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1. Introduction

- □ Backward control (BC) is a construction where the null CONTROLLEE is superior to the overt CONTROLLER, (1b).
- a. Gus Hiddink persuaded him_i [Δ_i to play center middle]
 b. Gus Hiddink persuaded Δ_i [he_i to play center middle] (hypothetical)
- BC was proposed in Japanese (Kuroda 1965; Harada 1973), Brazilian Portuguese (Farrell 1995), Tsez (Polinsky and Potsdam 2002) and Malagasy (Polinsky and Potsdam 2003).
- □ Korean object control predicates permit a nominative/accusative case alternation:
- (2) Cheolsu-neun Yeonghi-leul/ka kake-e ka-tolok seolteukha-eoss-ta Cheolsu-Top Yeonghi-Acc/Nom store-to go-Comp persuade-Past-Decl 'Cheolsu persuaded Yeonghi to go to the store.'
- □ Accusative case: constituent of the matrix clause binding a null element Δ in the embedded clause, (3). (ordinary control)
- (3) Cheolsu-neun Yeonghi-leul_i [Δ_i kake-e ka-tolok] seolteukha-eoss-ta Cheolsu-Top Yeonghi-Acc store-to go-Comp persuade-Past-Decl 'Cheolsu persuaded Yeonghi to go to the store.' (ordinary control)
- □ Nominative case: constituent of the embedded coindexed with a null element Δ in the matrix clause, (4). (backward control)
- (4) Cheolsu-neun ∆i [Yeonghi-kai kake-e ka-tolok] seolteukha-eoss-ta Cheolsu-Top Yeonghi-Nom store-to go-Comp persuade-Past-Decl 'Cheolsu persuaded Yeonghi to go to the store.' (backward control)
- □ I argue that Korean licenses <u>backward object control</u> in (4).

- 2. Goals of the talk
- Provide empirical evidence for the forward control structure in (3) and the backward control structure in (4):
 - i) clause membership of the *persuadee* DP ii) existence of Δ
- □ Argue against a *pro*-based analysis of backward control in Cormack and Smith 2002.
- Demonstrate that a control-is-movement approach accounts for the facts.
- 3. Korean <u>persuade</u> is an object control predicate not ECM
- □ ECM predicates license a case alternation similar to (2) (JS Lee 1992).
- (5) John-eun Mary-leul/ka yeppeu-ta-ko mit-neun-ta John-Top Mary-Acc/Nom pretty-Decl-Comp believe-Pres-Decl 'John believes Mary to be pretty.'
- Korean *persuade* selects for the case alternating DP and places selectional restrictions on it, while Korean ECM does not.

3.1 Non-control usage

- Den Non-control Korean persuade can license an additional overt internal argument:
- (6) Cheolsu-neun Yeonghi-leul/eke Suyeong-ka ka-yaha-n-ta-ko Cheolsu-Top Yeonghi-Acc/Dat Suyeong-Nom go-should-Pres-Decl-Comp seolteukha-eoss-ta persuade-Past-Decl 'Cheolsu persuaded Yeonghi that Suyeong be allowed to go to the store.'
- Korean ECM predicates cannot license an additional overt argument:
- (7) *Cheolsu-neun Yeonghi-leul Suycong-i yeppeu-ta-ko mit-eoss-ta Cheolsu-Top Yeonghi-Acc Suycong-Nom pretty-Decl-Comp believe-Past-Decl (*Cheolsu believed Yeonghi Suycong to be pretty.')

