

Implications of ideology and unequal distribution of resources on sign language typology

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Acknowledgements

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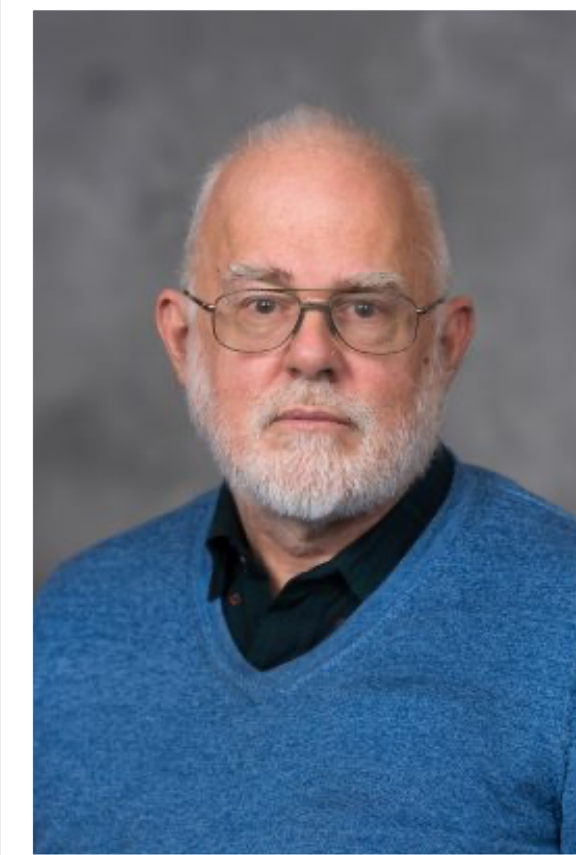


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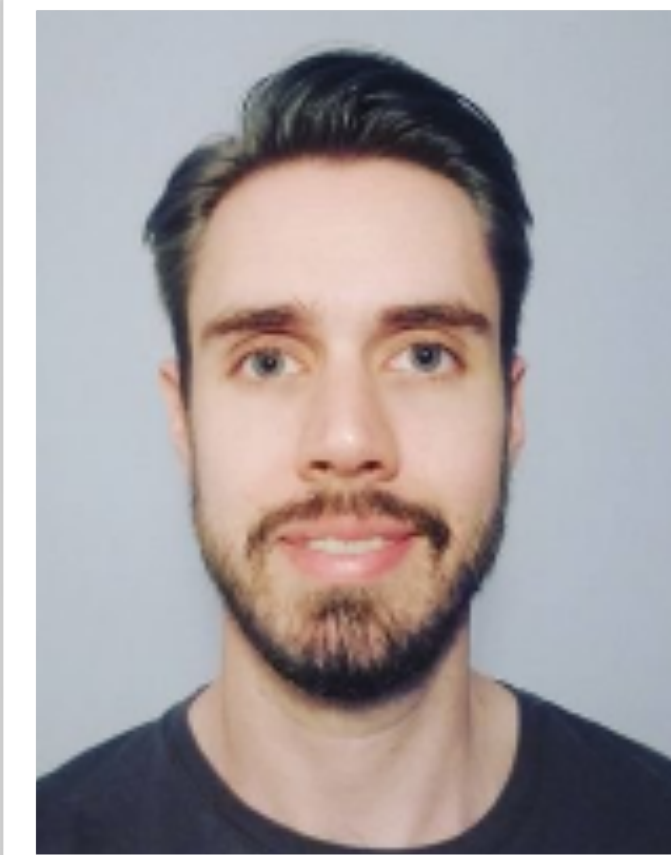


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What are mouthings?

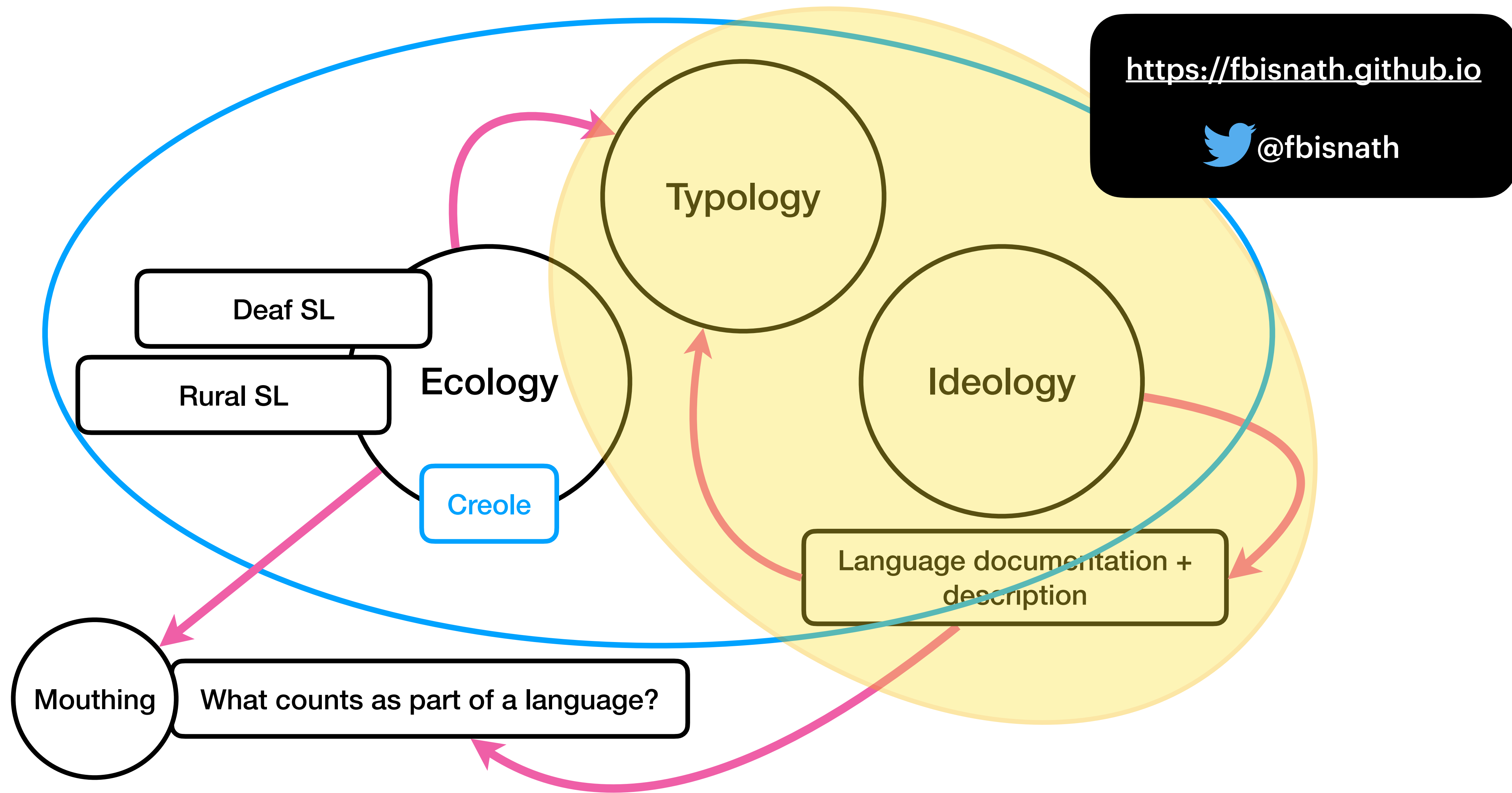
- Movements of the mouth in sign languages (SLs) that correspond with those made when articulating **specific, synchronic** spoken language words
- A multimodal language contact phenomenon



Online Dictionary of New Zealand Sign Language

Overview

- Background
 - This project
 - Sign language typology
 - The relationship between linguistic typology and language documentation and description
- Documentation inequalities and sign language typology
- Documentation and description of mouthing constructions in sign languages



Some kinds of language groups

Grouped by:

- **modality** e.g. signed, spoken, tactile
- **form** e.g. analytic, synthetic, ergative-absolutive, nominative-accusative etc.
- **genealogy** e.g. Indo-European, Niger-Congo, LSFic
- **socio-historical** e.g. creoles
- etc.

