

# The role of phonological overlap in perceived iconicity in foreign signs

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## Background

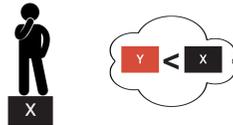
Language experience affects iconicity judgement <sup>4,1</sup>



Considerable amount of quantifiable overlap across unrelated sign languages <sup>5,6</sup>

## Research Question

RQ1: Are native signs judged to be more iconic than foreign signs?



RQ2: Are signs that are more similar in a foreign language perceived as more iconic?



## This Study

Sign languages:

CSL



NGT



Method: 1) phonological overlap  
2) iconicity rating

Analysis: (mixed effects model) <sup>2</sup>  
iconicity rating ~ language  
iconicity rating ~ phonological overlap

## Phonological Comparison

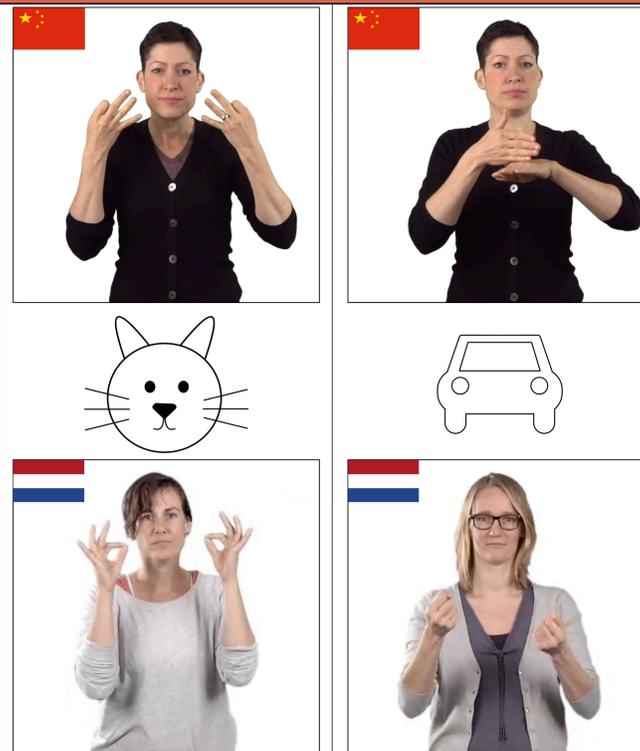
- Swadesh list signs from Global Signbank <sup>3</sup>
- 24 phonological features coded
- Automated pairwise comparison
- Normalised for no. of features compared

> Phonological Overlap Score (0-1)



Feature	CAT CSL	CAT NGT	Comparison	Similarity Pts.
Location	Check	Check	X	0
Movement Direction	Ipsilateral	Ipsilateral	✓	1
Repeated Movement	0	0	✓	1
Alternating Movement	0	0	✓	1
Relative Orientation: Movement	Base	Back	X	0
Orientation Change	NA	NA	-	-
Handedness	2s	2s	✓	1
Contact Type	Initial	None	X	0

## Stimuli



## Iconicity Rating

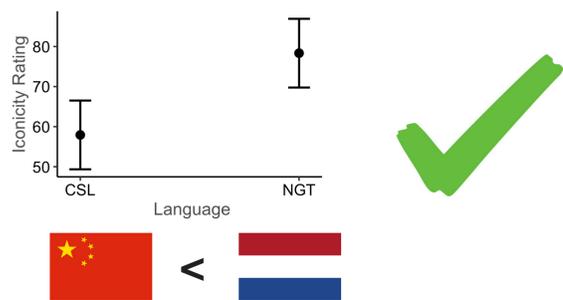
- Online rating task
  - 45 randomised blocks of paired signs (CSL, NGT)
  - Iconicity rating for each sign (0-100)
  - 9 deaf NGT signers (one-way rating)
- > Iconicity Rating (0-100)



## Results

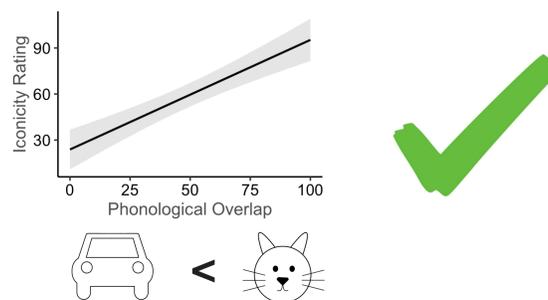
RQ1: Native more iconic than foreign?

