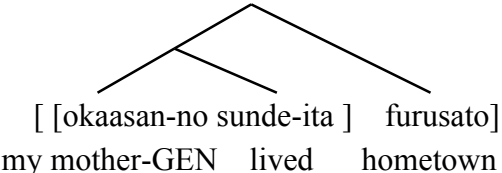
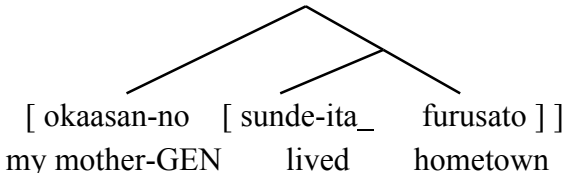


## Genitive Subjects in Korean and Japanese at Prosody-Syntax Interface

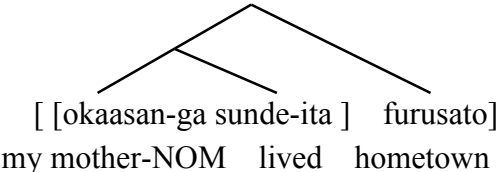
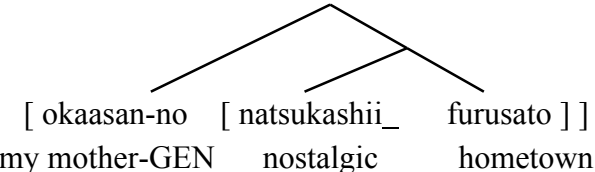
**Introduction:** The NP that appears to bare the subject grammatical function in relative clauses or other types of adnominal clauses is often marked by a genitive case-marker in Korean and Japanese. Though this phenomenon has attracted attention of many linguists, little research has been done so far about the question how native speakers process sentences containing such ‘genitive subjects’. Sakai (1994) pointed out that the expression like (1) is ambiguous between the structure like (2a) in which the subject of adnominal clause is marked by the genitive case particle *-no* and the structure like (2b) in which the possessor NP adjoined to the head noun.

(1) okaasan-no   sunde-ita   furusato   ‘the hometown where my mother lived’  
       my mother -GEN   lived       hometown

(2) a.  b. 

Sohn (2004) argued that an apparent genitive subject is actually a possessor NP adjoined to the head noun and nominative-genitive alternation is a ‘spurious phenomenon’ in Korean. Maki et al. (2004) observed that many Japanese speakers less prefer genitive subjects compared to nominative subjects. These findings together predict that, if Korean/Japanese native speakers encounter an ambiguous expression like (1), they should prefer the analysis like (2b) over the analysis like (2a). In this paper, we attempt to verify this prediction by conducting a series of speech production experiments in Seoul and Northern Kyungsang Korean and Tokyo Japanese. Contrary to the prediction, we found that speakers of all three dialects prefer the structure (2a) over the structure (2b).

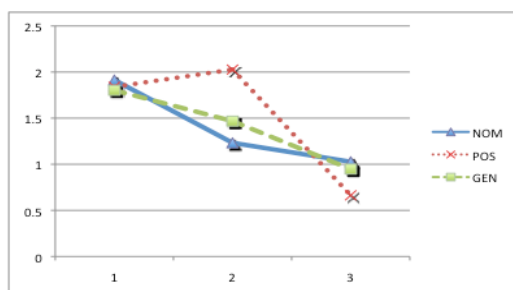
**Background Assumptions:** Many researchers have examined the syntax-prosody mapping in Korean and Japanese (See Kubozono (1993) for Tokyo Japanese, Jun (1993) for Seoul Korean, and Jun et al. (2006) for Northern Kyungsang Korean, among others). They all pointed out that the existence of major syntactic boundaries yields different prosodic phrasing by native speakers. In particular, the ‘left-branching structure’ like (2a) and the ‘right-branching structure’ like (2b) lead to different prosodic phrasing that is eventually realized as distinct prosodic patterns. That is, if we compare the speech sound produced by native speakers who read ambiguous expression like (1) to those of unambiguously left-branching structure like (3a) and the unambiguously right-branching structure like (3b), the result would reveal whether native speakers assigned the ambiguous expression the structure (2a) or the structure (2b).

(3) a. Left-branching structure  b. Right-branching structure 

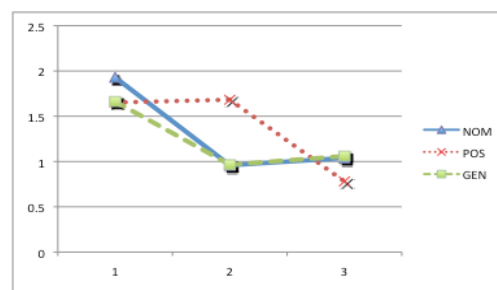
**Method & Material:** In Experiment 1, speakers of Tokyo Japanese (N=20) pronounced Japanese sentences containing a complex NP with (a) a genitive subject (GEN), (b) a nominative subject (NOM), or (c) a possessor NP (POS). In Experiment 2 & 3, speakers of Seoul Korean (N=20) and speakers of Northern Kyungsang Korean (N=21) pronounced Korean sentences constructed for the same three conditions that were additionally classified into two types depending on the initial tone of critical accentual phrases (AP 2 in (4) below). In either of the experiments, pitch (F0) patterns are extracted from the digitally recorded sound data (16bit, 44.1k Hz) using Praat (Boersma & Weenink, 2013). Individual z-scores were obtained from the log-transformed average height of F0 peaks of each accentual phrase.

**Results and Discussion:** The pitch patterns of three conditions in Experiment 3 (Kyungsang Korean) were represented in (4a) and (4b) below.

(4) a. AP2 starting with a high tone



b. AP2 starting with a low tone



\*The red line indicates the pitch pattern of POS condition and the blue and green lines indicate those of NOM condition and GEN condition respectively. The vertical scale shows the average of z-scores and the horizontal scale shows the number of accentual phrases.

Results of two-way ANOVA showed statistically significant differences among the conditions. That is, the F0 peak value of AP2 of POS condition was significantly higher compared to those of NOM condition or GEN condition. This basic pattern was identical in all three dialects, though the acoustic differences were more salient in Northern Kyungsang Korean and Tokyo Japanese compared to Seoul Korean. These results indicate that native speakers of these three dialects prefer the left-branching structure like (2b) over the right-branching structure (2a) and process 'genitive subjects' not as the possessor NP but as the subject of embedded clauses.

**Selected References:** [1] Boersma, P. & Weenink, D. (2013). Praat: doing phonetics by computer. Version 5.3.44. [2] Jun, J-H., Kim, J-S., Lee, H-Y. & Jun, S-A. (2006). The prosodic structure and pitch accent of Northern Kyungsang Korean. *Journal of East Asian Linguistics* 15, 289-317. [3] Jun S-A. (1993). *The phonetics and phonology of Korean prosody*. PhD dissertation, The Ohio State University. [4] Kubozono, H. (1993). *The Organization of Japanese Prosody*. Tokyo: Kuroshio Publishers. [5] Maki, H., Morishima, T., & Dunton, J. (2004). A statistical analysis of the Nominative/Genitive alternation in Japanese: A preliminary study, *Annual Research Report by Faculty of Regional Studies in Gifu University* 14, 87-119. [6] Sakai, H. (1994). Complex NP Constraint and case-conversions in Japanese. In *Current Topics in English and Japanese*, M. Nakamura (ed.), 179-203, Tokyo: Hitsuji Shobo. [7] Sohn, K-W. (2004). Nom-Gen conversion as a spurious phenomenon. *The Jungang Journal of English Language and Literature* 46, 4:183-202.