Sign language typology

Deaf SL

- Congregation of deaf people in urban centers at deaf schools and clubs
- Larger non-signing hearing population
- Deaf people born into hearing non-signing families

Rural SL

- Isolated areas of developing countries
- Hearing population able to sign/communicate with deaf people
- High incidence of congenital deafness

Prototypes

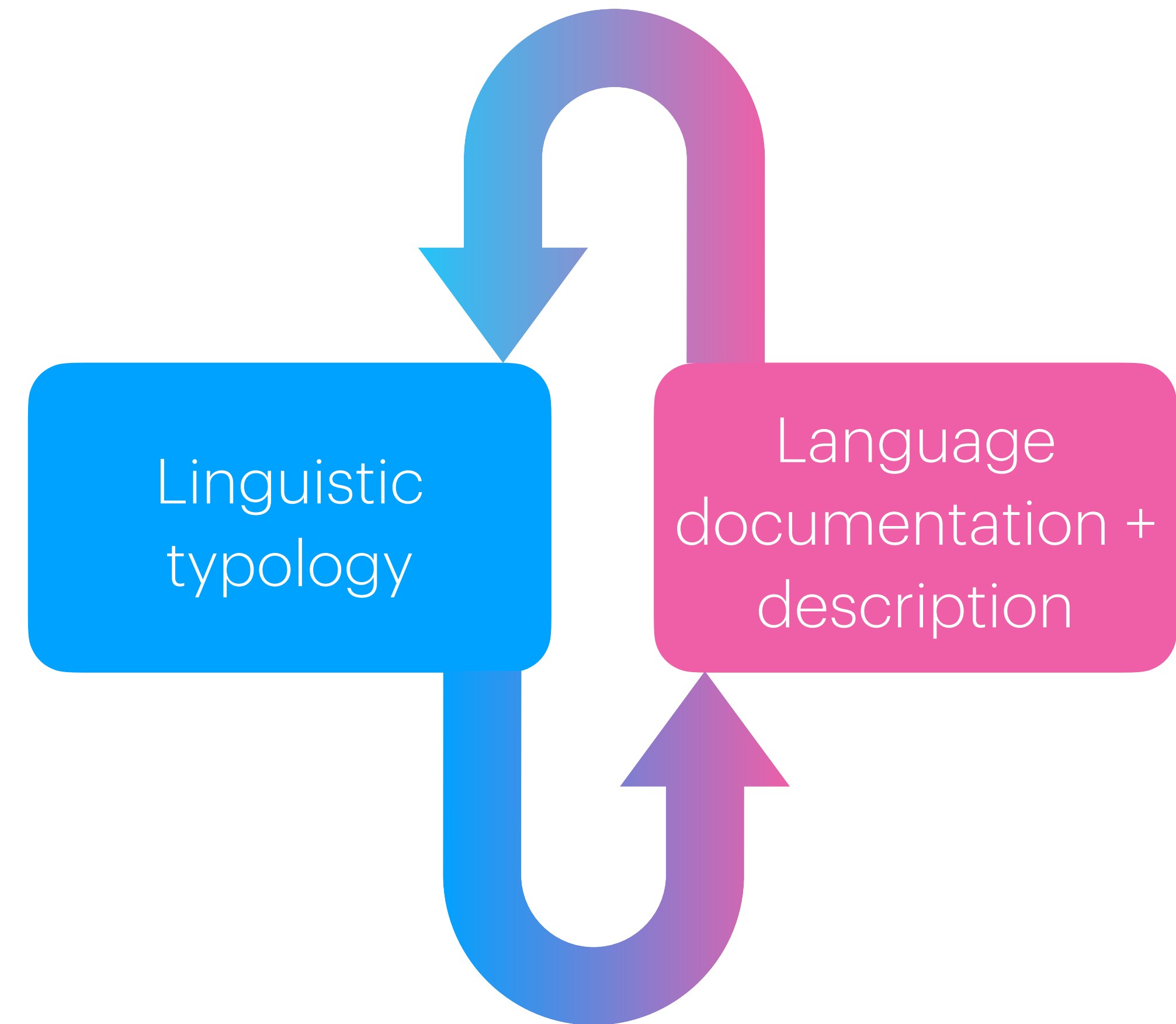
- Best-exemplar (Rosch 1973):
 - members have a family resemblance and can be more or less like a prototype
 - an abstraction of the most typical member
- First specimen (Mufwene 2000):
 - the creole that was **studied first or most i.e. Atlantic Creoles**
 - cautions against conflating the two

references
language
documentation
and description

Documentation & Description

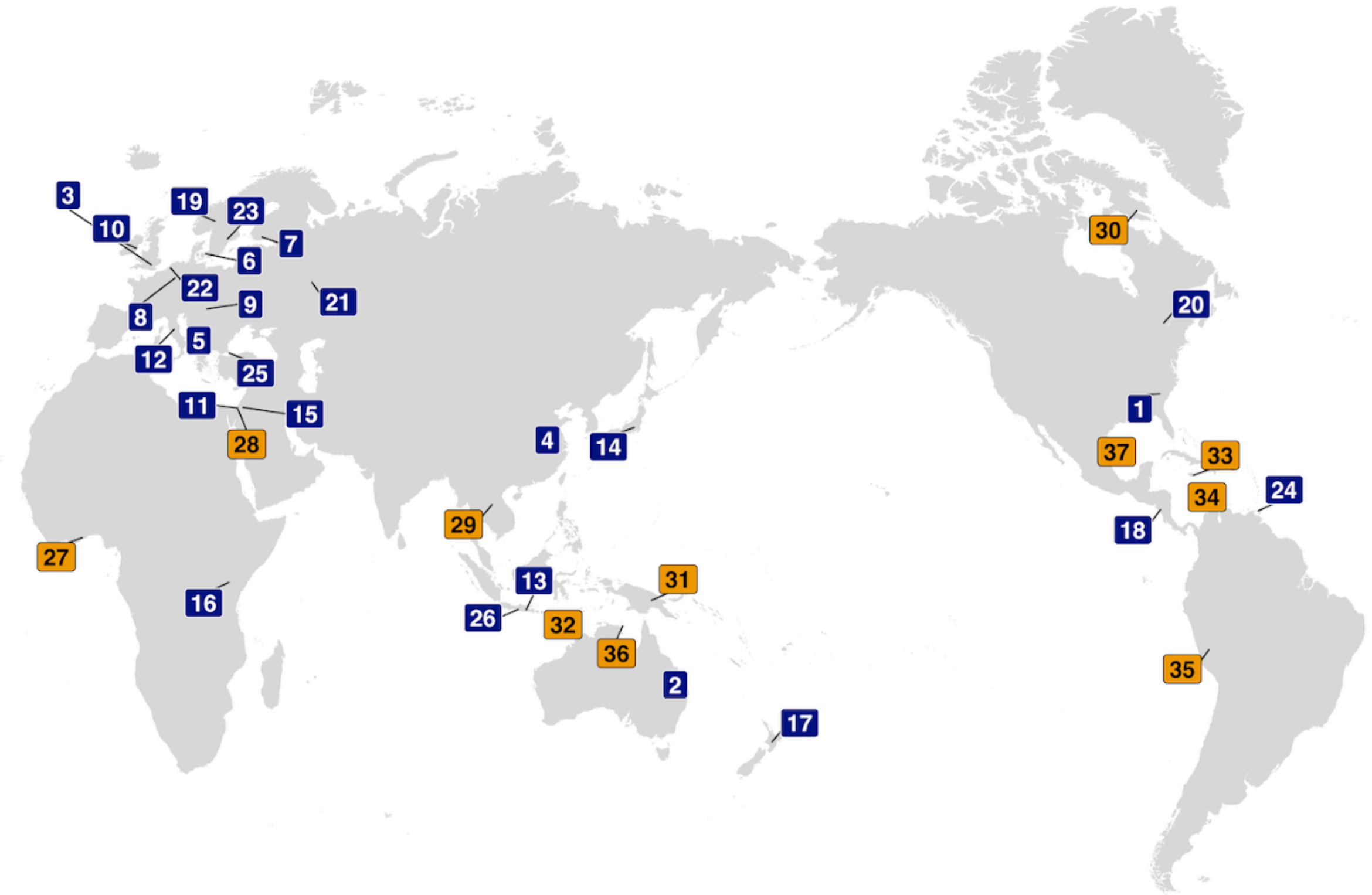
(Epps 2010; Himmelman 2016)

- Documentation: determining the type of data to collect, methods, processing and representing data
- Description: representation of patterns underlying data, production of grammars and dictionaries
- **Documentation and description are inseparable**



Method

- Identified sample of 37 signed languages (26 deaf, 11 rural)
- Proportions reflect those in Glottolog 4.4 (Hammarström et al. 2021)



