

The Role of Prosody in Conditioning Tagalog o/u Variation

Darlene Intlekofer¹, Jason Bishop^{1,2}

¹ Linguistics Program, Graduate Center, City University of New York

² Department of English, College of Staten Island, City University of New York

INTRODUCTION

/u~/o/ Variation in Tagalog

- A contrast between citation pronunciation of an unsuffixed (1) versus a suffixed single form (2):

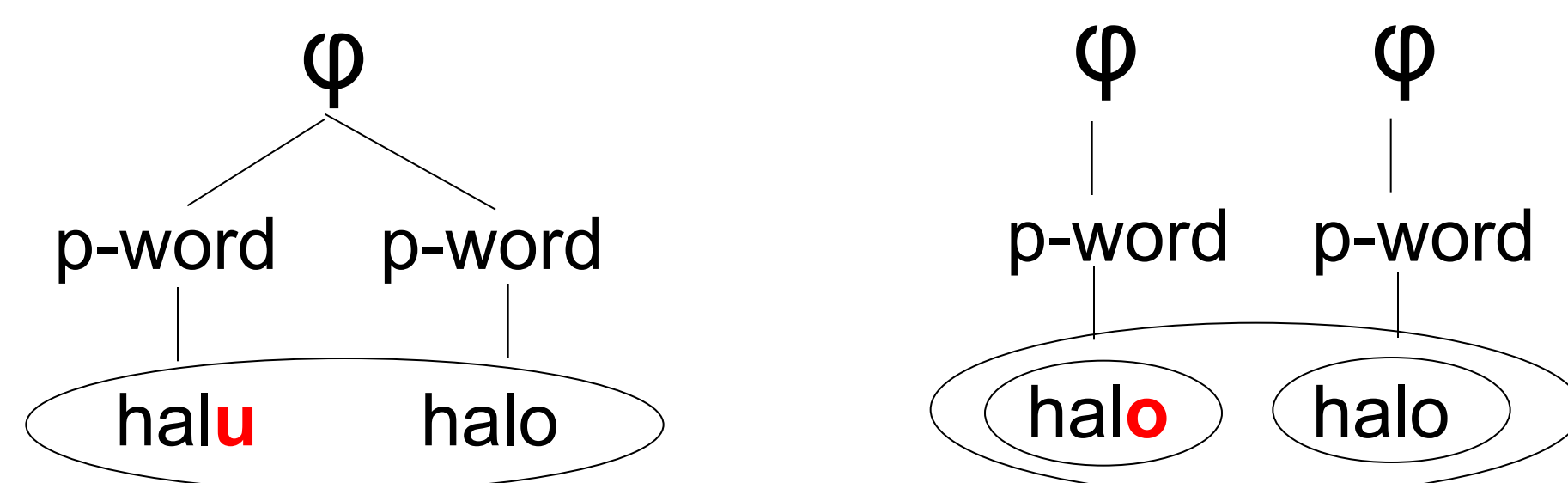
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|-----|------------|---------------------|
| (1) | /halo/ | 'mix' |
| | [halo] | *halu |
| (2) | /halo-hin/ | 'to mix (together)' |
| | [haluin] | *[haloin] |

- Suffixed reduplications show raising, applying to the last vowel in a prosodic unit:

- | | | |
|-----|----------------|-------------------|
| (3) | /halo-halo/ | 'an ice dessert' |
| | [haluhalo] | ~ *[halohalo] |
| (4) | /halu-halu-an/ | 'very well mixed' |
| | [haluhaluan] | *[halohaluan] |

