même dans presque toute son intégrité. Il faut observer seulement que les mots coptes qui, dans une transcription quelconque, *sont placés entre deux parenthèses*, n'expriment que le *mot égyptien* correspondant à un signe ou groupe hiéroglyphique, lequel étant *idéographique* et non *phonétique*, ne rendait point de son.

The functions of hieroglyphic signs

Champollion (1790-1832)

- *Lettre à M. Dacier* (1822, p. 3)
- *Précis du système hiéroglyphique* (1824, p. xiv)
  - Two main classes

	Graphemic signifier	
	"Ideogram"	"Phonogram"
Linguistic sign	[–signifier]	[+signifier]
	[+signified]	[–signified]

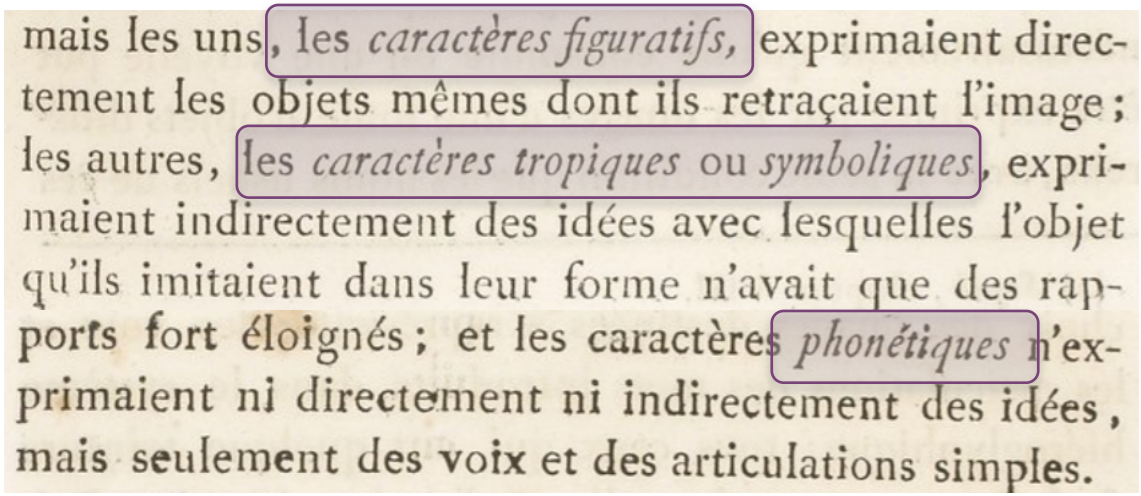
[sun]

/b/

The functions of hieroglyphic signs

Champollion (1790-1832)

- *Lettre à M. Dacier* (1822, p. 3)
- *Précis du système hiéroglyphique* (1824, p. 313-314)
  - Two main classes
  - Two subclasses of ideograms (cf. Clement of Alexandria), based on the relation perceived between the graphemic signifier and the linguistic signified



mais les uns, les *caractères figuratifs,* exprimaient directement les objets mêmes dont ils retraçaient l'image; les autres, les *caractères tropiques* ou *symboliques*, exprimaient indirectement des idées avec lesquelles l'objet qu'ils imitaient dans leur forme n'avait que des rapports fort éloignés; et les caractères *phonétiques* n'exprimaient ni directement ni indirectement des idées, mais seulement des voix et des articulations simples.

The functions of hieroglyphic signs

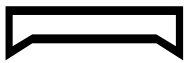
Champollion (1790-1832)

	Graphemic signifier		
	"Ideogram"		"Phonogram"
Linguistic sign	[–signifier]		[+signifier]
	[+signified]		[–signified]
	Direct Relation	Indirect Relation	
	"figurative"[6]	"symbolic"[7]	

- Proper

- Abbreviated

- Conventional



The functions of hieroglyphic signs

Champollion (1790-1832)

	Graphemic signifier	
	"Ideogram"	"Phonogram"
Linguistic sign	[–signifier]	[+signifier]
	[+signified]	[–signified]
	Direct Relation	Indirect Relation
	"figurative"[6]	"symbolic"[7]

- Synecdoche

- Metonym

- Metaphor

- Enigma

The functions of hieroglyphic signs

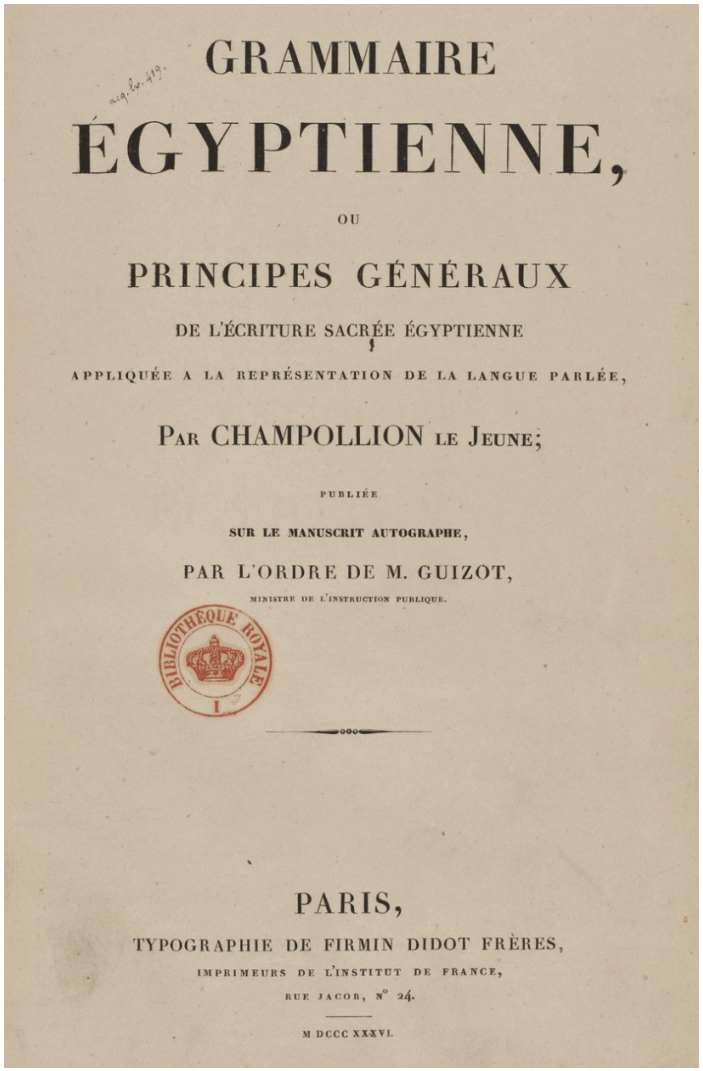
Champollion (1790-1832)

- *Lettre à M. Dacier* (1822, p. 3)
- *Précis du système hiéroglyphique* (1824, p. 313-314)
  - To sum up, the function of any hieroglyphic sign is defined according to
    - The element of the linguistic sign it refers to
      - Signified (meaning/content, "first articulation unit") ⟹ Ideogram
      - Signifier (sound, "second articulation unit") ⟹ Phonogram
    - Its relationships with the linguistic signified
      - Direct ⟹ Figurative
      - Indirect ⟹ Symbolic

The functions of hieroglyphic signs

Champollion (1790-1832)

- 1822
- 1824
- 1836



GRAMMAIRE

ÉGYPTIENNE,

OU

PRINCIPES GÉNÉRAUX

DE L'ÉCRITURE SACRÉE ÉGYPTIENNE

APPLIQUÉE A LA REPRÉSENTATION DE LA LANGUE PARLÉE,

PAR CHAMPOLLION LE JEUNE;

PUBLIÉE

SUR LE MANUSCRIT AUTOGRAPHE,

PAR L'ORDRE DE M. GUIZOT,

MINISTRE DE L'INSTRUCTION PUBLIQUE.

BIBLIOTHÈQUE ROYALE

PARIS,

TYPOGRAPHIE DE FIRMIN DIDOT FRÈRES,

IMPRIMEURS DE L'INSTITUT DE FRANCE,

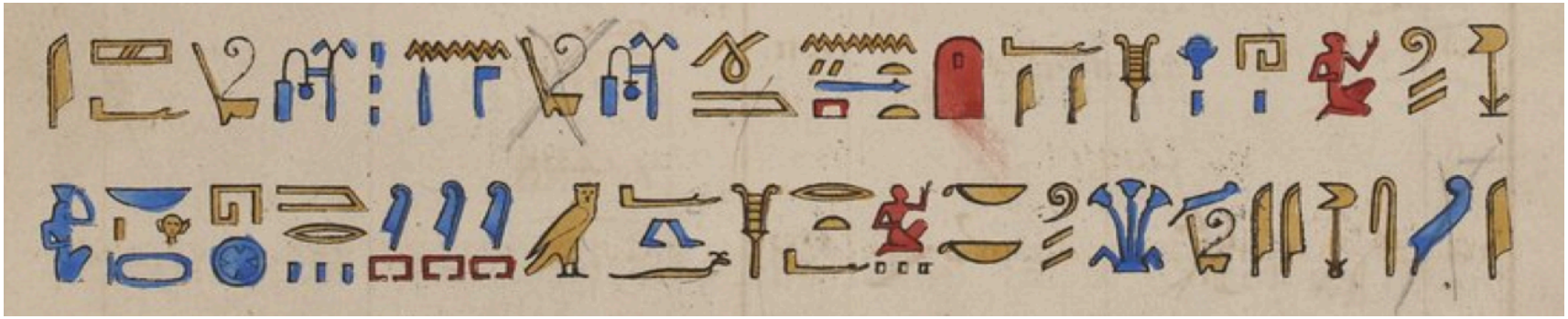
RUE JACOB, N° 24.

