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Study  
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Results  
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Conclusions  
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Appendix  
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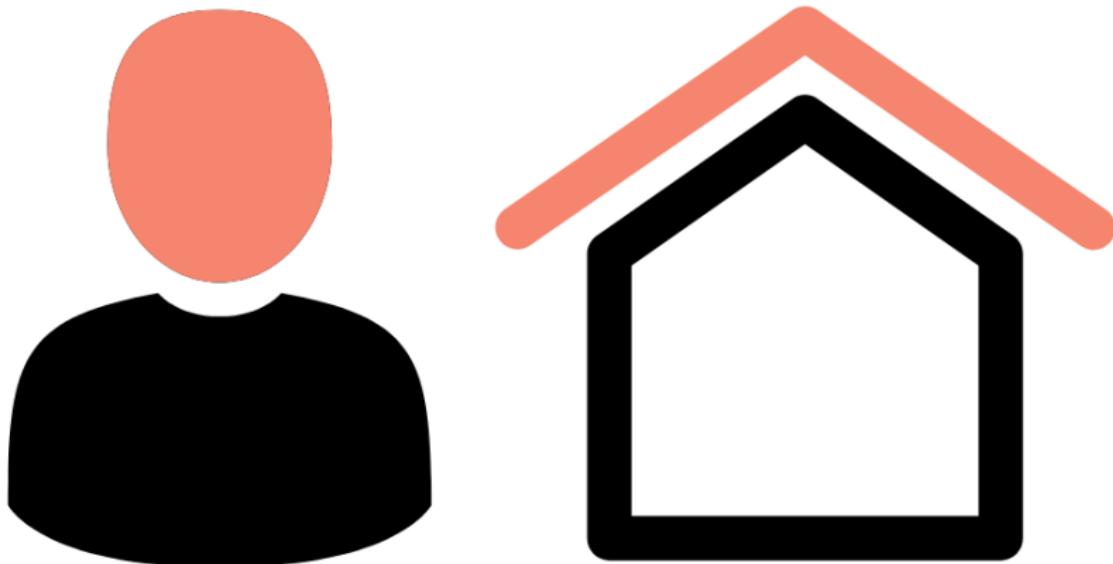
# Using body part terms for objects across languages: Frequency, patterns and analogies

Annika Tjuka

Max Planck Institute for Evolutionary Anthropology

Semantic Shifts Summer School 2022

## Body-object colexifications



**khon** (Burmese)

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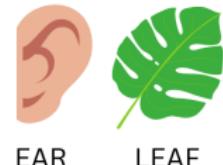
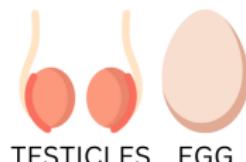
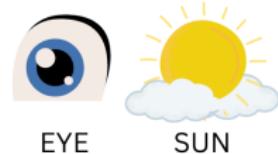
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- **Areal patterns of specific colexifications appear** (e.g., Schapper, San Roque & Hendery 2016; Gast & Koptjevskaja-Tamm, 2019).

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- Areal patterns of specific colexifications appear (e.g., Schapper, San Roque & Hendery 2016; Gast & Koptjevskaja-Tamm, 2019).
- **Languages can use them systematically** (Levinson 1994).

## Body-object colexifications



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- Question: Do differences in the frequency and distribution of body-object colexifications occur across diverse languages?

