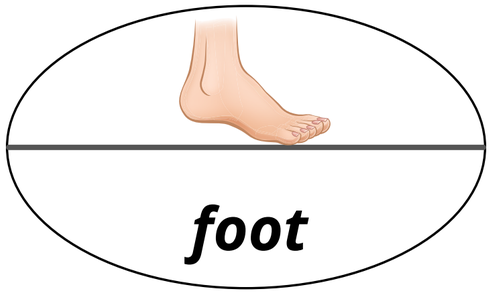
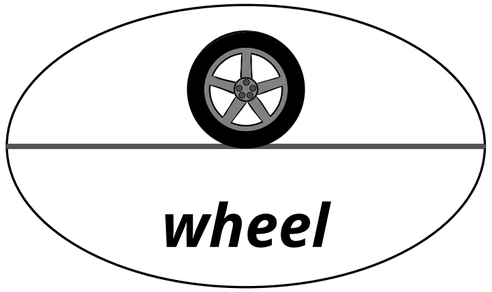
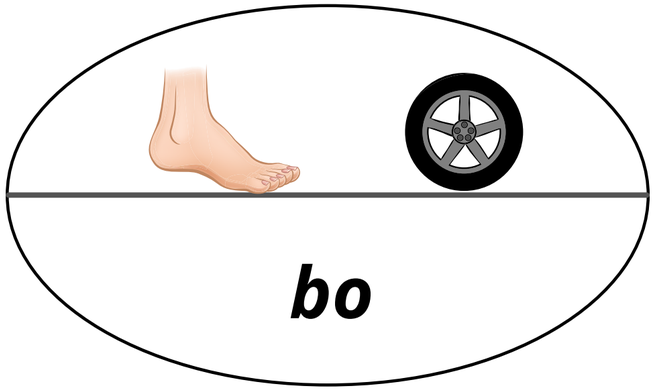
English





Grebo

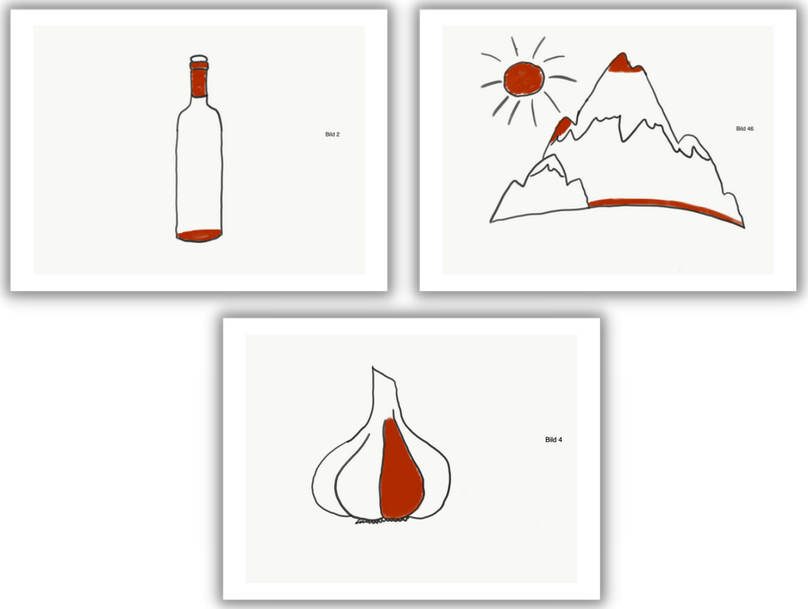


If a car had feet, where would they be?
Using the body as an analogy to name object parts

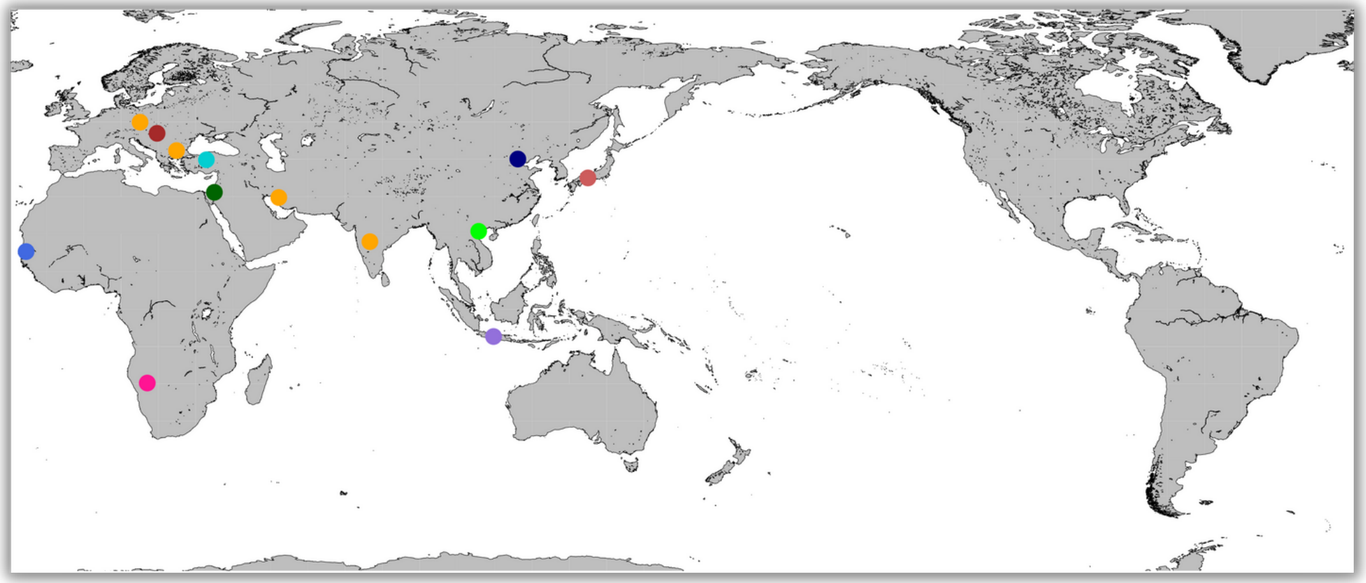
Annika Tjuka
Max Planck Institute for Evolutionary Anthropology, Leipzig
@AnnikaTjuka
annika_tjuka@eva.mpg.de

2018 ⏪

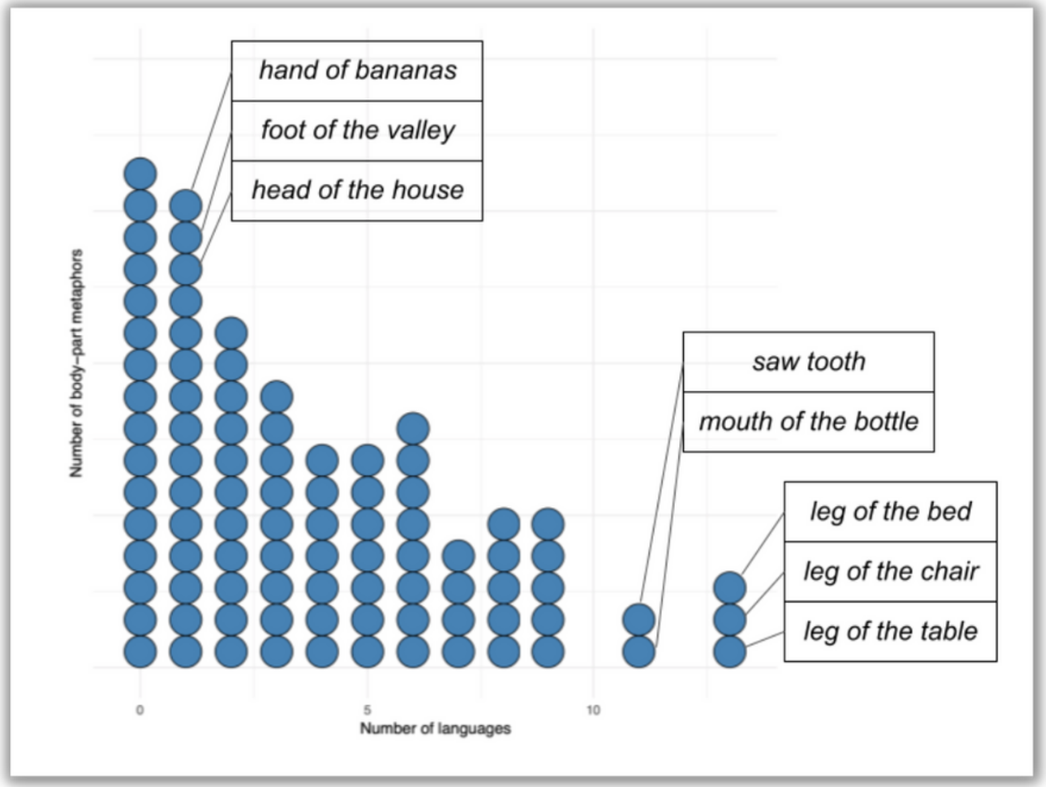
Elicitation study in
an urban fieldwork setting



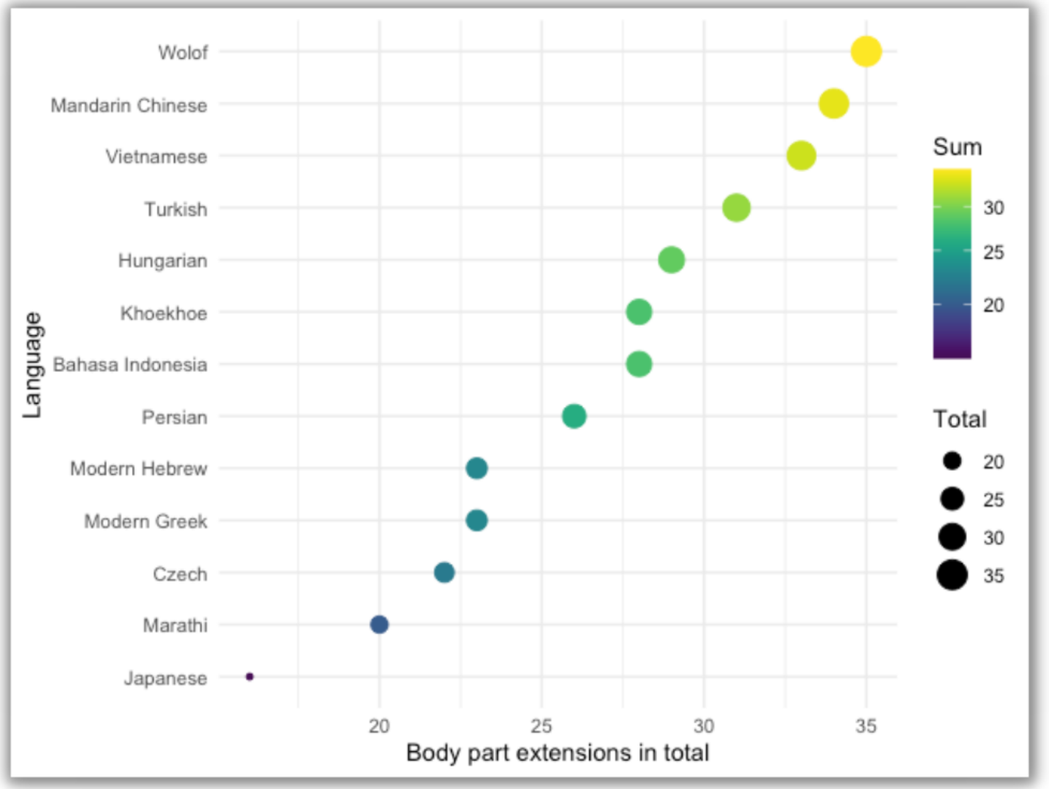
with 13 speakers of diverse languages.



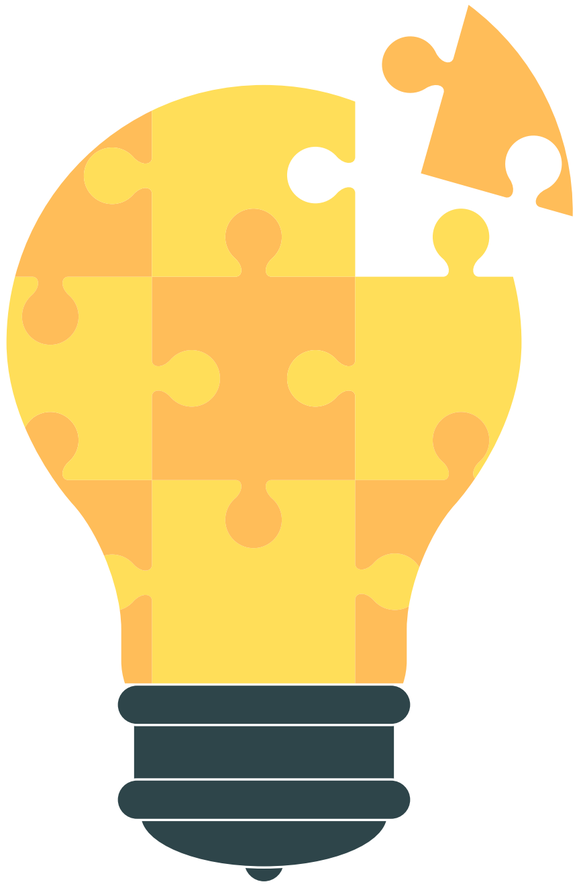
2018 ⏪



Only a few body-object colexifications occur in many languages; most are language-specific.



