

Locality and Clause Size Matter: Semantic Selection of Nominalized Interrogatives

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0 Overview

- Today's talk: interrogatives in semantic selection, with a focus on *nominalized* complement clauses (≈ a chapter in my dissertation; also language-specific versions in Kim to appear a; Kim to appear b)
- Case in point – embedded nominalized interrogatives in Korean, Japanese and Turkish, as to:
 - **Where** these clauses encode the interrogative information; and
 - **How local** they are to matrix predicates that require them (*e.g.*, $\sqrt{\text{ASK}}$)

Core claim: locality and clause size in semantic selection

- What seems to be non-local s(ematic)-selection demonstrates that:
 - 'long-distance' s-selection of interrogatives is subject to phase-based locality (*i.e.*, PIC2); and
 - nominalized clauses encode interrogatives in distinct syntactic domains due to size of clauses.
- S-selection of interrogatives is satisfied by a syntactic dependency rather than a lexical constraint
⇒ supports the view that s-selection involves a bi-directional mutual dependency (Safir 2021)
- Finite nominalized clauses vary in their size, with systematic syntactic consequences
⇒ supports size variations in finiteness (*e.g.*, Adger 2007; Wurmbrand and Lohninger 2023)

Roadmap:

- §1 Empirical and theoretical backgrounds on semantic selection and nominalization
- §2 The role of syntactic locality in semantic selection of interrogatives
- §3 Korean and Japanese: interrogatives in the **DP** domain
- §4 Turkish: interrogatives in the **vP** domain
- §5 A brief summary and theoretical implications

1 Backgrounds: Semantic Selection and Nominalization

- **Selection** – a matrix predicate requires a particular type of syntactic category (“c(ategory)-selection”) and a particular semantic type (“s(ematic)-selection”) in its embedded clause.
- The question: how does **s-selection** behave when the embedded clause is *nominalized*?

1.1 Locality in Semantic Selection

- Properties of s-selection have been considered to be a constraint in the lexicon → information for semantic items is specified pre-syntactically (Grimshaw 1979; Pesetsky 1982; Odijk 1997, *among others*).
- In English, the information of s-selection is encoded in the form of complementizer: both c-selection and s-selection are satisfied **locally**.

- (1) a. John **believed** [_{CP} {[✓]**that**/[✓]**if**} Mary ate the apple].
 b. John **asked** [_{CP} {[✓]**that**/[✓]**if**} Mary ate the apple].

⇒ With this, s-selection is assumed to be either i) independently motivated as a lexical constraint, or ii) trivially satisfied by c-selection. However, there are many attested cases of **non-local** s-selection.

- Korean: s-selection of *declaratives* and *interrogatives* is satisfied non-locally.

(2) *Korean: non-local s-selection in CP*

- a. Suho-nun [_{CP} Mina-ka sakwa-lul mek-ess-{{[✓]**ta**/[✓]**nya**}-ko}] **mit**-ess-ta.
 Suho-TOP [Mina-NOM apple-ACC eat-PAST-{{[✓]**DECL**/[✓]**Q**}-COMP}] **believe**-PAST-DECL
 'Suho believed that Mina ate the apple.'
- b. Suho-nun [_{CP} Mina-ka sakwa-lul mek-ess-{{[✓]**ta**/[✓]**nya**}-ko}] **mwul**-ess-ta.
 Suho-TOP [Mina-NOM apple-ACC eat-PAST-{{[✓]**DECL**/[✓]**Q**}-COMP}] **ask**-PAST-DECL
 'Suho asked if Mina ate the apple.'

- C-selection is satisfied locally with CPs headed by the complementizer *ko*.
- S-selection is non-local – the clause-typing morphemes are embedded under *ko* (Pak 2008; An 2024).¹

- French: s-selection of *indicatives* and *subjunctives* is satisfied non-locally.

(3) *French: non-local s-selection in CP*

- a. Jean **pense** [_{CP} *que* Marie **dort**].
 Jean **thinks** [COMP Marie sleep.**IND**]
 'Jean thinks that Marie sleeps.'
- b. Jean **veut** [_{CP} *que* Marie **dorme**].
 Jean **wants** [COMP Marie sleep.**SUBJ**]
 'Jean wants that Marie sleeps.'

- Both verbs c-select a CP headed by the complementizer *que*, but s-select different semantic moods, which are reflected in the conjugation of embedded verbs → again, s-selection is *non-local*.

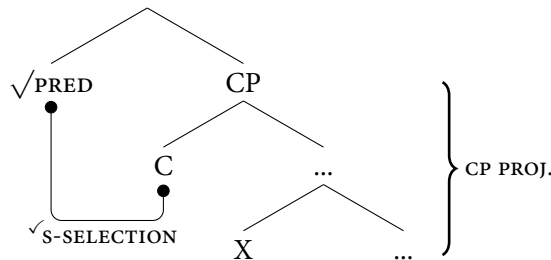
¹If *ta-ko* or *nya-ko* represents a single morpheme, s-selection would be considered local. However, these morphemes may be separated in direct quotation contexts, with the quotation marker *la* intervening:

(i) *Korean*

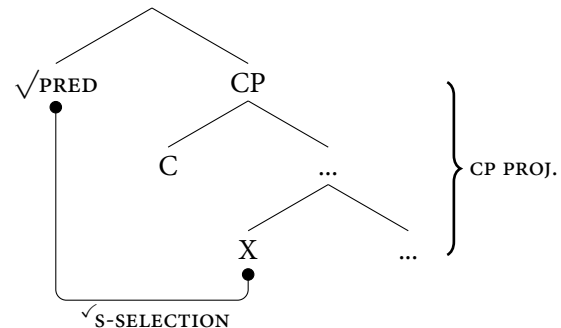
Suho-nun [_{CP} Mina-ka sakwa-lul mek-ess-{{[✓]**ta**/[✓]**nya**}} *la*-ko}] malha-ess-ta.
 Suho-TOP [Mina-NOM apple-ACC eat-PAST-{{[✓]**DECL**/[✓]**Q**}} QUOT-COMP] say-PAST-DECL
 'Mina ate the apple?/Did Mina eat the apple?', said Suho.'