3.2 Passive/active synonymy

- □ Passive and active forms are not synonymous with *persuade* (as in the English translations):
- a. Cheolsu-neun Yeonghi-ka/leul Suyeong-eul inteophyu ha-tolok Cheolsu-Top Yeonghi-Nom/Acc Suyeong-Acc interview do-Comp seolteukha-eoss-ta persuade-Past-Decl
 *Cheolsu persuaded Yeonghi to interview Suyeong.'
 - b. Cheolsu-neun **Suyeong-i/%eul** Yeonghi-eke inteophyu pat-tolok Cheolsu-Top **Suyeong-Nom/Acc** Yeonghi-Dat interview Pass-Comp seolteukha-eoss-ta persuade-Past-Decl 'Cheolsu persuaded **Suyeong** to be interviewed by Yeonghi.' (≠ 8a)
- Dear This lack of synonymy suggests that Korean persuade is selecting for the persuadee DP.
- Passive and active are synonymous with ECM:
- (9) a. Cheolsu-neun [Yeonghi-ka Suyeong-eul manna-ass-ta-ko] mit-eoss-ta Cheolsu-Top Yeonghi-Nom Suyeong-Acc meet-Past-Decl-Comp believe-Past-Decl 'Cheolsu believed (that) Yeonghi to have met Suyeong.' (active)
 - b. Cheolsu-neun [Suyeong-ka Yeonghi-e euihaeseo manna-jyeoss-ta-ko] mit-eoss-ta Cheolsu-Top Suyeong-Nom Yeonghi-by meet-Pass-Decl-Comp believed 'Cheolsu believed (that) Suyeong to have been met by Yeonghi.' (passive; = 9a)
- □ Korean ECM predicates do not select for the case alternating DP. Korean persuade does.

3.3 Selectional restrictions

- □ A non-persuadable entity in the case alternating position creates an anomalous reading, (10).
- (10) #Cheolsu-neun **tol-i/eul** tteoleoji-tolok seolteukha-eoss-ta Cheolsu-Top **rock-Nom/Acc** fall-Comp persuade-Past-Decl '#Cheolsu persuaded the rocks to fall.'
- □ The same anomalous interpretation does not arise in ECM constructions:
- (11) Cheolsu-neun **tol-i** tteoleoji-n-ta-ko mit-eoss-ta Cheolsu-Top **rock-Nom** fall-pres-Decl-Comp believe-Past-Decl 'Cheolsu believes the rocks to be falling.'

3.4 Summary of section

- □ Korean *persuade* selects for three semantic arguments while Korean ECM selects for two.
- □ Korean *persuade* places selectional restrictions on the case alternating DP.
- □ With the assumption that argument selection is local, these facts suggest a control analysis.
- 4. Constituent analysis of Korean persuade constructions
- Propose two constituent structure analyses to account for the case alternation.
- Argue that the nominative DP is a constituent of the embedded clause

4.1 Proposed constituency structures

- □ Subject/Object Analysis: the nominative DP is a constituent of the embedded clause, (12a).
- (12) <u>Subject/Object Analysis (SOA)</u>

a. Cheolsu-neun Cheolsu-Top 'Cheolsu persuade	[Yeonghi-ka kake-e Yeonghi-Nom store-to d Yeonghi to go to the store.'	ka-tolok] go-Comp	seolteukha-eoss-ta persuade-Past-Decl
b. Cheolsu-neun	Yeonghi-leul [kake-e	ka-tolok]	seolteukha-eoss-ta

- Cheolsu Persuaded Yeonghi Acc store-to go-Comp persuade-Past-Decl 'Cheolsu persuaded Yeonghi to go to the store.'
- Deliver Analysis: the case alternating DP is a constituent of the matrix clause
- (13) <u>Object Analysis (OA)</u> Cheolsu-neun Yeonghi-leul/ka [kake-e ka-tolok] Cheolsu-Top Yeonghi-Acc/Nom store-to go-Comp 'Cheolsu persuaded Yeonghi to go to the store.'

4.2 Case in monoclausal structures

- □ In a monoclausal structure, nominative case is not permitted on the object DP.
- □ This is not predicted by the OA.
- The SOA makes this prediction because nominative case is not licensed in matrix object position.

4

(14) Cheolsu-neun Yeonghi-leul/*ka seolteukha-eoss-ta Cheolsu-Top Yeonghi-Acc/*Nom persuade-Past-Decl 'Cheolsu persuaded Yeonghi.'

