

# **Forms of multimodal language contact: mouthing constructions across signed languages**



Felicia Bisnath | LSA2023

# Aims

- ▶ To motivate the mouthing construction
  - ▶ by taking a semiotic repertoires framing
  - ▶ through cross-linguistic investigation
  - ▶ showing components of constructions are related
- ▶ To exemplify multimodal contact by describing 4 mouthing constructions
- ▶ To show functions of mouthing in mouthing constructions

# Mouthing

- ▶ Movements of the mouth in sign languages that correspond with those made when articulating specific, synchronic spoken language words
- ▶ Often associated with negative attitudes and ideologies because of association with spoken language
- ▶ e.g. mouthings are not part of “real” ASL (Nadolske & Rosenstock 2007)

# Semiotic Repertoires

- ▶ Semiotic repertoire (Kusters et al. 2017: 220–221)
  - ▶ “departs from the idea that languages are bounded [...] and that repertoires are merely linguistic (they are multimodal and embodied) [and] enables a holistic focus (addressing ideologies, histories, potential and constraints) on action that is both multilingual and multimodal”

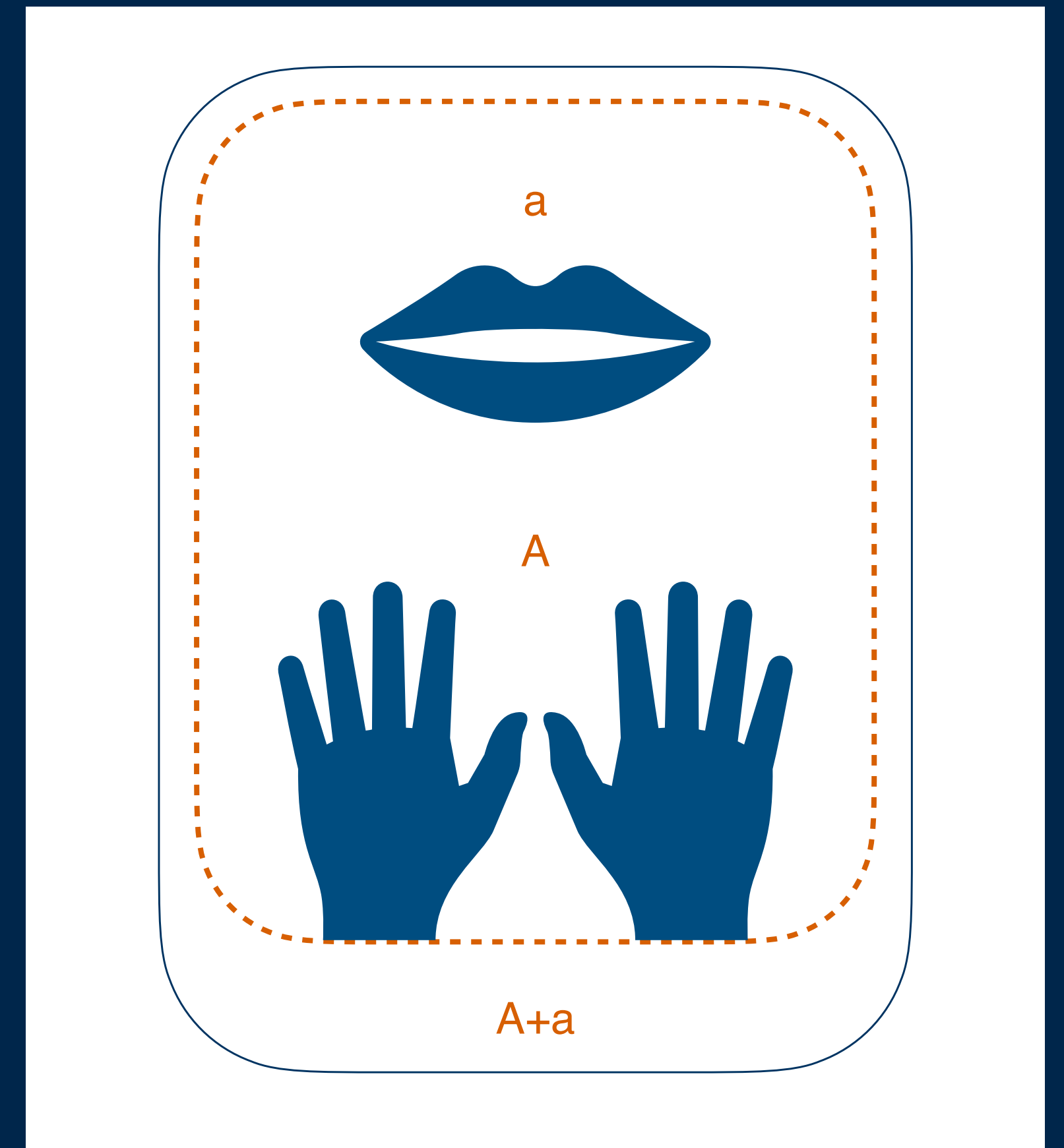
# Semiotic Repertoires

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  - ▶ “departs from the idea that languages are bounded [...] and that repertoires are merely linguistic (they are multimodal and embodied) [and] enables a holistic focus (addressing ideologies, histories, potential and constraints) on action that is both multilingual and multimodal”

allows us to admit structures typically considered to be part of separate systems for joint analysis/allows us to examine forms arising from multimodal contact i.e. the mouthing cxn

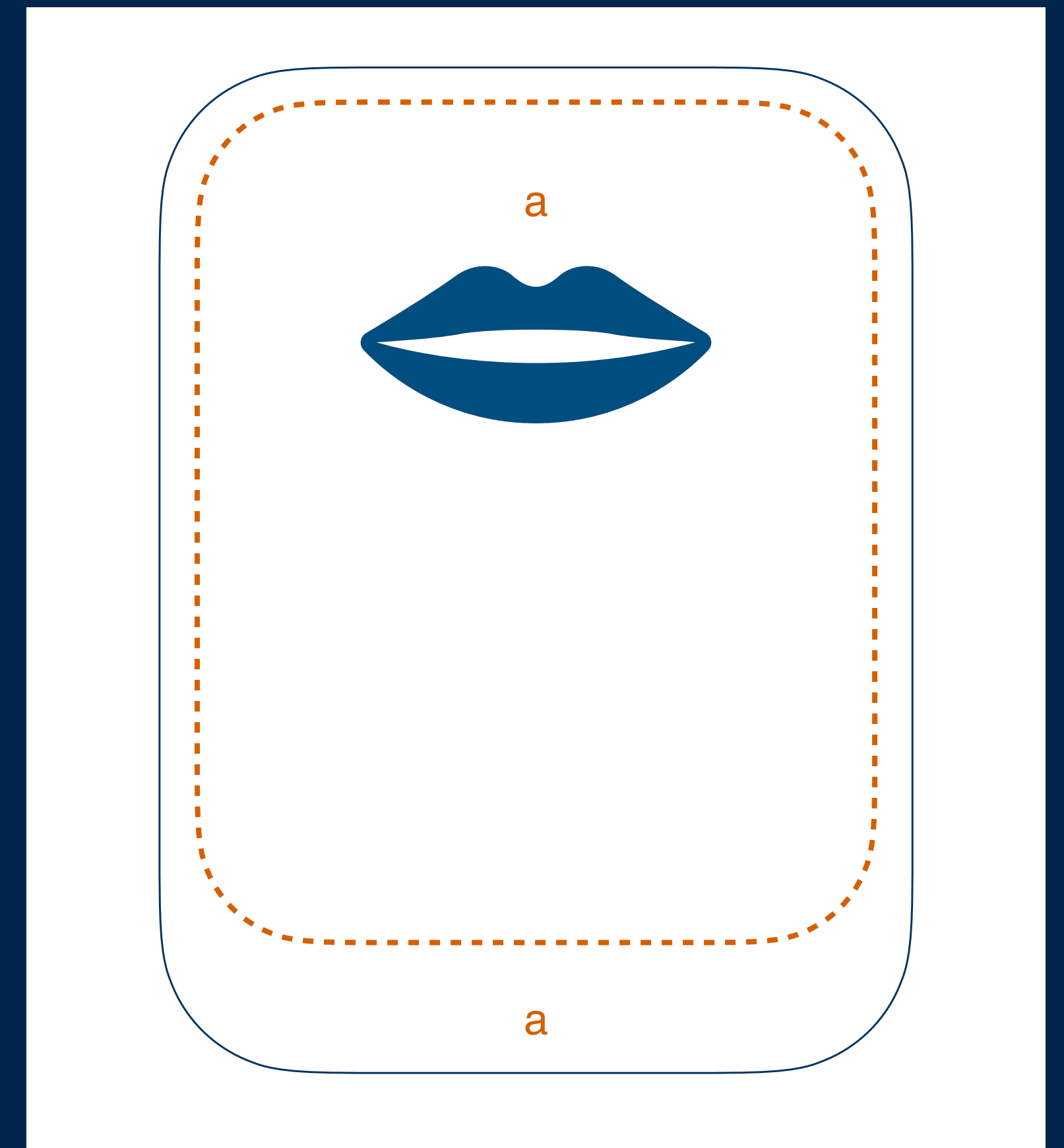
# Mouthing Constructions (cxns)

- ▶ Mouthing cxns are multimodal multilingual cxns
- ▶ Mouthing cxn
  - ▶ must have a mouthing
    - ▶ “obligatoriness” of mouthing across constructions and in instances of production will vary
  - ▶ *typically* has a manual sign



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  - ▶ *typically* has a manual sign
- ▶ Multimodal = **linked** to the modality of spoken languages, NOT **in** a different modality



# DHH people are multimodal multilinguals



Language  
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Deaf/hard-of-hearing people may not produce and perceive spoken language in the way hearing people do but this does not exclude them from having linguistic knowledge of ambient spoken languages that they can recruit

# DHH people are multimodal multilinguals

- ▶ Channels
  - ▶ mouth
  - ▶ hands
- ▶ Resources
  - ▶ manual signs
  - ▶ manual alphabet
  - ▶ mouth shapes, tongue movements
  - ▶ spoken language orthography

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# Matter and Pattern in Language Contact

- ▶ Semiotic resources typically under consideration in language contact are traditional linguistic ones e.g. phones, affixes, words, syntactic frames etc.
- ▶ Matras & Sakel (2007) on contact-induced *change* ← form
  - ▶ Matter: replication of phonological shapes (from a *source* language)
  - ▶ Pattern: replication of patterns of distribution, grammatical and semantic meaning, formal-syntactic arrangement (from *recipient* language)

