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## Diachronic lexical semantics in Ancient Egyptian–Coptic

The Egyptianness of basic vocabulary in Coptic

# + Background

- It is well known that Coptic, as it comes down to us in written texts, is massively influenced by Greek in the domain of lexicon
- The Leipzig-Berlin *Dictionary and Database of Greek Loanwords in Coptic* project, headed by T. Sebastian Richter, has already recorded c. 5000 loan word types and c. 60.000 loan word tokens



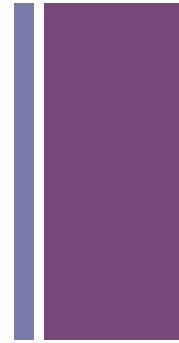
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- On this basis, linguists, philologists, and historians often make assumptions about the nature and extent of bilingualism. Some linguists have even proposed that Coptic is a case of ‘code-mixing’ of Egyptian and Greek, which assumes extensive bilingualism among Egyptians in Late Antiquity



# + Goal of the talk

- We tackle this question from another angle, by determining the extent to which Greek influenced Coptic in terms of its *basic vocabulary*
- It may be that we can learn more about bilingualism in Late Antique Egypt this way, since overall lexical borrowing need not correlate with lexical borrowing in the domain of basic vocabulary
- As a (significant) side effect of this study, we can also say something about the rate of replacement of basic vocabulary in Egyptian-Coptic across its 4000 years of attestation, as well as the semantic domains and periods in which lexical replacement was faster or slower



# + Basic vocabulary lists

## What they are and what they're for

- The most famous lists are that of Morris Swadesh (1909-1967) in the 1950s (with first 225, then 165, 215, 200 and finally meanings)
- Basic vocabulary is an intuitive notion, as Swadesh proposed his list on an intuitive basis for his historical-comparative purposes



Morris Swadesh, 1950. Salish Internal relationships, *IJAL* 16, p. 157-sq.

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- |          |            |           |
|----------|------------|-----------|
| 1. I     | 11. one    | 21. dog   |
| 2. you   | 12. two    | 22. louse |
| 3. we    | 13. big    | 23. tree  |
| 4. this  | 14. long   | 24. seed  |
| 5. that  | 15. small  | 25. leaf  |
| 6. what  | 16. woman  | 26. root  |
| 7. who   | 17. man    | 27. bark  |
| 8. not   | 18. person | 28. skin  |
| 9. all   | 19. fish   | 29. flesh |
| 10. many | 20. bird   | 30. blood |

The first 20  
items of the  
classical  
Swadesh list

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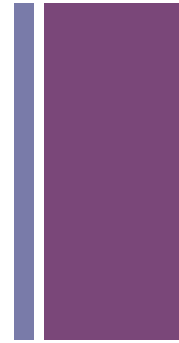
# + Basic vocabulary lists

## What they are and what they're for

- This list is often criticized...
- but basic vocabulary lists are widely used by linguists and anthropologists
  - Cross-linguistic comparison (e.g., measuring borrowability; Greenberg [1957: 39] already stated that basic, 'fundamental', vocabulary is much less susceptible to borrowing than non basic, 'cultural', vocabulary)
  - Determining relatedness of languages (whether and how languages are related to each other) - basic vocabulary is least likely to be borrowed, and so is better for establishing cognates
  - Synchronic description - among the first words to be elicited in fieldwork

# + Intuitive notion of basic vocabulary in Coptic

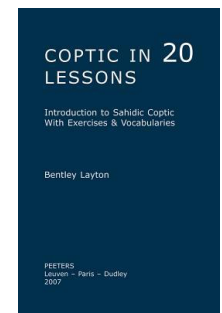
- Every specialist in Egyptian-Coptic would probably draw up an intuitive list, based on *frequency*, assumed *cultural importance* and *universality*





# + Intuitive notion of basic vocabulary in Coptic

- Every specialist in Egyptian-Coptic would probably draw up an intuitive list, based on *frequency*, assumed *cultural importance* and *universality*
- An example
  - Layton (2007), in the first lesson with a vocabulary list, gives a list of words from the domain of ‘the family’ (*human being, man, woman, father, parent, mother, brother/sibling, sister, son/child, etc.*) and the domain of ‘authority/power’ (*master/lord, mistress/lady, servant/slave, power, fear, glory/honor, king/emperor, etc.*), as well as a short list of grammatical items (*the, this, a, of, and*).
  - In the vocabulary list of the second lesson, Layton adds words from the domain of ‘daily life’ (*water, food, stone, boat, fire, city, fruit*) and ‘religion/ethics’ (*god, Jesus, Christ, sin, baptism, salvation, life, death, etc.*)



# + Intuitive notion of basic vocabulary in Coptic

- Every specialist in Egyptian-Coptic would probably draw up an intuitive list, based on frequency, assumed *cultural importance* and *universality*
- Such list will reflect an actual experience of Coptic texts,
- but it is probably not comparable to basic word lists in other languages, as the criteria are not explicit and *much is culturally-dependent*

# + Recent empirical approach

## The Leipzig-Jakarta List

- A large-scale typological project headed by Martin Haspelmath and Uri Tadmor of the Linguistics Department of the Max Planck Institute for Evolutionary Anthropology and its Jakarta Field Station, *aiming at a crosslinguistic survey of lexical borrowing*, resulted in the publication of
  - *Loanwords in the world's languages: A comparative handbook*, Berlin: De Gruyter (2009)
  - The *World Loanword Database* (online database: <http://wold.clld.org/>)



WORLD LOANWORD DATABASE (WOLD)

Home Vocabularies Meanings Languages Authors

Glossary History Legal Download Contact

### The World Loanword Database (WOLD)

The World Loanword Database, edited by Martin Haspelmath and Uri Tadmor, is a scientific publication by the Max Planck Institute for Evolutionary Anthropology, Leipzig (2009) | [cite](#)

It provides **vocabularies** (mini-dictionaries of about 1000-2000 entries) of 41 languages from around the world, with comprehensive information about the loanword status of each word. It allows users to find **loanwords**, **source words** and **donor languages** in each of the 41 languages, but also makes it easy to compare loanwords across languages.

Each vocabulary was contributed by an expert on the language and its history. An accompanying book has been published by De Gruyter Mouton ( *Loanwords in the World's Languages. A Comparative Handbook*, edited by Martin Haspelmath & Uri Tadmor).

The World Loanword Database consists of vocabularies contributed by 41 different authors or author teams. When citing material from the database, please cite the corresponding vocabulary (or vocabularies).

The database can be accessed by language, by meaning or by author.

The World Loanword Database is the result of a collaborative project coordinated by Uri Tadmor and Martin Haspelmath between 2004 and 2009, called the *Loanword Typology Project (LWT)*. Most of the contributors took part in workshops at which the procedures for selecting and annotating words were discussed extensively. The list of 1460 meanings on which the vocabularies are based is called the *Loanword Typology meaning list*, and it is in turn based on the list of the *Intercontinental Dictionary Series*.

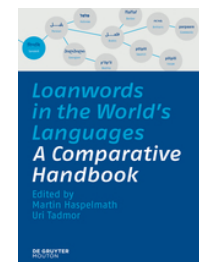
**New domain for WOLD**

For reasons beyond our control we have to serve WOLD under a new domain. Starting June 3, 2014 WOLD should be accessed using the domain [wold.clld.org](http://wold.clld.org) instead of the old domain [wold.livingsources.org](http://wold.livingsources.org).

Until the end of 2014 the old domain will be redirected to the new one, but make sure you update bookmarks or links accordingly. From January 2015 [wold.livingsources.org](http://wold.livingsources.org) is no longer under our control.

We regret that we could not find a better solution and apologize for the inconvenience.

disclaimer  
Application source on **GitHub**



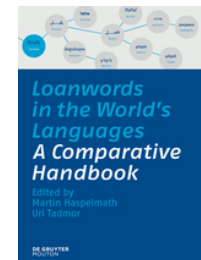
# + Recent empirical approach

## The Leipzig-Jakarta List

### ■ Methodology

- 1460 meanings in a world-wide sample of 41 languages
- For each meaning, specialists listed words that lexicalize the meaning, and provided rich data about the word's origin, age, analyzability, semantic field, semantic word class, and more, as well as more general information about the language contact situation

<b>MEANING</b>	LWT code	1.21
	Semantic Field	The physical world
	LWT label (M2)	<b>the land</b>
	Meaning Description (M3)	the hard surface of the earth, when compared to the area covered by
	Typical Context (M4)	The captain sighted land in the distance.
	Semantic category (M5)	Noun ▼



# + Recent empirical approach

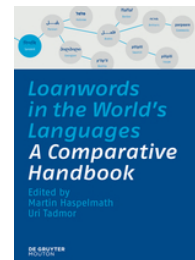
## The Leipzig-Jakarta List

### ■ Results

Table 1: Lexical borrowing rates in LWT project languages

Borrowing type	Languages	Total words	Loanwords	Loanwords as % of total
Very high borrowers	Selice Romani	1,431	898	62.7%
	Tarifyt Berber	1,526	789	51.7%
High borrowers	Gurindji	842	384	45.6%
	Romanian	2,137	894	41.8%
	English	1,504	617	41.0%
	Saramaccan	1,089	417	38.3%
	Ceq Wong	862	319	37.0%
	Japanese	1,975	689	34.9%
	Indonesian	1,942	660	34.0%
	Bezhta	1,344	427	31.8%
	Kildin Saami	1,336	408	30.5%
	Imbabura Quechua	1,158	350	30.2%
	Archi	1,112	328	29.5%
	Sakha	1,411	409	29.0%
	Vietnamese	1,477	415	28.1%
	Swahili	1,610	447	27.8%
Yaqui	1,379	366	26.5%	
Thai	2,063	539	26.1%	
Takia	1,123	291	25.9%	

Borrowing type	Languages	Total words	Loanwords	Loanwords as % of total
Average borrowers	Lower Sorbian	1,671	374	22.4%
	Hausa	1,452	323	22.2%
	Mapudungun	1,236	274	22.2%
	White Hmong	1,290	273	21.2%
	Kanuri	1,427	283	19.8%
	Dutch	1,513	289	19.1%
	Malagasy	1,526	267	17.5%
	Zinacantán Tzotzil	1,217	195	16.0%
	Wichi	1,187	188	15.8%
	Q'eqchi'	1,774	266	15.0%
	Iraqw	1,117	162	14.5%
	Kalí'na	1,110	156	14.0%
	Hawaiian	1,245	169	13.6%
	Oroqen	1,138	137	12.0%
	Hup	993	114	11.5%
	Gawwada	982	111	11.3%
	Seychelles Creole	1,879	201	10.7%
Otomi	2,158	231	10.7%	
Low borrowers	Ket	1,030	100	9.7%
	Manange	1,009	84	8.3%
	Old High German	1,203	70	5.8%
	Mandarin Chinese	2,042	25	1.2%

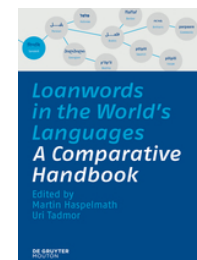


# + Recent empirical approach

## The Leipzig-Jakarta List

### ■ Results

- Correlation between lexical borrowing rates and sociolinguistic situations



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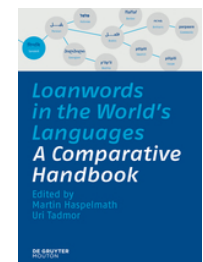
## The Leipzig-Jakarta List

### ■ Results

- Correlation between lexical borrowing rates and sociolinguistic situations
- Borrowability according to semantic fields

Table 6: Borrowing by semantic field

Semantic field	Loanwords as % of total
Religion and belief	41.2%
Clothing and grooming	38.6%
The house	37.2%
Law	34.3%
Social and political relations	31.0%
Agriculture and vegetation	30.0%
Food and drink	29.3%
Warfare and hunting	27.9%
Possession	27.1%
Animals	25.5%
Cognition	24.2%
Basic actions and technology	23.8%
Time	23.2%
Speech and language	22.3%
Quantity	20.5%
Emotions and values	19.9%
The physical world	19.8%
Motion	17.3%
Kinship	15.0%
The body	14.2%
Spatial relations	14.0%
Sense perception	11.0%
<b>All words</b>	<b>24.2%</b>



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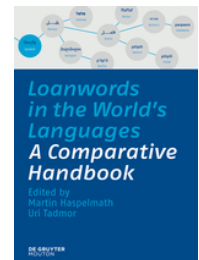
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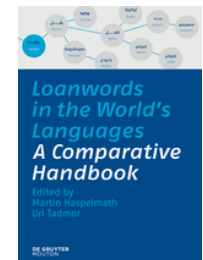
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## The Leipzig-Jakarta List

### ■ Results

- Correlation between lexical borrowing rates and sociolinguistic situations
- Borrowability according to semantic fields
- A list of the most borrowing-resistant meanings

Rank	Label	Unbor. Score
1	he/she/it	1.000
1	we (inclusive)	1.000
1	we (exclusive)	1.000
1	up	1.000
1	this	1.000
6	where?	0.997
7	why?	0.995
8	which?	0.994
9	we	0.991
10	married woman	0.990
11	younger sister	0.989
11	to rise	0.989
13	day after tomorrow	0.987
13	to spin	0.987
15	stinking	0.982
15	to bring	0.982
17	day before yesterday	0.981



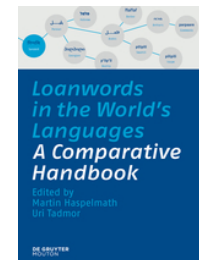
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## The Leipzig-Jakarta List

### ■ Results

- Correlation between lexical borrowing rates and sociolinguistic situations
- Borrowability according to semantic fields
- A list of the most borrowing-resistant meanings
- As noted by Tadmor (2009: 66), “[t]he least borrowed items on this list contain surprisingly few of the meanings traditionally associated with the notion of ‘basic vocabulary’, such as body parts and important natural phenomena”

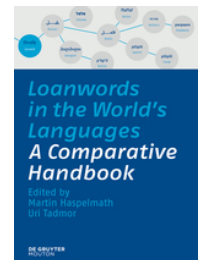
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1	up	1.000
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6	where?	0.997
7	why?	0.995
8	which?	0.994
9	we	0.991
10	married woman	0.990
11	younger sister	0.989
11	to rise	0.989
13	day after tomorrow	0.987
13	to spin	0.987
15	stinking	0.982
15	to bring	0.982
17	day before yesterday	0.981



# + Recent empirical approach

## The Leipzig-Jakarta List

- Not yet a list of basic vocabulary...
- Resistance to borrowing is not the only factor involved in basic vocabulary
  - **Age** - the longer a word has persisted in a language without being replaced, the better evidence it provides for being resistant to change in general
  - **Simplicity** - some meanings are lexicalized by combinations of words (compounds, etc.), and as such, are not good examples of basic vocabulary
  - **Representativeness** - meanings that are not well-represented as words in the sample's languages (e.g., younger sister), i.e., meanings that are not lexicalized in many languages, are not good examples of basic vocabulary (or of resistance to borrowing)





# Recent empirical approach

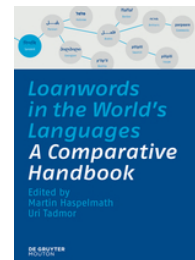
## The Leipzig-Jakarta List

### ■ The weighted-list of basic vocabulary

Table 8: The Leipzig-Jakarta list of basic vocabulary

Rank	Word meaning	Unborrowed score	Age score	Simplicity score	Representation score	Composite score
1	fire	0.965	0.939	0.995	1.000	0.901
2	nose	0.973	0.906	0.980	1.000	0.864
3	to go	0.963	0.887	0.974	1.000	0.832
4	water	0.909	0.926	0.987	1.000	0.831
5	mouth	0.920	0.904	0.982	1.000	0.817
6	tongue	0.934	0.908	0.954	1.000	0.808
7	blood	0.904	0.890	1.000	1.000	0.805
7	bone	0.918	0.904	0.971	1.000	0.805
9	2SG pronoun	0.958	0.893	0.933	1.000	0.798
9	root	0.944	0.869	0.973	1.000	0.798
11	to come	0.968	0.876	0.940	1.000	0.796
12	breast	0.947	0.856	0.967	1.000	0.783
13	rain	0.916	0.898	0.950	1.000	0.782
14	1SG pronoun	0.970	0.875	0.936	0.976	0.776
15	name	0.915	0.886	0.955	1.000	0.774
15	louse	0.950	0.861	0.946	1.000	0.774
17	wing	0.884	0.904	0.968	1.000	0.773
18	flesh/meat	0.877	0.892	0.986	1.000	0.771
19	arm/hand	0.881	0.903	0.966	1.000	0.768
20	fly	0.948	0.858	0.942	1.000	0.766
20	night	0.931	0.880	0.934	1.000	0.766
22	ear	0.896	0.888	0.961	1.000	0.764
23	neck	0.895	0.881	0.964	1.000	0.760
23	far	0.944	0.850	0.948	1.000	0.760
25	to do/make	0.947	0.877	0.914	1.000	0.759
26	house	0.893	0.876	0.969	1.000	0.758
27	stone/rock	0.895	0.882	0.958	1.000	0.756
28	bitter	0.975	0.872	0.889	1.000	0.755
28	to say	0.972	0.837	0.928	1.000	0.755
28	tooth	0.882	0.877	0.975	1.000	0.755
31	hair	0.944	0.871	0.917	1.000	0.754