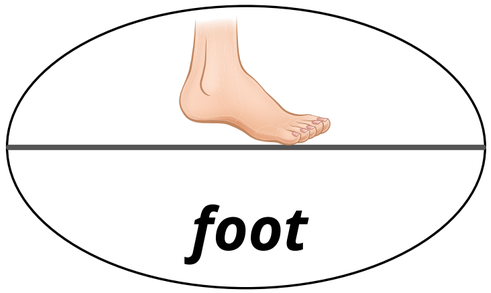
Some languages appear to have more body-object colexifications in their vocabulary.

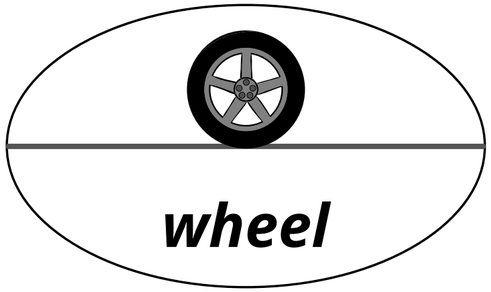


What meanings can be expressed by the same word in different languages and why?

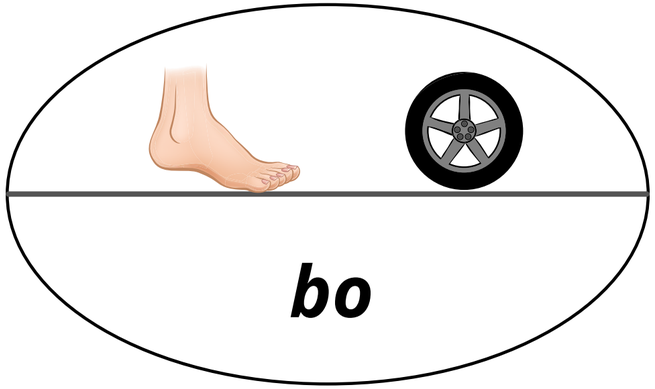
Colexifications

English

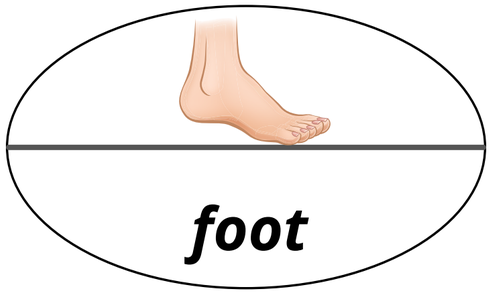


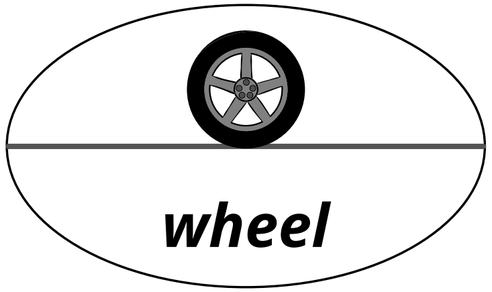


Grebo

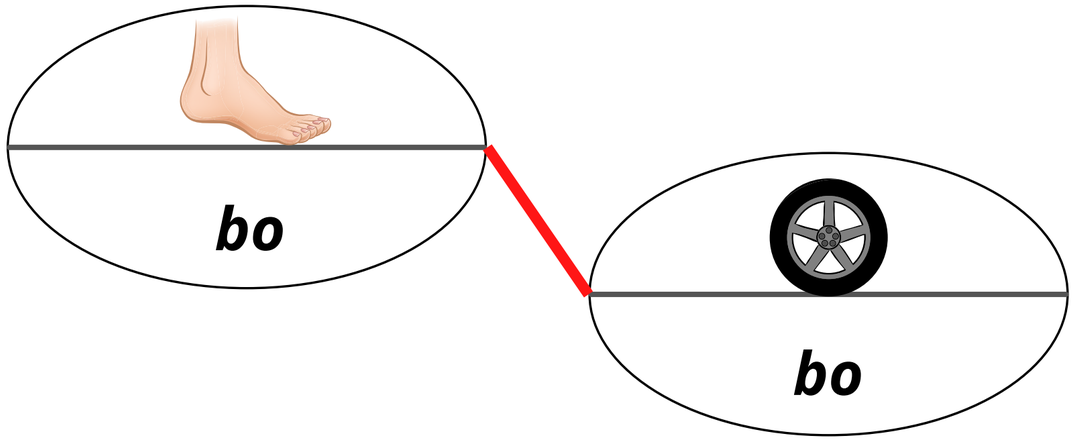


English



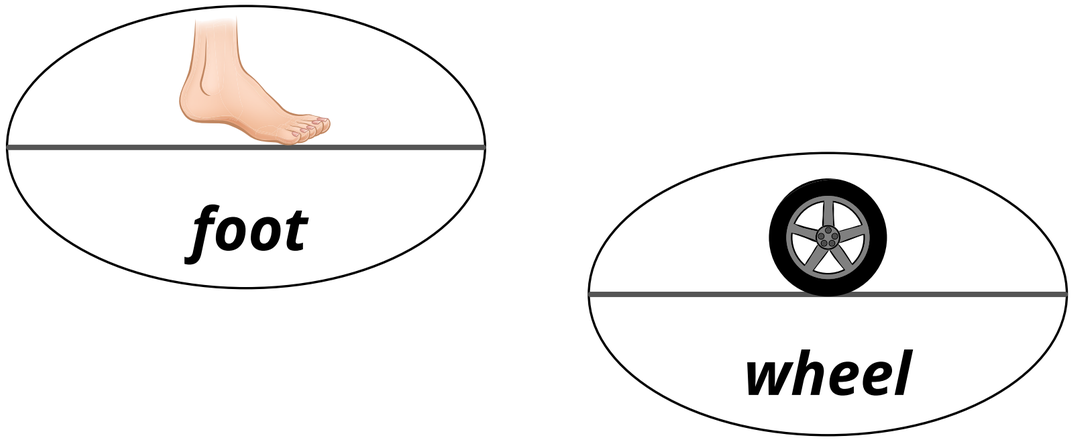


Grebo

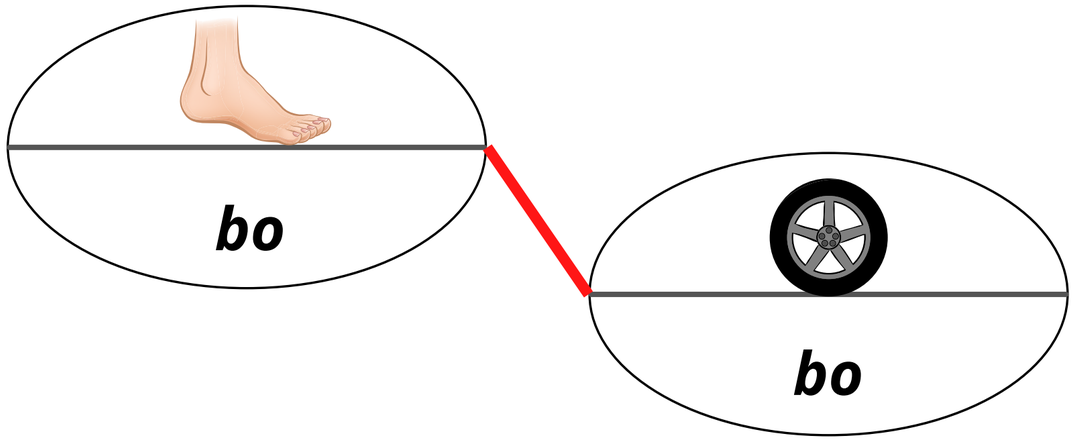


(François 2008; François 2021)

English



Grebo



Dislexification:
Two separate lexical forms are used to denote two senses based on a synchronic analysis.

Strict Colexification:
The same lexical form is used to denote two senses across diverse languages based on a synchronic analysis.

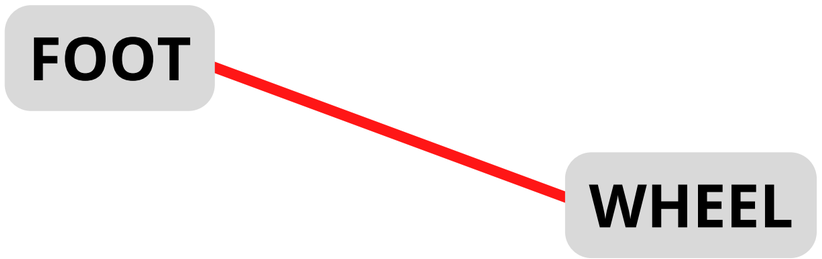
(François 2008; François 2021)

English

FOOT

WHEEL

Grebo



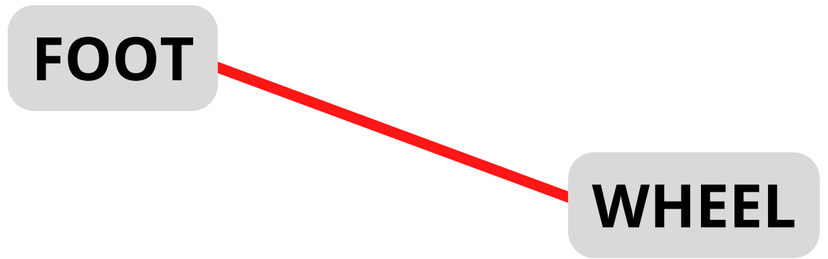
(CLICS3, Rzymski et al. 2020)

English

FOOT

WHEEL

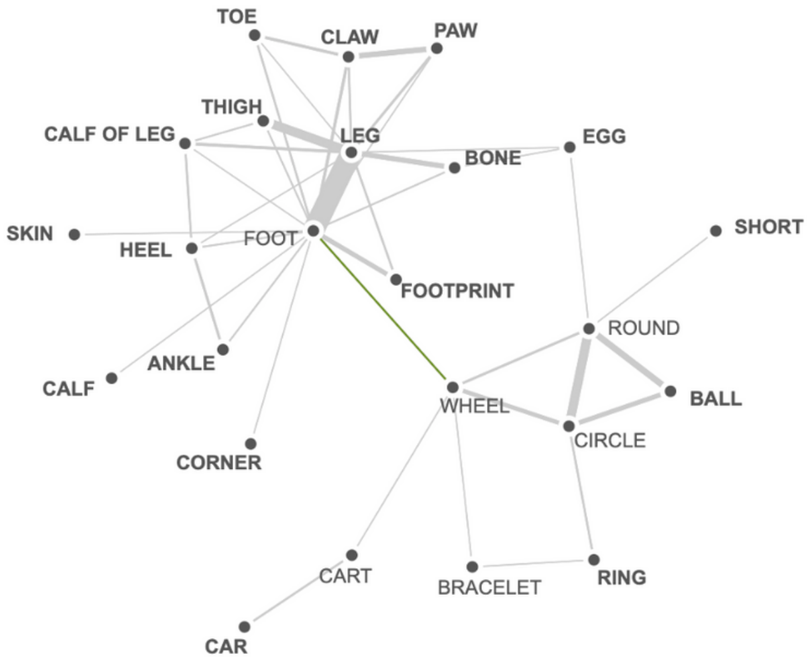
Grebo



Body-Object Colexifications

(CLICS3, Rzymski et al. 2020)

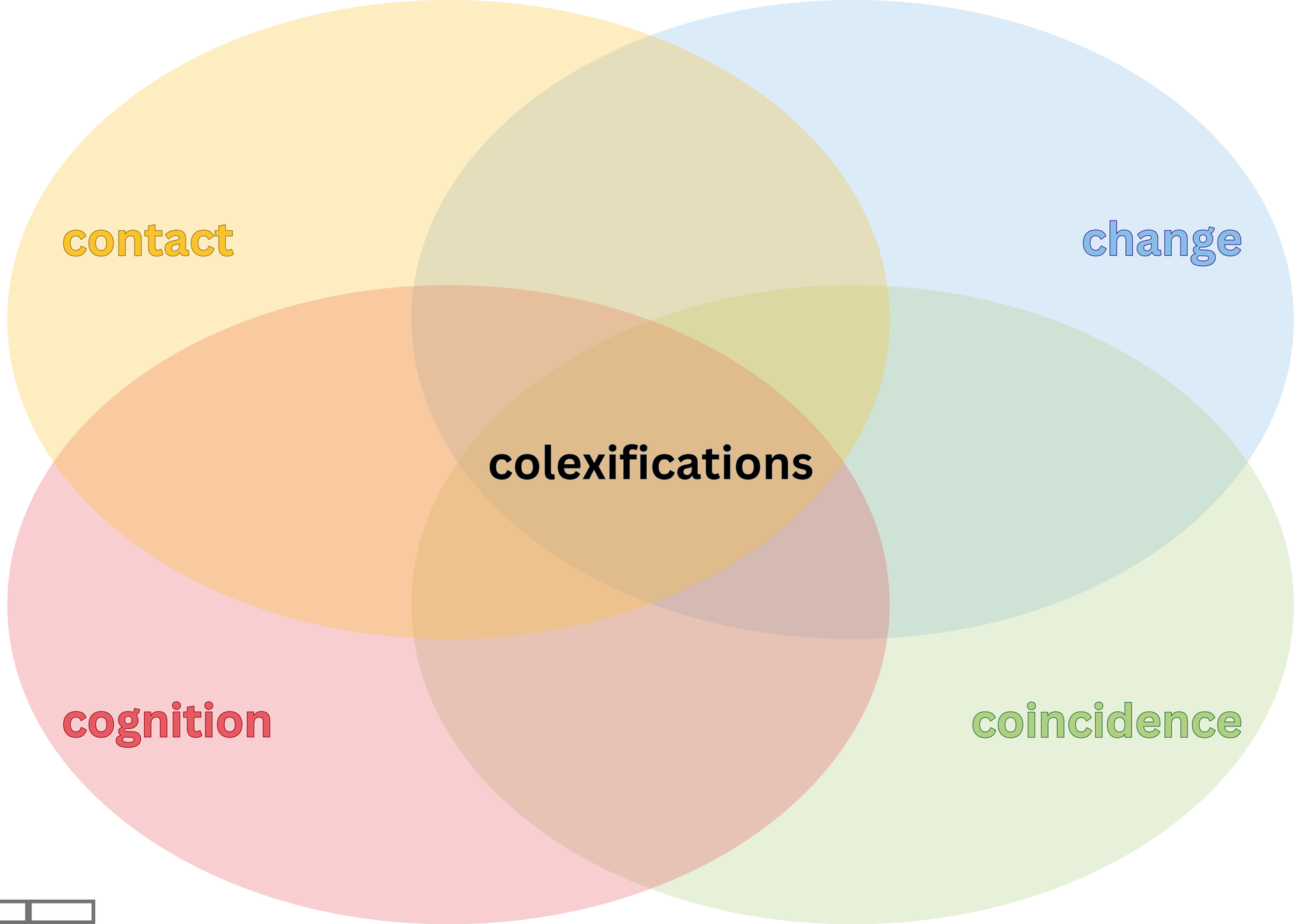
Subgraph WHEEL



5 colexifications for "WHEEL" and "FOOT":

Language	Family	Form
Cofán	Cofán	cithe
Puinave	Puinave	sim
Yaruro	Pumé	tao
Wayampi	Tupian	pi
Ninam (Shirishana variety)	Yanomamic	mahuk

https://clics.clld.org/graphs/subgraph_710 (CLICS3, Rzymski et al. 2020)

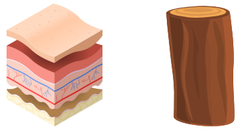

contact
change
colexifications
cognition
coincidence

- Lexical typology discovers the systematicity behind the variation of semantic features across the world’s languages.