- Grimshaw (2000); Shlonsky (2006): s-selection is local if satisfied within a single Extended Projection.
 - Since s-selection is satisfied within the extended projection of CP, it is considered local.
 - The notion of locality is *relaxed* with lexical specification → s-selection can still be a lexical constraint.

(4) *Local s-selection* (= English (1))



(5) *Non-local s-selection* (= Korean (2); French (3))



- Cases of s-selection across two extended projections: nominalized clauses as a testing ground
- Coming up: a contrast between declaratives and interrogatives in nominalized contexts.
⇒ A possibility: not all types of s-selection are equal in their status.

1.2 Nominalization of Finite Embedded Clauses

- Propositional finite clauses may be nominalized by a D-related element, which is taken to indicate direct complementation of CP to the D head (e.g., Roussou 1991; Borsley and Kornfilt 2000; Pietraszko 2019).
- The matrix verb c-selects a DP *with* a CP: **mixed** extended projections (Borsley and Kornfilt 2000).

- Korean: CP-level embedded clauses may be nominalized by the pronominal element *kes* 'thing'.

(6) *Korean: ✓s-selection of nominalized declaratives*

Suho-nun [_{DP} [_{CP} Mina-ka sakwa-lul mek-ess-**ta**-nun] **kes**]-ul **mit**-ess-ta.
 Suho-TOP [[Mina-NOM apple-ACC eat-PAST-**DECL**-ADN] **NMZ**]-ACC **believe**-PAST-DECL
 'Suho believed that Mina ate the apple.'

- The meaning of *kes* is semantically bleached (e.g., no factivity triggered; Shim and Ihsane 2015).
 - The morpheme *kes* spells out the D head (*kes* spells out the highest nominal projection; M-J Kim 2009), with the adnominal marking *-nun* (≈ a linker between verbal and nominal projections).
- Then, can interrogatives be s-selected in the same configuration? Well, not really...

(7) *Korean: *s-selection of nominalized interrogatives*

*Suho-nun [_{DP} [_{CP} Mina-ka sakwa-lul mek-ess-**nya**-nun] **kes**]-ul **mwul**-ess-ta.
 Suho-TOP [[Mina-NOM apple-ACC eat-PAST-**Q**-ADN] **NMZ**]-ACC **ask**-PAST-DECL
 (intended) 'Suho asked if Mina ate the apple.'

- A surprising contrast: interrogatives cannot be s-selected **across** the DP domain.
- Two possible scenarios: a lexical ban or a **syntactic constraint** – I argue that this is syntactic!

- First of all, it is **not** the case that interrogatives are entirely banned in nominalized clauses!
- Korean: interrogatives must be expressed by the ‘interrogative nominalizer’ *ci* ‘NMZ.Q’.²

(8) *Korean: ✓s-selection of nominalized interrogatives*

Suho-nun [_{DP} Mina-ka sakwa-lul mek-ess-nun **ci**]-lul **mwul**-ess-ta.
 Suho-TOP [Mina-NOM apple-ACC eat-PAST-ADN **NMZ.Q**]-ACC **ask**-PAST-DECL
 ‘Suho asked if Mina ate the apple.’

- The portmanteau morpheme *ci* (nominalizer and interrogatives) satisfies s-selection **locally** → §3
- This morpheme is interrogative only: it is incompatible with declarative-taking predicates.

(9) *Korean*

*Suho-nun [_{DP} Mina-ka sakwa-lul mek-ess-nun **ci**]-lul **mit**-ess-ta.
 Suho-TOP [Mina-NOM apple-ACC eat-PAST-ADN **NMZ.Q**]-ACC **believe**-PAST-DECL
 (intended) ‘Suho believed that Mina ate the apple.’

- Turkish: nominalized clauses headed by *DIK* (realized as *diğ* here due to a phonological reason).

(10) *Turkish: ✓s-selection of nominalized declaratives*

Murat [_{DP} Ayla-nın elma-yı ye-**diğ**-in]-i **san**-dı.
 Murat [Ayla-GEN apple-ACC eat-**NMZ**-POSS.3SG]-ACC **think**-PAST
 ‘Murat thought that Ayla ate the apple.’

- In interrogative contexts, disjunctive morphology is required in the embedded verb.

(11) *Turkish: ✓s-selection of nominalized interrogatives*

Murat [_{DP} Ayla-nın elma-yı yi-**yip** ye-**me**-diğ-in]-i **sor**-du.
 Murat [Ayla-GEN apple-ACC eat-**CONJ** eat-**NEG**-NMZ-POSS.3SG]-ACC **ask**-PAST
 ‘Murat asked if Ayla ate the apple.’

- A-not-A question (e.g., Hagstrom 2006); but this strategy is limited to nominalized contexts.
- With verbal disjunction, s-selection of interrogatives is satisfied **non-locally** → §4

- A quick take on **locality**: different strategies of satisfying s-selection in nominalized interrogatives.

(12) a. *Korean: interrogatives in DP*

[DP ... **D**_[Q] **✓ASK**]
 └──────────┘
 S-SELECTION

b. *Turkish: interrogatives in vP*

[DP ... [_{vP} ... **v**_[Q] ... **D**] **✓ASK**]
 └──────────┘
 S-SELECTION

²Note that I only marked the presence of DP in the example for the sake of simplicity. However, I will demonstrate that *ci*-clauses in Korean do involve CP-level structure in §3.2.

Two outstanding questions:

- Why declaratives and interrogatives exhibit such a discrepancy in nominalized contexts?
⇒ S-selection of interrogatives is special in that it requires syntactic dependencies (§2)
- Why do these languages differ this exact way with s-selection in nominalized clauses?
⇒ Different size of nominalization is responsible for this pattern, with respect to locality (§3, §4)

2 Semantic Selection of Interrogatives as Syntactic Dependencies

- What is special about interrogatives? In this section, I demonstrate that...
 - **Markedness** of interrogatives plays a crucial role in their s-selection, in contrast with declaratives.
 - S-selection of interrogatives abides by the weak Phase Impenetrability Condition (**PIC2**; Chomsky 2001).