M DCCC XXXVI.

The functions of hieroglyphic signs

Champollion (1790-1832)

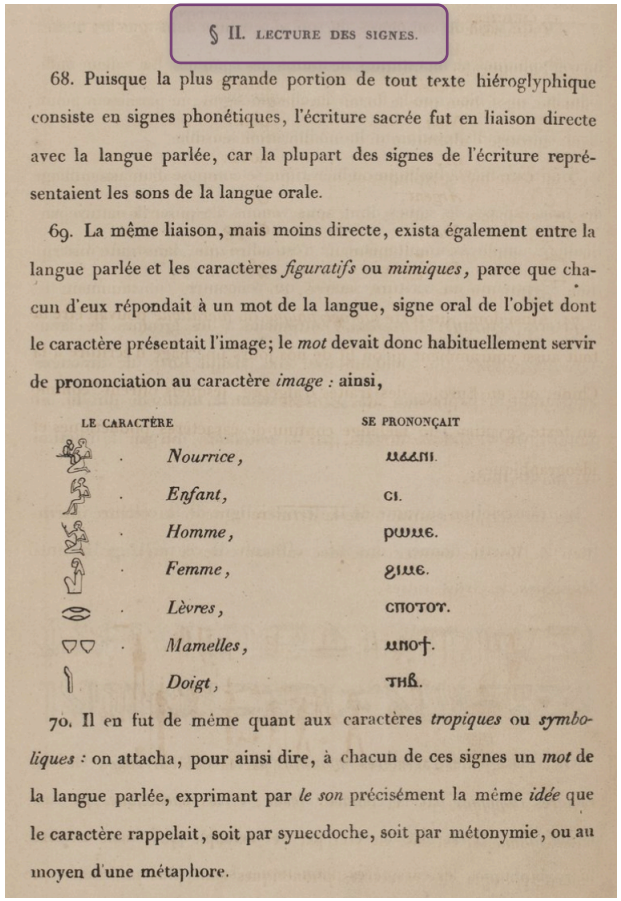
- *Lettre à M. Dacier* (1822)
- *Précis du système hiéroglyphique* (1824)
- *Grammaire égyptienne* (1836, p. 22, §48)
  - Champollion still distinguishes three classes of hieroglyphic signs: "1° Les caractères *mimiques* ou FIGURATIFS ; 2° Les caractères *tropiques* ou SYMBOLIQUES ; 3° Les caractères *phonétiques* ou SIGNES DE SON."
  - The conceptualization and definition of the category *Ideogram* changes



The functions of hieroglyphic signs

Champollion (1790-1832)

- *Grammaire égyptienne* (1836, p. 48, §68-70)



§ II. LECTURE DES SIGNES.

68. Puisque la plus grande portion de tout texte hiéroglyphique consiste en signes phonétiques, l'écriture sacrée fut en liaison directe avec la langue parlée, car la plupart des signes de l'écriture représentaient les sons de la langue orale.

69. La même liaison, mais moins directe, exista également entre la langue parlée et les caractères *figuratifs* ou *mimiques*, parce que chacun d'eux répondait à un mot de la langue, signe oral de l'objet dont le caractère présentait l'image; le *mot* devait donc habituellement servir de prononciation au caractère *image* : ainsi,

LE CARACTÈRE		SE PRONONÇAIT
	Nourrice,	ⲙⲁⲁⲩⲛⲓ.
	Enfant,	ϣⲓ.
	Homme,	ⲣⲱⲙⲉ.
	Femme,	ϩⲓⲙⲉ.
	Lèvres,	ϭⲛⲟⲧⲟⲩ.
	Mamelles,	ⲙⲛⲟϯ.
	Doigt,	ⲧⲏϐ.

70. Il en fut de même quant aux caractères *tropiques* ou *symboliques* : on attacha, pour ainsi dire, à chacun de ces signes un *mot* de la langue parlée, exprimant par *le son* précisément la même *idée* que le caractère rappelait, soit par synecdoche, soit par métonymie, ou au moyen d'une métaphore.

The functions of hieroglyphic signs

Champollion (1790-1832)

- *Grammaire égyptienne* (1836, p. 48, §68-70)

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LE CARACTÈRE		SE PRONONÇAIT
	Nourrice,	ⲙⲉϩⲛⲓ.
	Enfant,	ϣⲓ.
	Homme,	ⲣⲱⲙⲉ.
	Femme,	ϩⲓⲙⲉ.
	Lèvres,	ϭⲛⲟⲧⲟⲩ.
	Mamelles,	ⲙⲛⲟϯ.
	Doigt,	ⲧϩⲃ.

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The functions of hieroglyphic signs

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- *Grammaire égyptienne* (1836, p. 48, §68-70)

§ II. LECTURE DES SIGNES.

68. Puisque la plus grande portion de tout texte hiéroglyphique consiste en signes phonétiques, l'écriture sacrée fut en liaison directe avec la langue parlée, car la plupart des signes de l'écriture représentaient les sons de la langue orale.

69. La même liaison, mais moins directe, exista également entre la langue parlée et les caractères *figuratifs* ou *mimiques*, parce que chacun d'eux répondait à un mot de la langue, signe oral de l'objet dont le caractère présentait l'image; le *mot* devait donc habituellement servir de prononciation au caractère *image* : ainsi,

LE CARACTÈRE		SE PRONONÇAIT
	Nourrice,	ⲙⲁⲁⲩⲓ.
	Enfant,	ϣⲓ.
	Homme,	ⲣⲱⲙⲉ.
	Femme,	ϩⲓⲙⲉ.
	Lèvres,	ϭⲛⲟⲧⲟⲩ.
	Mamelles,	ⲙⲛⲟϯ.
	Doigt,	ⲧϩϧ.

70. Il en fut de même quant aux caractères *tropiques* ou *symboliques* : on attacha, pour ainsi dire, à chacun de ces signes un *mot* de la langue parlée, exprimant par *le son* précisément la même *idée* que le caractère rappelait, soit par synecdoche, soit par métonymie, ou au moyen d'une métaphore.

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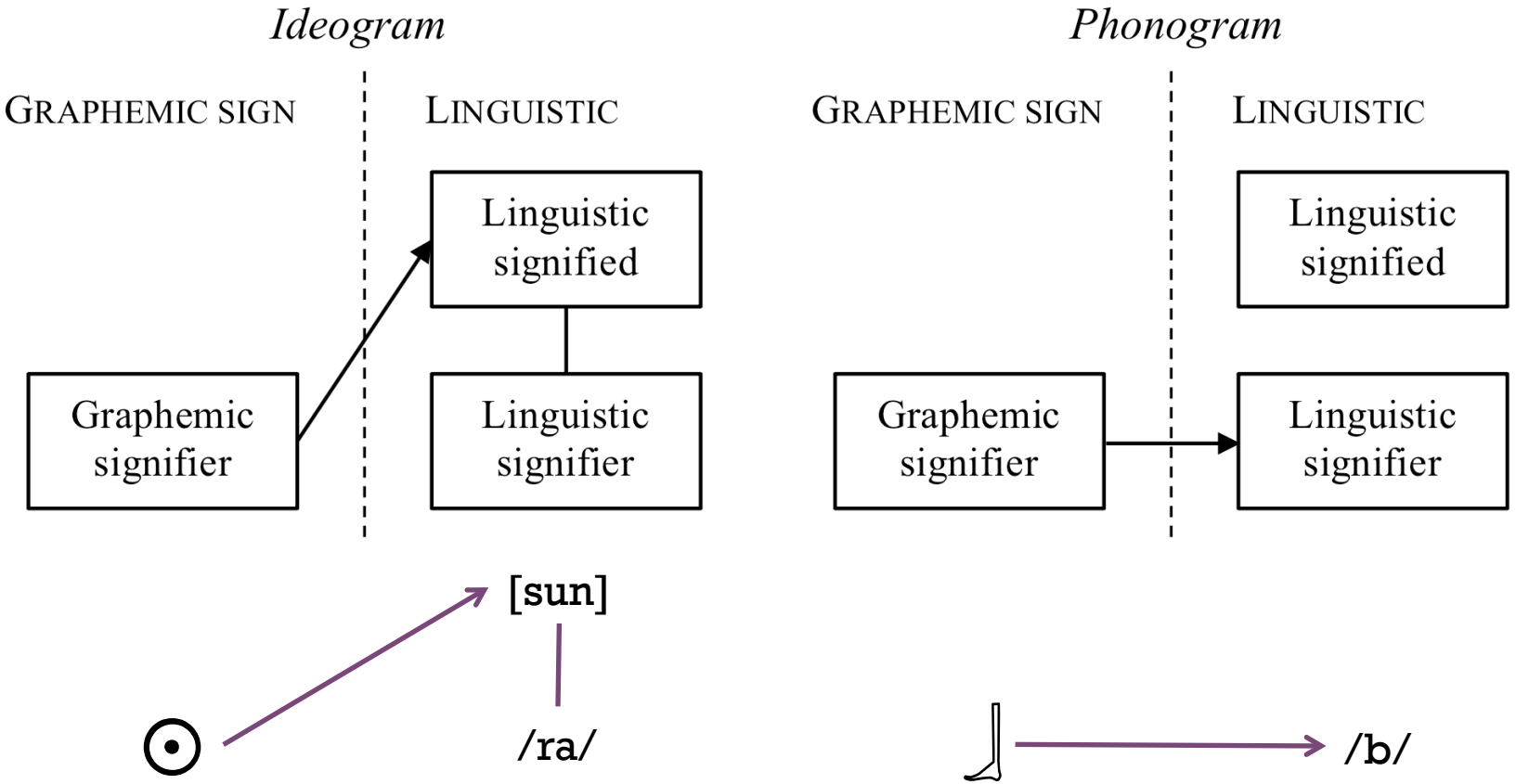
LE CARACTÈRE		SE PRONONÇAIT DONC
	Mois,	ϵϧⲟⲧ.
	Année,	ⲣⲟⲙⲡⲉ.
	Nom,	ⲣⲁⲛ.
	Or,	ⲛⲟⲩϧ.
	Argent,	ϩⲁⲩ.
	Nuit,	ϭⲱⲣϩ.
	Panégyrie,	ϩϧⲁⲓ.