## Data

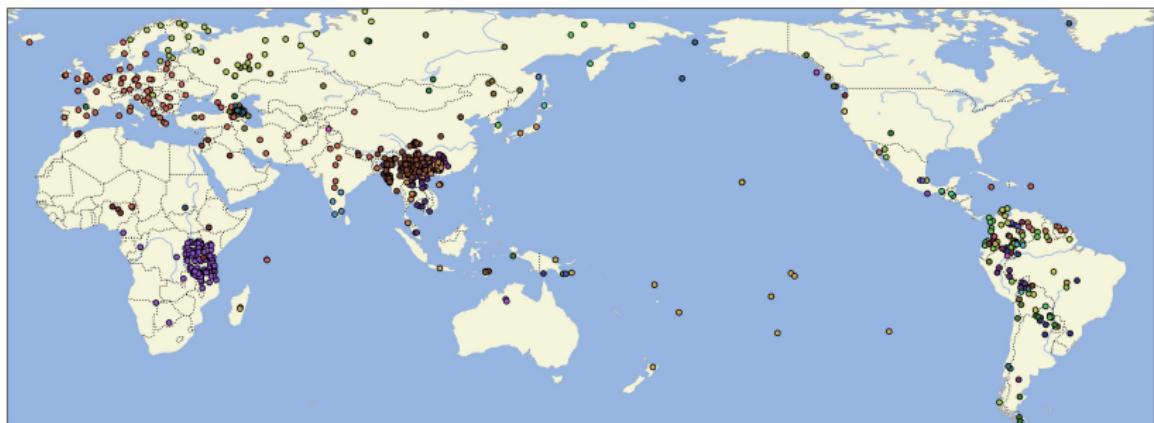
Analysis of 93 body-object colexifications across 997 languages from 87 language families.

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- Data and analysis are available on GitHub:  
[github.com/lexibank/bodyobjectcolexifications](https://github.com/lexibank/bodyobjectcolexifications)
- Visualization of data with CLDFViz Version 0.8.0 (Forkel 2022)

## Language distribution



# Frequency of body-object colexifications

Body	Concept	Object	Concept	Colexified	Not-Colexified	Missing
	SKIN		LEATHER	309	253	435
	SKIN		BARK	128	766	103
	NECK		COLLAR	60	466	471
	TESTICLES		EGG	51	535	411
	HEAD		TOP	47	629	321
	MOUTH		EDGE	28	538	431
	BUTTOCKS		BOTTOM	26	483	488
	LIP		EDGE	22	541	434
	SKIN		SHELL	21	555	421
	INTESTINES		SAUSAGE	19	289	689
	BODY		TREE TRUNK	18	532	447
	FINGERNAIL		NAIL (TOOL)	17	516	464
	NOSE		CAPE	17	215	765
	BLOOD VESSEL		ROOT	15	456	526
	SHOULDERBLADE		SPADE	14	333	650

## Frequency of body-object colexifications

- Most body-object colexifications are not frequent and occur only in 1-2 languages.

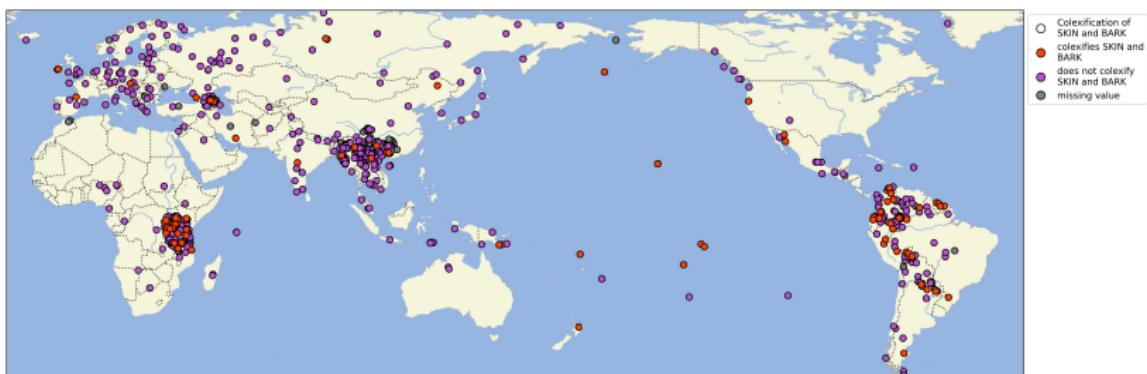
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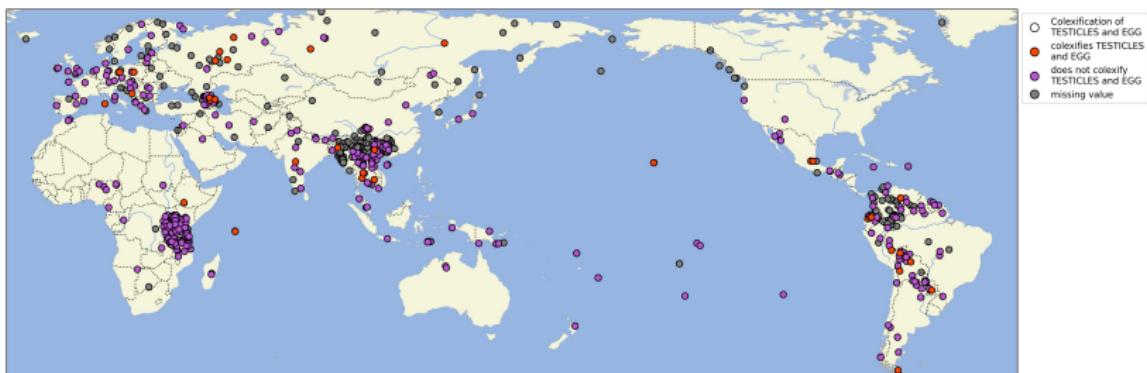
## Frequency of body-object colexifications

