

Influence of Intonation, Morphology and Syntax on the Semantic Scope of wh-phrases in Kyeongsang Korean

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1. Research Question

Background

According to Ishihara (2005), Smith (2010), and H.K. Hwang (2011), **intonation** and **the semantic scope of wh-phrases** correlate each other in Japanese and Korean; an embedded wh-phrase can take matrix scope if appropriate intonation is provided, which allows for the violation of the wh-island constraint in those languages contrary to Nishigauchi (1990, 1999), Watanabe (1992), H.S. Han (1992), H.S. Choe (1995), and Yoshida (1998).

Research Question

Besides intonation, in Kyeongsang Korean, **sentence final particles** can also indicate different wh-scope.

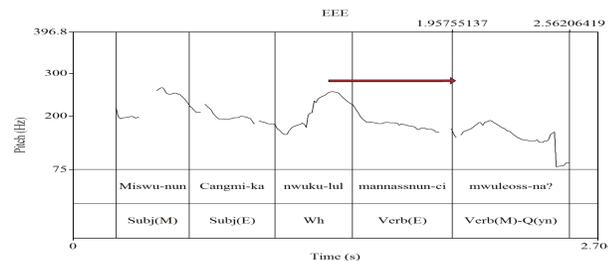
- How would intonation and sentence final particles interact with each other?
- Would the surface syntactic position of wh-phrases affect the interpretation of wh-scope?

4. Stimuli

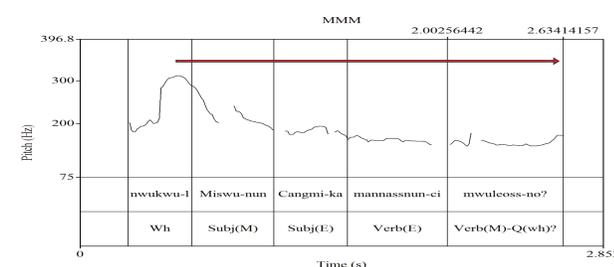
A native speaker of the dialect recorded 4 sets of fully crossed stimuli (2x2x2=8 types) purposely.

(1) and (2) illustrate the stimuli in which all three factors match each other.

- (1) 'Did Miswu ask who Cangmi met?'
 Miswu-nun [Cangmi-ka **nwukwu-lul** mannassnun-ci] mwules-**no**?
 Miswu-Top Cangmi-Nom **who-Acc meet-Comp** asked-Q(y/n)?
 Morphological cue: embedded scope
 Prosodic cue: embedded scope
 Surface position: embedded clause



- (2) 'Who did Miswu ask whether Cangmi met?'
nwukwu-lul Miswu-nun [Cangmi-ka t mannassnun-ci] mwules-**no**?
who-Acc Miswu-Top Cangmi-Nom t meet-Comp asked-Q(wh)?
 Morphological cue: matrix scope
 Prosodic cue: matrix scope
 Surface position: matrix clause



2. Three factors related to the semantic scope of a wh-phrase

Intonation

A wh-question is associated with pitch compression or a high plateau between a wh-phrase and the corresponding complementizer (Hwang 2011).

Embedded scope: wh-intonation (wh-phrase --- embedded complementizer)
 Matrix scope: wh-intonation (wh-phrase --- matrix complementizer)

Morphology

There are two different question particles, -na(Y/N) and -no(WH). When a wh-phrase is in an embedded clause, the semantic scope of the wh-phrase is decided depending on the sentence final particle.

[...[...wh.....]..... **-na**]: embedded scope reading (yes/no question)
 [...[...wh.....]..... **-no**]: matrix scope reading (wh question)

Syntax

A wh-phrase generated in an embedded clause can be moved into the matrix clause through long-distance scrambling. The syntactic position of the wh-phrase might affect the processing of its semantic scope.