The functions of hieroglyphic signs

Champollion (1790-1832)

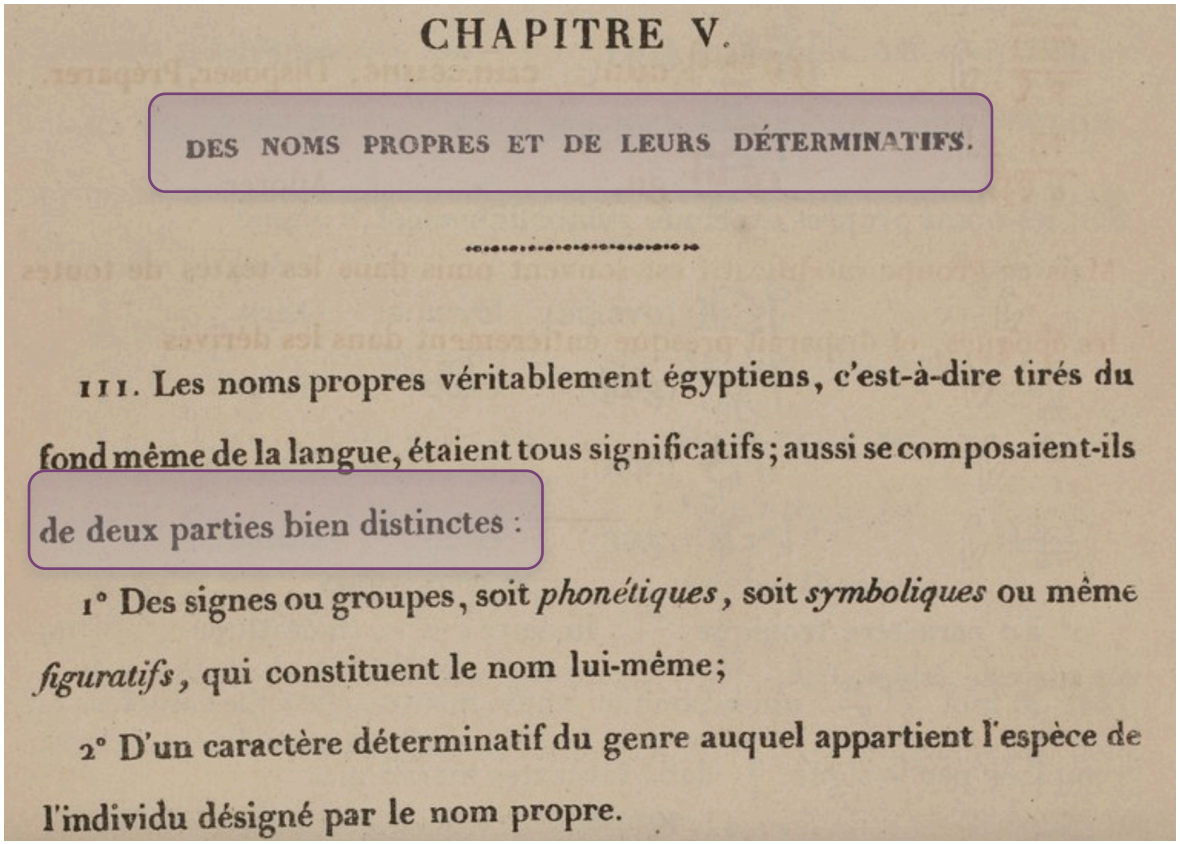
- *Grammaire égyptienne* (1836, p. 48, §68-70) [Depuydt 1995]



The functions of hieroglyphic signs

Champollion (1790-1832)

- *Grammaire égyptienne* (1836, p. 109, §111)



CHAPITRE V.

DES NOMS PROPRES ET DE LEURS DÉTERMINATIFS.

111. Les noms propres véritablement égyptiens, c'est-à-dire tirés du fond même de la langue, étaient tous significatifs; aussi se composaient-ils de deux parties bien distinctes :

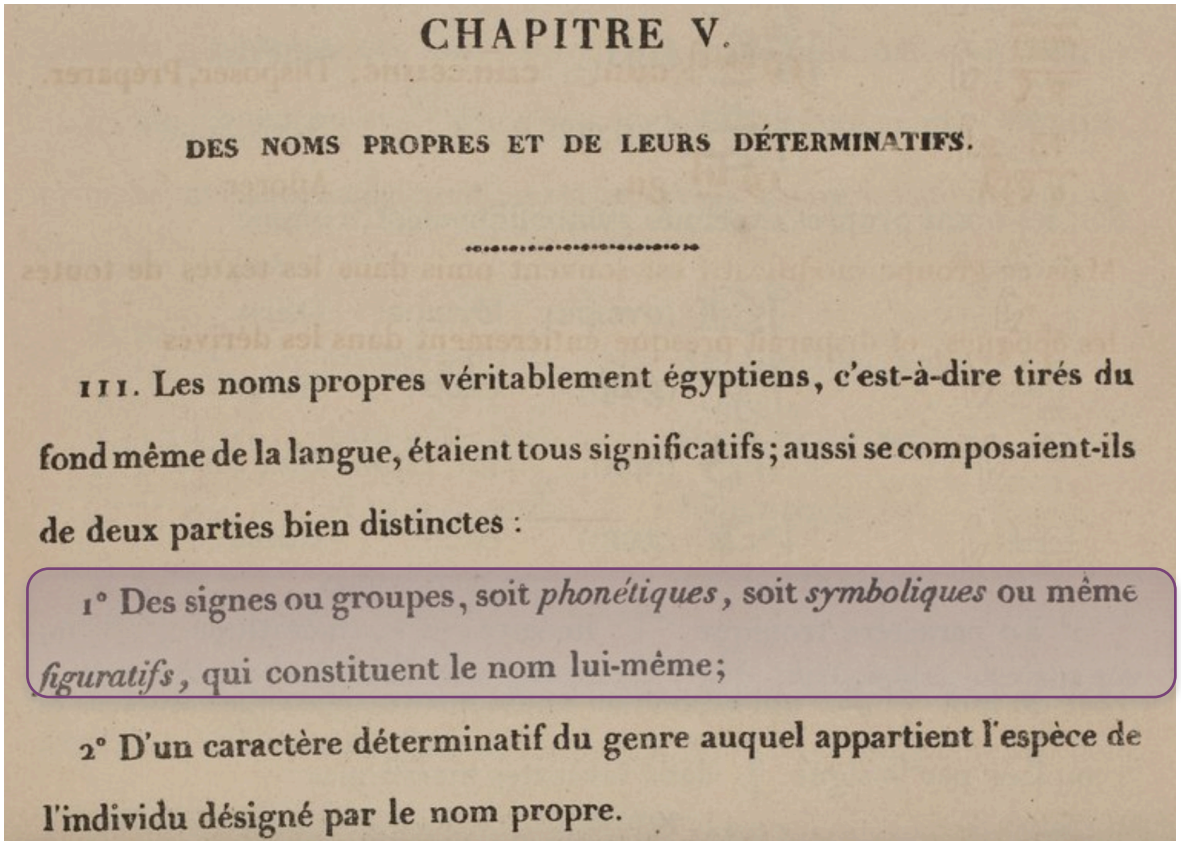
1° Des signes ou groupes, soit *phonétiques*, soit *symboliques* ou même *figuratifs*, qui constituent le nom lui-même;

2° D'un caractère déterminatif du genre auquel appartient l'espèce de l'individu désigné par le nom propre.

