

iClassifiers

A NEW DIGITAL TOOL FOR THE ANALYSIS OF CLASSIFIERS SCRIPTS AND LANGUAGES

The Hebrew University of Jerusalem

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Classifiers : A typological overview

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1969-2019... Fifty years of living with classifiers!

CRAIG on **Noun Classifiers of Jacaltec Maya** (FW between 1969-79)

1977 syntax (as Pro... pro drop rule), in Harvard/MIT Phd

1979 as categorization system, in Shopen's college textbook!

1986 in cognitive approach (*UofO conf: Lakoff, Givon, Dixon, RUDE!*)

GRINEVALD on a **Typology of Classifiers** (first version)

2000 **Morphosyntactic Typology**, in Senft, ed. (*MPI conference*)

2001 in Elsevier Encyclopedia (first edition)

2004 in Lehmann encyclopedic "Morphology Handbook"

2006 Goldwasser meets Grinevald

GRINEVALD & GOLDWASSER

on Ancient Egyptian Determinatives being Classifiers

2012 ‘Determinatives’ as ‘Classifiers’ (*from COST conference 2009*)

GRINEVALD

2015 typology revised, Elsevier Encyclopedia (2d ed),
+ new system N&V = root TYPO 2

SELZ, GRINEVALD, GOLDWASSER

2017 Sumerian cuneiforms have noun classifiers

1. About doing ‘linguistic typology’ ...

- ... in a “functional typological” framework
- ... through a process of “working typology”

2. Morphosyntactic Typology of classifiers

- “classifiers” as one of the systems of classification
- identification of subtypes of classifiers of NOUN entities

3. As categorization systems of human language cognition

- of different scope

Conclusion: studying classifiers across modalities :Ancient Egyptian

- From oral tradition contemporary languages to an ancient script

1. About doing 'linguistic typology'...

- **An intense dialogue of linguists doing description and typology today,**
 - whose new descriptions are fed by, and feed into, typology
 - (Some call it doing 'typo-description')
- An explosion in the last decades of the descriptions
 - of **oral tradition un(der)described (and endangered)** languages
 - showing the true meaning of 'linguistic diversity'
- From **different parts of the world**
 - the (N.S)Americas, Australia, (S.E.) Asia, Africa...

1. About doing 'linguistic typology' in a functional-typological framework

*A la "West Coast functionalists": UofO Givon, deLancey... (Grinevald) Craig
And now also ... DDL Lyon*

- Description of a language in its **natural state**: *importance of TEXT approach*
- Of **speaker/hearer communication**: *explicit/inferred*
- Expressing **basic functions**: *ex here: CATEGORIZATION*
- At all levels of grammar: *morphology, syntax, discourse*
- With an eye for **grammaticalization processes**: *ex of "CLASSIFIER systems"*

1. About doing 'linguistic typology'... ... through a process of 'working typology'

- Language descriptions... feed a **typology of X at time 1**
- This typology of X at time 1... guides **new language descriptions**
- Allowing for discoveries of **new (aspects) of phenomena**
- Producing a **revised Typology of X at time 2**

The dynamics used over the last decades for the description of linguistic phenomena of hundreds of oral languages **of Australia, the Americas, Asia** etc...
...have been more recently turning to **...languages of ancient scripts.**