- Areal semantics explains the diffusion of lexical patterns due to language contact, including similarities in the meanings of individual lexical items, semantic domains, or the entire lexicon.

(Koptjevskaja-Tamm & Liljegren 2017; Koptjevskaja-Tamm 2008; Schapper & Koptjevskaja-Tamm 2022)

contact

Body-object colexification	Area	Study
	South America	List et al. (2018)
	Eastern Africa, Americas, Australia	Gast and Koptjevskaja-Tamm (2019)
	South America, Melanesia	Gast and Koptjevskaja-Tamm (2019)

contact

Expectations

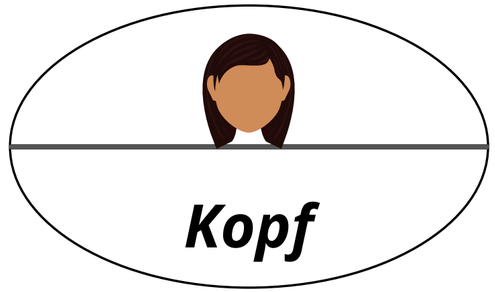
E1. Few areal patterns are expected to show up in the analysis due to the coarse-grained approach using strict colexifications.

E2. Since the present study uses a larger data collection than previous studies, some pro- posed areal patterns turn out to be more widespread.

(Gast & Koptjevskaja-Tamm 2019)

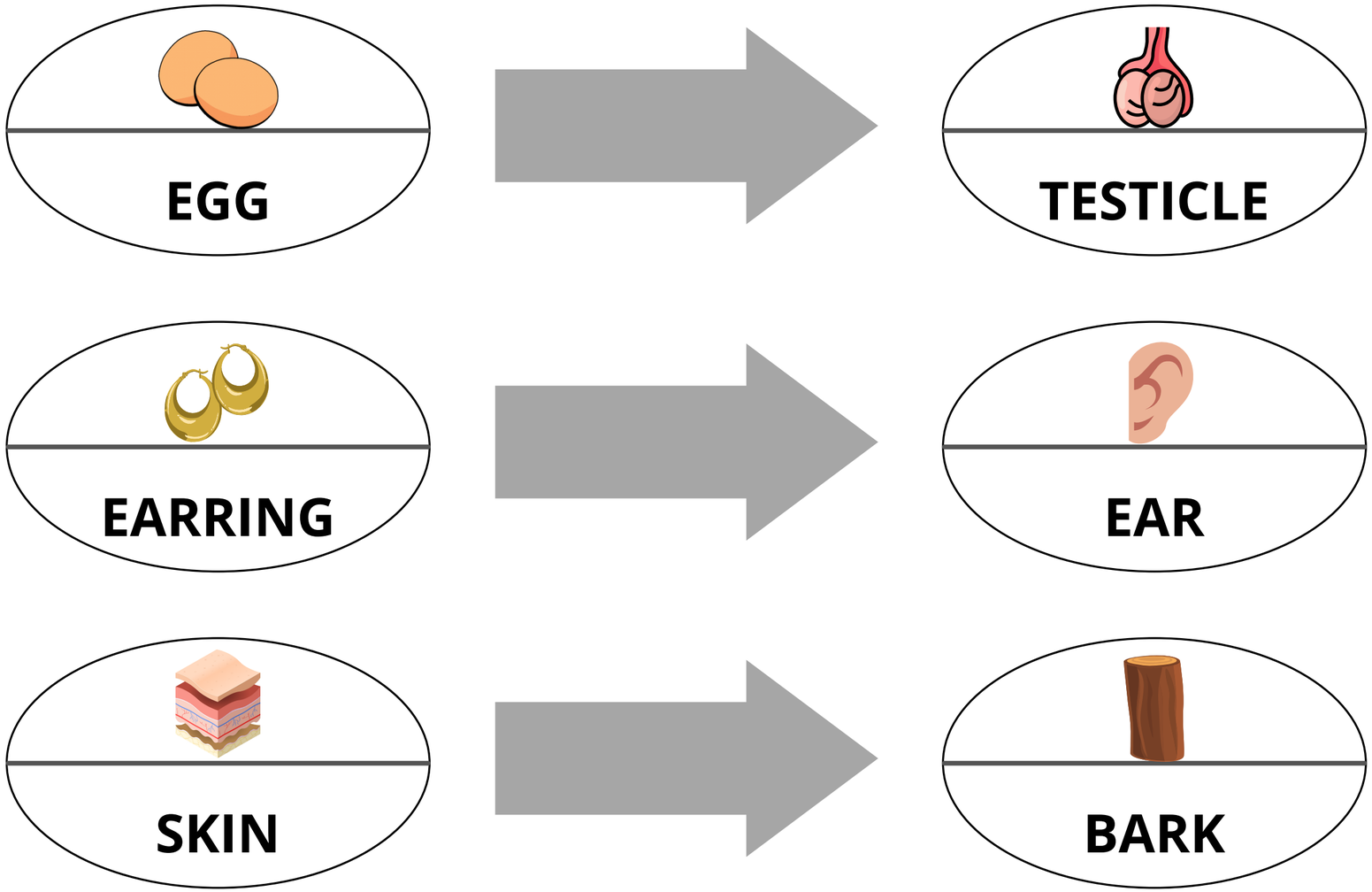
Proto-Germanic

German



"Synchronic polysemy becomes crucial in the investigation of semantic changes because it acts as a proof of the plausibility that two meanings are semantically related and that one meaning could give rise to the other." (Wilkins 1996, 269)

Semantic changes attested across languages:



change

Expectations

E3. There is a tendency for terms referring to more salient body parts to develop more meaning extensions.

E4. Metynomic extensions from body part terms to objects are likely to occur frequently in the data.

cognition

colexification

polysemy

homonymy

semantics

metaphor

metonymy

meronymy

similarity

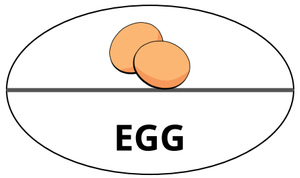
continuity

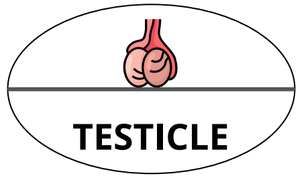
part-of

perception

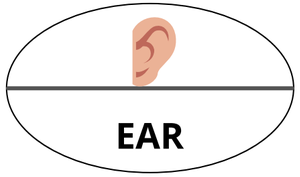
cognition

Similarity

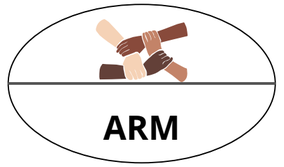




Continuity

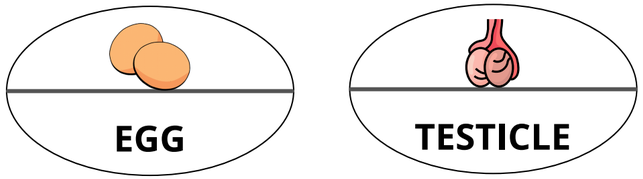


Part-of

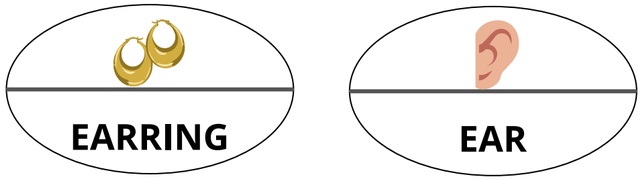


cognition

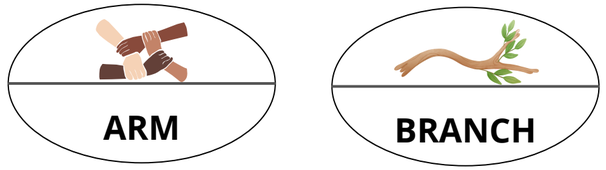
Similarity

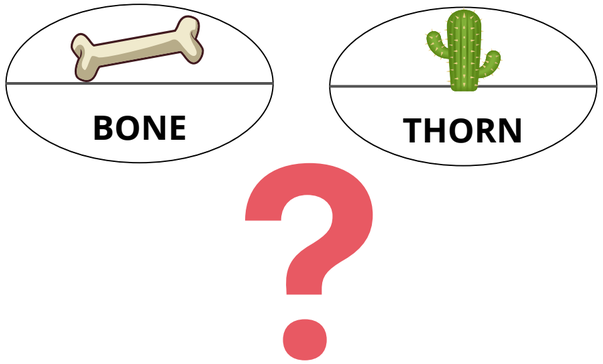


Continuity



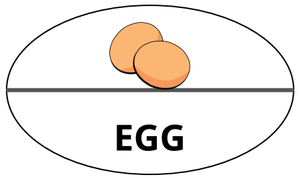
Part-of

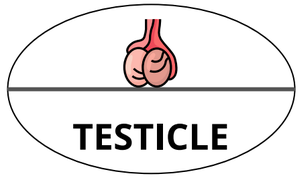




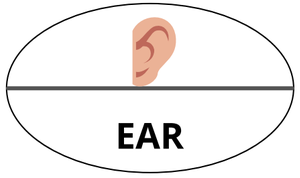
cognition

Similarity

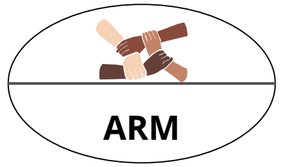


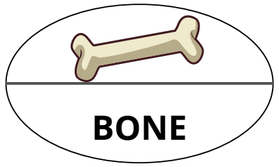


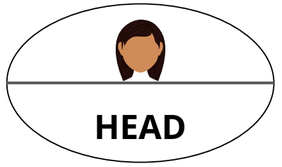
Continuity

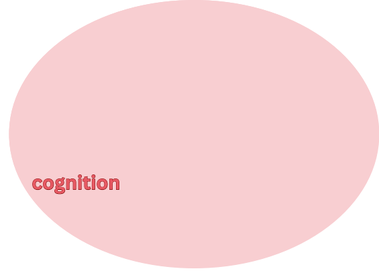


Part-of







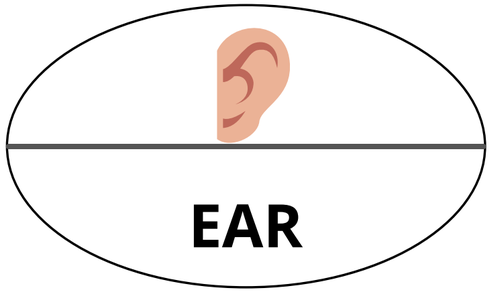


Expectations

E5. If more than one cognitive relation can be identified as the basis for a body-object colexification, it should occur more frequently in the data.

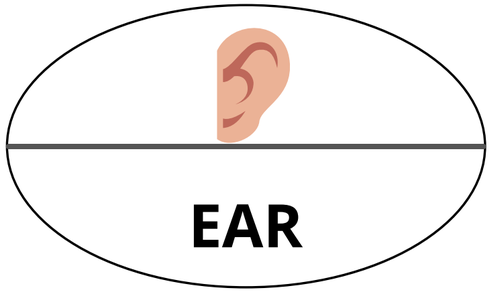
coincidence

Similarity



coincidence

~~Similarity~~



Homophony

coincidence

Expectations

E6. Only a few coincidental colexifications appear and if so, they are restricted to language varieties of the same language family.

Study

Aim

- systematically investigate shared names between body parts and objects across many languages

- first large-scale study that examines the patterns and causes of strict colexification between body and object concepts

Research question

How widespread are body-object colexifications across languages and what are the causes for the emerging patterns?