2.1 Markedness of Interrogatives

- Interrogatives exhibit more marked behaviors than declaratives. Like English T-to-C head movement:

- (13) a. Mary will go to Ithaca.
b. **Will** Mary __ go to Ithaca?

- Turkish: *polar*-interrogatives require a designated clause-typing particle.

- (14) *Turkish: only interrogatives accompany question particle*

- a. Murat [_{CP} Ayla elma-yı ye-di diye] **san**-dı.
Murat [Ayla apple-ACC eat-PAST COMP] **think**-PAST
'Murat thought that Ayla ate the apple.'
- b. Murat [_{CP} Ayla elma-yı ye-di **mi** diye] **sor**-du.
Murat [Ayla apple-ACC eat-PAST **Q** COMP] **ask**-PAST
'Murat asked if Ayla ate the apple.'

→ Declaratives do not require a syntactic movement or a designated morphology. They are the most unmarked, 'default' clause type (Bosque 2012; Farkas 2024), as opposed to interrogatives.

- (15) *Morphosyntactic markedness of interrogatives*

Interrogatives (but not declaratives) require a particular licensing condition.

- Lasnik and Saito (1984): interrogatives are licensed via the COMP-indexing mechanism, which involves a Spec-Head agreement dependency with the [Q]-feature (also see Han and Romero 2004).
- Following the elaborated periphery of the CP domain (e.g., Rizzi 1997; Saito 2012; Satik 2024), I assume the following clause-typing operation **only for interrogatives**:

- (16) *Clause-typing for polar-interrogatives* (à la COMP-indexing mechanism)

[_{CP} [_{ForceP} operator_[iQ:val] [_{TP} ...] Force_[uQ:val]] C]



CLAUSE-TYPING

- In Korean, both clauses are overtly marked by the respective morphemes (*i.e.*, *ta* for DECL; *nya* for Q). I assume that the morpheme *ta* spells out the Force head in the absence of relevant clause-typing feature.

(17) *Exponents of clausal periphery in complementizer clause (to be updated)*

	Force	Force _[Q]	C
Korean	<i>ta</i>	<i>nya</i>	<i>ko</i>
Turkish	∅	<i>mI</i>	<i>diye</i>

2.2 Semantic Selection of Interrogatives as Syntactic Dependencies

- Recall: in Korean, nominalized clauses block only s-selection of interrogatives.

(18) *Korean: contrast between declaratives and interrogatives in DP*

- Suho-nun [_{DP} [_{CP} Mina-ka sakwa-lul mek-ess-**ta**-nun] **kes**]-ul **mit**-ess-ta.
Suho-TOP [[Mina-NOM apple-ACC eat-PAST-**DECL**-ADN] **NMZ**]-ACC **believe**-PAST-DECL
'Suho believed that Mina ate the apple.'
- *Suho-nun [_{DP} [_{CP} Mina-ka sakwa-lul mek-ess-**nya**-nun] **kes**]-ul **mwul**-ess-ta.
Suho-TOP [[Mina-NOM apple-ACC eat-PAST-**Q**-ADN] **NMZ**]-ACC **ask**-PAST-DECL
(intended) 'Suho asked if Mina ate the apple.'

- With the notion of locality defined by extended projection (Grimshaw 2000), (18b) would be considered ungrammatical due to the intervening **nominal** extended projection.

(19) *Ban on interrogatives in nominalized contexts* (if s-selection is a lexical constraint)
Interrogatives cannot be s-selected across two extended projections.

- However, such a *lexical* assumption is challenged by two questions:
 - First, why declaratives are able to be s-selected across the DP layer?
 - Second, how can the observation with nominalized interrogatives (*i.e.*, *ci*-clause) be accounted for?

(20) *Korean*

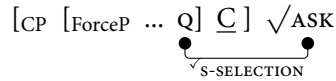
Suho-nun [_{DP} Mina-ka sakwa-lul mek-ess-nun **ci**]-lul **mwul**-ess-ta.
Suho-TOP [[Mina-NOM apple-ACC eat-PAST-ADN **NMZ.Q**]-ACC **ask**-PAST-DECL
'Suho asked if Mina ate the apple.'

- My claim: the failure of s-selection is due to the markedness of interrogatives → s-selection of interrogatives (but not declaratives) requires a type of cross-clausal syntactic dependencies.
 - In nominalized clauses, s-selection crosses **two** phase boundaries (CP and DP).

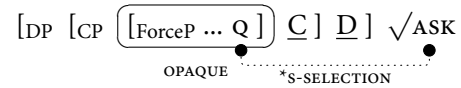
(21) *Ban on interrogatives in nominalized contexts* (if s-selection is a syntactic constraint)
Interrogatives cannot be s-selected across two phase boundaries.

- The weak Phase Impenetrability Condition (PIC2; Chomsky 2001): the embedded ForceP is spelled out and becomes opaque only when an additional phase boundary (e.g., DP) intervenes → s-selection fails!

(22) a. $\checkmark$ S-selecting interrogative CP (= (2b))



b. *S-selecting interrogative DP (= (18b))



- Declaratives, on the other hand, are not subject to PIC2: the default clause type with no syntactic dependency!

3 Interrogatives in DP: Korean and Japanese

- Now adding Japanese to the discussion → s-selection of interrogatives is subject to PIC2!

3.1 Failure of Semantic Selection in Nominalized Clauses

- Japanese: with s-selection in CP, interrogatives is non-local; declaratives are default (no overt morphology).

(23) *Japanese: only interrogatives accompany question particle*

- a. Haru-wa [CP Aki-ga ringo-wo tabe-ta-to] **sinji**-ta.
 Haru-TOP [Aki-NOM apple-ACC eat-PAST-COMP] **believe**-PAST
 'Haru believed that Aki ate the apple.'
- b. Haru-wa [CP Aki-ga ringo-wo tabe-ta-**ka**-to] **tazune**-ta.
 Haru-TOP [Aki-NOM apple-ACC eat-PAST-**Q**-COMP] **ask**-PAST
 'Haru asked if Aki ate the apple.'