2. A Linguistic Typology of 'classifiers'

- Classifiers as one of the systems of nominal

see Goldwasser's presentation

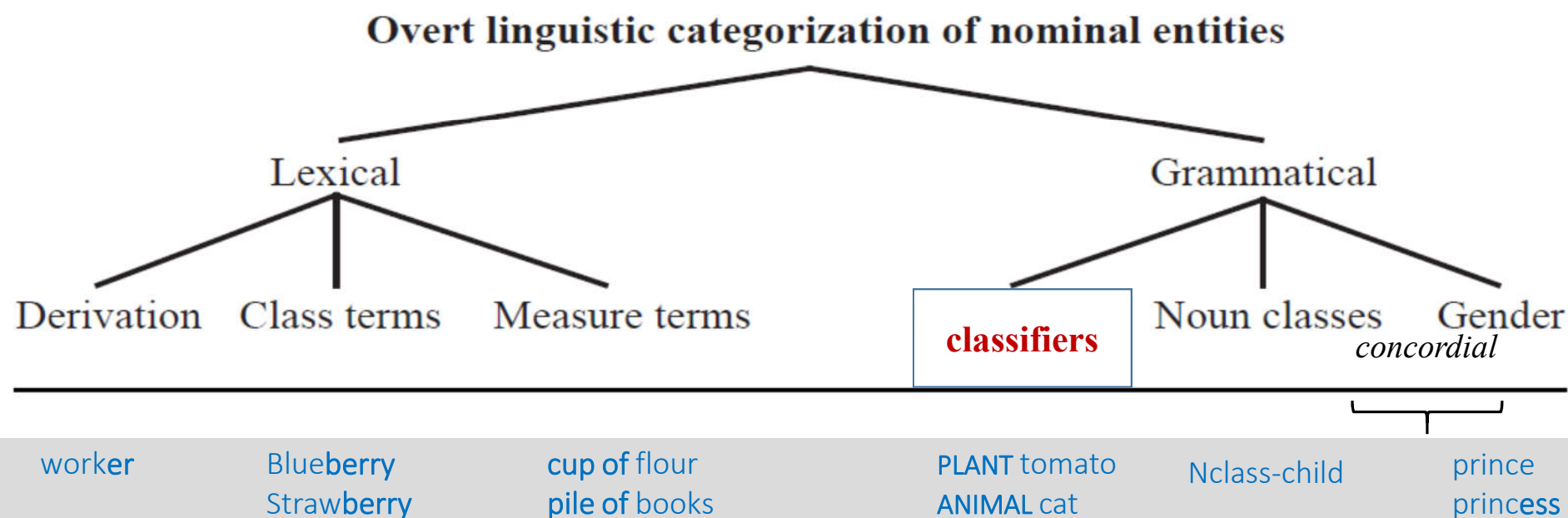
and Grinevald guide to lexical classification systems.

- Arguments for morphosyntactic typology

2. A Linguistic Typology of 'classifiers'

Classifiers as one of the systems of nominal classification

Table 3 Different systems of overt linguistic categorization



2. A Linguistic Typology of 'classifiers'

Three Arguments for a morphosyntactic typology of classifiers of NOUNS

1. Locus
2. Semantic profile
3. Co-occurrence in the same language

ARG 1. Morphosyntactic argument: position, ie 'LOCUS'

Table 4 Loci of major subsystems of nominal classifiers

$NP [POSS + CL_{genitival}]$	Numeral + $CL_{numeral}$	$CL_{noun} + Noun$	//	Verb - CL_{verbal}
------------------------------	--------------------------	--------------------	----	----------------------

nime-i
 $CL^{[DRINKING-THING]}$ -my coconut
'my coconut'
 (Ponapean)

bir nafar *âdam*
 one $CL^{[HUMAN]}$ person
'one person'
 (Uzbek)

ixim wah
 $CL^{[CORN]}$ tortilla
'tortillas'
 (Jakaltek)

Ohon'atatke: ak-hon'at-a:k
 It-potato-rotten past.I- $CL^{[POTATO]}$ -eat
'I ate a rotten potato'
 (Caguya) (Mithun 1986: 386-388)

all classifying a noun !

ARG 2. Semantic arguments

Different “semantic profiles” of their inventories

cf: « *What are noun classifiers good for?* » 1.,2. :Denny 1976; 3.:Grinevald 2000

1. *Numeral* = **physical** categories

<i>two</i> -[ROUND]	oranges
<i>three</i> -[LONG RIGID]	pencils

2. *Genitival* = **functional** categories

<i>his</i> -[DRINKABLE]	potion
<i>their</i> -[TRANSPORT]	canoe

3. *Noun* = **material/essence** categories (+**physical** categories?)

