Durational variability in isomorphic tics and words





BACKGROUND

- Tourette syndrome (TS): neurological condition causing unwanted movements and vocalizations called tics [1]
- o Verbal tics: mimic words or phrases but are automatic responses to preceding urges & lack linguistic/communicative intent
- Tics interact with prosody: separate research showed that tics reliably occur between, not within, intonational phrases (IPs)

Ticcing is sensitive to IP-level prosodic structure. Are tics subject to IP-boundary effects?

HYPOTHESIS & PREDICTIONS

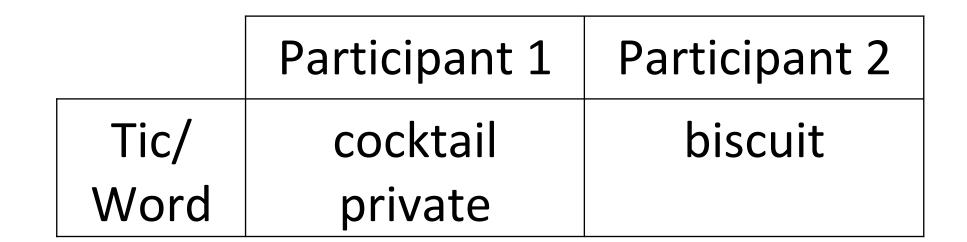
- Task of prosody: phrasal organization of words, encoding intended meaning [2]
- o Temporal signatures of prosodic phrasing: English words longer Phrase-finally than in Phrase-medial (unaccented) positions [3]
- > Hypothesis: Tics do not encode information and so, tics should not be "prosodified" phrasally

PREDICTION 1: True Word Duration will shrink/stretch as a function of Phrasal Position.

PREDICTION 2: Tic Word Duration will **not** be influenced by Faux-prosodic position.

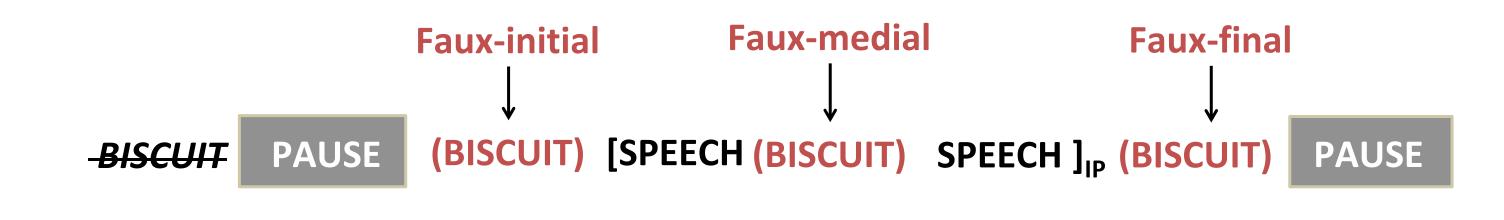
METHOD: TRUE WORD DURATION

2 British English speakers (F) read True Words isomorphic with Tic Words in Phrase-medial and Phrase-final context:



METHOD: FAUX-PROSODY

Duration of Tic Words produced sufficiently close to IPs considered for analyses:



