

# Theory-Description-Theory: A Round Trip in French Sign Language Phonology

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## GOALS

Adopting/adapting the **Prosodic Model** (Brentari 1998) for the phonology of French Sign Language (LSF):

- Accounting for **orientation issues**
- Accounting for **complex signs**

## CHALLENGES

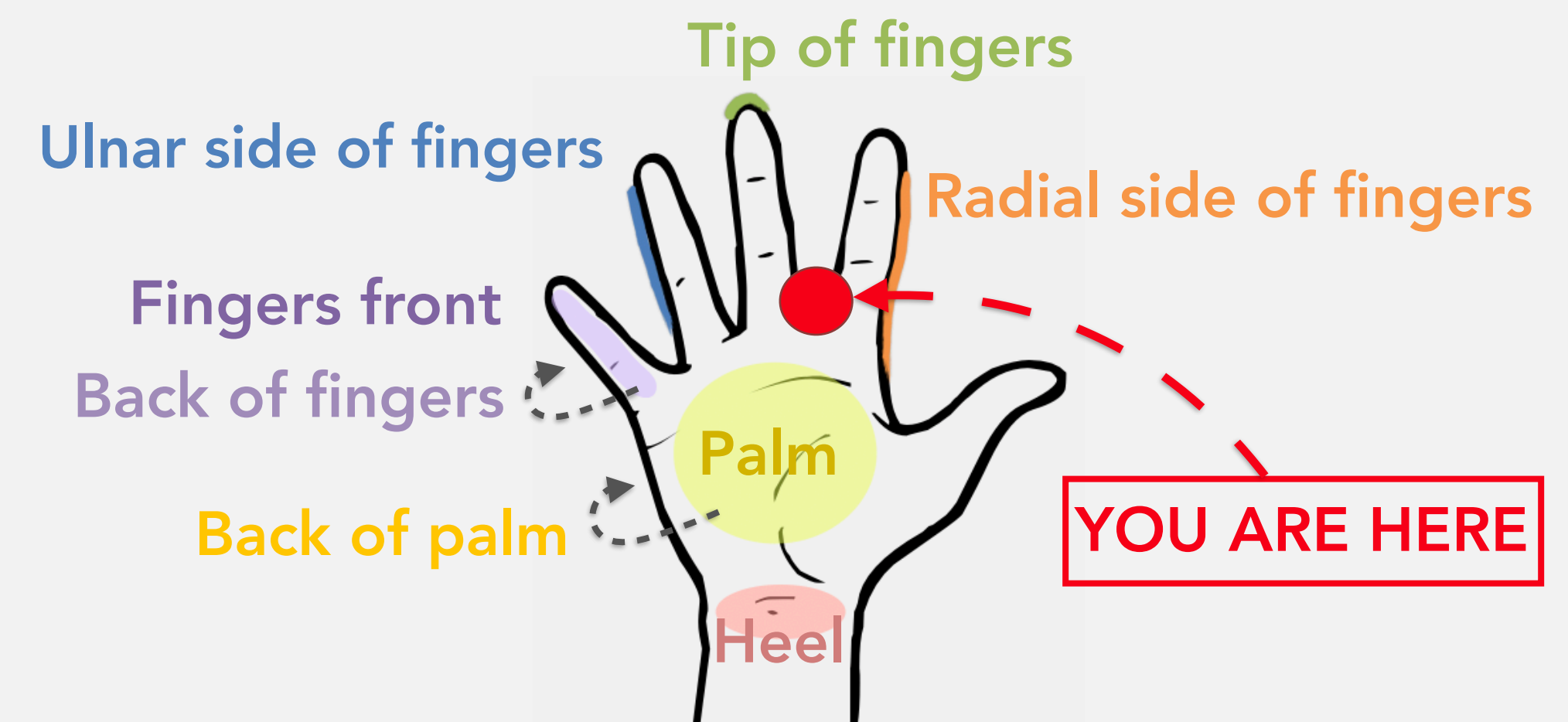
- Empirical challenge** on the size of feature inventories.
- Theoretical challenges:**
  - Absolute vs. relative orientation
  - Timing units in simultaneous compounds

