

Introduction

➤ In American English, deaccenting is licensed when a constituent corresponds to an identical antecedent in a structurally isomorphic position. [1-8]

(1) John likes Mary, and Bill likes Sue.

➤ Also proposed, but with less reliable judgments: Deaccenting is licensed when an antecedent makes a constituent available via an inferencing relation: [4-6]

• **Entailment:** e.g. *x Verb1 y* entails *y Verb2*

(2) First John told Mary about the budget cuts, and then Sue heard about them. [4]

• **Implicational bridging:** *x Verb1 y* makes *x Verb2 y* pragmatically available

(3) She called him a Republican, and then he insulted her. [4-5]

➤ **Research goal:** Empirically investigate the felicitousness of deaccenting licensed by inferencing relations compared to by overt repetition

Research questions

- 1) In production, do speakers produce discourse-inferable verbs with less prominence than discourse-new verbs?
- 2) In perception, do speakers judge deaccented discourse-inferable verbs as more felicitous than deaccented discourse-new verbs?

Stimuli & Norming

- Two-clause sentences of the form *SVO and SVO*
- Second clause constant by item
- Constant number of syllables before Clause 2 onset across all items
- Clause 2 subject always discourse-new; Clause 2 object same as Clause 1
- Clause 1 verb varies to condition discourse status of Clause 2 verb:

	Verb status	Sentence
Items 1-6	New	Andrea rebuffed Laura, and Ron embraced Laura.
	Entailment	Veronica hugged Laura, and Ron embraced Laura.
	Repeated	Christina embraced Laura, and Ron embraced Laura.
Items 7-12	New	Madeline offended Noah, and Al seduced Noah.
	Implicational bridging	Angelina charmed Noah, and Al seduced Noah.
	Repeated	Jocelyn seduced Noah, and Al seduced Noah.

Norming inferability

Given that you know that **Andrea rebuffed Laura**, how likely do you think it is that **Andrea embraced Laura**?

Least likely 1 2 3 4 5 6 7 Most likely

➤ 60 Amazon Mechanical Turk users

Verb status	Mean score
New (Items 1-6)	1.8 / 7
Entailment	6.7 / 7
New (Items 7-12)	2.1 / 7
Implicational bridging	5.5 / 7

Experiment 1

Question

➤ Do speakers produce inferable verbs with phonetic correlates typical of discourse-new verbs, discourse-old verbs, or with a unique phonetic pattern?

Task

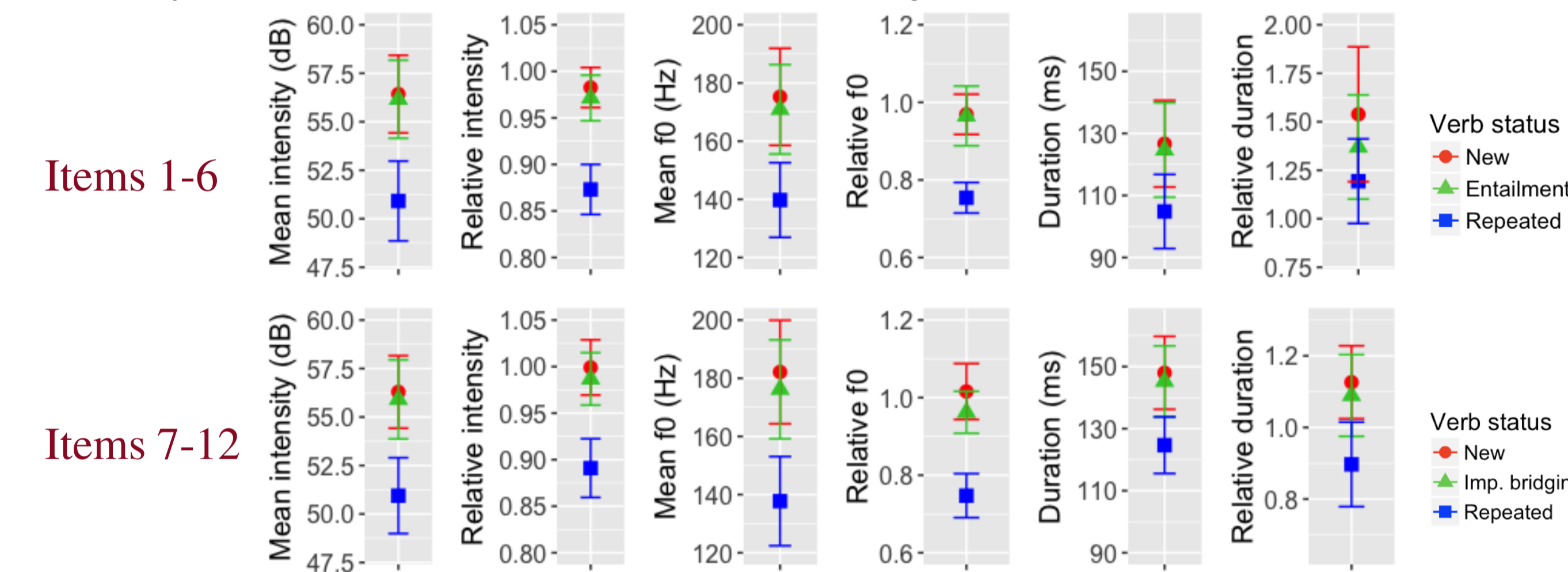
- Participants read aloud 72 critical sentences embedded in carrier paragraph
- Instructed to read full paragraph and plan production ahead of time

