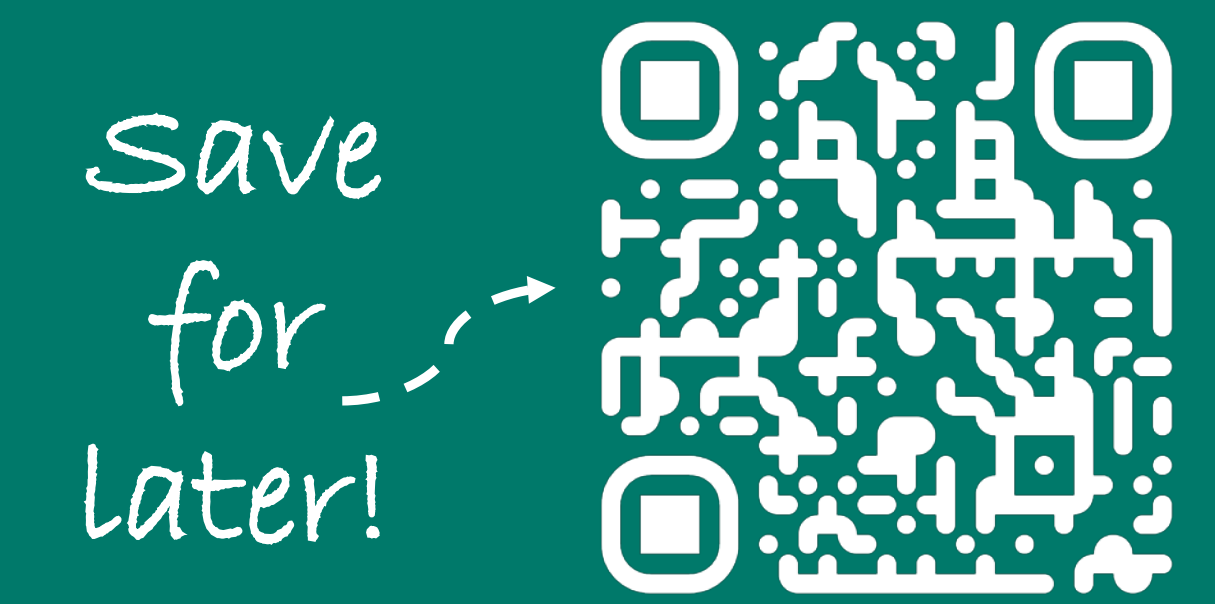


Shadowing unfamiliar speech from familiar speakers

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Background

Phonetic convergence is the tendency of interlocutors to sound more like each other over time. Previous research has focused on phonemic and prosodic features (e.g., Pardo et al., 2018). As part of a speaker familiarity project, we investigate whether convergence occurs on a smaller scale.

RQ: Do listeners converge to sub-categorical variation?

Stimuli

Record
(tegenstand)
/texəntənt/

Record
(teugenstand)
/tøxəntənt/

Synthesize
(tegenstand)
/te↓xəntənt/

We manipulated the F2 of the Dutch vowel /e/ to be lower, namely equal to that of the Dutch vowel /ø/, providing a convergence *target* (“/e↓/”) for participants.

Tasks

Reading Task

Read 40 trisyllabic Dutch words to provide baseline F2 for /e/ and /ø/
(e.g., “esthetisch”, “edelen”, “euvelen”)

Familiarization*

Shadowing Task

Repeat (among fillers) 120 words that contain /e↓/
(e.g., “tegevfloer” /te↓xəlfloer/, “omgeving” /omxe↓ving/, “torpedo” /torpe↓do/)