## OVERVIEW

### 4 phonemic classes:

- Handshape (A)
- Location (PoA)
- Orientation (O)
- Movement (PF)

- When the PoA is the non-dominant hand (H2): 8 possible subparts **excluding  $[\pm web]$** .
- Orientation **derived** from feature specification from both PoA and A  $\rightarrow$  **relative orientation** (no absolute orientation).
- No account for **simultaneous compounds** in terms of structure and timing units.



## 1- FEATURE SPECIFICATION: EVIDENCE FROM MINIMAL PAIRS IN LSF $[\pm web]$

In the Prosodic Model, no  $[\pm web]$  feature:

"There is one more contact discussed by Liddell and Johnson (1989), known as 'web' (e.g. [...]), but because H1 contacts **the ulnar side of each finger of H2**, 'web' can be treated as a subclass of 'ulnar.'"

Need of  $[\pm web]$ , evidence from the minimal pair EGG ~ SHIT:



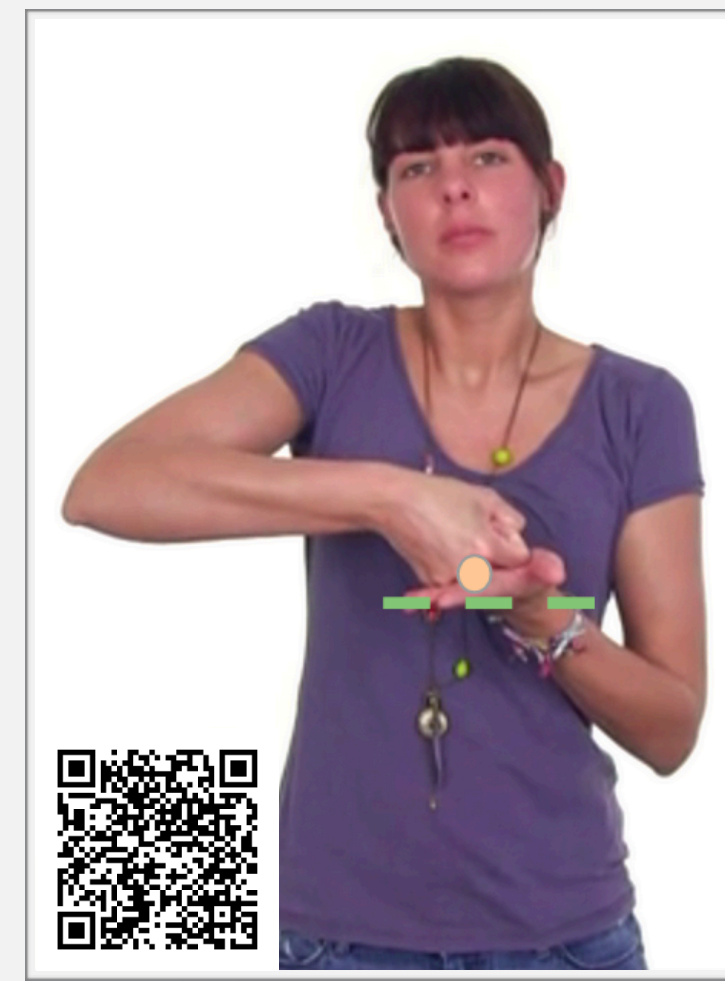
EGG  
Location: **ulnar side**



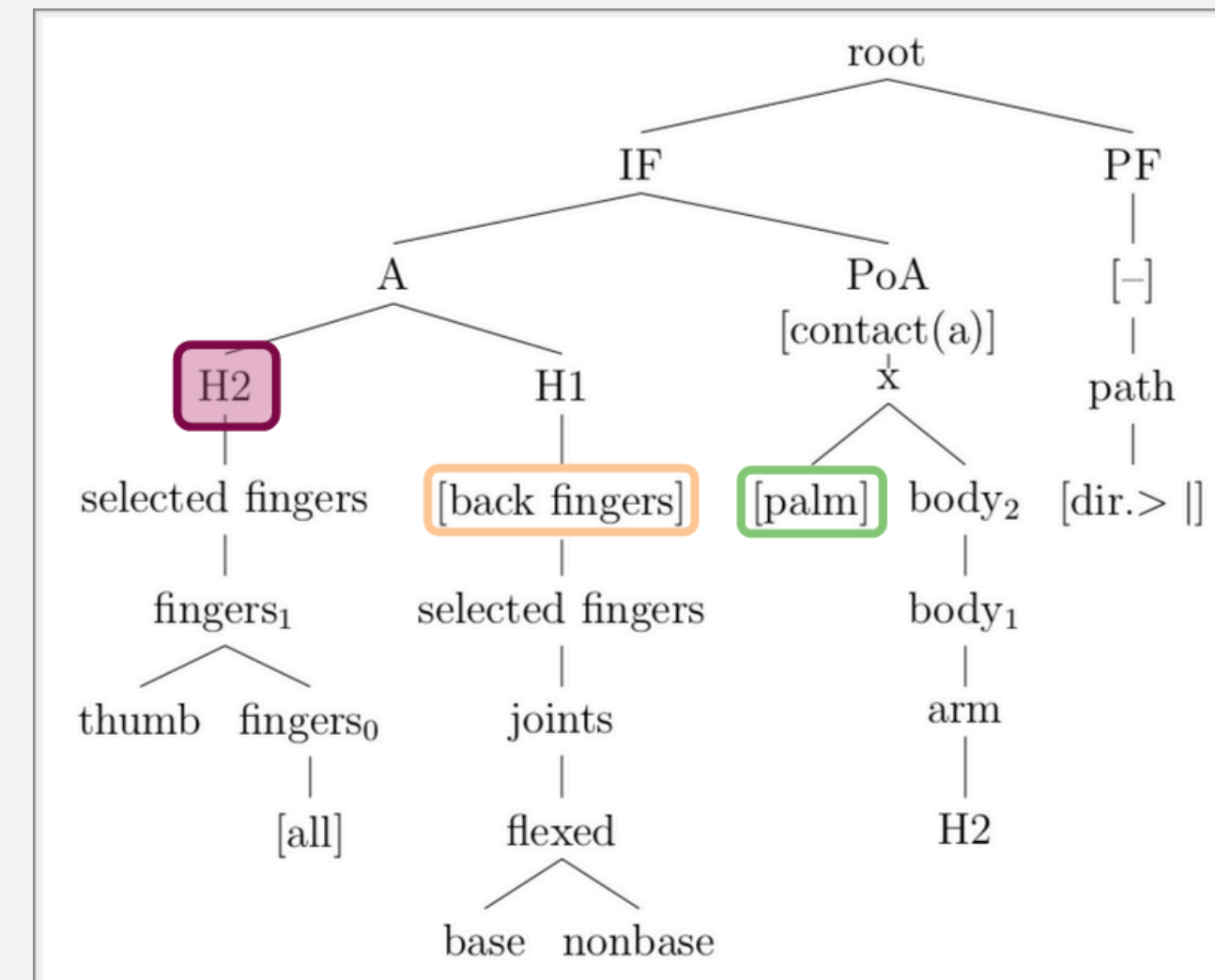
SHIT  
Location: **web**

## 2- SECONDARY PLANE: EVIDENCE FROM ABSOLUTE ORIENTATION

Relative orientation: specification of the **relevant part of the dominant hand** relative to the **relevant part of the non-dominant hand** as the PoA.