Participants

➤ 10 participants (5 female, mean age 21.9) recruited from campus community

Results

➤ Phonetic correlates measured for nucleus of Clause 2 verb: absolute intensity, f_0 , duration; intensity, f_0 , duration relativized to Clause 2 subject [9-11]



Error bars: 95% CI

Analysis

- All correlates: significant effect of verb relation (LMER; $p < .05$)
- All correlates except relative duration: repeated < new, inferable (EMM; $p < .001$)
- All correlates: new vs. inferable n.s. (EMM, $p > .2$)
- Inferable verbs pronounced like discourse-new to the exclusion of repeated verbs

Experiment 2

Question

➤ Do the phonetic correlates measured in Experiment 1 match native speakers' perceptions of whether the critical verbs were accented or deaccented?

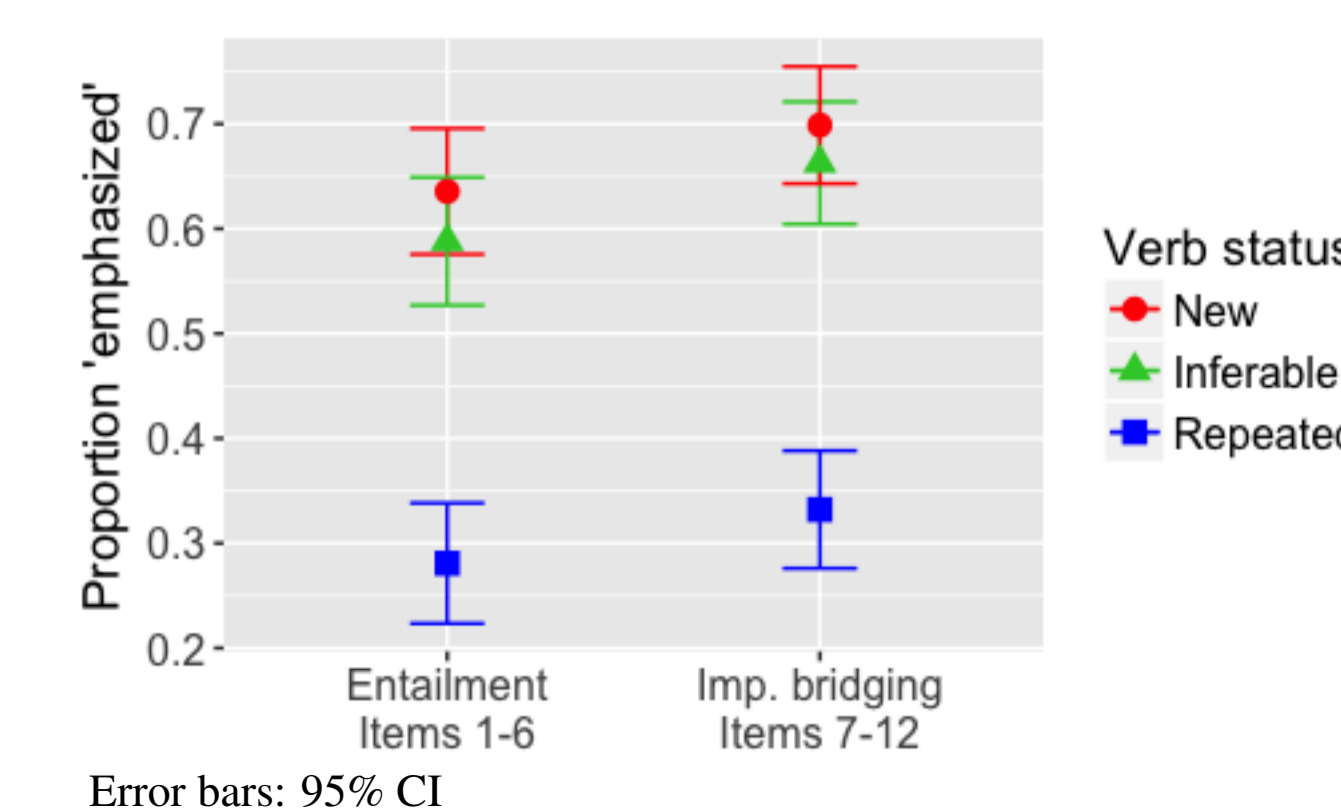
Task

➤ Participants listened to 24 clipped recordings of Experiment 1 second SVO clauses and rated verb as "emphasized" or "not emphasized"

Participants

➤ 200 self-reported native English-speaking Amazon Mechanical Turk users (62 female, mean age 34.3)

Results



Error bars: 95% CI

Analysis

- Significant effect of verb status on emphasis perception (Logistic MER, $p < .001$)
- Proportion "emphasized" lower for repeated than new or inferable (EMM, $p < .001$)
- Proportion "emphasized" not different for new and inferable (EMM, $p > .2$)
- Repeated verbs perceived as deaccented, but inferable verbs perceived the same as new

Experiment 3

Question

➤ Are deaccented inferable verbs perceived as felicitous even though they appear not to occur in production?