[MAN]	<i>John</i>
[ANIMAL]	<i>deer</i>
[ROCK]	<i>cave</i>

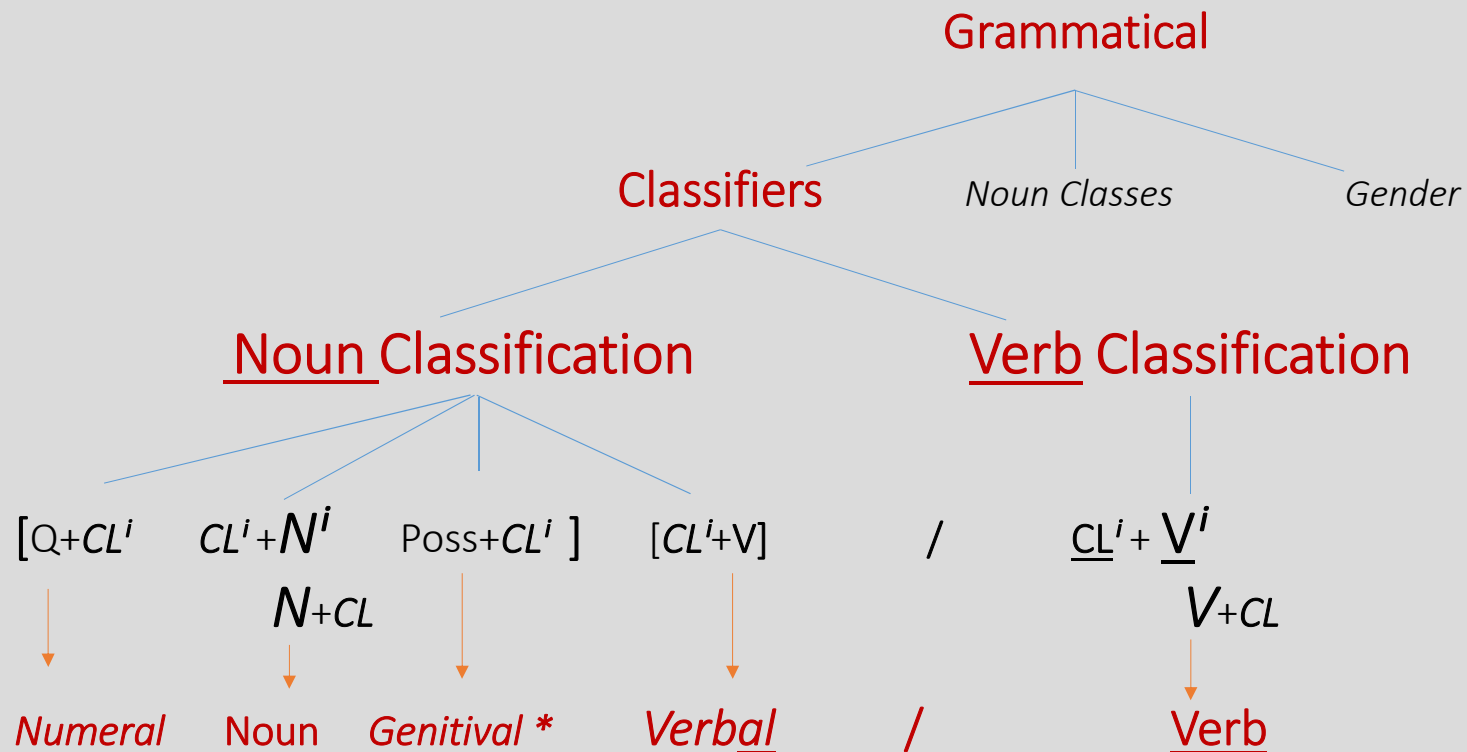
ARG 3. Co-occurrence in same language : ex Ponapean