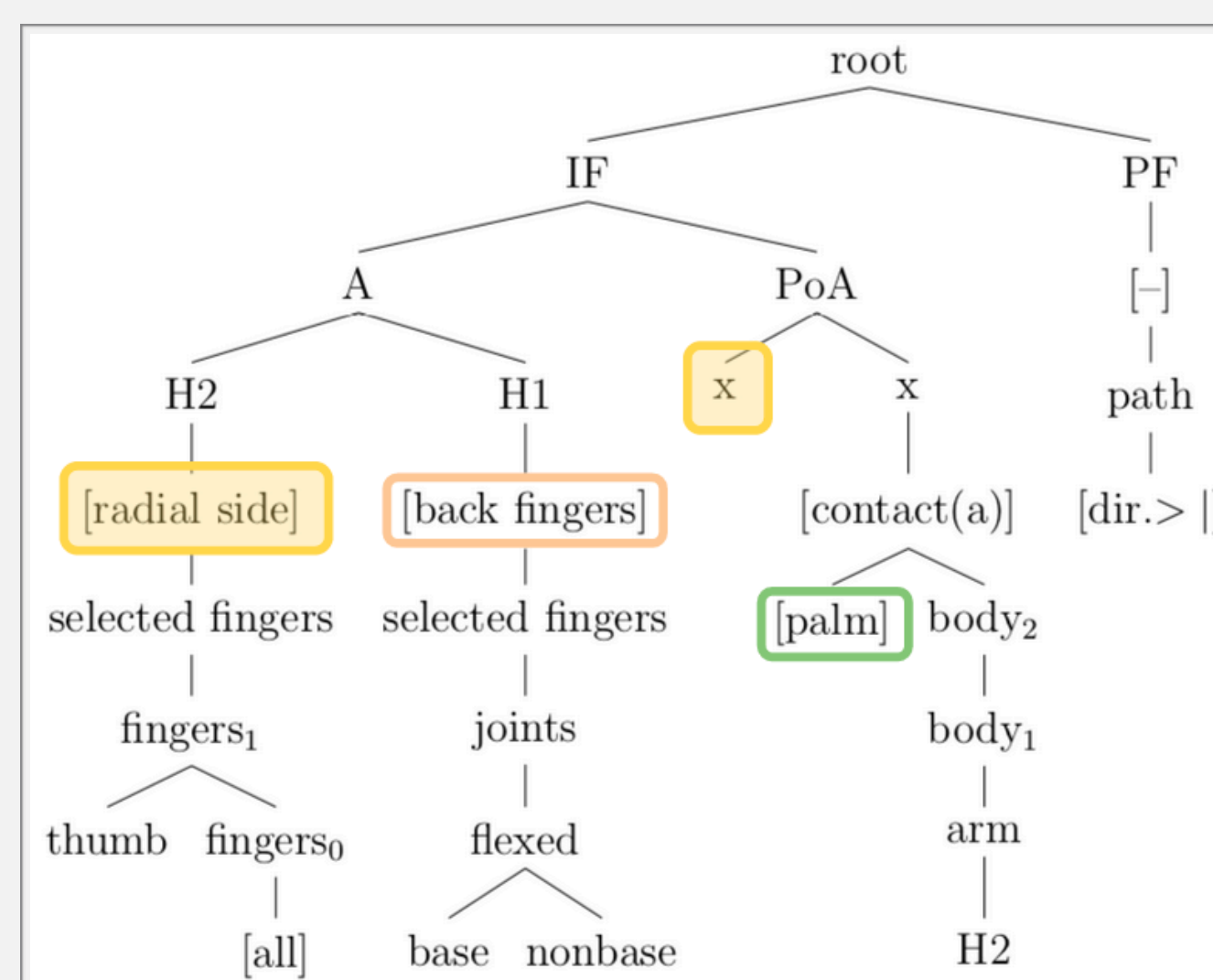
MINIMUM



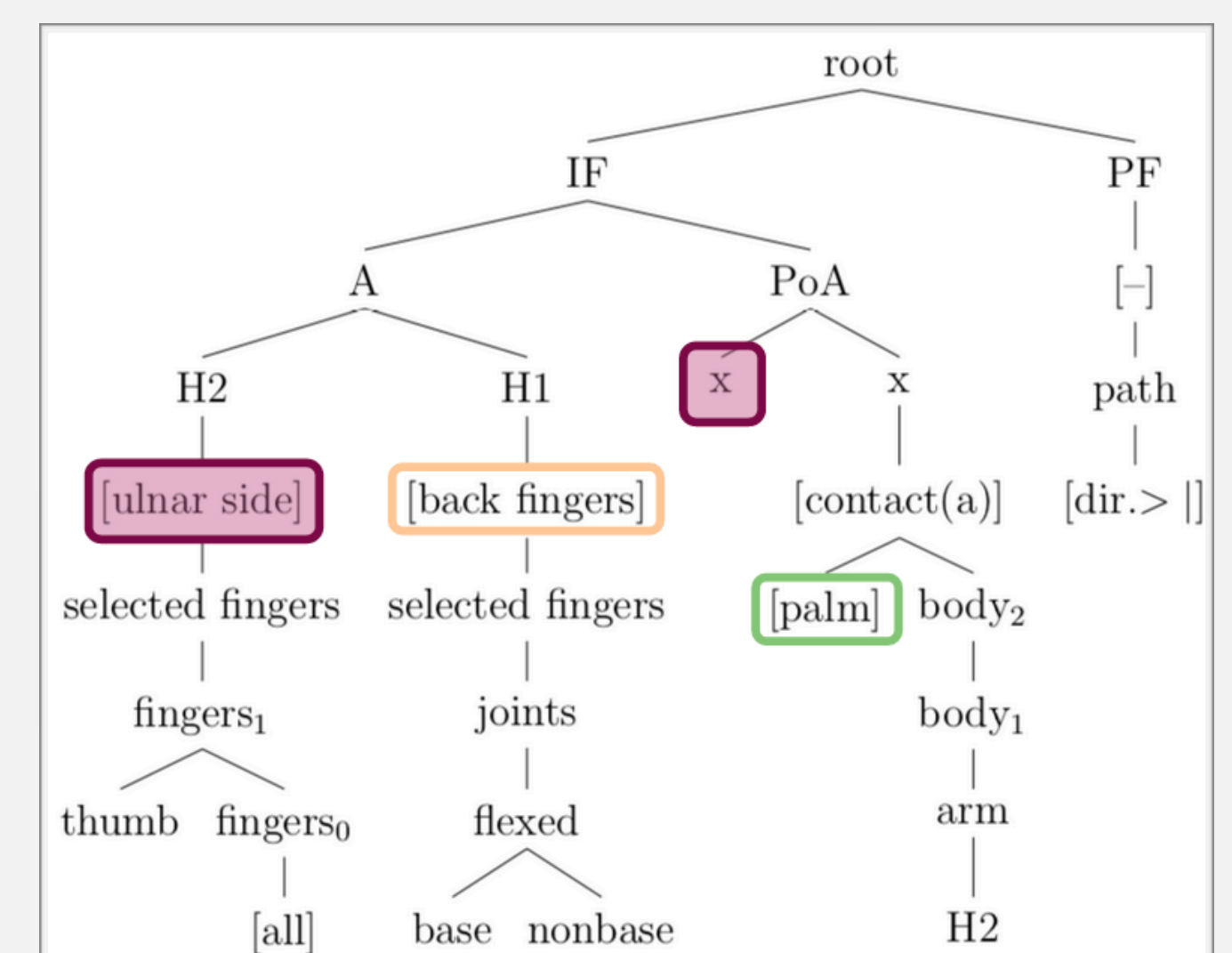
MAXIMUM

Same phonological representation for MINIMUM and MAXIMUM based on relative orientation.