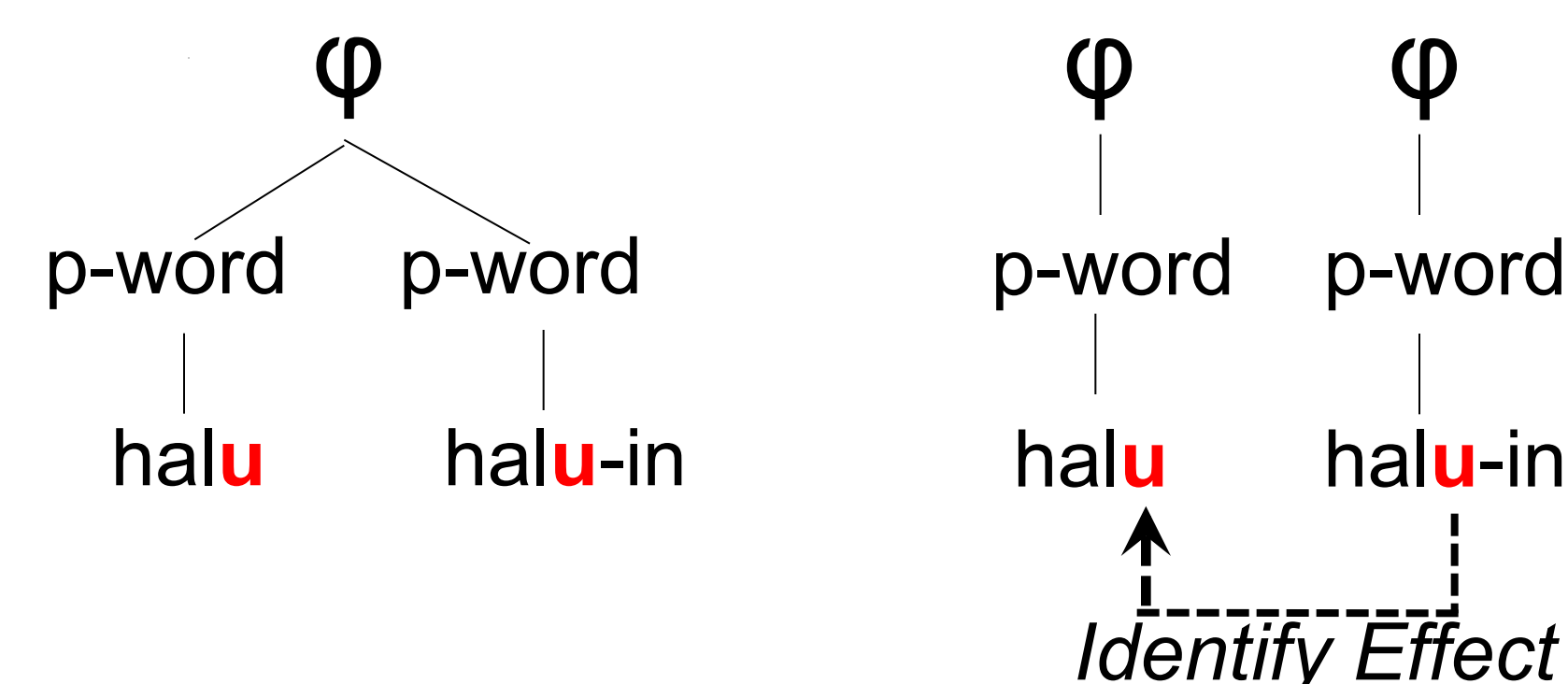
Prosodic Conditioning

- Zuraw (2009): an indirect correlation between this prosodic context of vowel raising and lexical frequency.
- Lexical frequency influences which prosodic structure is accessed, e.g., /halo-halo/ 'ice dessert'



- | | |
|------------------------|-------------------|
| • Single prosodic unit | • Separate units |
| • Higher frequency | • Lower frequency |
| • "u" surfaces | • "o" surfaces |

- Reduplicative identity effect in suffixed forms regardless of structure



Present Study

- Is there evidence for a relation with prosody?
- Does the prosodic structure affect the vowel variant?
- Prediction: [o] vowels tend to precede a prosodic boundary and [u] vowels do not
- Examine segmental durations: final lengthening of first-copy [o] and initial strengthening C₁ of second copy

METHOD

Production Task

- Self-paced reading of 2 sentences
- Participants provided the reduplicated version of the given stem

Stimuli

- Subset of unsuffixed reduplicants from larger study; Cs were obstruents:

- | | | |
|-----|--------------|--------------------|
| (6) | bago 'new' | buto 'bone' |
| | bako 'rough' | dugo 'blood' |
| | buko 'node' | puno 'overflowing' |

- Two carrier frames:

- (7) Ang unang salita ay [bago], at ang pangalawang salita ay [____].
The first word is [new], and the second word is [____].