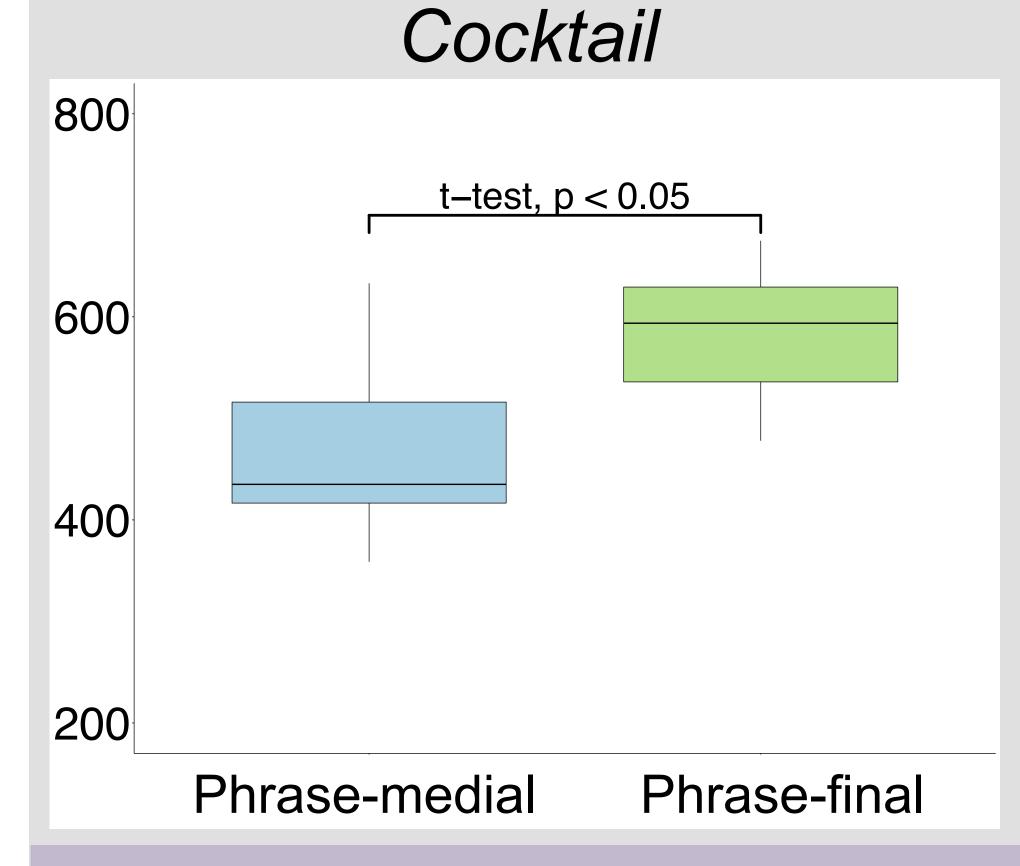
Clink on link below for sentence frames, audio examples and other supplementary material.