Table 5 Examples of major subtypes of nominal classifier systems

1.	Noun classifiers; Jakaltek-Popti' (Craig, 1986, p. 264)	a.	xil naj xuwan no7 lab'a saw CL John CL snake '(man)John saw the (animal)snake'
2.	Numeral classifiers; Ponapean (Rehg, 1981, p. 130)	a.	pwi hk riemen pig 2+CL: animate 'two(-animate) pigs'
		b.	tuhke rioapwoat tree 2+CL: long 'two(-long) trees'
3.	Genitive classifiers; Ponapean (Rehg, 1981, p. 184)	a.	kene-i mwenge CL-GEN.1 food 'my(-edible) food'
		b.	were-i pwoht CL-GEN.1 boat 'my(-transport) boat'
4.	Verbal classifiers; Cayuga (Mithun, 1986, pp. 386–388)	a.	ohon'atatke: ak-hon'at-a:k it-potato-rotten past.I-CL-eat 'I (potato-)ate a rotten potato'

2. A Linguistic Typology of ‘classifiers’

...and another type of classifiers on locus of verb
“verbal classifiers” of NOUNS vs “VERB classifiers”



2. A Linguistic Typology of ‘classifiers’

Another type of classifiers on locus of verb

“verbal classifiers” of NOUNS vs “VERB classifiers”

Verbal classifiers = several types of semantic categories possible

PHYSICAL	I- [LONG RIGID] –put the knife on the table
FUNCTIONAL	you-[DOMESTIC PET]-have a dog
MATERIAL	he-[POTATO]-ate a rotten potato

VERB classifiers = *major verbal semantics*

ACTION	[DO] hunt, cook, cut
MOTION	[GO] go, arrive, travel
SPEECH	[TALK] talk, yell, repeat, shout

2. A Linguistic Typology of ‘classifiers’

Another type of classifiers on locus of verb

“verbal classifiers” of NOUNS vs “VERB classifiers”

*Verbal CL (classifier of patient
object)*

Verb CL (classifier of verb semantics)

a. I [LONG RIGID]-put a
knife on the table

c. You shout-[SAY] to me (Intransitive)

b. I [VEHICLE]-have a canoe

d. Put-[DO] a knife on the (Transitive)
table!

3. As categorization systems of human language cognition

- of different scope
- in different modalities
 - oral tradition contemporary languages
 - ancient scripts
 - here Ancient Egyptian, i.e. *silent 'determinatives'

3. A categorization approach to classification systems of NOUNS

- Now turning to **their classification** processes,
and their **categorization** principles
- And how they provide **cognitive insight**
into how speakers organize their world,
from **most universal to most culturally specific** categories

3. A categorization approach to classification systems of NOUNS

« classifier systems » are built around central elements that operate semantic classification mostly around **prototypes**, at different levels:

Jakaltek system

Generic (superordinate) classifiers: head large heterogeneous classes

Ex: MAN WOMAN ANIMAL PLANT MINERAL

Specific classifiers: head smaller classes with cultural highlighting

Ex: CORN MEDICINAL PLANT THREAD

Unique classifiers: for classes of one item! very specific cultural highlighting...

Ex: DOG SALT

3. A categorization approach to classification systems with extreme cases of levels of categorization

Default classifier (ex Chinese & Ancient Egyptian, does not exist in Jakaltek)

- semantically empty
- from total loss of semantic motivation 'THING X'
- marking a class encompassing from general to the most specific nouns.

3. A categorization approach to classification systems

Special classifiers: the case of 'repeaters'

A questions of FORM vs CATEGORIZATION

- The term 'repeater' coined by Allan 1977, called 'eco classifier' by Senft
 - **qein ta qein** 'one CL house' (Burmese) (Allan 1977:292)
- A fairly common phenomenon,
- showing the nominal origin of many classifiers.
- Warning: Repeaters may appear at **all levels of categorization!**
 - ⇒ generic, special, unique

3. A categorization approach to classification systems

More about repeaters : keeping questions of FORM vs. CATEGORIZATION separated !