- (8) Ang paborito kong salita ay [____].
My favorite word is [____].

Participants

- 13 female Tagalog native speakers recruited from CUNY campuses
- Mean age: 36 years
- Length of residence: 0-25 years; Age of arrival: 14-22 years
- 11 used an additional language at home; 1 used 2 additional languages at home; 2 used English as main home language
- All received monetary compensation

DATA ANALYSES

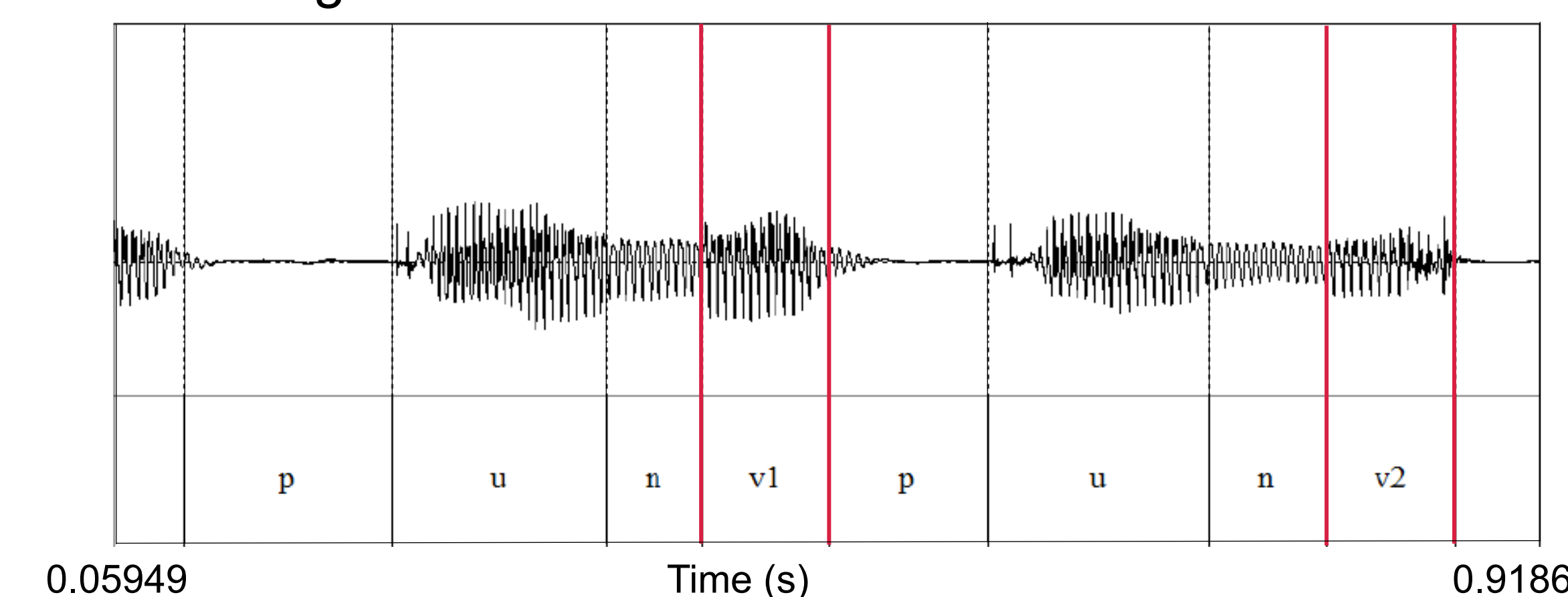
Vowel Labeling

- Measure of analysis: phonetic transcriptions
- 4 categories: [u], [o], "?", "other"

Segmentation of Obstruents

- Onsets marked by the onsets of constriction following a previous vowel
- Offsets (and vowel onsets) marked by release of the constriction
- Excluded data: disfluencies and tokens whose target vowels had an unidentifiable beginning and/or end

Figure 1 Example segmentation of /puno-puno/ 'overflowing'



RESULTS

Final Lengthening

- Absolute terms: First-copy [u]s (Fig. 2) are shorter than first-copy [o]s (Fig. 3) ($p < .001$)
- Relative effect: First-copy [u]s are significantly shorter compared to their second-copy vowel counterparts than [o] compared to its counterpart ($p < .001$).