# Congruence in Language Contact

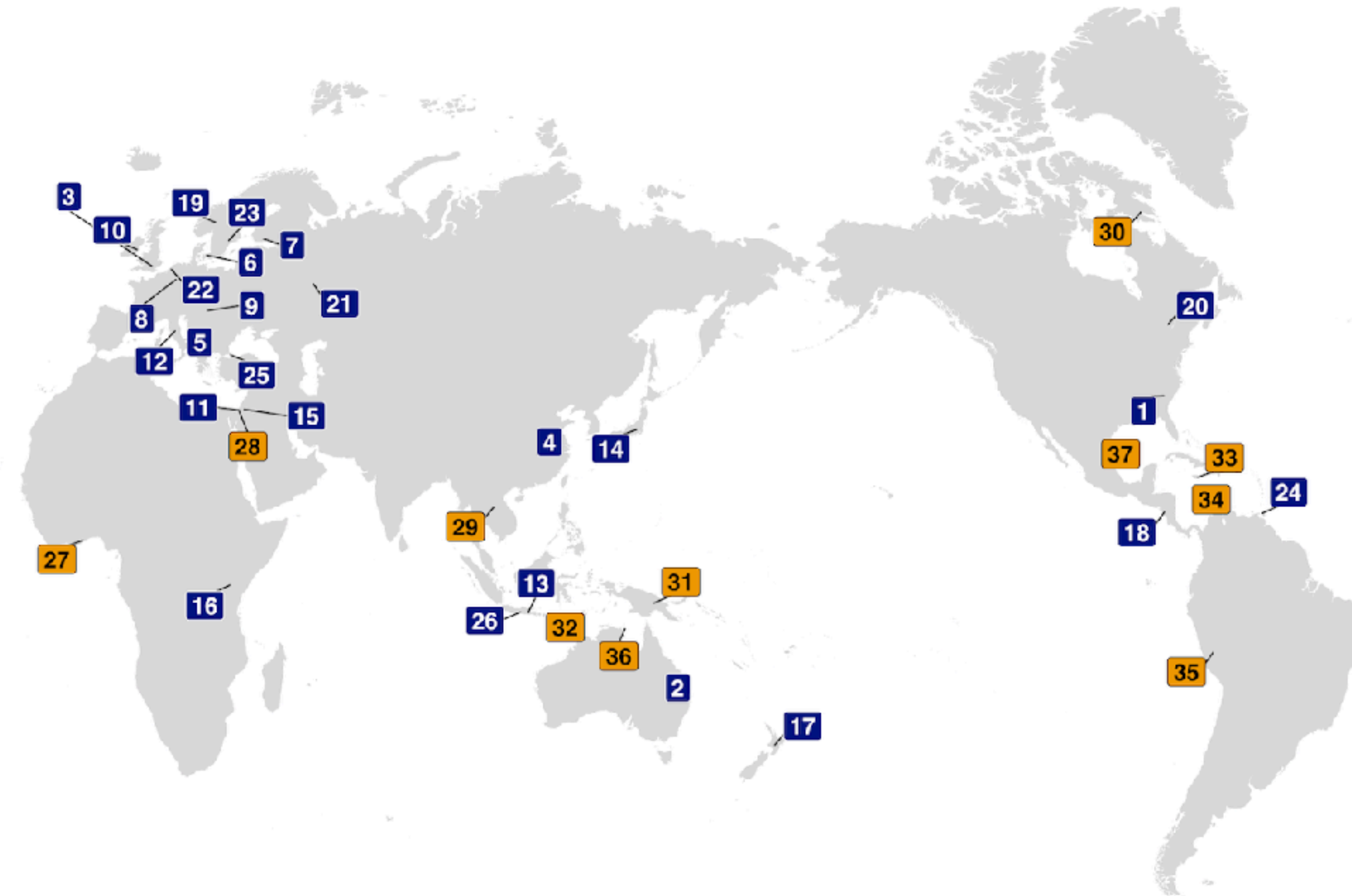
- ▶ Baptista (2020) on contact-induced *emergence* ← mechanism
  - ▶ Features that are selected are those that are perceived to be congruent in source and recipient languages

# Method

- ▶ Keyword search for “mouth”, “mouthing”, “lip” to find potentially relevant sources
- ▶ If the descriptions of mouth actions matched my definition of mouthing, the source was included
- ▶ Sample is one of convenience
  - ▶ No controlling for genetic relationships because available data is limited

# Sample (N=37)

Deaf and **rural** sign languages in sample



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. Quebec 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. Yucataec Maya SLs

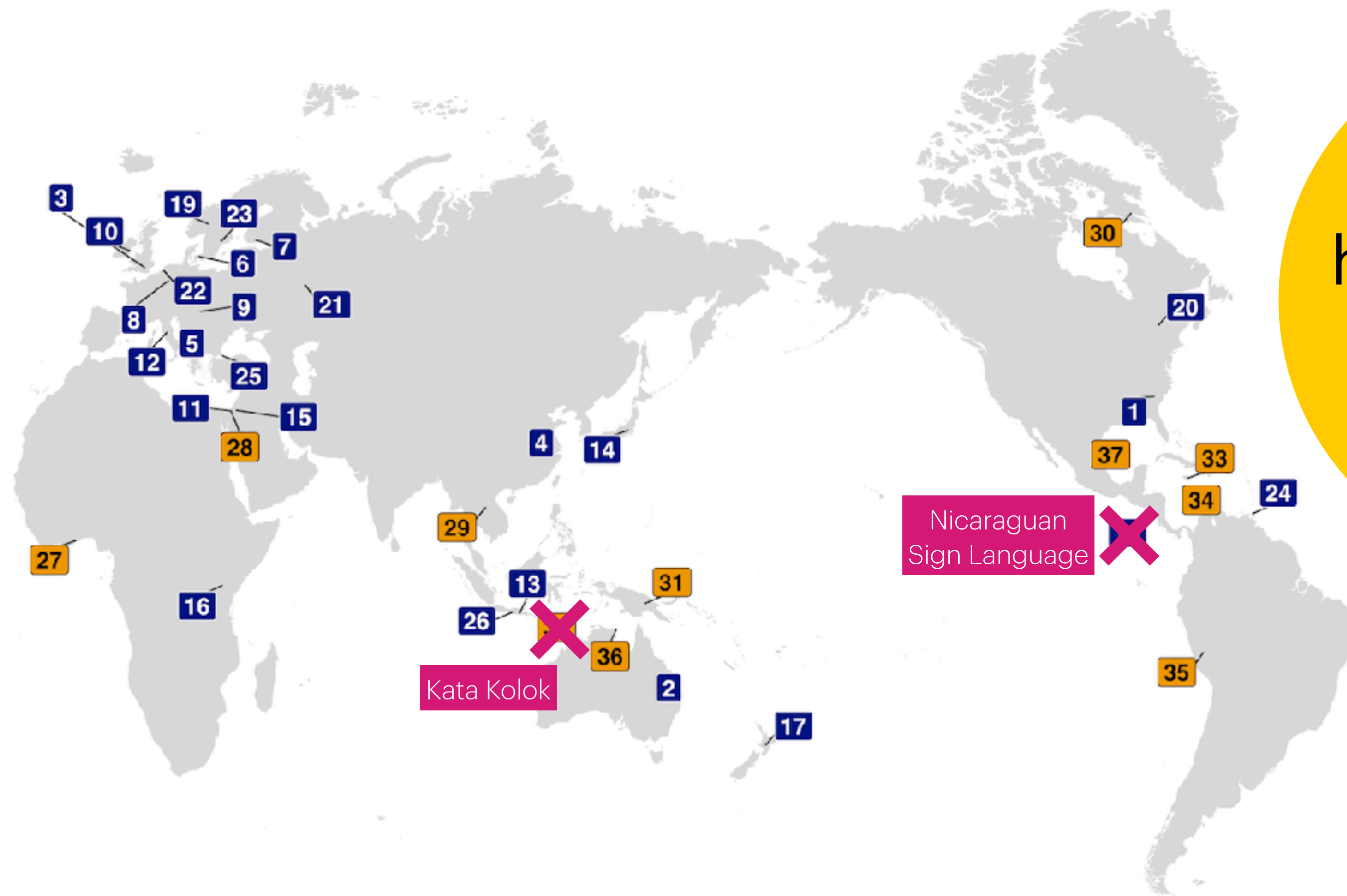
# Coding

- ▶ Identified if:
  - ▶ presence of mouthing
    - ▶ coding: 1 = present, 0 = absent, ? = unreported, UC = unclear because of conflicting data
  - ▶ what kinds of cxns mouthing appears in:
    - ▶ >20 cxns found — 4 selected: morpho-phonological, morpho-syntactic, congruent, free



