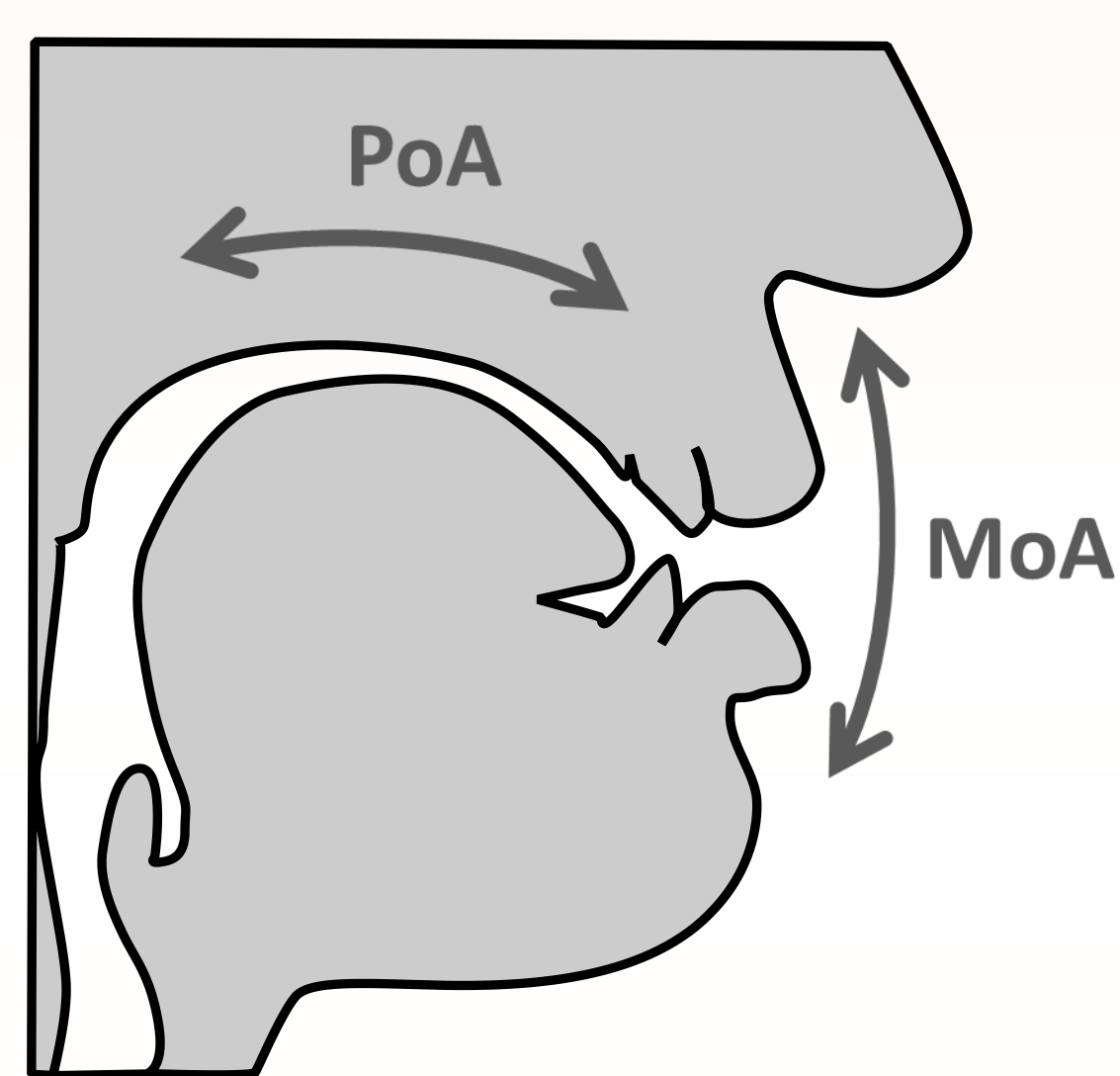


Lazy speakers, influential learners and distant sounds

On the role of articulatory difference in phonotactic production, acquisition and change

Andreas Baumann¹ & Kamil Kaźmierski²

Articulatory differences in consonant diphones: questions



E.g.