Method

Step 1: Prepare word list

ID	ENGLISH	CHINESE
Allen-2007-500-1	sky	天
Allen-2007-500-2	sun	太阳
Allen-2007-500-3	moon	月亮
Allen-2007-500-4	star	星星
Allen-2007-500-5	cloud	云
Allen-2007-500-6	wind	风
Allen-2007-500-7	rain	雨
Allen-2007-500-8	lightning (vb)	闪电
Allen-2007-500-9	thunder (vb)	打雷
Allen-2007-500-10	hail	冰雹

Step 2: Map to Concepticon

ID	ENGLISH	CHINESE	CONCEPTICON_ID	CONCEPTICON_GLOSS
Allen-2007-500-1	sky	天	1732	SKY
Allen-2007-500-2	sun	太阳	1343	SUN
Allen-2007-500-3	moon	月亮	1313	MOON
Allen-2007-500-4	star	星星	1430	STAR
Allen-2007-500-5	cloud	云	1489	CLOUD
Allen-2007-500-6	wind	风	960	WIND
Allen-2007-500-7	rain	雨	658	RAIN (PRECIPITATION)
Allen-2007-500-8	lightning (vb)	闪电	2377	FLASH (VERB)
Allen-2007-500-9	thunder (vb)	打雷	2378	THUNDER (VERB)
Allen-2007-500-10	hail	冰雹	609	HAIL

Step 2: Map to Concepticon

ID	ENGLISH	CHINESE	CONCEPTICON_ID	CONCEPTICON_GLOSS
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Allen-2007-500-5	cloud	云	1489	CLOUD
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Allen-2007-500-7	rain	雨	658	RAIN (PRECIPITATION)
Allen-2007-500-8	lightning (vb)	闪电	2377	FLASH (VERB)
Allen-2007-500-9	thunder (vb)	打雷	2378	THUNDER (VERB)
Allen-2007-500-10	hail	冰雹	609	HAIL

(List et al. 2022; Tjuka, Forkel & List 2022)

Concepticon | Home | Concepts | Concept sets | Concept lists | Languages | Compilers | Sources

Concept set SKY

The part of the earth's atmosphere and space outside it that is visible from earth's surface. During the day it is perceived as blue, and at night as black.

Showing 1 to 100 of 202 entries

← Previous 1 2 3 Next →

Id	Concept in source	Conceptlist
Search	Search	Search
Abraham-2018-307-191	sky [english]	Abraham 2018 307
Allen-2007-500-1	天 [chinese]; sky [english]	Allen 2007 500
Alpher-1999-151-70	sky [english]	Alpher 1999 151
Anonby-2018-1500-1120	sky [english]; آسمان [persian]	Anonby 2018 1500
Araujo-1996-289-44	Himmel [german]; céu [portuguese]	Araujo 1996 289
Backstrom-1992-210a-43	sky [english]	Backstrom 1992 210a
Backstrom-1992-210b-43	sky [english]	Backstrom 1992 210b
Backstrom-1992-210c-43	sky [english]	Backstrom 1992 210c
Backstrom-1992-210d-43	sky [english]	Backstrom 1992 210d
Backstrom-1992-210e-43	sky [english]	Backstrom 1992 210e
Backstrom-1992-210f-43	sky [english]	Backstrom 1992 210f
Birchall-2016-125-107	Sky [english]	Birchall 2016 125
BirketSmith-1928-510-36	Sky [english]	BirketSmith 1928 510
Blust-1981-200-129	sky [english]	Blust 1981 200

No Ra Re

NoRaRe offers information about specific concept and word properties published along with studies from linguistics and psychology.

The corresponding entry in NoRaRe is linked to 449 variables from 76 datasets.

https://concepticon.clld.org/parameters/1732

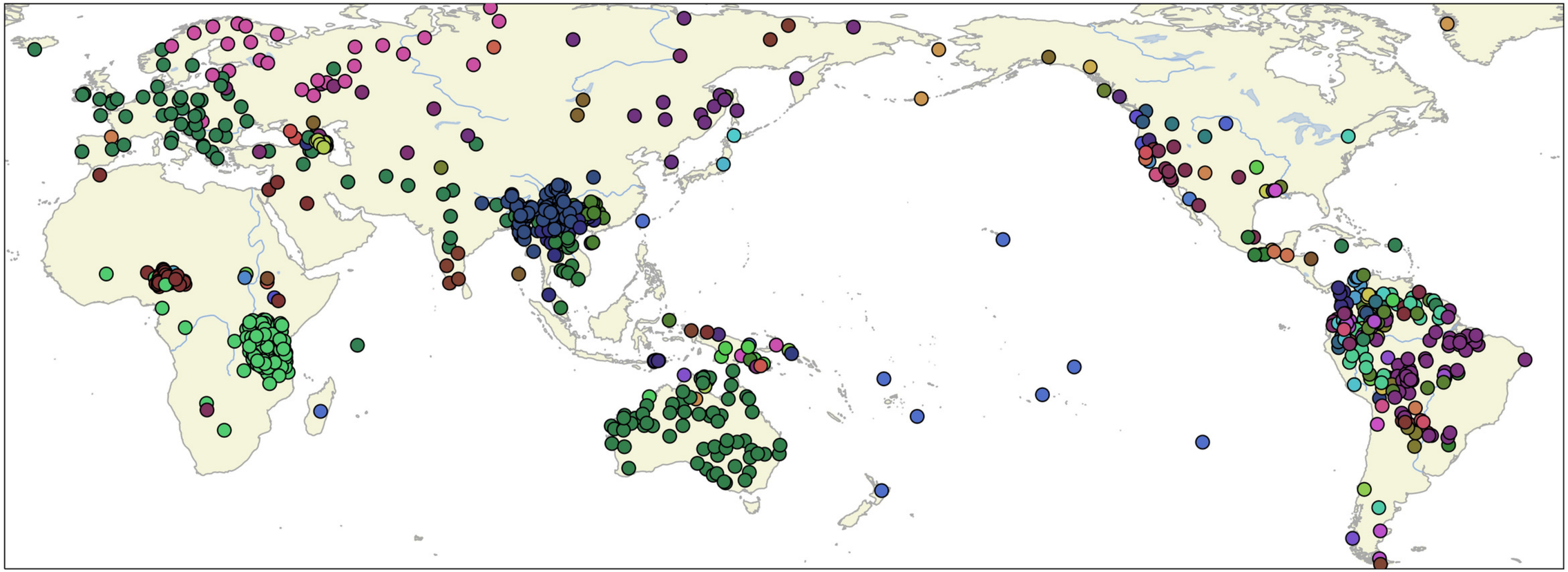
Step 3: Create your source list

ID	CONCEPTICON_ID	CONCEPTICON_GLOSS	ENGLISH	GROUP	SEMANTIC_FIELD
Tjuka-2022-784-1	802	ADAM'S APPLE	ADAM'S APPLE	body	human body part
Tjuka-2022-784-2	678	BEARD	BEARD	body	human body part
Tjuka-2022-784-3	1402	BREAST	BREAST	body	human body part
Tjuka-2022-784-4	834	BUTTOCKS	BUTTOCKS	body	human body part
Tjuka-2022-784-5	498	CALF OF LEG	CALF OF LEG	body	human body part
Tjuka-2022-784-135	20	SCYTHE	SCYTHE	object	tool
Tjuka-2022-784-136	124	THORN	THORN	object	plant
Tjuka-2022-784-137	146	SUGAR CANE	SUGAR CANE	object	plant
Tjuka-2022-784-138	159	SWEET POTATO	SWEET POTATO	object	food
Tjuka-2022-784-139	217	BETELNUT	BETELNUT	object	food

Step 3: Select your target word lists from Lexibank

ID	Organisation	Dataset	Zenodo
abrahammonpa	lexibank	abrahammonpa	10.5281/zenodo.5115885
allenbai	lexibank	allenbai	10.5281/zenodo.5115649
bantubvd	lexibank	bantubvd	10.5281/zenodo.5115982
beidasinitic	lexibank	beidasinitic	10.5281/zenodo.5119295
bodtkhobwa	lexibank	bodtkhobwa	10.5281/zenodo.5119330
bowernpny	lexibank	bowernpny	10.5281/zenodo.5119341
chenhmongmien	lexibank	chenhmongmien	10.5281/zenodo.5118744
chindialectsurvey	lexibank	chindialectsurvey	10.5281/zenodo.5121280
halenepal	lexibank	halenepal	10.5281/zenodo.5121540

(List et al. 2022)



Convenient (opportunistic) sample of 931 language varieties

(Bakker 2010)

Step 5: Find matches in Lexibank lists

✓	Allen-2007-500-119	119	fruit	果	1507	FRUIT
✓	Allen-2007-500-120	120	pit,stone	核	1762	STONE (OF FRUIT)
✓	Allen-2007-500-121	121	peel,husk	皮	275	PEEL
✓	Allen-2007-500-122	122	thorn	刺	124	THORN
✓	Allen-2007-500-123	123	body	身体	1480	BODY
✓	Allen-2007-500-124	124	head		1256	HEAD
✓	Allen-2007-500-125	125	hair		2648	HAIR (HEAD)
✓	Allen-2007-500-126	126	face		1560	FACE
✓	Allen-2007-500-127	127	eye	眼	1248	EYE
✓	Allen-2007-500-128	128	nose	鼻子	1221	NOSE

Lexibank list

Source list

ID	CONCEPTICON_ID	CONCEPTICON_GLOSS	ENGLISH	GROUP	SEMANTIC_FIELD
Tjuka-2022-784-1	802	ADAM'S APPLE	ADAM'S APPLE	body	human body part
Tjuka-2022-784-2	678	BEARD	BEARD	body	human body part
Tjuka-2022-784-3	1402	BREAST	BREAST	body	human body part
Tjuka-2022-784-4	834	BUTTOCKS	BUTTOCKS	body	human body part
Tjuka-2022-784-5	498	CALF OF LEG	CALF OF LEG	body	human body part
Tjuka-2022-784-135	20	SCYTHE	SCYTHE	object	tool
Tjuka-2022-784-136	124	THORN	THORN	object	plant
Tjuka-2022-784-137	146	SUGAR CANE	SUGAR CANE	object	plant
Tjuka-2022-784-138	159	SWEET POTATO	SWEET POTATO	object	food
Tjuka-2022-784-139	217	BETELNUT	BETELNUT	object	food

Step 6: Extract colexifications automatically

EXAMPLE_ID	GLOTTOCODE	CLTS_FORM	CONCEPTICON_GLOSS
allenbai-Eryuan-149_heart-1	eryu1239	ɕi^{55}	HEART
allenbai-Eryuan-222_firewood-1	eryu1239	ɕi^{55}	FIREWOOD
allenbai-Jianchuan-139_bellystomach-1	jian1239	fɤ^{44}	BELLY
allenbai-Jianchuan-235_pen-1	jian1239	fɤ^{44}	PEN

```
$ cldfbench makecldf cldfbench_tjukabodyobject.py
```

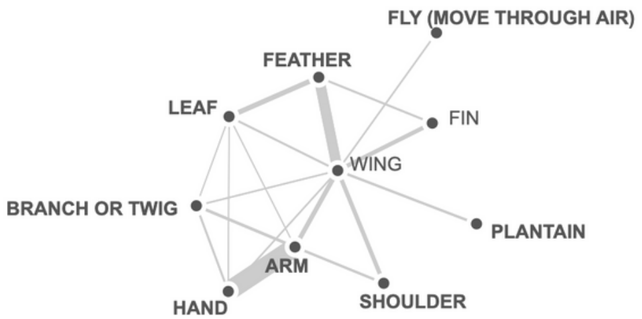
CLICS³ Home Datasets Varieties Concepts

About Legal Download Contact

Database of Cross-Linguistic Colexifications

CLICS³ is an online database of colexifications (polysemies or homophonies) in currently 3156 language varieties of the world.

The original Database of Cross-Linguistic Colexifications (CLICS), has established a computer-assisted framework for the interactive representation of cross-linguistic colexification patterns. It has proven to be a useful tool for various kinds of investigation into cross-linguistic semantic associations, ranging from studies on semantic change, patterns of conceptualization, and linguistic paleontology. But CLICS has also been criticized for obvious shortcomings. Building on standardization efforts reflected in the CLDF initiative and novel approaches for fast, efficient, and reliable data aggregation, CLICS² expanded the original CLICS database. CLICS³ - the third installment of CLICS - exploits the framework pioneered in CLICS² to more than double the amount of data aggregated in the database.