# Presence of mouthing

Deaf and **rural** sign languages in sample

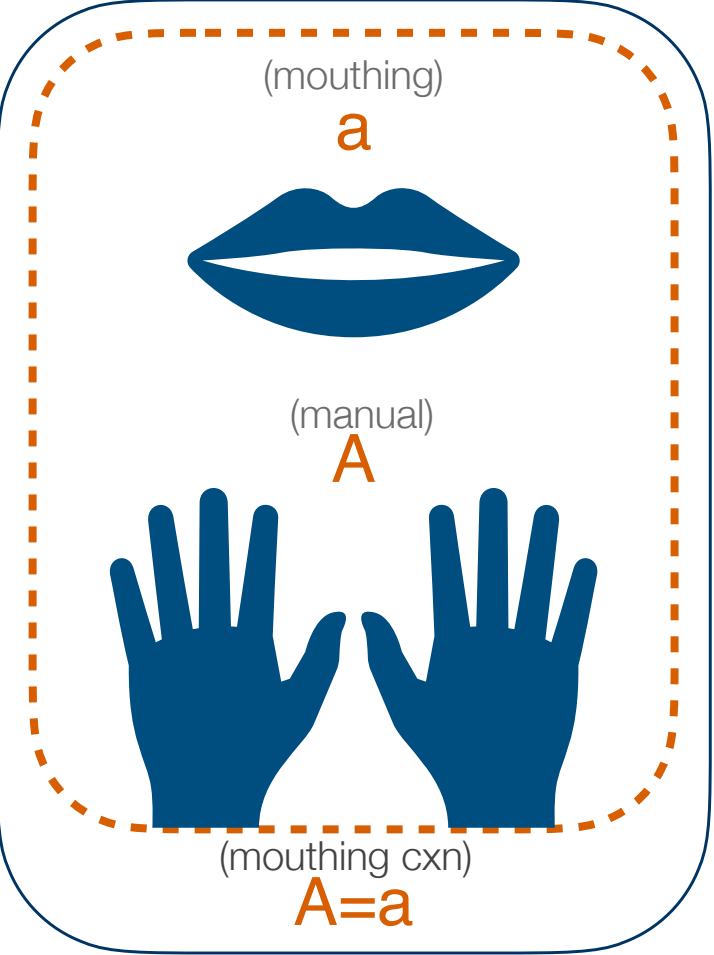


mouthing is  
highly frequent  
cross-  
linguistically



# Mouthing Cxns

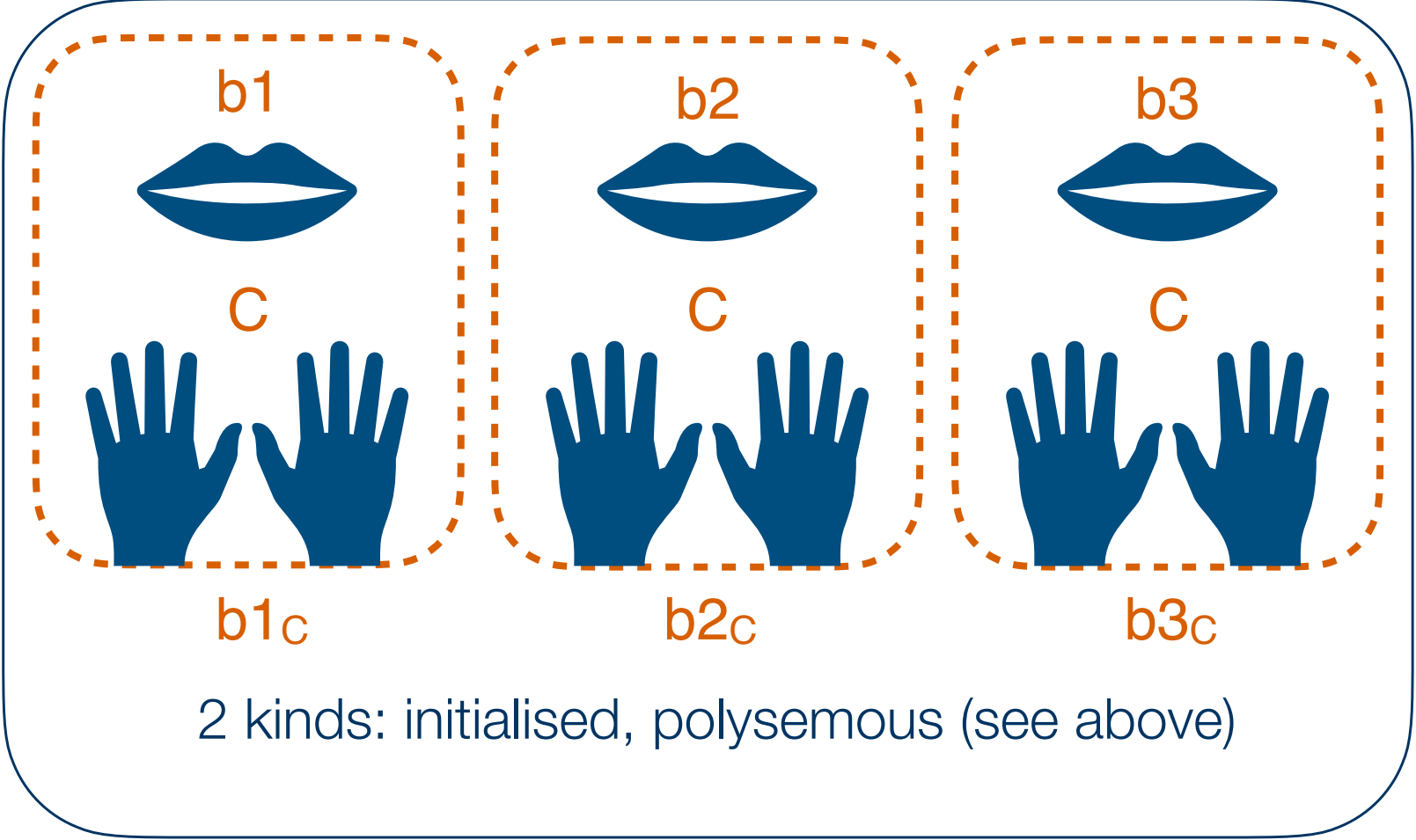
## CONGRUENT



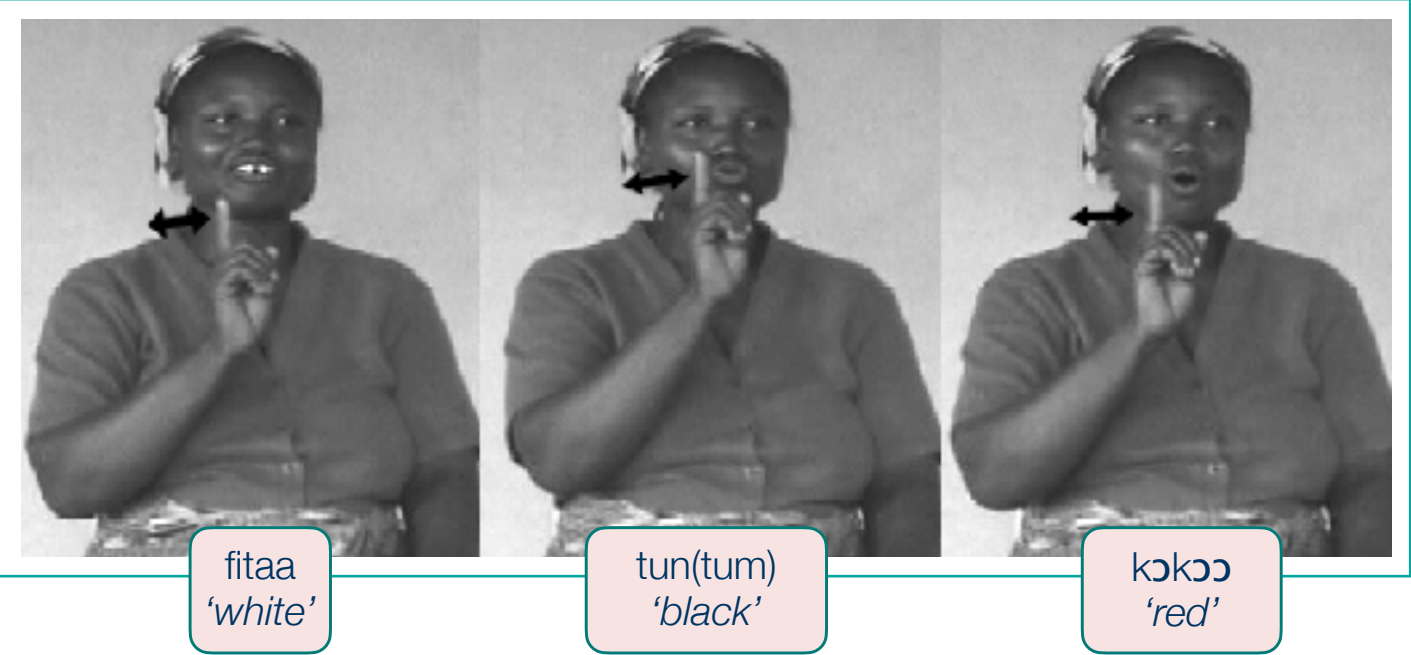
Swedish SL



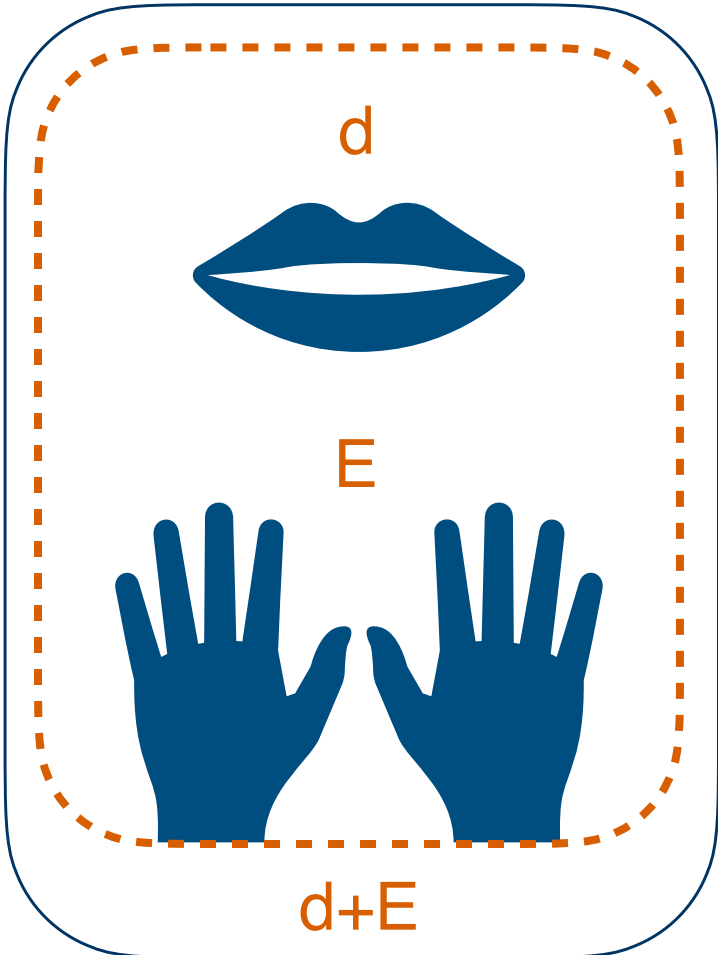
## MORPHO-PHONOLOGICAL



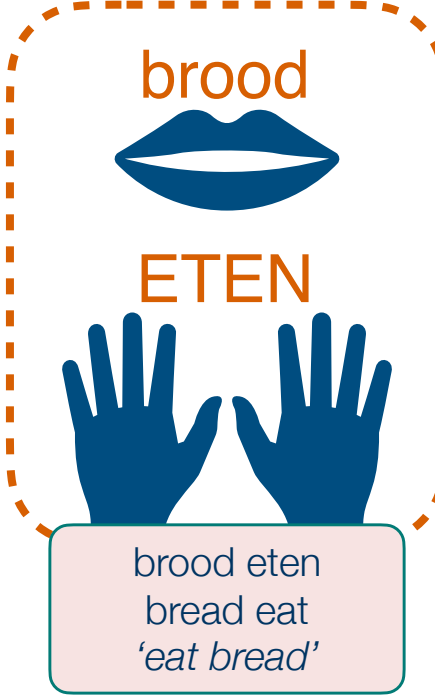
Adamorobe SL



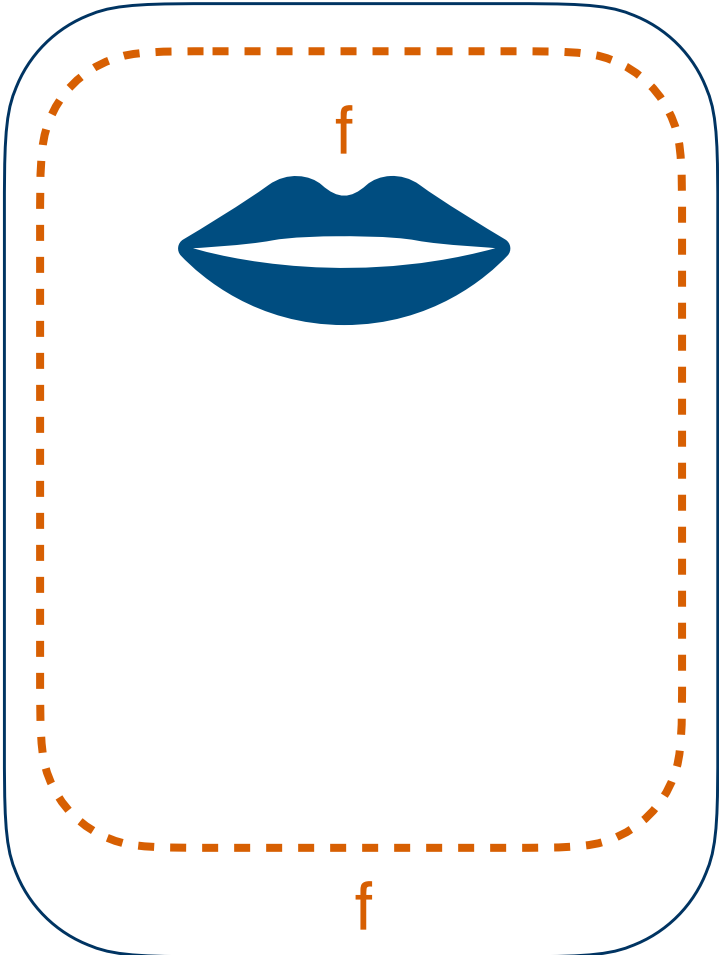