The functions of hieroglyphic signs

Champollion (1790-1832)

- *Grammaire égyptienne* (1836, p. 109, §111)



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The functions of hieroglyphic signs

Champollion (1790-1832)

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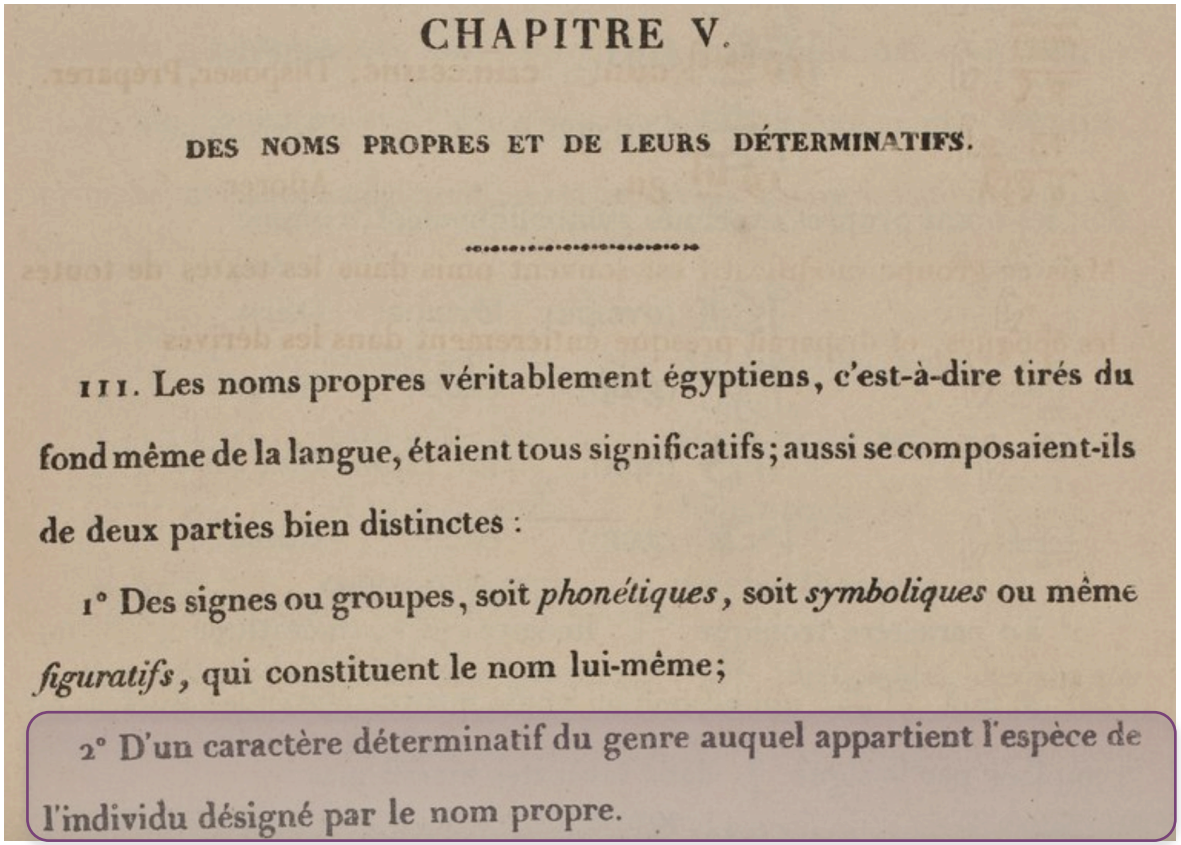

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The functions of hieroglyphic signs

Champollion (1790-1832)

- *Grammaire égyptienne* (1836)
  - Champollion distinguishes between two functions:
    - Hieroglyphs that have a phonetic value [+signifier]
    - Hieroglyphs that have refer to some content [+signified] and, hence, are linked to a given phonetic realization [+signifier]
  - He makes a distinction between to parts in Egyptian words:
    - The signs forming the word itself (phonetic, figurative and symbolic signs)
    - The "déterminatif" that gives an indication about the type/genre to which the (proper) name belongs
  - Both the *paradigmatic* and *syntagmatic* dimensions are taken into account

Outline of the talk

- Historical approach:
  The functions of hieroglyphic signs
  - Ancient authors (Herodotus, Clement of Alexandria, Horapollo, …)
  - The evolution of Champollion's description
  - **The dual view (Sethe, Gardiner, etc.)**
  - A triadic organization of sign functions (Erman, Kaplony, Vernus, Winand, etc.)
  - Schenkel's square of hieroglyphic functions (and Kammerzell's revision)
  - Morenz' tree of hieroglyphic functions

The functions of hieroglyphic signs

The dual view

- K. Sethe
  - 1908. Zur Reform der ägyptischen Schriftlehre, in: *Zeitschrift für Ägyptische Sprache und Altertumskunde* 45, 36-43.
  - †1935. *Das hieroglyphische Schriftsystem: ein Vortrag*, Glückstad-Hamburg, J.J. Augustin (= *Leipziger Ägyptologische Studien* 3).

- A.H. Gardiner
  - 1957, p. 8, §6: "[e]ven in the fully developed form of hieroglyphic writing only two classes of signs need be clearly distinguished. These are: (1) sense-signs or ideograms (Greek *idea* 'form' and *gramma* 'writing'); (2) sound-signs or phonograms (Greek *phonē* 'sound' and *gramma* 'writing')."

- J. Allen
  - 2000
  - Etc.

The functions of hieroglyphic signs

The dual view

- Principle
  - [+ signified] vs. [+signifier]

Graphemic signifier	
"Ideogram"	"Phonogram"
[+signified]	[+signifier]
"Proper"	"Determinative"
[–end]	[+end]

  - Implications
    - Close to the description in Champollion's *Précis* (1824) without reference to the fact that the "ideograms" do also refer to some phonetic shape.
    - But, the syntagmatic dimension allows to acknowledge two categories of signs (informally "end of the word").

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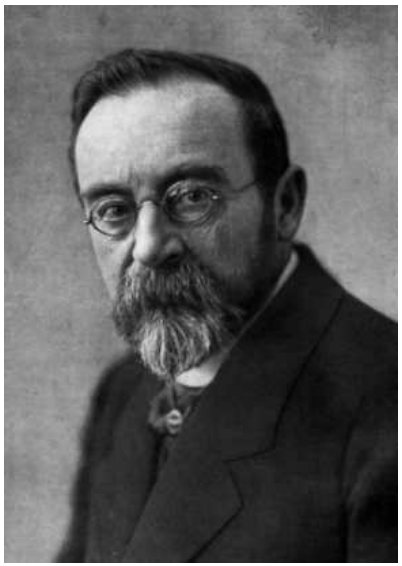
The functions of hieroglyphic signs

A triadic organization of sign functions

- A. Erman
- P. Kaplony
- P. Vernus
- J. Winand
- Etc.

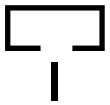


The functions of hieroglyphic signs

A triadic organization of sign functions

- Principle
  - Combination of two features
    - [± MEANING] and [± SOUND] ⟹ Four logical categories

	MEANING	SOUND
Phonogram	–	+
Logogram/ Ideogram	+	+
Classifier/ Determinative	+	–



[house] - /pr/

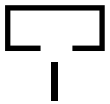
The functions of hieroglyphic signs

A triadic organization of sign functions

- Principle
  - Combination of two features
    - [± MEANING] and [± SOUND] ⟹ Four logical categories

	MEANING	SOUND
Phonogram	–	+
Logogram/ Ideogram	+	+
Classifier/ Determinative	+	–

/pr/ (in *pri* 'to go out')



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The functions of hieroglyphic signs

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Phonogram	–	+
Logogram/ Ideogram	+	+
Classifier/ Determinative	+	–

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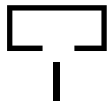
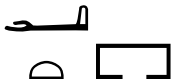


[house] - /pr/



[building] (in *ʿ.t* 'room')

The functions of hieroglyphic signs

A triadic organization of sign functions

- Principle
  - Combination of two features
    - [± MEANING] and [± SOUND] ⟹ Four logical categories
  - Implications
    - Close to the description in Champollion's *Grammar* (1836), because it acknowledges the phonemic dimension of the ideograms.
    - The syntagmatic dimension is completely lacking.

Outline of the talk

- Historical approach:
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  - Morenz' tree of hieroglyphic functions

The functions of hieroglyphic signs

Schenkel's square of hieroglyphic functions

- It was Schenkel who most clearly and systematically drew attention to this syntagmatic dimension — as part of the spatial configuration of the script — when he introduced the notion of "*Assoziogramm*" (1971) and later made the distinction between uses of graphemic signifiers als "*Notation*" or "*Kennzeichnung*" (1984; 1994; 2003).

