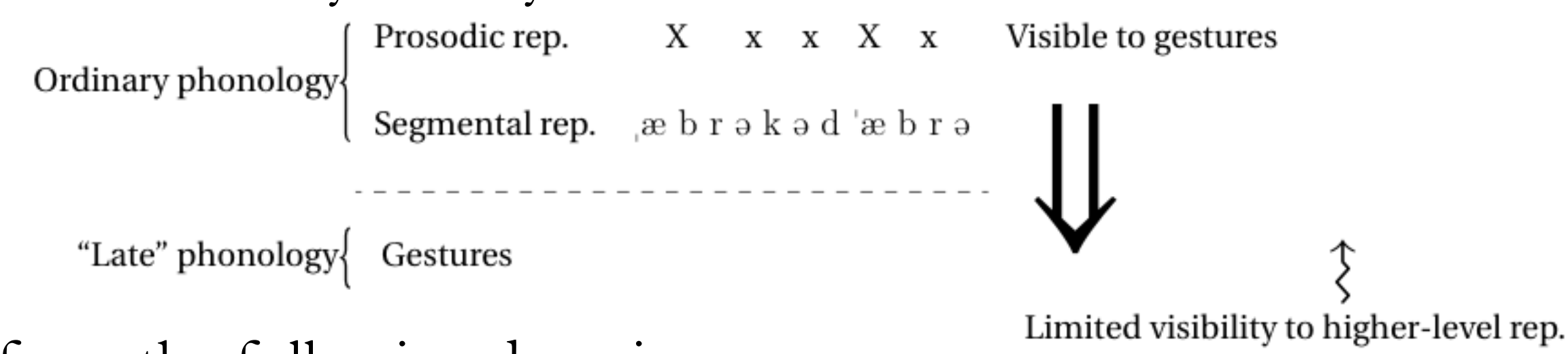


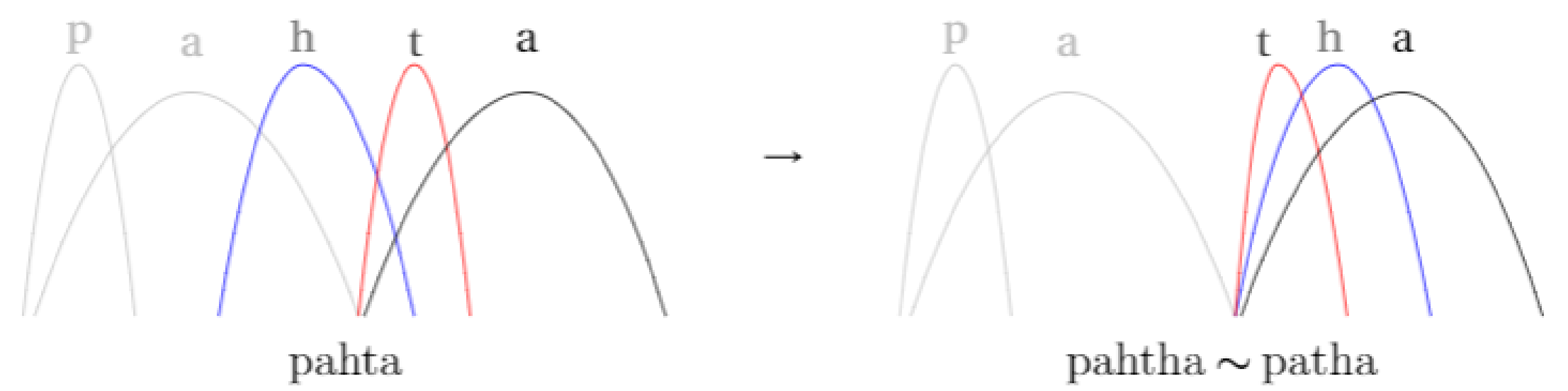
I. Main Claim

- **Main claim:** Productive phonological metathesis is gestural overlap (Grammont 1933; Blevins & Garrett 1998; Hall 2003; Mooney 2021), not transposition
- **Secondary claim:** Metathesis operates on temporal representations that are *late* in the phonology
- By *late*, we mean that there is an asymmetry in what information is available to different levels of representation