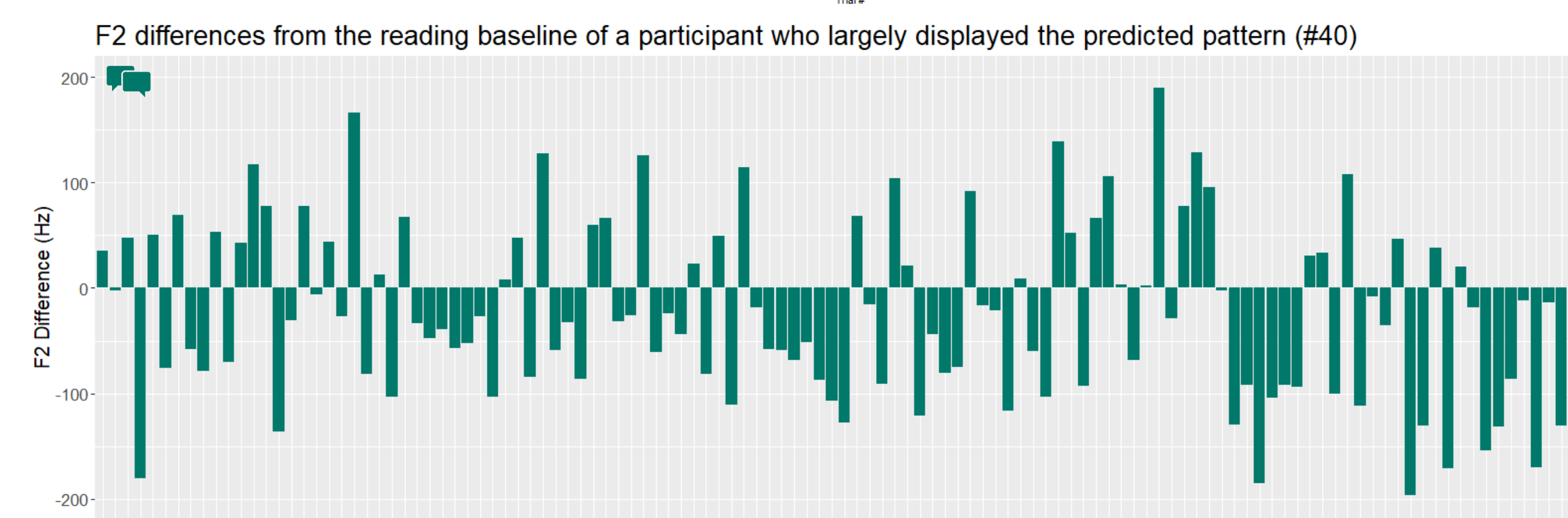
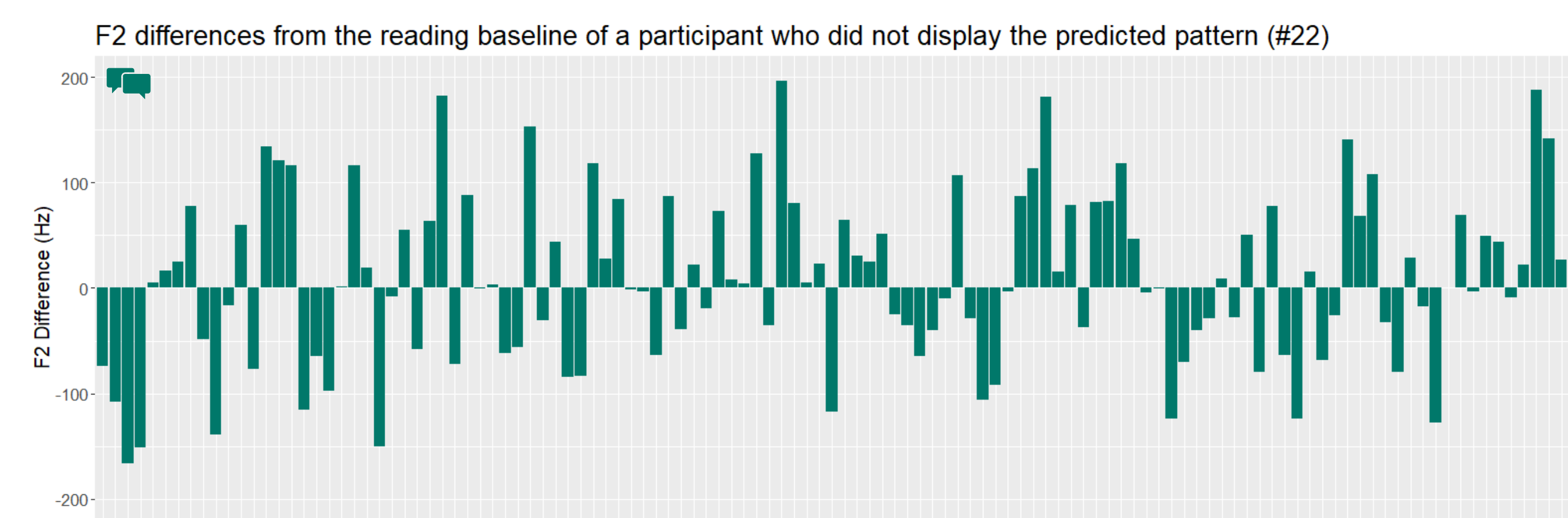
Categorization Task

Categorize words that contained only one of /e/, /ø/, or /e↓/ as /e/ or /ø/
(e.g., “comité” /komite/, “tegenwicht” /te↓xənvixt/, “zeukerheid” /zøkərhait/)