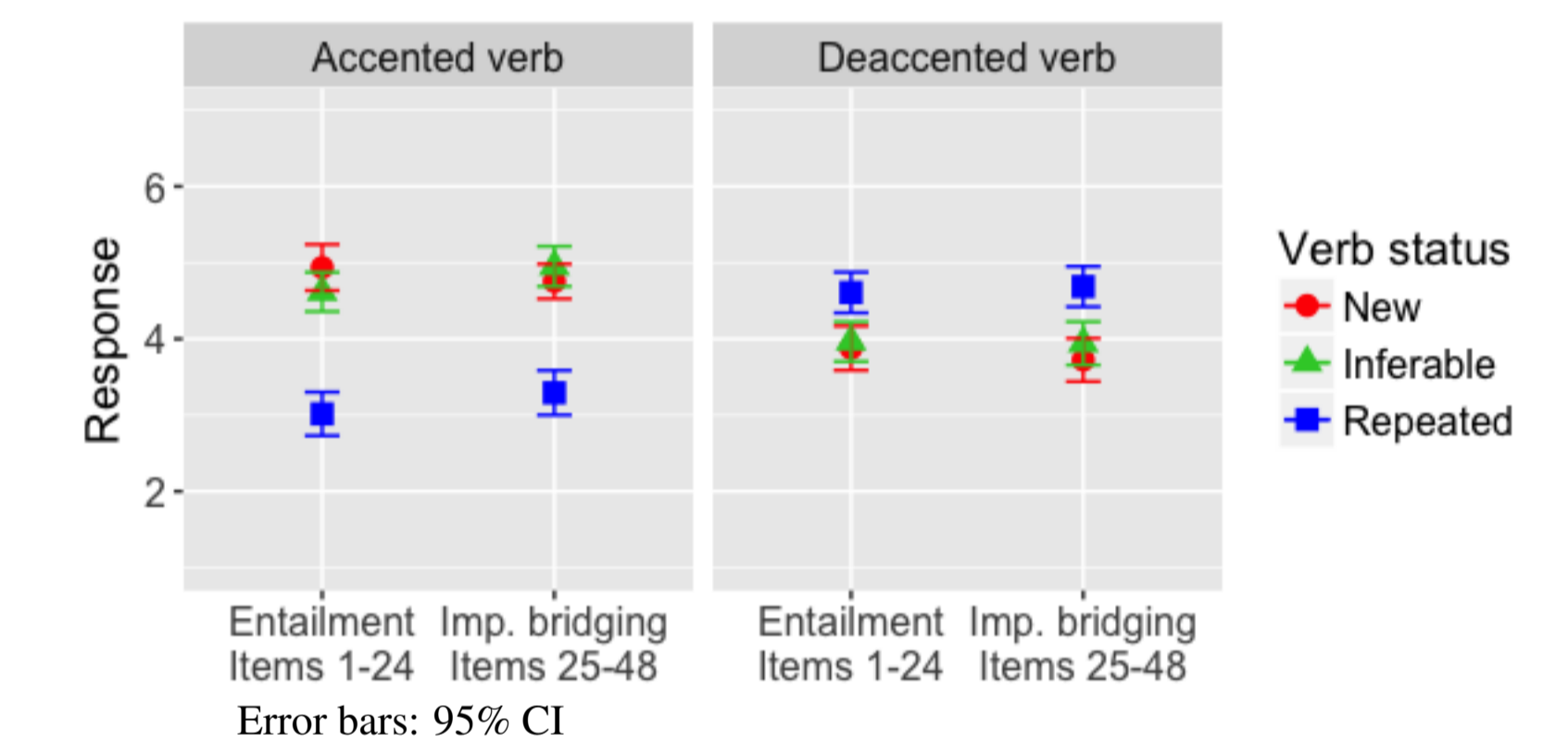
Task

- 2 reliable Experiment 1 participants (1 male, 1 female) returned and recorded an expanded stimulus set (24 entailment items, 24 implicational bridging items)
- Productions of **new** verbs were labeled as *accented*; productions of **repeated** verbs were labeled as *deaccented*
- Recordings were cross-spliced so accented and deaccented verbs appeared in each of 3 conditioning environments: **new**, **inferable**, **repeated**
- For 48 sentences, MTurk participants rated prosody ("tune or melody of sentence") on a 7-point Likert scale, where 1 was least natural

Participants

➤ 144 self-reported native English-speaking Amazon Mechanical Turk users (67 female, mean age 36.7)

Results



Analysis

- Significant interaction of pronounced accent and verb status (LMER, $p < .001$)
- Accented verbs: repeated < new, inferable (EMM, $p < .001$); new vs. inferable n.s. (EMM, $p > .3$)
- Deaccented verbs: repeated > new, inferable (EMM, $p < .01$); new vs. inferable n.s. (EMM, $p > .2$)
- In perception, inferable verbs pattern with discourse-new verbs when they are accented and deaccented
- No evidence that inferable verbs can be deaccented more felicitously than discourse-new verbs

Conclusion

- Inferable verbs were not deaccented in production. (Experiments 1 & 2)