- We present evidence from the following domains:
 1. Phonetic: synchronic metathesis produces intermediate and coarticulated forms
 2. Phonological interactions: phonology acts like metathesis has not occurred
- Languages: Sevillian Spanish (Romance) and Uab Metro (Austronesian)

II. Case Study 1: Sevillian Spanish

- Productive CC metathesis in /sp st sk/ clusters (Torreira 2012; Ruch 2013; Ruch & Peters 2016)
 - [s] debuccalizes to [h] and metathesizes
 - (1) /pasta/ → [pahta] → [pat^ha] 'pasta'
- Phonetics
 - Experimental work suggests that speakers treat [Ch] sequences as underlying /sC/ clusters (Gilbert 2021), not as aspirated stops (cf. O'Neill 2009; Gylfadottir 2015)
 - Metathesis can be understood as overlap of the [h] and stop gestures (following Parrell 2012)
 - (2) 
 - Phonetically intermediate forms suggest that metathesis occurs via gestural overlap: [ht], [th], [hth]
- Phonological interactions
 - Metathesis operates on surface temporal representations, independent of other phonology
 - We use the fact that Spanish is weight-sensitive to test interaction between metathesis and stress
 - **Weight Restriction for Antepenultimate Stress:** *LLHL, √LLLL (Harris 1983)
 - If [Ch] sequences are underlying /sC/ clusters, surface syllable structure changes with metathesis
 - (3) /'plas.ti.ko/ HLL → ['pla.thi.ko] LLL
 - Question: Does surface change in syllable structure affect stress?
 - Results from a nonce word judgment task (Gilbert, ms)

(4) a. /lumafato/ /LLLL/	b. /lumafasto/ /LLHL/	c. /lumafanto/ /LLHL/	d. /lumafasto/ /LLHL/
[lu'mafato] [L ^l LL]	[lu'mafatho] [L ^l LL]	[lu'mafanto] [L ^l HL]	[lu'mafatho] [L ^l LL]
	>	=	

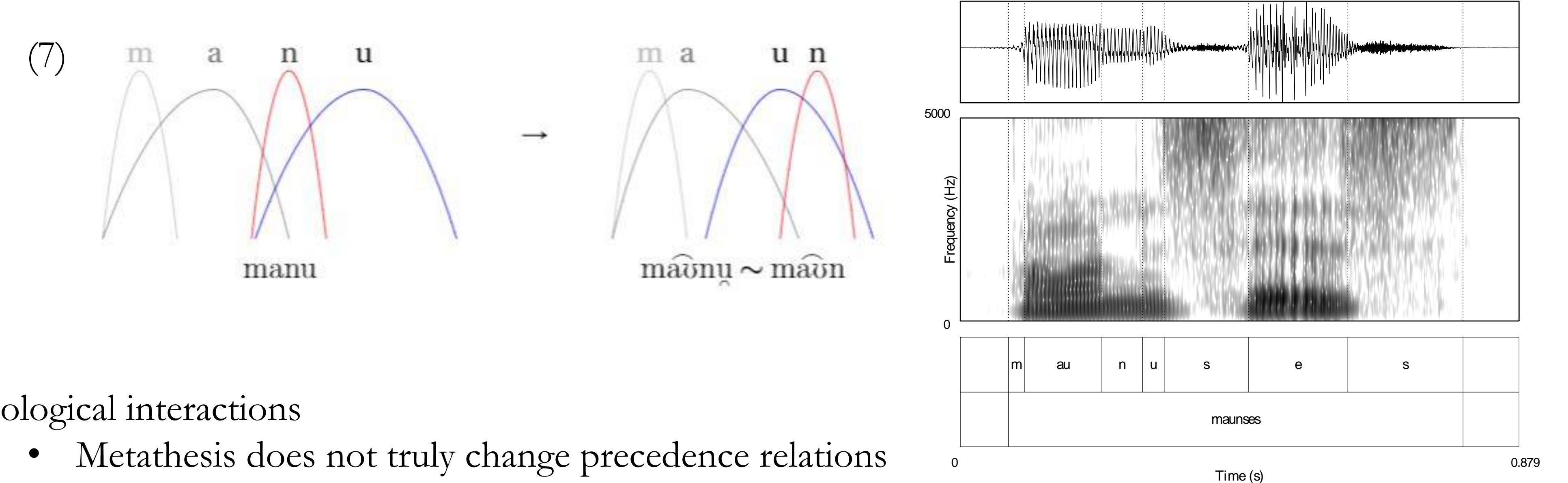
- If stress were evaluated based on the metathesized (=surface) form, we'd expect:
 - (4a.) and (4b.) to be treated equally, because they are both LLLL on the surface
 - (4d.) to be better than (4c.) because (4d.) is LLLL on the surface
- UR weight—not surface—weight matters for stress assignment
- This means that metathesis is not visible to stress assignment
- The gestural representations are not visible to the prosodic representations, so metathesis is *late*