Rank	Word meaning	Unborrowed score	Age score	Simplicity score	Representation score	Composite score
32	big	0.889	0.864	0.980	1.000	0.753
32	one	0.870	0.893	0.969	1.000	0.753
34	who?	0.968	0.838	0.924	1.000	0.749
34	3SG pronoun	1.000	0.893	0.955	0.878	0.749
36	to hit/beat	0.955	0.827	0.947	1.000	0.748
37	leg/foot	0.856	0.897	0.972	1.000	0.747
38	horn	0.840	0.898	0.987	1.000	0.745
38	this	1.000	0.851	0.897	0.976	0.745
38	fish	0.855	0.885	0.984	1.000	0.745
41	yesterday	0.958	0.843	0.922	1.000	0.744
42	to drink	0.904	0.877	0.934	1.000	0.741
42	black	0.951	0.866	0.899	1.000	0.741
42	navel	0.878	0.860	0.982	1.000	0.741
45	to stand	0.981	0.847	0.889	1.000	0.738
46	to bite	0.964	0.861	0.887	1.000	0.736
46	back	0.918	0.868	0.924	1.000	0.736
48	wind	0.828	0.900	0.987	1.000	0.736
49	smoke	0.916	0.863	0.929	1.000	0.734
50	what?	0.971	0.804	0.939	1.000	0.732
51	child (kin term)	0.929	0.866	0.930	0.976	0.730
52	egg	0.910	0.846	0.945	1.000	0.728
53	to give	0.913	0.878	0.907	1.000	0.727
53	new	0.920	0.860	0.920	1.000	0.727
53	to burn (intr.)	0.951	0.860	0.889	1.000	0.727
56	not	0.965	0.880	0.974	0.878	0.726
56	good	0.893	0.860	0.945	1.000	0.726
58	to know	0.933	0.856	0.908	1.000	0.725
59	knee	0.911	0.862	0.922	1.000	0.724
59	sand	0.901	0.866	0.928	1.000	0.724
61	to laugh	0.942	0.844	0.910	1.000	0.723
61	to hear	0.953	0.848	0.895	1.000	0.723
63	soil	0.900	0.883	0.954	0.951	0.722
64	leaf	0.897	0.823	0.977	1.000	0.721
64	red	0.926	0.864	0.900	1.000	0.721
66	liver	0.869	0.857	0.967	1.000	0.720
67	to hide	0.928	0.847	0.913	1.000	0.718
67	skin/hide	0.889	0.875	0.924	1.000	0.718
67	to suck	0.940	0.860	0.888	1.000	0.718
70	to carry	0.919	0.838	0.953	0.976	0.717
71	ant	0.865	0.850	0.975	1.000	0.716
71	heavy	0.911	0.874	0.901	1.000	0.716



# + Recent empirical approach

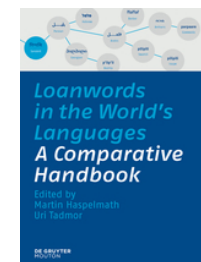
## The Leipzig-Jakarta List

- The weighted-list of basic vocabulary

Rank	Word meaning	Unborrowed score	Age score	Simplicity score	Representation score	Composite score
71	to take	0.900	0.898	0.887	1.000	0.716
74	old	0.896	0.867	0.920	1.000	0.715
75	to eat	0.920	0.840	0.925	1.000	0.714
76	thigh	0.906	0.856	0.918	1.000	0.712
76	thick	0.950	0.827	0.906	1.000	0.712
78	long	0.956	0.824	0.898	1.000	0.707
79	to blow	0.962	0.857	0.878	0.976	0.706
80	wood	0.860	0.871	0.940	1.000	0.705
81	to run	0.976	0.833	0.867	1.000	0.704
81	to fall	0.946	0.825	0.903	1.000	0.704
83	eye	0.904	0.847	0.918	1.000	0.703
84	ash	0.853	0.891	0.921	1.000	0.699
84	tail	0.883	0.813	0.973	1.000	0.699
84	dog	0.838	0.869	0.960	1.000	0.699
87	to cry/weep	0.871	0.871	0.921	1.000	0.698
88	to tie	0.879	0.836	0.948	1.000	0.697
89	to see	0.918	0.842	0.900	1.000	0.695
89	sweet	0.914	0.857	0.887	1.000	0.695
91	rope	0.848	0.824	0.993	1.000	0.694
91	shade/shadow	0.887	0.840	0.931	1.000	0.694
91	bird	0.842	0.857	0.962	1.000	0.694
91	salt	0.848	0.838	0.976	1.000	0.694
91	small	0.909	0.790	0.966	1.000	0.694
96	wide	0.955	0.819	0.885	1.000	0.692
97	star	0.830	0.859	0.970	1.000	0.691
97	in	0.948	0.856	0.943	0.902	0.691
99	hard	0.918	0.833	0.903	1.000	0.690
100	to crush/grind	0.919	0.845	0.886	1.000	0.688

It comprises the notions normally associated with the concept of basic vocabulary

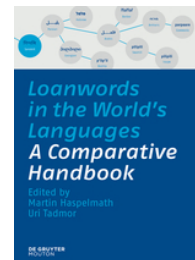
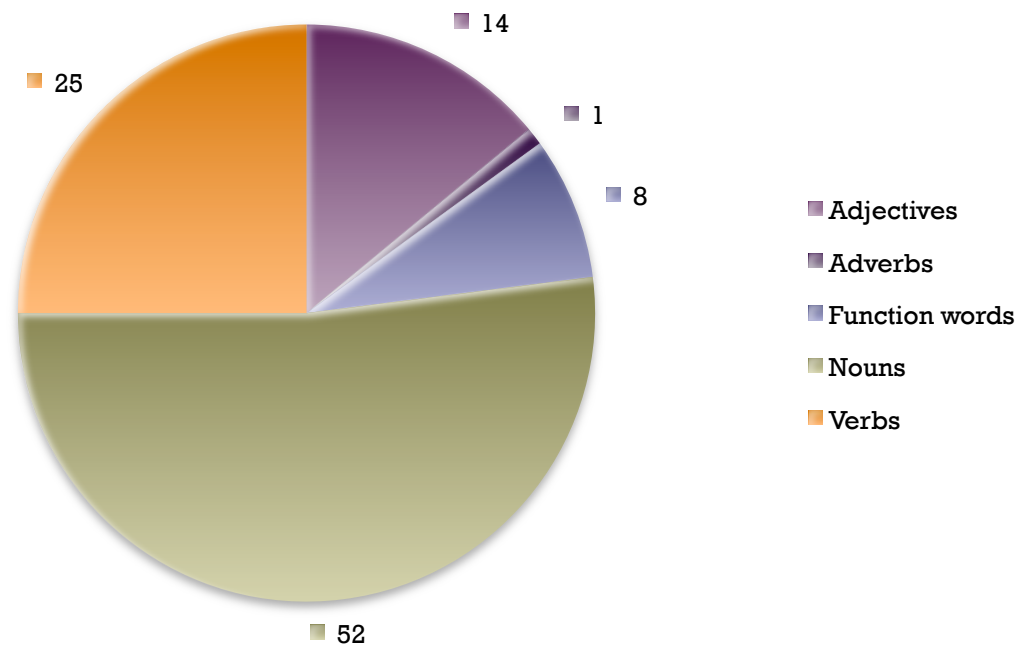
- *stability* = age score
- *simplicity* = analyzability score
- *universality* = representation score



# + Recent empirical approach

## The Leipzig-Jakarta List

### ■ Categories and semantic fields



# + Recent empirical approach

## The Leipzig-Jakarta List

### ■ Categories and semantic fields

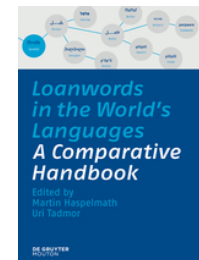
### ■ Adjective

- Time (*old, young*)
- Color (*black, red*)
- Measure (*big, heavy, small, long, etc.*)
- Quality (*good, hard, etc.*)
- Taste (*bitter, sweet*)

### ■ Adverb (*far*)

### ■ Function word

- Singular pronouns (*I, you, he/she*)
- Some interrogatives (*what?, who?*)
- Demonstrative (*this*)
- Preposition (*in*)
- Negation





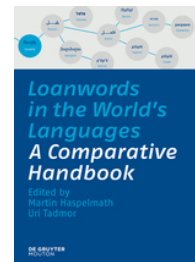
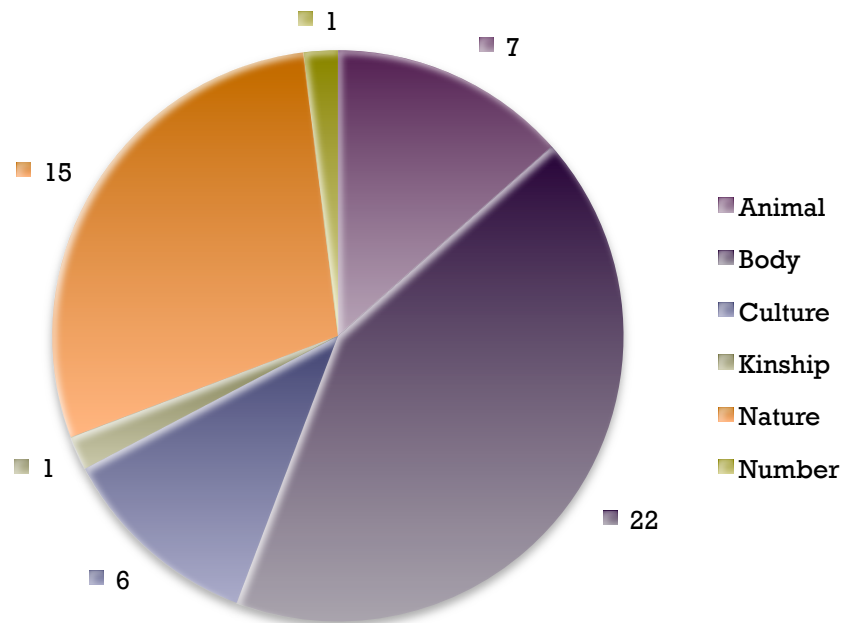
# + Recent empirical approach

## The Leipzig-Jakarta List

### ■ Categories and semantic fields

### ■ Noun

- Body parts (*mouth, ear, nose, hand/arm*)
- Natural phenomena (*fire, water, stone, rain, night, star*)
- A few generic animal terms (*fish, bird, dog*) as well as *louse, ant, fly*
- A single kinship term (*child*)



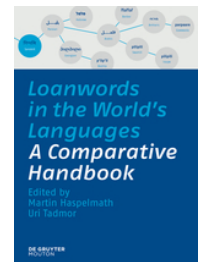
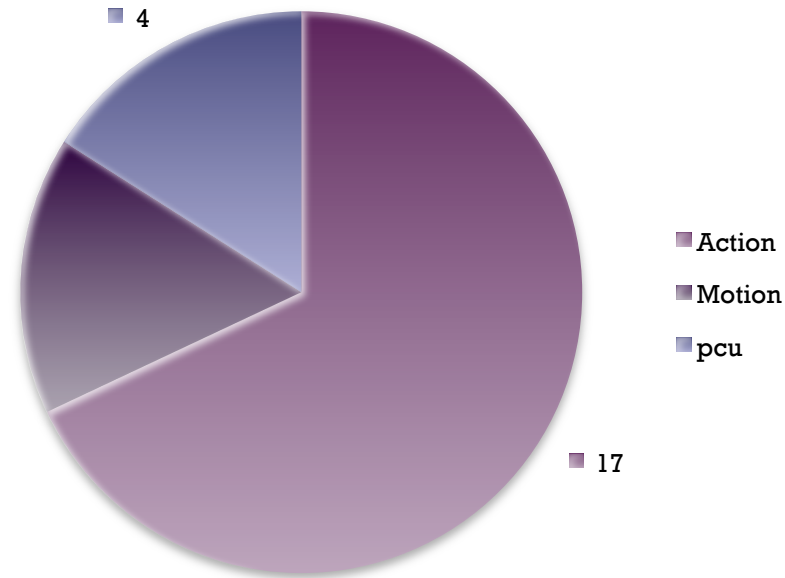
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## The Leipzig-Jakarta List

### ■ Categories and semantic fields

### ■ Verbs

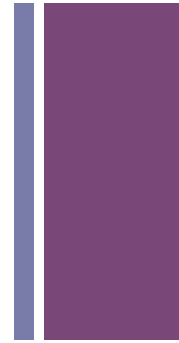
- Generic actions (*bite, burn, carry, eat, give, laugh*)
- Motion (*come, go, run, fall*) ■ 4
- Perception-cognition-utterance (*hear, see, know, say*)



# + Towards a list of basic vocabulary in Coptic

## ■ Methodology

1. Collect all possible **Egyptian-Coptic** lexemes that lexicalize one<sup>+</sup> of the 100 meanings of the Leipzig-Jakarta list



# + Towards a list of basic vocabulary in Coptic

## ■ Methodology

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## ■ Crum's (1939) English Index



### ENGLISH INDEX

This index is strictly alphabetical, *e g. break and broken, sick and sickness* are independent entries. The repeated occurrence of a word in the same column is not indicated. Entries in roman type are those of words not amenable to more precise translation. (*Add*) indicates Additions and Corrections.

<i>abandon</i> 95 a, 97 a, 98 a, 284 a, 495 a	<i>add to</i> 30 a, 360 b, 393 b, 409 a, 505 b, 506 a, b	<i>agreeable, be</i> 437 b
<i>abased</i> 516 b	<i>addition</i> 448 b, 757 b	<i>agreed, be</i> 261 b
<i>abide by</i> 10 a, 537 a	<i>address</i> 192 b, 442 b	<i>agreement</i> 339 a, 385 b, 438 a, 439 a, 614 a
<i>able, be</i> 455 b, 541 a, b, 648 b, 816 b	<i>adhere</i> 330 b, 814 b	<i>aground, go</i> 688 a, b, 706 a
<i>aboard, go</i> 408 a, b	<i>adhesive</i> 150 a, b, 151 a	<i>ague</i> 18 a, 296 b
<i>abode</i> 24 b	<i>adjacent, be</i> 452 b	<i>aid, give</i> 426 b, 427 a
<i>abominable, make</i> 45 b	<i>adjoin</i> 452 b	<i>air hole</i> 261 a ( <i>Add</i> )
<i>abominate</i> 45 b, 529 a	<i>adjure</i> 181 a, 430 a, b, 529 b	<i>akin</i> 66 b, 304 b, 347 b
<i>abomination</i> 45 b, 378 b, 379 a	<i>admire</i> 581 b	<i>alcove</i> 608 b
<i>abortion</i> 642 b	<i>admit</i> 95 a, 97 b, 491 b	<i>alert, be</i> 432 b
<i>about 1 a, 50 b, 126 b, 154 a, 218 a, 235 b</i>	<i>admonish</i> 356 a	<i>alestes dentex</i> 287 b
<i>about 10, be</i> 29 a, 70 a, 199 b, 204 a, 219 a, 500 b	<i>admonition</i> 401 b, 407 a	<i>alight</i> 507 a, b
<i>above, 259 a, 550 a, 645 b, 698 a ff</i>	<i>adorn</i> 138 a, 331 b, 332 a, 390 b, 435 b	<i>alight, set</i> 116 a, 387 a
	<i>adornment</i> 324 b, 332 a, 339 a, 388 b	<i>alimony</i> 479 a
	—, <i>loving</i> 435 b, 604 b	<i>alive</i> 347 b, 421 a, b

# + Towards a list of basic vocabulary in Coptic

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INDEX		
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à, vers 37, 284, 253	– sg. f. 158, 210	aisselle 323
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abandonner 197, 278	adjurer 220	ajouter 213, 225, 227, 241
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# + Towards a list of basic vocabulary in Coptic

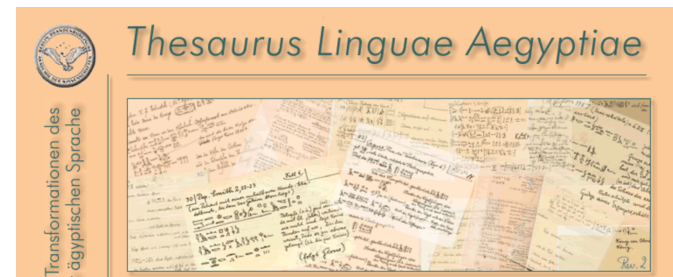
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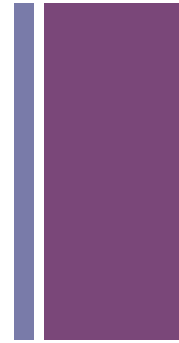
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3. Try to find the earliest date of attestation for each lexeme (with the available lexicographical tool, esp. the *TLA* [<http://aaew.bbaw.de/tla/index.html>])