⇒ The Force_[Q] head spells out the question particle *ka*, while the Force head is null (≈ Turkish).

(24) *Exponents of clausal periphery in complementizer clause*

	Force	Force _[Q]	C
Korean	<i>ta</i>	<i>nya</i>	<i>ko</i>
Japanese	∅	<i>ka</i>	<i>to</i>
Turkish	∅	<i>mI</i>	<i>diye</i>

- Also Japanese: nominalization by the pronominal *koto* (the D head). Similar to Korean, interrogatives are special – they cannot be s-selected **across** the DP domain.

(25) *Japanese: contrast between declaratives and interrogatives in DP*

- a. Haru-wa [DP [CP Aki-ga ringo-wo tabe-ta] **koto**]-wo **sinji**-ta.
 Haru-TOP [[Aki-NOM apple-ACC eat-PAST] **NMZ**]-ACC **believe**-PAST
 'Haru believed that Aki ate the apple.'
- b. *Haru-wa [DP [CP Aki-ga ringo-wo tabe-ta-**ka**] **koto**]-wo **tazune**-ta.
 Haru-TOP [[AKi-NOM apple-ACC eat-PAST-**Q**] **NMZ**]-ACC **ask**-PAST
 (intended) 'Haru asked if Aki ate the apple.'

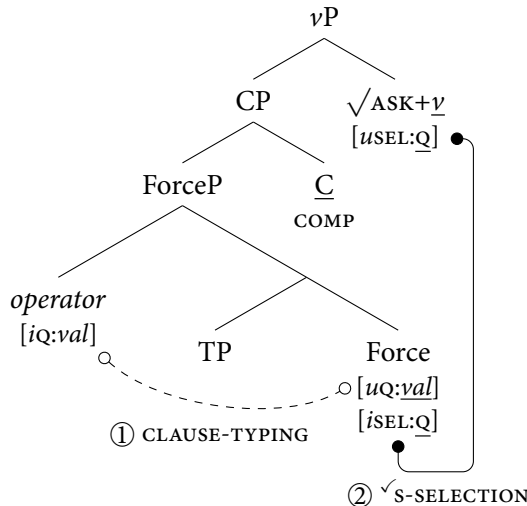
- My claim: s-selection of interrogatives is subject to PIC2, because it requires the operation Agree.

(26) *Valuation of **selection** feature in semantic selection*

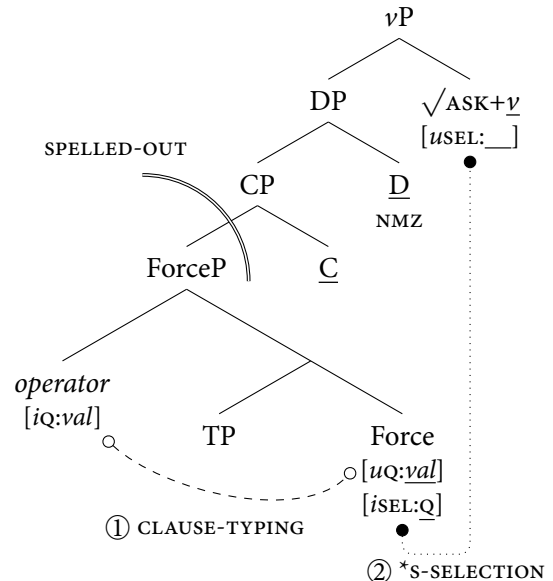
Interrogatives are s-selected by valuing the [SEL]-feature in the matrix predicate.

- Two-step requirement for s-selection of interrogatives:
 - ① The clause-typing values the [Q]-feature in the Force head and values the [SEL]-feature as Q.³
 - The (clause-typing) [Q]-feature in the Force head comes with a selection feature (*modulo* markedness).
 - ② The now-valued [SEL]-feature agrees with the [SEL]-probe in the matrix predicate, satisfying s-selection.
 - The clause-typing operation for interrogatives **feeds** s-selection, by providing a valued goal for Agree.
- This agreement dependency fails when two phase boundaries intervene with nominalization → **PIC2!**

(27) a. *Selecting interrogative CP (= (22a))*



b. *Selecting interrogative DP → fails (= (22b))*



- Prediction: interrogatives may be embedded under DP in **non-s-selected** positions – borne out in (28a).
 - Korean *nya-kes* sequence is blocked only in s-selection contexts (for Japanese, see Appendix A).

(28) *Korean*

- a. [DP [CP Mina-ka sakwa-lul mek-ess-**nya**-nun] **kes**]-i cwungyoha-ta.
 [[Mina-NOM apple-ACC eat-PAST-**Q**-ADN] **NMZ**]-NOM important-DECL
 'Whether Mina ate the apple or not is important.'
- b. *Suho-nun [DP [CP Mina-ka sakwa-lul mek-ess-**nya**-nun] **kes**]-ul **mwul**-ess-ta.
 Suho-TOP [[Mina-NOM apple-ACC eat-PAST-**Q**-ADN] **NMZ**]-ACC **ask**-PAST-DECL
 (intended) 'Suho asked if Mina ate the apple.'

³This assumption comes with the definition of features in Pesetsky and Torrego (2007): interpretable features may enter syntactic derivation *unvalued*, which function as a goal when they get *valued*. I take the interpretable [SEL]-feature to instantiate such a case.

3.2 Interrogative Nominalizer as Repair Strategy by Syntactic Bundling

- Recall: in Korean, what I call ‘interrogative nominalizer’ *ci* satisfies s-selection *locally*.

(29) *Korean*

Suho-nun [_{DP} Mina-ka sakwa-lul mek-ess-nun **ci**]-lul **mwul**-ess-ta.
 Suho-TOP [Mina-NOM apple-ACC eat-PAST-ADN **NMZ.Q**]-ACC **ask**-PAST-DECL
 ‘Suho asked if Mina ate the apple.’