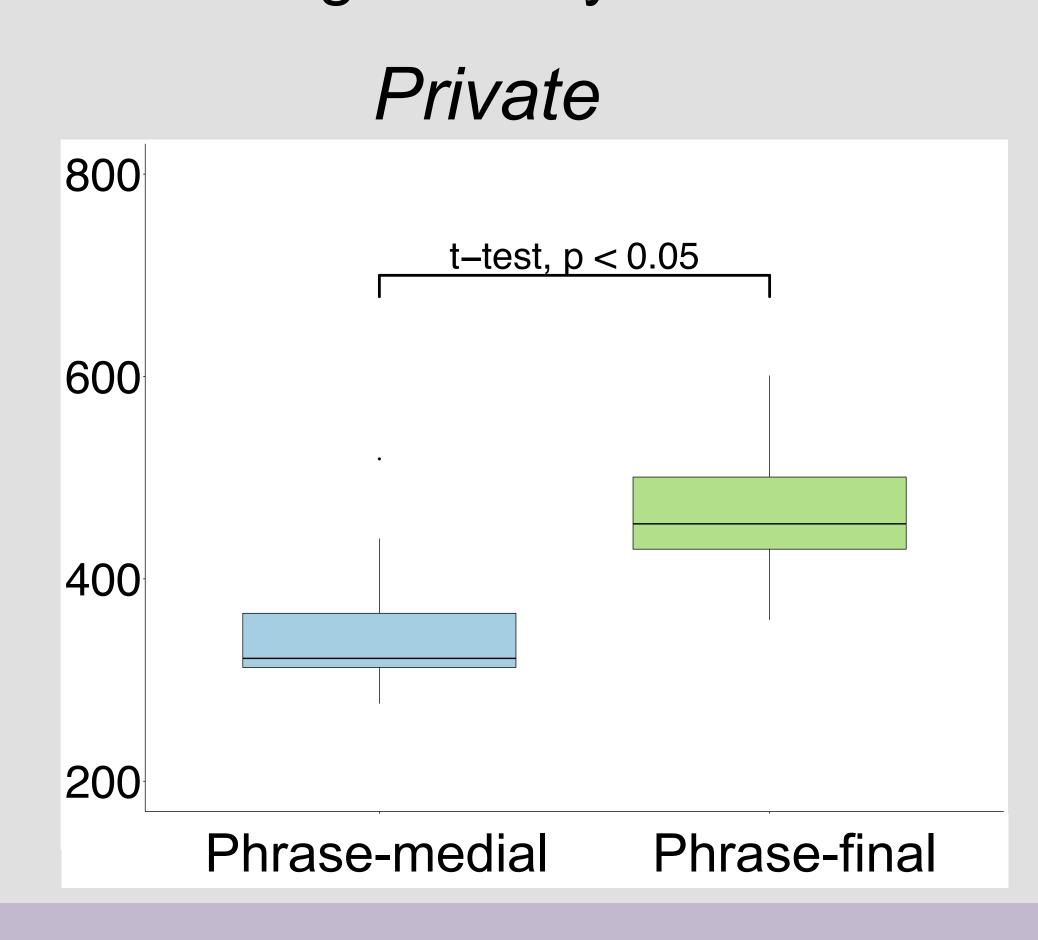
RESULTS

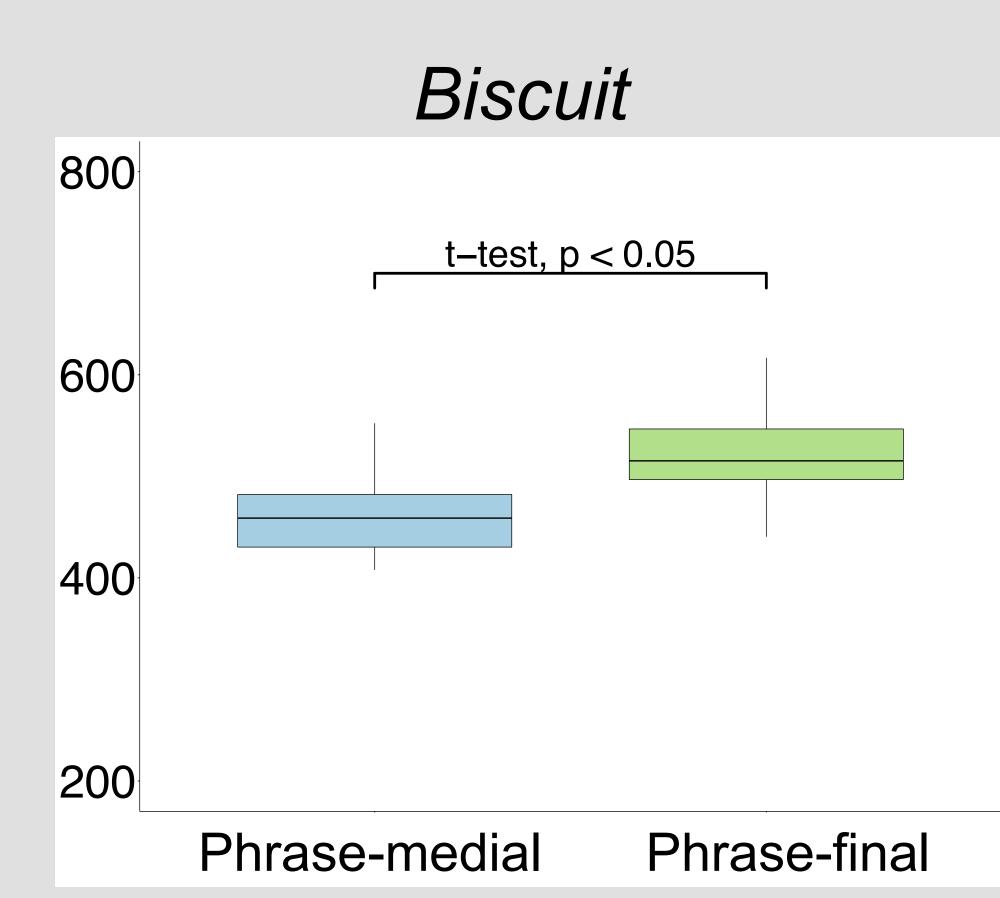
Token-to-token durational variability patterns in True Words and Tic Words support hypothesis.

True Words

Phrase-medial True Words are significantly shorter than Phrase-final True Words.