# + Towards a list of basic vocabulary in Coptic

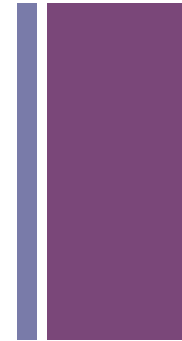
- Methodology
  - Synthesize the data for 4 dialects
    - Sahidic
    - Bohairic
    - Fayyumic
    - Akhmimic







# A list of basic vocabulary in Coptic

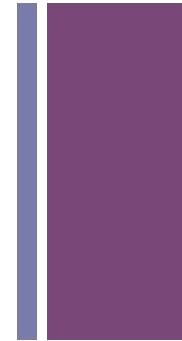


	E	F	G	H	I	J	K	L	M
1	meaning	Sahidic	Bohairic	Fayyumic	Akhmimic	Crum	Crum_Meanir	Cerny	Vycichl
56	tooth	naChe	naChi	--	neeCe	249	tooth (of man)	[119] gender?	-
57	tooth	obhe	--	ab(a)h	abhe	254			[154] f. "dent"
58	tooth	Sol	Sol	--	xal	557		[239] a loan word	[260] m. "défense" ou "molaire"
59	to say	co:	co:	co:	co:u	754			[323] vb. "dire, raconter, chanter"
60	hair	fo:	fo:i	fo:i	foue	623			[280] m. cheveu, cheveux
61	hair	kap	kap	-	-	113	For a single h	> material for ban	-
62	hair	sir	--	--	--	353			[195] m. "cheveu, bande"
63	hair	Cok / Cak	--	--	--	761	Hair of man o	-	-
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59	Eg	Dd	N	OK	Pyr	say	Wb 5, 618.9-625.2	E 689
60	Eg	fa-aA	N	NK	OAD	hair	BIFAO 57, 210-111, BIFAO 62, 1964,10	E 144,4 (fay, hair)
61	?Eg	kp	N	?	-	Material for bandage	Wb. 5, 18,13-14	?
62	Eg	sr	N	MK	-	Hair of a woman (perruque	Wb 4, 191.3-4; FCD 235; Wilson, Ptol. Lexikon, 880	
63	?Sem?	-	N	Coptic	-	?	?	?
64	? Eg	? nx	N	Coptic	-	?	?	?
65	Eg	? nxt	N	OK	-	strong	Wb 2, 315.5-316.3	



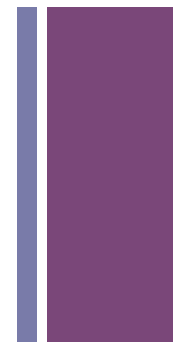
# A list of basic vocabulary in Coptic



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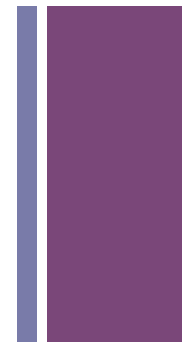
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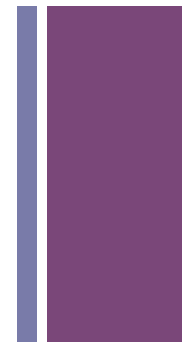
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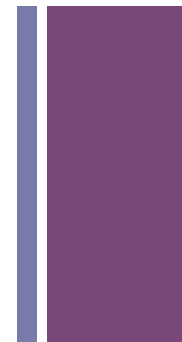
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59	to say	co:	co:	co:	co:u	754			[323] vb. "dire, raconter, chanter"
60	hair	fo:	fo:i	fo:i	foue	623			[280] m. cheveu, cheveux
61	hair	kap	kap	-	-	113	For a single h	> material for ban	-
62	hair	sir	--	--	--	353			[195] m. "cheveu, bande"
63	hair	Cok / Cak	--	--	--	761	Hair of man o	-	-
64	big	noc	noC	nac/noC	nac	250		[119] > nxt 'strong	[153] grand, étym. obscure; reject previous sugge
65	big	noucte	niSti	--	--	--		[119] > nxt 'strong	[149 & 153] same entry as the previous one

	O	P	Q	R	S	T	U	V
1	Known cognate	Egyptian cognate	Compound	Period of 1st at	1st attestation	original meaning	Reference	Ref_Dem
56	Eg	nDH.t	N	?	-	tooth	Wb 2,384,2	Not in E (but cf. Ap
57	Eg	ibH	N	OK	Pyr	tooth	Wb 1, 64.2-4	E 4 (AbH, tooth)
58	Eg	xl	N	NK	-	(lion) tooth	Wb 3, 298.7; Lesko, Dictionary II, 183;	E 368 (xl "canine")
59	Eg	Dd	N	OK	Pyr	say	Wb 5, 618.9-625.2	E 689
60	Eg	fa-aA	N	NK	OAD	hair	BIFAO 57, 210-111, BIFAO 62, 1964,10	E 144,4 (fay, hair)
61	?Eg	kp	N	?	-	Material for bandage	Wb. 5, 18,13-14	?
62	Eg	sr	N	MK	-	Hair of a woman (perruque)	Wb 4, 191.3-4; FCD 235; Wilson, Ptol. Lexikon, 880	
63	?Sem?	-	N	Coptic	-	?	?	?
64	? Eg	? nx	N	Coptic	-	?	?	?
65	Eg	? nxt	N	OK	-	strong	Wb 2, 315.5-316.3	

# + A list of basic vocabulary in Coptic



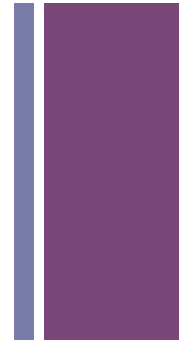
	E	F	G	H	I	J	K	L	M
1	meaning	Sahidic	Bohairic	Fayyumic	Akhmimic	Crum	Crum_Meanir	Cerny	Vycichl
56	tooth	naChe	naChi	--	neeCe	249	tooth (of man)	[119] gender?	-
57	tooth	obhe	--	ab(a)h	abhe	254			[154] f. "dent"
58	tooth	Sol	Sol	--	xal	557		[239] a loan word	[260] m. "défense" ou "molaire"
59	to say	co:	co:	co:	co:u	754			[323] vb. "dire, raconter, chanter"
60	hair	fo:	fo:i	fo:i	foue	623			[280] m. cheveu, cheveux
61	hair	kap	kap	-	-	113	For a single h	> material for ban	-
62	hair	sir	--	--	--	353			[195] m. "cheveu, bande"
63	hair	Cok / Cak	--	--	--	761	Hair of man o	-	-
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57	Eg	ibH	N	OK	Pyr	tooth	Wb 1, 64.2-4	E 4 (AbH, tooth)
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60	Eg	fa-aA	N	NK	OAD	hair	BIFAO 57, 210-111, BIFAO 62, 1964,10	E 144,4 (fay, hair)
61	?Eg	kp	N	?	-	Material for bandage	Wb. 5, 18,13-14	?
62	Eg	sr	N	MK	-	Hair of a woman (perruque)	Wb 4, 191.3-4; FCD 235; Wilson, Ptol. Lexikon, 880	
63	?Sem?	-	N	Coptic	-	?	?	?
64	?Eg	? nx	N	Coptic	-	?	?	?
65	Eg	? nxt	N	OK	-	strong	Wb 2, 315.5-316.3	

# + A list of basic vocabulary in Coptic

- General results

- 233 Egyptian-Coptic lexemes lexicalize these 100 meanings  
(2,33 lexemes per meaning)



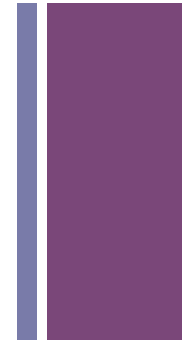
# + A list of basic vocabulary in Coptic

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- One single lexeme for one meaning in all dialects, e.g. [nose]



# + A list of basic vocabulary in Coptic



## ■ General results

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Coptic

ϣⲗ	S
ša	
ϣⲗⲓ	B
šai	
ϣⲏ	F
še:	
ϣⲎ	A
še	

# + A list of basic vocabulary in Coptic

## ■ General results

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Old Egyptian    Middle Egyptian    Late Egyptian    Demotic/Ptol    Coptic



*šr-t*

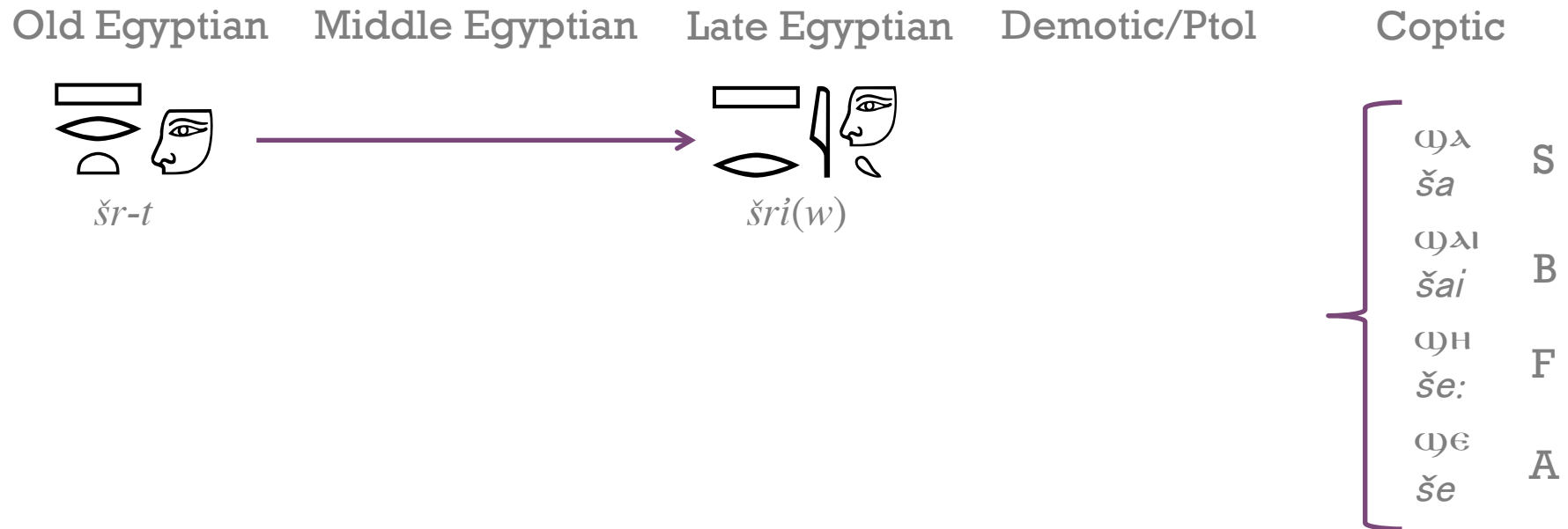


Ⲫⲗ    S  
ša  
Ⲫⲗⲓ    B  
šai  
ⲪⲎ    F  
še:  
ⲪⲎⲉ    A  
še

# + A list of basic vocabulary in Coptic

## ■ General results

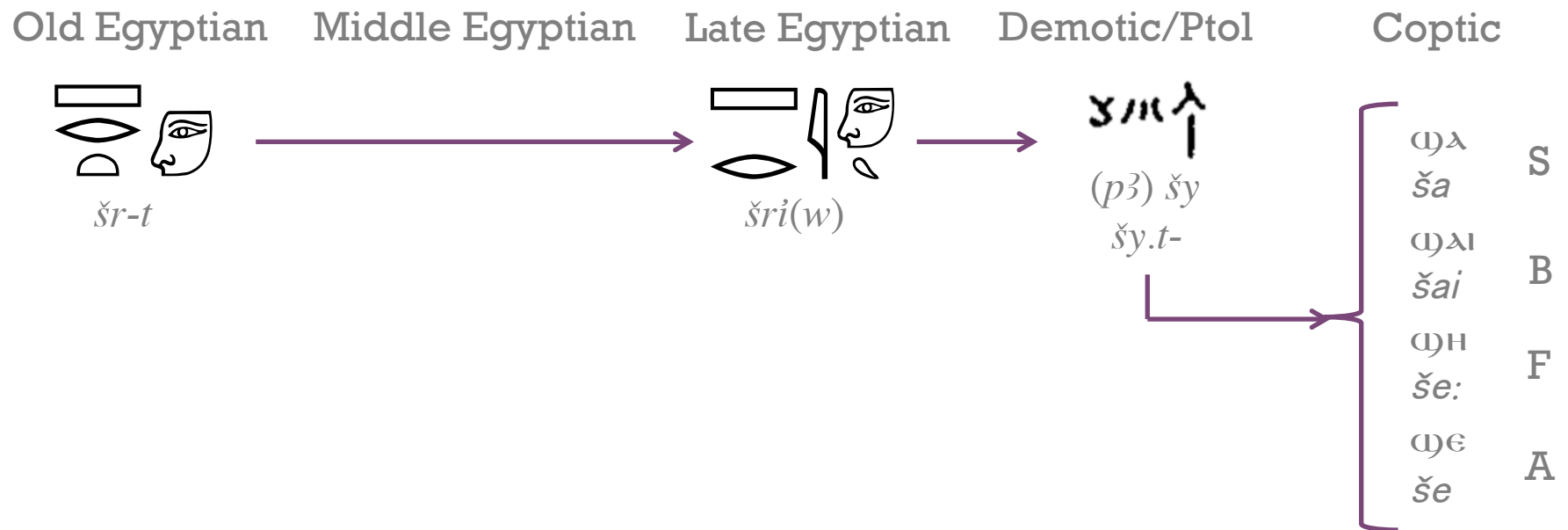
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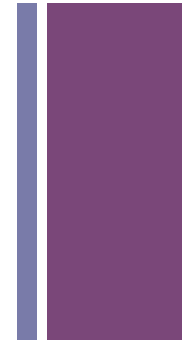


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  - Several lexemes for one meaning in several dialects

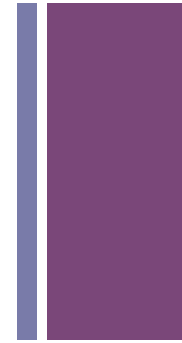
# + A list of basic vocabulary in Coptic



## ■ Meaning 'to go'

<b>Coptic</b>			
<b>S</b>	<b>B</b>	<b>F</b>	<b>A</b>
ⲃⲟⲕ <i>bôk</i>	-	-	ⲃⲟⲕ <i>bôk</i>
(ⲱⲎ) <i>(še)</i>	ⲱⲎ <i>še</i>	ⲱⲎⲏ <i>šê</i>	ⲱⲎ <i>še</i>
ⲙⲟⲟⲱⲎ <i>mooše</i>	ⲙⲟⲱⲏ <i>moši</i>	ⲙⲁ(ⲁ)ⲱⲏ <i>ma(a)ši</i>	ⲙⲁⲁⲁⲎ <i>maahe</i>
ⲏⲁ <i>na</i>	ⲏⲁ <i>na</i>	ⲏⲎ <i>ne</i>	(ⲏ)ⲏⲁ <i>(n)na</i>

# + A list of basic vocabulary in Coptic

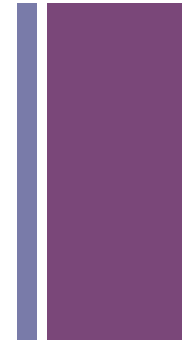


- Meaning 'to go'

Coptic			
S	B	F	A
ⲃⲟⲕ <i>bōk</i>	-	-	ⲃⲟⲕ <i>bōk</i>
(ⲱⲉ) <i>(še)</i>	ⲱⲉ <i>še</i>	ⲱⲏ <i>šê</i>	ⲱⲉ <i>še</i>

ⲙⲟⲱⲉ <i>mooše</i>	ⲙⲟⲱⲓ <i>moši</i>	ⲙⲁ(ⲁ)ⲱⲓ <i>ma(a)ši</i>	ⲙⲁⲁⲓ <i>maahe</i>
ⲛⲁ <i>na</i>	ⲛⲁ <i>na</i>	ⲛⲉ <i>ne</i>	(ⲛ)ⲛⲁ <i>(n)na</i>

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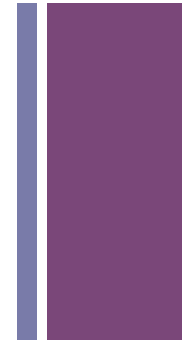


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Coptic			
S	B	F	A
ⲃⲟⲕ <i>bōk</i>	-	-	ⲃⲟⲕ <i>bōk</i>
(ⲱⲉ) <i>(še)</i>	ⲱⲉ <i>še</i>	ⲱⲏ <i>šê</i>	ⲱⲉ <i>še</i>
ⲙⲟⲟⲱⲉ <i>mooše</i>	ⲙⲟⲱⲏ <i>moši</i>	ⲙⲁ(ⲁ)ⲱⲏ <i>ma(a)ši</i>	ⲙⲁⲁⲁⲉ <i>maahe</i>
ⲛⲁ <i>na</i>	ⲛⲁ <i>na</i>	ⲛⲉ <i>ne</i>	(ⲛ)ⲛⲁ <i>(n)na</i>