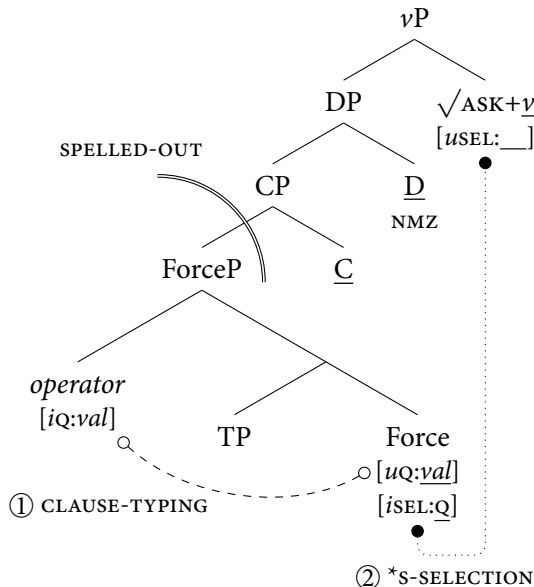
- A similar observation in Japanese, with the morpheme *ka* ‘NMZ.Q’ (more on this ‘syncretic’ pattern soon).

(30) *Japanese*

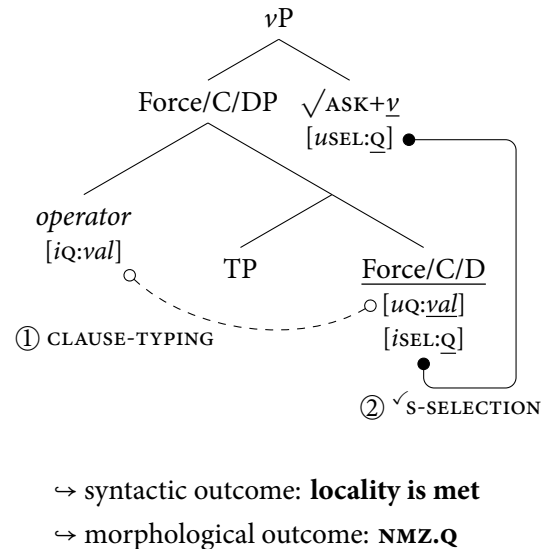
Haru-wa [_{DP} Aki-ga ringo-wo tabe-ta-**ka**]-wo **tazune**-ta.
 Haru-TOP [Aki-NOM apple-ACC eat-PAST-**NMZ.Q**]-ACC **ask**-PAST
 ‘Haru asked if Aki ate the apple.’

- I argue that such an ‘interrogative nominalizer’ emerges as a reflex of **syntactic bundling**.
 - When s-selection of interrogatives is to fail due to the locality reason, ForceP/CP/DP are bundled together as a **repair strategy** to salvage the derivation → bundling collapses two phase boundaries.
 - The bundled Force/C/D head spells out the *portmanteau* morpheme NMZ.Q and **locally** satisfies s-selection.

(31) a. *Selecting interrogative DP → fails*



b. *Repair strategy by bundling (= (29); (30))*



- This bundling takes place in syntax (*à la* Hsu 2021) but not in the lexicon (*pace* Giorgi and Pianesi 1996):

(32) *Bundling only in nominalized and interrogative context → it is syntactically triggered!*

	CP	DP (nominalized)
declaratives	✓no dependency required	✓no dependency required
interrogatives	✓locality met for [SEL]	locality <i>not</i> met → bundling

- Back to Japanese: the Force_[Q] head and the bundled Force_[Q]/C/D head are syncretic – *ka*.
 - Saito (2012): the Force_[Q] head is nominal if it is the most peripheral (also Yoshida 2019; Tomioka 2020).
 - Me: the Force_[Q] head is nominal if it is bundled with the D head due to the locality reason.
 - A support: in Korean, these two types of heads are spelled out by distinct morphemes, *nya* and *ci*.
- The contrast in Korean and Japanese → a case of **the morphological blocking effect**.
 - Korean: the presence of a more specific form (*ci*) blocks the default form (*nya*).
 - Japanese: the default form (*ka*) is retained due to the absence of a more specific form.

(33) *Korean*

- a. Force_[Q]/C/D $\Leftrightarrow$ *ci* (**nya*)
 b. Force_[Q] $\Leftrightarrow$ *nya*

(34) *Japanese*

- a. Force_[Q]/C/D $\Leftrightarrow$ *ka*
 b. Force_[Q] $\Leftrightarrow$ *ka*

4 Interrogatives in ν P: Turkish

- Recall: in Turkish *DIK*-clauses, verbal disjunction is required for s-selection of interrogatives.

(35) *Turkish: non-local s-selection of interrogatives in DP*

- a. Murat [_{DP} Ayla-nın elma-yı ye-diğ-in]-i **san**-dı.
 Murat [Ayla-GEN apple-ACC eat-NMZ-POSS.3SG]-ACC **think**-PAST
 ‘Murat thought that Ayla ate the apple.’
- b. Murat [_{DP} Ayla-nın elma-yı yi-yip ye-me-diğ-in]-i **sor**-du.
 Murat [Ayla-GEN apple-ACC eat-CONJ eat-NEG-NMZ-POSS.3SG]-ACC **ask**-PAST
 ‘Murat asked if Ayla ate the apple.’

- In this section, I demonstrate that:
 - Turkish *DIK*-clauses represent TP-level nominalization → different size of clause (TP + D).
 - Verbal disjunction in nominalized clauses reflects the **absence** of CP-level structure.

4.1 TP-level Nominalization in Turkish

- (i) The presence of *DIK* requires nominal properties → *DIK*-clauses $\approx$ possessive DPs.

(36) *Turkish*

Murat [_{DP} Ayla-nın kitab-ın]-ı oku-du.
 Murat [Ayla-GEN book-POSS.3SG]-ACC read-PAST
 ‘Murat read Ayla’s book.’

- The D head is present: genitive subject; possessive φ -agreement; and case-marking.

- (ii) *DIK*-clauses refers to a non-future event: for the future tense, the nominalizer *AcAK* is used.

(37) *Turkish*

Murat [_{DP} Ayla-nın elma-yı yi-yeceğ-in]-i san-dı.
 Murat [Ayla-GEN apple-ACC eat-NMZ.FUT-POSS.3SG]-ACC think-PAST
 ‘Murat thought that Ayla would eat the apple.’