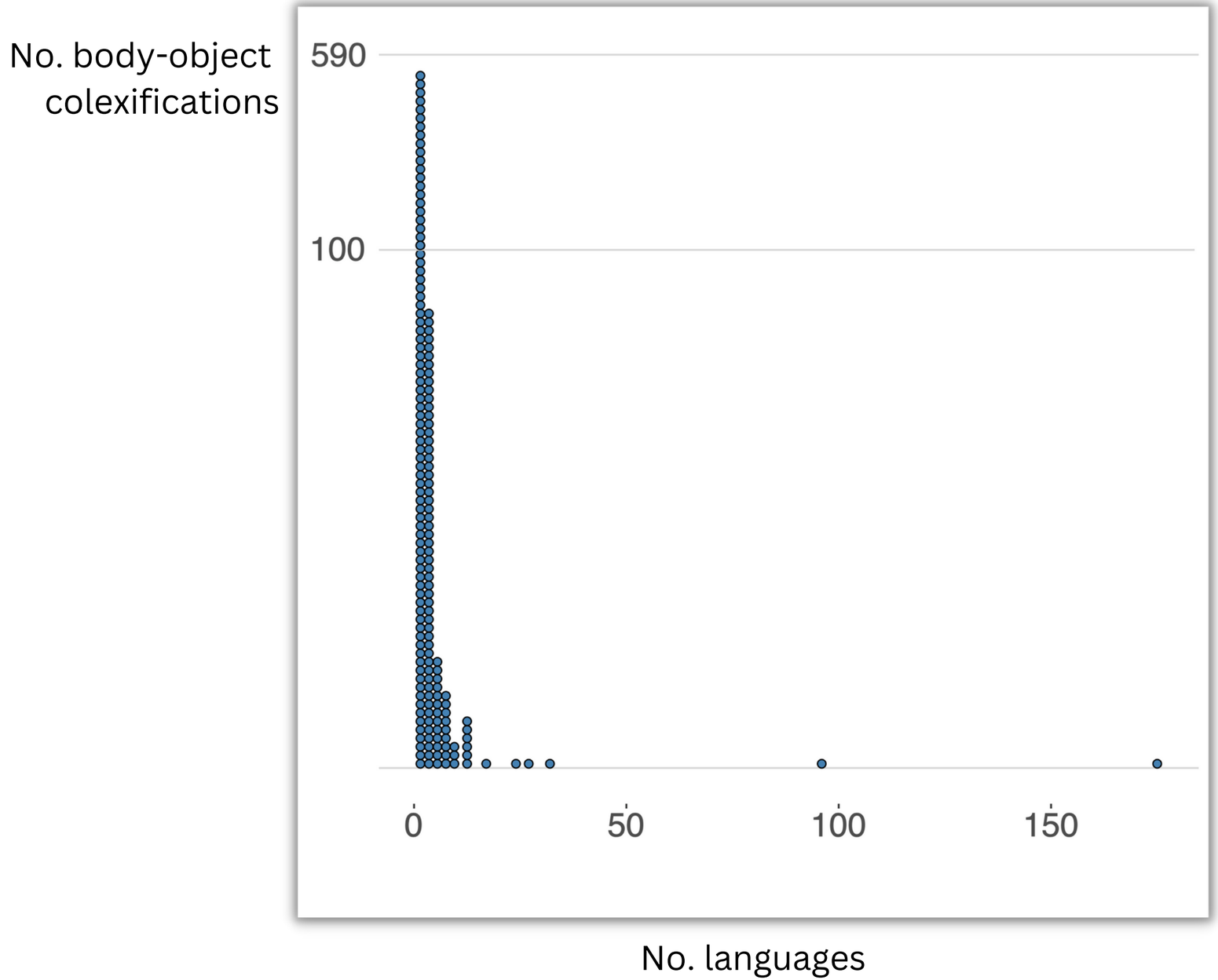
Cite

Rzymski, Christoph and Tresoldi, Tiago et al. 2019. The Database of Cross-Linguistic Colexifications, reproducible analysis of cross-linguistic polysemies. DOI: 10.1038/s41597-019-0341-x

https://clics.clld.org/

Results

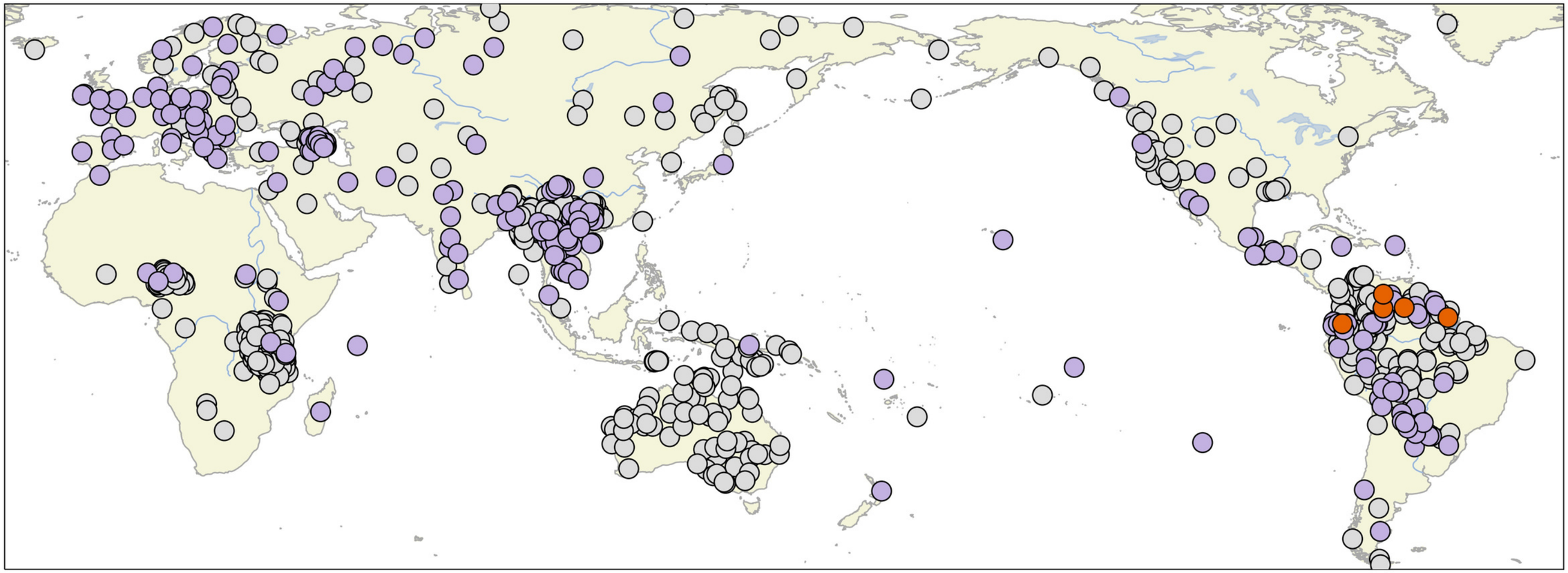
Frequency


No. body-object colexifications
590
100
0
50
100
150
No. languages

Frequency

Body	Concept	Object	Concept	Strict	Loose/Dislexified	N/A
	SKIN		LEATHER	160	155	616
	SKIN		BARK	90	593	248
	TESTICLES		EGG	31	443	457
	HEAD		TOP	24	388	519
	NECK		COLLAR	24	279	628
	BUTTOCKS		BOTTOM	15	260	656
	HEART		FIREWOOD	13	590	328
	SKIN		SHELL	13	323	595
	FINGERNAIL		NAILTOOL	12	299	620
	INTESTINES		SAUSAGE	12	140	779
	LIP		EDGE	12	301	618
	MOUTH		EDGE	12	312	607
	BODY		TREETRUNK	9	302	620
	TENDON		ROOT	9	207	715
	SHOULDERBLADE		SPADE	8	168	755

contact



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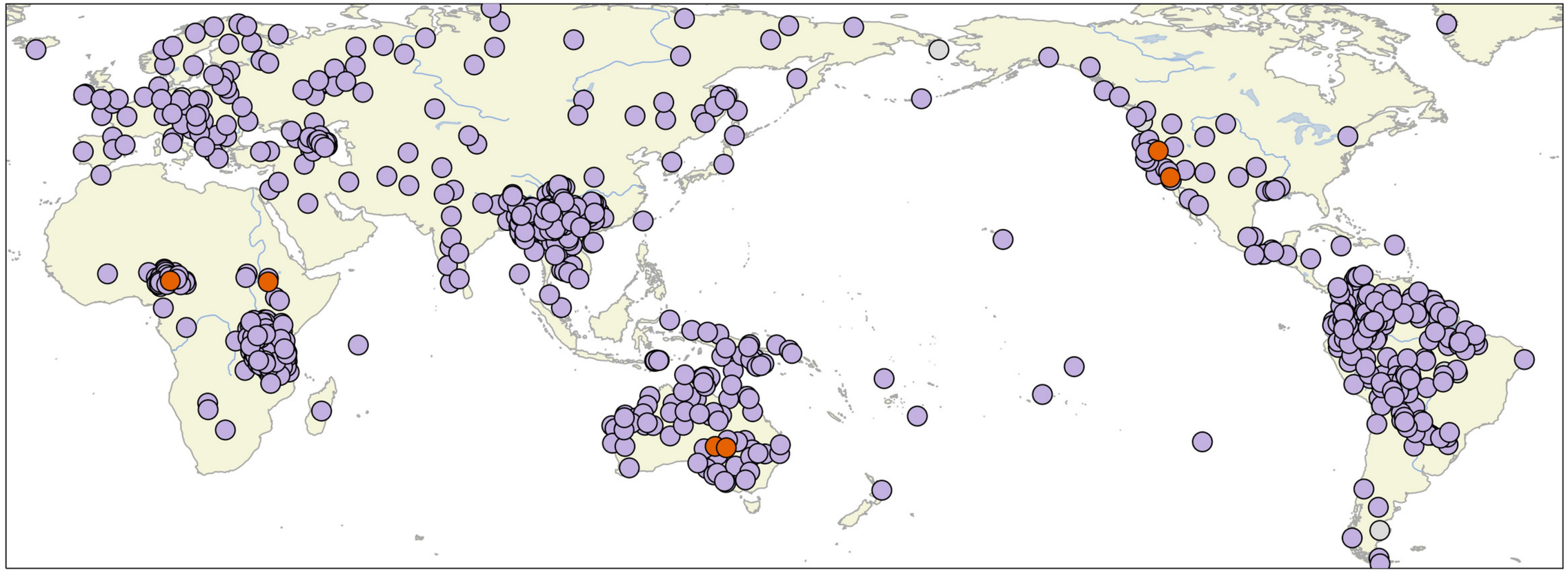

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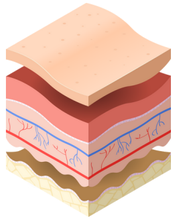

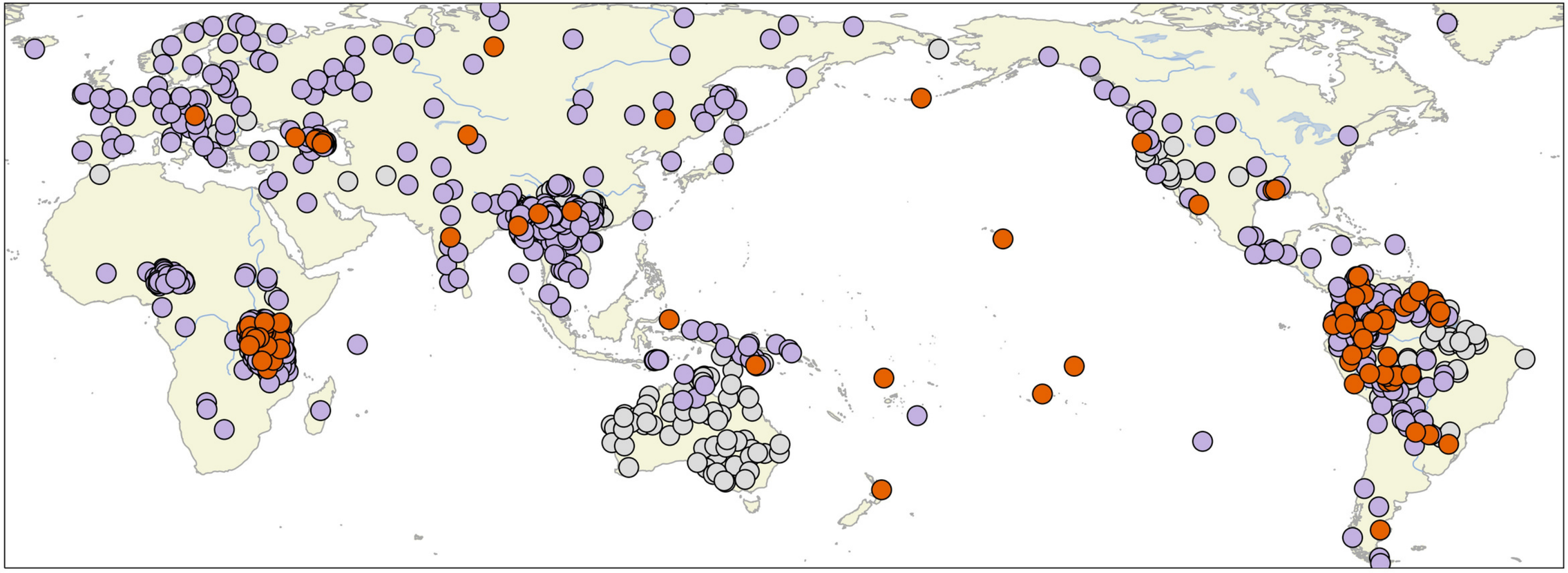

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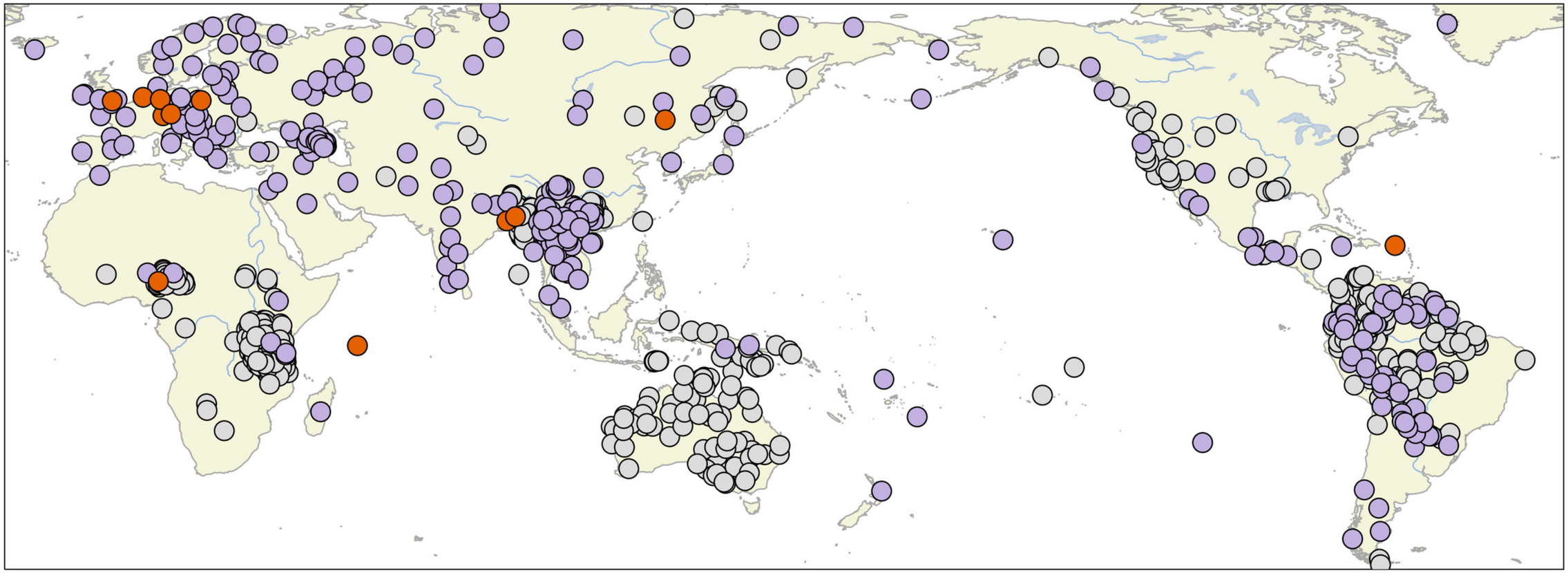