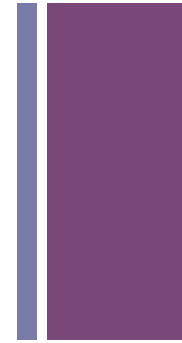
# + A list of basic vocabulary in Coptic



## ■ Meaning 'to go'

Old Egyptian	Middle Egyptian	Late Egyptian	Demotic	Coptic			
				S	B	F	A
				ⲃⲟⲕ <i>bōk</i>	-	-	ⲃⲟⲕ <i>bōk</i>
				(ⲱⲉ) <i>(še)</i>	ⲱⲉ <i>še</i>	ⲱⲎ <i>šê</i>	ⲱⲉ <i>še</i>
				ⲙⲟⲟⲱⲉ <i>mooše</i>	ⲙⲟⲱⲓ <i>moši</i>	ⲙⲁ(ⲁ)ⲱⲓ <i>ma(a)ši</i>	ⲙⲁⲁⲁⲉ <i>maahe</i>
				ⲛⲁ <i>na</i>	ⲛⲁ <i>na</i>	ⲛⲉ <i>ne</i>	(ⲛ)ⲛⲁ <i>(n)na</i>

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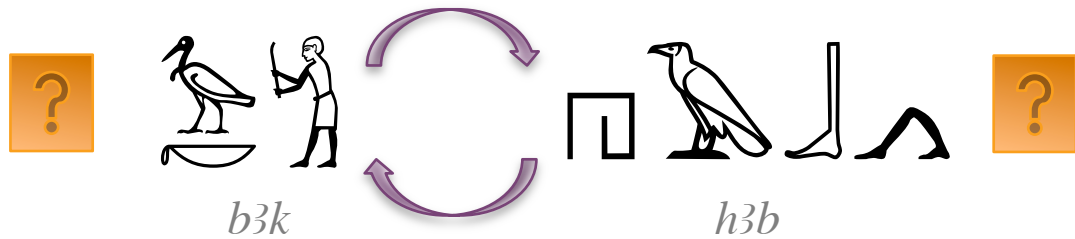
## ■ Meaning 'to go'

Old Egyptian	Middle Egyptian	Late Egyptian	Demotic	Coptic			
				S	B	F	A
?	?	?	?	ⲃⲟⲕ <i>bōk</i>	-	-	ⲃⲟⲕ <i>bōk</i>
				(ⲱⲉ) <i>(še)</i>	ⲱⲉ <i>še</i>	ⲱⲎ <i>šê</i>	ⲱⲉ <i>še</i>
				ⲙⲟⲟⲱⲉ <i>mooše</i>	ⲙⲟⲱⲓ <i>moši</i>	ⲙⲁ(ⲁ)ⲱⲓ <i>ma(a)ši</i>	ⲙⲁⲁⲓⲉ <i>maahe</i>
				ⲛⲁ <i>na</i>	ⲛⲁ <i>na</i>	ⲛⲉ <i>ne</i>	(ⲛ)ⲛⲁ <i>(n)na</i>

# + A list of basic vocabulary in Coptic

## ■ Meaning 'to go'

Old Egyptian | Middle Egyptian | Late Egyptian | Demotic



S	Coptic			
	B	F	A	
ⲃⲠⲕ <i>bōk</i>	-	-	ⲃⲠⲕ <i>bōk</i>	
(ⲱⲎ) (še)	ⲱⲎ <i>še</i>	ⲱⲎ <i>šê</i>	ⲱⲎ <i>še</i>	
ⲙⲟⲱⲎ <i>mooše</i>	ⲙⲟⲱⲎ <i>moši</i>	ⲙⲁ(ⲁ)ⲱⲎ <i>ma(a)ši</i>	ⲙⲁⲁⲁⲎ <i>maahe</i>	
ⲛⲁ <i>na</i>	ⲛⲁ <i>na</i>	ⲛⲎ <i>ne</i>	(ⲛ)ⲛⲁ (n)na	



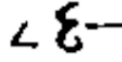

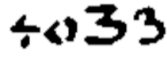
# + A list of basic vocabulary in Coptic

## ■ Meaning 'to go'

Old Egyptian	Middle Egyptian	Late Egyptian	Demotic	Coptic			
				S	B	F	A
				ⲃⲟⲕ <i>bôk</i>	-	-	ⲃⲟⲕ <i>bôk</i>
				(ⲱⲎ) (še)	ⲱⲎ <i>še</i>	ⲱⲎ <i>šê</i>	ⲱⲎ <i>še</i>
				ⲙⲟⲟⲱⲎ <i>mooše</i>	ⲙⲟⲱⲎ <i>moši</i>	ⲙⲁ(ⲁ)ⲱⲎ <i>ma(a)ši</i>	ⲙⲁⲁⲁⲎ <i>maahe</i>
				Ⲏⲁ <i>na</i>	Ⲏⲁ <i>na</i>	ⲎⲎ <i>ne</i>	(Ⲏ)Ⲏⲁ (n)na

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Old Egyptian	Middle Egyptian	Late Egyptian	Demotic	Coptic			
				S	B	F	A
?	?	?	?	ⲃⲟⲕ <i>bōk</i>	-	-	ⲃⲟⲕ <i>bōk</i>
 <i>šm</i>	→	 <i>š(m)</i>	→  <i>š(e)</i>	(ⲱⲎ) ( <i>še</i> )	ⲱⲎ <i>še</i>	ⲱⲎ <i>šê</i>	ⲱⲎ <i>še</i>
?	?	 <i>mša</i>	→  <i>mša</i>	ⲙⲟⲟⲱⲎ <i>mooše</i>	ⲙⲟⲱⲎ <i>moši</i>	ⲙⲁ(ⲁ)ⲱⲎ <i>ma(a)ši</i>	ⲙⲁⲁⲁⲎ <i>maahe</i>
				Ⲣⲁ <i>na</i>	Ⲣⲁ <i>na</i>	ⲢⲎ <i>ne</i>	(Ⲣ)Ⲣⲁ ( <i>n</i> ) <i>na</i>

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				S	B	F	A
				ⲃⲟⲕ <i>bōk</i>	-	-	ⲃⲟⲕ <i>bōk</i>
				(ⲱⲎ) ( <i>še</i> )	ⲱⲎ <i>še</i>	ⲱⲎ <i>šê</i>	ⲱⲎ <i>še</i>
				ⲙⲟⲟⲱⲎ <i>mooše</i>	ⲙⲟⲱⲎ <i>moši</i>	ⲙⲁ(ⲁ)ⲱⲎ <i>ma(a)ši</i>	ⲙⲁⲁⲁⲎ <i>maahe</i>
				ⲛⲁ <i>na</i>	ⲛⲁ <i>na</i>	ⲛⲎ <i>ne</i>	(ⲛ)ⲛⲁ ( <i>n</i> ) <i>na</i>

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## ■ Meaning 'to go'

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				ⲃⲟⲕ <i>bōk</i>	-	-	ⲃⲟⲕ <i>bōk</i>	
<i>šm</i>	→	<i>š(m)</i>	→	Ⲙⲉ <i>š(e)</i>	(ⲱⲎ) ( <i>še</i> )	ⲱⲎ <i>še</i>	ⲱⲎ <i>šê</i>	ⲱⲎ <i>še</i>
		<i>mša</i>	→	ⲘⲟⲟⲱⲎ <i>mša</i>	ⲘⲟⲟⲱⲎ <i>mooše</i>	ⲘⲟⲱⲎ <i>moši</i>	Ⲙⲁ(ⲁ)ⲱⲎ <i>ma(a)ši</i>	ⲘⲁⲁⲁⲎ <i>maahe</i>
<i>na(i)</i>	→	<i>na(i)</i>	→	Ⲏⲁ <i>na</i>	Ⲏⲁ <i>na</i>	ⲎⲎ <i>ne</i>	(Ⲏ)Ⲏⲁ ( <i>n</i> ) <i>na</i>	

# + A list of basic vocabulary in Coptic

## ■ General results

- 233 Egyptian-Coptic lexemes lexicalize these 100 meanings (2,33 lexemes per meaning)
  - One single lexeme for one meaning in all dialects
  - Several lexemes for one meaning in several dialects
  - Lexemes poorly attested in Coptic were also included, even if their belonging to the 'basic vocabulary' is certainly questionable (e.g. S Ⲫⲣⲗ *cra* / ⲧⲣⲗ *tra* 'leg', cf. Demotic *gr.t*)

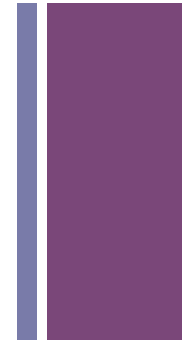
gr.t

Ⲫⲣⲗ/ⲧⲣⲗ

Fuss (\*). fem.  
Vgl. Ⲫⲣⲗ Cumm 429 b.  
(Philae 60,7,9 neben  
Ⲫⲣⲗ "Lendenstück").

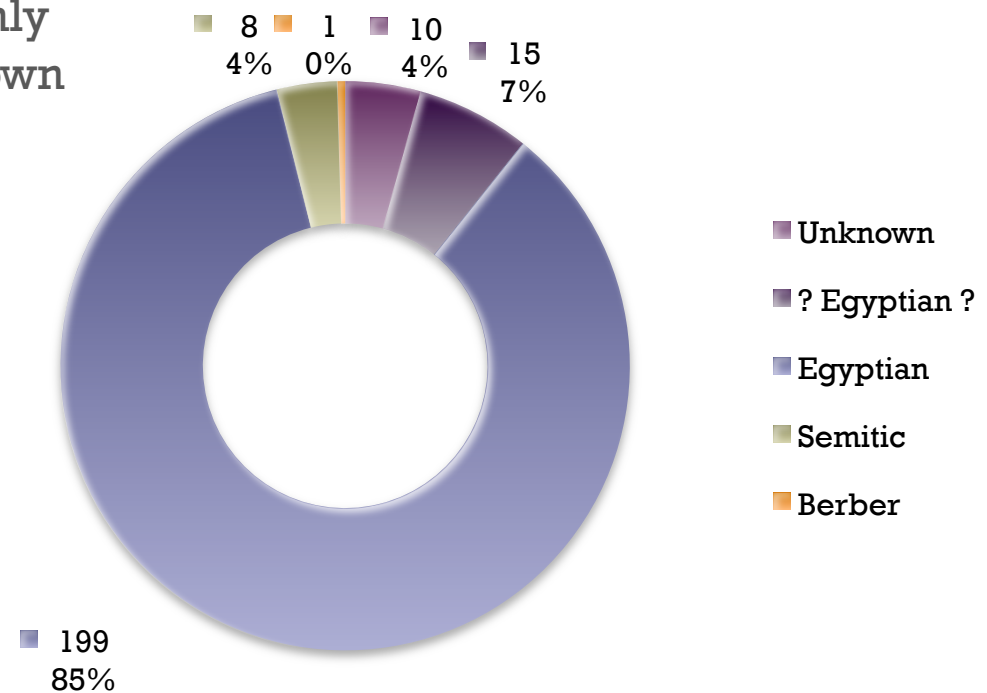


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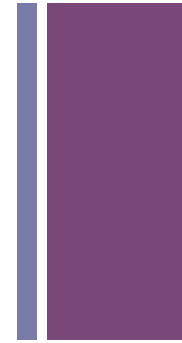


## ■ General results

- 233 Egyptian-Coptic lexemes lexicalize these 100 meanings (2,33 lexemes per meaning)
- Among these 233 lexemes, the vast majority has cognates in pre-Coptic Egyptian, with only 10 lexemes having an unknown etymology



# + A list of basic vocabulary in Coptic



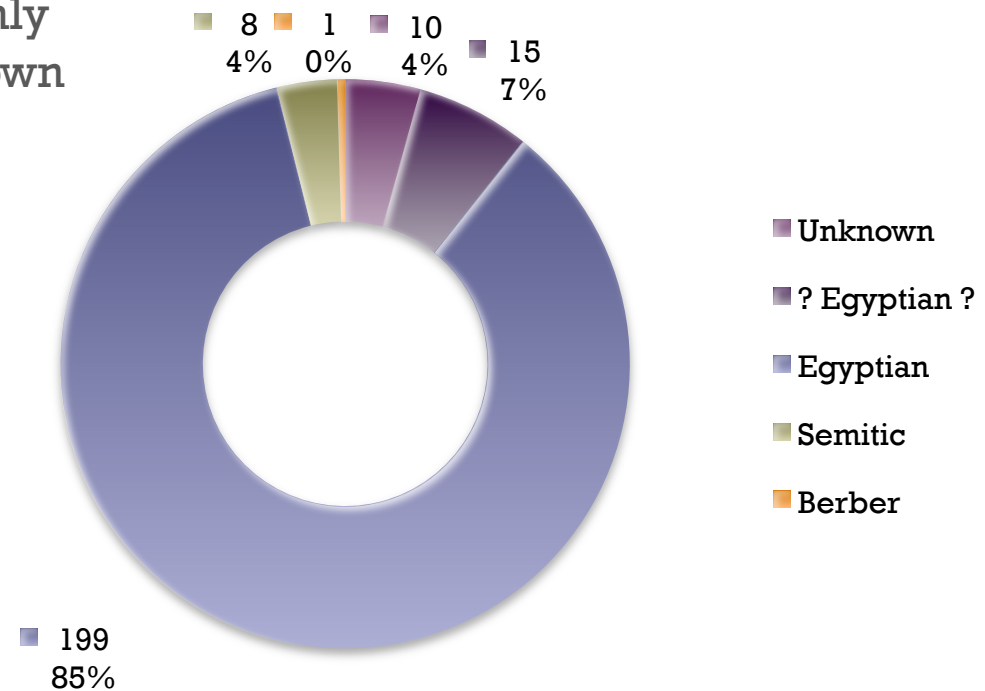
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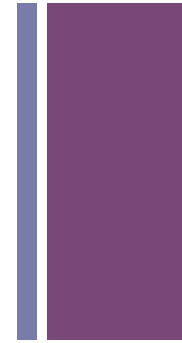
- Among these 233 lexemes, the vast majority has cognates in pre-Coptic Egyptian, with only 10 lexemes having an unknown etymology

- There is no correlation between unknown etymologies and a particular semantic field

- adjective [time]
- noun [body, kinship, natural]
- verb [action, motion]

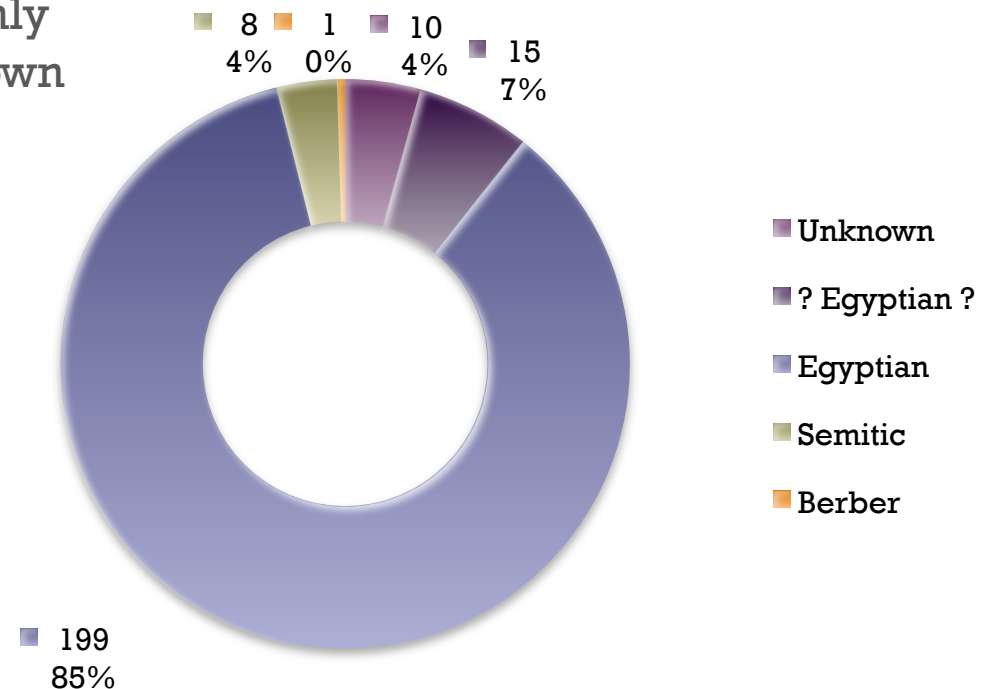


# + A list of basic vocabulary in Coptic



## ■ General results

- 233 Egyptian-Coptic lexemes lexicalize these 100 meanings (2,33 lexemes per meaning)
- Among these 233 lexemes, the vast majority has cognates in pre-Coptic Egyptian, with only 10 lexemes having an unknown etymology
- 9 lexemes can be linked to roots in Semitic or Berber, but are not attested earlier in Egyptian (recent borrowing?)