Table 13 Repeater versus unique in Jakaltek Popti'

<i>CL</i>		<i>Repeater</i>	<i>Unique</i>	<i>CL</i>		<i>N</i>
<i>atz'am</i>	'Salt'	+	+	<i>atz'am</i>	<i>atz'am</i>	'(The) salt'
<i>metx'</i>	'Dog'	—	+	<i>metx'</i>	<i>tx'i'</i>	'The/a dog'
<i>ha</i>	'Water'	+	—	<i>ha</i>	<i>ha'</i>	'The water'
				<i>ha</i>	<i>nhab'</i>	'The rain'
				<i>ha</i>	<i>pam</i>	'The/a lake'
				<i>etc.</i>		

3. A categorization approach to classification systems

An extreme case of 'repeaters': the 'phonetic classifiers'

The case of the Movima numeral classifiers (Bolivia): 'partial repeaters' since they consist of
the LAST SYLLABLE of the noun being counted
the LAST TWO SYLLABLES for non native noun

Nb-CL Noun

Native words: a. oy-**d'o** chad'**o** '2 plates' a' oy-**pi** sukapi**i** '2 belts'

Borrowed words: b. oy-**misa** kamisa '2 shirts' b' oy-**sasa** mesa '2 tables'

Hence: no categorizing/classifying value per se!
although confusing effect of categorization because of homophonous syllables!

By way of conclusion.

Linguistic typology as a way to study classifiers across modalities

- The study of the silent determinatives as ‘classifiers’
- Leading to a new version of a typology of classifier systems