III. Case Study 2: Uab Metro

- Uab Metro (Austronesian, West Timor) has productive CV metathesis
 - Metathesis is prosodically conditioned (Mooney 2021), similar to CV metathesis in other Austronesian languages (e.g. Rotuman, Churchward 1940; Kwara'ae, Heinz 2005; Leti, Hume 1998)
- Uab Metro truncates roots to reduce right-edge lapses, as in (5)

(5) a. /'kibaʔ/	→ ['kibaʔ]	'ant'	σσ	→ σσ	No truncation
b. /'kibaʔ-e/	→ ['kibʔ-es]	'an ant'	σσσ	→ σσ	Truncation
- In some contexts, as in (6), truncation can also feed metathesis

(6) a. /'manus/	→ ['manus]	'betel vine'	σσ	→ σσ	No truncation
b. /'manus-es/	→ ['maʊns-es]	'a betel vine'	σσσ	→ σσ	Truncation + Met.
- Phonetics
 - Metro metathesis can be understood as overlap of C and V gestures
 - Like in Sevillian Spanish, this overlap can produce *intermediate forms*



- Phonological interactions
 - Metathesis does not truly change precedence relations
 - Metathesis can repair a number of markedness violations, but it cannot resolve vowel hiatus
 - (8) Vowel hiatus resolved via epenthesis

a. /'fatu-e/	→ ['fautq-e].	'the stone'	*[faut-e]
b. /'kero-es/	→ ['keorg-es]	'a monkey'	*[keor-es]
c. /'tasi-e/	→ ['taisq-e]	'the sea'	*[tais-e]
 - If metathesis were transposition, metathesis alone should be enough in (8), e.g. *[faut-e]
 - Metathesis-as-overlap cannot resolve hiatus, because the vowel remains partially in-situ
 - Additional perk: analyzing metathesis as overlap removes overgeneration issues associated with LIN

Interim summary:

- Productive, synchronic metathesis in Spanish and Uab Metro share several key characteristics:
 - (a) Metathesis is realized as gestural overlap, and produces intermediate forms around 10% of the time
 - (b) Metathesis doesn't seem to change how the phonology proper views segmental order
 - (c) Metathesis is not morpheme-driven, but entirely predictable based on surface phonology

V. Discussion & Conclusions

- Metathesis in Sevillian Spanish and Uab Metro is overlap, not transposition
 - This supports arguments against transposition in phonology proper (Takahashi 2019)
 - In both cases, this overlap occurs independent of other phonology (e.g. stress assignment)
- What does this mean for the phonetics-phonology interface?
 - Metathesis manipulates gestural representations, not atomic segments
 - Gestural representations are *not* visible to higher-level phonological structure, but the higher-level phonology *is* visible to gestures
 - We call this asymmetry *lateness*