- (38) *Turkish*

- (39) *Turkish*

- (40) *Exponents of clausal periphery in nominalized clauses*

(41) *Turkish*

- 11

4.2 Disjunction as Repair Strategy for Semantic Selection

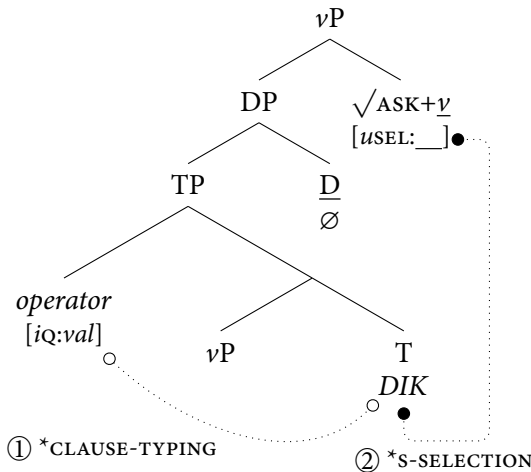
- The absence of CP in Turkish finite nominalized clauses has two syntactic consequences:
 - First, Turkish *DIK*-clauses are known to be transparent for cross-clausal dependencies (e.g., Aygen 2002).
 - Second, being a *finite* clause implies a possibility to encode interrogatives (and to be selected by $\sqrt{\text{ASK}}$).
 - The [Q]-feature for ‘clause-typing’ must be located somewhere in the clausal spine → **in νP !**
- The disjunctive morphology is a morphological reflex of clause-typing in the absence of CP/ForceP.

- (42) a. $\text{Force}_{[uQ:_]} \xrightarrow{\text{CLAUSE-TYPING}} \text{Force}_{[uQ:val]} \Leftrightarrow mI$ (CP-level clause)
- b. $\nu_{[uQ:_]} \xrightarrow{\text{CLAUSE-TYPING}} \nu_{[uQ:val]} \Leftrightarrow V\text{-CONJ } V\text{-NEG}$ (TP-level nominalized clause)

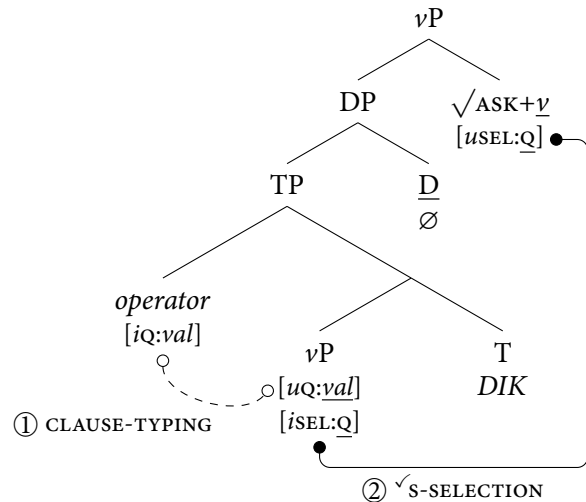
- (42a): when ForceP is present, s-selection is satisfied by the clause-typing in ForceP.
- (42b): when ForceP is absent, s-selection is satisfied by verbal disjunction in νP .

- The disjunction strategy in νP is a **repair strategy** to satisfy s-selection in **TP-level clauses**.
 - The *polar*-operator merges in the highest *verbal* projection (Spec,TP), but the clause-typing is not possible by the Spec-Head agreement dependency, and thus s-selection is to fail as in (43a).
 - Clause-typing in νP -level: this operator values the [Q]-feature and the [SEL]-feature in the ν head. (i.e., νP is the only and the closest syntactic domain that is equipped with the ‘disjunction’ strategy)
 - The ν head agrees with the [SEL]-probe in the matrix domain and satisfies s-selection in (43b).

- (43) a. No ForceP → s-selection fails



- b. Repair strategy by verbal disjunction (= (35b))



- Crucial point: verbal disjunction is **not** a lexical specification → it is **not** attested in CP-level clauses.

- (44) Disjunction only in nominalized and interrogative context → **it is syntactically triggered!**

	CP	DP (nominalized)
declaratives	✓no dependency required	✓no dependency required
interrogatives	✓ForceP present	ForceP absent → disjunction

⇒ Strategies in **nominalized interrogatives** stem from syntactic desiderata:

- Korean/Japanese: *bundling* is syntactically triggered in the periphery to derive the required locality.
- Turkish: *disjunction* is syntactically triggered in ν P to take over the role of ForceP.
- More on locality: disjunction seems to exhibit a Last Resort nature. Then, the *closest* syntactic domain is expected to appear in disjunction ($\approx$ clause-typing and s-selection as local as possible).
- Case in point: certain TAM morphology may appear in *DIK*-clauses with the auxiliary verb *ol* (see Göksel 2001; Sağ 2013; Fenger 2020; Kim 2024 for discussion on auxiliary verb periphrasis in Turkish).

(45) *Turkish*

Murat [_{DP} Ayla-nın Ankara-ya gid-iyor ol-duğ-un]-u san-dı.
 Murat [Ayla-GEN Ankara-DAT go-**PROG** **AUX**-NMZ-POSS.3SG]-ACC think-PAST
 (roughly) ‘Murat thought that Ayla was going to Ankara.’

- Prediction: in interrogative contexts, verbal disjunction must appear in the *higher* auxiliary verb, but never in the *lower* lexical verb – borne out by the contrast in (46).

(46) *Turkish*

- a. Murat [_{DP} Ayla-nın gid-iyor ol-**up** ol-**ma**-dığ-ın]-ı sor-du.
 Murat [Ayla-GEN go-PROG **AUX-CONJ** **AUX-NEG**-NMZ-POSS.3SG]-ACC ask-PAST
 ‘Murat asked if Ayla was going.’
- b. *Murat [_{DP} Ayla-nın gid-**ip** git-**m**-iyor ol-duğ-un]-u sor-du.
 Murat [Ayla-GEN go-**CONJ** go-**NEG**-PROG **AUX**-NMZ-POSS.3SG]-ACC ask-PAST
 (intended) ‘Murat asked if Ayla was going.’