## MORPHO-SYNTACTIC



SL of the Netherlands



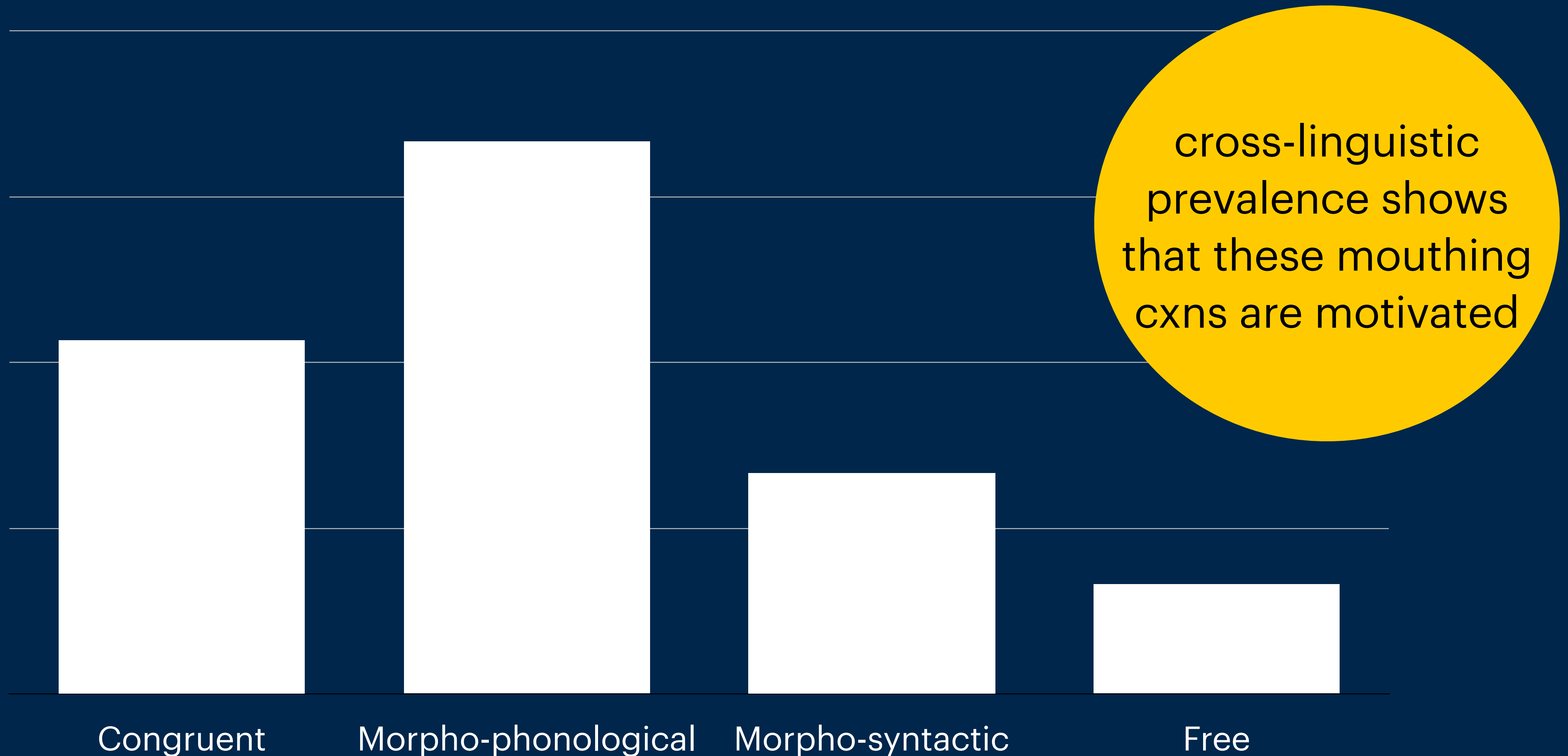
## FREE



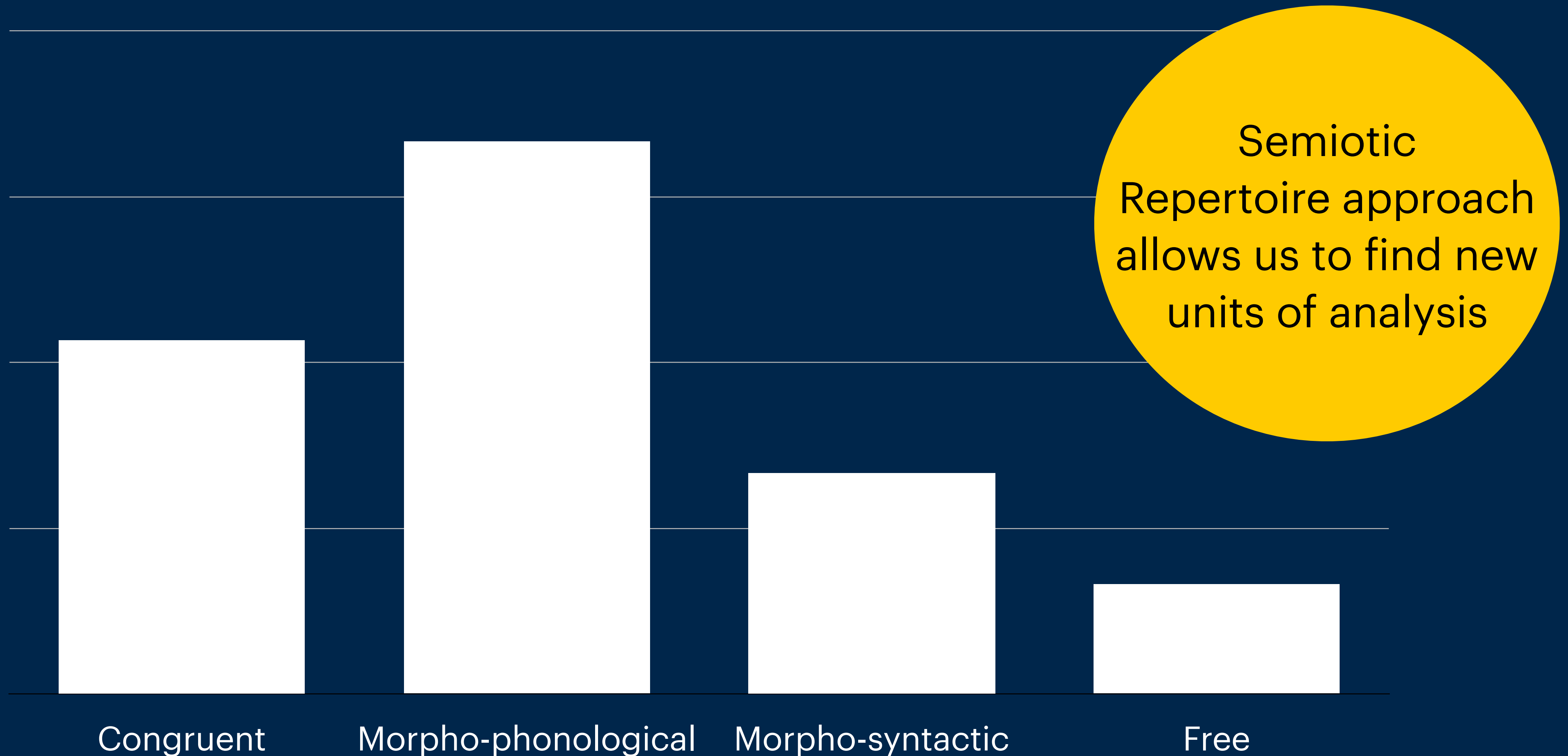
Chinese SL



# Frequencies of mouthing cxns



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# Congruent

- ▶ Manual sign and mouthing can be glossed with the same word

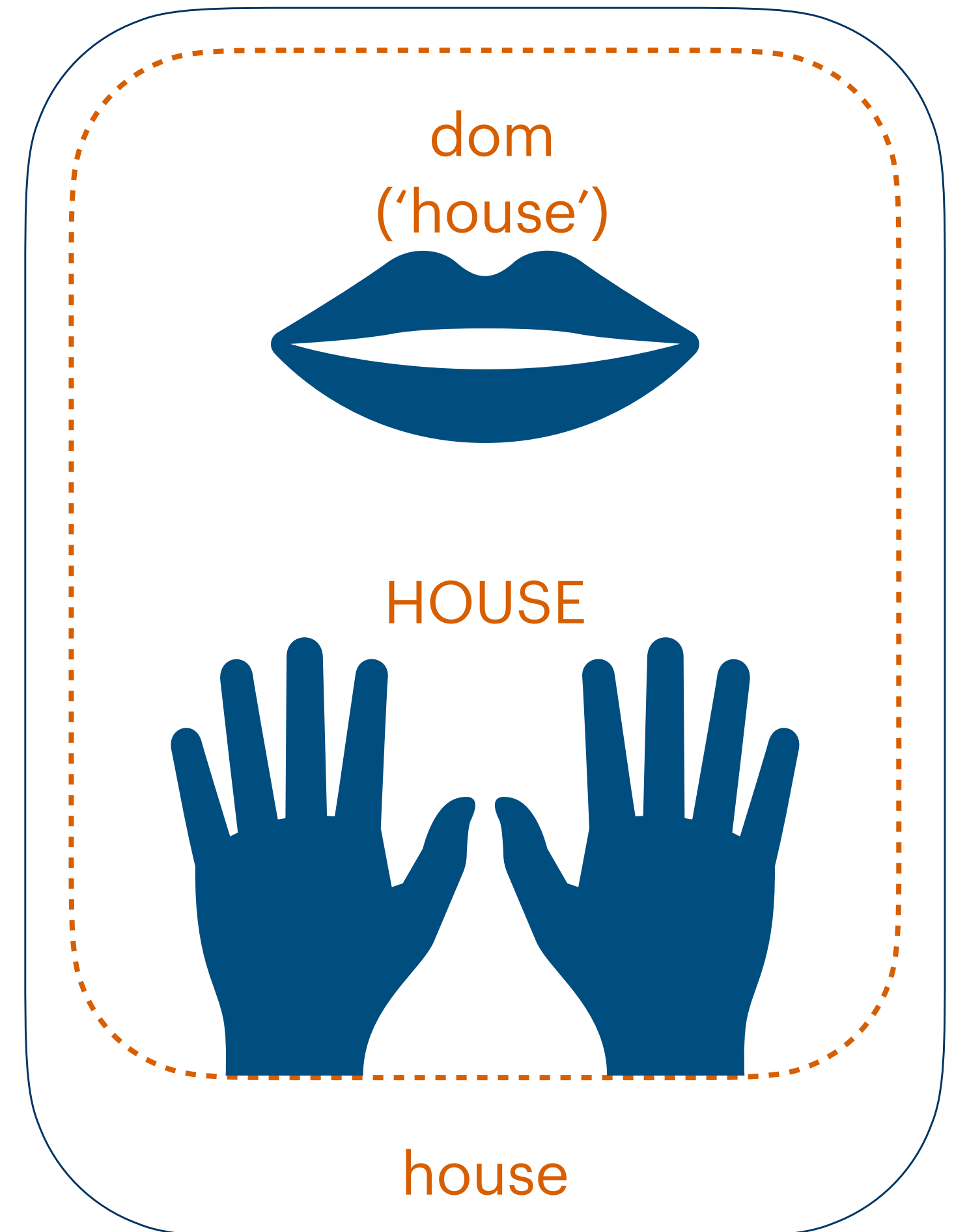
dom ('house')

CL:HIGH HOUSE

CL:HIGH

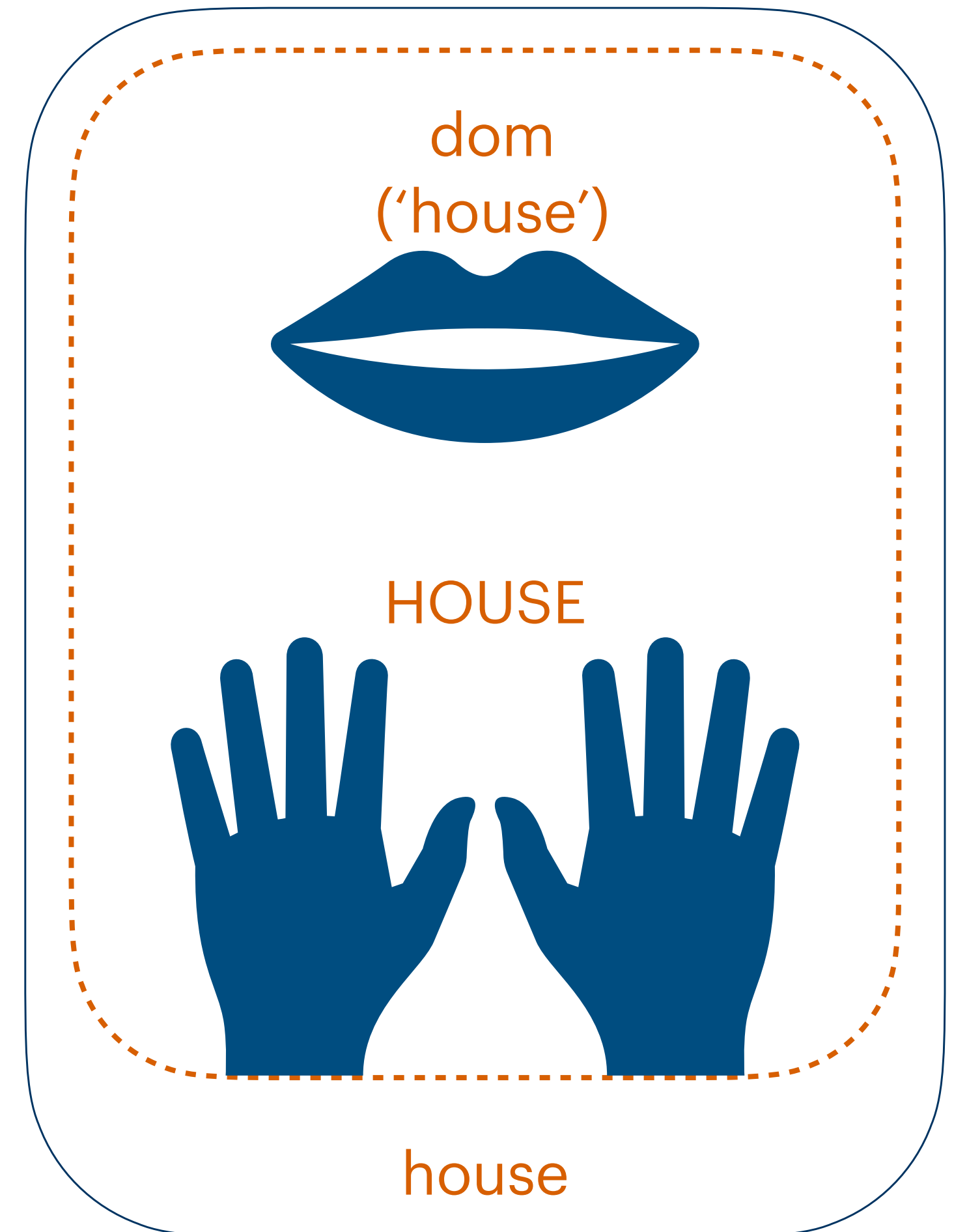
*'There is a high building'*

[RSL]  
(Bauer 2018: 12)



