

Does Priming Prosodic Phrasing Modulate Reading Times?



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What did we investigate?

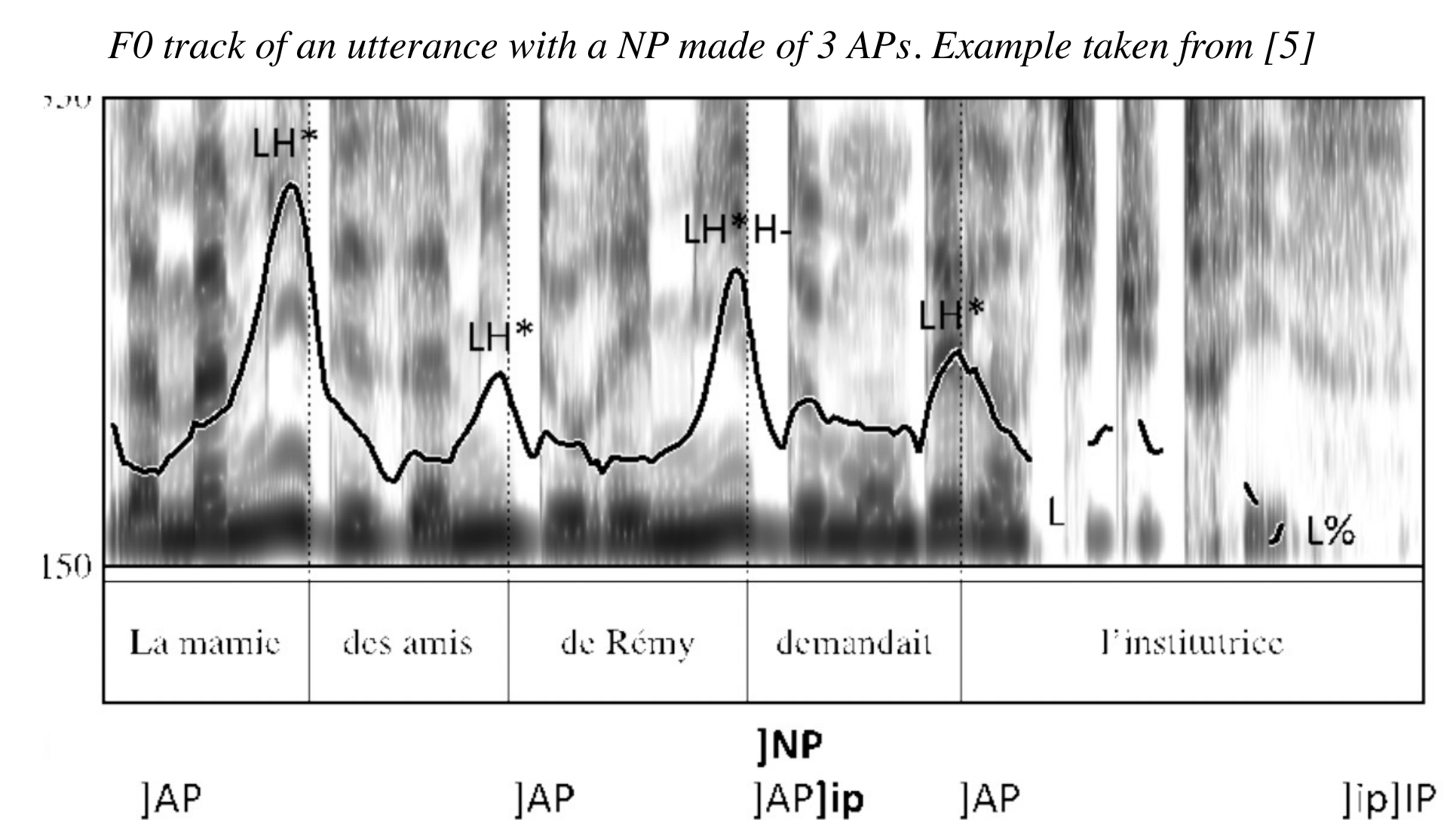