Figure 2 Mean segmental durations of reduplicated forms in first-copy [u]s

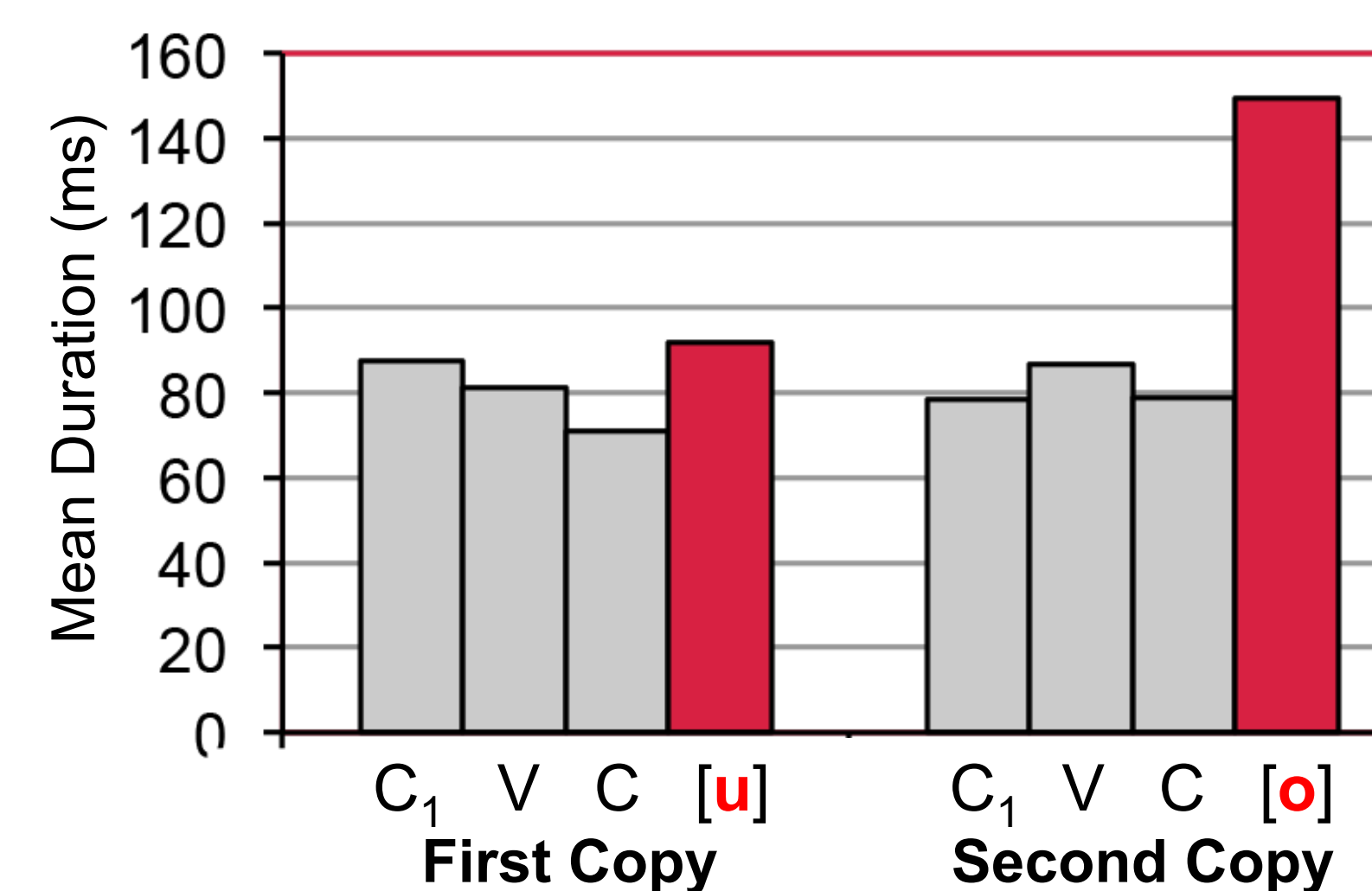
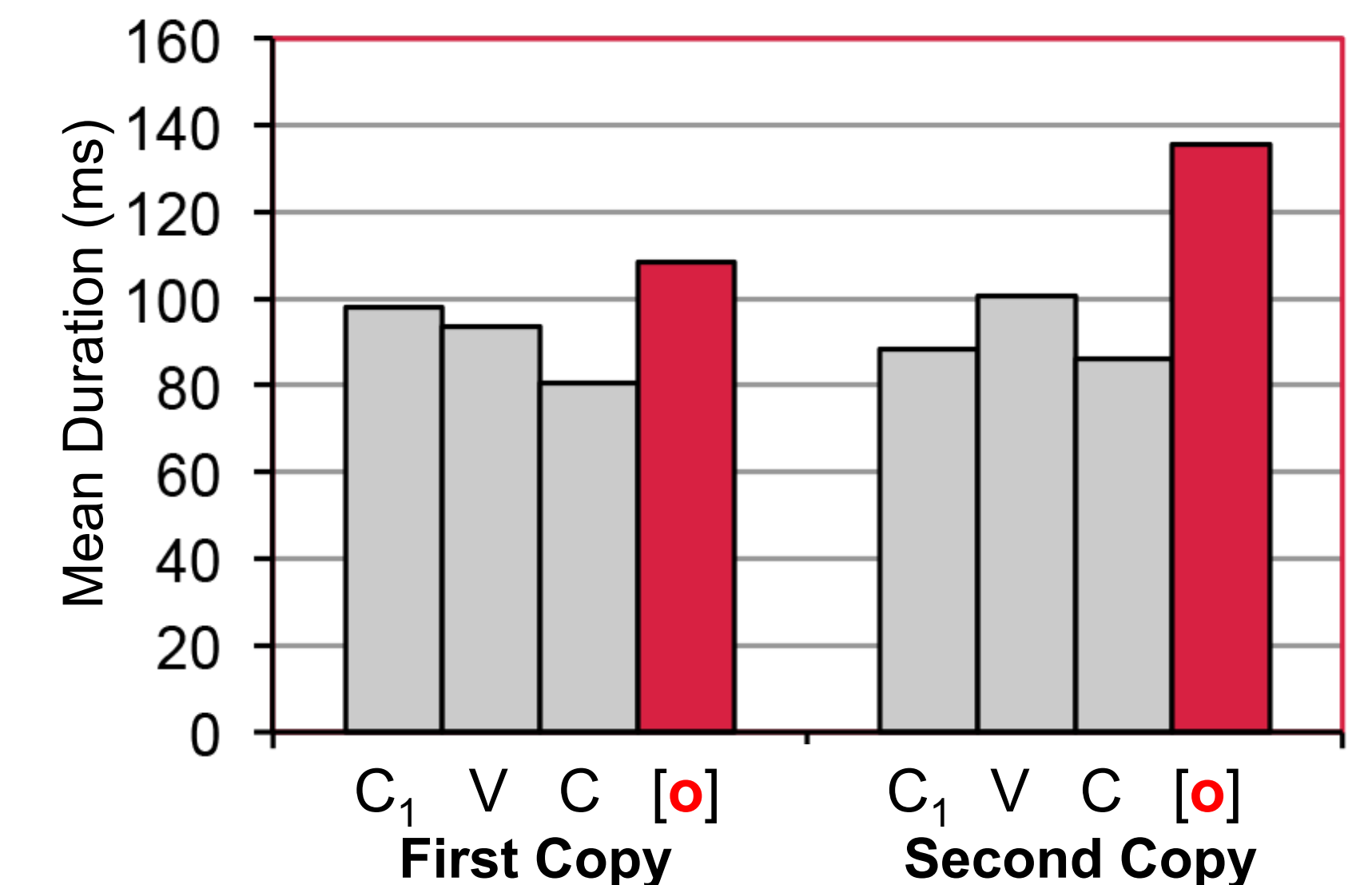