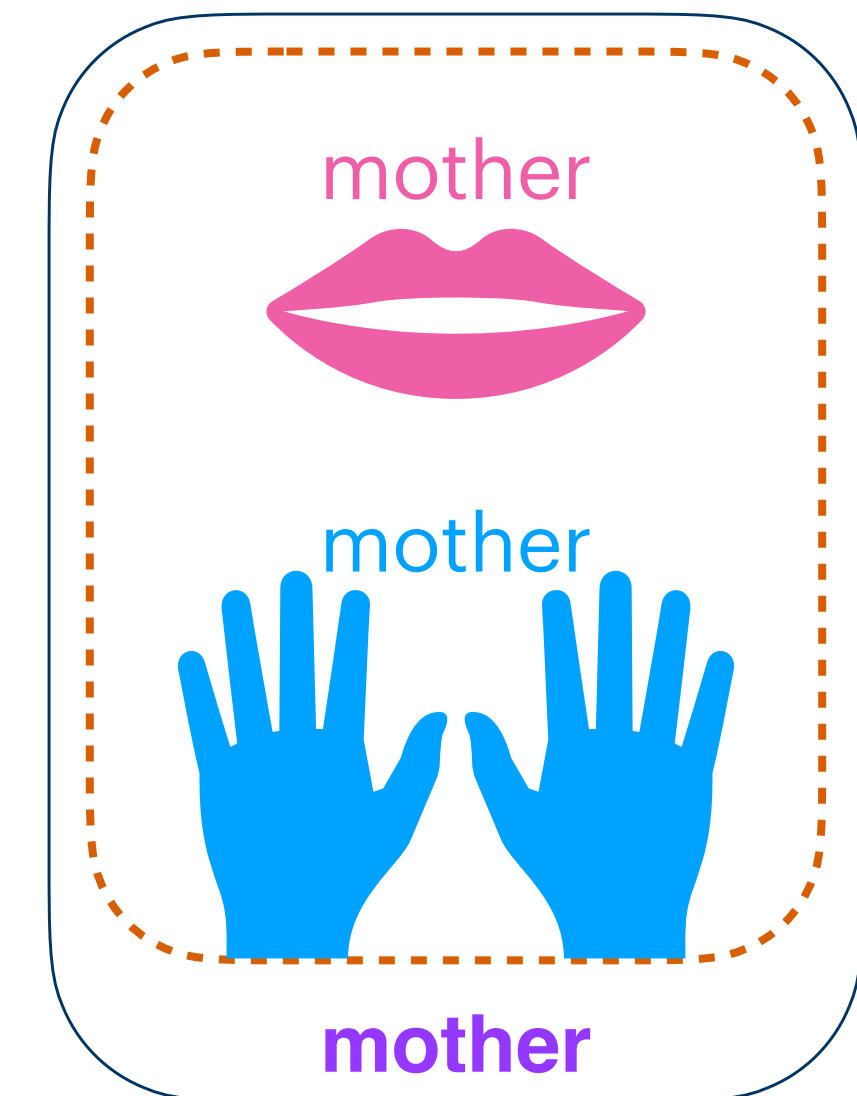
1. American SL, 2. Auslan, 3. British SL, 4. Chinese SL, 5. Croatian SL, 6. Danish SL, 7. Finnish SL, 8. German SL, 9. Hungarian SL, 10. Irish SL, 11. Israeli SL, 12. Italian SL, 13. Jakarta SL (BISINDO), 14. Japanese SL, 15. Jordanian SL, 16. Kenyan SL, 17. New Zealand SL, 18. Nicaraguan SL, 19. Norwegian SL, 20. Québec SL, 21. Russian SL, 22. SL of the Netherlands, 23. Swedish SL, 24. Trinidad & Tobago SL, 25. Turkish SL, 26. Yogyakarta SL (BISINDO), 27. Adamorobe SL, 28. Al-Sayyid Bedouin SL, 29. Ban Khor SL, 30. Inuit SL, 31. Kailge SL, 32. Kata Kolok, 33. Konchri Sain, 34. Providence Island SL, 35. Sivia SL, 36. Yolngu SL, 37. Yucatec Maya SLs

Method

- Counted **presence** of 4 mouthing constructions (cxn)
- A mouthing cxn is a pairing of a mouthing and a manual sign or a mouthing that has meaning