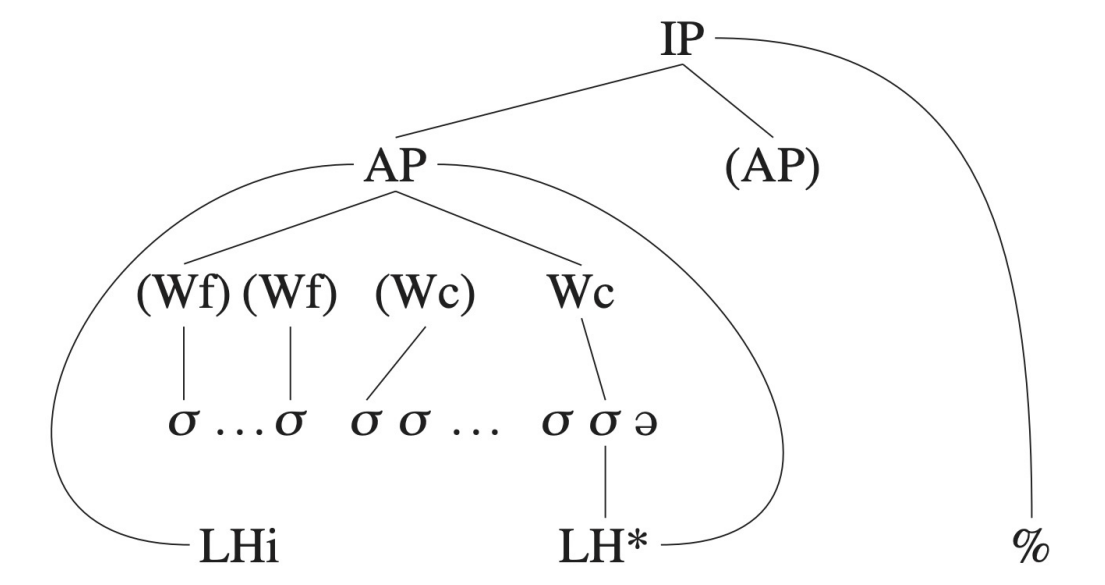
Is prosody simply the result of low-level processes, or does it affect the processing of new sentences? [1, 2]