5 Summary and Implications

In this talk, I argued that:

- S-selection of interrogatives involves an agreement dependency → it is subject to PIC2.
 - Differences in size of nominalized clauses result in different strategies of satisfying s-selection.
 - CP-level nominalization: bundling of peripheral heads collapses the phase boundaries → NMZ.Q
 - TP-level nominalization: the ν head satisfies s-selection as a Last Resort → verbal disjunction
- ⇒ **Locality** and **clause size** systematically interact with properties of s-selection!

- Two theoretical implications:
 - (i) With respect to **locality**, certain types of s-selection may as well be motivated in syntax.
 - (ii) With respect to **clause size**, my claim updates the typology of variations in finiteness.

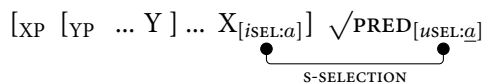
5.1 Locality and Semantic Selection Revisited

- The status of s-selection: a lexical constraint as a uni-directional requirement by matrix predicates. But:
 - It is strictly clause-bound (s-selection never skips an intermediate clause).
 - Its locality was relaxed based on the notion of extended projection (Grimshaw 2000; Shlonsky 2006).

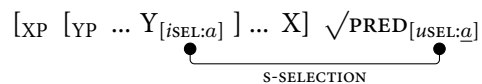
⇒ Observations from nominalized clauses illustrated that...

- Not every s-selection is equal: the contrasting observation between declaratives and interrogatives.
- Syntactic locality plays a role: s-selection is blocked across two phase boundaries (*à la* PIC2).
- More recently...
 - Grimshaw (2018): s-selection requires **compatibility** between matrix predicates and embedded Force.
 - Safir (2021): s-selection of actual clauses in Lubukusu is (semantically) **bi-directional**.
 - They both suggest that s-selection needs to be more elaborated as a ‘mutual’ type of dependencies.
- My claim nicely captures their insight with locality of s-selection: the operation Agree.

(47) *Local s-selection*



(48) *Non-local s-selection*



- Different locality in s-selection depends on **which syntactic head** encodes relevant semantic information, which is subject to cross-linguistic variations (*e.g.*, the C head in English; the ν head in French).
- At the same time, s-selection must not be **too non-local** → Agree accounts for i) its clause-bound nature; and more precisely, ii) its failure across two phase boundaries.
- S-selection may require a mutual dependency between a matrix predicate and the embedded clause.
⇒ Certain types of s-selection is best understood as syntactic dependencies!

5.2 Variations of Finiteness in Nominalized Clauses

- Traditionally, finiteness was tied to the property of CP: *e.g.*, finite CP *vs.* non-finite TP in English.
- Adger (2007); Wurmbrand and Lohninger (2023): **finiteness** comes in a variety of size, *e.g.*, CP; TP; and ν P (also see Todorović and Wurmbrand 2020; Despić to appear for similar claims with a focus on Slavic).
- Nominalized clauses in Korean, Japanese and Turkish show a parallel variation regarding finiteness.
 - Finite nominalized clauses vary in their relative size (Kornfilt and Whitman 2011).
 - Domain of nominalization differs, with distinct strategies (Alexiadou 2020; Iordăchioaia 2020).

- In particular, such differences in size of nominalization had **syntactic** consequences, with two caveats:
 - Phase-based locality interacts with differences in size.
(e.g., Korean and Japanese opt for syntactic bundling to derive a local configuration)
 - The locus of encoding semantic type of clauses varies.
(e.g., Turkish must encode interrogatives in ν P due to the absence of CP/ForceP)

⇒ My claim updates the typology of finiteness, incorporating observations from nominalized clauses.

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Appendix A: More on Nominalized Periphery

- Korean: the interrogative particle *nya* may be embedded under the D head *kes* in non-s-selected positions.
→ I attributed the contrast between (49a) and (49b) to s-selection (as agreement dependencies).

(49) *Korean*

- a. [DP [CP Mina-ka sakwa-lul mek-ess-**nya**-nun] **kes**]-i cwungyoha-ta.
[[Mina-NOM apple-ACC eat-PAST-Q-ADN] **NMZ**]-NOM important-DECL
'Whether Mina ate the apple or not is important.'
- b. *Suho-nun [DP [CP Mina-ka sakwa-lul mek-ess-**nya**-nun] **kes**]-ul **mwul**-ess-ta.
Suho-TOP [[Mina-NOM apple-ACC eat-PAST-Q-ADN] **NMZ**]-ACC **ask**-PAST-DECL
(intended) 'Suho asked if Mina ate the apple.'

- Japanese: the interrogative particle *ka* **cannot** be embedded under the D head *koto* regardless of s-selection.

(50) *Japanese*

- a. *[DP [CP Aki-ga ringo-wo tabe-ta-**ka**] **koto**]-ga zyuuyoo-da.
[[Aki-NOM apple-ACC eat-PAST-Q] **NMZ**]-NOM important-COP
(intended) 'Whether Aki ate the apple or not is important.'
- b. *Haru-wa [DP [CP Aki-ga ringo-wo tabe-ta-**ka**] **koto**]-wo **tazune**-ta.
Haru-TOP [[AKi-NOM apple-ACC eat-PAST-Q] **NMZ**]-ACC **ask**-PAST
(intended) 'Haru asked if Aki ate the apple.'

⇒ I demonstrate that the ungrammaticality of (50a) stems from an additional factor in Japanese nominalization, while (50b) is subsumed under the failure of s-selection (*via* PIC2).