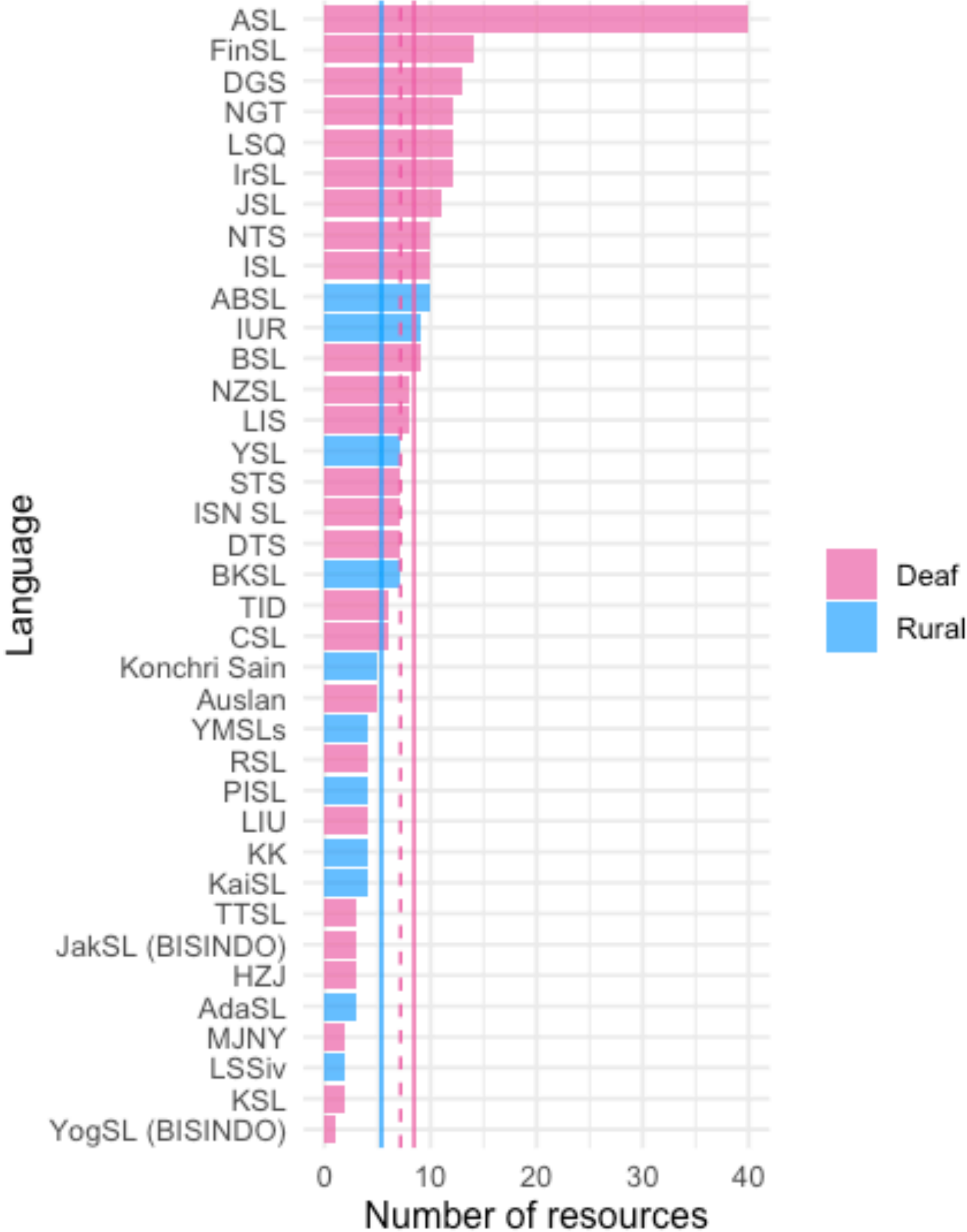


Online Dictionary of New Zealand Sign Language



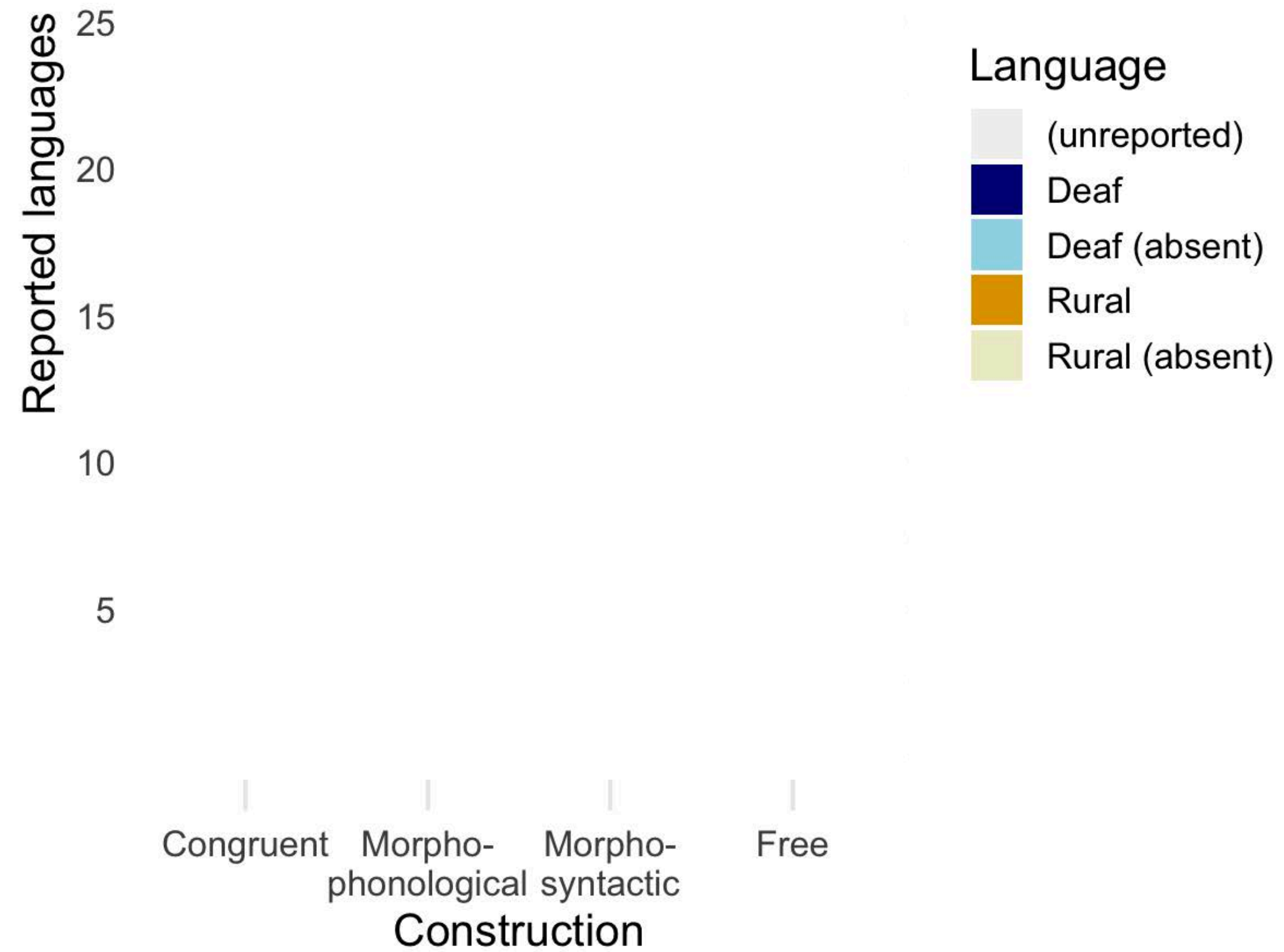
Documentation Inequalities

MED type	Description
long grammar	Grammar with more than 300 pages
grammar	Grammar with less than 300 pages
grammar sketch	Grammar sketch
phonology/text	New Testament, Text, Phonology, (typological) Study Of A Specific Feature or Dictionary
Wordlist or less	Wordlist or less



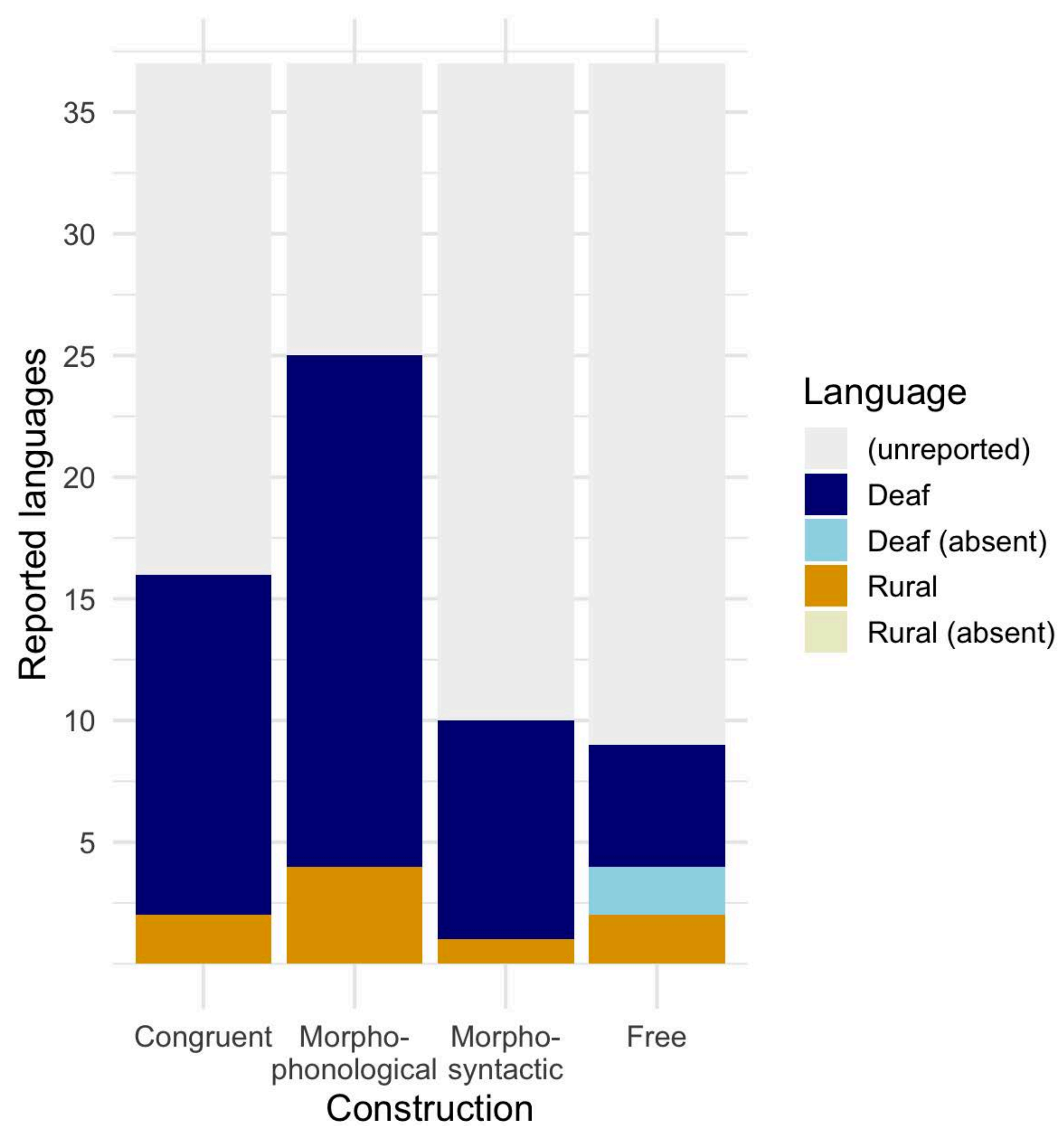
Data from Glottolog 4.4 (Hammarström et al. 2021)

Results Overview



Results Overview

- More unreported than reported
- More reporting in deaf vs. rural SLs
- Only cxn reported absent is free mouthing



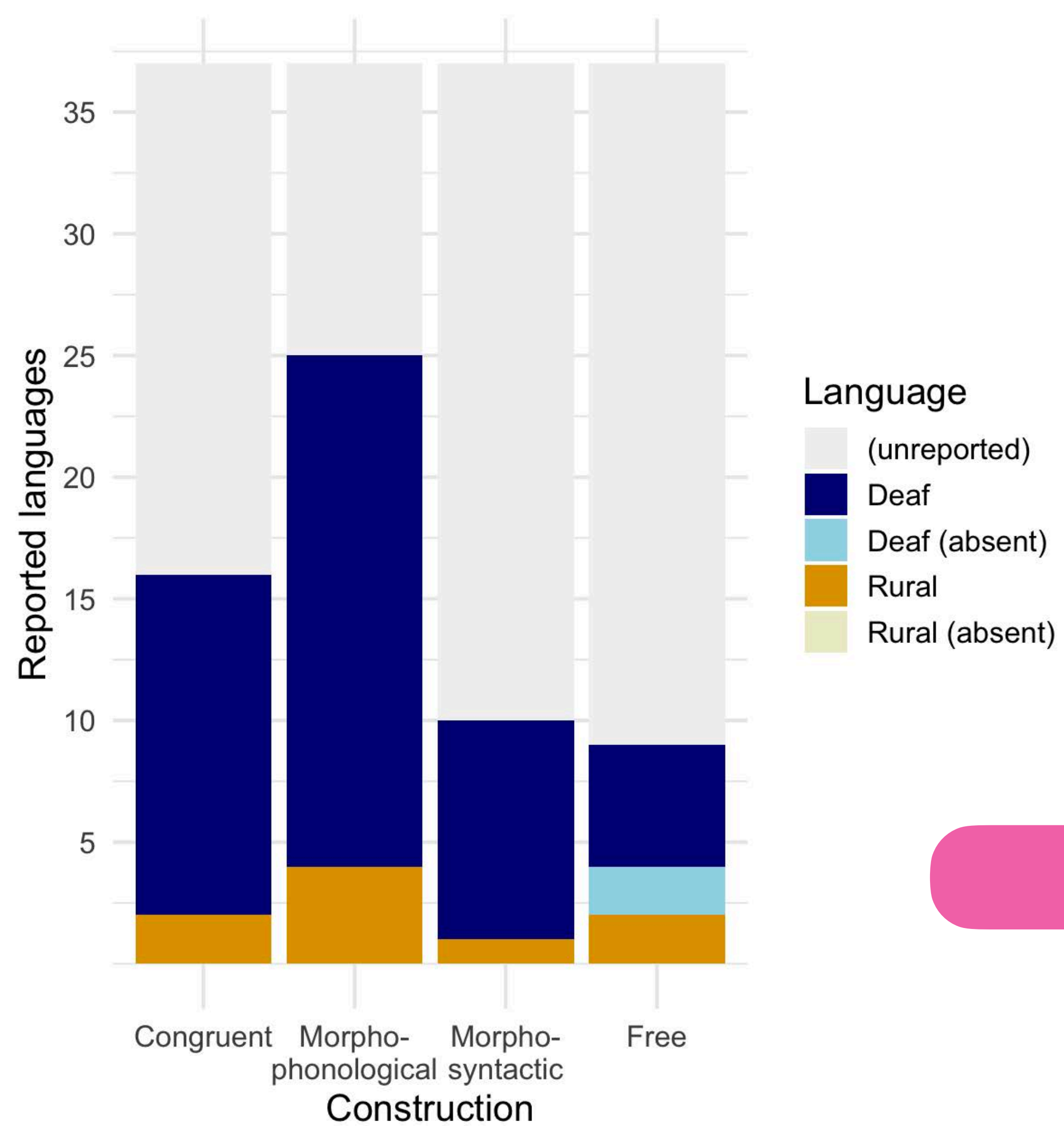
Documentation Inequality

Summary

- There is more documentation of deaf SLs than rural SLs
 - American SL resources outnumber all other SLs
- SL types are based on socio-cultural profiles
 - These profiles may be **systematically** associated with inequalities in documentation
- From the Uniformitarian perspective on creoles:
 - Socio-X groupings do not necessarily translate into structural profiles
 - **Be cautious when differentiating among groups, or creating dichotomies, when one group is systematically disadvantaged and/or under-documented**