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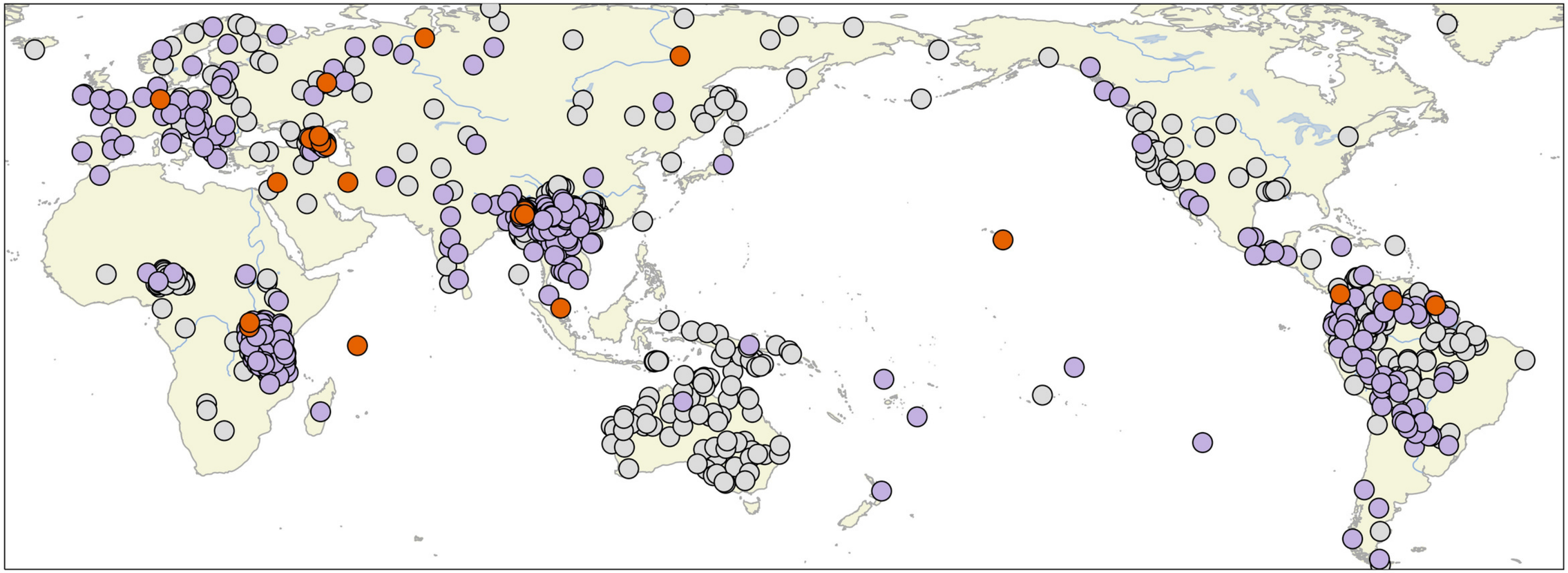
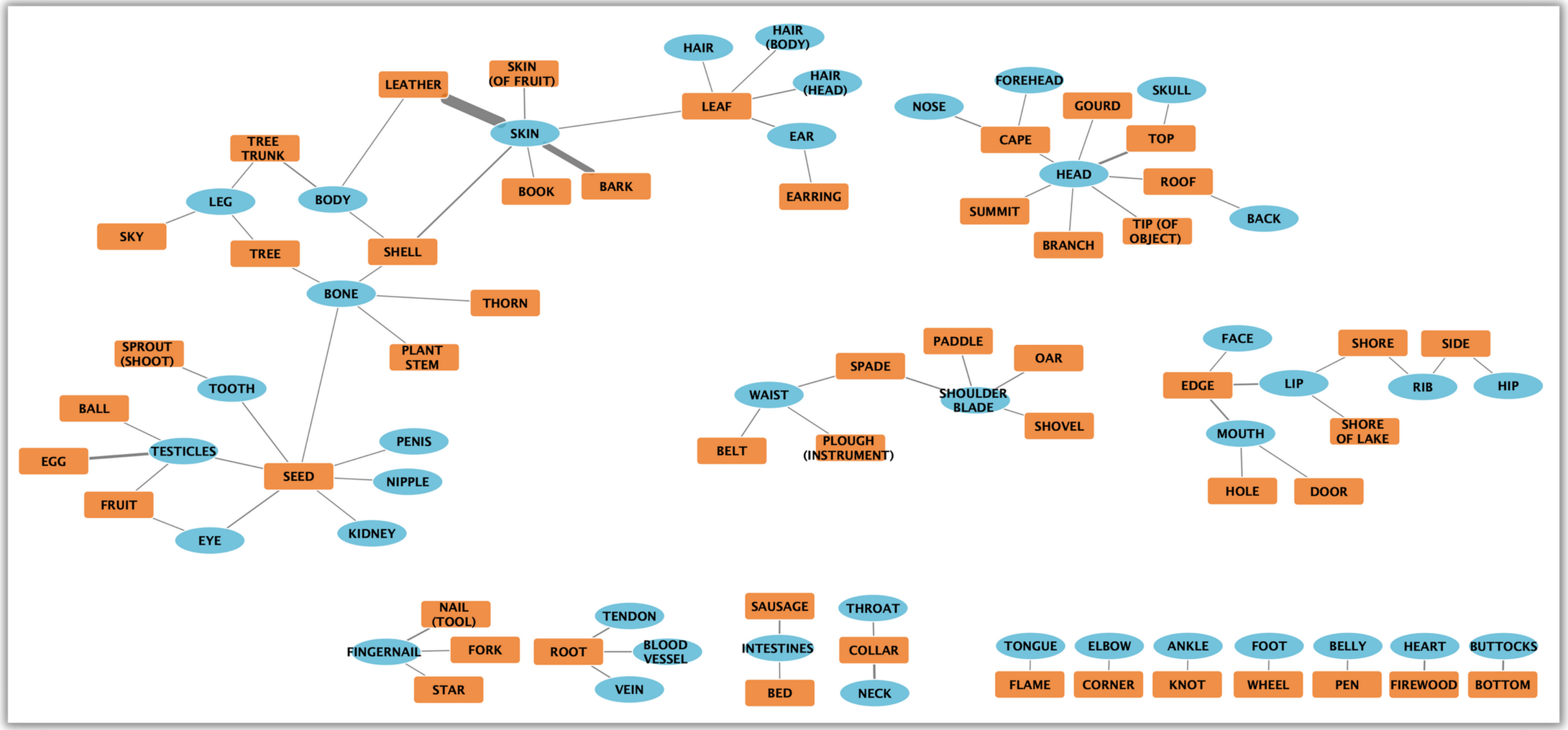
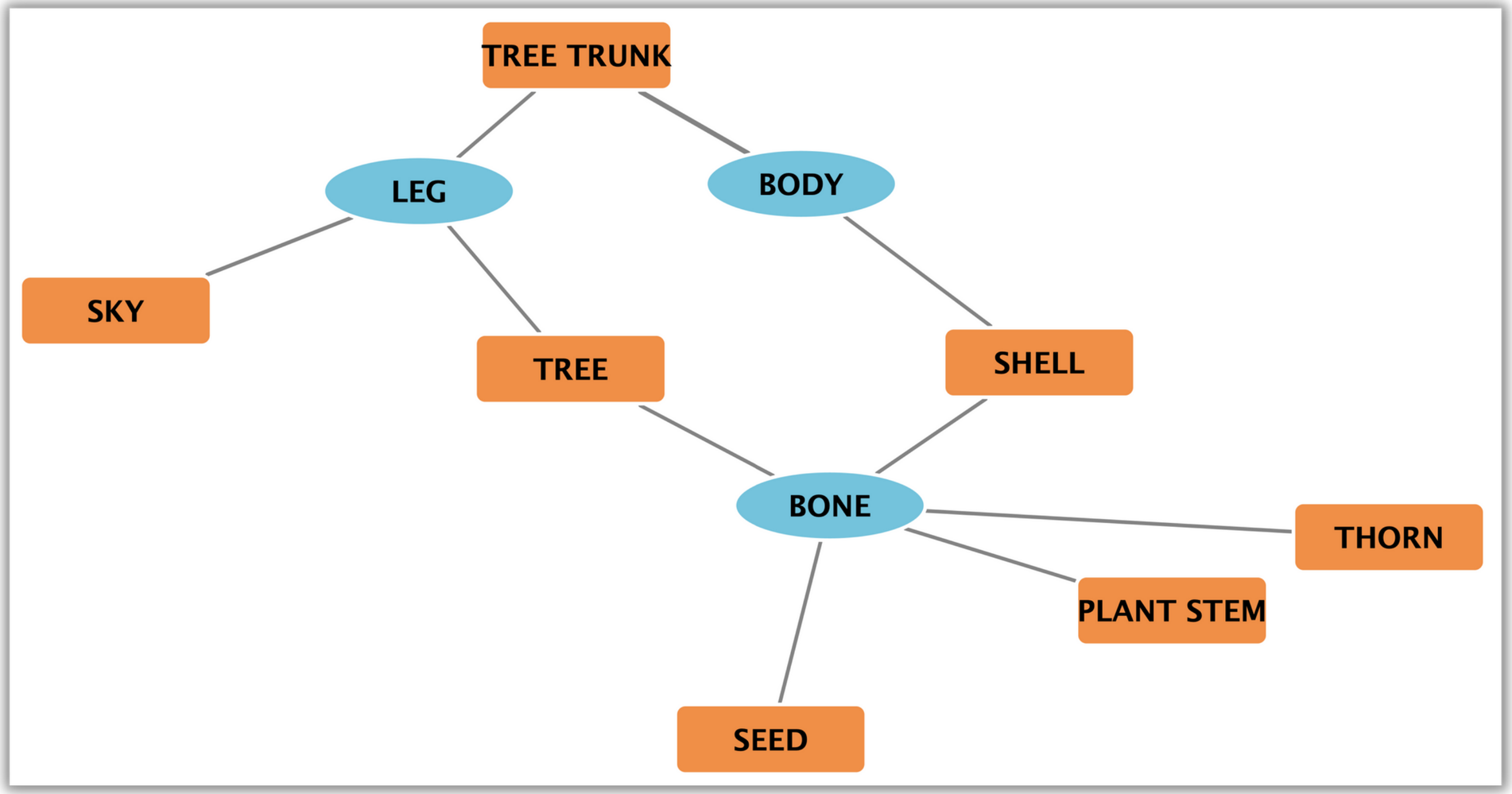