# Congruent

- ▶ Semantic congruence identified between RSL sign for house and Russian word for house
- ▶ Matter replication in terms of primarily importing the *mouth articulations* of part or all of 'dom'



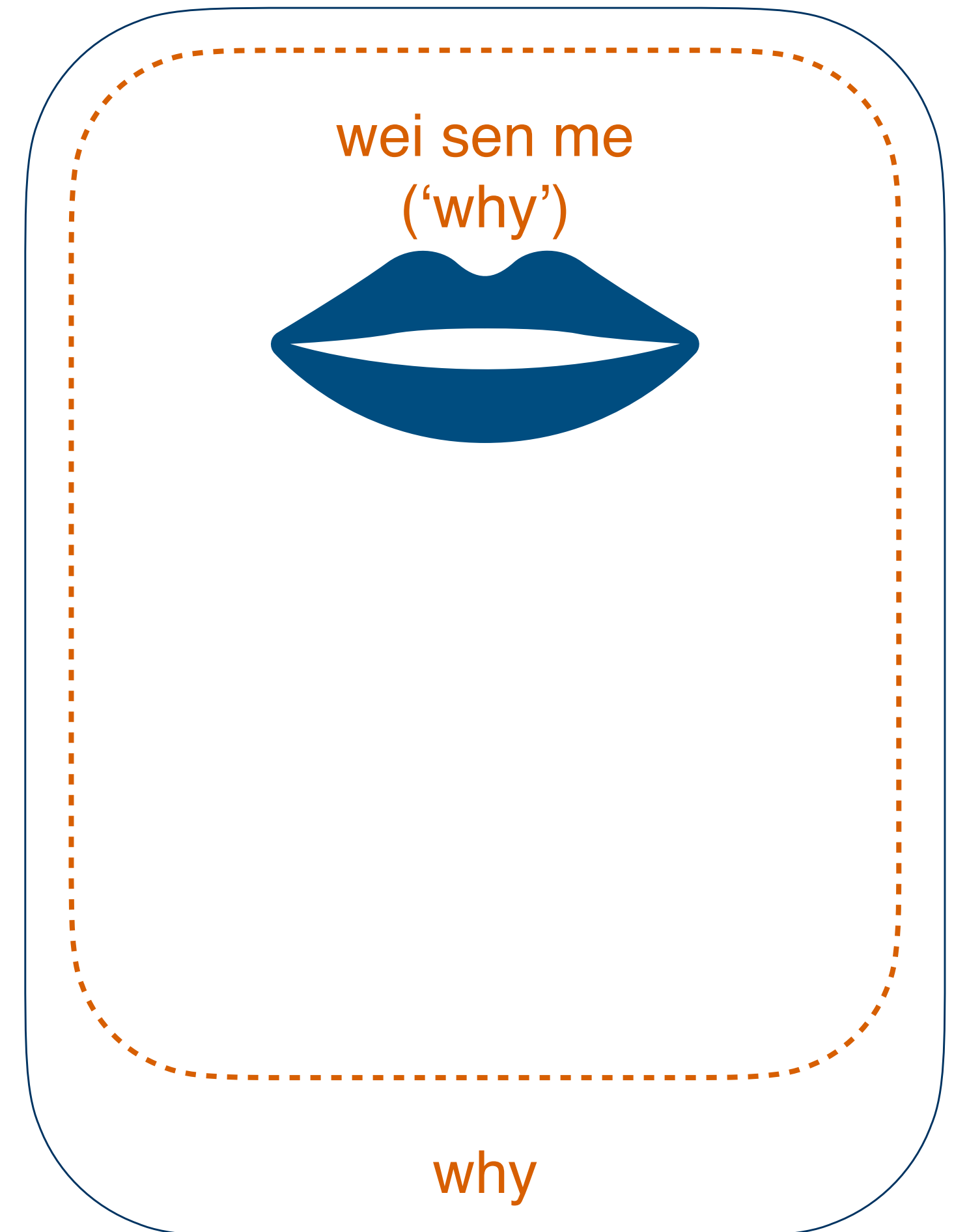
# Free

## ► Mouthing without any manual sign

Chinese SL<sup>4</sup>

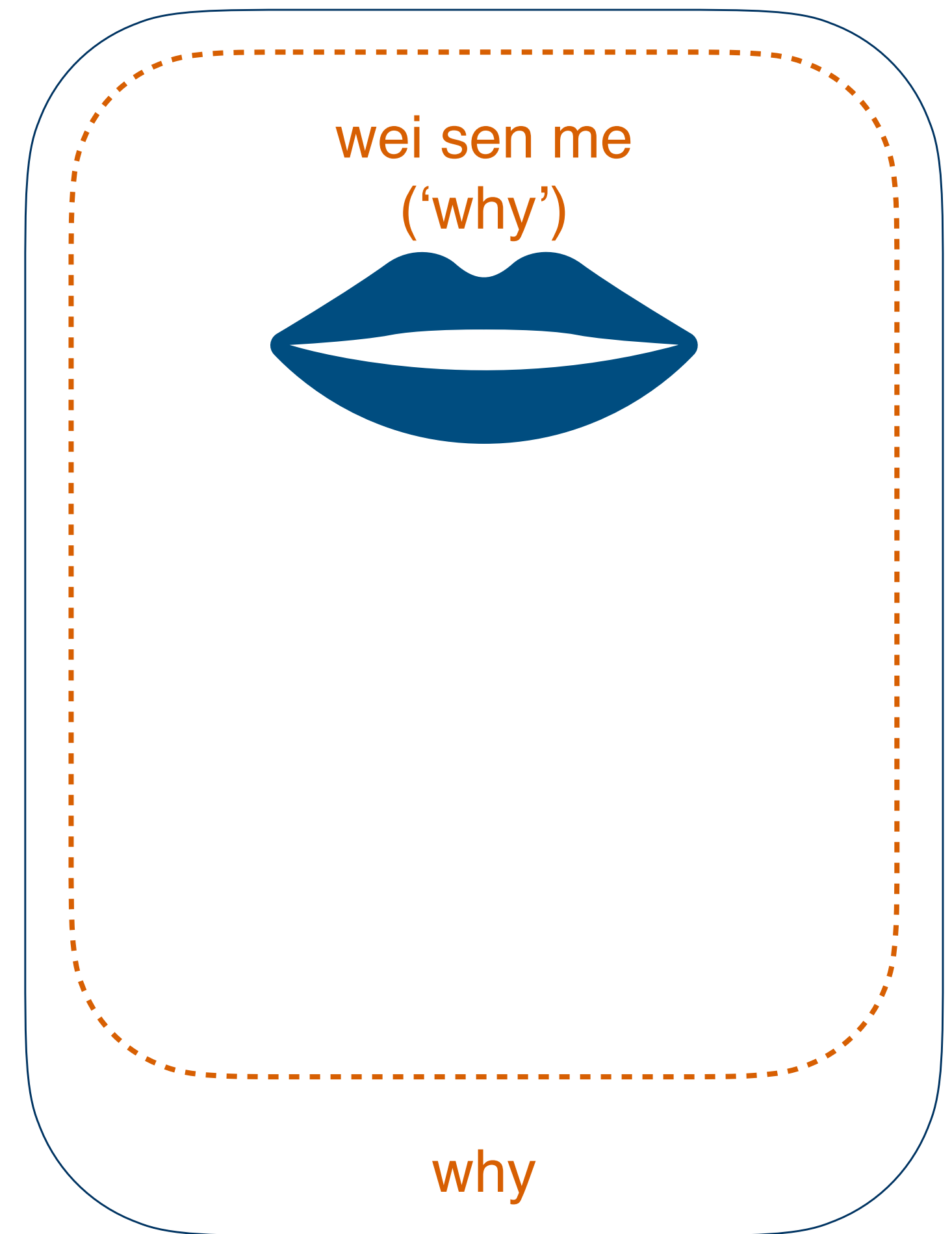


[CSL]  
(Lin 2019)



# Free

- ▶ Typically occurs:
  - ▶ when hands are occupied
  - ▶ in transitions between signs
  - ▶ backchanneling



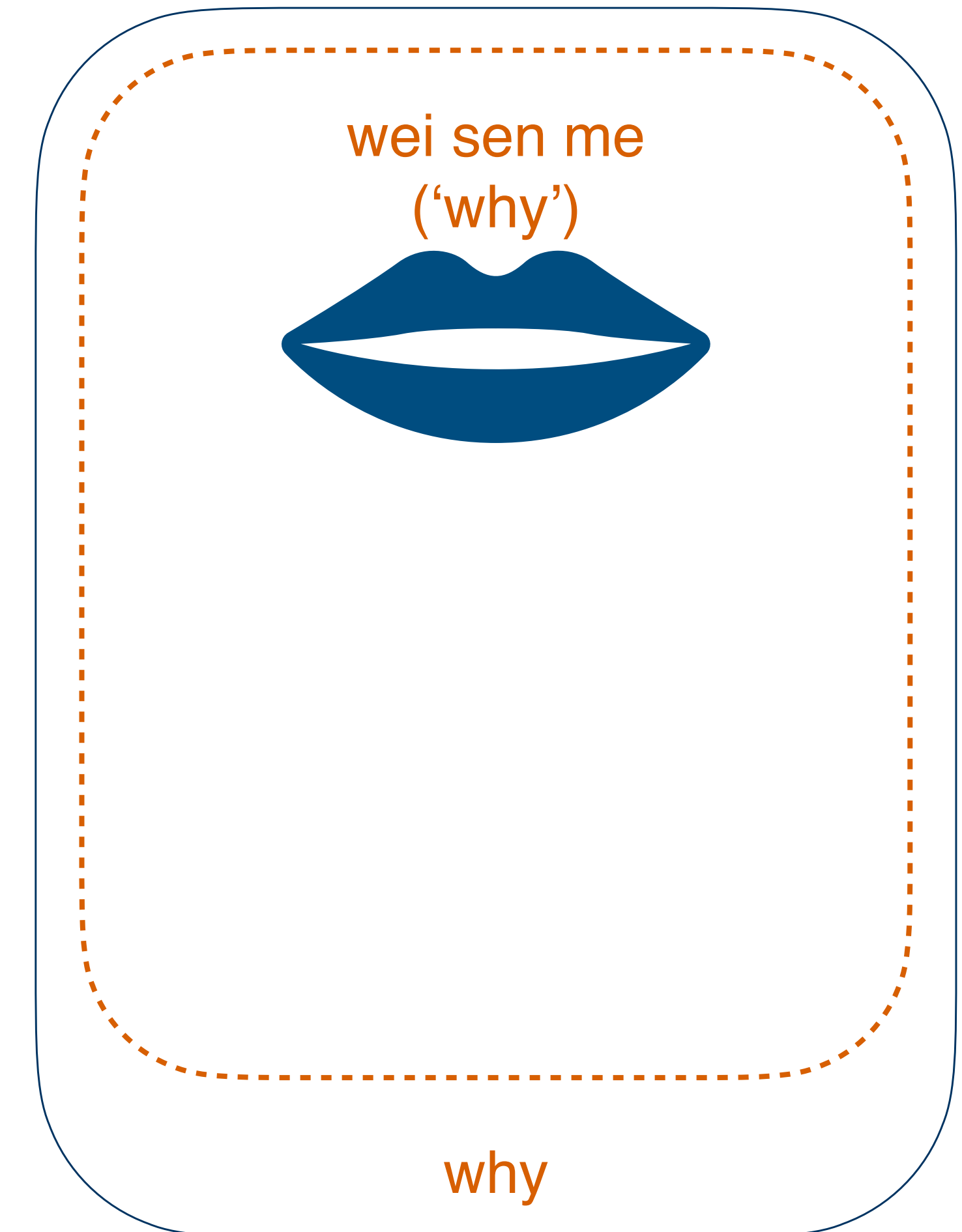


# Free

**Table 7:** Examples of free mouthing constructions in 6 sign languages ( $N=23$ )

Sign language	Free mouthing constructions	Reference
Auslan ( $n=9$ )	<i>but, for, just, maybe, I don't know, I think, no, yes, not true</i>	(Johnston, van Roekel & Schembri 2016: 22)
CSL ( $n=1$ )	为什么 (wèi-shén-me) ('why')	(Lin 2019: 51)
LIU ( $n=1$ )	existential <i>fi</i>	(Hendriks 2008: 65)
LSSiv ( $n=2$ )	<i>mother, let's go</i>	(Clark 2017: 139)
NGT ( $n=5$ )	<i>ja</i> ('yes'), <i>nee</i> ('no'), <i>december</i> ('December'), <i>nodig</i> ('necessary'), <i>woon</i> ('live-in'), <i>maar</i> ('but')	(Bank 2014: 98)
PISL ( $n=5$ )	<i>lie, bad, coffee, home, mango</i>	(Washabaugh, Woodward & DeSantis 1978: 98)