# + A list of basic vocabulary in Coptic

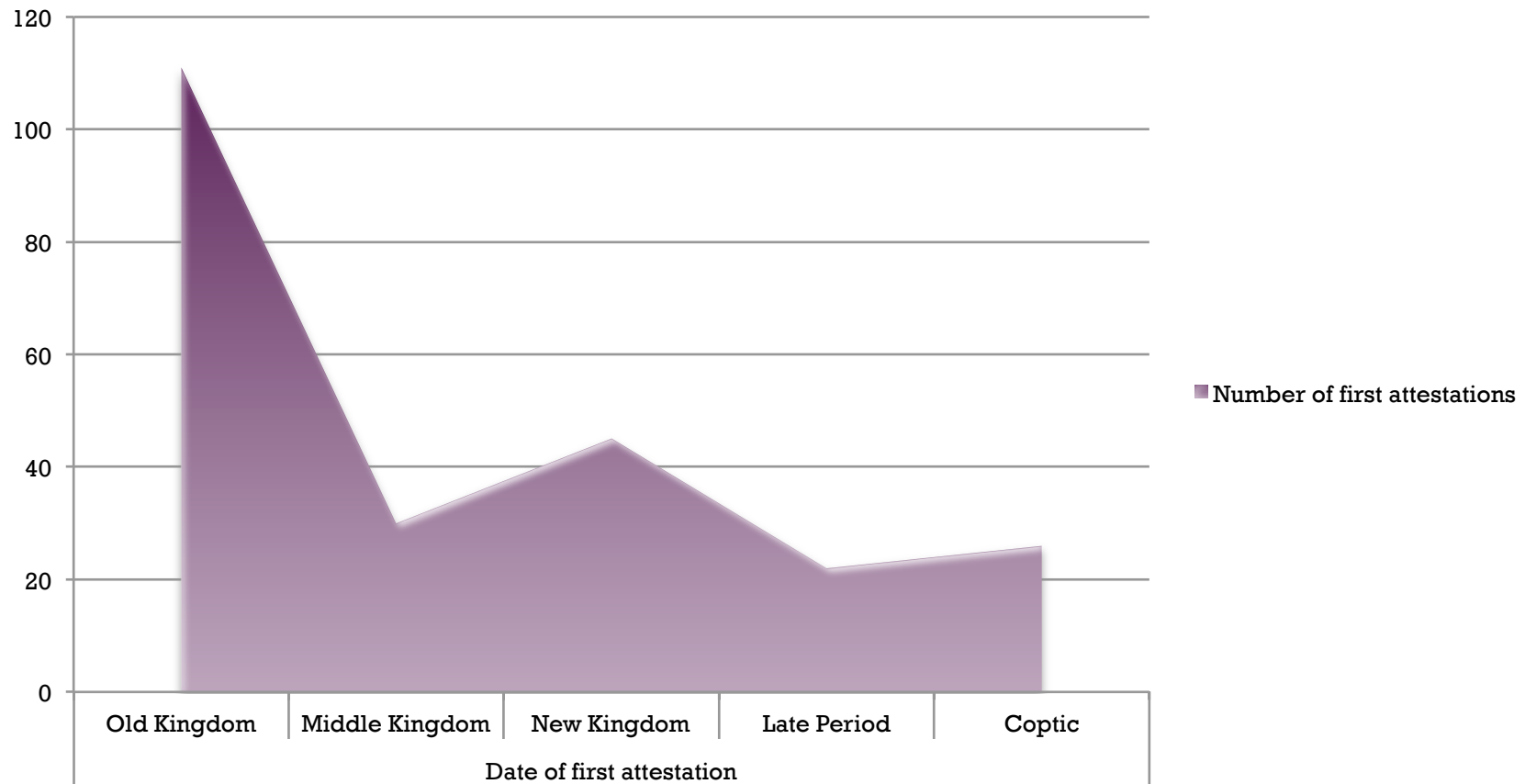
## ■ General results

- 233 Egyptian-Coptic lexemes lexicalize these 100 meanings (2,33 lexemes per meaning)
- Among these 233 lexemes, the vast majority has cognates in pre-Coptic Egyptian, with only 10 lexemes having an unknown etymology
- Out of the 199 lexemes already attested during previous stages of Egyptian, 8 could be interpreted as earlier lexical borrowings
  - [?1 MEg] ‘to be sweet, take delight’ 𓂏𓂏𓂏𓂏 (S) – 𓂏𓂏𓂏𓂏 (B) – 𓂏𓂏𓂏𓂏 (F) – 𓂏𓂏𓂏𓂏 (A) > LEg > MEg ‘to be happy, to rejoice’
  - [8 LEg], e.g., ‘tooth’ 𓂏𓂏𓂏 (SB) > Dem *šl* > LEg *hl* ‘fangs (of lions), canine teeth’ (cf. Hoch 19\$\$\$ : n° 336)



# A list of basic vocabulary in Coptic

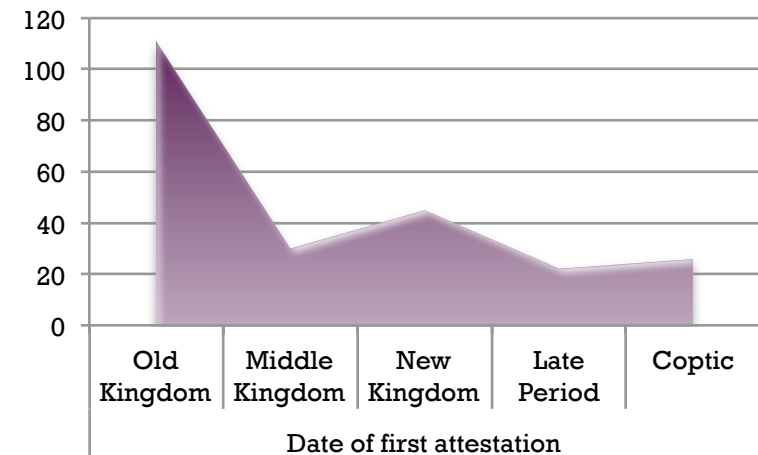
Age of attestation



# + A list of basic vocabulary in Coptic

## Age of attestation

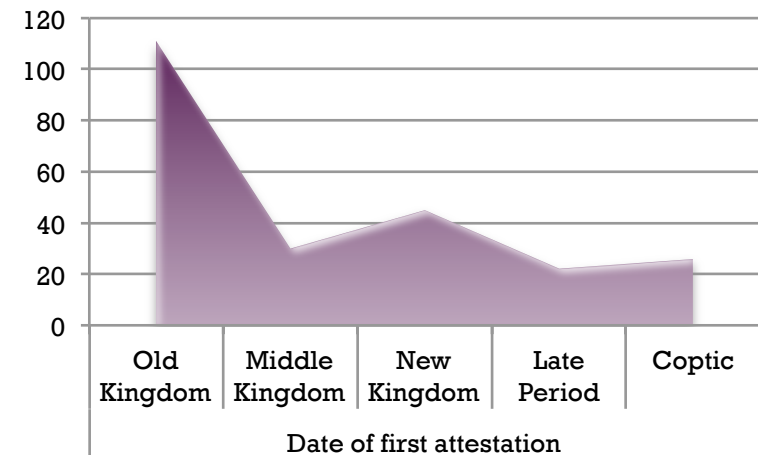
- 48% of the basic vocabulary in Coptic is already attested in Old Egyptian, namely nearly 3000 years before Coptic



# + A list of basic vocabulary in Coptic

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- 48% of the basic vocabulary in Coptic is already attested in Old Egyptian, namely nearly 3000 years before Coptic
- Taking Old Egyptian into consideration leads to revising Lees (1953) [ref. due to S.T. Richter]
  - His aim was to calculate a universal constant 'to express the average rate of retention  $k$  of the basic-root-morpheme [ $I$ ']
  - ' $k = 0.8048 \pm 0.0176$  per millennium', which means that on the average, c. 80% of the basic root of a language will survive as cognate after 1000 years





# A list of basic vocabulary in Coptic

## Age of attestation

- 48% of the basic vocabulary in Coptic is already attested in Old Egyptian, namely nearly 3000 years before Coptic
- Taking Old Egyptian into consideration leads to revising Lees (1953) [ref. due to S.T. Richter]
  - Coptic quite interestingly has the lowest retention rate, with a score of 0.76 per 1000 years (Klaus Baer provided the data for Coptic [200 words] with only 106 cognates in MEG, i.e. 53%)

LANGUAGE	$F_s$	$t$	$k$
1. English	.766	1.0	.766
2. Spanish	.655	1.8	.790
3. French	.625	1.85	.776
4. German	.842	1.1	.854
5. Coptic	.530	2.20	.760
6. Athenian	.690	2.07	.836
7. Cypriote	.678	2.07	.829
8. Chinese	.796	1.0	.795
9. Swedish	.850	1.02	.854
10. Italian	.686	2.15	.839
11. Portuguese	.629	2.15	.806
12. Rumanian	.560	2.15	.764
13. Catalan	.606	2.15	.793

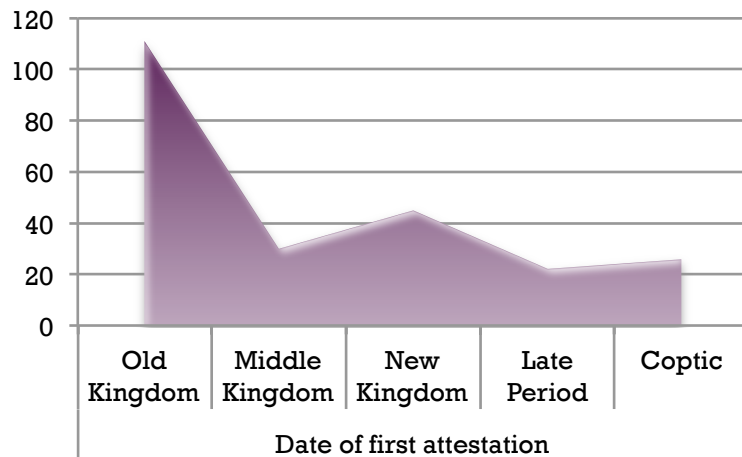




# A list of basic vocabulary in Coptic

## Age of attestation

- 48% of the basic vocabulary in Coptic is already attested in Old Egyptian, namely nearly 3000 years before Coptic
- Taking Old Egyptian into consideration leads to revising Lees (1953) [ref. due to S.T. Richter]
- Moreover, one sees that some stages of Egyptian are

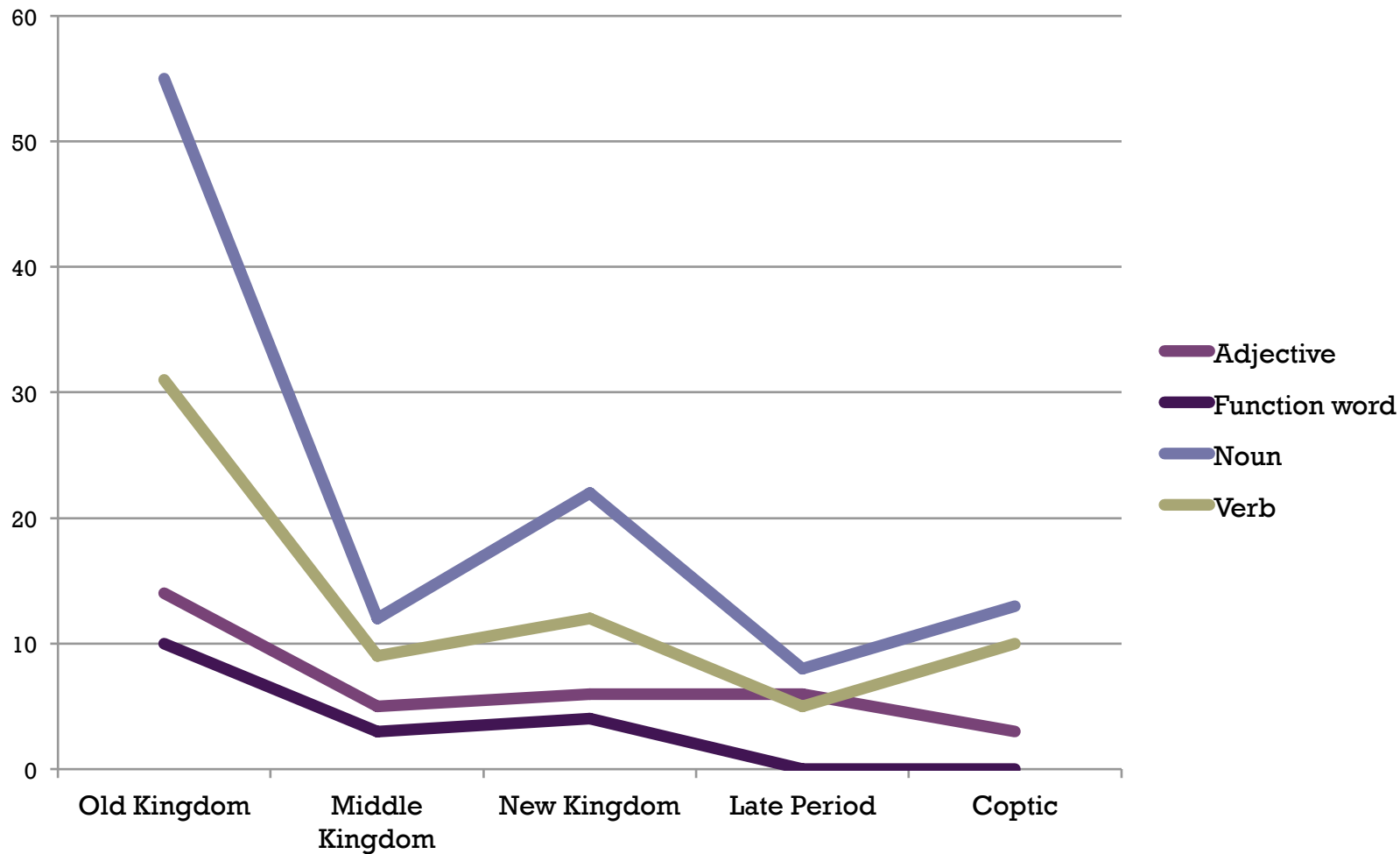


of new lexemes for expressing meanings of the basic vocabulary. As such, the constant rate of evolution is, at least, questionable



# A list of basic vocabulary in Coptic

Age of attestation: a closer look

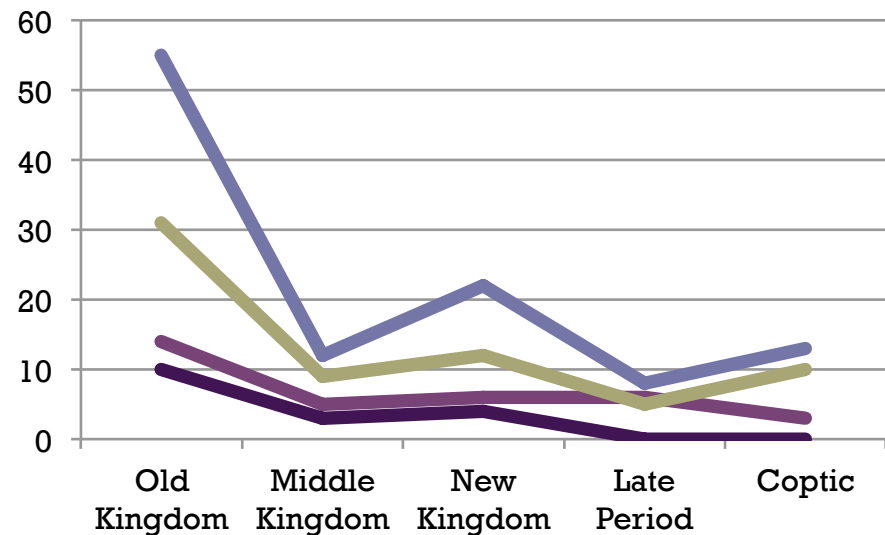




# A list of basic vocabulary in Coptic

## Age of attestation: a closer look

- All Coptic function words of the basic vocabulary have cognates that are already attested with the same meaning during the New Kingdom (min. 1500 years before)
- Overall, the New Kingdom is a period when many new lexemes belonging to the Coptic basic vocabulary occur for the first time
  - Lexical borrowing?
  - Bigger corpus of 'daily life' texts?