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- The body concept SKIN colexifies most frequently across languages.
- Improved data coverage demonstrates that SKIN-BARK is a global instead of an areal pattern.

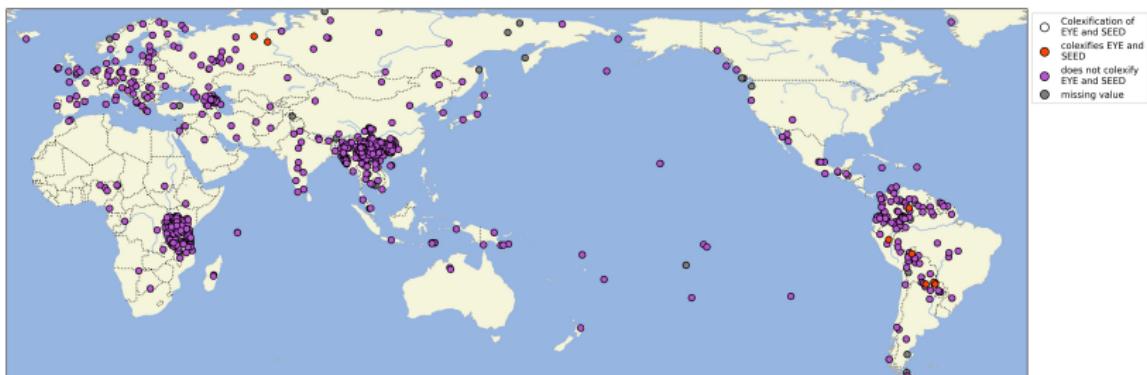
## Global patterns: SKIN-BARK



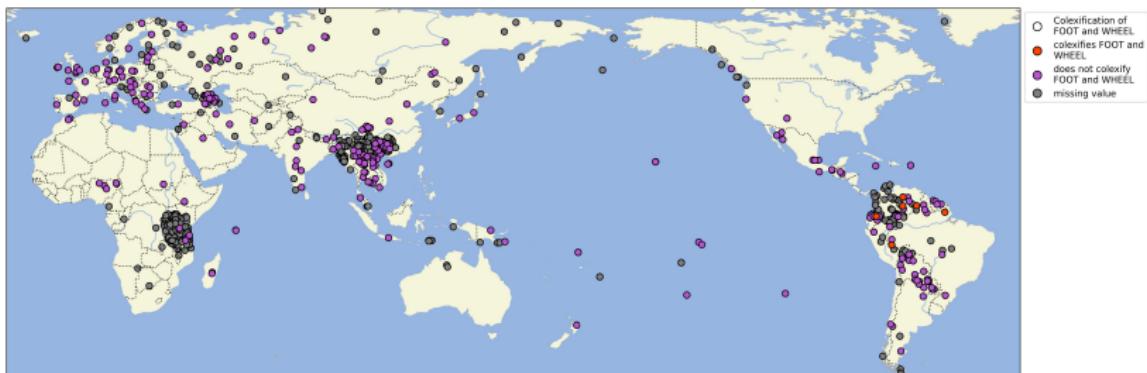
## Global patterns: TESTICLES-EGG



## Areal patterns: EYE-SEED



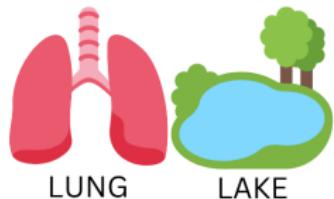
## Areal patterns: FOOT-WHEEL



# Visual analogies

## Shape

- 23 out of 93 body-object colexifications are established due to an analogy with shape.



## Visual analogies

### Space and proximity

- HEAD occurs exclusively in body-object colexifications that are based on an analogy in space instead of round shape.



# Functional analogies

## Function

- The skin's function as a protective external covering of the body leads to the following body-object colexifications:
  - SKIN-BARK, SKIN-SHELL, SKIN-BASKET
- Body parts functioning as openings also occur in body-object colexifications:



MOUTH



HOLE



MOUTH



DOOR



NOSTRIL

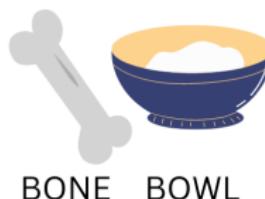
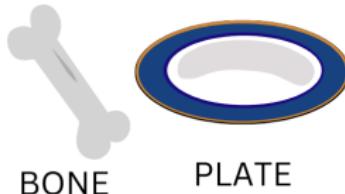


HOLE

# Functional analogies

## Material

- Body-object colexifications based on an analogy involving material mainly include the body concept BONE:



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- Most body-object colexifications occur in diverse languages and only a few areal patterns were found.
- Visual and functional analogies are used to establish body-object colexifications.