- Priming effects of prosodic phrasing in the resolution of ambiguity in perception studies [3, 4, 5]
- Processing cost of conflicting prosodic phrasing in offline physiological studies [6]

Does prosodic phrasing modulate online processing beyond syntactic structure?
Can we have priming effects of prosodic phrasing in the online processing of unambiguous sentences with a well-defined prosodic structure in French?

Why French?

- French intonation: highly regular prosodic structure based on the repetition of a minimal prosodic unit, the accentual phrase, AP [7, 8]



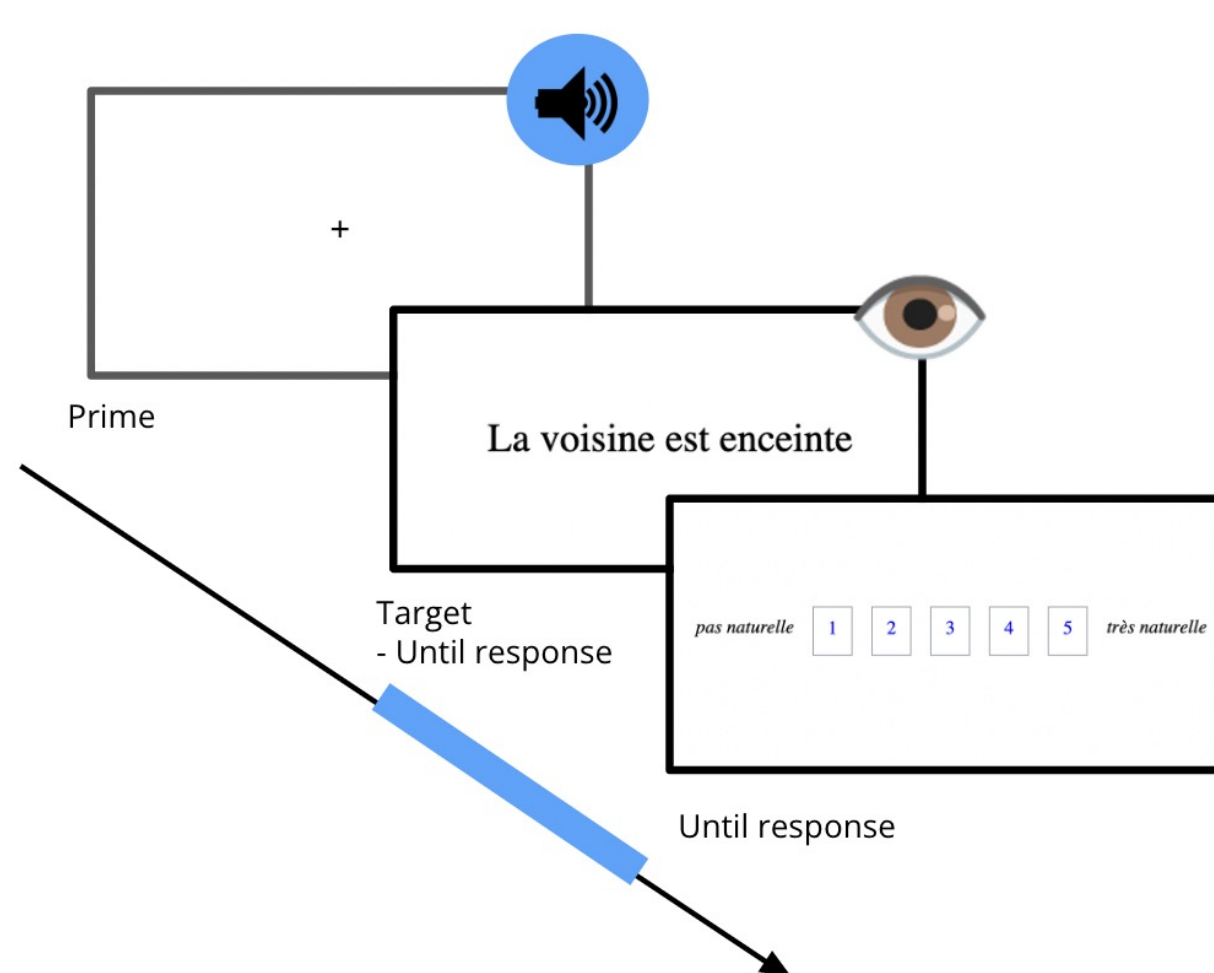
How to test it?

Stimuli

- Primes: monosyllabic numbers (cooperating/conflicting prosodic phrasing)
- Targets: 18 unambiguous NP+VP sentences with 2 APs (default/deviant)
- Fillers: 2 other constructions with different prosodic phrasings to avoid adaptation effects to unreliable prosody [9, 10]
- Attention checks: to ensure engagement with the primes