4.3 Temporal adverb distribution

- □ Temporal adverbs in Korean are clausebound in their scope (J Yoon 1996).
- □ A matrix adverb is able to follow the accusative marked *persuadee* DP (15).
- A matrix adverb is unable to follow the nominative marked *persuadee* DP (16).
- (15) Cheolsu-neun Yeonghi-leul naeil kake-e maeil ka-tolok seolteukha-l keo-ya Cheolsu-Top Yeonghi-Acc tom. store-to everyday go-Comp persuade-Fut-Decl 'Tomorrow, Cheolsu will persuade Yeonghi to go to the store everyday.'
- (16) *Cheolsu-neun Yeonghi-ka naeil kake-e maeil ka-tolok seolteukha-l keo-ya Cheolsu-Top Yeonghi-Nom tom. store.to everyday go-Comp persuade-Fut-Decl 'Tomorrow, Cheolsu will persuade Yeonghi to go to the store everyday.'

4.3.1 OA analysis of adverb facts

- OA predicts (15): the matrix adverb can be interpreted with matrix scope.
- (17) Cheolsu-neun Yeonghi-leul naeil [kake-e maeil ka-tolok] seolteukha-l keo-ya Cheolsu-Top Yeonghi-Acc tom. store-to everyday go-Comp persuade-Fut-Decl 'Tomorrow, Cheolsu will persuade Yeonghi to go to the store everyday.'
- □ OA fails to predict the ungrammaticality of (16).
- (18) *Cheolsu-neun Yeonghi-ka naeil [kake-e maeil ka-tolok] seolteukha-l keo-ya Cheolsu-Top Yeonghi-Nom tom. store-to everyday go-Comp persuade-Fut-Decl 'tomorrow, Cheolsu will persuade Yeonghi to go to the store everyday.'
- 4.3.2 SOA analysis of adverb facts
- □ SOA correctly predicts (15).
- (19) Cheolsu-neun Yeonghi-leul naeil [kake-e maeil ka-tolok] seolteukha-l keo-ya Cheolsu-Top Yeonghi-Acc tom. store-to everyday go-Comp persuade-Fut-Decl 'Tomorrow, Cheolsu will persuade Yeonghi to go to the store everyday.'
- □ SOA also predicts (16): the matrix adverb is unable to take matrix scope.
- (20) *Cheolsu-neun [Yeonghi-ka naeil kake-e maeil ka-tolok] seolteukha-l keo-ya Cheolsu-Top Yeonghi-Nom tom. store-to everyday go-Comp persuade-Fut-Decl 'Tomorrow, Cheolsu will persuade Yeonghi to go to the store everyday.'

4.4 Scrambling

- □ The embedded clause is unable scramble without the nominative marked DP:
- (21) Cheolsu-neun kake-e ka-tolok Yeonghi-leul/*ka seolteukha-eoss-ta Cheolsu-Top store-to go-Comp Yeonghi-Acc/*Nom persuade-Past-Decl 'Cheolsu persuaded Yeonghi to go to the store.'

WCCFL 22

4.4.1 OA analysis of scrambling facts

- □ OA fails to predict a contrast between (22) and (23).
- (22) Cheolsu-neun [kake-e ka-tolok]_i Yeonghi-leul t_i seolteukha-eoss-ta Cheolsu-Top store-to go-Comp Yeonghi-Acc persuade-Past-Decl 'Cheolsu persuaded Yeonghi to go to the store.'
- (23) *Cheolsu-neun [kake-e ka-tolok]_i Yeonghi-ka t_i seolteukha-eoss-ta Cheolsu-Top store-to go-Comp Yeonghi-Nom persuade-Past-Decl 'Cheolsu persuaded Yeonghi to go to the store.'