Results Overview

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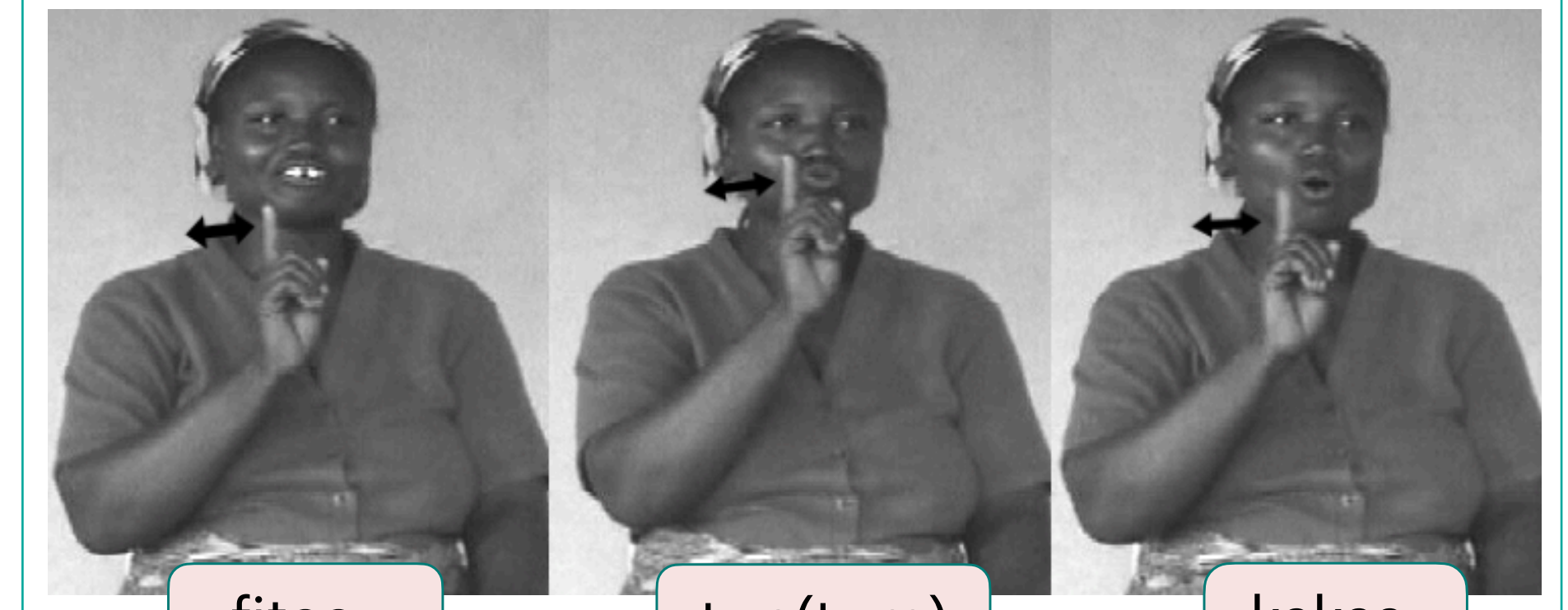
morpho-phon > congruent > morpho-syn > free

Morpho-phonological Mouthing

Definition

- 3 kinds: **polysemous***, initialized, homophones
- Manual sign is the same across a group with mouthing identifying a specific type

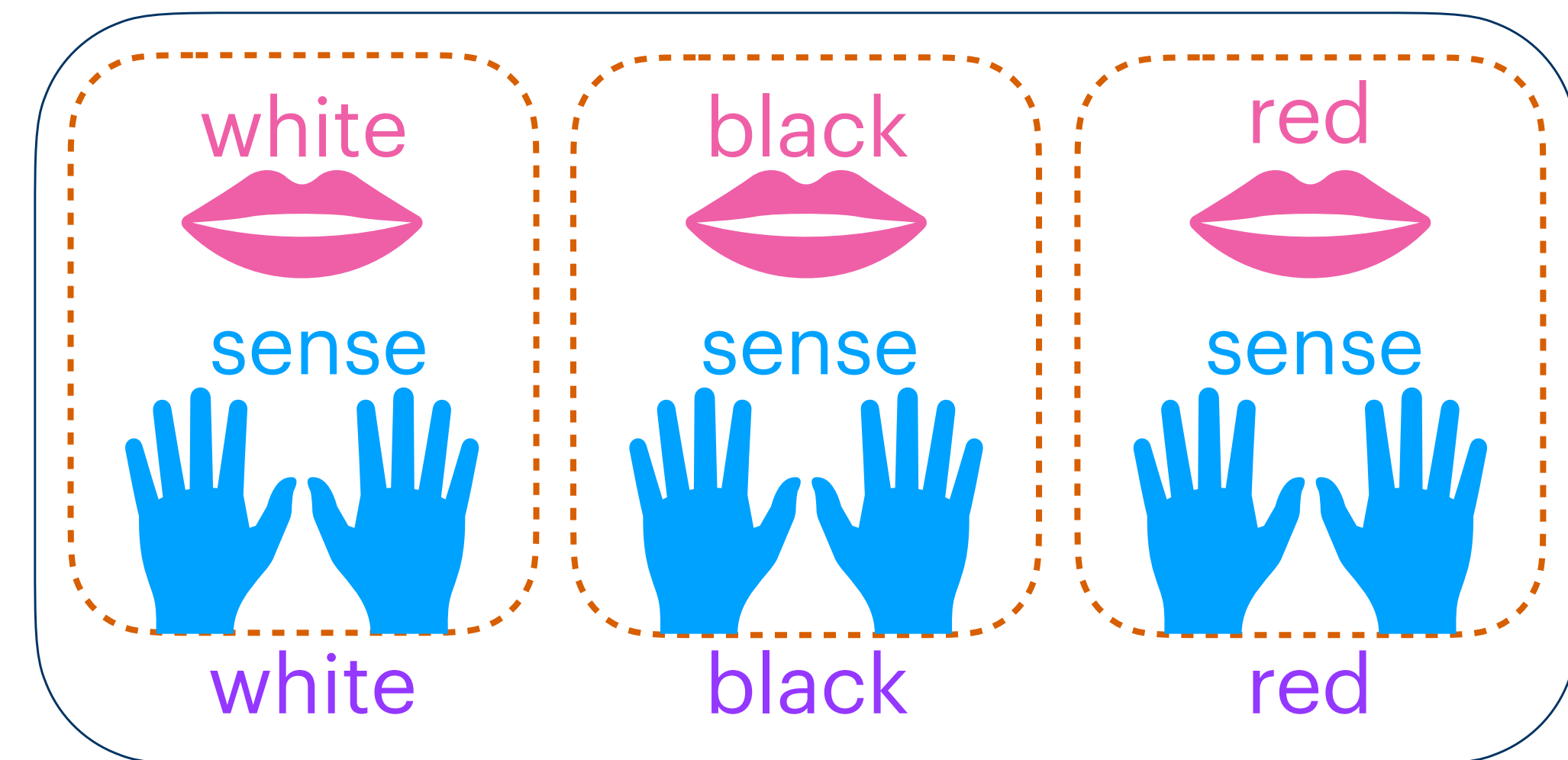
AdaSL (Nyst 2007)



fitaa
'white'

tun(tum)
'black'