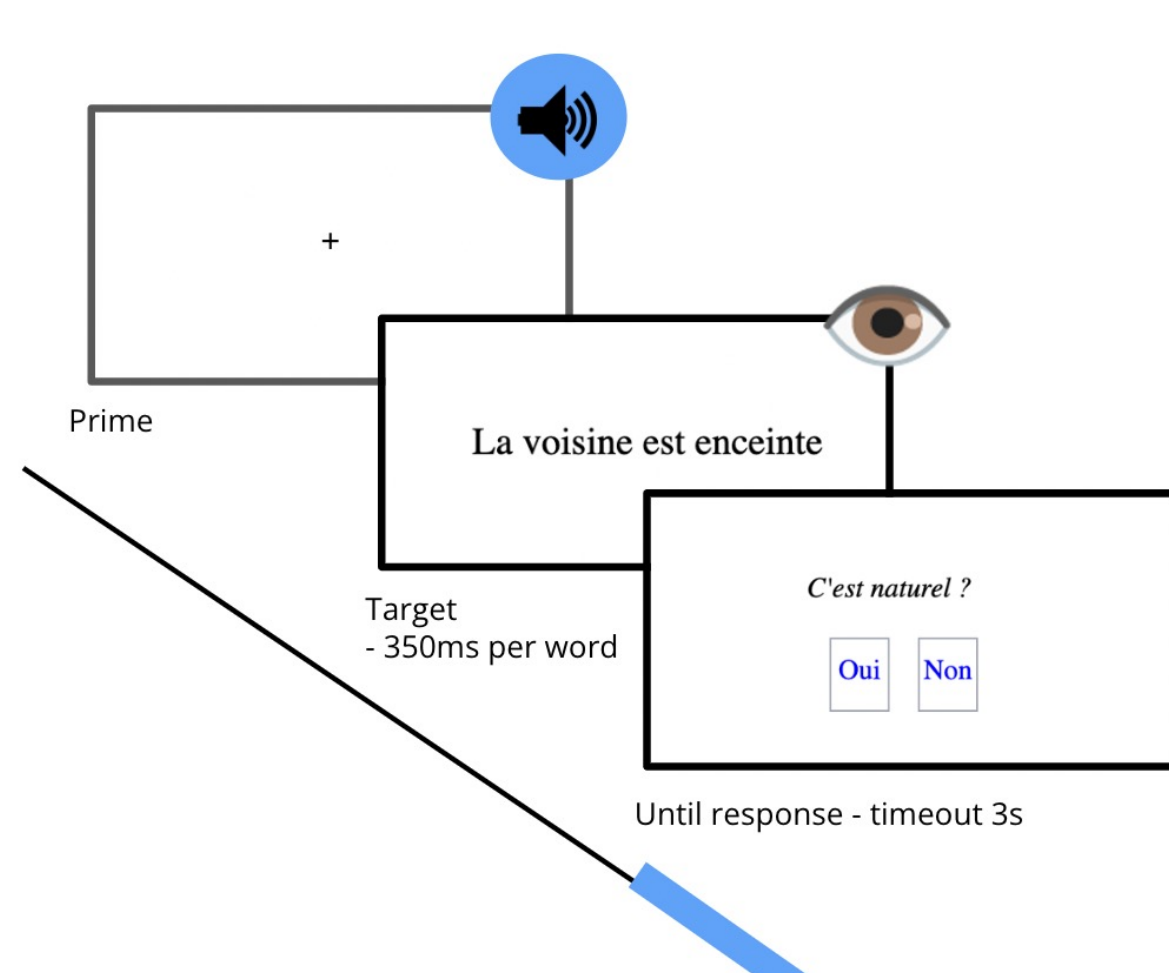
Target structure	Audio prime	Target sentence
default	Cooperating	5 9 6 - 1 7 2 (La voisine) _{AP} (est enceinte) _{AP} 'The neighbor is pregnant'
	Conflicting	5 9 6 1 7 - 2
deviant	Cooperating	5 9 6 1 7 - 2 8 3 (La voisine sympa) _{AP} (est enceinte) _{AP} 'The nice neighbor is pregnant'
	Conflicting	5 9 6 - 1 7 2 8 3

Experiment 1



- Task: Audio-primed acceptability judgment
- Measure: Reading times at silent reading before rating

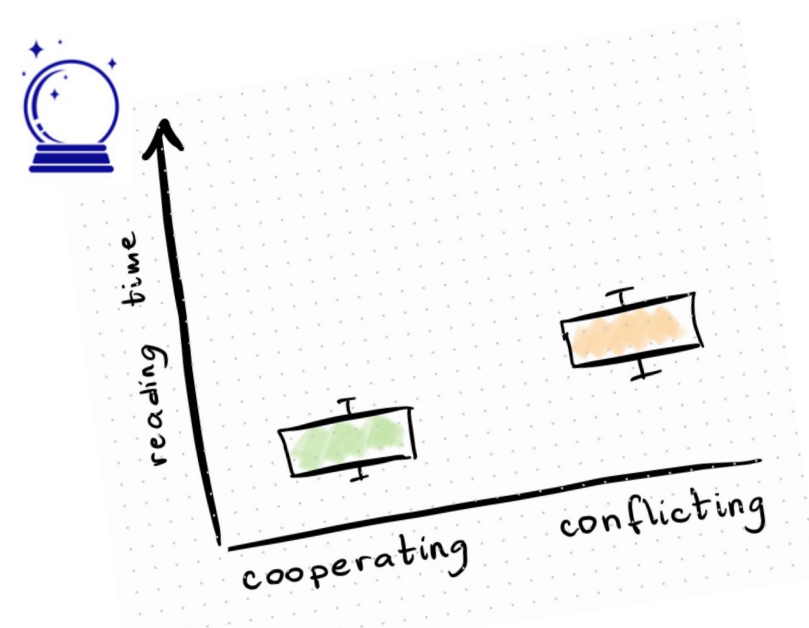
Experiment 2



- Task: Audio-primed speeded acceptability judgment
- Measure: Reaction times at judgement

What did we expect?