4.4.2 SOA analysis of scrambling facts

- □ The SOA predicts the contrast between (24) and (25).
- (24) Cheolsu-neun [kake-e ka-tolok]_i **Yeonghi-leul** t_i seolteukha-eoss-ta Cheolsu-Top store-to go-Comp **Yeonghi-Acc** persuade-Past-Decl 'Cheolsu persuaded Yeonghi to go to the store.'
- □ The nominative persuadee DP is a constituent of the embedded clause.
- □ The embedded clause is unable to scramble without the nominative persuadee.
- (25) * Cheolsu-neun kake-e ka-tolok_i [Yeonghi-ka t_i] seolteukha-eoss-ta Cheolsu-Top store-to go-Comp Yeonghi-Nom persuade-Past-Decl 'Cheolsu persuaded Yeonghi to go to the store.'

4.5 Summary of section 4

- □ A difference in case equates to a difference in syntactic position.
- □ When the *persuadee* DP is **accusative**, it is a constituent of the matrix clause, (3).
- □ When the *persuadee* DP is **nominative**, it is a constituent of the embedded clause, (4).

6

- (3') Cheolsu-neun Yeonghi-leul_i [∆i kake-e ka-tolok] seolteukha-eoss-ta Cheolsu-Top Yeonghi-Acc store-to go-Comp persuade-Past-Decl 'Cheolsu persuaded Yeonghi to go to the store.' (ordinary control)
- (4') Cheolsu-neun Δ_i [Yeonghi-ka_i kake-e ka-tolok] seolteukha-eoss-ta Cheolsu-Top Yeonghi-Nom store-to go-Comp persuade-Past-Decl 'Cheolsu persuaded Yeonghi to go to the store.' (backward control)
- 5. Evidence for Δ
- \Box Evidence supporting the existence of Δ in (4) is desired.
- Present evidence for the existence of Δ in the backward control construction with data from quantifier agreement and reflexive binding.
- 5.1 Quantifier agreement
- Destrominal quantifiers in Korean must agree in case with the head noun (Cho 2000):
- (26) haksacng-teul-i motu-ka/*leul us-eoss-ta student-Pl-Nom all-Nom/*Acc laugh-Past-Decl 'All the students laughed.' (Cho 2000:193)
- (27) Mary-ka haksaeng-teul-eul motu-leul/*ka sohwanha-eoss-ta Mary-Nom student-Pl-Acc all-Acc/*Nom call-Past-Decl 'Mary called all the students.' (Cho 2000:194)
- An accusative quantified DP can appear in post-embedded clause position:
- (28) Cheolsu-neun [kake-e ka-tolok] **ai-teul-eul motu-leul** seolteukha-eoss-ta Cheolsu-Top store-to go-Comp **child-Pl-Acc all-Acc** persuade-Past-Decl 'Cheolsu persuaded all the children to go to the store.'
- □ In (29), the quantified DP is nominative and a constituent of the embedded clause.
- The quantifier is accusative and a constituent of the matrix clause.
- □ This should be illicit.
- (29) Cheolsu-neun [ai-teul-i kake-e ka-tolok] motu-leul seolteukha-eoss-ta Cheolsu-Top child-Pl-Nom store-to go-Comp all-Acc persuade-Past-Decl 'Cheolsu persuaded all the children to go to the store.'
- \Box The embedded subject is coindexed with Δ in the matrix clause.

(30) Cheolsu-neun [**ai-teul-i** kake-e ka-tolok] Δ_i **motu-leul**_i seolteukha-eoss-ta Cheolsu-Top **child-Pl-Nom** store-to go-Comp **all-Acc** persuade-Past-Decl 'Cheolsu persuaded all the children to go to the store.'

5.2 Reflexive binding

- □ The reflexive anaphor keunyeojasin 'herself' is governed by Condition A (JM Yoon 1989).
- □ In (31), the reflexive is in a matrix VP adjunct and is coindexed with the embedded subject.
- □ This should be illicit.
- (31) % Cheolsu-neun [Yeonghi-kai ka-tolok] [PP keunyeojasin-eui yuik-eul Cheolsu-Top Yeonghi-Nom go-Comp herself-gen benefit-Acc uihae] seolteukha-eoss-ta for persuade-Past-Decl 'Cheolsu for herself'si benefit persuaded Yeonghi to go.'
- \Box Acceptability is due to Δ in the matrix clause satisfying Condition A.
- (32) % Cheolsu-neun [Yeonghi-kai ka-tolok] Δi [PP keunyeojasin-euli Cheolsu-Top Yeonghi-Nom go-Comp herself-Acc yuik-eul uihae] seolteukha-eoss-ta benefit-Acc for persuade-Past-Decl 'Cheolsu for herself'si benefit persuaded Yeonghi, to go.'