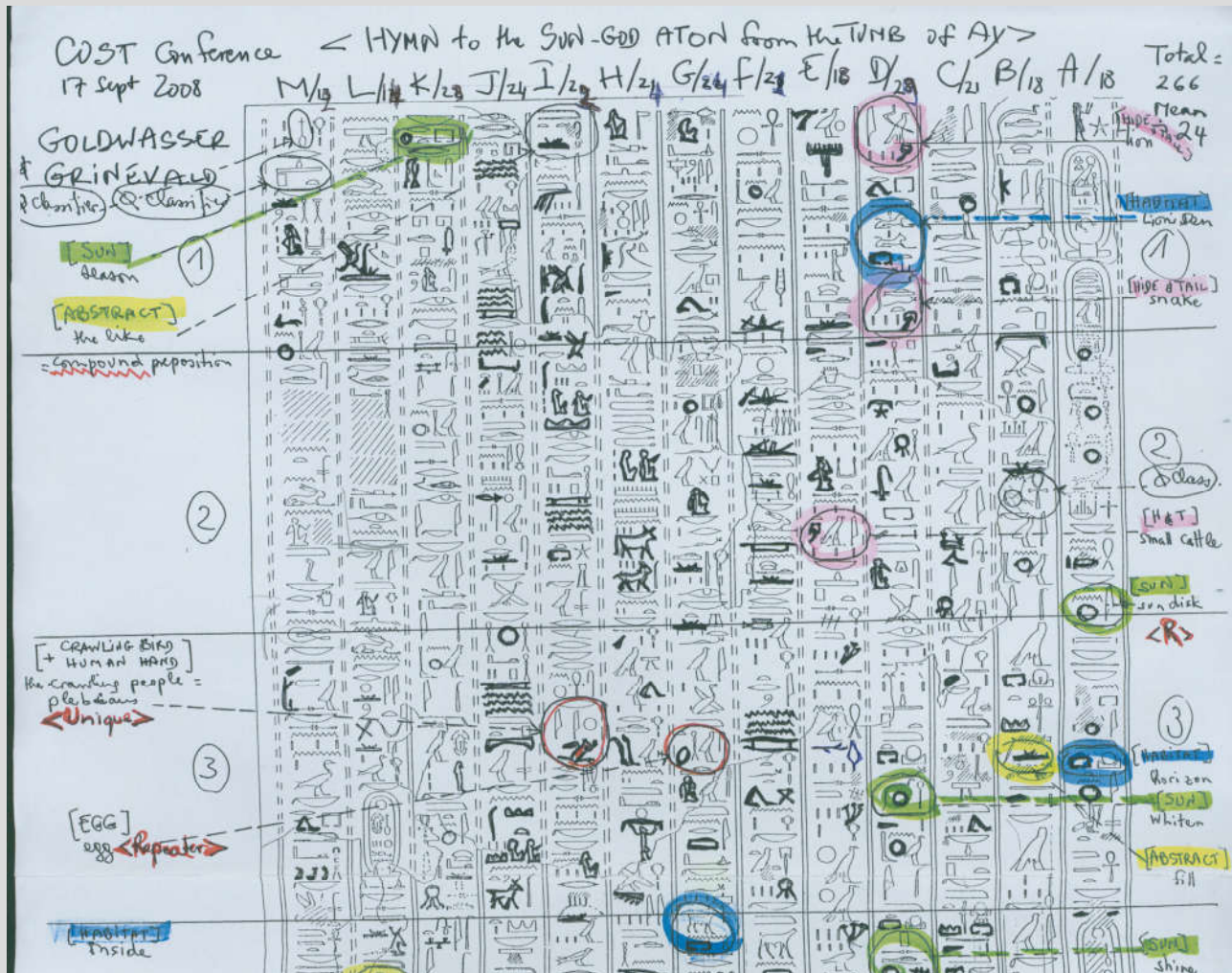
TAKING A LINGUISTIC TEXT APPROACH TO DETERMINATIVES

A case study- the Aten hymn TEXT



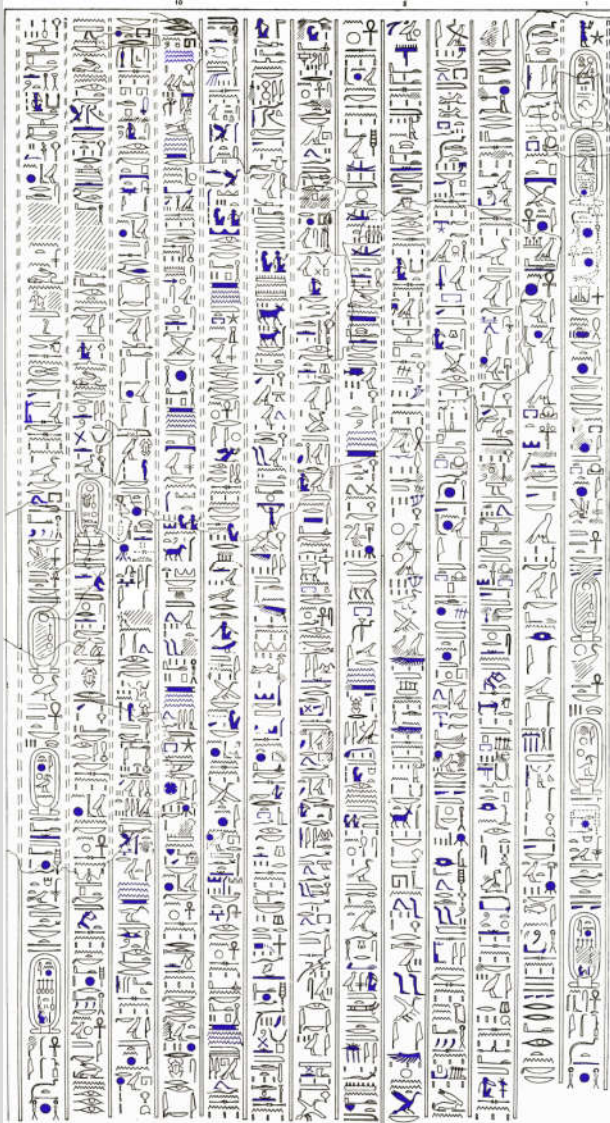
Step 1:
« determinatives »
identified
by O. Goldwasser

The TEXT approach: ‘Fieldnotes’ of analysis



Notes from
working sessions of text analysis:

Grinevald 'field linguist'
Golwasser 'speaker/informant/expert'
= source of knowledge



TEXT APPROACH TO DETERMINATIVES

Step 2. first evidence of a « system »: the density of occurrence



















































1. Density of classifier per column (represented by letters)

Columns:	M	L	K	J	I	H	G	F	E	D	C	B	A
Tokens:	12	14	24	24	22	24	24	21	19	29	21	18	18