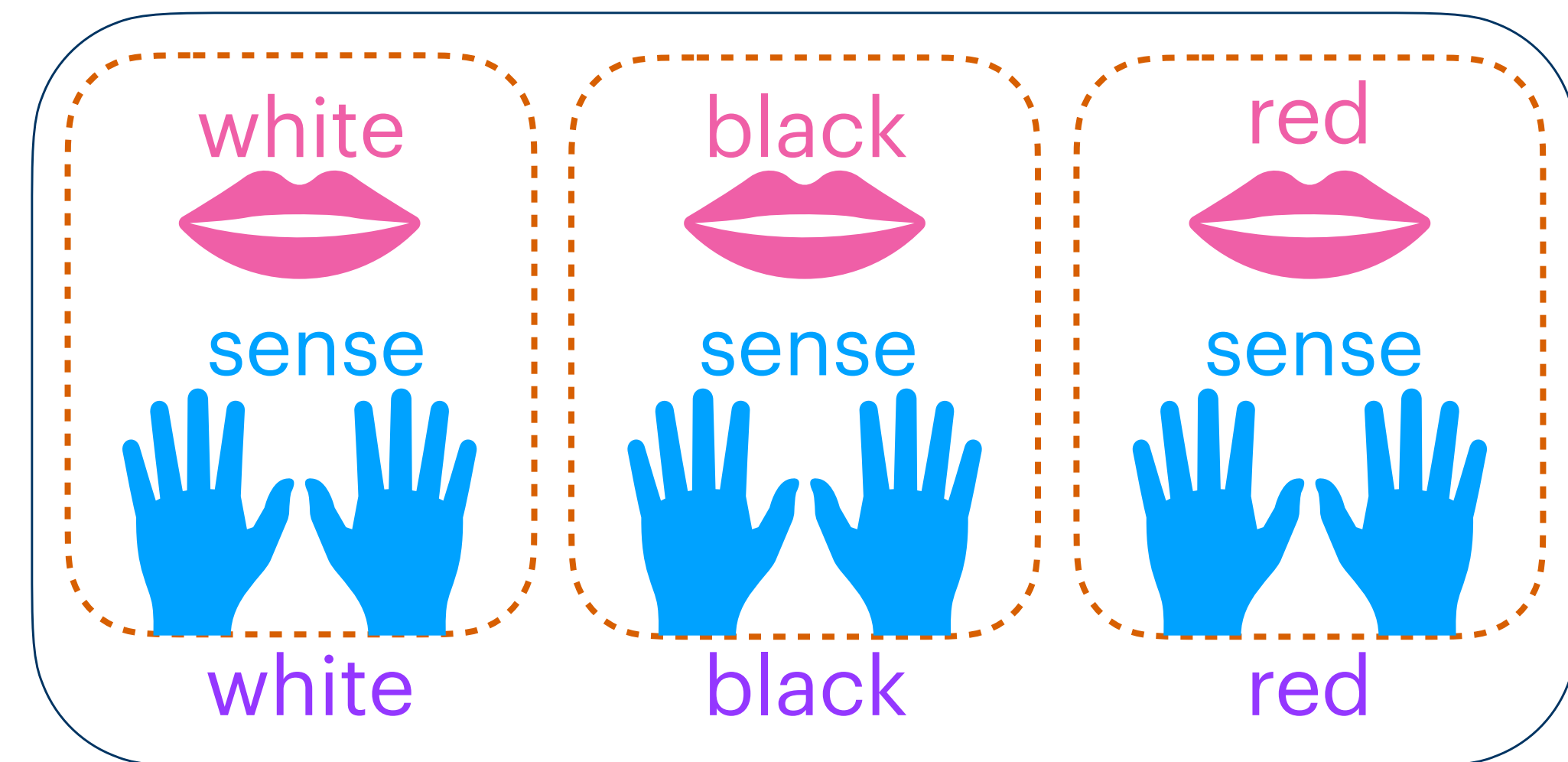
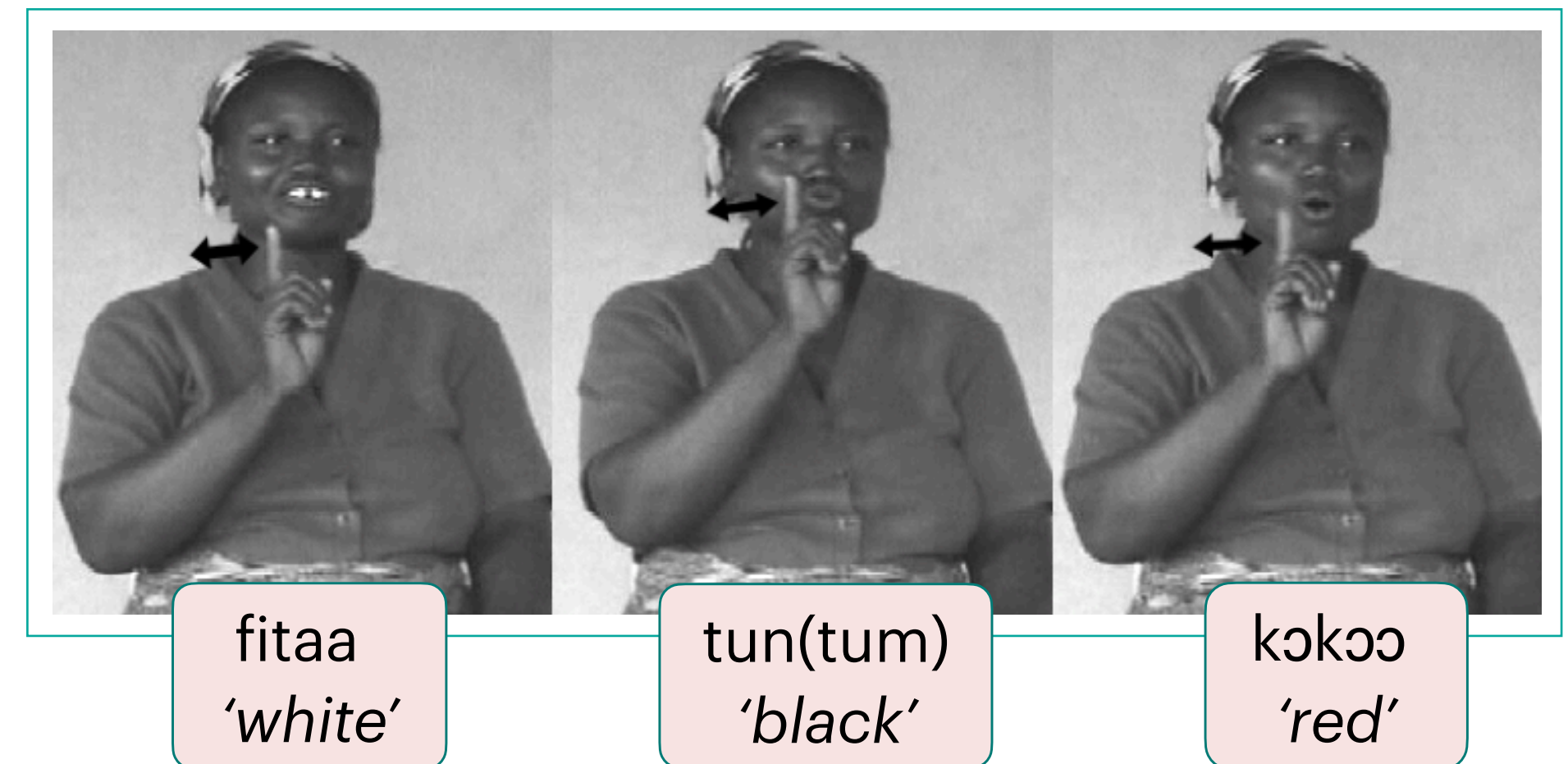
kokoo
'red'



Morpho-phonological Mouthing Results

- Reported most
 - Polysemous type reported most
- Reporting may be greater because of **contrastive role of mouthing** in this cxn

AdaSL (Nyst 2007)