6. Formal analysis

- \Box Address the identity of Δ .
- □ PRO is inadequate for reasons discussed in Polinsky and Potsdam 2002.
- Dependence of the pro-based analysis offered by Cormack and Smith 2002.
- □ Show the control-is-movement analysis accounts for the backward control data from Korean.

manna-ass-ta

8

meet-past-decl

6.1 pro-based account

- □ The null element in (3) and (4) is pro.
- □ Korean is a null object language.
- (33) Cheolsu-ka (Yeonghi-leul) Cheouls-nom (Yeonghi-acc) 'Cheolsu met Yeonghi.'

- Delinsky and Potsdam 2002 argue for backward subject control in Tsez:
- (34) Δ_i/*k [kidba:i ziya bišra] yoqsi girl-erg cow-abs feed-inf begin-past
 'The girl began to feed the cow.' (backward control; Polinsky and Potsdam 2002)
- Delinsky and Potsdam 2002:fn.17 provide three arguments against a pro-based account:
 - 1) pro c-commands its antecedent. This is a Condition C violation.
 - 2) *pro* cannot account for the obligatory control relationship.
 - 3) The null element does not alternate with an overt pronoun.
- □ Cormack and Smith 2002 provides solutions to two of these three problems.
- □ pro is generated in a position where it does not c-command Yeonghi.
- This structure is lexically determined.
- (35) $[_{TP} Cheolsu [_{VP} [_{CP} Yeonghi_i store go] [_{V\cup} [_{DP} pro_i] persuaded]]]$
- □ A Meaning Postulate obligatorily coindexes the embedded agent with *pro*.
- (36) $\forall s \forall x \forall y \text{ [PERSUADE.} s.x. y \rightarrow x \text{ is an agent in the event given by } s \text{]}$ Where type x, y = <e>, type s =

6.2 Problems with the pro-based account

- □ pro should be able to alternate with a pronoun.
- □ This is not the case:
- *Cheolsu-neun (keunyeo-leul_i) [Yeonghi-ka_i kake-e ka-tolok] Cheolsu-top she-acc Yeonghi-nom store-to go-comp (keunyeo-leul_i) seolteukha-eoss-ta she-acc persuade-past-decl 'Cheolsu persuaded Yeonghi to go to the store.'
- A distributively quantified DP should be illicit in embedded subject position: no binding configuration.
- □ Korean permits a quantified DP.
- (38) Cheolsu-neun **[kakkak-eui ai-ka** sukjae-leul ha-tolok] Cheoslu-top **each-gen child-nom** homework-acc do-comp seolteukha-eoss-ta persuade-past-decl 'Cheolsu persuaded each child to do the homework.'
- □ The Meaning Postulate incorrectly predicts that *pro* be interpreted with the agent of the passivized embedded clause.

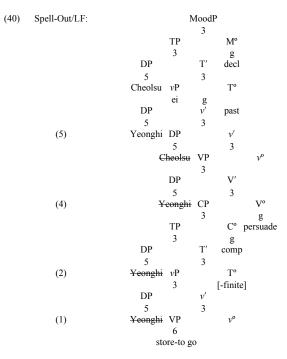
9

- (8b') Cheolsu-neun Suyeong-ka Yeonghi-eke inteophyu pat-tolok Cheolsu-Top Suyeong-Nom Yeonghi-Dat interview Pass-Comp seolteukha-coss-ta persuade-Past-Decl
 'Cheolsu persuaded Suyeong to be interviewed by Yeonghi.'
 '*Cheolsu persuaded Yeonghi, that Suyeong interview her_i.'
- □ Korean licenses both forward and backward control. We are required to posit a lexically marked structure for the backward control (4) and another structure for the forward control.