2. TOTAL TOKENS 266

3. Even distribution per column:
 Maximum 29
 Average 22
 Minimum 12

Hymn classifiers in Gardiner's list

 man, person.	 hair, mourn, forlorn.	 fish.	 house, building.
 woman.	 eye, see, actions of eye.	 snake, worm.	 door, open.
 people.	 actions or conditions of eye.	 tree.	 box, coffin.
 child, young.	 (less accurately 𓄿) nose, smell, joy.	 plant, flower.	 shrine, palanquin, mat.
 old man, old, lean upon.	 contempt.	 or 𓄿 vine, fruit, garden.	 boat, ship, navigation.
 official, man in authority.	 ear, states or activities of ear.	 wood, tree.	 sacred bark.
 (Dyn. XVIII 𓄿 or 𓄿), exalted.	 tooth, actions of teeth.	 corn.	 clothe, linen.
 person, the dead.	 force, effort (interchangeable with 𓄿).	 or 𓄿 grain.	 bind, document.
 god, king.	 substitute for 𓄿 in hieratic, less often in hieroglyphic.	 sky, above.	 rope, actions with cord or rope.
 or 𓄿 king.	 offer, present.	 sun, light, time.	 knife, cut.
 god, king.	 arm, bend arm, cease.	 night, darkness.	 hoe, cultivate, hack up.
 or 𓄿 goddess, queen.	 envelop, embrace.	 star.	 break, divide, cross.
 high, rejoice, support.	 phallus, beget, urinate.	 fire, heat, cook.	 cup.
 praise, supplicate.	 leg, foot, actions of foot.	 air, wind, sail.	 vessel, anoint.
 force, effort.	 walk, run.	 stone.	 (less accurately 𓄿) pot, vessel, beverages.
 eat, drink, speak, think, feel.	 move backwards.	 copper, bronze.	 bread, cake.
 lift, carry.	 limb, flesh.	 ... sand, minerals, pellets.	 or 𓄿 loaf, cake, offering.
 weary, weak.	 tumours, odours, disease.	 water, liquid, actions connected with water.	 festival.
 enemy, foreigner.	 bodily discharges.	 (less often 𓄿) sheet of water.	 (also vertically 𓄿, older form 𓄿)
 enemy, death.	 and 𓄿 cattle.	 irrigated land.	 book, writing, abstract.
 or 𓄿 lie down, death, bury.	 savage, Typhonian.	 land (later often replaces 𓄿).	 royal name, king.
 mummy, likeness, shape.	 skin, mammal.	 road, travel, position.	 one; the object depicted
 head, nod, throttle.	 bird, insect.	 desert, foreign country.	 (also 𓄿, 𓄿, ...) several, plural.
	 small, bad, weak.	 foreign (country or person).	 substitute for signs difficult to draw (mostly hieratic).
		 town, village, Egypt.	

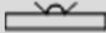





Step 3: their inventory

- 52 out of the 90 in Gardiner's list
- 15 additional ones not in the list

After A. Gardiner,
Egyptian Grammar, 1957

TEXT APPROACH TO DETERMINATIVES

step 4: token frequency reflect the themes and topics of the text.

sign	Gardiner no.	No. of tokens
	Y1 ["ABSTRACT"] [DEFAULT] <i>sealed papyrus with text.</i>	31
	N5 [SUN, TEMPS] <i>solar disc</i>	28
	D54 [MOVEMENT] <i>walking legs (human)</i>	16
	O1 [HABITAT] <i>house</i>	15
	N21 [LAND] <i>piece of land</i>	14
	N8 [LIGHT] <i>solar disk with rays</i>	7