- Deaccented inferable verbs were not more felicitous than deaccented new verbs. (Experiment 3)
- No evidence that discourse inferability licenses deaccenting beyond baseline.
- However, deaccenting felicitousness is not categorical. More work is needed to fully model the mechanisms of deaccenting licensing.

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Selected references: [1] Taglicht (1982). Intonation and the assessment of information. *Linguistics* 18(2). [2] Selkirk (1984). *Phonology and Syntax*. MIT Press. [3] Rochemont (1986). *Focus in Generative Grammar*. John Benjamins. [4] Rooth (1992). Ellipsis identity and redundancy identity. *Stuttgart Ellipsis Workshop*. [5] Tancredi (1992). Deletion, deaccenting, and presupposition. MIT PhD thesis. [6] Fox (1999). Focus, parallelism, and accommodation. SALT 9. [7] Schwarzschild (1999). Givenness, AVOIDF, and other constraints on the placement of accent. *Nat. Lang. Sem.* 7(2). [8] Wagner (2012). Focus and givenness: A unified approach. In *Contrasts and Positions in Information Structure*. Cambridge. [9] Sluijter & van Heuven (1996). Acoustic correlates of linguistic stress and accent in Dutch and American English. *ICSLP 4*. [10] Campbell & Beckman (1997). Stress, prominence, and spectral tilt. *ESCA Workshop*. [11] Turk & White (1999). Structural influences on accentual lengthening in English. *Phonetics* 27(2).