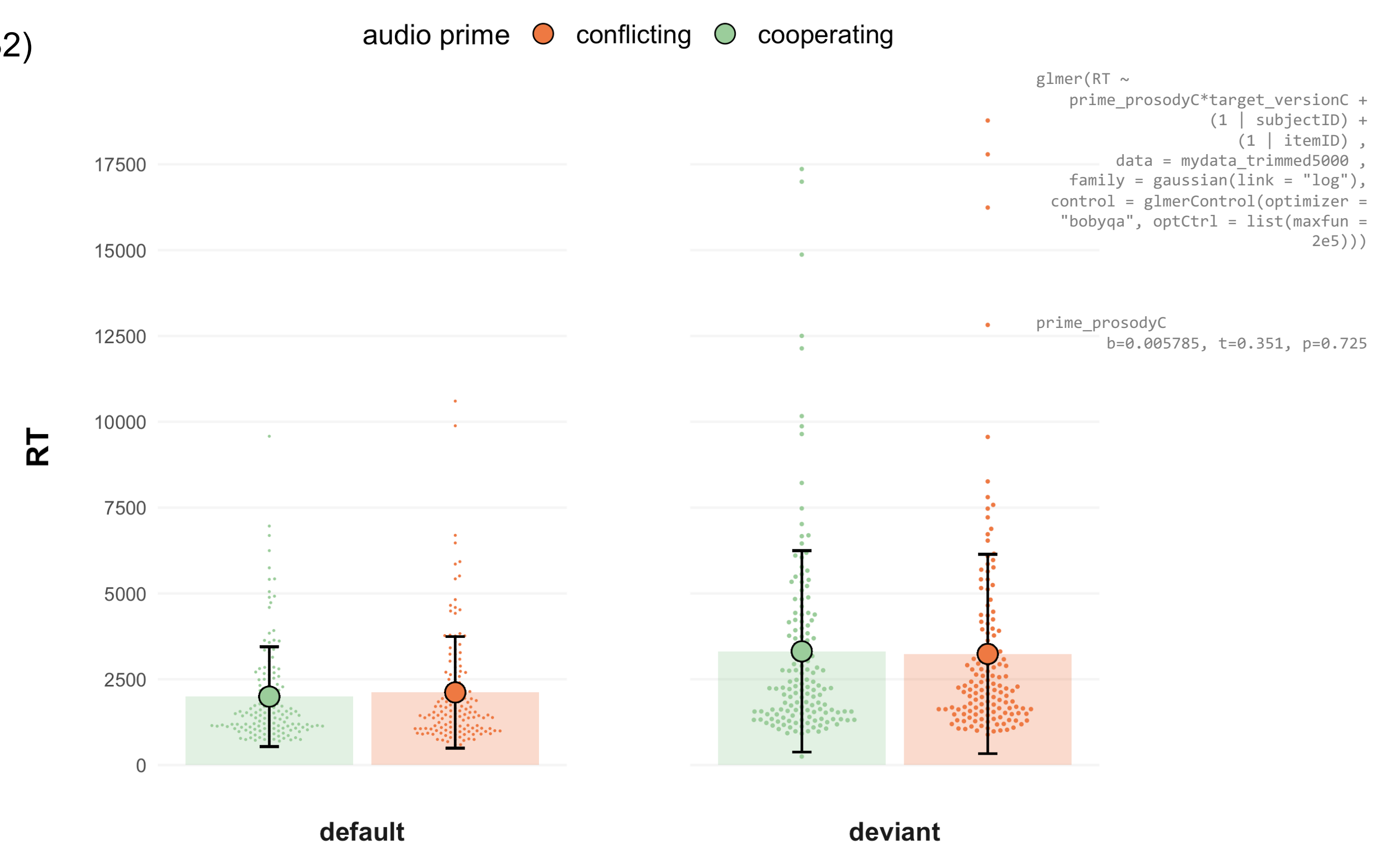
- Longer RT conflicting > cooperating prosodic phrasing
- Greater cognitive load in language processing, triggered by interference effects of primed conflicting prosodic phrasing
- Suggesting that prosodic phrasing may affect the processing of new sentences and play a role in language processing beyond expected syntactic structure



What did we find?

