



### I. Two varieties of Korean:

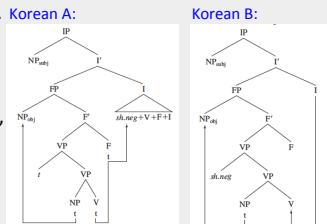
Han, Lidz & Musolino (HLM, 2007), Han, Musolino & Lidz (HML, 2016): Korean exhibits seemingly random variation throughout the population with respect to the interpretation of universal quantifier objects in negative sentences:

- (1) John-i motun chayk-ul an ilk-ess-ta.  
John-NOM every book-ACC NEG read-PST-DECL
- (2) John-i motun chayk-ul ilk-ci ani ha-yess-ta.  
John-NOM every book-ACC read-CL NEG do-PST-DECL

- Variety A, (1)/(2): 'John didn't read every book.'  $\neg > \forall$
- Variety B, (1)/(2): 'John read no book.'  $\forall > \neg$

### II. HLM, HML: optional rightward head movement:

HLM, HML: The Korean varieties differ with respect to whether the verb moves up to T (picking up negation along the way) or whether tense morphology lowers down onto the verb (leaving negation in situ).



- Objects raise to a VP-external position (Hagstrom 2000, 2002).
- Korean is scope-rigid (Joo 1989, Ahn 1990, Sohn 1995, Hagstrom 2000); hence no reconstruction.
- Negation morphologically attaches to the verb.

### III. Challenges for HLM, HML:

If the approach by HLM, HML is correct, this would yield one of the strongest arguments for rightward, string-adjacent head movement. However, the approach also faces serious challenges.

- In Korean A, (1) and (2) are both judged true when John read no book. Even though (1) and (2) are true in a scenario where no book is read, they are expected to trigger an implicature that John read some book. Hence, speakers are not predicted to fully accept (1) and (2) in such a context, contrary to fact.
  - In Korean B, the object should be able to reconstruct below negation, but these readings are not attested. The fact that Korean is scope-rigid with respect to multiple quantifiers does not extend to quantifier-negation scopal construals and therefore does not explain the absence of these readings.
- (3) John-i motun chayk-ul an ilk-ess-ta.  
John-NOM every book-ACC NEG read-PST-DECL  
'John read no book'  $\forall > \neg$
  - (4) John-un amwukesto an mek-ess-ta.  
John-TOP anything NEG eat-PST-DECL  
'John didn't eat anything'  $\neg > \exists$

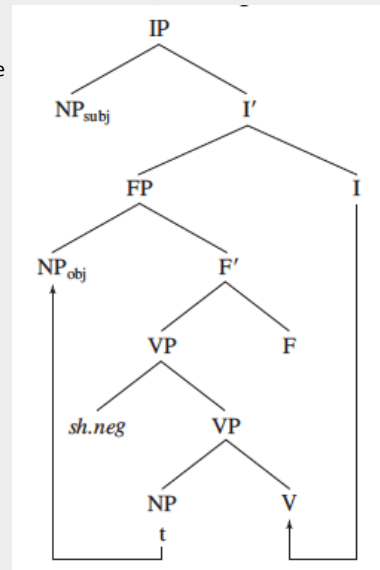
### IV. Alternative proposal:

In Korean, negation remains at its base position. Universal quantifier objects raise outside VP. In Korean B, universal quantifiers are PPIs; in Korean A, they are polarity-insensitive. Universal quantifiers PPIs are special PPIs that (i) are allowed to take scope below negation when they appear under it at surface structure, but (ii) may not reconstruct below negation (cf. Zeijlstra 2017).

- Korean universal quantifiers objects appear structurally higher than negation.
- Korean A: reconstruction possible:** both  $\forall > \neg$  and  $\neg > \forall$  possible
- Korean B: reconstruction forbidden:** only  $\forall > \neg$  allowed

The properties of such PPIs follow directly from Chierchia's (2006, 2013) analysis of NPIs. For Chierchia, unlicensed existential NPIs yield a logical contradiction and logical contradictions give rise to ungrammaticality judgments (cf. Gajewski 2002).

- The source of the logical contradiction is twofold: (i) NPIs obligatorily introduce domain-alternatives; (ii) NPIs come along with a syntactic feature that triggers the presence of a higher covert exhaustification operator.
- $EXH > NEG > \exists$  OK  $EXH > \exists$  Contradiction
- Universal quantifiers that have the same properties are PPIs that may take scope below negation, as long as EXH can intervene. If they appear above negation, they may not reconstruct.
- $NEG > EXH > \forall$  OK  $EXH > NEG > \forall$  Contradiction
- $EXH > \forall > NEG$  OK



### V. Syntactic vs. semantic variation:

According to this alternative proposal (which captures the available readings for both Korean A and B in a straightforward way), the difference between the two varieties lies in the polarity-(in)sensitivity of universal quantifiers, and not in the presence vs. absence of rightward head movement. Variation in terms of the polarity-(in)sensitivity is quite common:

- Dutch / Northern German *ieder/jeder* ('every') is a PPI; English / Southern German *every/jeder* is polarity-insensitive (cf. Zeijlstra 2017).
- (5) *Iedereen loopt niet* Dutch  $\forall > \neg; * \neg > \forall$   
*Jeder läuft nicht* German  $\forall > \neg; \% \neg > \forall$   
*Everybody doesn't walk* English  $\forall > \neg; \neg > \forall$
- English / Western Dutch *must/moeten* is a PPI; German / Eastern Dutch *müssen/moeten* is polarity-insensitive (cf. Iatridou & Zeijlstra 2013).
- In the early 20<sup>th</sup> Century, Northern Dutch *ooit* ('ever') was an NPI; Flemish *ooit* was polarity-insensitive (Hoeksema 1999).

### VI. Conclusions and consequences:

- The attested variation in Korean is due to the polarity-(in)sensitivity of universal quantifiers.
- No 'special status' to the attested microvariation in Korean. Korean microvariation reduces to well-attested variation with respect to the presence or absence NPI-hood / PPI-hood of particular scope-taking elements.
- No evidence for rightward movement (in Korean). In both varieties of Korean, the verb and the negative head stay in situ.
- No evidence for optionality in grammar with respect to 'hard' syntactic operations, such as rightward movement / affix lowering.