- This distinction allows him to make a distinction between
  - *Notation*: the autonomous uses of hieroglyphic signs, which as ideograms/logograms or phonograms refer directly to the *linguistic sign*
  - *Kennzeichnung*: the use of hieroglyphs as a means of disambiguating or refining the meaning (determinatives) or reading (phonetic complements) of *other graphemes* in the word or phrase to which they belong.

The functions of hieroglyphic signs

Schenkel's square of hieroglyphic functions

- Schenkel (1994)
  - Notation vs Kennzeichnung (syntagmatic dimension)
  - Semogram [+signified] vs Phonogram [+signifier]

	Semogramm	Phonogramm
Als Notation	Logogramm oder Ideogramm	Phonogramm
Als Kennzeichnung	Determinativ	Komplement

- Kammerzell (1998; 2004) – Lincke (2011) – Lincke & Kammerzell (2012)

	[+meaningful]	[–meaningful]
[+autonomous]	logograms (inaccurately: "ideograms")	phonograms (in the narrower sense)
[–autonomous]	Classifiers (inaccurately: "determinatives")	interpretants ("phonetic complements")
	semograms	phonograms (in the wider sense)

The functions of hieroglyphic signs

Schenkel's square of hieroglyphic functions

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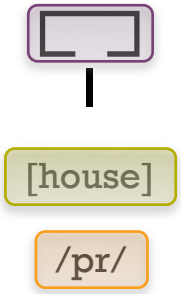
	semograms	phonograms (in the wider sense)

- Implication
  - Dual view + syntagmatic dimension



The functions of hieroglyphic signs

Schenkel's square of hieroglyphic functions

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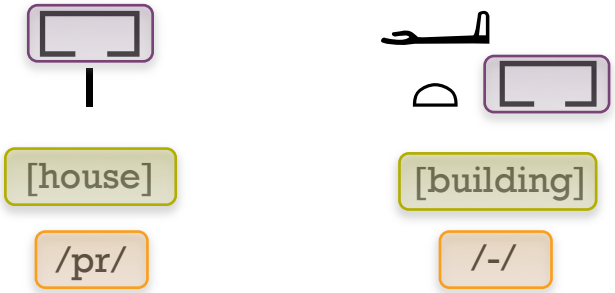

The functions of hieroglyphic signs

Schenkel's square of hieroglyphic functions

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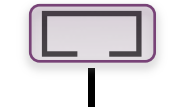

[house]

/pr/

[building]

/-/

[-]

/pr/

The functions of hieroglyphic signs

Schenkel's square of hieroglyphic functions

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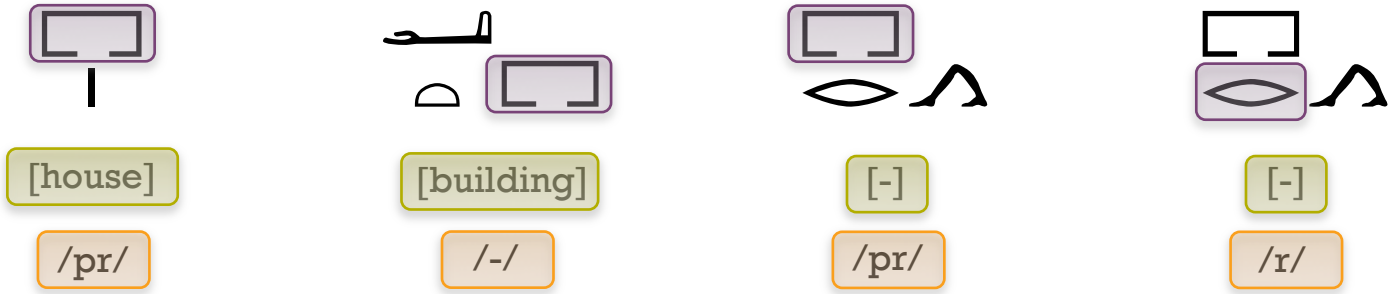

The functions of hieroglyphic signs

Schenkel's square of hieroglyphic functions

- Interim conclusions: a recurring issue is to acknowledge…
  - The fact that hieroglyphic signs are able to refer at the same time to
    - Units of 'first articulation', i.e. meaning (signified)
    - Units of 'second articulation', i.e. /sound/ (signifier)
  - The syntagmatic dimension
    - Logogram vs. classifier
    - Phonogram vs phonetic complement (or interpretant)

Champollion (1936) + Triadic model

Schenkel's square

Outline of the talk

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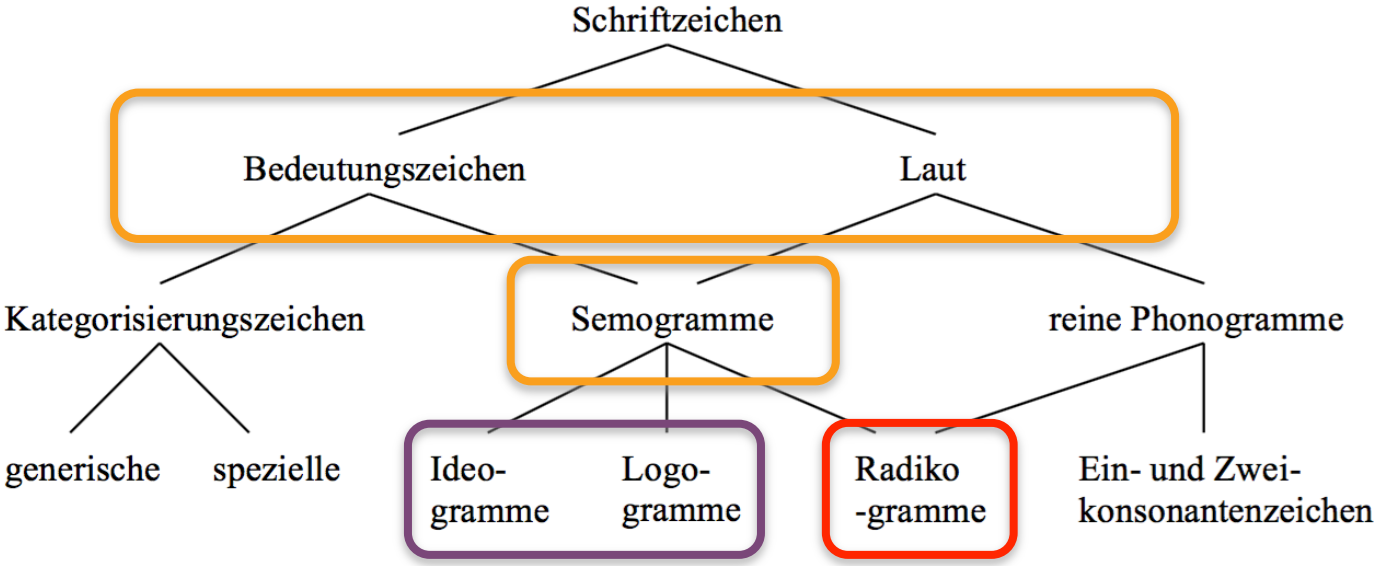
  - **Morenz' tree of hieroglyphic functions**

The functions of hieroglyphic signs

Morenz' tree of hieroglyphic functions

- Morenz (2004)
  - The goal is to introduce a kind of fluidity between broad semiotic categories such as semograms and phonograms that are not always easy to distinguish in practice (see Morenz 2004: 19, n. 64)



The functions of hieroglyphic signs

Morenz' tree of hieroglyphic functions

- Morenz (2004)
  - The goal is to introduce a kind of fluidity between broad semiotic categories such as semograms and phonograms that are not always easy to distinguish in practice (see Morenz 2004: 19, n. 64)
  - This approach can be systematized by integrating the syntagmatic dimension into this tree of functions

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- Towards a new taxonomy
  - Combining the syntagmatic and paradigmatic dimensions
  - Definition of the categories and prototypical examples

Towards a new taxonomy

Combining paradigmatic and syntagmatic features

- For systematizing the description of the glottic functions of the hieroglyphic signs, it is enough to combine the relevant features identified above and to answer three questions (that correspond to three polar features): *in a given syntagmatic environment*,
  1. does the hieroglyphic sign (graphemic signifier) express some content [+SEMOGRAM] or not [–SEMOGRAM]?
  2. does it refer to some linguistic form [+PHONEMOGRAM] or not [–PHONEMOGRAM]?
  3. does this hieroglyphic sign function autonomously [+AUTONOMOUS] in the written word (i.e., Schenkel's schematogram), or does it make sense *in relation* to other graphemes or signified [–AUTONOMOUS]?

