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Phonological interferences in bilingual acquisition: focus on French and Greek fricatives

Clémence Guieu-Grandsire

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Clémence Guieu-Grandsire

Laboratoire de Phonétique et Phonologie (LPP, CNRS/Sorbonne Nouvelle) clemence.guieu-grandsire@sorbonne-nouvelle.fr

GLOSSARY

Phonological system acquisition = **establishing sound contrasts**

- in **perception** = adult-like identification of correct and incorrect realization of contrast's members
- in **production** = adult-like realization of contrast's members

Simultaneous bilinguals: children exposed to two languages **since birth** (Patterson, 2002)

RESEARCH QUESTION

Aim: Show evidences of interaction between phonological systems in bilingual acquisition by comparing them to monolingual peers, under **three types of interferences in production and perception**

Question: How do sound systems interact in bilinguals' production and perception?

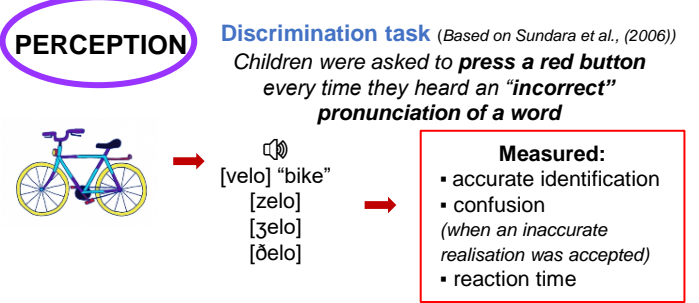
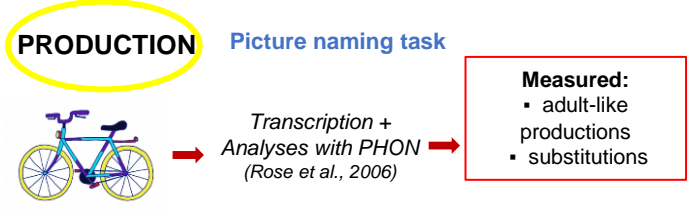
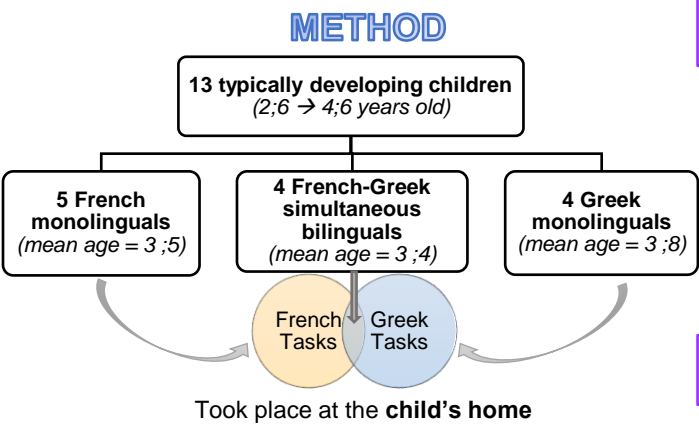
INTERFERENCES, SIGNS OF INTERACTION

Paradis & Genesee (1996)

- Acceleration:** Earlier emergence of certain properties in one or both languages in bilinguals compared to monolinguals
- Deceleration:** Later emergence of certain properties in bilinguals compared to monolinguals
- Transfer:** One property is transferred from one language into the other + is strongly influenced by language dominance

OUR HYPOTHESES in PERCEPTION & PRODUCTION

- Shared contrasts between both languages
LABIAL-CORONAL (/f, v/ vs. /s, z/)
- Specific contrasts between both languages
[±posterior] for French (/s, z/ vs /ʃ, ʒ/) & [±strident] for Greek (/s, z/ vs /θ, ð/)
- Influence of input on acquisition of **specific contrasts**
[±posterior] → /s, z/ vs /ʃ, ʒ/ acquired before [±strident] → /s, z/ vs /θ, ð/



