



# [-zu], An Initial Accenting Suffix: The Case for Non-local Interaction

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## Introduction

• Many languages have affixes that assign accents onto the target root word, and they usually insert the accent onto the syllable adjacent to them.

• Researchers have claimed that among languages, the accent assigned by those post-accenting and pre-accenting affixes is always local (Kurusu 2001; Revithiadou 2008).

Examples from Japanese:

/ma-minami/ => [ma-mi'na:mi] 'the true South'  
/minami-ke/ => [mi-na:mi'ke] 'the house of Minami'

• However, Kawahara and Wolf (2010) document a Japanese suffix which counter exemplifies the generalization.

• This Japanese suffix, [-zu], is a loanword from the English plural suffix "-s", and is usually used to form group names such as sports teams, musical bands, etc.

• Kawahara and Wolf's study has shown that [-zu] inserts an accent on the initial syllable while lengthening the root-final syllable.

Examples:

[sana] => [sa'na:zu] (Comedian name)  
[raion] => [ra'ion:zu] (Baseball team name)

Some problems of their study:

- the syllable structure was not controlled
- real words were used for stimuli
- some speakers did not show accenting

The current study:

- the syllable and morphological structures were controlled
- nonsense words were used to test the true productivity
- auditory stimuli were used rather than orthographic stimuli

## Experiment I: Method

The stimuli consisted of 4 conditions, 10 words each:

- The monomorphemic words (baseline condition)
- **Initial accent:** ill-formed words (Kubozono 2008)
- **Antepenultimate accent:** default pattern (McCawley 1968)

The zu-words (target)

- **Unaccented root**
- **Accented roots**

The unaccented roots have the phonological shape that would produce unaccented pronunciation by having non-epenthetic vowels at word final positions (Kubozono 1994).

	Monomorphemic (baseline condition)	Zu-words (Target)	
		Unaccented root and zu-words	Accented root and zu-words
Initial	[na'rigumaada]	[chi'yogise] -> [chi'yogiseezu]	[seri'ponu] -> [seri'ponuuzu]
Antep.	[nari'guma'ada]		

### Procedure:

• A female native Tokyo speaker was recorded for the auditory stimuli, which was embedded, using flash-player, to an online questionnaire that was created through Sakai.

• The Demo site: <http://tinyurl.com/yfydf3b>.

• The participants were instructed to judge the naturalness of the accent patterns of monomorphemic words and zu-words.

• The rating scale:

- (5) very natural
- (4) somewhat natural
- (3) neither natural nor unnatural
- (2) somewhat unnatural
- (1) very unnatural

The questionnaire consisted of 2 parts:

Part 1: 10 monomorphemic stimuli with initial accents  
10 with antepenultimate accents

Part 2: 20 zu-words each started with word roots and followed by zu-words.

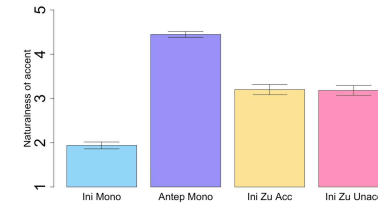
### Participants:

51 native speakers of Japanese have participated in this experiment. The data was limited to subjects who were in their 20's and 30's since the suffix [-zu] is used among young speakers.

### Statistics:

Linear Mixed Model with condition as a fixed factor and subject and item as random factors.

## Experiment I: Results



The average rating of the naturalness of accents of the 4 conditions

• The initial accenting zu-words show a higher rating than the initial accenting monomorphemic words ( $t(1528)=19.7, p<.001$ ).

• The initial accenting zu-words show a lower rating than the antepenultimate pronunciation of monomorphemic words ( $t(1528)=-20.1, p<.001$ ).

• The average rating of zu-words derived from unaccented roots and zu-words derived from accented roots does not show a significant difference ( $n.s.$ ).

## Experiment II: Methods

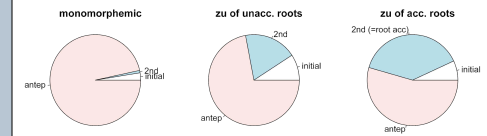
Experiment II is a multiple choice test.

The nonce word stimuli are the same from Experiment I. The option of a second syllable accent was added.

	Monomorphemic	Unaccented root and zu-words	Accented root and zu-words
Initial	[ga'yohamooda]	[mo'pesenoozu]	[za'mesokuuzu]
2nd syllable	[gayo'hamooda]	[mope'senoozu]	[zame'sokuuzu]
Antep.	[gayohamo'oda]	[mopeseno'ozu]	[zamesoku'uzu]

The participants were 35 native Japanese speakers. They were asked to listen to the auditory stimuli and choose which accentual pattern sounded the most natural.

## Experiment II: Results



	Monomorphemic	Unaccented root and zu-words	Accented root and zu-words
Initial	2.6% [ga'yohamooda]	9.2% [mo'pesenoozu]	6.9% [za'mesokuuzu]
2nd syllable	0.8% [gayo'hamooda]	18.7% [mope'senoozu]	38.6% [zame'sokuuzu]
Antep.	96.6% [gayohamo'oda]	72.0% [mopeseno'ozu]	54.5% [zamesoku'uzu]

• Initial accenting in zu-words is not the best choice.

• However, zu-words do show more initial accenting responses than monomorphemic words (Wilcoxon test,  $V=23.5, p<.05$ ).

• Given accented roots, speakers did often chose words that preserve root accents.

## Conclusion

• Non-local affix-controlled accentuation is possible.

• Initial accenting in zu-words is more acceptable than initial accenting in monomorphemic words.

• However, not all grammatical forms are equally acceptable (Coetzee 2009).

## References

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