- **Body-object colexifications based on visual analogies are most common across languages.**

## Thank you!

If there are any open questions, you can find me here:

[annikatjuka.com](http://annikatjuka.com)

[annika\\_tjuka@eva.mpg.de](mailto:annika_tjuka@eva.mpg.de)

@AnnikaTjuka



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# Appendix

Body-object colexification	Proposed area	Language sample size	Study
LEG-TABLE PART	global global (13 languages)	not specified 13	Ullmann (1963) Tjuka (2019)
FOOT-MOUNTAIN PART	global global (7 languages)	not specified 13	Ullmann (1963) Tjuka (2019)
TESTICLES-EGG	global (21 languages)	81	Brown & Witkowski (1981)
EYE-SEED	global (6 languages)	118	Brown & Witkowski (1983)
EYE-FRUIT	global (4 languages)	118	Brown & Witkowski (1983)
EYE-SUN	Austroasiatic, Tai-Kadai, Austronesian global	214 not specified	Urban (2010) Blust (2011)
FOOT-WHEEL	South American (26 languages)	1220	List et al. (2018)
EAR-LEAF	Eastern Africa, Americas, Australia (39 languages)	221	Gast & Koptjevskaja-Tamm (2019)
SKIN-BARK	South America, Melanesia (14 languages)	221	Gast & Koptjevskaja-Tamm (2019)

# Appendix

**Table 1:** The number of object concepts that are colexified with a particular body concept.

Body concept	No. of colexified object concepts
SKIN	8
BONE	7
EYE	6
HEAD, TESTICLES	5
LEG, NOSE	4
BODY, HAND, MOUTH, SHOULDER BLADE, TOOTH	3
ARM, BACK, BLOOD VESSEL, EAR, FACE, FOOT, FOREHEAD, INTESTINES, LIP, PENIS, RIB, THROAT, WAIST	2
ANKLE, BELLY, BUTTOCKS, ELBOW, FINGER, FINGERNAIL, HAIR, HAIR (HEAD), HEART, HEEL, HIP, LUNG, NECK, NIPPLE, NOSTRIL, SKULL, TEMPLES, TENDON, TONGUE, VEIN	1