DETERMINATIVES', as CLASSIFIERS of N & V & N/V

Noun

 *sdmi* [HUMAN & MALE] judge

 *sšn* [LOTUS] lotus

 *irp* [JAR] wine

 *3twt* [WOOD] bed

Verb

 *pr* [MOVEMENT] to enter

 *fd* [ACTION OF FORCE] to pluck/pull out

Noun/Verb

 *Itn* [SUN] sun

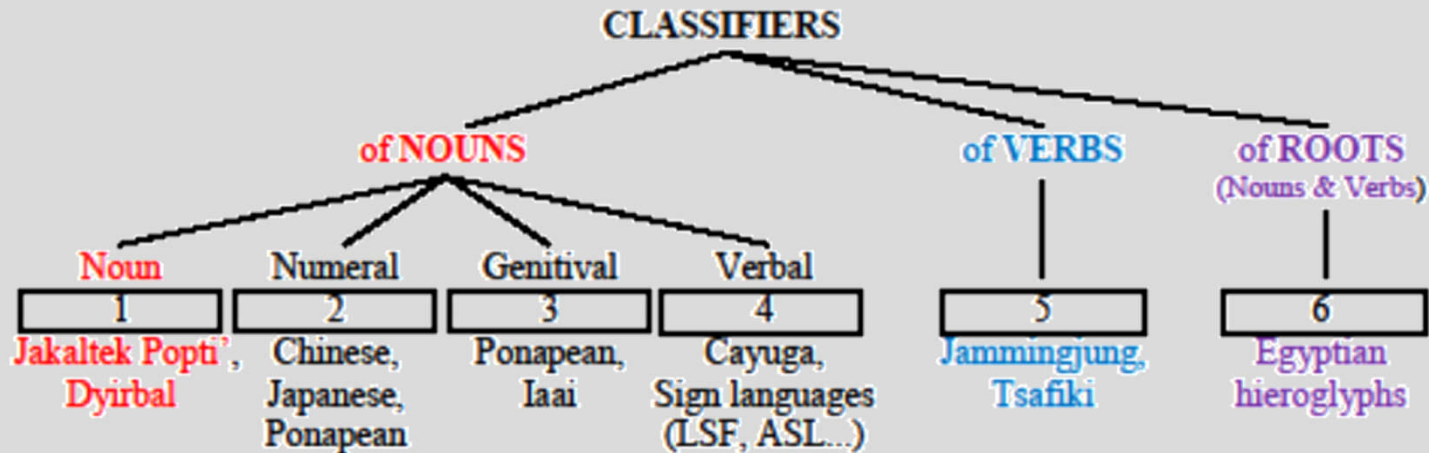
 *wbn* [SUN] shine

 *dpt* [BOAT] boat

 *n^c* [BOAT] travel

OUTCOME: review of the typology of classifier systems, adding the Ancient Egyptian ROOT subsystem

TABLE 11. Diversity of subtypes of classifiers (and sample languages)



Grinevald, C. 2015 **Classifiers, Linguistics of**. In: James D. Wright (ed) *International Encyclopedia of the Social & Behavioral Sciences*, 2d edition, Vol 3. Oxford: Elsevier. Pp 811-818

And where did the help come from? Oral tradition languages.
Native languages of America and Australia

Noun classifiers vs Verb classifiers vs Root classifiers



ON A WORKING LINGUISTIC TYPOLOGY OF CLASSIFIERS:
THE CONTRIBUTION OF ANCIENT WRITINGS

1. A « **fieldwork approach** » for an ancient language script
2. A demonstration of productive back and forth between
description & typology
3. Opening perspectives on **new « fieldwork » situations
of other ancient language classifiers...**

Gebhard Selz, Colette Grinevald & Orly Goldwasser. 2017
Sumerian and Egyptian classifier systems in a comparative perspective



CAVEAT what there was no time to talk about

More aspects of a linguistic typology of classifiers:

- the inherent dynamics of such systems, demanding a multidimensional approach
- the issue of boundaries/overlap of systems:
the challenge of analysis of the Amazonian systems
classifiers, noun classes, mixed systems?
- an a priori basic posture of 'lumpers' and 'non lumpers'

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**Merci!
Thank you!**

Yuch'an tiyox teyet!

**Special thank you to Orly Golwasser
For getting us all together here!**