Towards a new taxonomy

Combining paradigmatic and syntagmatic features

- The first two features define 6 classes on the paradigmatic axis

[+SEMOGRAM]		[-SEMOGRAM]
1	2	3
[-PHONEMOGRAM]	[+PHONEMOGRAM]	

- And we end up with 6 classes when one adds the syntagmatic dimension

	[+SEMOGRAM]		[-SEMOGRAM]
[-RELATIONAL]	1	2	3
[+RELATIONAL]	4	5	6
	[-PHONEMOGRAM]	[+PHONEMOGRAM]	

Towards a new taxonomy

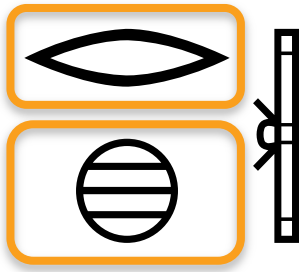
Combining paradigmatic and syntagmatic features

	[+SEMOGRAM]		[-SEMOGRAM]
[-RELATIONAL]	1	2	3
[+RELATIONAL]	4	5	6
	[-PHONEMOGRAM]	[+PHONEMOGRAM]	

Towards a new taxonomy

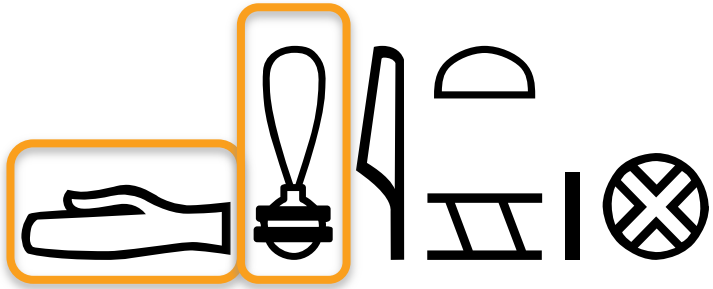
Combining paradigmatic and syntagmatic features

	[+SEMOGRAM]		[-SEMOGRAM]
[-RELATIONAL]	1	2	Phonogram
[+RELATIONAL]	4	5	6
	[-PHONEMOGRAM]	[+PHONEMOGRAM]	



rḫ

/r/ + /x/



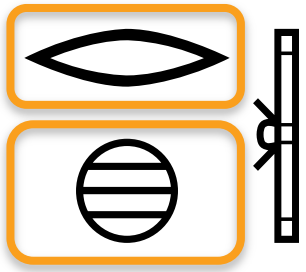
dmi

/d/ + /mi/

Towards a new taxonomy

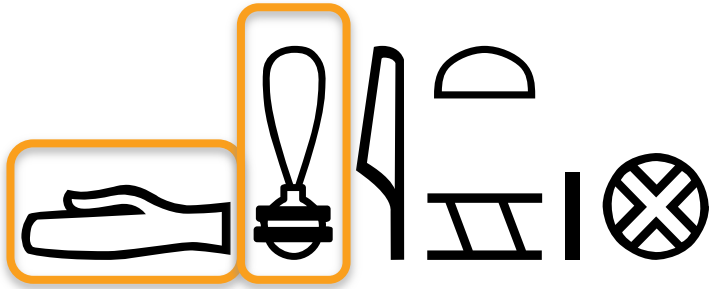
Combining paradigmatic and syntagmatic features

	[+SEMOGRAM]		[-SEMOGRAM]
[-RELATIONAL]	1	2	Phonogram
[+RELATIONAL]	4	5	6
	[-PHONEMOGRAM]	[+PHONEMOGRAM]	



rḫ

/r/ + /x/



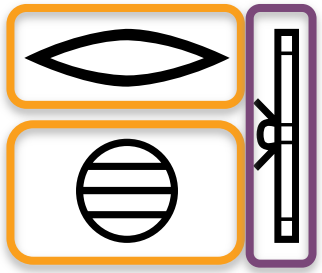
dmi

/d/ + /mi/

Towards a new taxonomy

Combining paradigmatic and syntagmatic features

	[+SEMOGRAM]		[-SEMOGRAM]
[-RELATIONAL]	1	2	Phonogram
[+RELATIONAL]	Classifier	5	6
	[-PHONEMOGRAM]	[+PHONEMOGRAM]	



rḫ

/r/ + /x/

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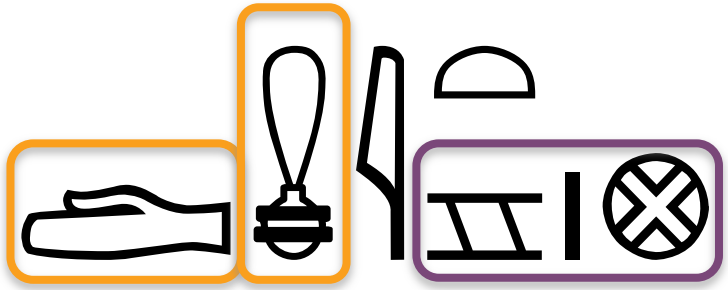


dmi

/d/ + /mi/

[delimited land] + [city]

Towards a new taxonomy

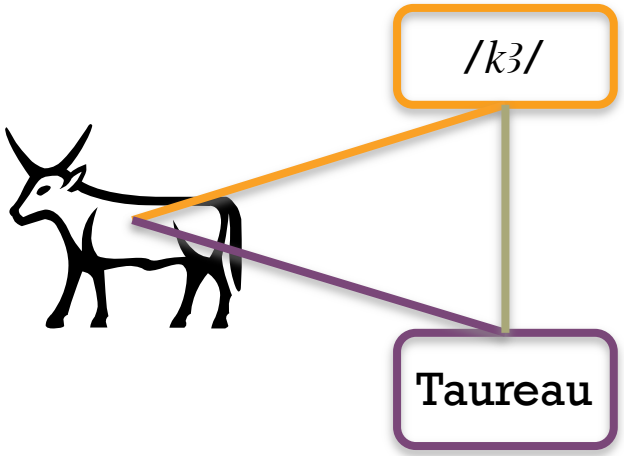
Combining paradigmatic and syntagmatic features

	[+SEMOGRAM]		[-SEMOGRAM]
[-RELATIONAL]	1	2	Phonogram
[+RELATIONAL]	Classifier	5	6
	[-PHONEMOGRAM]	[+PHONEMOGRAM]	

Towards a new taxonomy

Combining paradigmatic and syntagmatic features

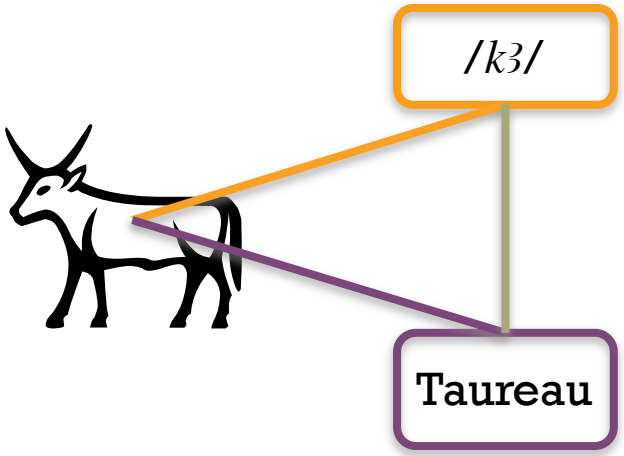
	[+SEMOGRAM]		[-SEMOGRAM]
[-RELATIONAL]	1	Logogram	Phonogram
[+RELATIONAL]	Classifier	5	6
	[-PHONEMOGRAM]	[+PHONEMOGRAM]	



Towards a new taxonomy

Combining paradigmatic and syntagmatic features

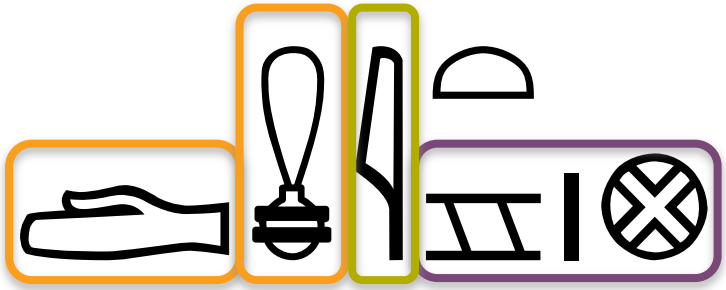
	[+SEMOGRAM]		[-SEMOGRAM]
[-RELATIONAL]	1	Logogram	Phonogram
[+RELATIONAL]	Classifier	5	6
	[-PHONEMOGRAM]	[+PHONEMOGRAM]	



Towards a new taxonomy

Combining paradigmatic and syntagmatic features

	[+SEMOGRAM]		[-SEMOGRAM]
[-RELATIONAL]	1	Logogram	Phonogram
[+RELATIONAL]	Classifier	5	Interpretant
	[-PHONEMOGRAM]	[+PHONEMOGRAM]	



dmi

/d/ + /mi/-/i/

[delimited land] + [city]

Towards a new taxonomy

Combining paradigmatic and syntagmatic features

	[+SEMOGRAM]		[-SEMOGRAM]
[-RELATIONAL]	1	Logogram	Phonogram
[+RELATIONAL]	Classifier	5	Interpretant
	[-PHONEMOGRAM]	[+PHONEMOGRAM]	

Towards a new taxonomy

Combining paradigmatic and syntagmatic features

	[+SEMOGRAM]		[-SEMOGRAM]
[-RELATIONAL]	1	Logogram	Phonogram
[+RELATIONAL]	Classifier	5	Interpretant
	[-PHONEMOGRAM]	[+PHONEMOGRAM]	