- ▶ Wide variety of grammatical classes
- ▶ Matter replication





# Morpho-syntactic

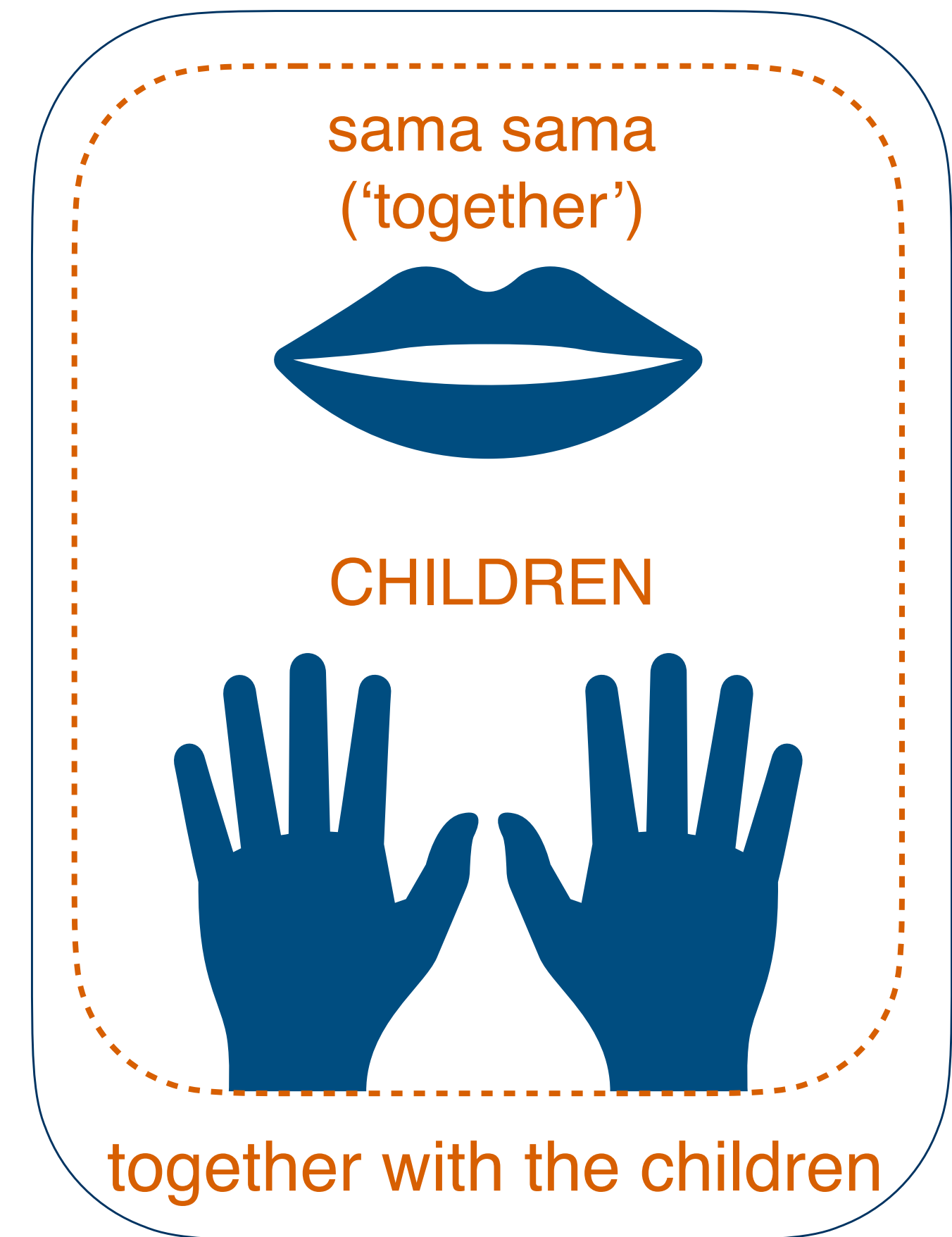
- ▶ Manual sign and mouthing have independent, specific meanings that combine to form a complex morpho-syntactic construction with a compositional meaning

sama sama ('together')

CHILDREN

*'Together with the children'*

[JakSL(BISINDO)]  
(Suwiryono 2013: 135)



# Morpho-syntactic

- ▶ 13 concrete examples
- ▶ 6 types

nominal modifier

rød\_\_\_\_\_ ('red')

GENSER ('pullover')

'Red pullover'

[NTS]  
(Vogt-Svendsen 2001: 22)

object complement

brood ('bread')

ETEN ('to eat')

'eat bread'

[NGT]  
(Crasborn et al. 2008: 48)

# Morpho-syntactic

nominal modifier

adverb

head noun

head verb

guardian

frightened boy

push

ANGEL

FEEL

LITTLE

BOAT

*'Guardian angel feel frightened little boy push the boat'*

[BSL]

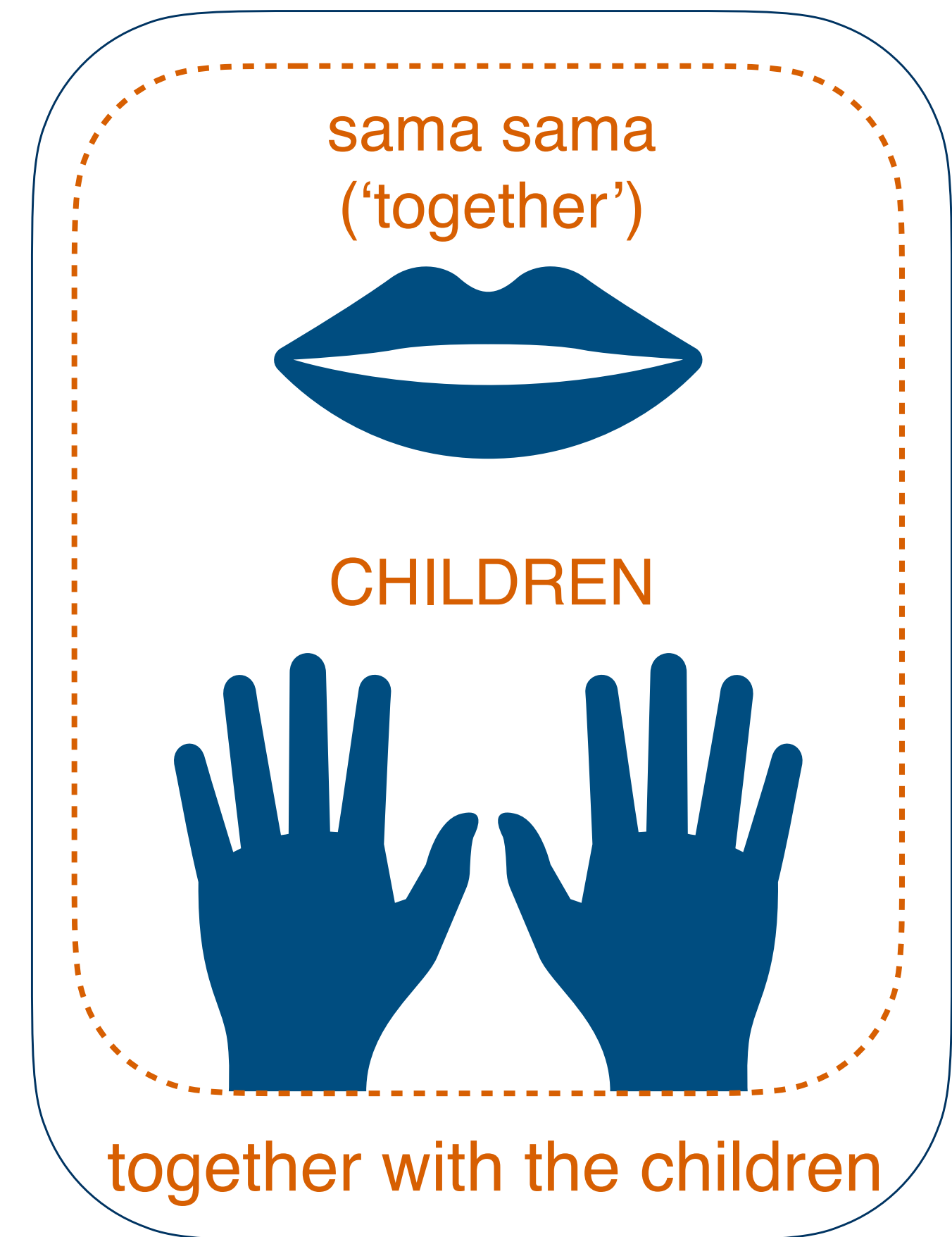
(Sutton-Spence 2007: 157)



all produced by same  
signer in same text

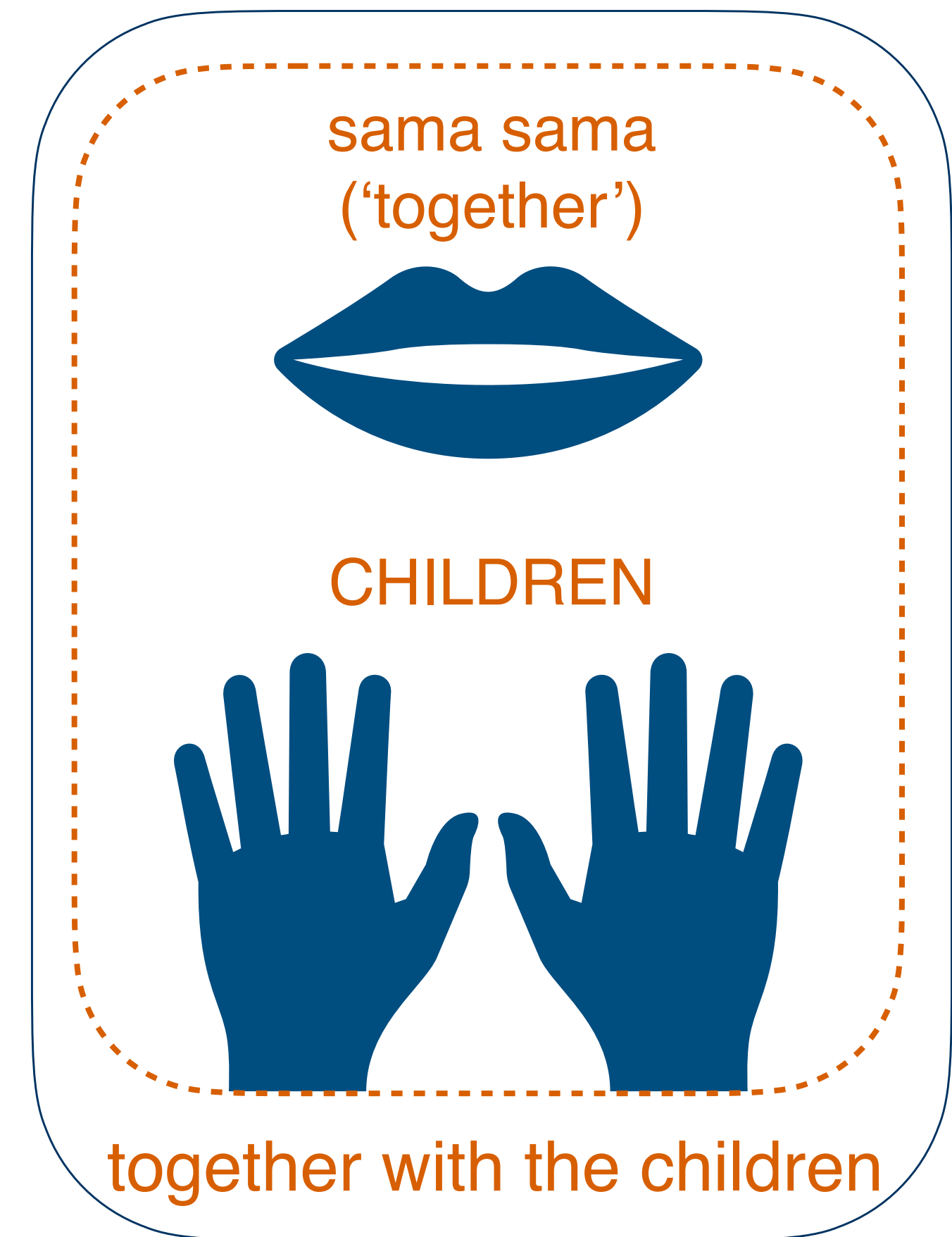
# Morpho-syntactic

- ▶ Matter replication
- ▶ *Potential* tendency to map head onto the hands and dependent onto mouthing (cf. slide 26)
  - ▶ can be classed as pattern matching as there seems to be sensitivity to grammatical categories