Need of **absolute orientation** for the **non-dominant hand** relative to the horizontal plane (x) to obtain two distinct representations:



MINIMUM  
Relevant part: **radial side**



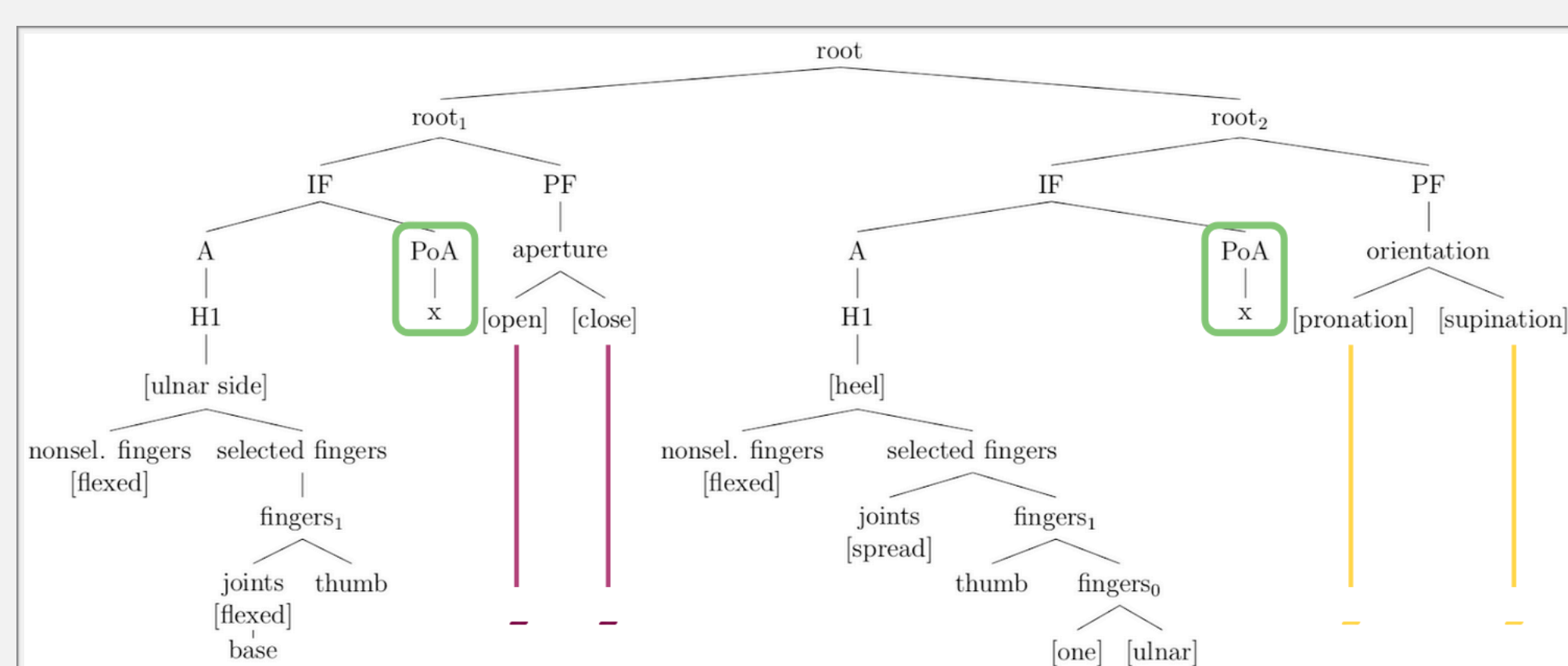
MAXIMUM  
Relevant part: **ulnar side**

## 3- MERGE IN SIMULTANEOUS COMPOUNDS: EVIDENCE FROM TIMING UNITS

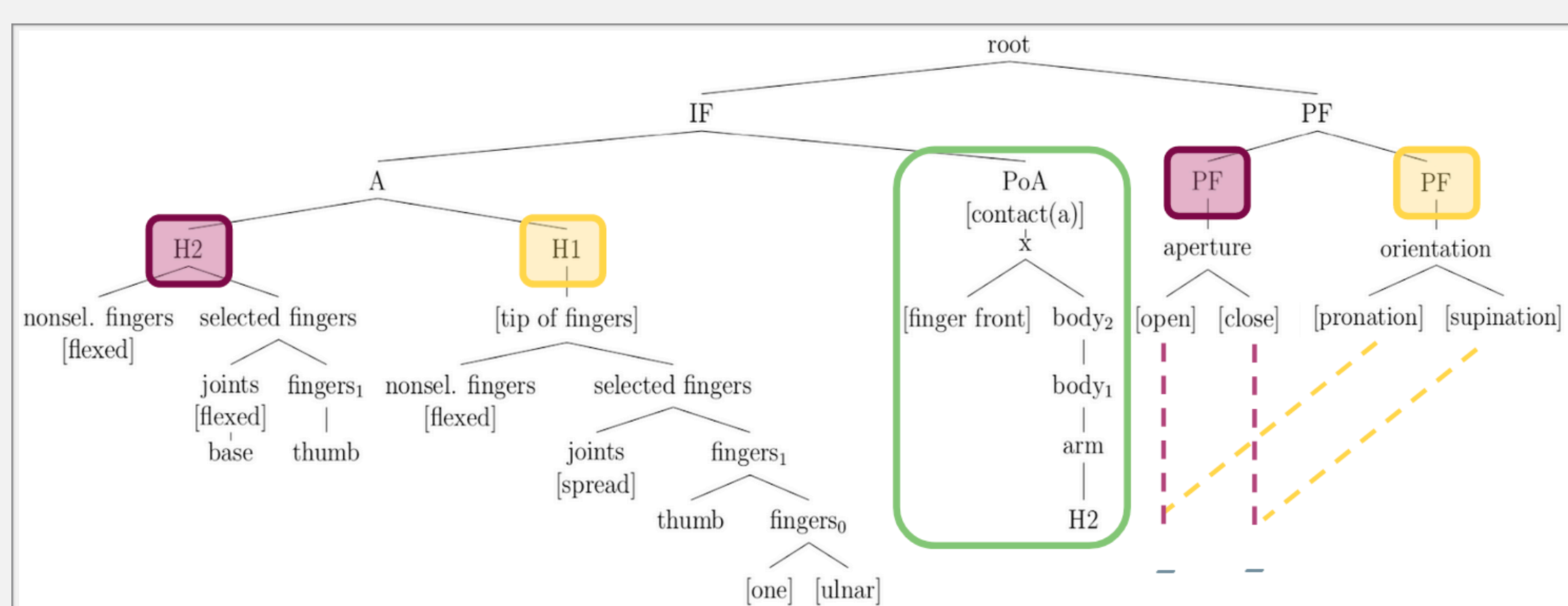


STRING BEAN

- Single sign vs. compound:
  - If single sign: representation of the movement of the **dominant hand only**.
- Sequential compound vs. simultaneous compound (Santoro 2018):



**MERGE**



Underlying form:

- PoA: incorrect
- Timing units: 4

Surface form:

- PoA: correct
- Timing units: 2

## CONCLUSIONS

- Addition of the feature  $[\pm web]$ .
- Implementation of **absolute orientation** by inserting a **secondary plane** of articulation.
- Merge** in simultaneous compounds for **correct PoA** and the **alignment of timing units**.

## REFERENCES

Brentari, D. (1998). *A prosodic model of sign language phonology*. MIT Press.  
 Liddell, S. K., & Johnson, R. E. (1989). *American sign language: The phonological base*. SLS, 64(1), 195-277.  
 Santoro, M. (2018). *Les mots composés dans les langues signées : le cas de la Langue des Signes Italienne (LIS) et de la langue des Signes Française (LSF)*. Paris, EHESS (Doctoral dissertation, PhD thesis).