5. Results

Type	Wh-position	Wh-intonation	Final particle	Sentences	WH/YN (%)	Naturalness (scale: 0-6)
1	E	E	E	S(M) [S(E) Wh V(E)-C] V(M)-Q(YN)	85.2	3.7
2	E	E	M	S(M) [S(E) Wh V(E)-C] V(M)-Q(WH)	71.3	2.5
3	E	M	E	S(M) [S(E) Wh V(E)-C] V(M)-Q(YN)	77.8	2.9
4	E	M	M	S(M) [S(E) Wh V(E)-C] V(M)-Q(WH)	87	2.7
5	M	E	E	Wh S(M) [S(E) V(E)-C] V(M)-Q(YN)	75.9	2.1
6	M	E	M	Wh S(M) [S(E) V(E)-C] V(M)-Q(WH)	89.8	2.3
7	M	M	E	Wh S(M) [S(E) V(E)-C] V(M)-Q(YN)	67.6	2.0
8	M	M	M	Wh S(M) [S(E) V(E)-C] V(M)-Q(WH)	84.2	2.5

6. Discussion & Conclusion

Forced Choice Task

- Among three factors, a sentence final particle plays a decisive role on a wh-scope in most cases.
- However, when both the wh-intonation and the syntactic position indicate a matrix scope reading, the role of the sentence final particle is not decisive (Type 7 and 8).

3. Experiment & Prediction

Experiment

In order to investigate how the mismatch between the intonation, the sentence final particle, and the position of the wh-phrase affects the judgment of the semantic wh-scope in Kyeongsang Korean, we conducted a perception test (N=111) which consists of a forced choice task and an acceptability judgment task.

Prediction

- According to Hirotani (2005), the use of specific wh-intonation is optional when sentence final particles indicate the wh-scope. Thus, we predict that the influence of sentence final particles would be stronger than wh-intonation.
- We also expect that a matrix scope reading would be more easily available when the wh-phrase appears in the matrix clause on the surface.

6. Discussion & Conclusion

Acceptability Judgment Task

- All sentence types were not well accepted with the exception of Type 1 (E,E,E). In particular, the acceptability of sentences with long-distance wh-scrambling was low. This shows that long-distance scrambling of wh-phrases is not preferred.
- Type 7 showed the lowest acceptability.

We conjecture that in this case people have a strong expectation of a matrix scope reading during processing because of the relevant cues (i.e. the syntactic position and wh-intonation) given at the beginning of the sentence and continued through the end of the sentence. However, their expectation is dismissed because of the sudden attachment of the sentence final particle that has a strong factor on wh-scope. The sudden change of expectation would be the reason of the low acceptability.

Conclusion

- Our study confirms the influence of intonation and morphology on wh-scope and newly discovers the influence of its syntactic position.
- The sentence final particle is the most influential factor as we expected, but the combination of wh-phrase scrambling and prosodic information may override the influence of the sentence final particle.
- We found a preference for an in-situ reading that does not violate the wh-island constraint, which explains the alleged wh-island effect from previous literature. However, our study confirms the more recent argument that the wh-island constraint is violable.

7. Selected References

Choe, H.S. 1995. Focus and Topic Movement in Korean and Licensing. *Discourse Configurational Languages*, K. E. Kiss (ed.), 269-334. New York: Oxford University Press.
 Han, H.S. 1992. Notes on Reflexive Movement. *Journal of East Asian Linguistics* 1, 215-218.
 Hirotani, M. 2005. Prosody and LF interpretation: Processing Japanese wh questions. Doctoral dissertation, University of Massachusetts at Amherst.
 Hwang, H.K. 2011. The interaction of Accent and Wh-intonation in Korean and Japanese. *Language Research* 47.1, 1-26
 Ishihara, S. 2005. Prosody-Scope Match and Mismatch in Tokyo Japanese Wh questions. *English Linguistics* 22.2.
 Nishigauchi, T. 1990. Quantification in the theory of grammar. Kluwer.
 Nishigauchi, T. 1999. Quantification and wh-constructions. N. Tsujimura (ed.), *A Handbook of Japanese Linguistics*. New York: Blackwell, 268-296.
 Smith, J. 2010. Empirical Approaches to Fukuoka Japanese Wh Prosody. R. Bennis, A. Thompson, and M. Tucker (eds.), *Proceedings of FAJL 5*. MITWPL.
 Watanabe, A. 1992. Wh-in-situ, Subjacency, and Chain Formation. *MIT Occasional Papers in Linguistics* 2, MITWPL, Cambridge.
 Yoshida, T. 1998. Wh-operator vs. Yes/No-operator. *ICU Language Research Bulletin* 13, 159-172.