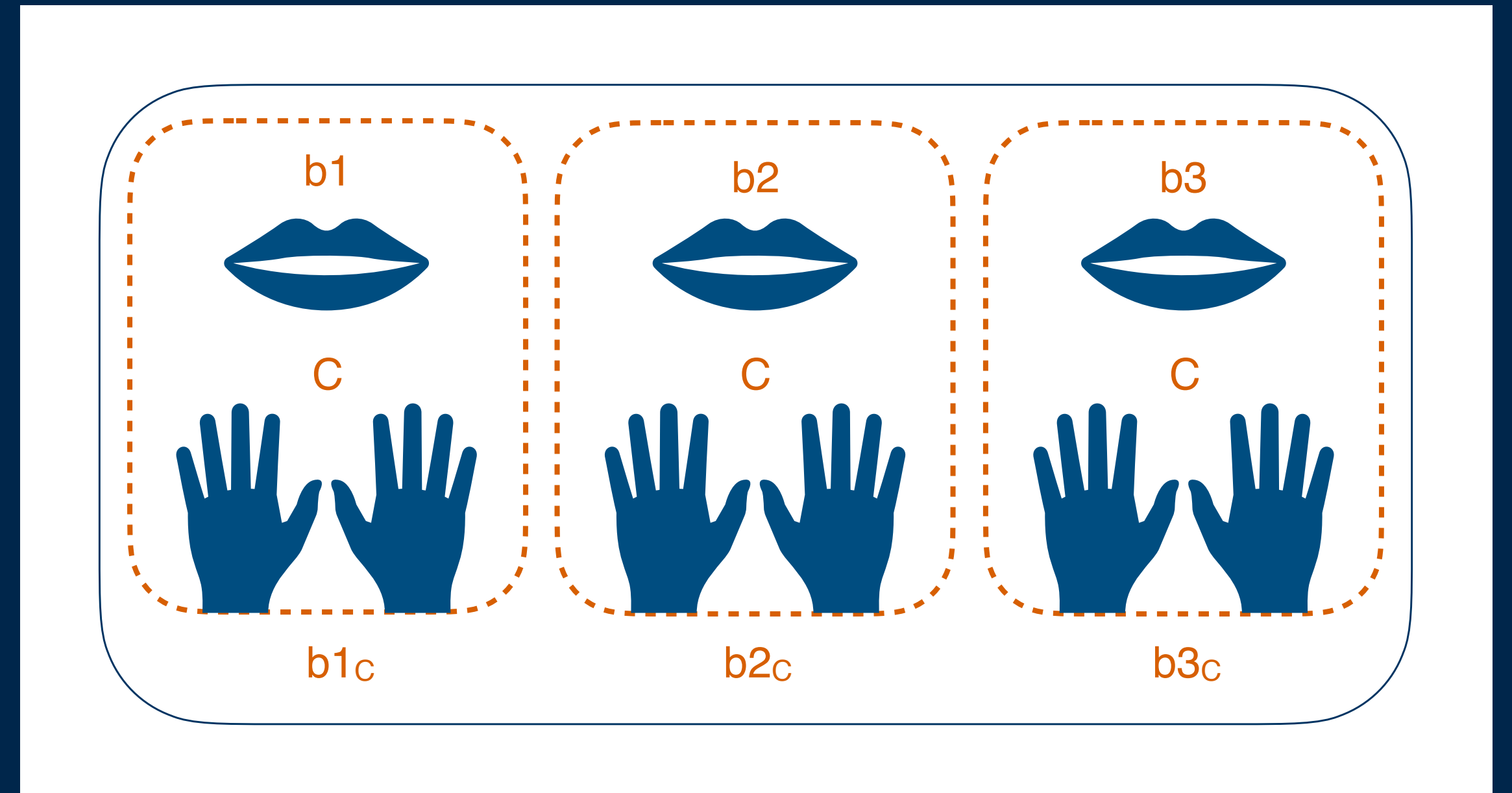
# Morpho-syntactic

- ▶ Pattern matching may be complicated to identify because of simultaneous articulation
- ▶ May be helpful to know if there is a general pattern in sign languages to put certain kinds of information on the hands and other kinds on the mouth/face



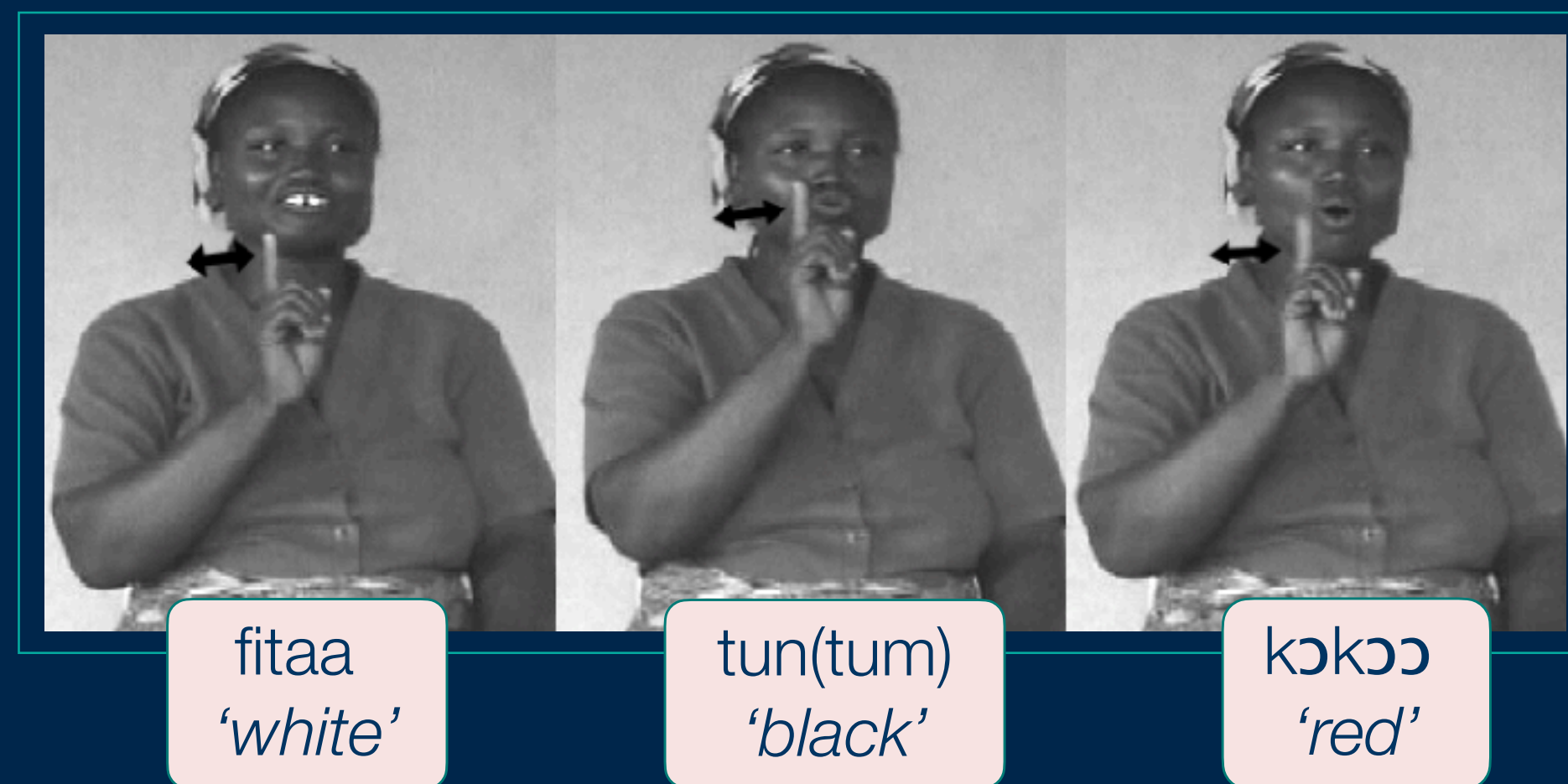
# Morpho-phonological

- ▶ Manual sign is the same across the group with mouthings related in some predictable way to the manual sign
- ▶ 2 kinds that differ in how they are related to the manual sign
  - ▶ polysemous
  - ▶ initialised

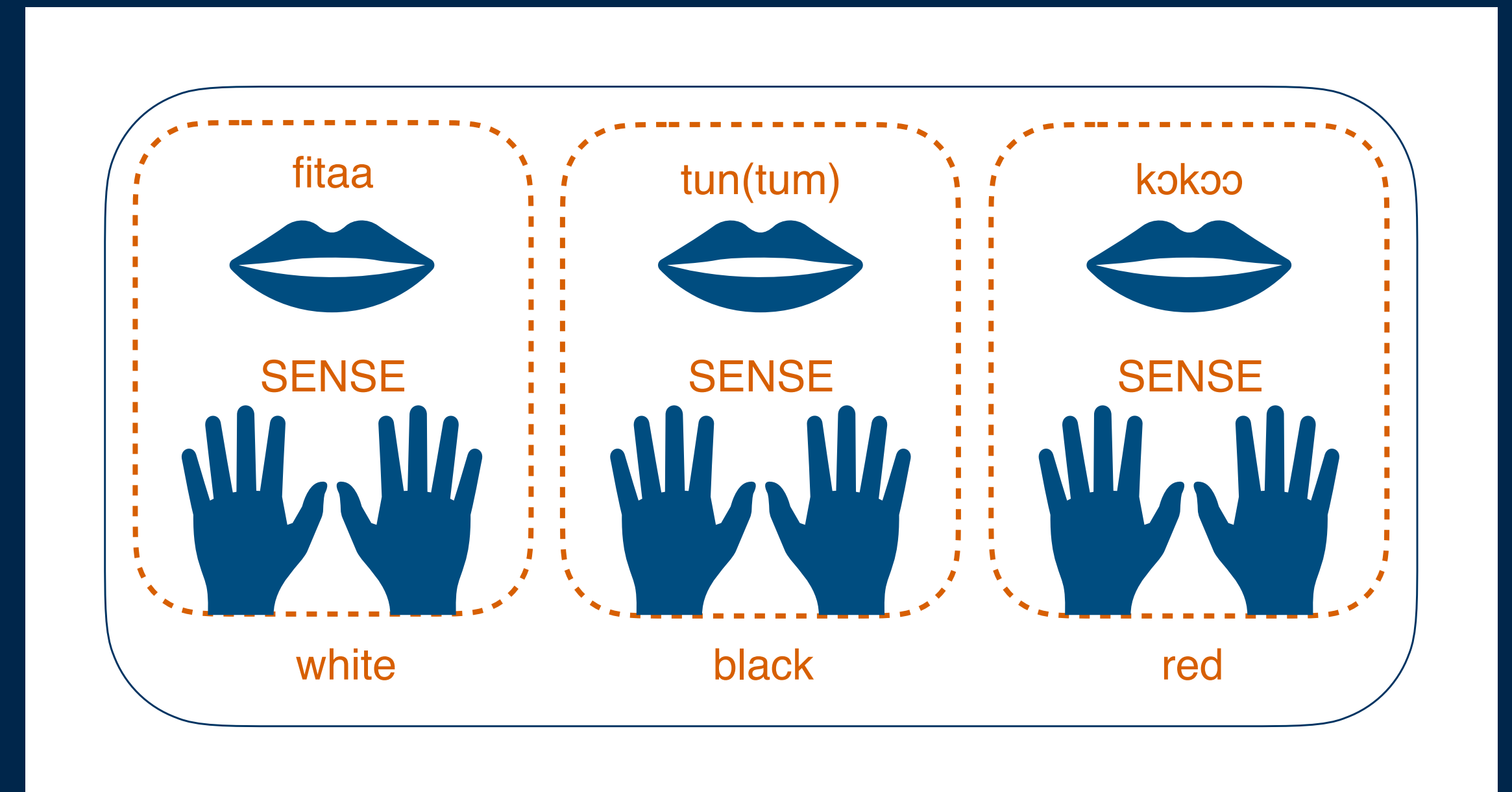


# Morpho-phonological | Polysemous

- ▶ matter replication
- ▶ identification of congruence in meaning, the mouthing is a sub-type of the meaning of the manual form