/mp/ (as in *stomp* or *pimp*) differs in MoA but not in PoA

/kt/ (as in *baked* or *duct*) differs in PoA but not in MoA

Q1

Do manner and place differences have different effects?

Q2

Do articulatory differences play the same role in acquisition and change?

Q3

Are small articulatory differences better than large ones?

Operationalization

		MoA								
		OBSTRUENT		SONORANT			VOWEL			
		STOP	AFFRICATE	FRICATIVE	NASAL	LIQUID lateral	LIQUID rhotic	GLIDE		
		7	6	5	4	3	2	1	0	
PoA	p b				m			w	1 bilabial	LABIAL
	/md/			f v					2 labio-dental	
	t d			θ ð					3 inter-dental	CORONAL
				ʃ ʒ					4 alveolar	
				ʎ ʝ					5 post-alveolar	DORSAL
	k g				ŋ			j	6 palatal	
								w	7 velar	

Dziubalska-Kolaczyk, K., Pietrala, D., Aperliński, G. 2014. The NAD Phonotactic Calculator – an online tool to calculate cluster preference in English, Polish and other languages. <http://wa.amu.edu.pl/nadcalc/>

Diachrony

Diachronic growth rate of 41 English word-final cluster types through ME and ModE

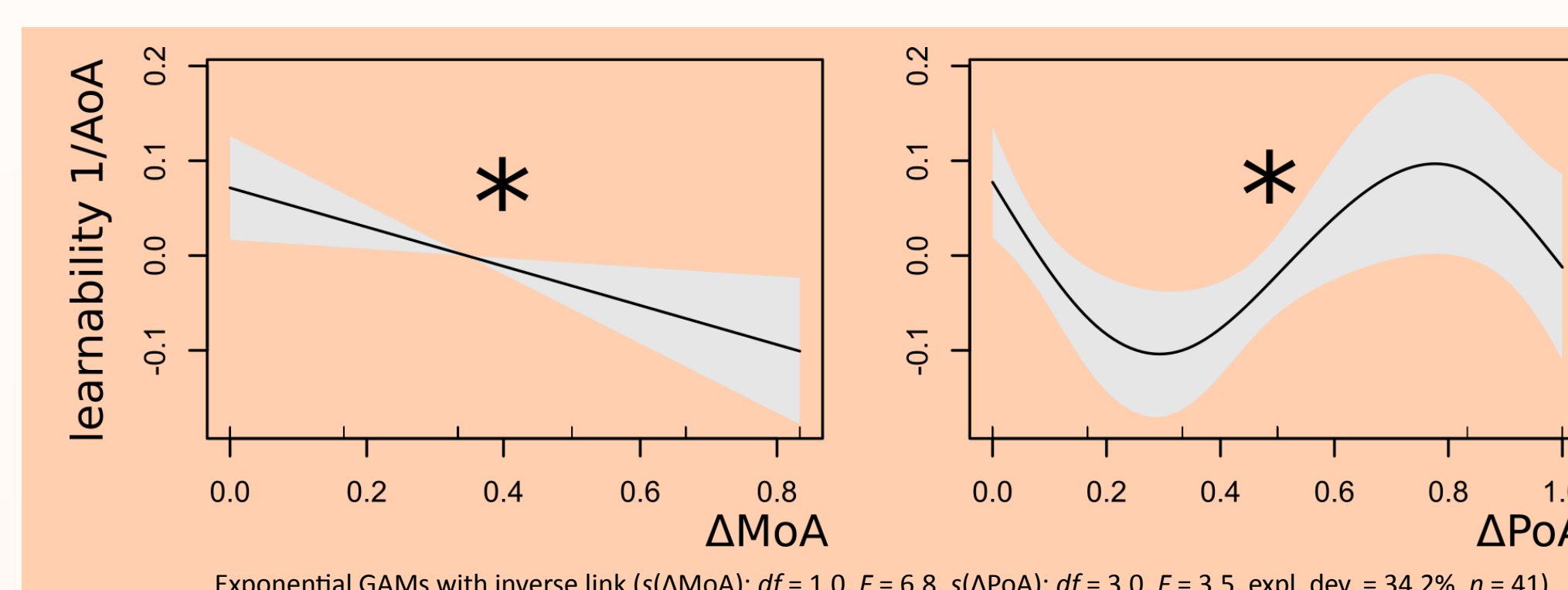
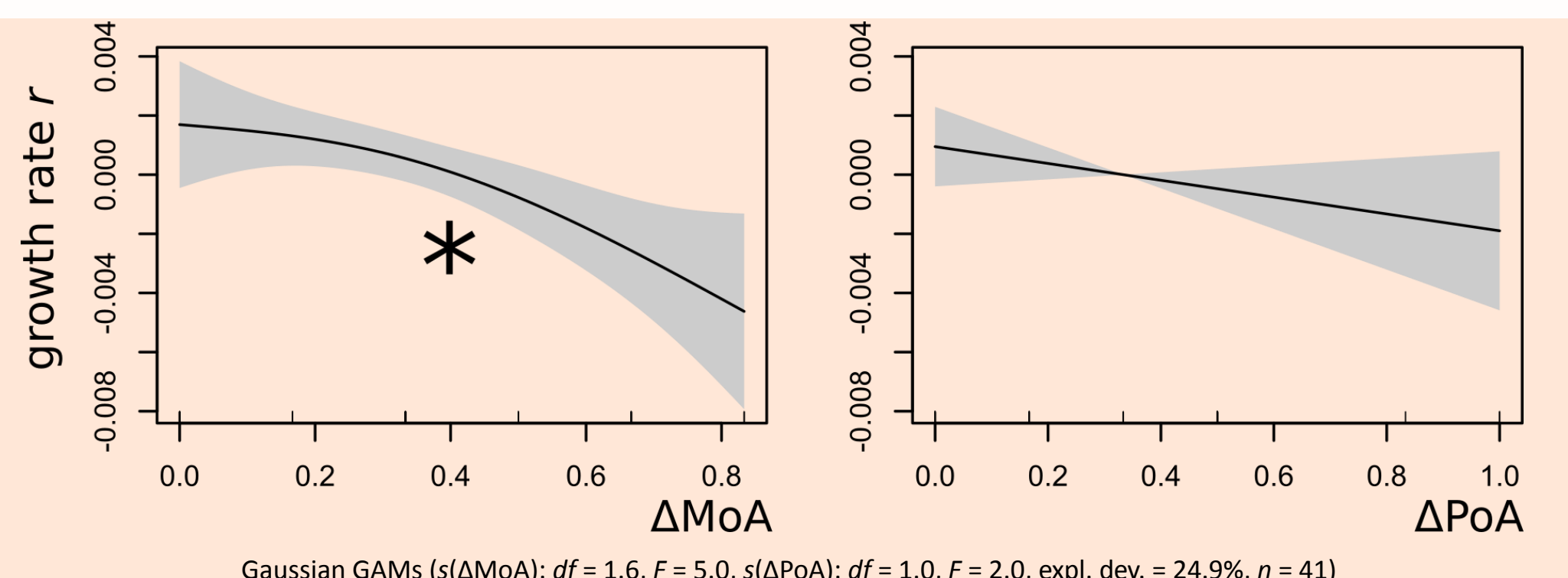
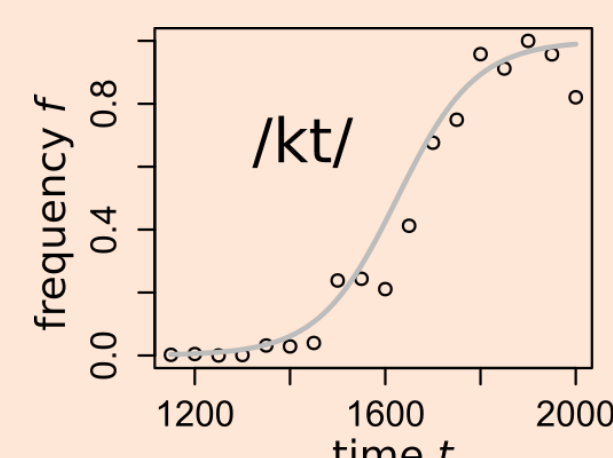
Data: PPCME2, PCEME, PPCMBE, COHA, COCA