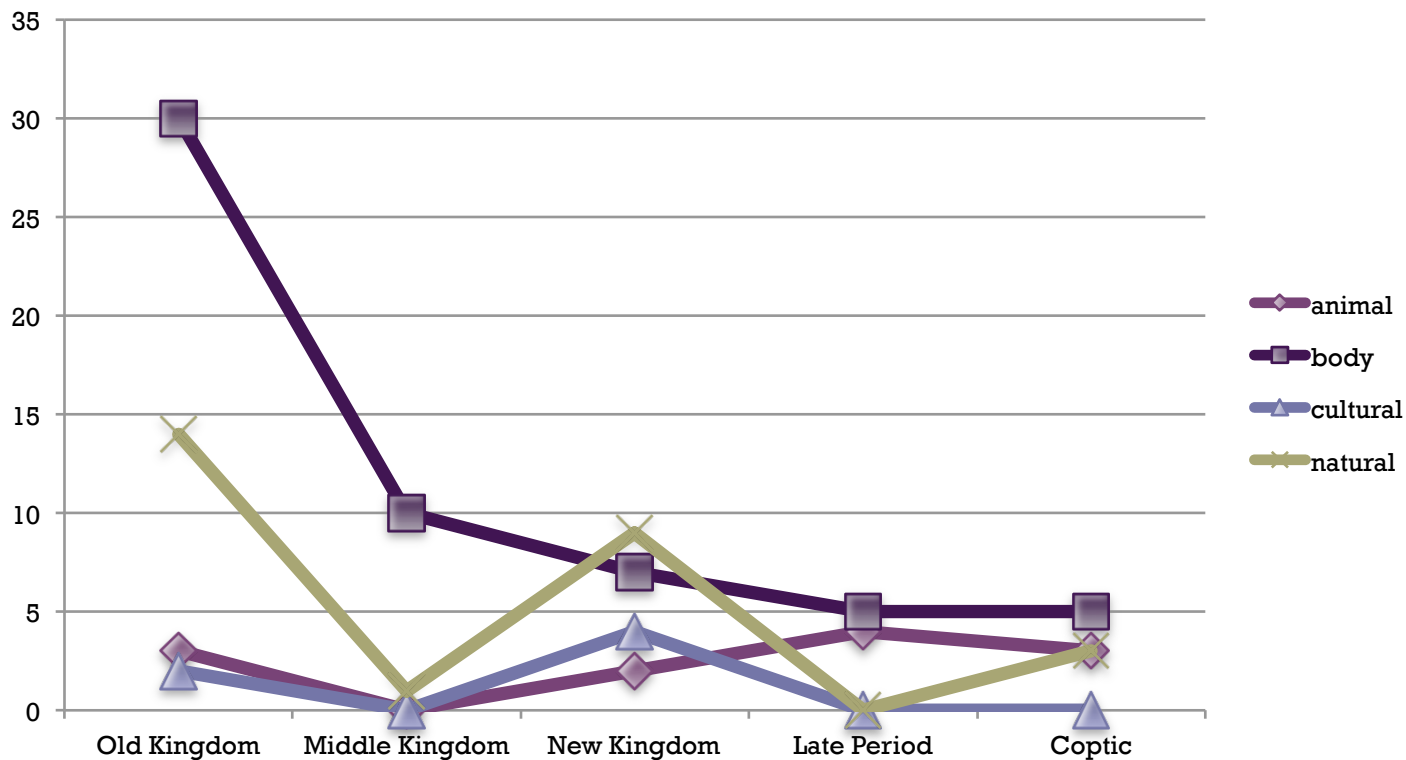




# A list of basic vocabulary in Coptic

## Age of attestation: a closer look

- Evolution of the **nouns** of the basic vocabulary according to semantic fields (only the 4 main semantic fields, with significant figures, are included in the graph)





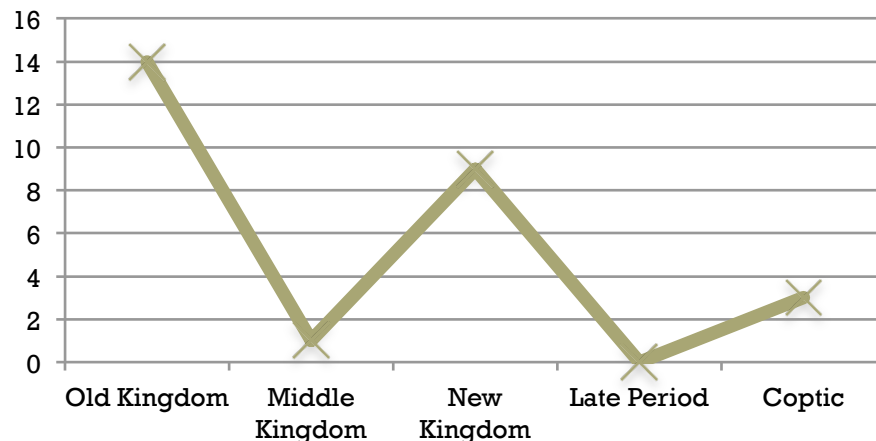
# A list of basic vocabulary in Coptic

## Age of attestation: a closer look

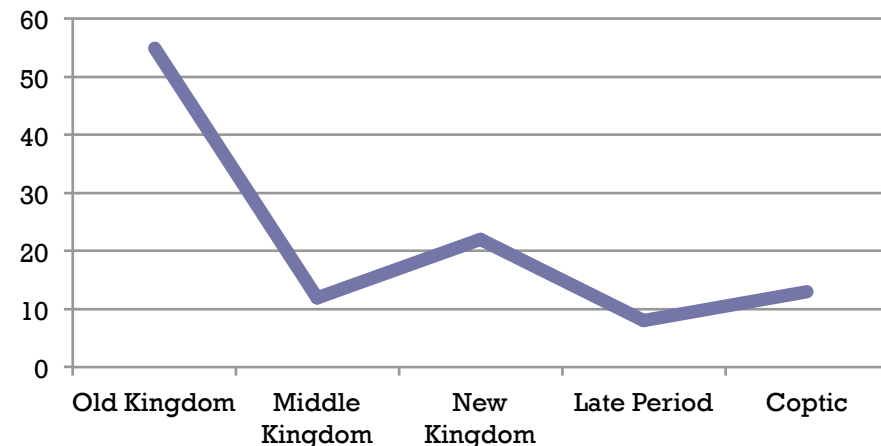
- Evolution of the **nouns** of the basic vocabulary according to semantic fields (only the 4 main semantic fields, with significant figures, are included in the graph)
- The most striking variation has to do with the [**natural/physical world**], which is the category mainly responsible for the sinusoidal look of the evolution of the nouns



### Natural/physical world



### Nouns





# A list of basic vocabulary in Coptic

## Age of attestation: a closer look

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- The most striking variation has to do with the [**natural/physical world**], which is the category mainly responsible for the sinusoidal look of the evolution of the nouns

### New Kingdom

- Fire, smoke, ashes
- root, leaf
- wind, soil
- shadow

### Coptic

- Fire, smoke, ashes
- -
- -
- -

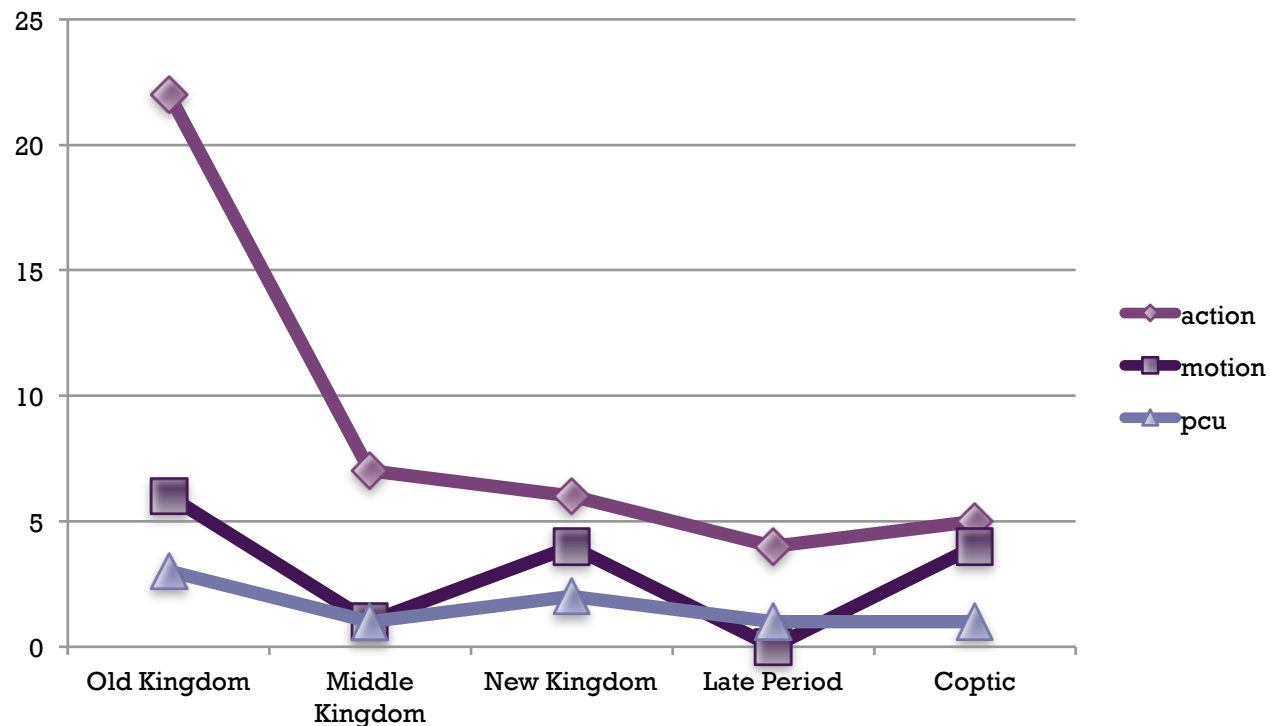




# A list of basic vocabulary in Coptic

## Age of attestation: a closer look

- Evolution of the **verbs** of the basic vocabulary according to semantic fields (only the 4 main semantic fields, with significant figures, are included in the graph)



# + A list of basic vocabulary in Coptic

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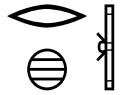
Old Egyptian	Middle Egyptian	Late Egyptian	Demotic	Coptic			
				S	B	F	A
 <i>dd</i>							
‘to say’							
				ⲭⲱ	ⲭⲱ	ⲭⲱ	ⲭⲱϮ
				čô	čô	čô	čô
 <i>sdm</i>							
‘to hear’							
				Ⲙⲟⲧⲙ	Ⲙⲟⲧⲙ	Ⲙⲟⲧⲙ	Ⲙⲟⲧⲙⲉ
				sôtm	sôtem	sôtem	sôtme



# + A list of basic vocabulary in Coptic

## Age of attestation: a closer look


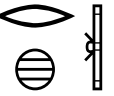

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Old Egyptian	Middle Egyptian	Late Egyptian	Demotic	Coptic			
				S	B	F	A
 <i>dd</i>	‘to say’			ⲭⲟ	ⲭⲟ	ⲭⲟ	ⲭⲟϣ
				čô	čô	čô	čô
 <i>sdm</i>	‘to hear’			Ⲙⲟⲧⲙ	Ⲙⲟⲧⲙ	Ⲙⲟⲧⲙ	Ⲙⲟⲧⲙⲉ
				<i>sôtm</i>	<i>sôtem</i>	<i>sôtem</i>	<i>sôtme</i>
 <i>rh</i>	‘to know’ > ‘can’			Ⲡ	Ⲡ	Ⲡ	Ⲛ
				š	š	š	x’

# + A list of basic vocabulary in Coptic

## Age of attestation: a closer look



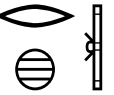



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Old Egyptian	Middle Egyptian	Late Egyptian	Demotic	Coptic			
				S	B	F	A
 <i>dd</i>	‘to say’			Ⲭⲟ <i>čô</i>	Ⲭⲟ <i>čô</i>	Ⲭⲟ <i>čô</i>	Ⲭⲟϥ <i>čô</i>
 <i>sdm</i>	‘to hear’			Ⲭⲟⲧⲙ <i>sôtm</i>	Ⲭⲟⲧⲉⲙ <i>sôtem</i>	Ⲭⲟⲧⲉⲙ <i>sôtem</i>	Ⲭⲟⲧⲙⲉ <i>sôtme</i>
 <i>rh</i>	‘to know’ > ‘can’			Ⲭ <i>š</i>	Ⲭ <i>š</i>	Ⲭ <i>š</i>	Ⲩ <i>x’</i>
 <i>eime</i>	‘to swallow’			ⲉⲓⲙⲉ <i>eime</i>	ⲉⲓⲙⲓ <i>eimi</i>	ⲓⲙⲓ <i>imi</i>	ⲙⲙⲉ <i>mme</i>
 <i>mme</i>	‘to understand’						

# + A list of basic vocabulary in Coptic

## Age of attestation: a closer look



- Evolution of the **verbs** of the basic vocabulary according to semantic fields (only the 4 main semantic fields, with significant figures, are included in the graph)

Old Egyptian	Middle Egyptian	Late Egyptian	Demotic	Coptic				
				S	B	F	A	
 <i>dd</i>	‘to say’			$\chi\omega$ <i>čô</i>	$\chi\omega$ <i>čô</i>	$\chi\omega$ <i>čô</i>	$\chi\omega\Upsilon$ <i>čô</i>	
 <i>sdm</i>	‘to hear’			$\text{C}\omega\text{T}^{\text{M}}$ <i>sôtm</i>	$\text{C}\omega\text{T}^{\text{EM}}$ <i>sôtem</i>	$\text{C}\omega\text{T}^{\text{EM}}$ <i>sôtem</i>	$\text{C}\omega\text{T}^{\text{ME}}$ <i>sôtme</i>	
 <i>rh</i>	‘to know’ > ‘can’			$\omega$ <i>š</i>	$\omega$ <i>š</i>	$\omega$ <i>š</i>	$\varepsilon$ <i>x’</i>	
 <i>em</i>	‘to swallow’		 <i>em</i>	$\epsilon\text{I}\text{M}\epsilon$ <i>eime</i>	$\epsilon\text{M}\text{I}$ <i>eimi</i>	$\text{I}\text{M}\text{I}$ <i>imi</i>	$\text{M}\text{M}\epsilon$ <i>mme</i>	
	‘to understand’			 <i>swn</i>	$\text{C}\omega\text{O}\Upsilon\text{N}$ <i>sooun</i>	$\text{C}\omega\text{O}\Upsilon\text{N}$ <i>sôoun</i>	$\text{C}\omega\text{O}\Upsilon\text{N}$ <i>sooun</i>	$\text{C}\lambda\Upsilon\text{N}\epsilon$ <i>saune</i>

# + A list of basic vocabulary in Coptic

## Age of attestation: a closer look

- Evolution of the **verbs** of the basic vocabulary according to semantic fields (only the 4 main semantic fields, with significant figures, are included in the graph)

Old Egyptian	Middle Egyptian	Late Egyptian	Demotic	Coptic			
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 <i>dd</i>	‘to say’			ⲭⲱ <i>čô</i>	ⲭⲱ <i>čô</i>	ⲭⲱ <i>čô</i>	ⲭⲱⲎ <i>čô</i>
 <i>sdm</i>	‘to hear’			Ⲙⲱⲧⲙ <i>sôtm</i>	Ⲙⲱⲧⲙ <i>sôtem</i>	Ⲙⲱⲧⲙ <i>sôtem</i>	Ⲙⲱⲧⲙⲉ <i>sôtme</i>

- Similarly with verbs of vision (see Winand 1986; Depuydt 1988; Stella 2013)

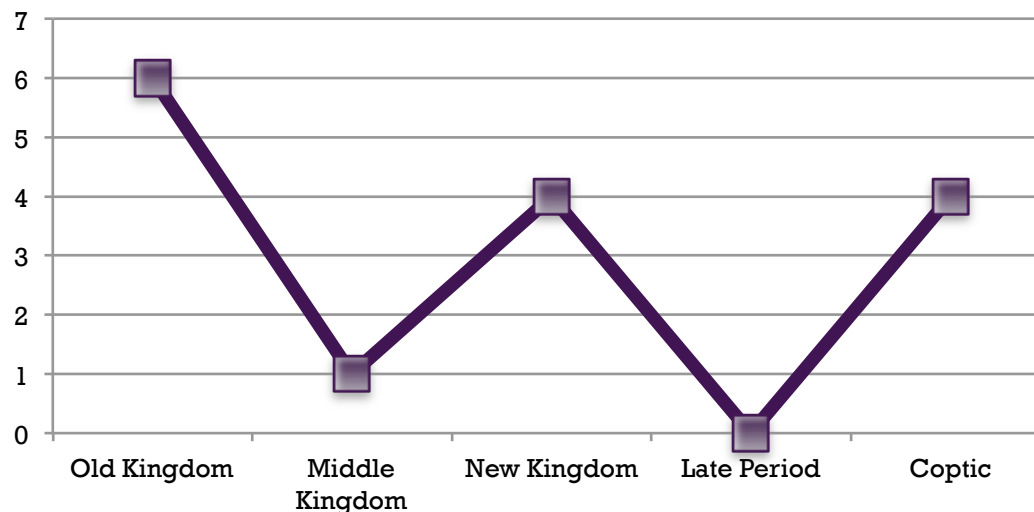


# A list of basic vocabulary in Coptic

## Age of attestation: a closer look

- Evolution of the **verbs** of the basic vocabulary according to semantic fields (only the 4 main semantic fields, with significant figures, are included in the graph)
- Much like the nouns belonging to the [natural/physical world], the **verbs of motion** display a characteristic 'sinusoidal' behavior