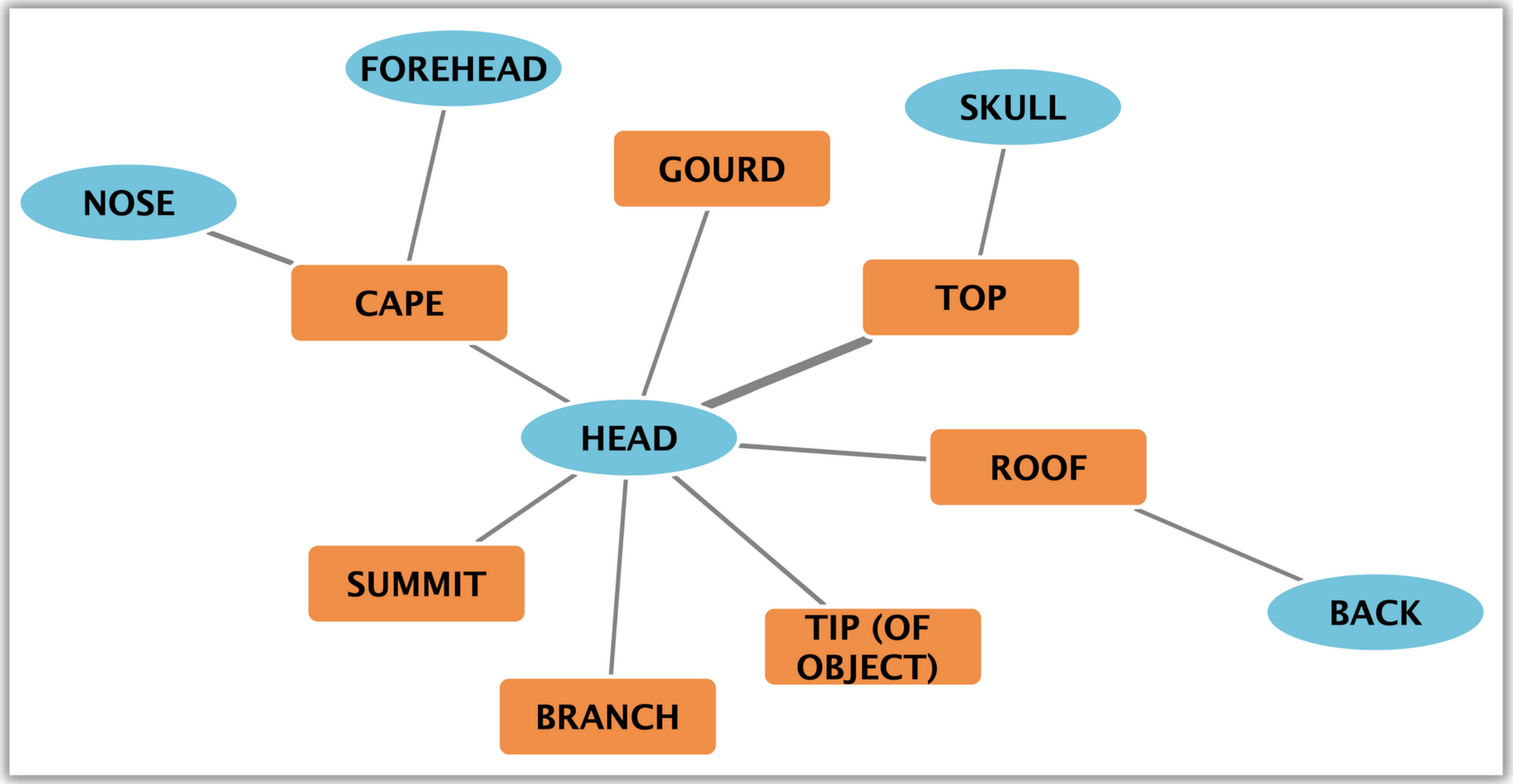
cognition


HAIR
HAIR (BODY)
HAIR (HEAD)
LEAF
EAR
EARRING
LEATHER
SKIN (OF FRUIT)
SKIN
BOOK
BARK
TREE TRUNK
LEG
BODY
SKY
TREE
SHELL
BONE
THORN
PLANT STEM
SPROUT (SHOOT)
TOOTH
BALL
TESTICLES
EGG
FRUIT
EYE
SEED
PENIS
NIPPLE
KIDNEY
FOREHEAD
NOSE
CAPE
GOURD
SKULL
TOP
HEAD
ROOF
SUMMIT
BRANCH
TIP (OF OBJECT)
BACK
PADDLE
SPADE
OAR
WAIST
SHOULDER BLADE
SHOVEL
BELT
PLOUGH (INSTRUMENT)
FACE
SHORE
SIDE
EDGE
LIP
RIB
HIP
SHORE OF LAKE
MOUTH
HOLE
DOOR
NAIL (TOOL)
FINGERNAIL
FORK
STAR
TENDON
ROOT
BLOOD VESSEL
VEIN
SAUSAGE
INTESTINES
BED
THROAT
COLLAR
NECK
TONGUE
FLAME
ELBOW
CORNER
ANKLE
KNOT
FOOT
WHEEL
BELLY
PEN
HEART
FIREWOOD
BUTTOCKS
BOTTOM