Congruent Mouthing

Definition

Manual sign and mouthing can be glossed with the same word

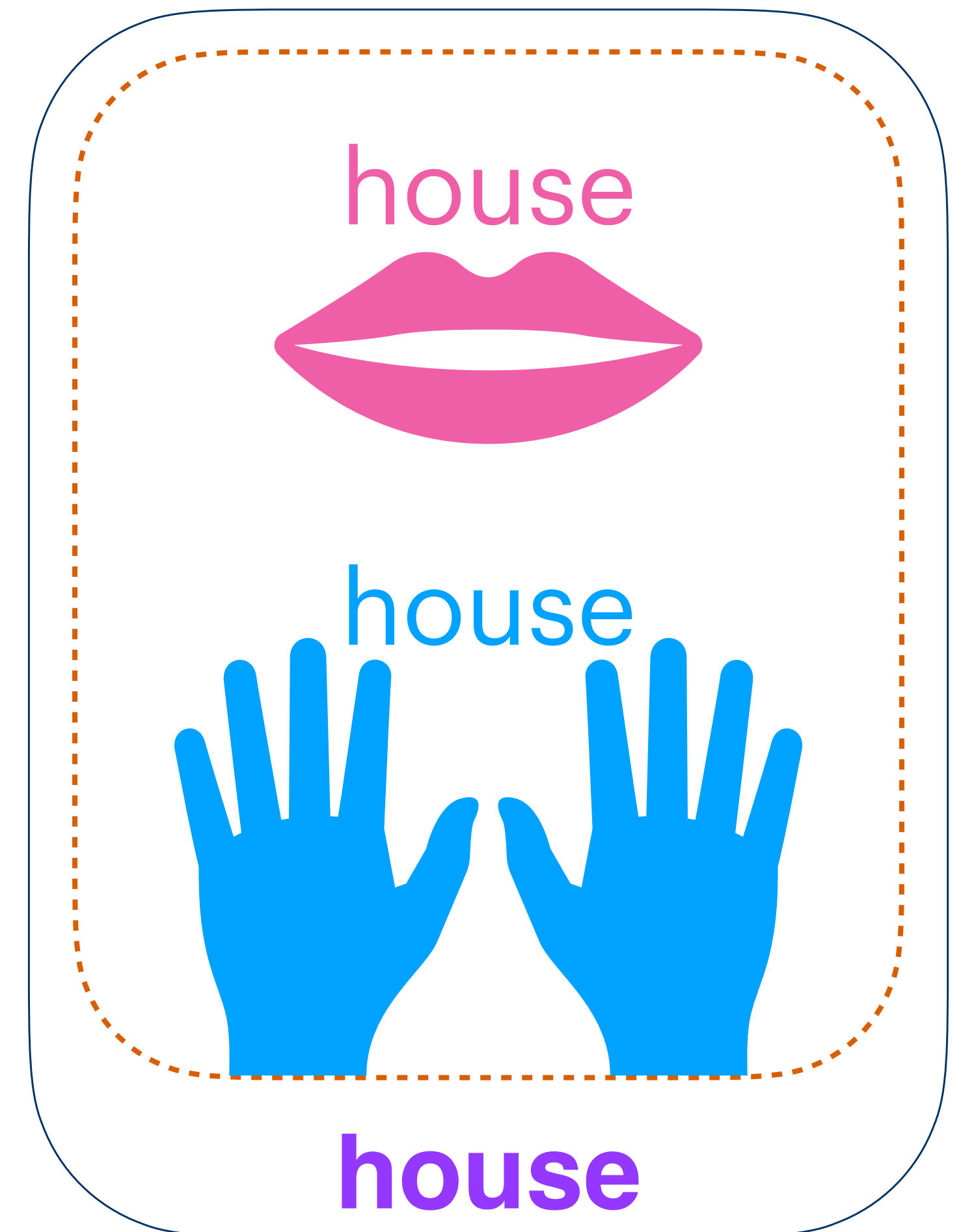
dom ('house')

CL:HIGH HOUSE

CL:HIGH

'There is a high building'

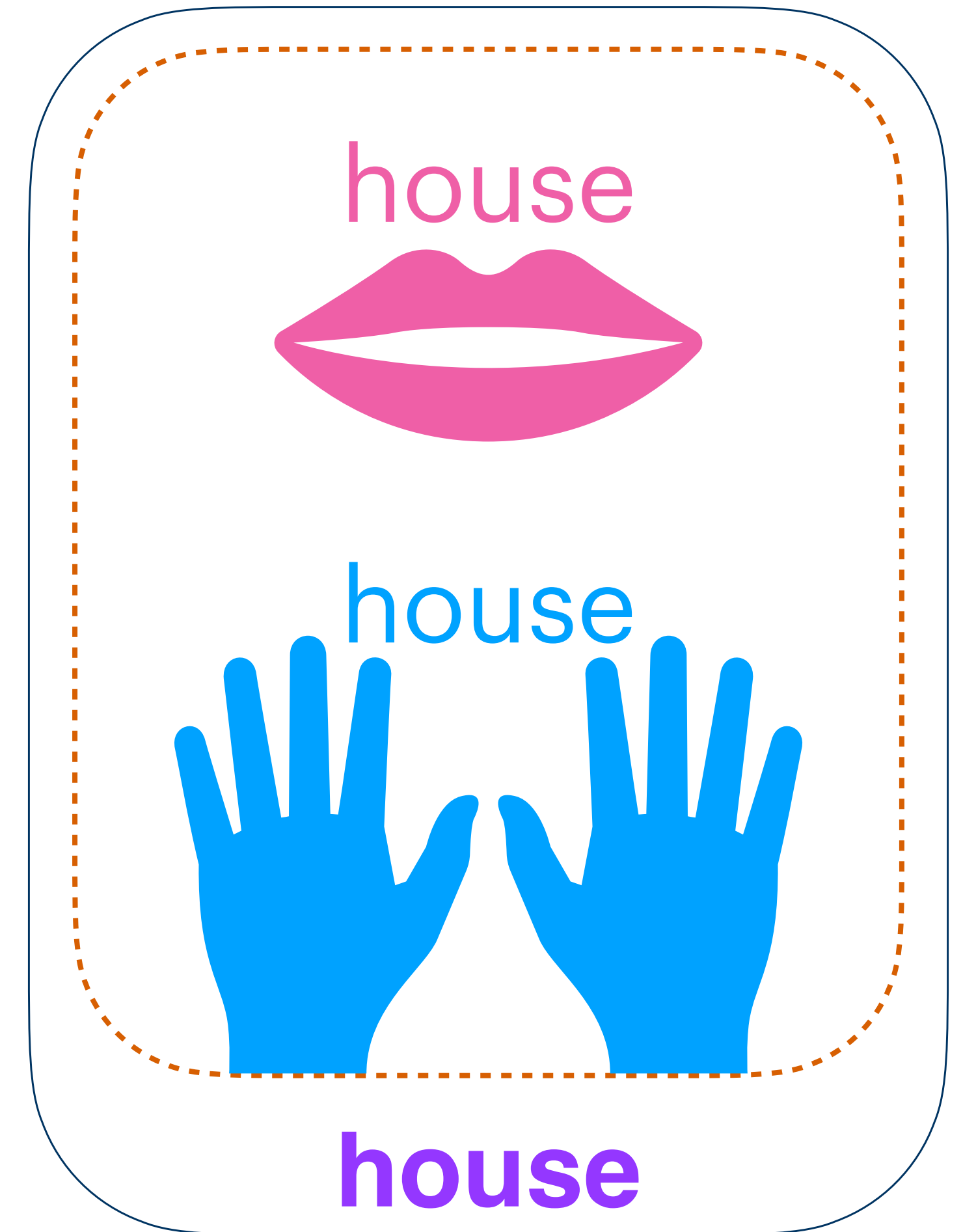
RSL (Bauer 2018)



Congruent Mouthing

Results

- May be the most common kind of mouthing
- **Unlikely to be explicitly mentioned**
 - definitionally, the mouthing **does not produce a meaning contrast**
 - may not **consistently** appear with the same sign
 - different mouthings may appear with the same sign



Congruent Mouthing

Documentation

- not represented in glosses,
 - the tyranny of Glossing (Slobin 2008; Hochgesang 2019)
- not found in resources like:
 - ASL SignBank (Hochgesang et al. 2017)
 - BSL SignBank (Fenlon et al. 2014)
 - ASL-LEX 2.0 (Sehyr et al. 2021)

```
NOTHING DS_5 PU THRILL SET-UP FS NOW IX  
CANNOT IX WORD WORD SAME-AS BUT SIGN  
DIFFERENT SKILL WOW EXPERIENCE ANDasym  
CREATE SIGN POSS_1 MOTHERstr STRONG  
SUPPORT ORAL DS_3 LOOK IX_1 DS_x ZERO DS_x  
SAME-AS WORD SIGN QUOTE NOT WORD IX  
WORD THAT APPEAR INSTAGRAM ~SELFIE THIRSTY  
SWEET CONTACT DS_cx FS DS_cx DS_b DS_b IX IX  
STORYf ABOUTix IX LOOK WORK DS_1 DIFFERENT  
UNIVERSITY PU IX_1 DON'T-KNOW WHOflex PU  
IX_1 DON'T-KNOW WHOflex FAMOUS BETWEEN  
TWO PERSONp PU NOW IX COW DS_s LANGUAGEI  
THAT PROCESS FROM MAKEstr FS XXX THAT IX_1  
JUST WHY SET-UP FEW GROUPc GROUPc WOW
```

(Hochgesang 2019)

Congruent Mouthing

Description

found in dictionaries like:

- the Online Dictionary of New Zealand SL (McKee et al. 2011)
- svenskt teckenspråklexikon (Swedish SL) (venskt teckenspråklexikon 2020)
- Suvi (Finnish SL) (Suomen Viittomakielten Verkkosanakirja 2015)
- Ordbog over dansk tegnsprog (Danish SL)

morpho-phon > **congruent** > morpho-syn > free

Congruent Mouthing

Documentation & Description



ASL SignBank
(Hochgesang 2019)