- Back to nominalization: there are various strategies of nominalizing a XP-level constituent.
 - XP + D: XP directly combines with the D head to nominalize a propositional argument.
(**complementation approach**: Roussou 1991; Borsley and Kornfilt 2000; Pietraszko 2019)
 - XP + *n*: XP first combines with a nominalizer *n*, which in turn may accompany the D head.
(**categorization approach**: Hartman 2012; Panagiotidis 2015)
- Nasu et al. (2024): Japanese nominalized clauses accompany the *n* head, whose semantic content varies.
→ Nominalized interrogatives in Japanese (*ka*-clauses) instantiates a CP + *n* + D structure.
 - semantically **vacuous** *n*: purely nominalizing a clausal complement; requires the D head.
 - semantically **contentful** *n*: bearing a covert content noun; does not require the D head.
 - Crucially, they assume that **s-selected** interrogative nominalized clauses appears with the **vacuous** *n* head + DP (*via* contextual alloosemy of *n* in Wood 2023; *c.f.*, contentful nominalization in Moulton 2015)
- Their supporting argument for the presence of *n* head: patterns of modification.
 - If Japanese nominalized clauses involve the intervening *n* head, how about Korean?
 - The two languages exhibit distinct modification patterns, which suggest that Korean **lacks** the *n* head.

(51) *Japanese*
[DP [_{nP} [CP ... C] *n*] D]

(52) *Korean*
[DP [CP ... C] D]

- First, adjectival modification of interrogative nominalized clauses is possible **only in Japanese**.

(53) *Japanese: adjectival modification possible with ka-clause* (modified from Nasu et al. 2024)
kaigi-de **ano** zyuuyoo-**na** [dooyatte kakaku-wo osaeru ka]-ga hanasiaw-are-ta.
meeting-in **that** important-**ADJ** [how price-ACC control Q]-NOM discuss-PASS-PAST
'In the meeting, that important, 'how to control the price', was discussed.'

(54) *Korean: adjectival modification not possible with ci-clause*
*hoyuy-eysey **ku** cwungyoha-**n** [ettehkey kakyek-ul eknurul ci]-ka nonuy-toy-ess-ta.
meeting-in **that** important-**ADJ** [how price-ACC control Q]-NOM discuss-PASS-PAST-DECL
(intended) 'In the meeting, that important, 'how to control the price', was discussed.'

- Nasu et al. (2024) attribute the possibility of adjectival modification in Japanese to the presence of *nP*.
- If so, the contrast between (53) and (54) suggests that *ci*-clauses in Korean **lack the *nP* projection**.

- Second, with non-verbal predicates, the adjectival marking is retained in NMZ.Q-clauses **only in Korean**.

(55) *Japanese: adjectival marking in RC is replaced with copular in ka-clauses* (Nasu et al. 2024)
a. [_{RC} seiseki-ga yuusyyuu-{[✓]**na**/***da**}] gakusei
[grade-NOM excellent-{[✓]**ADJ**/***COP**}] student
'Students with excellent grades'
b. Haru-wa [_{DP} dare-ga yuusyyuu-{***na**/[✓]**da**} ka]-wo sit-te.iru.
Haru-TOP [who-NOM excellent-{***ADJ**/[✓]**COP**} Q]-ACC know-IMPV
'Haru knows who is excellent.'

- As nominalized clauses include the *n* head (but not relative clauses), this contrast is expected by structural differences (*i.e.*, ADJ-marking cannot be present with the *n* head).
- As the *n* head is absent, the contrast between RCs and nominalized clauses does not hold in Korean.

(56) *Korean: adjectival marking in RC is retained in ci-clauses*
a. [_{RC} sengcek-i usuha-{[✓]**n**/***ta**}] haksayng
[grade-NOM excellent-{[✓]**ADJ**/***COP**}] student
'Students with excellent grades'
b. Suho-nun [_{DP} nwu-ka usuha-{[✓]**n**/***ta**} ci]-lul al-ko.iss-ta.
Suho-TOP [who-NOM excellent-{[✓]**ADJ**/***COP**} Q]-ACC know-IMPV-DECL
'Suho knows who is excellent.'

- These contrasts are expected if only Japanese projects *nP* in nominalization.
- Support: in Korean, an adnominal marking must be present in nominalized clauses, which Japanese lacks.
 - I attribute this contrast to the *n* head: without the *n* head, CP and D must be mitigated by the adnominal marking due to language-specific properties (possibly agglutinateness).
 - My claim aligns with the view that adnominal markings occupy the C head in Korean (Bondarenko 2022).

- Also, given that the D head has the phasal status in both cases, the claim regarding s-selection and syntactic bundling remains intact: s-selection is blocked only when DP and ForceP are **separate** projections.

(57) *Japanese*

a. *No bundling: s-selection fails*

[DP [_{nP} [CP [ForceP ... Force] C] n] D] √ASK

b. *Bundling: s-selection succeeds*

[Force/C/n/DP ... Force/C/n/D] √ASK

(58) *Korean*

a. *No bundling: s-selection fails*

[DP [CP [ForceP ... Force] C] D] √ASK

b. *Bundling: s-selection succeeds*

[Force/C/D ... Force/C/D] √ASK

- Upshot: the adnominal marking *-nun* appears **before** *ci* in Korean: mitigating T and Force/C/D.

(59) *Korean*

Suho-nun [_{DP} Mina-ka sakwa-lul mek-ess-**nun** ci]-lul mwul-ess-ta.
 Suho-TOP [Mina-NOM apple-ACC eat-PAST-**ADN** NMZ.Q]-ACC ask-PAST-DECL
 ‘Suho asked if Mina ate the apple.’

- Going back the ungrammaticality of *ka-koto* sequence in Japanese: Nasu et al. (2024) assume a semantically contentful *n* in non-s-selected positions (with covert lexical items such as √ISSUE). Two possibilities:
 - A contentful *n* head, by definition, does not require the D head, hence the ungrammaticality of *koto*.
 - Since the *n* head already bears some lexical information, it is not compatible with interrogatives.
- Again, this is perks of interrogatives: both languages allow nominalized declaratives as a sentential subject.

(60) *Korean*

[DP [CP Mina-ka ka-ass-**ta**-nun] **kes**]-i cwungyoha-ta.
 [[Mina-NOM go-PAST-**DECL**-ADN] **NMZ**]-NOM important-COP
 ‘It is important that Mina went.’

(61) *Japanese*

[DP [CP Aki-ga it-ta] **koto**]-ga zyuuyoo-da.
 [[Aki-NOM go-PAST] **NMZ**]-NOM important-COP
 ‘It is important that Aki went.’