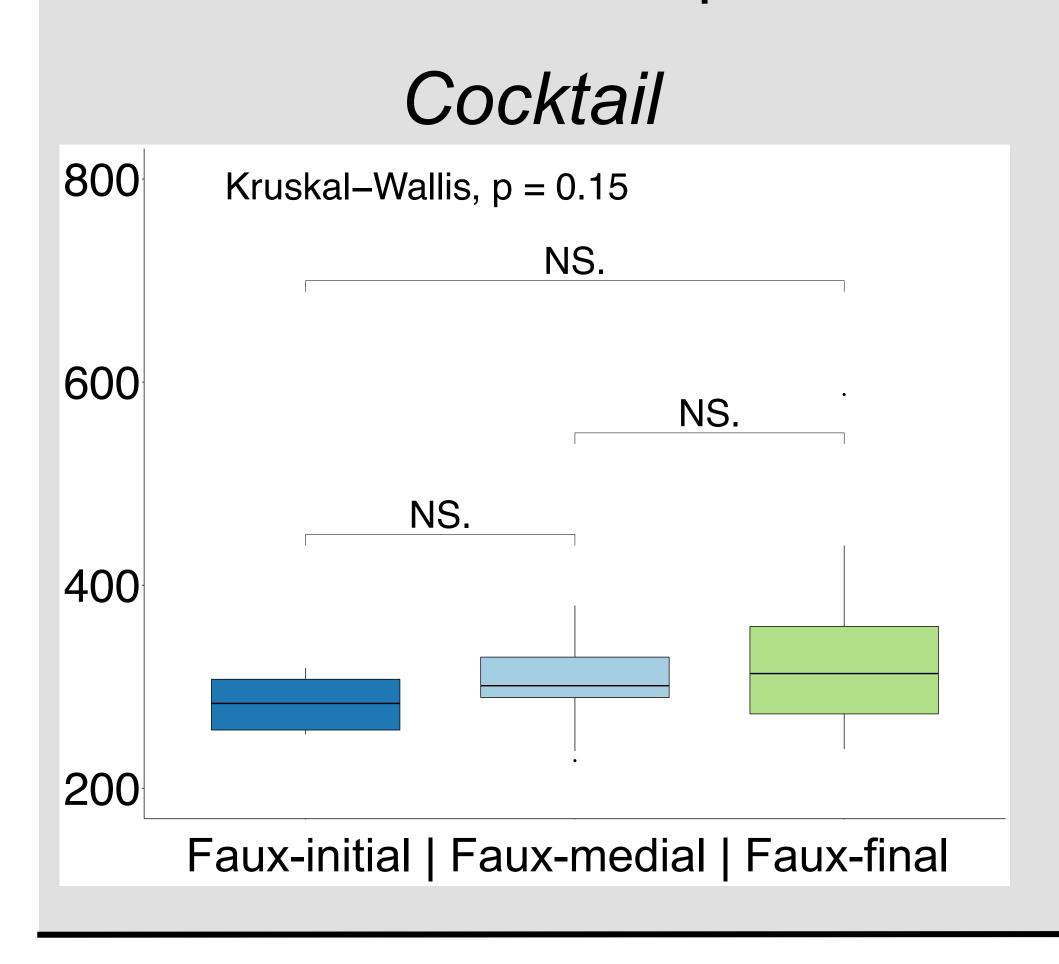


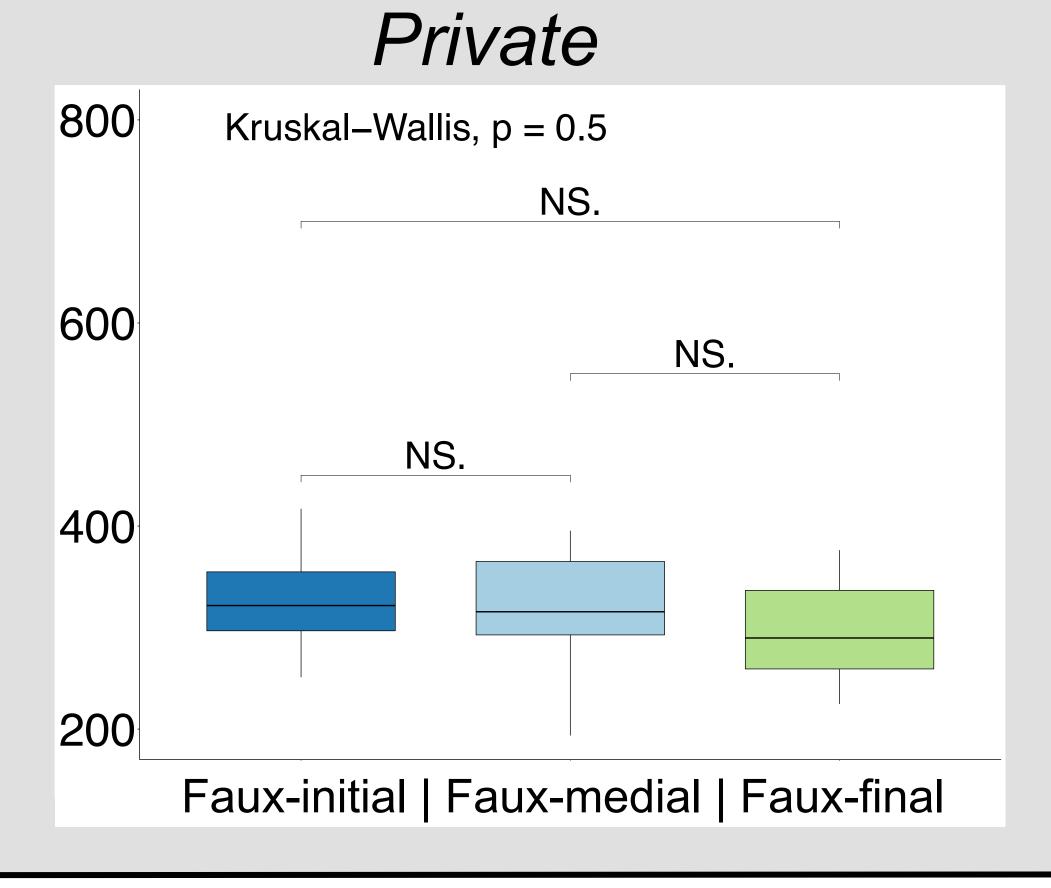


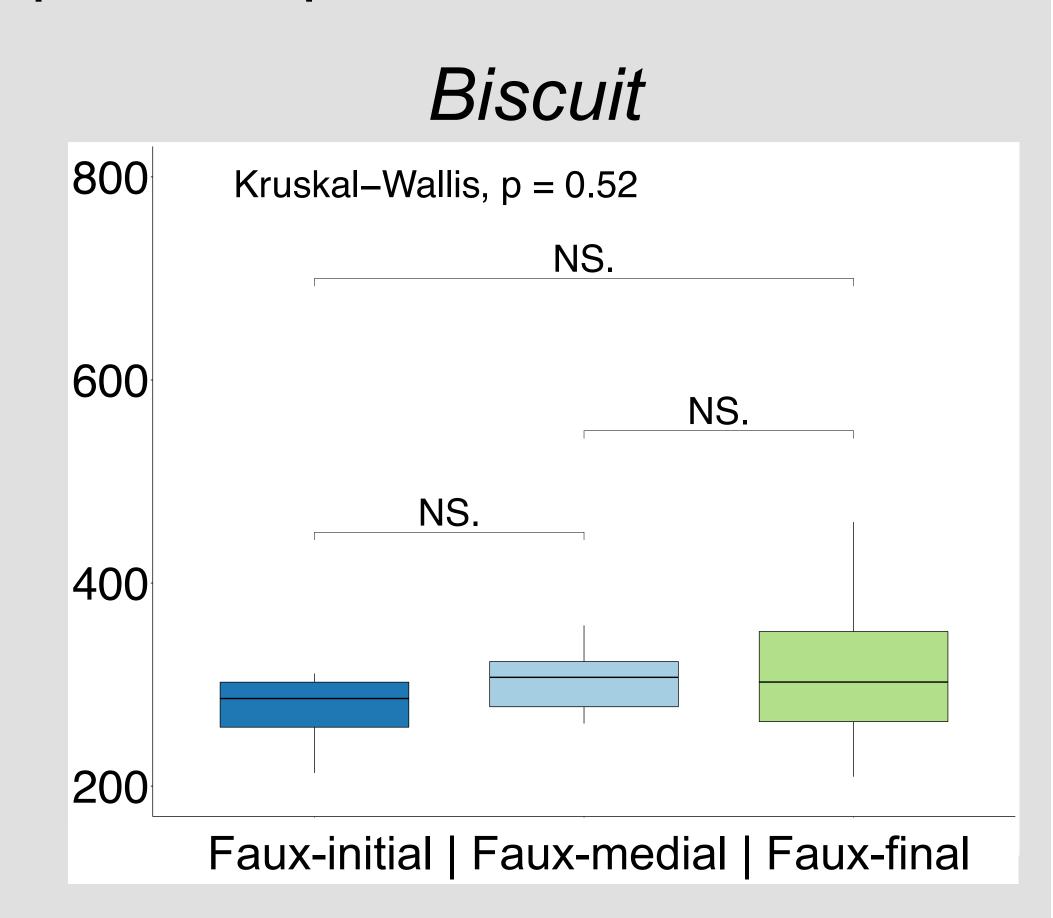


Tic Words

Isomorphic Tic Words do not vary as a function of Faux-prosodic positions.







DISCUSSION

- English phrase boundary effects spare tic words even when they closely precede or follow true words that form part of a true IP—follows from prosody's link to structure of information intended
- "Bare" verbal tics could be model for word-production free of phrasal prosody—examination of token-to-token variability in other facets of word-level phonetics possible via study of tics