Ordbog over dansk tegnsprog

Morpho-syntactic Mouthing

Definition

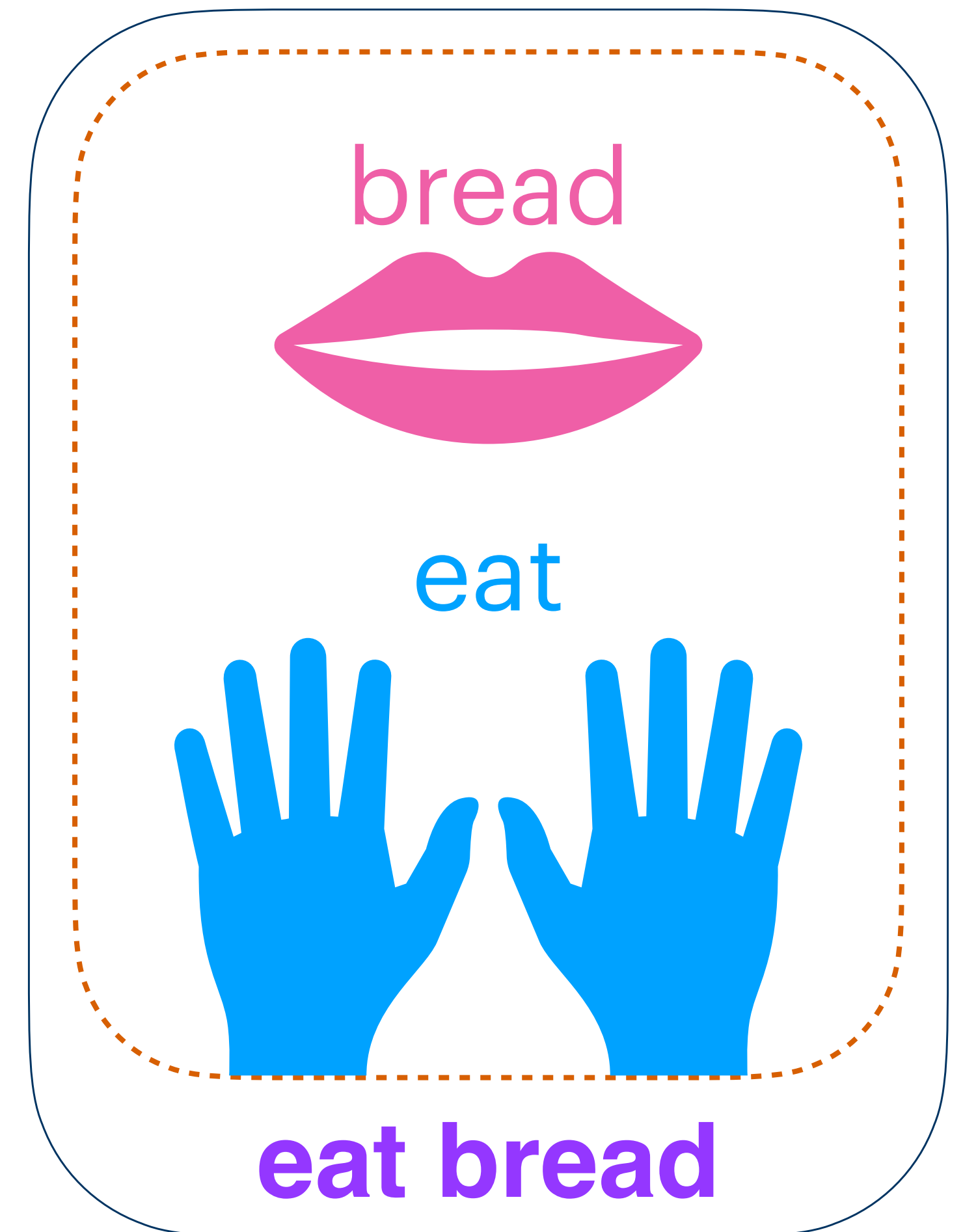
Manual sign and mouthing have independent, specific meanings that combine to form a complex morpho-syntactic cxn with compositional meaning

brood ('bread')

ETEN ('eat')

'eat bread'

NGT (Crasborn et al. 2008)



Morpho-syntactic Mouthing

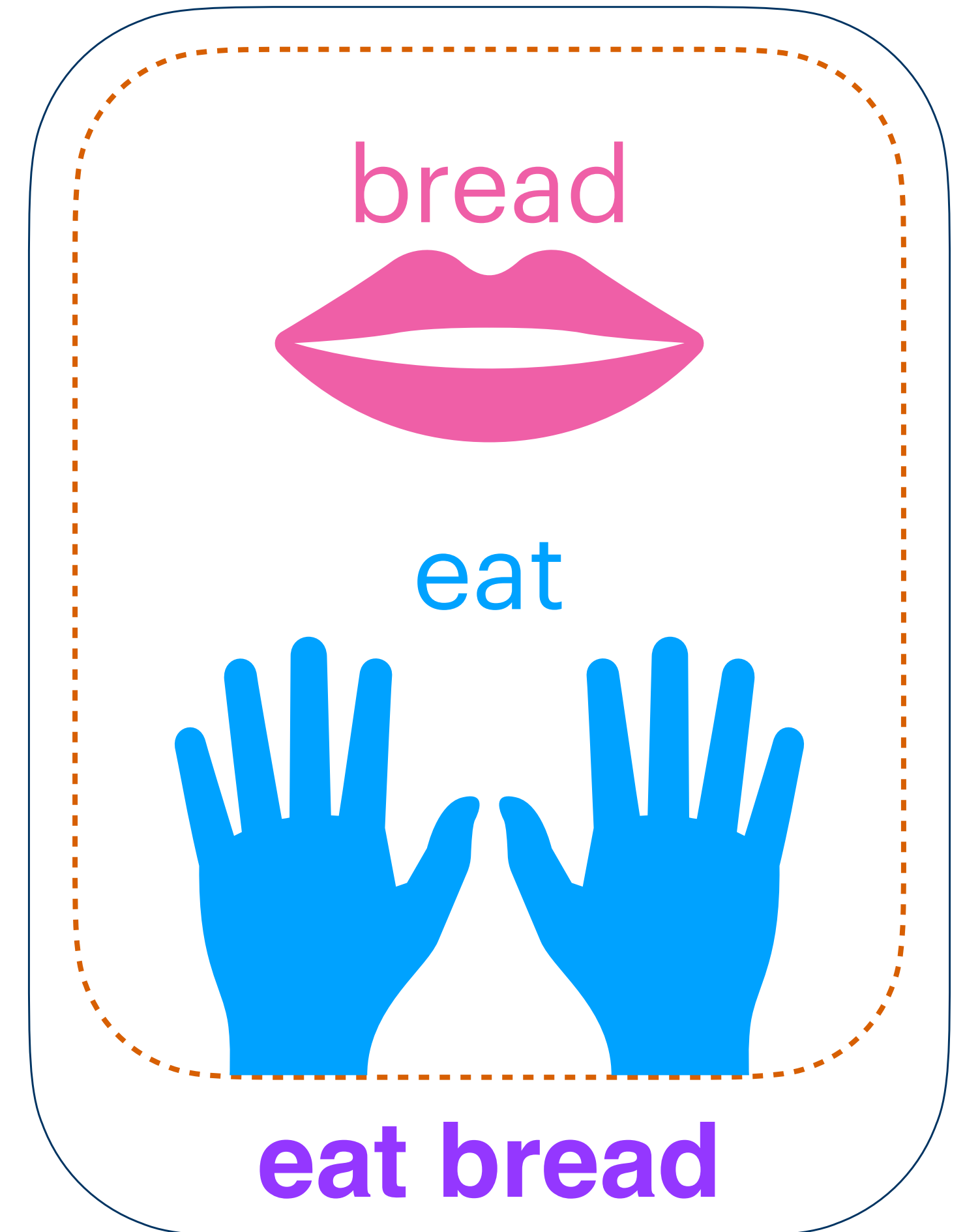
Documentation & Description

- In this example the mouthing is the object of the verb
- This kind of cxn may be in competition with cxns with **dedicated** positions for objects

MUST IX1 GO_ALONG IX1 ADAPT EAT **CATERPILLAR**

'I would have been obliged to adapt and eat the caterpillar'

NGT (Klomp 2021)



Free Mouthing

Definition

Mouthing appears without a manual sign



CSL (Lin 2019)



Free Mouthing

Documentation & Description

- Reported as a fallback strategy in SL of the Netherlands, Chinese SL and Norwegian SL when the hands are occupied (Bank 2014; Lin 2019; Vogt-Svendsen 2001)
- In planned recording sessions, the hands are likely to be free



Free Mouthing

Documentation & Description

- Only cxn reported absent
- Negative ideologies
 - Norwegian SL: “*signers do not consider them to be acceptable signs*” (Vogt-Svendsen 2001)
 - Turkish SL: “*mouthing cannot be produced alone*” (Dikyuva, Makaroğlu & Arik 2017)



Documentation & Description in Reporting of Mouthing

Summary

- **Documentation practices** impact if mouthing is reported or represented
 - May disproportionately impact reporting of congruent and free mouthing
 - Differ across SL databases, dictionaries etc.
- **Descriptive analysis** may favor reporting of cxns that produce differences in meaning i.e. morpho-phonological and morpho-syntactic mouthing
 - However morpho-syntactic cxns may be in competition with cxns that have dedicated sequential positions in the manual channel

Conclusions

- Sign language types are linked to inequalities in documentation and description
 - Uniformitarian perspective on creoles warns against dichotomies based on documentation inequalities
- Mouthing is used in multiple ways in sign languages that may not be captured by practices in documentation and description
 - Limits potential understanding of contact between spoken and signed languages i.e. multimodal language contact

Thanks!

<https://fbisnath.github.io>

 @fbisnath

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