Transcription: ECCE, CMU

Estimated rates r of logistic model fit to

frequency trajectory f

$$f(t) = \frac{1}{1 + e^{-r(t-t_0)}}$$



Acquisition

AoA of 41 English cluster types

Data/transcription: AoA ratings of 30,000 words (Kuperman et al. 2012), CMU

Cluster AoA defined as AoA of the first word ending in that cluster

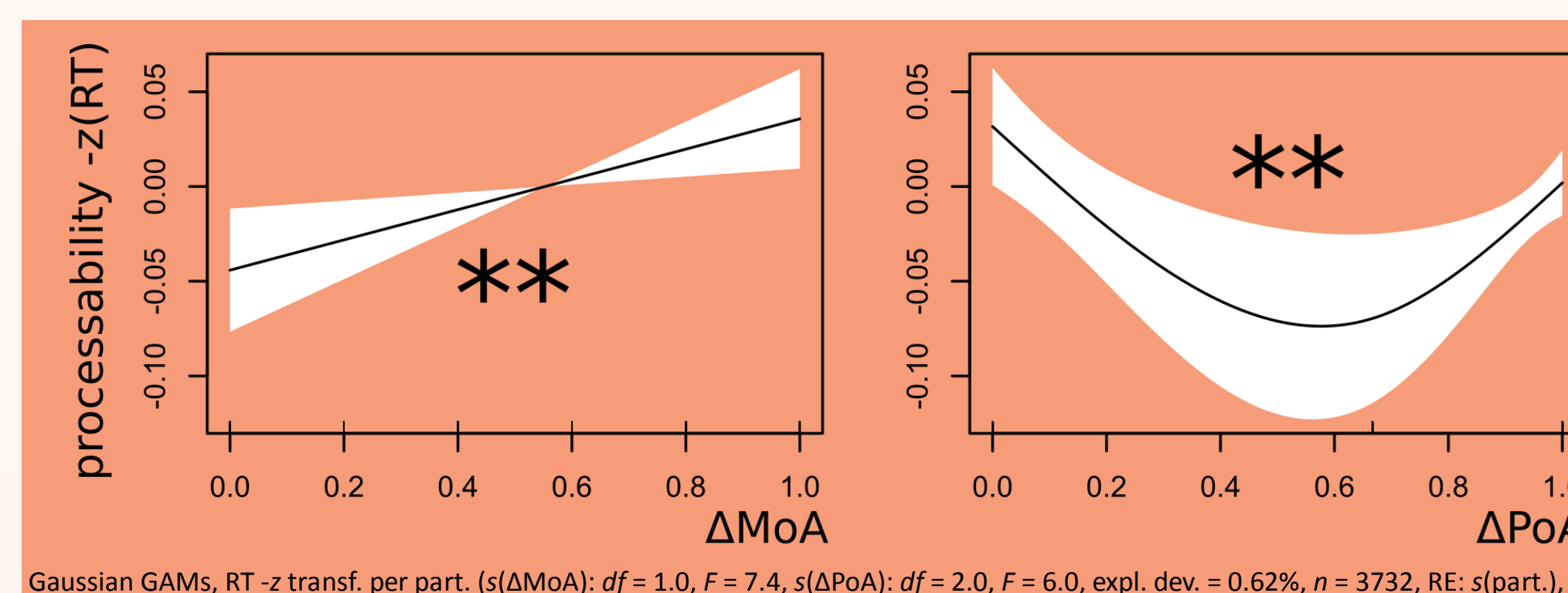
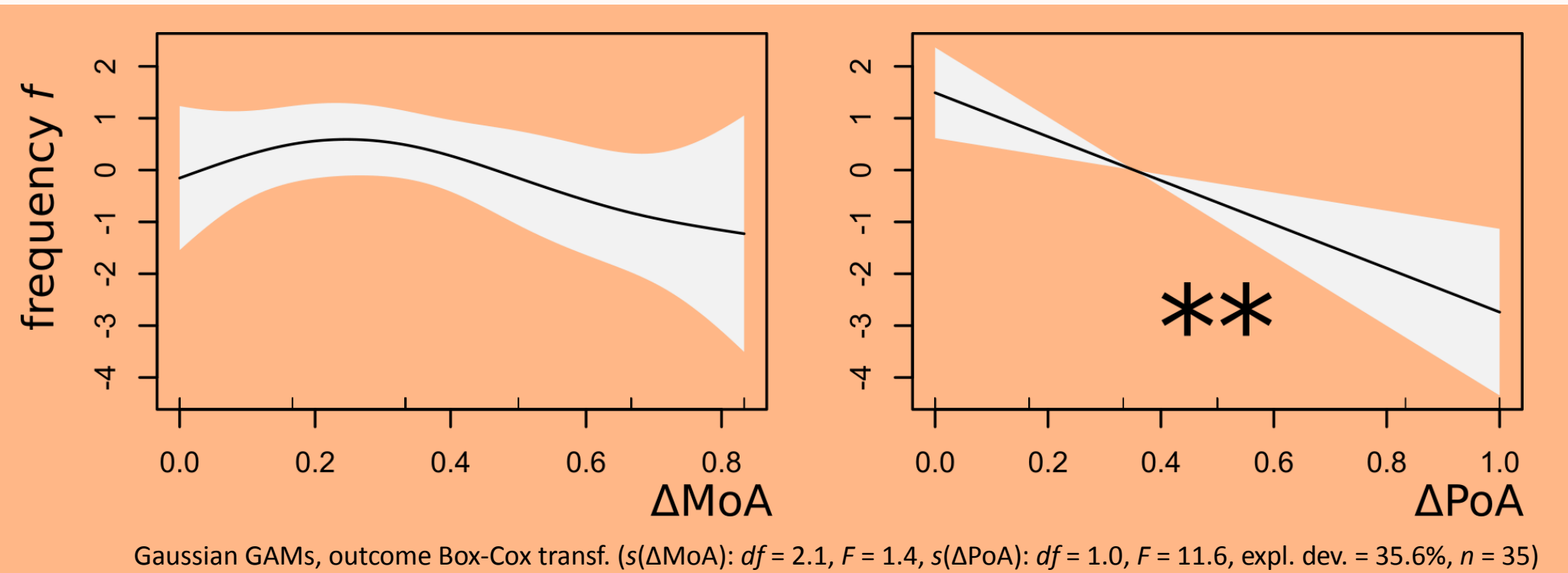
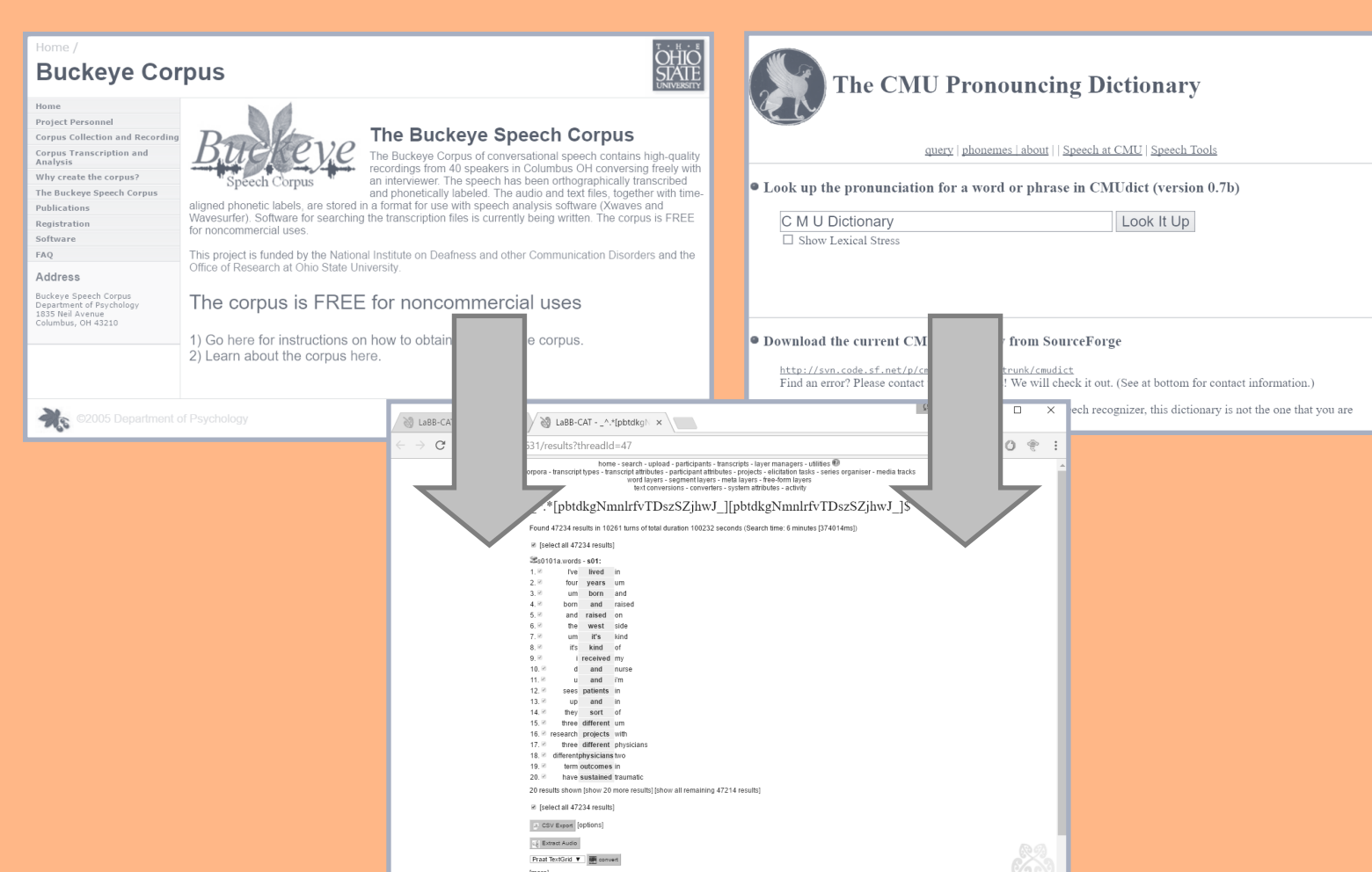
transcription	age of acquisition
...	...
...	...
...	...

Kuperman, V., Stadthagen-Gonzalez, H., Brysbaert, M. 2012. Age-of-acquisition ratings for 30,000 English words. *Behavior Research Methods* 44, 978–990.

Prevalence in use

Token frequency of 37 English cluster types

Data/transcription: Buckeye, CMU (in LaBB-CAT)



Processability

Processability of 27 English cluster types

Method: ABX task with disyllabic nonce words, 33 participants (speakers of a language with permissive phonotactics [Polish]; freq. controlled); 162 trials per participant



Results and discussion:

A1

Diachronically, MoA differences are worse than PoA differences; synchronically the reverse. Synchronically, place adjustment/repair is expected to be more prevalent.

A2

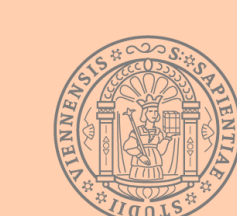
There is a correlation between phonotactic acquisition and change. Phonotactic change is (to a considerable extent) driven by language learners.

A3

Overall, small differences are better than large ones. Acquisition and change seem to be driven by the speaker (ease of effort) rather than by the hearer.

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evolution of consonant clusters in english Der Wissenschaftsfonds.

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📖 for a list of references see abstract

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