**Verbs of motion**



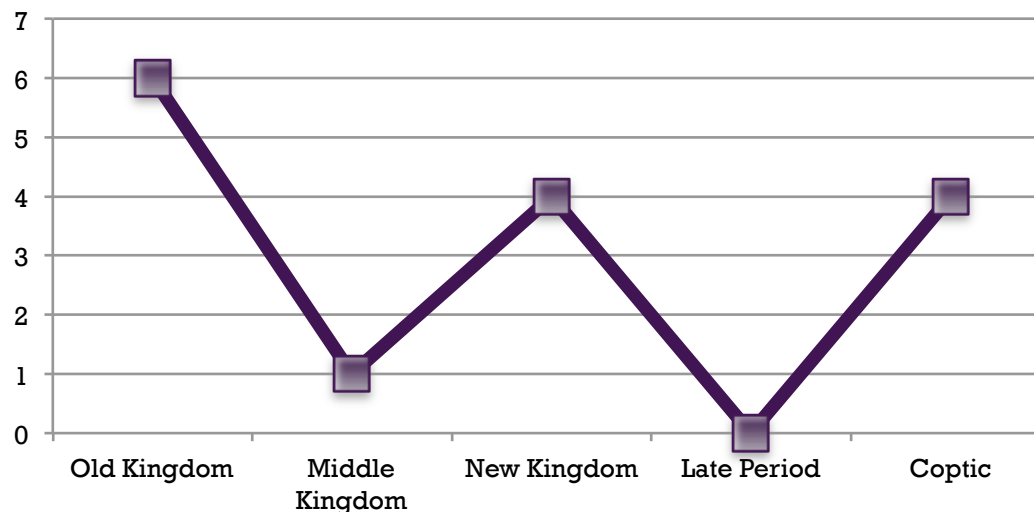


# A list of basic vocabulary in Coptic

## Age of attestation: a closer look












- Evolution of the **verbs** of the basic vocabulary according to semantic fields (only the 4 main semantic fields, with significant figures, are included in the graph)
- While the lexeme lexicalizing the meaning **'to come'** is stable from Old Egyptian to Coptic, the meaning **'to go'**, **'to run'** and **'to fall'** are definitely less so

**Verbs of motion**



# + A list of basic vocabulary in Coptic

## Meaning 'to go'

Old Egyptian	Middle Egyptian	Late Egyptian	Demotic	Coptic			
				S	B	F	A
				ⲃⲟⲕ <i>bōk</i>	-	-	ⲃⲟⲕ <i>bōk</i>
 <i>šm</i>	→	 <i>š(m)</i>	→	Ⲙⲉ <i>š(e)</i>	(ⲱⲎ) <i>(še)</i>	ⲱⲎ <i>še</i>	ⲱⲎ <i>še</i>
		 <i>mša</i>	→	ⲙⲟⲟⲱⲎ <i>mša</i>	ⲙⲟⲟⲱⲎ <i>mooše</i>	ⲙⲟⲱⲎ <i>moši</i>	ⲙⲁ(ⲁ)ⲱⲎ ⲙⲁⲁⲁⲎ <i>ma(a)ši maahe</i>
 <i>na(i)</i>	→	 <i>na(i)</i>	→	Ⲣⲁ <i>na</i>	Ⲣⲁ <i>na</i>	ⲢⲎ <i>ne</i>	(Ⲣ)Ⲣⲁ <i>(n)na</i>





# A list of basic vocabulary in Coptic

## Age of attestation: a closer look

- Evolution of the **verbs** of the basic vocabulary according to semantic fields (only the 4 main semantic fields, with significant figures, are included in the graph)
- While the lexeme lexicalizing the meaning 'to come' is stable from Old Egyptian to Coptic, the meaning 'to go', 'to run' and 'to fall' are definitely less so

### New Kingdom

- 'to run' (*pd*, *kḏ*)
- 'to go' (*mšꜥ*, *nꜥ*)

### Coptic

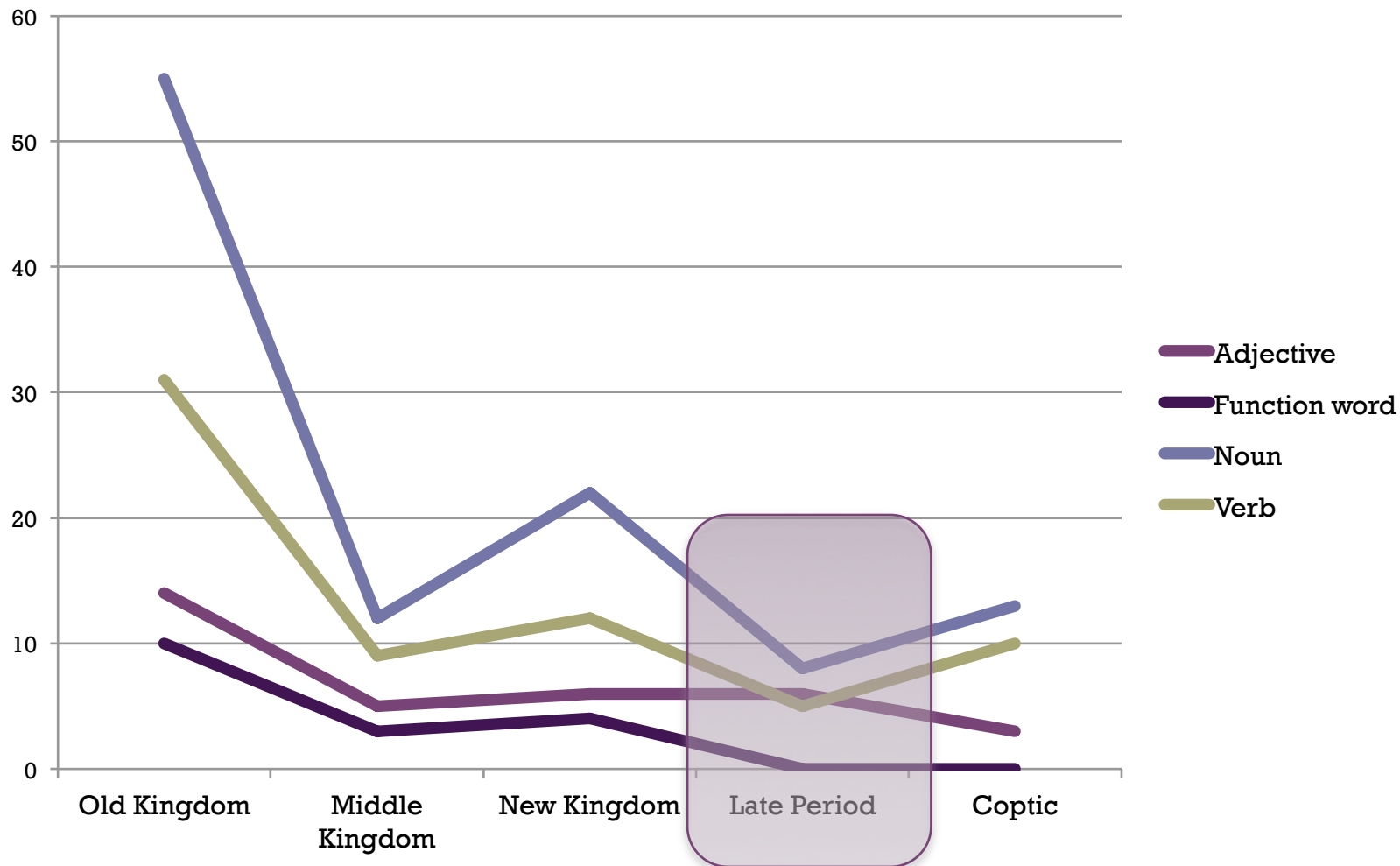
- -
- 'to go' (ⲃⲠⲔ *bôk*)
- 'to fall' (ⲥⲣⲟⲩⲣⲉⲩ *srofref*,  
ⲩⲟⲣⲩⲉⲣ *forfer*, ⲥⲕⲕⲁⲧⲉ *slaate*)





# A list of basic vocabulary in Coptic

Age of attestation: a closer look





# A list of basic vocabulary in Coptic

## Age of attestation: a closer look

- The figures are very low, but the proportionally higher proportion of new adjective in the Late Period can be related to two phenomena

- The appearance of a new grammatical construction in Demotic for adjectival meaning

*n3-nfr* '(be) good' > ΝΑΝΟΥ- '(be) good'

- The first occurrence of new compound adjectives

ⲕ ⲙⲓ ⲙⲓ ⲙⲓ *hl-c3* 'old-boy' > ⲉⲗⲗⲟ 'old (person)'

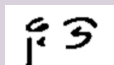




# A list of basic vocabulary in Coptic

## Analycity

- Among the 233 Egyptian-Coptic lexemes that lexicalizes the basic vocabulary of Coptic, only 8 can be positively identified as compounds, most of which are late

Old Kingdom [1]	Late Period [3]	Coptic [4]
<p><i>tp-r3</i> ‘utterance, word’</p>	<p>E.g.  <i>ti-n<sup>c</sup></i> ‘to cause to be fine’ &gt; ‘to grind finely’</p>	<p>E.g. *<i>mst.t-n-h3ty</i> ‘basket of the heart’</p>
<p>ⲧⲁⲡⲣⲟ <i>tapro</i> ‘mouth’</p>	<p>ⲧⲛⲛⲟ <i>tnno</i> ‘to grind/crush’</p>	<p>ⲙⲉⲤⲛⲁⲛⲏⲧ <i>mestnhêt</i> ‘breast’</p>



# A list of basic vocabulary in Coptic

## Representativeness

- All meanings on the list are lexicalized by words in Egyptian-Coptic, allowing for the size of the corpora of some of the dialects/periods.





# A list of basic vocabulary in Coptic

Across dialects

- Number of lexemes lexicalizing the basic vocabulary in each dialect
  - Sahidic = 212 lexemes for 100 meanings
  - Bohairic = 198 lexemes for 100 meanings
  - Fayyumic = 139 lexemes for 92 meanings
  - Akhmimic = 138 lexemes for 94 meanings
  
- 8 meanings are not lexicalized by Egyptian-Coptic words in Fayyumic and 6 in Akhmimic
  1. Not attested because of the type of corpus at our disposal?
  2. These meanings are expressed by lexical borrowing from Greek?





# A list of basic vocabulary in Coptic

Across dialects



<b>Word type</b>	<b>Semantic field</b>	<b>Fayyumic</b>	<b>Akhmimic</b>
adjective	size	-	long
noun	animal	louse	louse
noun	animal	fly	-
noun	animal	ant	-
noun	animal	dog	-
noun	body	navel	navel
noun	body	-	back
noun	body	tail	-
noun	product	egg	-
noun	product	-	salt
verb	action	to suck	to suck

# + A list of basic vocabulary in Coptic

Across dialects

Word type	Semantic field	Fayyumic	Akhmimic
adjective	size	-	long
noun	animal	louse	louse
noun	animal	fly	-
noun	animal	ant	-
noun	animal	dog	-
noun	body	navel	navel
noun	body	-	back
noun	body	tail	-
noun	product	egg	-
noun	product	-	salt
verb	action	to suck	to suck



# + A list of basic vocabulary in Coptic

Across dialects

Word type	Semantic field	Fayyumic	Akhmimic
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noun	animal	ant	-
noun	animal	dog	-
noun	body	navel	navel
noun	body	-	back
noun	body	tail	-
noun	product	egg	-
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Across dialects

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noun	body	-	back
noun	body	tail	-
noun	product	egg	-
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# + A list of basic vocabulary in Coptic

Across dialects

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noun	animal	dog	-
noun	body	navel	navel
noun	body	-	back
noun	body	tail	-
noun	product	egg	-
noun	product	-	salt
verb	action	to suck	to suck



# A list of basic vocabulary in Coptic

Across dialects



Word type	Semantic field	Fayyumic	Akhmimic	Greek	DDGLC
adjective	size	-	long	μακρός	NO ( <i>Nag Hammadi</i> )
noun	animal	louse	louse	-	-
noun	animal	fly	-	-	-
noun	animal	ant	-	-	-
noun	animal	dog	-	-	-
noun	body	navel	navel	-	-
noun	body	-	back	-	-
noun	body	tail	-	-	-
noun	product	egg	-	-	-
noun	product	-	salt	ἄλατιον	NO 1 occ. in Förster
verb	action	to suck	to suck	-	-

# + A list of basic vocabulary in Coptic

Across dialects



Word type	Semantic field	Fayyumic	Akhmimic	Greek	DDGLC
adjective	size	-	long	μακρός	NO ( <i>Nag Hammadi</i> )
noun	animal	louse	louse	-	-
noun	animal	fly	-	-	-
noun	animal	ant	-	-	-
noun	animal	dog	-	-	-
noun	body	navel	navel	-	-
noun	body	-	back	-	-
noun	body	tail	-	-	-
noun	product	egg	-	-	-
noun	product	-	salt	ἄλατιον	NO 1 occ. in Förster
verb	action	to suck	to suck	-	-

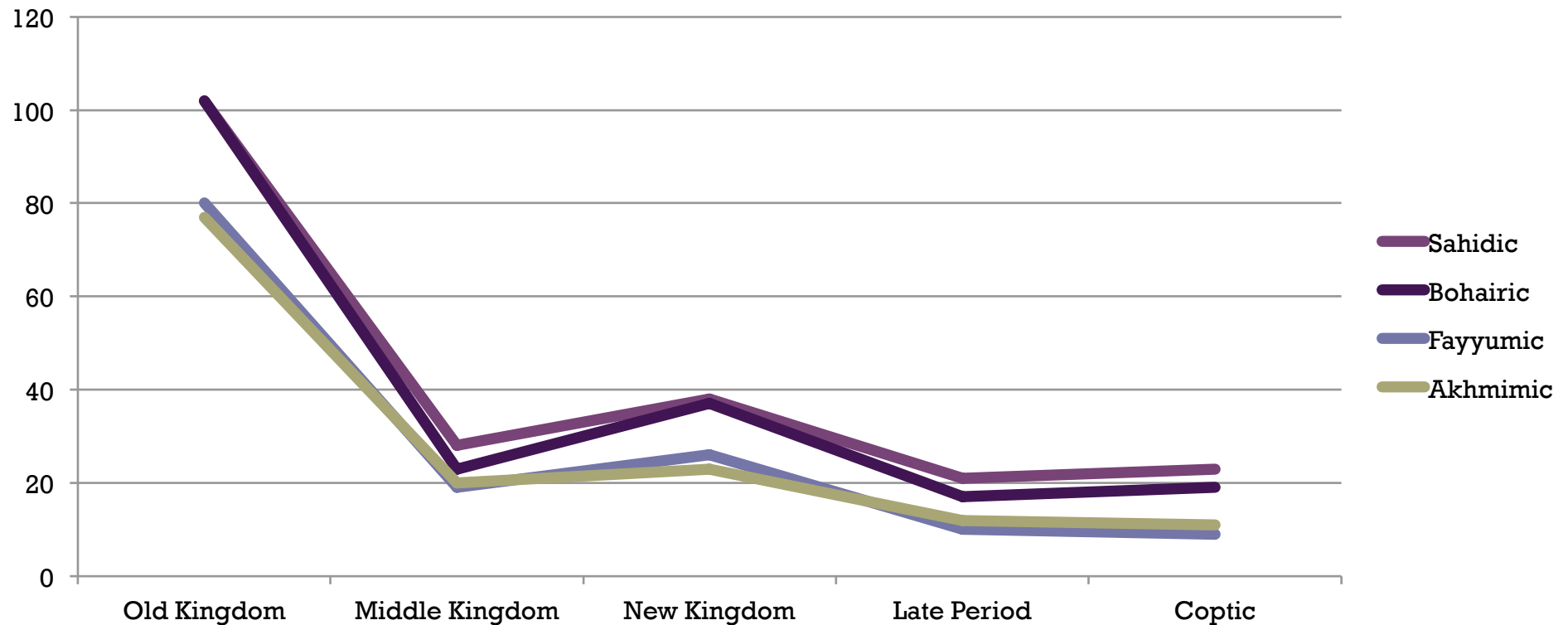


# A list of basic vocabulary in Coptic

Across dialects



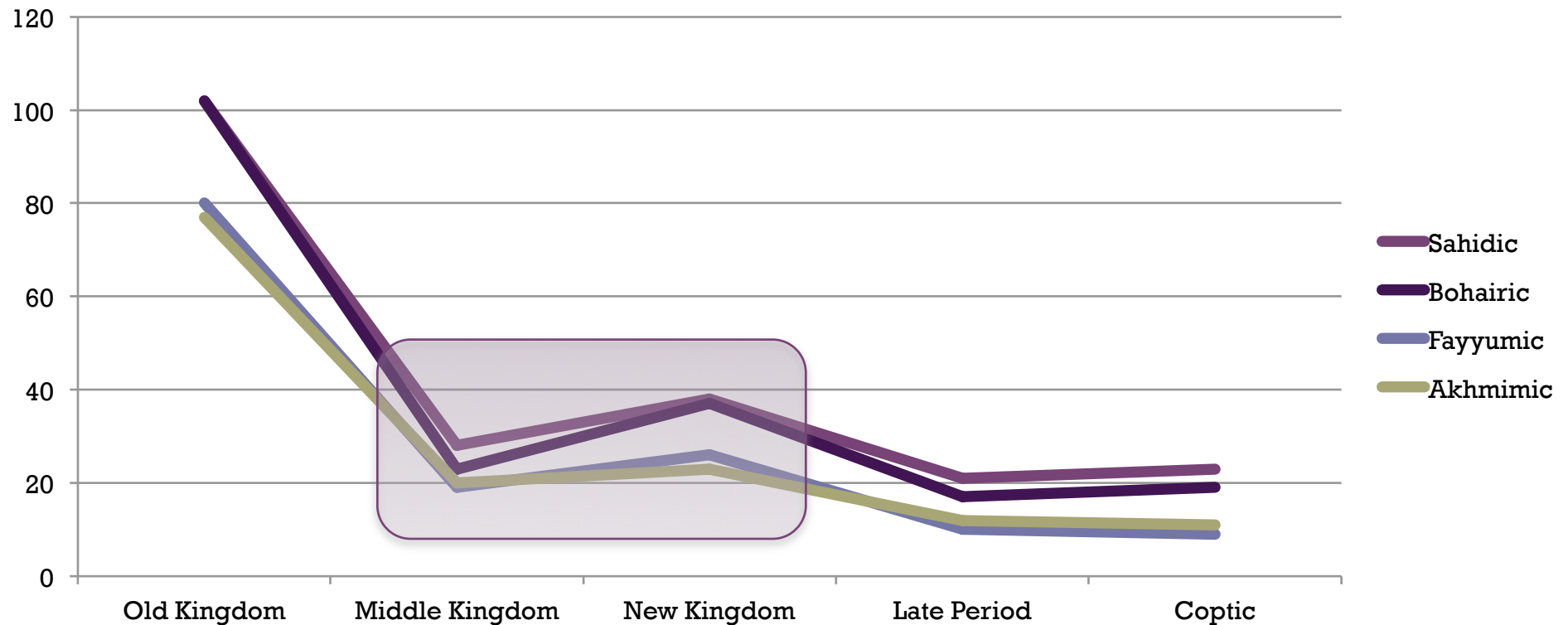
- Rate of appearance of new lexemes in the basic vocabulary for each dialect