Figure 3 Mean segmental durations of reduplicated forms in first-copy [o]s



Initial Strengthening

- Consonants following [o] productions were slightly longer
- While it was trending in the predicted direction, it was not a significant finding ($p > .10$).

Figure 4 Mean segmental durations of reduplicated forms in first-copy [o]s

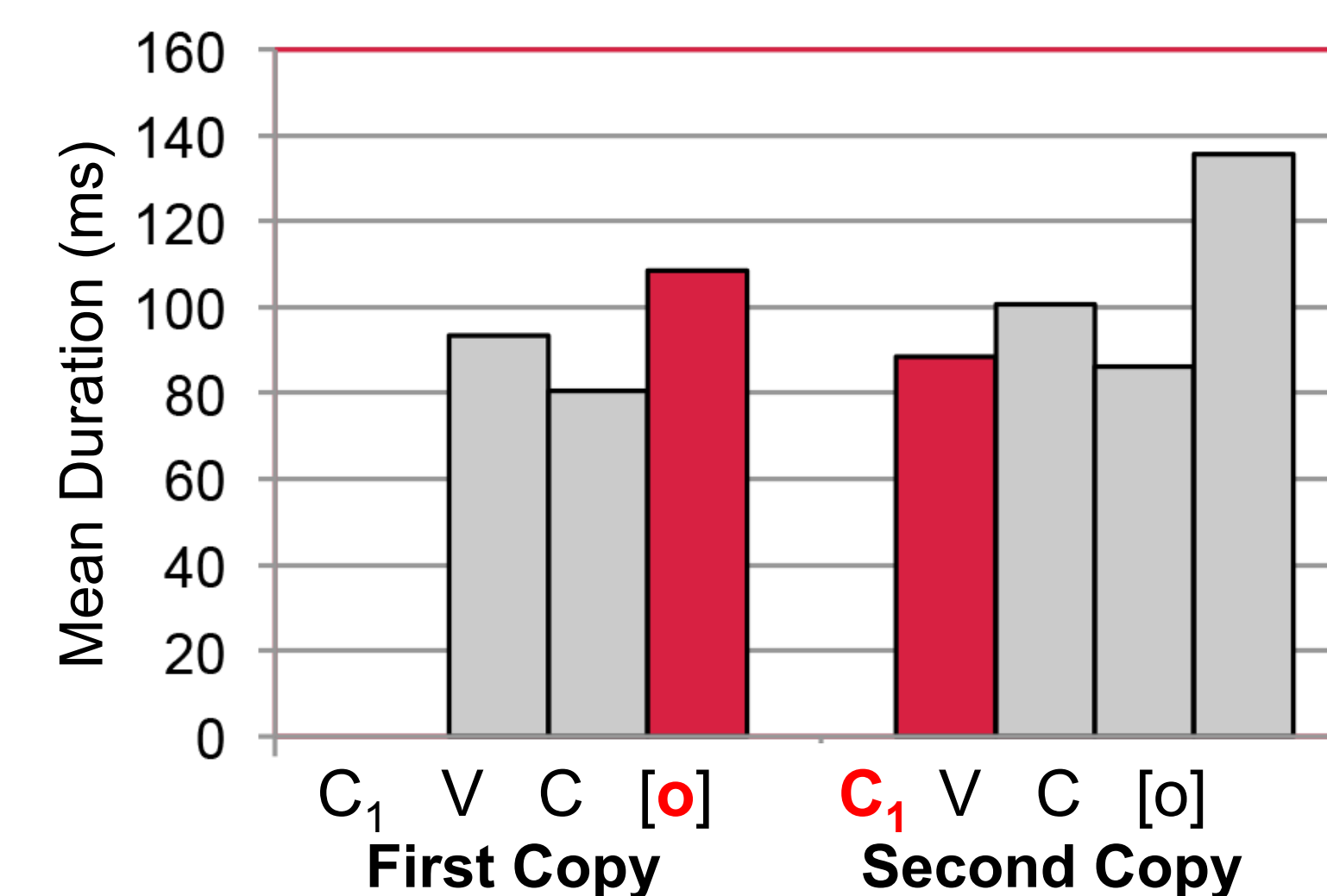
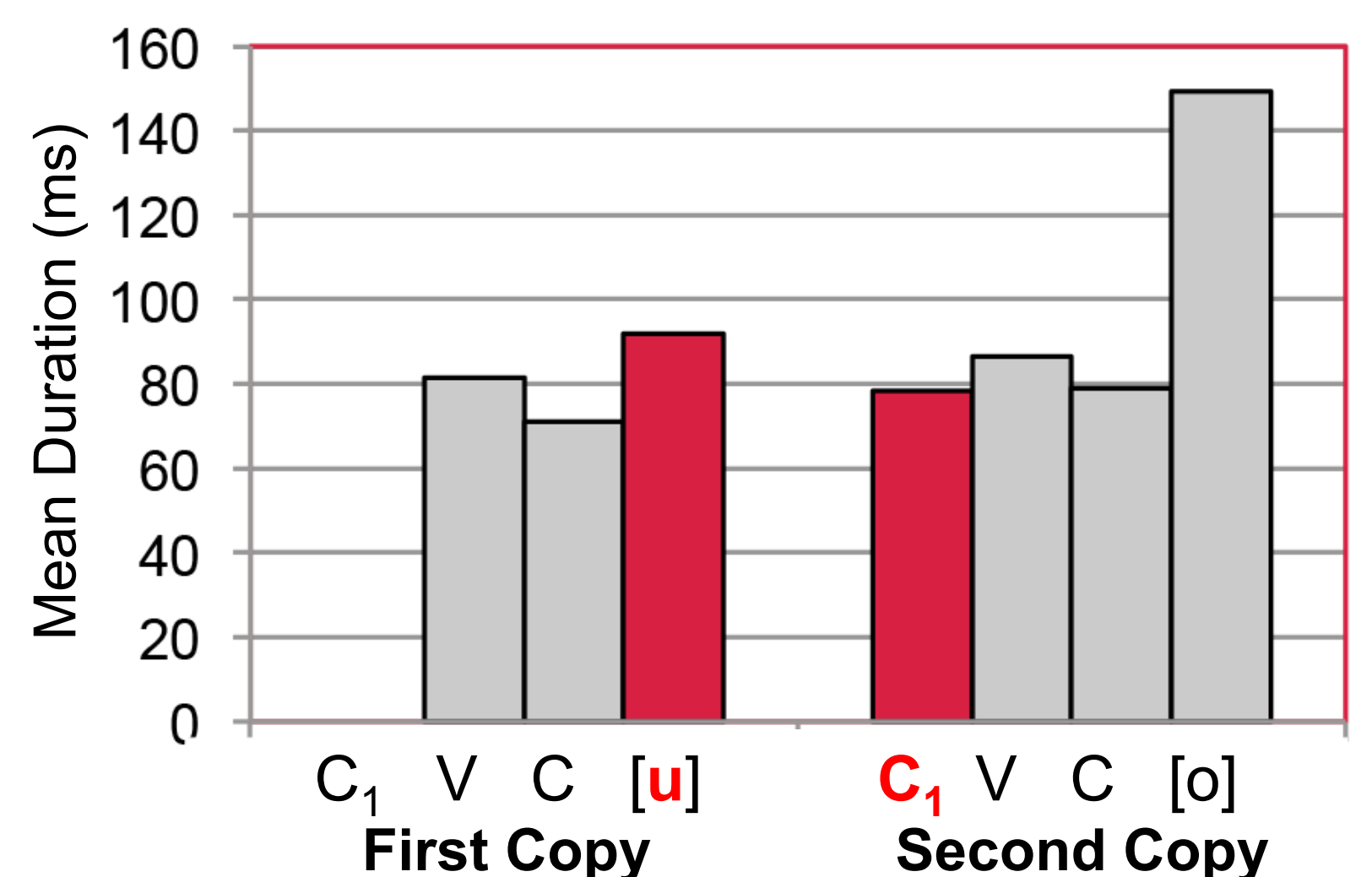


Figure 5 Mean segmental durations of reduplicated forms in first-copy [u]s



Discarded Tokens

- Tokens produced with a large pause between the two copies were excluded: 26 first-copy [o]s and 2 first-copy [u]s
- Marginal significance for pauses following [u] versus [o] ($p = .07$)

DISCUSSION

- Some of the segmental variation in the reduplicants may be prosodically conditioned, providing partial support for Zuraw's (2009) prosodic proposal
- Realizations of first-copy [o] were longer than first-copy [u]. Evidence for final lengthening
- General prosodic adjustment: shorter first-copy [u]s and longer word-final [o]s in the same word
- Direction of first-copy initial consonants consistent with initial strengthening

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