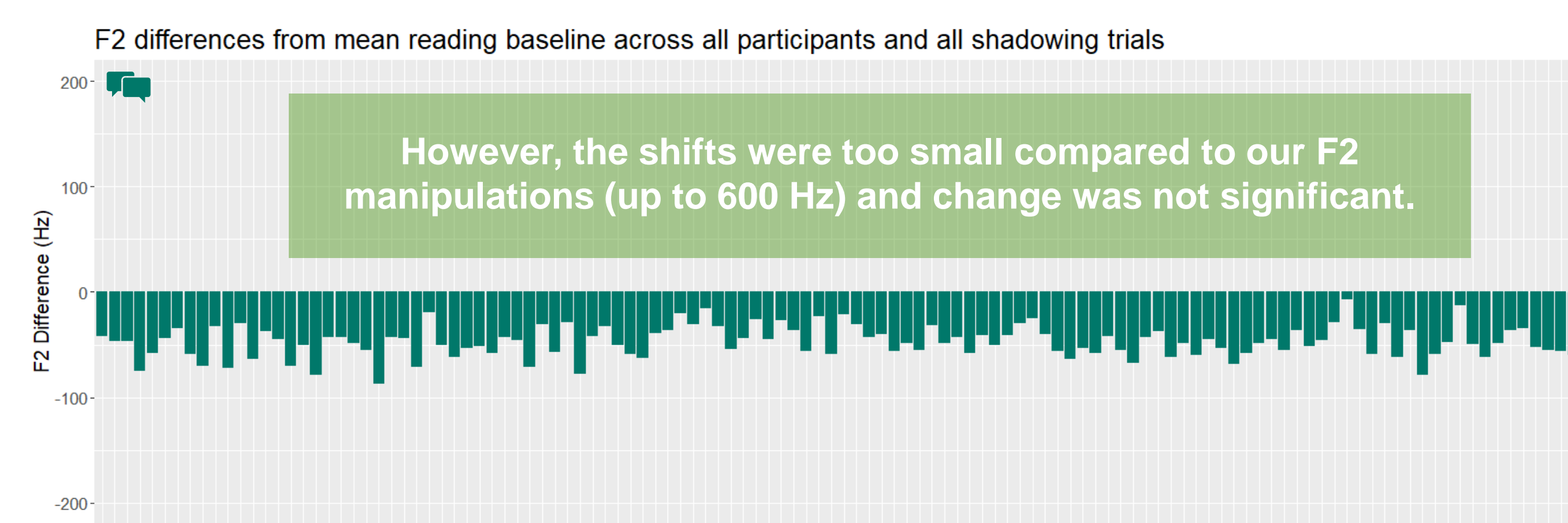
* The follow-up involving the familiarity measure was not run given the results of the current study.

Shadowing Results

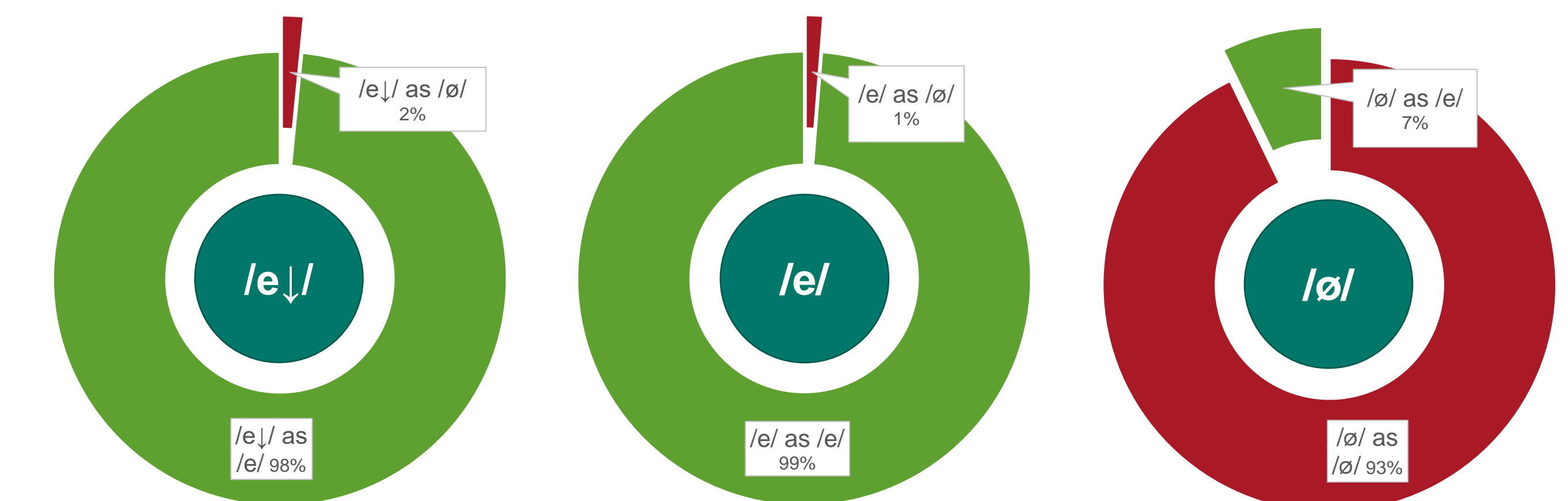
Participants had widely varying patterns of F2 change and some did converge in exactly the way we predicted.



They also had lower F2s throughout the shadowing task compared to the reading task



Categorization Results



↔ No perceived category changes for /e↓/, as expected.

Discussion

Overall, participants were not more likely to produce lower F2s for the vowel /e/ after repeated exposure to /e↓/.

This may have been caused by the fact that our manipulation was not phonologically salient.

Conclusion

Despite reports of convergence to other phonologically non-salient speech features such as speech rate (Manson et al., 2013) and subtle VOT differences (Nielsen, 2011), **listeners did not converge to sub-categorical F2 shifts.**