# + A list of basic vocabulary in Coptic

Across dialects

- Rate of appearance of new lexemes in the basic vocabulary for each dialect





# A list of basic vocabulary in Coptic

Integrating the data from Greek-Coptic





# + A list of basic vocabulary in Coptic

Integrating the data from Greek-Coptic

## ■ Methodology

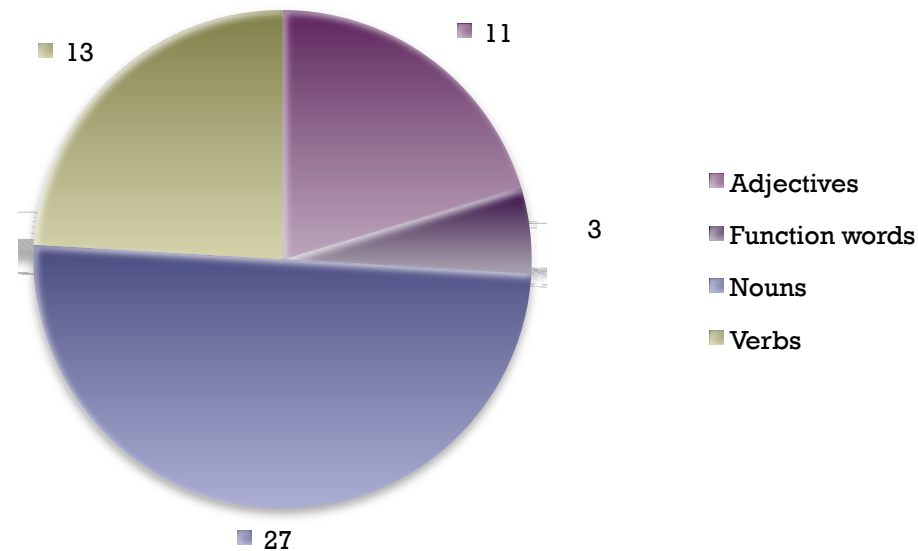
- Look in the DDGLC lemma-list [many thanks to T.S. Richter and his team] and check among the c. 5000 loan word types which lexemes could express the 100 meanings of the basic vocabulary, crucially integrating the results of Förster (2002)

# + A list of basic vocabulary in Coptic

## Integrating the data from Greek-Coptic

### ■ Methodology

- Look in the DDGLC lemma-list [many thanks to T.S. Richter and his team] and check among the c. 5000 loan word types which lexemes could express the 100 meanings of the basic vocabulary
  - It results in 85 lexemes for 54 meanings



# + A list of basic vocabulary in Coptic

Integrating the data from Greek-Coptic

## ■ Methodology

- Look in the DDGLC lemma-list [many thanks to T.S. Richter and his team] and check among the c. 5000 loan word types which lexemes could express the 100 meanings of the basic vocabulary
- In a second step, we took out of this list the lexemes
  - That do not occur at all in the DDGLC tokens





# A list of basic vocabulary in Coptic

Integrating the data from Greek-Coptic

## ■ Methodology

- Look in the DDGLC lemma-list [many thanks to T.S. Richter and his team] and check among the c. 5000 loan word types which lexemes could express the 100 meanings of the basic vocabulary
- In a second step, we took out of this list the lexemes
  - That do not occur at all in the DDGLC tokens
  - That were not mentioned in the questionnaire submitted to Coptologist colleagues

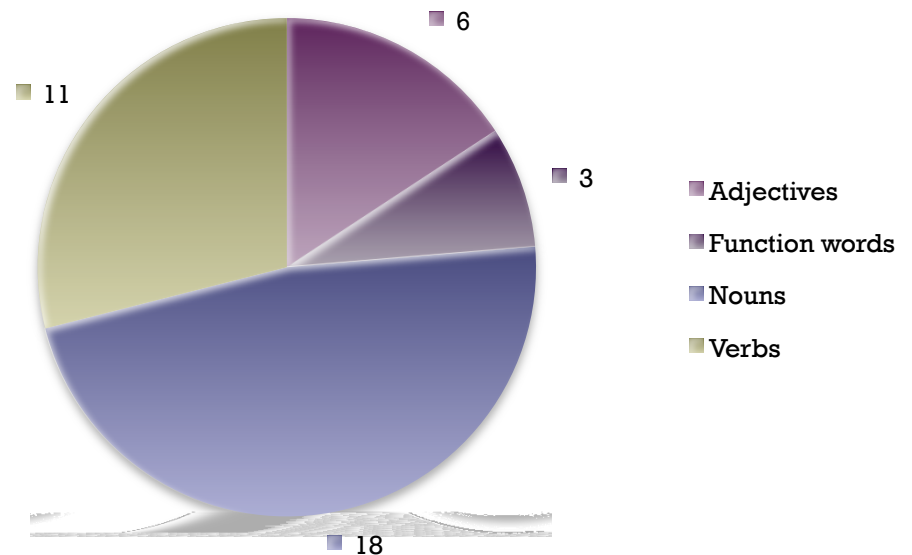
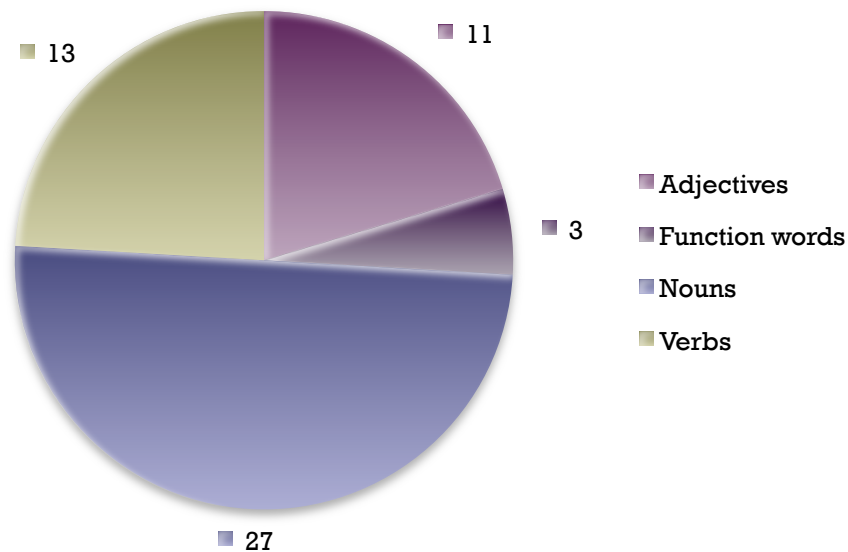


# + A list of basic vocabulary in Coptic

## Integrating the data from Greek-Coptic

### ■ Methodology

- Look in the DDGLC lemma-list [many thanks to T.S. Richter and his team] and check among the c. 5000 loan word types which lexemes could express the 100 meanings of the basic vocabulary
  - It results in 85 lexemes for 54 meanings
  - which left us with 54 lexemes for 38 meanings





# A list of basic vocabulary in Coptic

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- In a third step, we made judgments about the results
  - Taking out all the lexemes that only occur in phraseological expressions, e.g.
    - εγω *egô* (1sg), only appearing in colophons (Alain Delattre)
    - χειρ in the formula διὰ χειρός εἰς χεῖρας *dia xeiros eis xeiros* 'from hand to hand' (as opposed to payments made through a bank)
    - εν *en* 'in', which is highly restricted since it can govern only Greek borrowed lexemes, also in formula (Jean-Luc Fournet)
  - and rare lexemes that occur in codeswitching contexts



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  - ending up with 19 lexemes for 15 meanings



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## ■ Results

LJL-Meaning	Greek-Coptic Lexeme	Meaning	Frequency score
good	ἀγαθός	good	4
not	οὐ(χ)	no, not	4
not	οὐδέ	nor, and not, not even	4
not	οὐχί	no, not	4
name	ὄνομα	name	2
flesh/meat	σάρξ	flesh	2
to go	(προσ)έρχομαι	to come or go to	1
salt	ἀλάτιον	salt	1
to take	λαμβάνω	to take	1
small	μικρός	small, little	1
to know	νοέω	to grasp, to understand, to know	1
wood	ξύλον	wood, timber	1
bird	ὄρνειον	bird, chicken	1
bird	ὄρνίθιον	small bird, small chicken	1
old	παλαιός	old, aged, ancient	1
to do/make	πράττω, πράττομαι	to do	1
to run	τρέχω	to run	1
wood	ῥλη	forest, woodland, wood	1
sand	ψάμαθος	sand (of the sea-shore)	1





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Frequency score

4

4

4

4

2

2

1

1

1

1

1

1

1

1

1

1

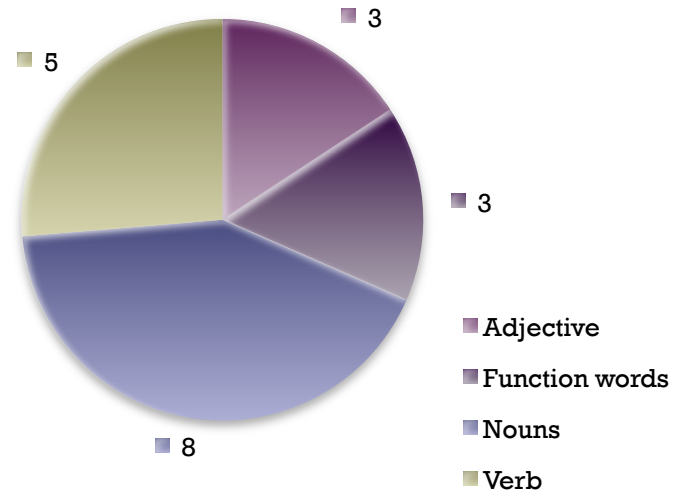
1

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1

1

1





# A list of basic vocabulary in Coptic

## Integrating the data from Greek-Coptic



### ■ Results

LJL-Meaning	Greek-Coptic Lexeme	Meaning	Frequency score	Egyptian-Coptic lexeme(s)
good	ἀγαθός	good	4	Y
not	οὐ(χ)	no, not	4	Y
not	οὐδέ	nor, and not, not even	4	Y
not	οὐχί	no, not	4	Y
name	ὄνομα	name	2	Y
flesh/meat	σάρξ	flesh	2	Y
to go	(προσ)έρχομαι	to come or go to	1	Y
salt	ἀλάτιον	salt	1	Y
to take	λαμβάνω	to take	1	Y
small	μικρός	small, little	1	Y
to know	νοέω	to grasp, to understand, to know	1	Y
wood	ξύλον	wood, timber	1	Y
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# A list of basic vocabulary in Coptic

Integrating the data from Greek-Coptic

- Co-existence = 19 lexemes
  - 6 frequent to occasional
  - 13 are rare to very rare
- Replacement = 0 lexeme





# A list of basic vocabulary in Coptic

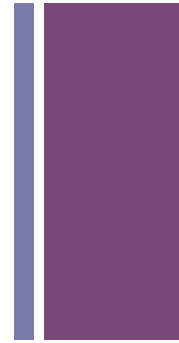
Integrating the data from Greek-Coptic

- Co-existence = 19 lexemes
  - 6 frequent to occasional
  - 13 are rare to very rare
- Replacement = 0 lexeme
- Bottom line: Basic vocabulary in Coptic is almost entirely native
- Greek loanwords co-exist with native words, but most are rare or limited either in meaning or in terms of collocation (e.g., most of the negative words)
  - E.g. Egyptian-Coptic ⲁⲓ *af* 'flesh, meat' vs Greek-Coptic ϸⲁⲣⲗ *sark<sup>s</sup>* 'flesh' (as opposed to the spirit)



# + How does Coptic compare to the rest of the world's languages?

- Using the data from the World Loanword Database, we extracted all loanwords that lexicalize meanings from the Leipzig-Jakarta list of basic vocabulary.
- Using their data, each word was ranked by a language specialist as:
  - Borrowed
  - Probably borrowed
  - Perhaps borrowed
  - Very little evidence for borrowing



# + Coptic vs the world's languages

## Scoring loanwords

- Each language received a score for the sum of loanwords attested

■ Borrowed	1.0
■ Probably borrowed	0.75
■ Perhaps borrowed	0.5
■ Very little evidence	0.25



# Coptic vs the world's languages

## Scoring loanwords

Ranking	Language	Score	Ranking	Language	Score
1	Saramaccan	35.17	22	Swahili	3.54
2	Gurindji	33.09	23	Zinacantán Tzotzil	3.2
3	Selice Romani	23.98	24	Mandarin Chinese	3
4	Thai	22.58	25	Q'eqchi'	2.75
5	Tarifiyt Berber	19.65	26	Yaqui	2.6
6	Kildin Saami	18.97	27	Mapudungun	2.54
7	Malagasy	18.69	28	Kanuri	2.4
8	Ceq Wong	17.04	29	Oroqen	2.37
9	White Hmong	15.62	30	Lower Sorbian	2.02
10	Indonesian	12.95	31	Iraqw	1.86
11	English	11.94	32	Kali'na	1.69
12	Japanese	10.76	33	Dutch	0.88
13	Archi	10.67	34	Old High German	0.24
14	Romanian	10.45	35	Iraqw	0.23
15	Takia	10.43	36	Kali'na	1.69
16	Vietnamese	.09	37	Dutch	0.88
17	Seychelles Creole	7.04	38	Old High German	0.24
18	Sakha	6.8	39	Iraqw	0.23
19	Imbabura Quechua	5.23	40	Hup	0
20	Hausa	4.87	41	Bezhta	0
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Depending on whether one considers all the Greek lexemes or only the frequent ones, Coptic has a score of 7.53 or 2.38 (which places it in the middle zone of basic vocabulary borrower anyway)





# Coptic vs the world's languages

## Scoring loanwords

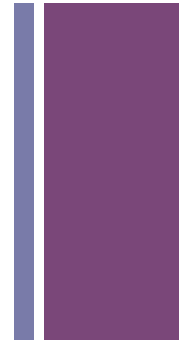
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# + Conclusions

Coming back to the beginning

- It is well known that Coptic, as it comes down to us in written texts, is massively influenced by Greek in the domain of lexicon ('translation language')
- On this basis, linguists, philologists, and historians often make assumptions about the nature and extent of bilingualism. Some linguists have even proposed that Coptic is a case of 'code-mixing' of Egyptian and Greek, which assumes extensive bilingualism among Egyptians in Late Antiquity



# + Conclusions

By looking only at basic vocabulary

- On a typologically-based, empirically constructed list of 100 meanings, we have shown that
  - Basic vocabulary is largely stable in Egyptian-Coptic (half of the list is stable from the Old Kingdom down to Coptic)
  - There are several periods in which changes in basic vocabulary can be observed, with different rates



# + Conclusions

By looking only at basic vocabulary

- Coptic basic vocabulary is almost entirely native
- The 6 commonly-used loanwords in the domain of basic vocabulary co-exist with native words, i.e., loanwords have not replaced native basic vocabulary
- Compared to other languages in the WOLD sample, Coptic is a middle borrower
- It is neither like post-creoles (Thai) nor languages whose speakers are universally bilingual (Selice Romani, Tarifiyt Berber)



# + Conclusions

By looking only at basic vocabulary

- However, much work remains to be done in order to understand the relationship between
  - a) overall borrowing in a language's lexicon,
  - b) borrowing of basic vocabulary, and
  - c) characteristics of the sociolinguistic contact situation
- We believe that the kind of work we have presented here is the basic empirical research needed in order to address these questions





Thanks!

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