6.3 Control-is-movement account

- Polinsky and Potsdam 2002 analyze backward control in Tsez with a control-is-movement approach (Hornstein 1999).
- □ A default nominative case (DNC) mechanism is responsible for the case alternation.
- (39) Default Nominative Case (DNC; YJ Kim 1990:180) Default case marking inserts nominative case on a DP that lacks morphological case.
- □ In the backward control structure, the DNC marks the DP *Yeonghi*, in spec, T^o [-tense] at Spell-Out, with nominative case at PF.
- I am assuming a case assignment system, metaphorically (actually adopting Chomsky 2000).
 The forward control derivation:
- (3') Cheolsu-neun Yeonghi-leul [Yeonghi kake-e ka-tolok] seolteukha-eoss-ta Cheolsu-Top Yeonghi-Acc store-to go-Comp persuade-Past-Decl 'Cheolsu persuaded Yeonghi to go to the store.' (ordinary control)

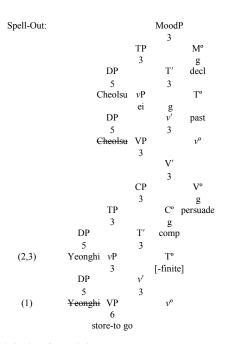
10



- □ The derivation of *Yeonghi* in **forward control**:
 - 1) Merged in embedded spec, v° it 'absorbs' the θ -role of the embedded verb.
 - 2) Raises into embedded spec, T° to delete the uninterpretable ϕ -features of T° .
 - 3) The DNC is not 'activated'.
 - 4) Raises into matrix spec, V^o to 'absorb' the θ -role of *persuade*.
 - 5) Raises into matrix spec, v° to delete the uninterpretable ϕ -features of v°
 - 6) It is assigned accusative case in outer spec, v° .

□ The backward control derivation:

(4') Cheolsu-neun [Yeonghi-ka; kake-e ka-tolok] seolteukha-eoss-ta Cheolsu-Top Yeonghi-Nom store-to go-Comp persuade-Past-Decl 'Cheolsu persuaded Yeonghi to go to the store.' (backward control)



• The derivation of *Yeonghi* in **backward control**:

(41)

- 1) Merged in embedded spec, v^{0} and 'absorbs' the θ -role of go.
- 2) Raises into embedded spec, T° and deletes the uninterpretable φ-features of T°.
- 3) Spell-Out applies and the DNC is activated.
- 4) Yeonghi is marked with nominative at PF.
- Yeonghi is still not assigned case in the phrase marker sent to LF.
- **□** The direct object θ -role of *persuade* is still 'unabsorbed'.
- The uninterpretable ϕ -features of v° are still not deleted.

(42) LF:

Yeonghi raises covertly into the matrix clause:

- 1) Raises into matrix spec, V° to 'absorb' the direct object θ -role of *persuade*.
- 2) Raises into matrix spec, v° to delete the uninterpretable ϕ -features of v° .
- 3) In spec, v° , the DP Yeonghi is assigned accusative case.

7. Conclusions

- Depresented novel empirical evidence for backward object control configuration in Korean.
- Other predicates that show this configuration in Korean are kangyohata 'force', chungkohata 'advise' and jeanhata 'suggest'.
- □ Showed that a pro-based approach was inadequate both empirically and theoretically.
- Extended the backward subject control analysis (Polinsky and Potsdam 2002) to backward object control.

- Both an 'unabsorbed' θ-role and a case unassigned nominal motivate the covert movement. Covert movement in Polinsky and Potsdam was motivated solely by θ-requirements.
- Proposed that the default nominative case strategy is responsible for the case alternation. Tsez did not have this forward/backward control option, nor did it show a case alternation.

8. References

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