Language predicts iconicity ratings



RQ2: High overlap more iconic than low overlap?

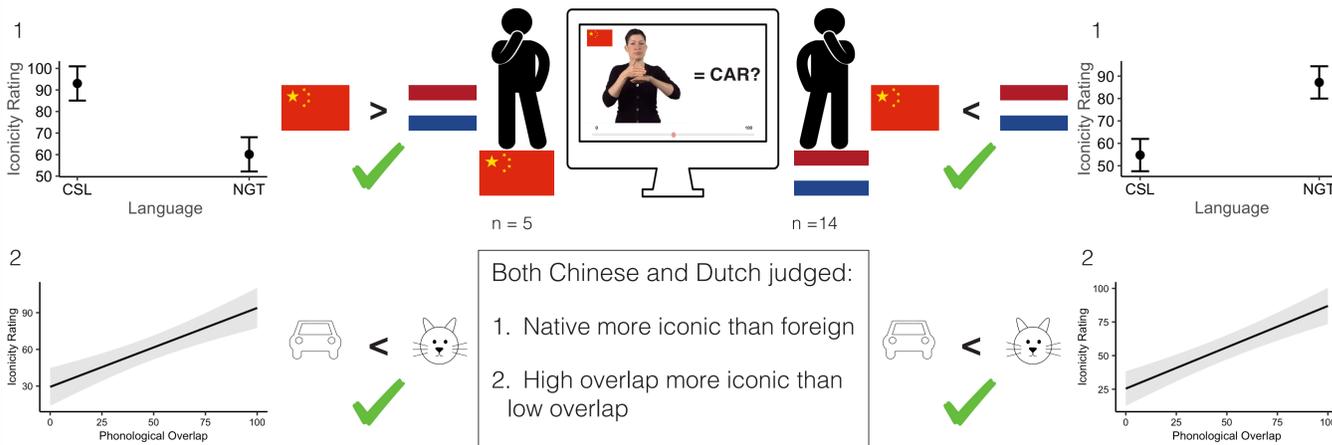
Degree of overlap predicts iconicity ratings



## Discussion

- Repeated form-meaning mappings reinforce perceived iconicity
- Item by item variation: elements of language experience not captured by this study e.g. classifiers
- Cross-signing & IS: iconicity helps! Automated comparison may help predict communicative success in translanguaging

## Follow-Up: Two-way Rating Task



## Take-Home

Native language iconicity bias:

- (1) Native signs judged as more iconic than foreign signs
- (2) The more form overlap between native & foreign signs, the more iconic the foreign sign

## References

1. Adam, M., Iversen, W., Wilkinson, E., & Morford, J. P. (2007). Meaning on the one and on the other hand. In C. Ljungberg, & O. Fischer (eds.), *Insistent Images*, 5, 211-227. Amsterdam: John Benjamins. 2. Baayen, R. H., Davidson, D. J., & Bates, D. M. (2008). Mixed-effects modeling with crossed random effects for subjects and items. *Journal of Memory and Language*, 59(4), 390-412. 3. Crasborn, O., Zwitserlood, I., van der Kooij, E., & Schüller, A. (2018). *Global SignBank manual*. 10.13140/RG.2.2.36603.82729. 4. Occhino, C., Anible, B., Wilkinson, E., & Morford, J. P. (2017). Iconicity in the eye of the beholder. *Gesture*, 16(1), 100-126. 5. McKee, D., & Kennedy, G. (2000). *Lexical comparison of signs from American, Australian, British and New Zealand sign languages*. In K. D. Emmorey & H. Lane (eds.), *The signs of language revisited: An anthology to honor Ursula Bellugi and Edward Klima*, 49-76. Mahwah, NJ: Lawrence Erlbaum Associates. 6. Parks, J. (2011). *Sign language word list comparisons: Toward a replicable coding and scoring methodology* (M.A. Thesis). University of North Dakota, Grand Forks, ND.

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More details? See full MA thesis here