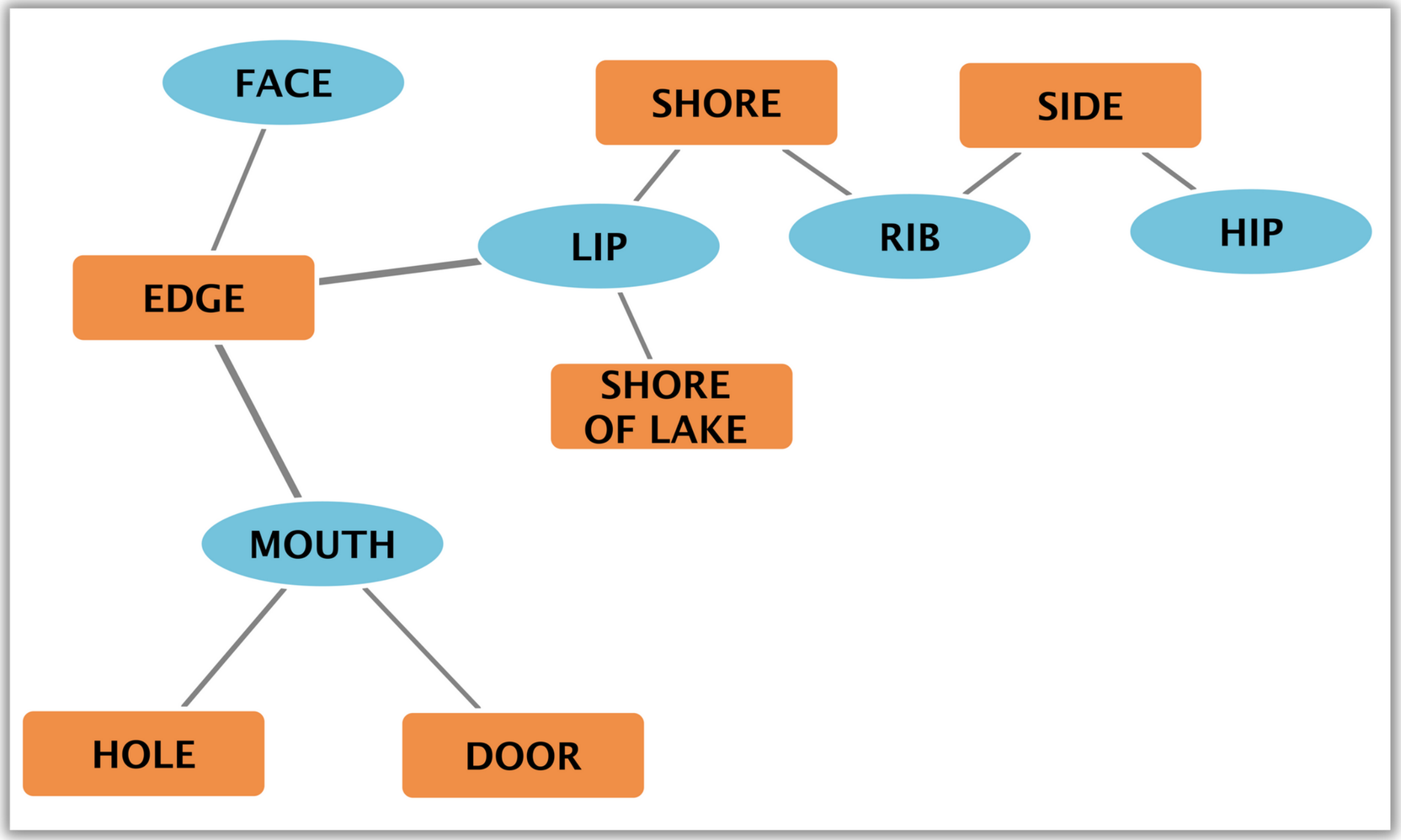
cognition


TREE TRUNK
LEG
BODY
SKY
TREE
SHELL
BONE
THORN
PLANT STEM
SEED

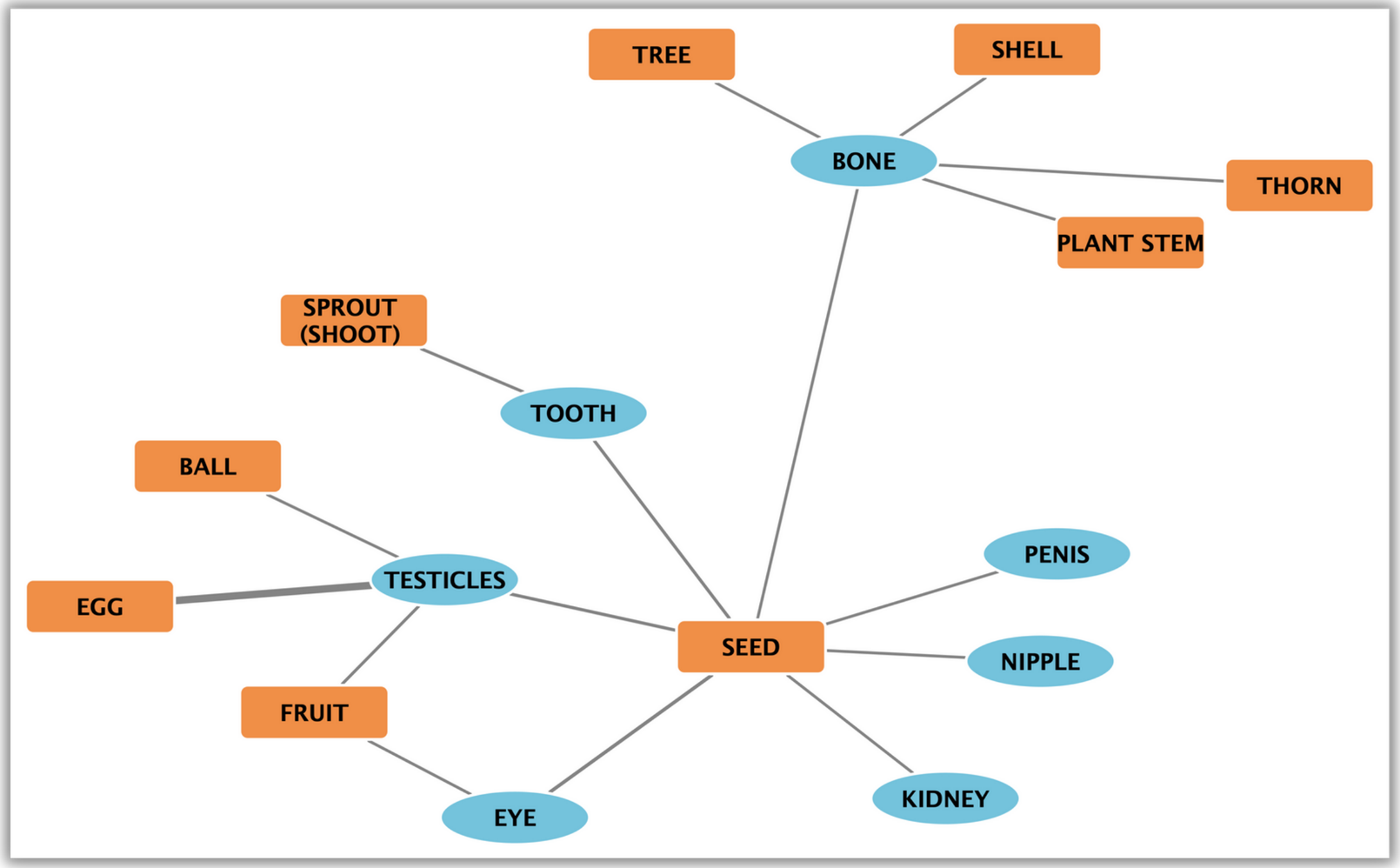
cognition


FOREHEAD
SKULL
GOURD
NOSE
CAPE
TOP
HEAD
ROOF
SUMMIT
BACK
TIP (OF OBJECT)
BRANCH

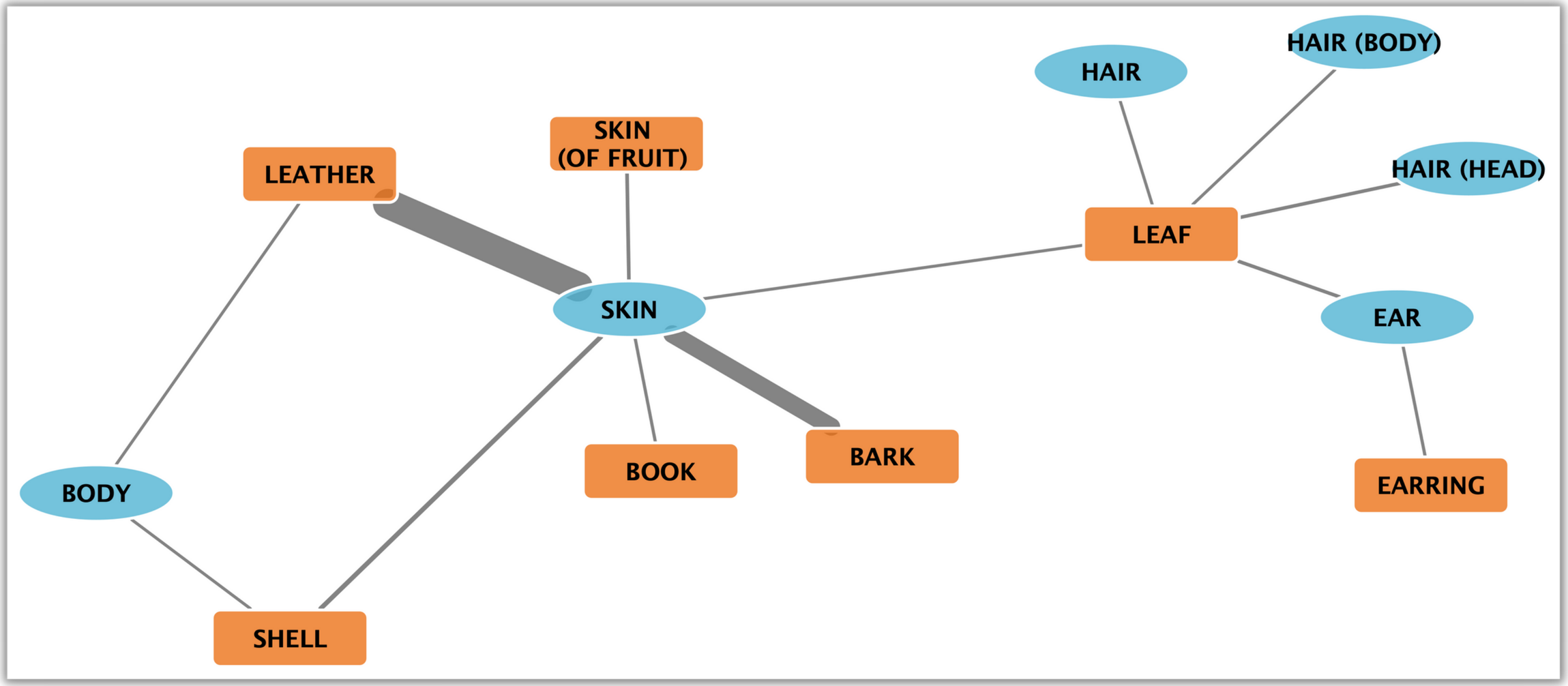
cognition


FACE
SHORE
SIDE
LIP
RIB
HIP
EDGE
SHORE
OF LAKE
MOUTH
HOLE
DOOR

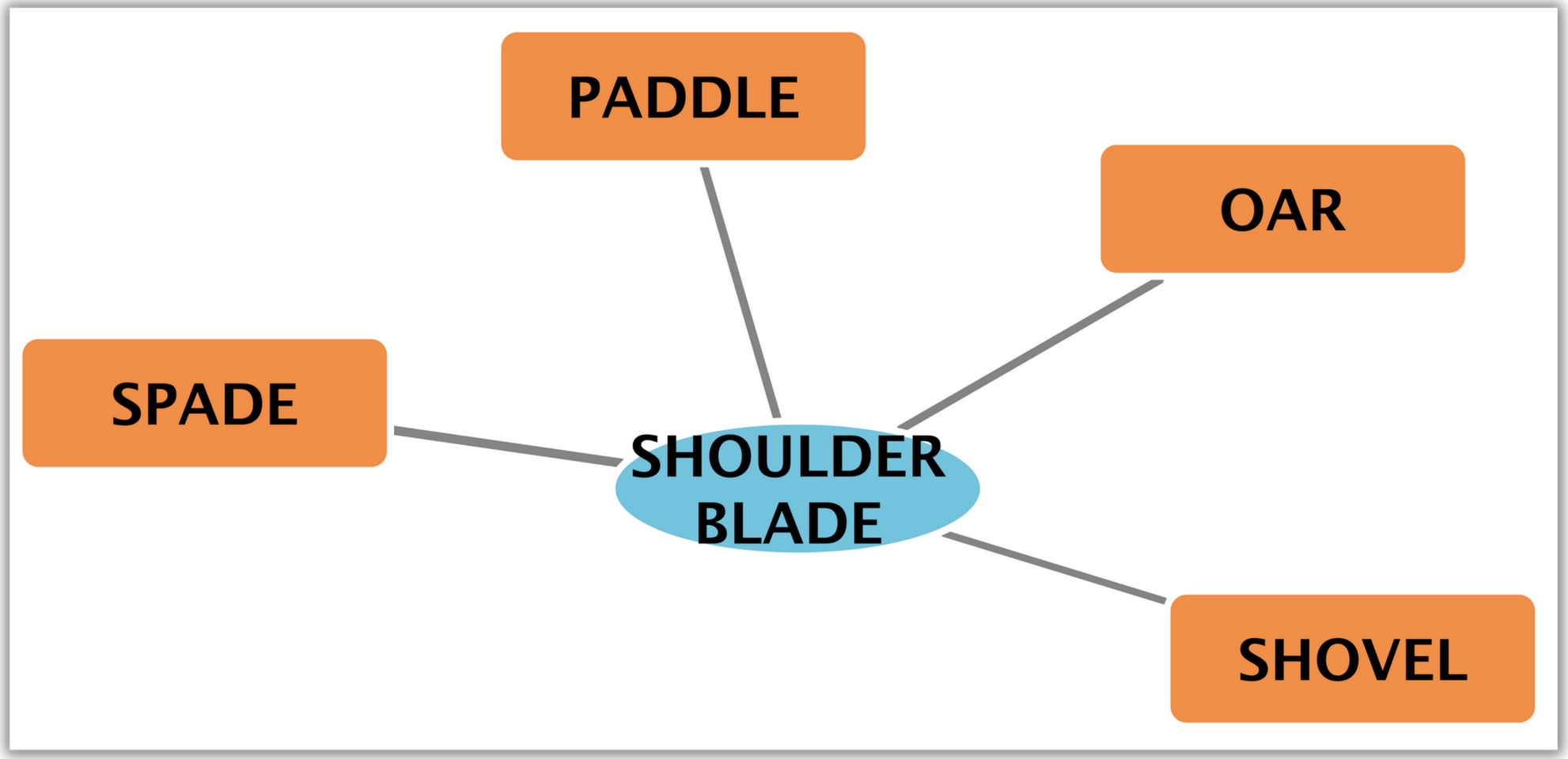
cognition


TREE
SHELL
BONE
THORN
PLANT STEM
SPROUT (SHOOT)
TOOTH
BALL
TESTICLES
EGG
PENIS
SEED
NIPPLE
FRUIT
KIDNEY
EYE

cognition


HAIR
HAIR (BODY)
HAIR (HEAD)
LEAF
EAR
EARRING
SKIN
(OF FRUIT)
LEATHER
SKIN
BOOK
BARK
BODY
SHELL

cognition



Summary

- With a larger language sample, some areal patterns occur more widespread and new global patterns emerge.

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- Terms for the body parts SKIN and BONE colexify with objects as frequently as HEAD, although they are not identified as salient.

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Happy to hear your thoughts!

@AnnikaTjuka

annika_tjuka@eva.mpg.de

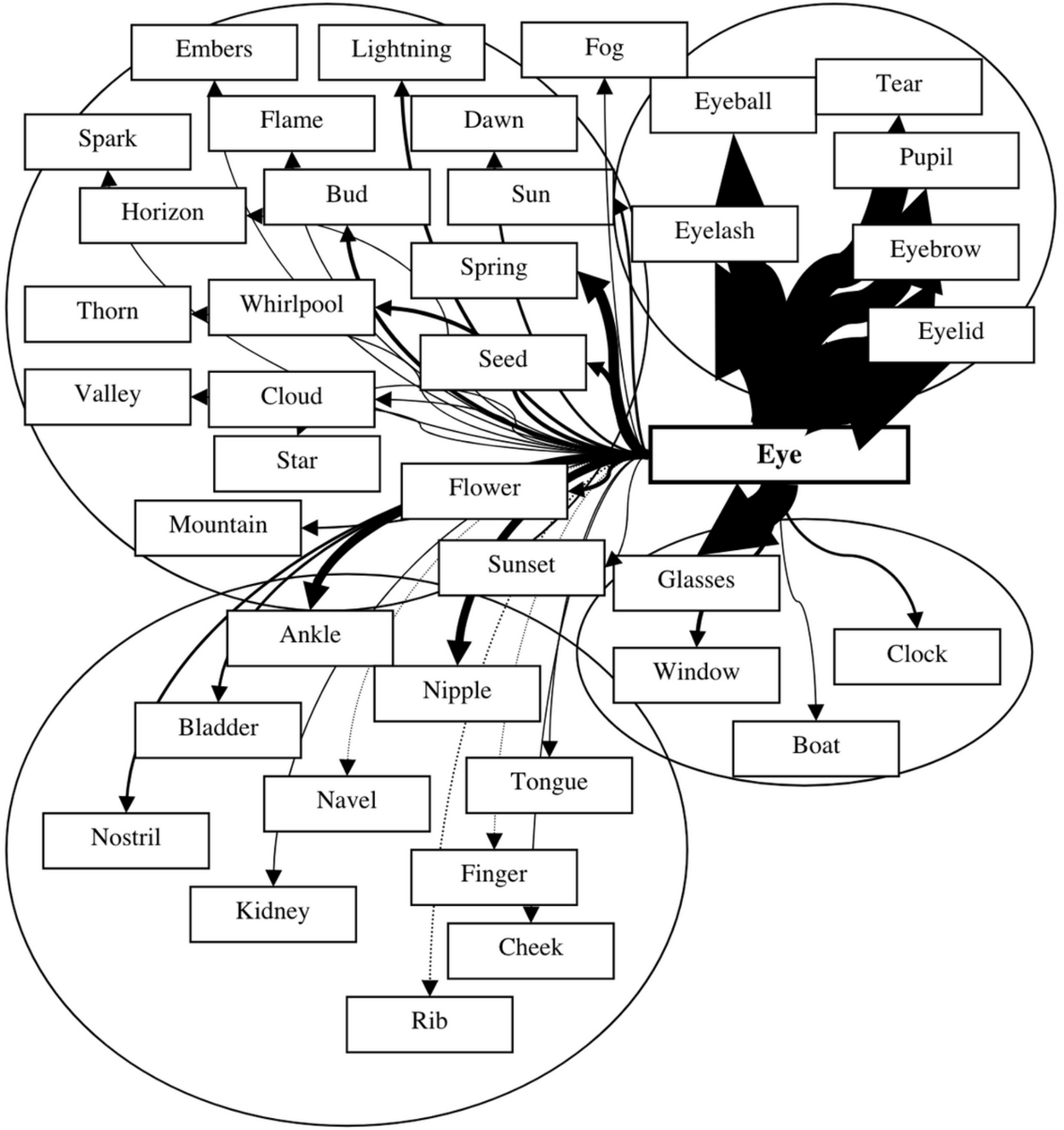

fig. 9.: lexico-semantic associations for the 'eye'

(Urban 2012)

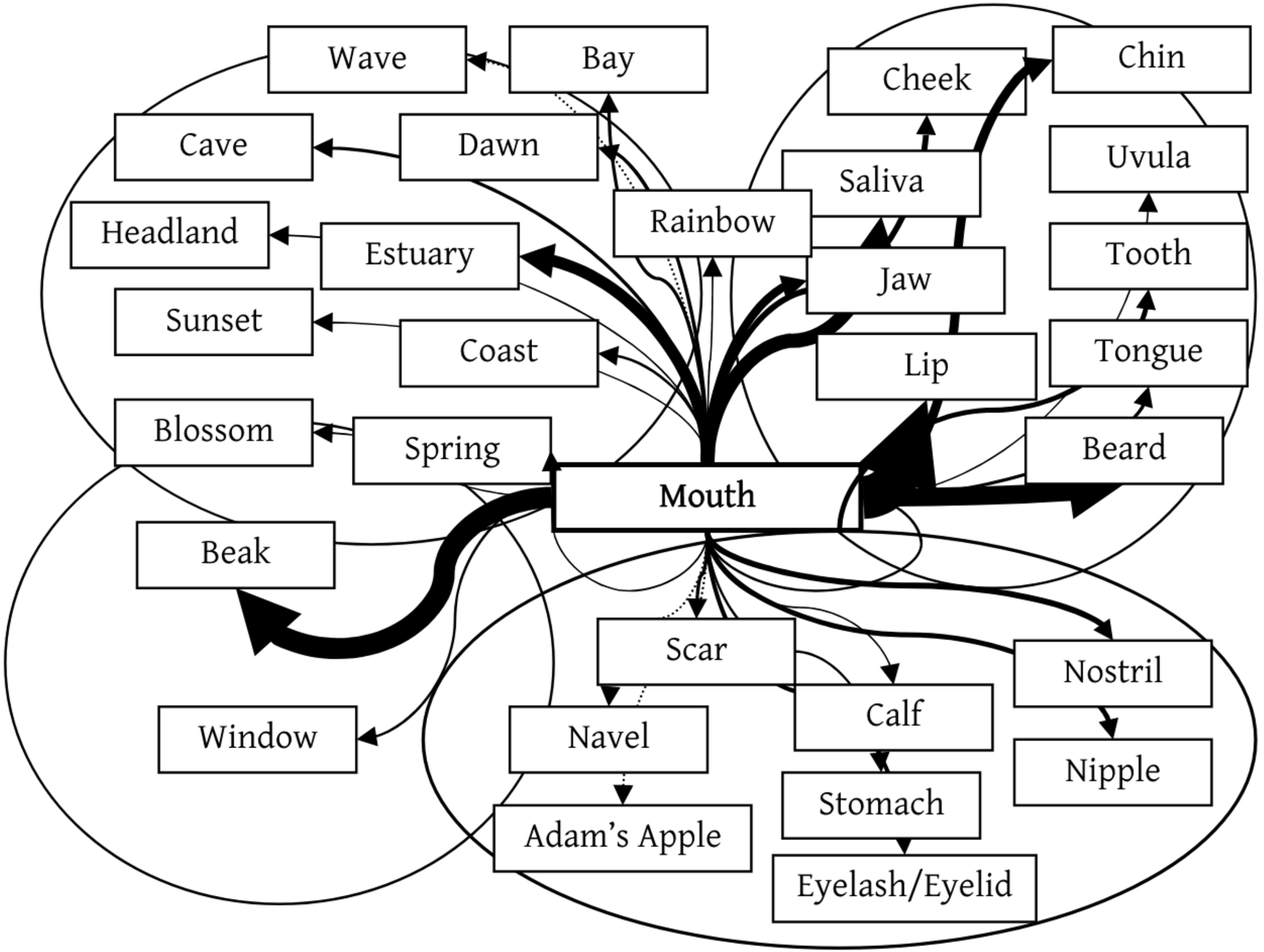

fig. 10.: semantic associations for 'mouth'

(Urban 2012)