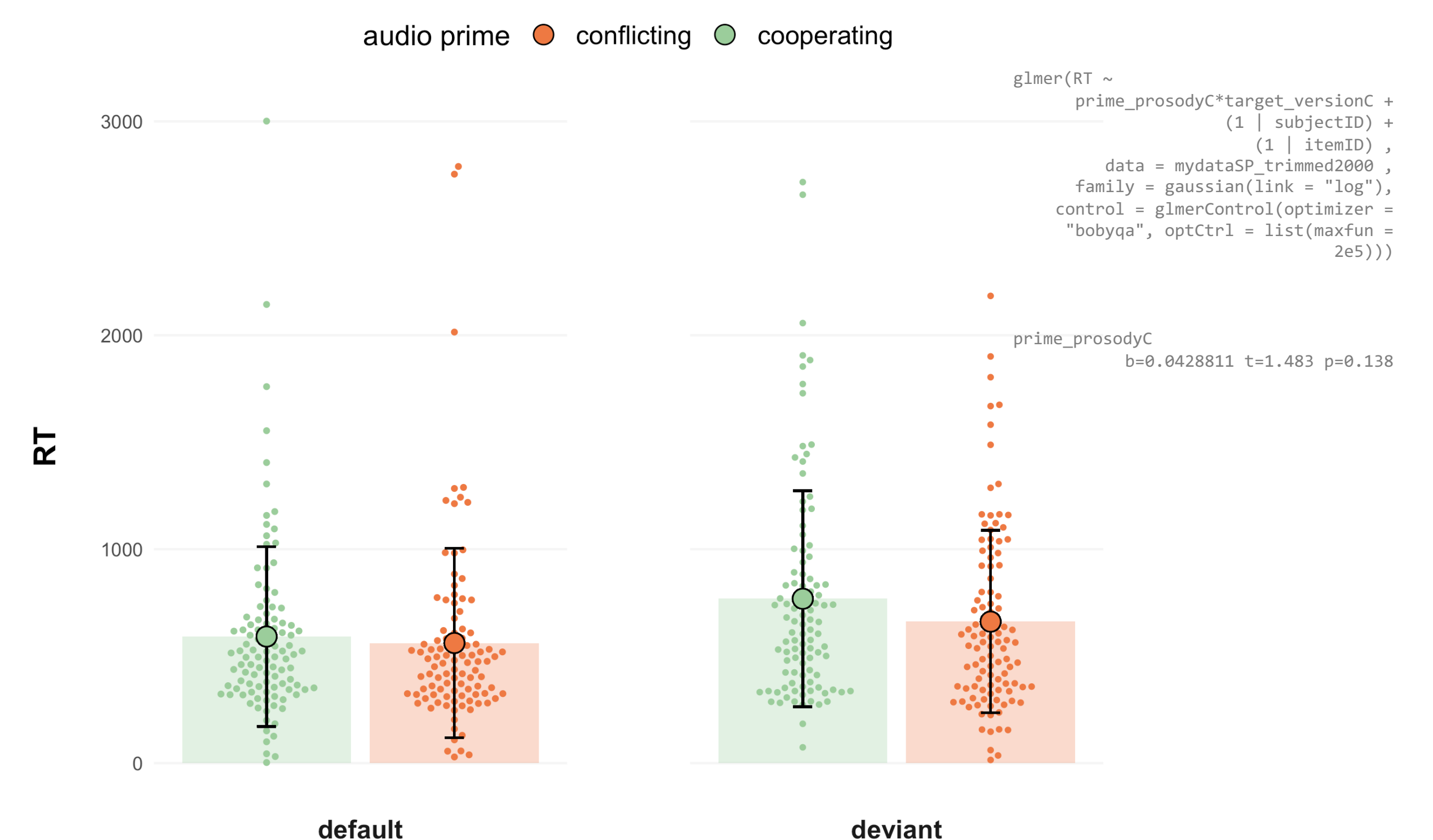
Experiment 1

(N = 32)



Experiment 2

(N = 23)



Our data do not seem to confirm the hypothesis of (inhibitory) priming effects of prosodic phrasing in the online processing of unambiguous sentences

- Not really capturing reading times
- Target sentences too short to show an effect?
- Prime not strong enough (vs. very regular prosodic phrasing of the targets)?
- Priming effect only on the resolution of ambiguous sentences?