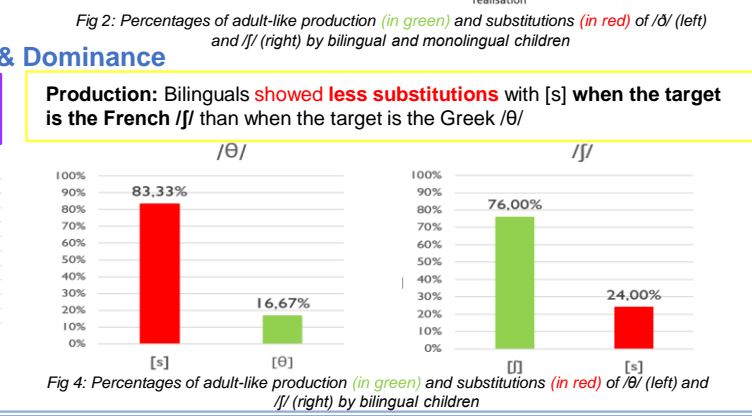
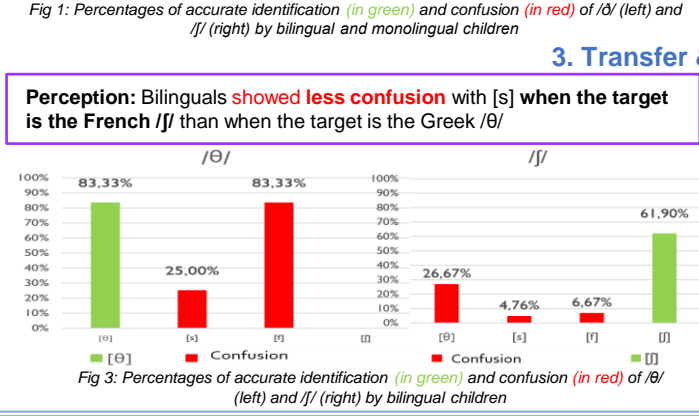
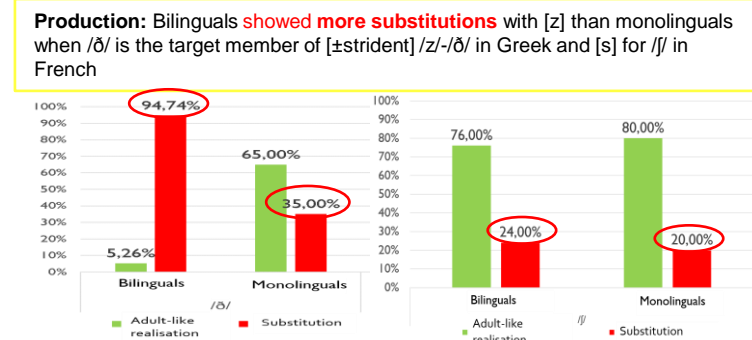
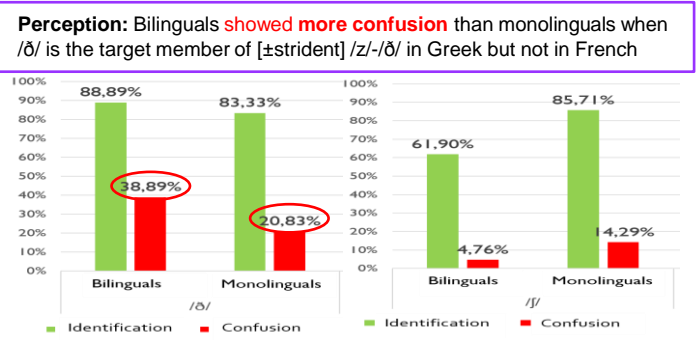
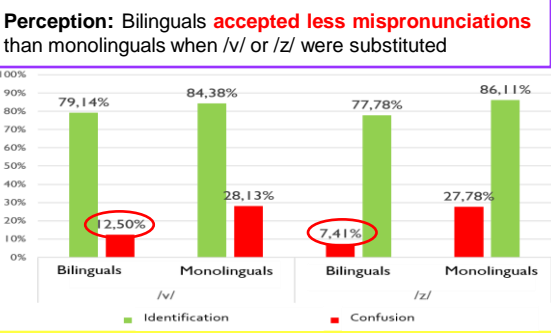
Perception: Bilinguals reacted faster than monolinguals to identify an inaccurate realization

Targeted phoneme	Reaction Time (ms)			
	Accurate identification of an incorrect pronunciation			
	/v/		/z/	
	Bilinguals	Monolinguals	Bilinguals	Monolinguals
[v]			3272ms	4458ms
[z]	3231ms	4826ms		

RESULTS

1. Shared contrasts

Production: bilinguals and monolinguals showed **no substitutions** between members of the shared contrast /v/-/z/



DISCUSSION & CONCLUSION

Interferences are:
Triggered by **cross-linguistic differences in structural properties:**

- No acceleration:** bilinguals did not show better perception nor production of **shared contrasts' members** compared to monolinguals

- Deceleration:** bilinguals showed **more substitutions** and **more confusion** than monolinguals when targets are **[-strident] /θ, ð/ in Greek** and **[+posterior] /ʃ, ʒ/ in French**

Affected by **language dominance in the child's input** (Foroodi-Nejad & Paradis (2009))

- Transfer** in contrasts acquisition order: **French contrast [±posterior] is mastered before the Greek contrast [±strident]**

+
General Bilingual Effect

- ❖ **Less confusion + Shorter reaction time** to identify inaccurate realization of **shared contrasts members**
→ **Could be interpreted as acceleration**

BUT

- ❖ **It would not be linked to interaction between structural properties** but rather to a **general bilingual effect** (Kehoe & Havy, 2019), resulting in:
 - a **more efficient information processing** (Patuto et al., 2011)
 - a **higher perceptive sensibility** by bilinguals

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