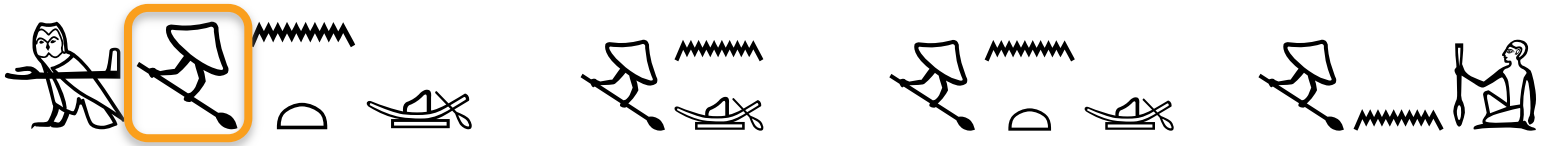
- What?
  - [+meaning]
  - [+sound]
  - [+relational]

Towards a new taxonomy

Combining paradigmatic and syntagmatic features

	[+SEMOGRAM]		[-SEMOGRAM]
[-RELATIONAL]	1	Logogram	Phonogram
[+RELATIONAL]	Classifier	Radicogram	Interpretant
	[-PHONEMOGRAM]	[+PHONEMOGRAM]	

- What?
  - [+meaning]
  - [+sound]
  - [+relational]
- The notion of 'radicogram' fits perfectly



Towards a new taxonomy

Combining paradigmatic and syntagmatic features

	[+SEMOGRAM]		[-SEMOGRAM]
[-RELATIONAL]	1	Logogram	Phonogram
[+RELATIONAL]	Classifier	Radicogram	Interpretant
	[-PHONEMOGRAM]	[+PHONEMOGRAM]	

Towards a new taxonomy

Combining paradigmatic and syntagmatic features

	[+SEMOGRAM]		[-SEMOGRAM]
[-RELATIONAL]	1	Logogram	Phonogram
[+RELATIONAL]	Classifier	Radicogram	Interpretant
	[-PHONEMOGRAM]	[+PHONEMOGRAM]	

- What?
  - [+meaning]
  - [-sound]
  - [-relational]

Towards a new taxonomy

Combining paradigmatic and syntagmatic features

	[+SEMOGRAM]		[-SEMOGRAM]
[-RELATIONAL]	Pictogram	Logogram	Phonogram
[+RELATIONAL]	Classifier	Radicogram	Interpretant
	[-PHONEMOGRAM]	[+PHONEMOGRAM]	

- What?
  - [+meaning]
  - [-sound]
  - [-relational]

- The notion of 'pictogram' fits here
  - Origin of the hieroglyphic writing system
  - 'Funny signs' or 'identity marks' (Andrássy et al. 2009; Haring & Kaper 2009)
  - Laboury et al.; *Workmen's notes*

Outline of the talk

- Historical approach:
  The functions of hieroglyphic signs
  - Ancient authors (Herodotus, Clement of Alexandria, Horapollo, …)
  - The evolution of Champollion's description
  - The dual view (Sethe, Gardiner, etc.)
  - A triadic organization of sign functions (Erman, Kaplony, Vernus, Winand, etc.)
  - Schenkel's square of hieroglyphic functions (and Kammerzell's revision)
  - Morenz' tree of hieroglyphic functions
- Towards a new taxonomy
  - Combining the syntagmatic and paradigmatic dimensions
  - Definition of the categories and prototypical examples
- Categorization and fluidity
  - Pictograms in action
  - Logograms other semograms
  - Phonograms and radicograms

Categorization and fluidity

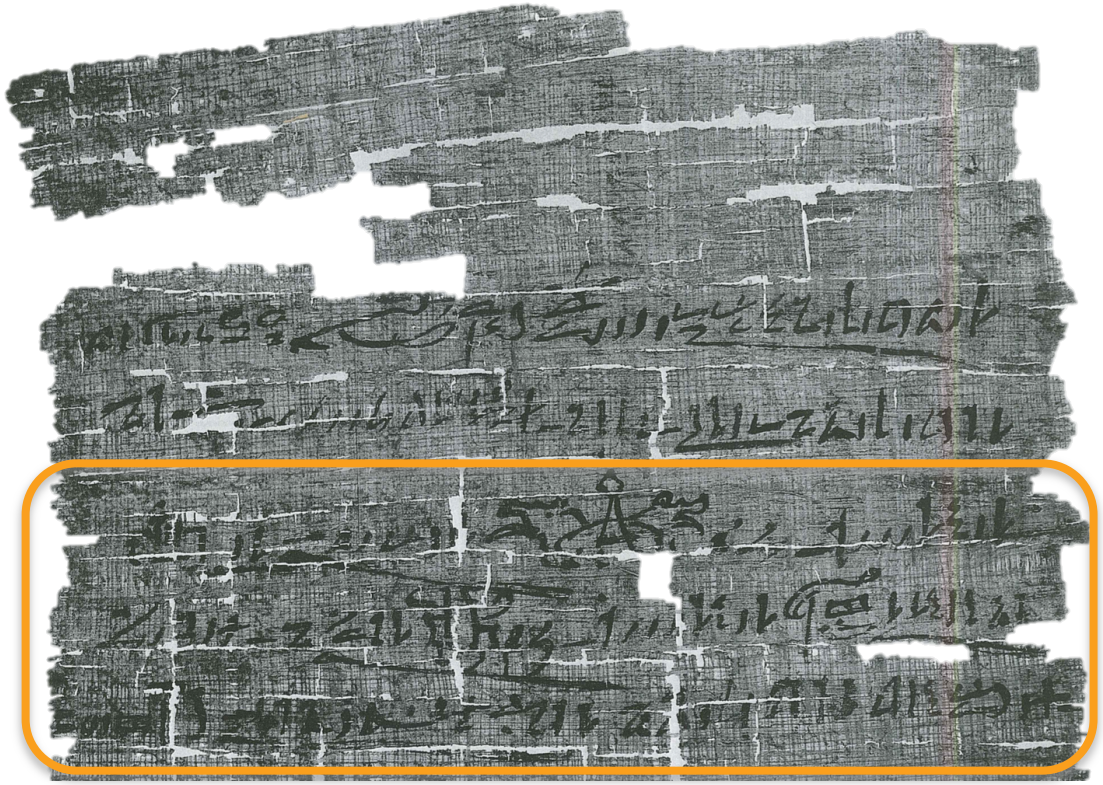
Exploring the borders

- The goal here is to confront the admittedly *etic* semiotic categorization of this modern taxinomy with empirical gradience. Indeed, as argued by Loprieno (2003a), the *emic* "iconocentrism" characteristic of the ancient Egyptian culture mediates between the semographic and phomegraphic realms, blurring the boundaries of our modern classifications.

Categorization and fluidity

Pictograms in action

- Pictograms can be fully integrated within the writing sytem, even in the admittedly less iconic types of cursive hieratic, see e.g. P. BM EA 10411, v° 3-5 = *LRLC* pl. 4



Categorization and fluidity

Pictograms in action

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Categorization and fluidity

Pictograms in action

- Pictograms can be fully integrated within the writing sytem, even in the admittedly less iconic types of cursive hieratic, see e.g. P. BM EA 10411, v° 3-5 = *LRLC* pl. 4

"Regarding the matter of the hippopotamus amulet that I gave you when you were about to go southward (mentioned) in your letter, (and) regarding the case of the double-crown amulet about which you said to me 'is it lost or is it in your possession?', in it, 'write to me!'; it is on the first month of Shemou, day 2 that I made them (i.e. the amulets) come to you."

Categorization and fluidity

Pictograms in action

- It's likely that the normal linguistic way to designate/verbalize such objects would have been to describe them…

- … as it is done for other artefacts:
  - *Tb.* (Spell 89)

"to be spoken over a human-headed bird of gold inlaid with semi-precious stones"

  - Manshîhet eṣ-Ṣadr stela (K*RI* II, 361,11): a picture is worth a thousand words

"I filled the temple of Re with numerous sphinxes, with statues, (of the type) prostrate offering a vase and (the type) kneeling making offering "

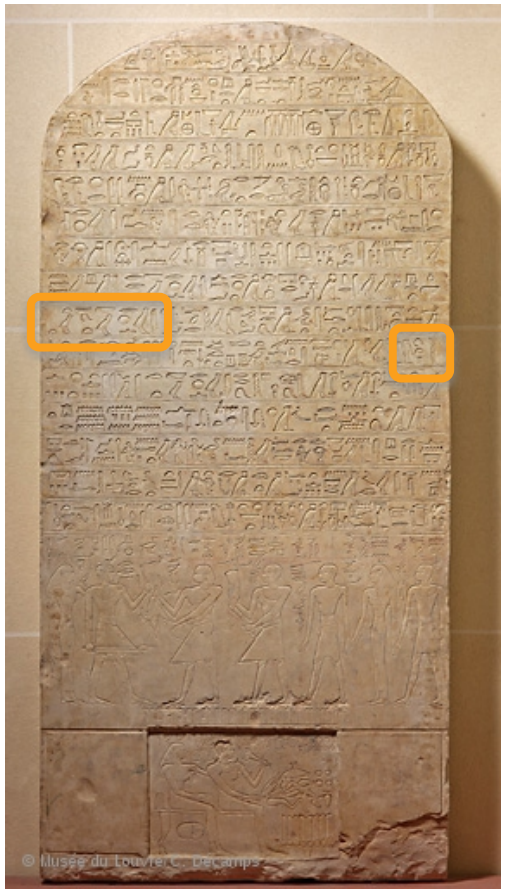
Categorization and fluidity

Pictograms in action

- However, the boundary between pictographic and logographic uses of signs is not always easy to make for modern interpreters. For instance, in the famous Abydenian stela of Irtysen (Louvre C14)
  - Lines 9-10

"I know (how to render) the going of a male figure and the coming of a woman figure."