[AdaSL]  
(Nyst 2007)





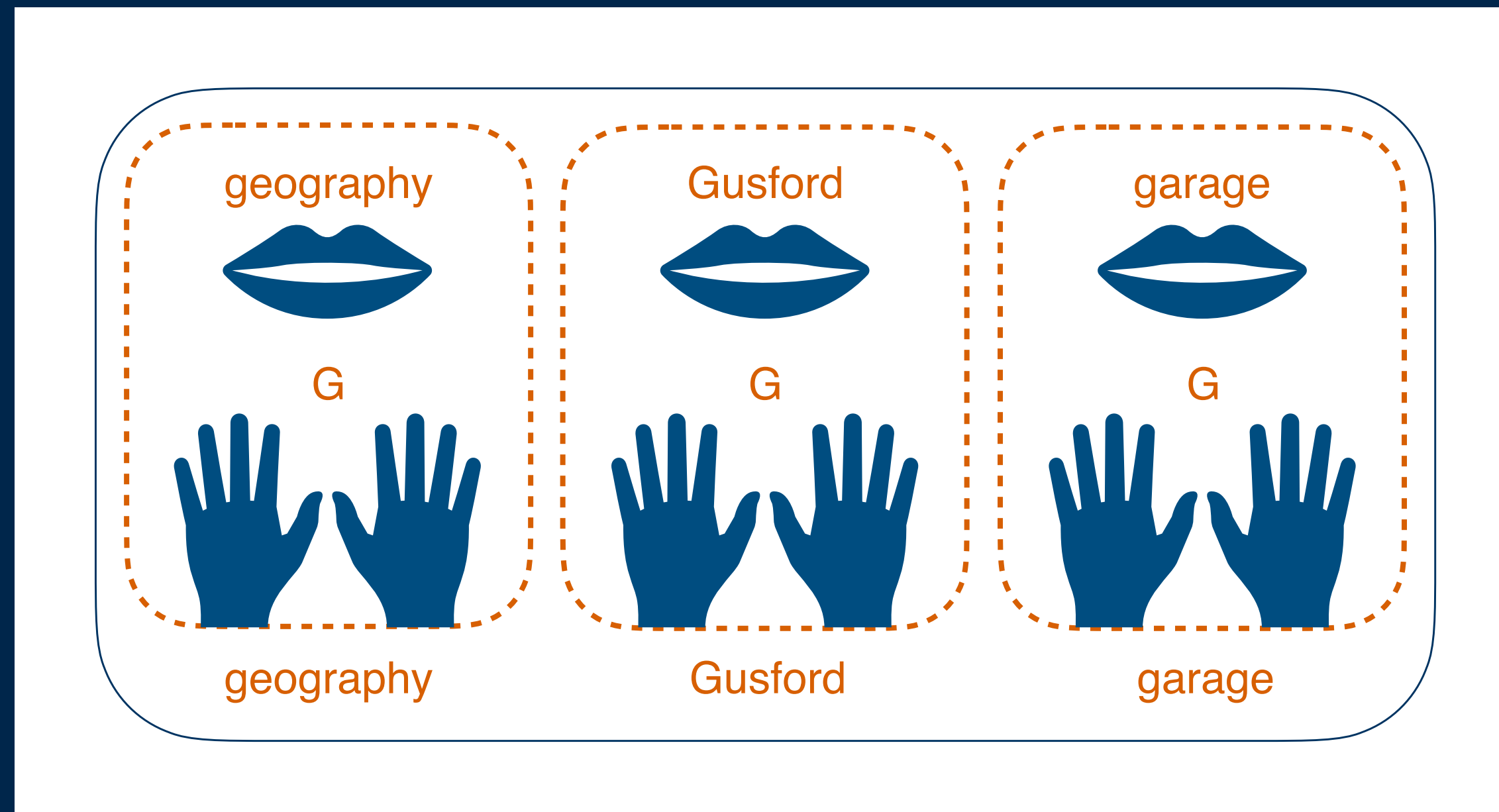
# Morpho-phonological | Polysemous

- ▶ Examples:
  - ▶ *wh*-words ( $n=9$ )
  - ▶ kinship terms ( $n=7$ )
  - ▶ colour terms ( $n=3$ )
- ▶ Potential origins → lexical sets are likely to be taught in groups
  - ▶ On numerals in NZSL “may be more rapidly affected by school usage than is the case for the overall lexicon since numbers are explicitly and extensively rehearsed as a *conventional set of high-frequency vocabulary in the classroom*” (McKee, McKee & Major 2011)



# Morpho-phonological | Initialised

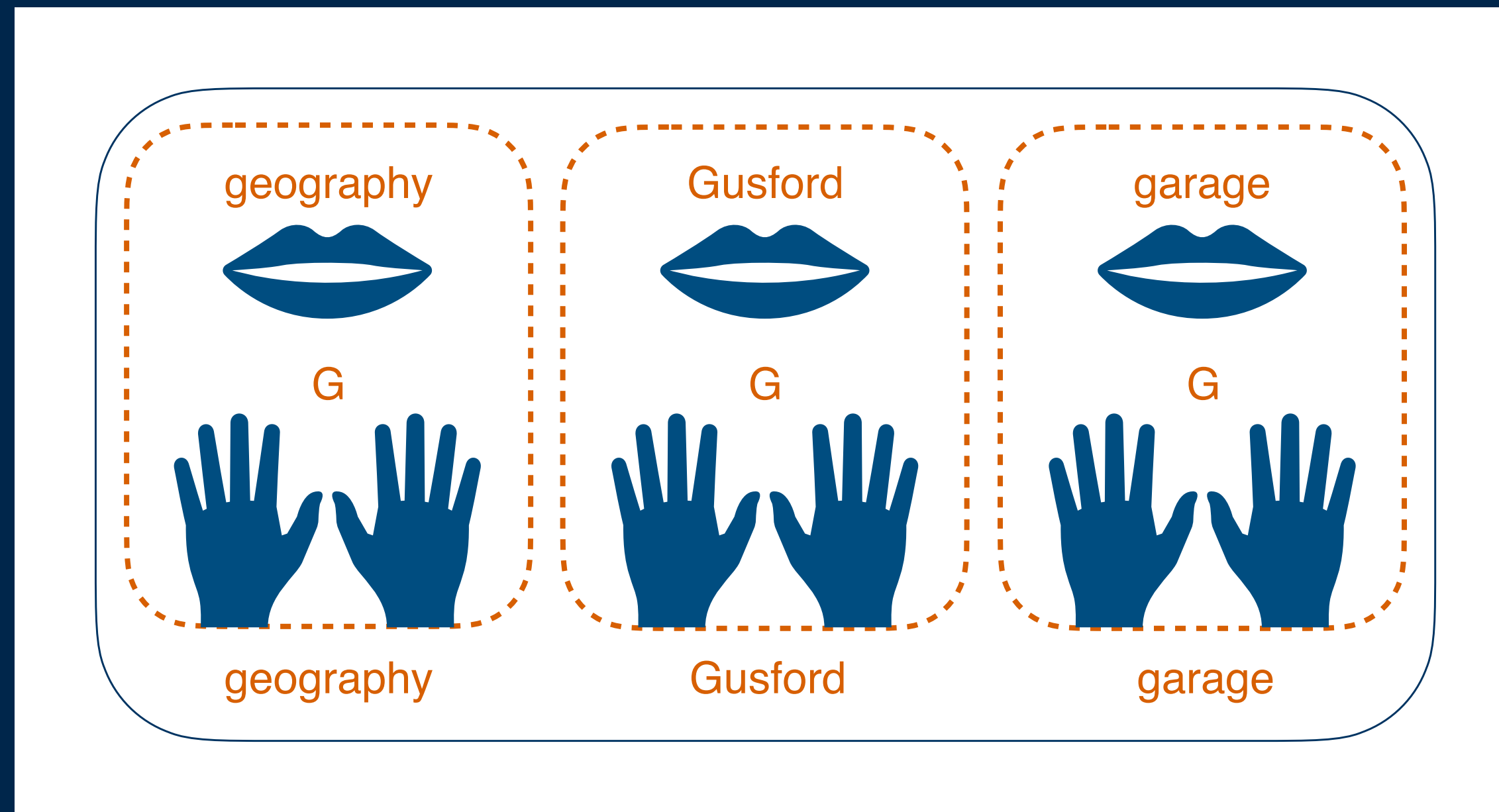
- ▶ matter replication
- ▶ identification of congruence between first letter of written form of spoken word and manual alphabet handshape



- ▶ coalesces spoken language phonetics and phonology, written language and sign language
- ▶ may be linked to teaching phonemes/written language

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- ▶ may be linked to teaching phonemes/ written language
  - ▶ teaching LSB: pá ('shovel'), pé ('foot'), pó ('dust'), pau ('stick'), pia ('sink'), pua ('brace'), pão ('bread'), pião ('spinning top') etc. (Vieira & Molina 2018: 7)

# Multimodal Contact Summary

- ▶ partial matter replication occurs in all constructions as some lip and tongue articulations from spoken language words are incorporated
- ▶ congruence occurs around lexical (congruent, polysemous) and phonetic/phonological (initialised) properties
- ▶ 1 modality referenced (i.e. spoken), free mouthing
- ▶ 2 modalities referenced (signed+spoken), congruent, polysemous and morpho-syntactic
- ▶ 3 modalities referenced (signed+spoken+written), initialised

# Multimodal Contact Summary

- ▶ Functions
  - ▶ supply the same content in different forms (congruent)
  - ▶ identify a general meaning and specify it (polysemous)
  - ▶ flag a spoken language form and specify it (initialized)
  - ▶ identify a head and a dependent (morpho-syntactic)
  - ▶ communicate when hands are occupied (free)
  - ▶ backchannel (free)

# Descriptive contributions

- ▶ Described different ways that multimodal resources may be combined, some of their functional properties and potential origins

# Theoretical contributions

- ▶ Motivated the mouthing construction as unit of analysis by:
  - ▶ showing cross-linguistically prevalence
  - ▶ showing how elements of constructions are linked following Matras & Sakel (2007)'s and Baptista (2020)'s framing

# Theoretical contributions

- ▶ Highlighted pattern replication and congruence that fall out of Matras & Sakel (2007) and Baptista (2020)'s spoken language contact work but is not explicit
  - ▶ e.g. Pattern matching implies replication of spoken word forms as the mouth must move to produce sound, but mouth articulation as a semiotic resource is not explicit

# Theoretical contributions

- ▶ Demonstrated the utility of taking a Semiotic Repertoires framing
  - ▶ Frames DHH people as multimodal multilinguals or users of spoken and written language semiotic resources
  - ▶ Identifies units of linguistic analysis that consider language use as it occurs in the “real world”



**Thanks!**

fbisnath@umich.edu, <https://fbisnath.github.io/>