  - It is fairly easy to guess that the last sign, (B24) means a woman's statue, as opposed to a man's
  - The word *rp.wt*, "*woman-shaped statue*" (*Wb.* II, 415,13) is well attested
  - This demonstrates that the limits between the two categories of autonomous semograms are somehow thin and critically depend on encyclopedic knowledge.



Categorization and fluidity

Logograms and other types of semograms

- Logograms and Pictograms (St. Louvre C14)
- The same applies to the distinction between logograms and classifiers
  - Consider the most common spelling

rmṯ people

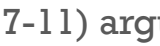
  - Should we describe it,
    1. as a logographic spelling *rmṯ* ( ) with two phonemographic interpretants, *r* () and *ṯ* ( )?
    2. as a (defective) phonemographic spelling ( ), with the classifier showing that this word refers to a group of human animates?

Categorization and fluidity

Logograms and other types of semograms

- Logograms and Pictograms (St. Louvre C14)
- The same applies to the distinction between logograms and classifiers
  - Consider the most common spelling

rmṯ people

  - The two answers are possible ⟹ diachronic gradience
    1. Lacau (1913: 7-11) argued that, originally, the sign-group was used as a logogram for the lexeme *rmṯ* "people" (e.g. *Urk.* I, 57,15 & 16; tomb of *Sšm-nfr*, late Vth dynasty); in the biography of Metjen, the logographic plural is attested: (*Urk.* I, 3,9).
    2. In a second step, some of its consonants were written out — but only those needed to avoid an ambiguity and ideally fitting within the space for a group or "quadrat" (Lacau 1913: 8-9) —, which led to the spelling  .
    3. Approximately at the same time, however, the sign-group is used as a classifier in the spelling of other lexemes referring to human animates, such as *msw* "children" (*Urk.* I, 41,9; tomb of *Ptḥ-w3š*, Vth dynasty) or *ḥm-k3* "funerary priest" (e.g. *Urk.* I, 11,11; IVth dynasty). The paradigm that emerges thus makes the second analysis suggested above likely at this point.

Categorization and fluidity

Logograms and other types of semograms

- Logograms and Pictograms (St. Louvre C14)
- Logograms and Classifiers in synchrony: *mnjw* "herdsman" (*Wb.* II, 74,15-75,6)
  - Usual spelling the man with a stick and a bundle on the shoulder (A33) classifies the lexeme *mnjw* "herdsman" in the category of [WANDERER]
  - In the Kanais inscription, one finds the logographic spelling in a common epithet that describes king Seti I as being a *mnjw nfr sʿnḫ mšʿ=f*, a "good shepherd, who keeps his army alive". In the context of the Kanais inscription — in which Seti I is praised not only for having built a temple but, most importantly, for having "excavated a well in front of it". This very specific writing of the lexeme *mnjw*, with a man carrying both goods and water, refer — crucially in this context — to his ability to provide water to his army.

Categorization and fluidity

Logograms and other types of semograms

- Logograms and Pictograms (St. Louvre C14)
- Logograms and Classifiers (*rmṯ* "people" and *mnỉw* "herdsman")
- Logograms and Radicograms: in lexemes related to [ROWING]

mḫn.t "ferry boat"

ḫnỉ "to row"

ḫn.t "water procession"

ḫnw "oarsman"

ḫnn "to agitate"

ḫnnw "brawler"

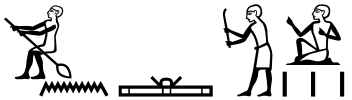
(like water agitated with a paddle)

Categorization and fluidity

Logograms and other types of semograms

- Logograms and Pictograms (St. Louvre C14)
- Logograms and Classifiers (*rmṯ* "people" and *mniw* "herdsman")
- Logograms and Radicograms: in lexemes related to [ROWING]
  - Complementarity: *mḫn.t* "ferry boat" in Boston Stela MFA 23733 (= *Urk*. IV, 1241,17)

  - Enriching radicograms iconically: *ḫni* "to convey by water" in P. Leiden 348, v° 9,1 (= *LEM* 135,13)



  - In this spelling, the radicogram is "logogramatized", so to speak, with the oarsman fully depicted and rowing in the water sign that functions both iconically and as a phonogram for *n*.

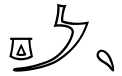
Categorization and fluidity

Logograms and other types of semograms

- Logograms and Pictograms (St. Louvre C14)
- Logograms and Classifiers (*rmṯ* "people" and *mniw* "herdsman")
- Logograms and Radicograms (*ḫn* [rowing])

Categorization and fluidity

Phonograms and radicograms

- Blurred boundaries between phonograms and radicograms
  - *mi̯* (a milk jug carried in a net; W19): its uses in words like *mj* "as", *mjw* "cat", *dmj* "town" show that it has no other value there than a phonemographic one.
  - gm (flamingo; G28). However, mostly attested in lexemes referring to the notion of [ENCOUNTERING] and of [TRITURATION], while generally avoided in other lexemes, such as  "temporal bone" ("Joch-Schlafenbein"; *Wb.* V, 170,2).
  - is is probably not merely a phonogram for *sš*, since it occurs always in words that have to do, in one way or another, with [WRITING] ⟹ Radicogram

Conclusions

Towards a referenced sign-list

Dung-beetle

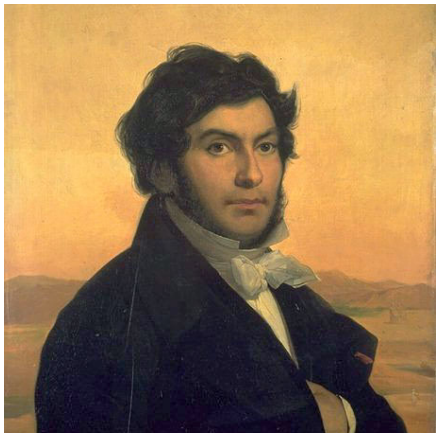
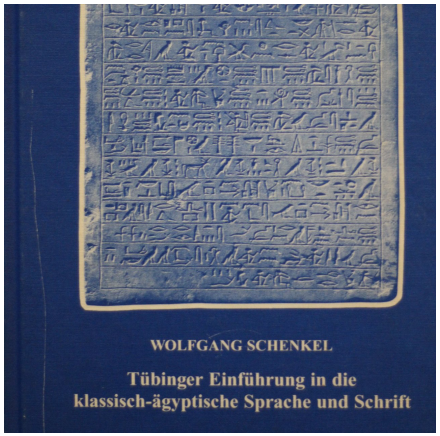
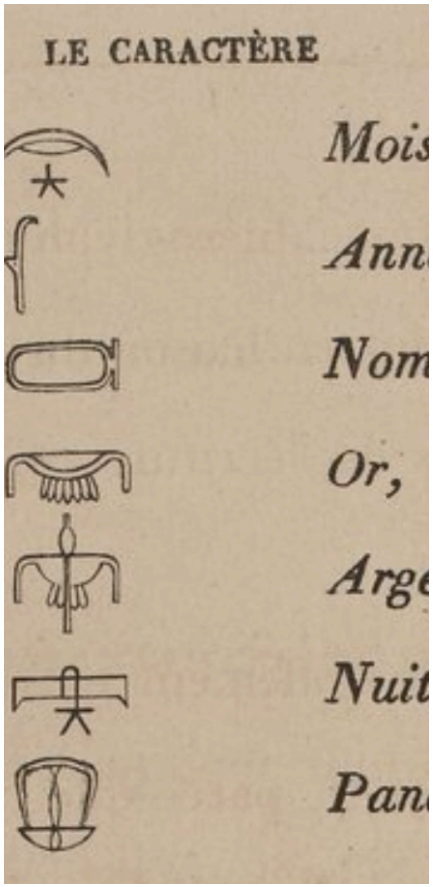
ID	Type	Standardized Drawing
98765901	Character	

Contents [hide]

1 Description
2 Function(s)
3 Codes
4 Hieratic
5 Variants
6 References

Description [edit]

Scarabeus sacer, a dung-beetle with six legs

Thanks!

s.polis@ulg.ac.be