Semantic Selection of Interrogatives as Syntactic Dependencies

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Overview This study revisits s(emantic)-selection of interrogative clauses from a syntactic point of view. Behaviors of embedded clauses in Korean and Japanese indicate that s-selection of interrogatives abides by locality and phasehood in ways probe-goal dependencies do. We argue that such s-selection involves the operation Agree initiated by the [*u*Q]-feature in a matrix probe. In particular, we demonstrate that s-selection of interrogatives fails if an additional phase boundary is introduced by nominalization, but that such failure of s-selection is overcome if a local configuration is created in syntax by bundling of peripheral heads.

Non-Local Selection of Interrogative Clauses In Korean and Japanese, s-selection of interrogatives is non-local in complementizer clauses. In (1-2), the verbs 'to ask' require their complement *ko*/*to*-clauses to be interrogatives, and this requirement is satisfied by the non-local morphemes, *nya* and *ka* respectively.

(1) Suho-nun [$_{CP}$ Mina-ka sakwa-lul mek-ess-**nya**-ko] **mul**-ess-ta.
Suho-TOP [Mina-NOM apple-ACC eat-PAST-**Q**-COMP] **ask**-PAST-DECL
'Suho asked if Mina ate the apple.' (Korean)

(2) 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.' (Japanese)

If the CP-level structure is nominalized with a pronominal element (*kes* in Korean; *koto* in Japanese), however, s-selection of interrogatives is disallowed across the DP layer, resulting in ungrammaticality as in (3-4).

(3) *Suho-nun [$_{DP}$ [$_{CP}$ Mina-ka sakwa-lul mek-ess-**nya**-nun] **kes**]-ul **mul**-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.' (Korean)

(4) *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.' (Japanese)

The contrast between (1-2) and (3-4) suggests that the additional DP layer blocks s-selection of interrogatives. We take this observation to indicate that s-selection of interrogative clauses involves an agreement dependency. If a matrix predicate s-selects an interrogative clause, it bears [*u*Q:_], and the Force head in the embedded clause is equipped with [*i*Q:*val*]. The s-selection requires that the uninterpretable [Q]-feature be valued for the derivation to be interpretable as interrogatives at the LF-interface. However, this dependency crosses two phase boundaries (*i.e.*, DP and CP) in nominalized contexts, which renders the embedded ForceP domain opaque when the matrix predicate initiates probing (due to the cyclic nature of Spell-Out; Chomsky 2001). The [*u*Q]-feature in the matrix probe thus fails to establish an agreement dependenty into the nominalized clause. Observe the contrast between (5a) and (5b) illustrated for Korean (the same applies to Japanese).

(5) a. ✓*Selecting interrogative CP in Korean* =(1)

$[_{\underline{CP}}\ [_{ForceP}\ \ldots\ \boldsymbol{nya}_{[iQ:val]}]\ ko]\ \boldsymbol{mul}_{[uQ:\_]}$

PHASE — S-SELECTION: AGREE

b. **Selecting interrogative DP in Korean* =(3)

$[_{\underline{DP}}\ [_{\underline{CP}}\ \boxed{[_{ForceP}\ \ldots\ \boldsymbol{nya}_{[iQ:val]}]}\ nun]\ kes]\ \boldsymbol{mul}_{[uQ:\_]}$

PHASE PHASE — OPAQUE — *S-SELECTION: AGREE

Bundling of Peripheral Heads in Nominalized Clauses If s-selection is a lexical constraint and has no status in syntax as previously assumed, the observed contrast must accompany an independent assumption that s-selection of interrogatives is disallowed in nominalized contexts. However, nominalized interrogative clauses are attested in both languages if the nominalizer itself carries the interrogative interpretation. Observe in (6) that a different nominalizer, *ci*, licenses the embedded interrogative interpretation in Korean.

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

The *ci* morpheme serves as a nominalizer, indicated by the accusative case marking; the same morpheme is also responsible for the interrogative interpretation, as *ci*-clauses are incompatible with declarative-taking verbs. We attribute this multi-functionality of *ci* to syntactic bundling of the Force, C and D head (*à la* Hsu 2021). For the purpose of s-selection, this bundling operation overcomes the failure of Agree observed in (5b) by creating a local configuration in syntax. A similar observation holds in Japanese. See (7).

(7) 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.' (Japanese)

In (7), the interrogative nominalizer *ka* is homophonous with the interrogative Force head in complementizer clauses (see (2)). Saito (2012) suggests that the interrogative Force head is nominal only if it demarcates the clausal periphery. In the present context, this claim means that the *ka* morpheme in (7) spells out the bundled Force, C and D head. In (8), the [*u*Q]-feature is now *locally* valued by the [*i*Q]-feature in both languages.

(8) a. ✓*Selecting interrogative DP in Korean* =(6) b. ✓*Selecting interrogative DP in Japanese* =(7)

The difference between the two languages then reduces to a matter of morphological realization. In Korean (9), the Force$_{[iQ:val]}$ head (*nya*) and the bundled Force$_{[iQ:val]}$ and D head (*ci*) are morphologically distinct; in Japanese (10), these two types of heads are both spelled out as *ka*, exhibiting a syncretism. This claim thus provides a solution to the puzzle of *nominality* in Japanese embedded questions (Saito 2012; Tomioka 2020).

(9) *Korean*
i. Force$_{[iQ:val]}$ ⇔ ***nya***
ii. Force$_{[iQ:val]}$/C/D ⇔ ***ci***

(10) *Japanese*
i. Force$_{[iQ:val]}$ ⇔ ***ka***
ii. Force$_{[iQ:val]}$/C/D ⇔ ***ka***

Selection Revisited The operation Merge is argued to be responsible for local c(ategory)-selection (*e.g.*, Chomsky 2000; Pesetsky & Torrego 2006; Zeijlstra 2019), while (non-local) s-selection is trivially satisfied in the lexicon (*e.g.*, Grimshaw 2000). We argue that s-selection is not a mere lexical constraint. By incorporating s-selection into syntax, our claim draws parallels between selection and syntactic dependencies that involves Merge and Agree. The result is that s-selection is independently motivated by needs of syntactic derivation.

Implications First, **markedness** seems to play a crucial role in s-selection as syntactic dependencies. In contrast to interrogatives, declaratives are the most unmarked clause type (*e.g.*, they are morphologically null in Japanese), which indicates that they emerge as a default without Agree. Thus, locality and phasehood are not an issue here, and declaratives are s-selected across the DP layer, as illustrated with Japanese in (11).

(11) 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 (the claim) that Aki ate the apple.' (Japanese)

Second, our claim potentially extends to other clause types. In Korean, for example, the exhortative mood is s-selected by the verb *ceyanha* 'to suggest' across the DP layer in (12). This is possible because there is only one phase boundary (DP) intervening in Agree, given that the CP layer is absent in **tenseless, non-finite** exhortative clauses that presumably project only up to MoodP. The [*u*EXH]-feature thus successfully probes into the nominalized clause, in which the exhortative mood *ca* with the [*i*EXH]-feature is still accessible.

(12) Suho-nun [$_{DP}$ [$_{MoodP}$ PRO sakwa-lul mek-**ca**-nun] **kes**]-ul **ceyanha**-ess-ta.
Suho-TOP [[apple-ACC eat-**EXH**-ADN] **NMZ**]-ACC **suggest**-PAST-DECL
'Suho suggested that we eat the apple.' (Korean)

Selected References **Chomsky, N. 2001.** Derivation by phase. **/ Grimshaw, J. 2000.** Locality and extended projection. **/ Hsu, B. 2021.** Coalescence: a unification of bundling operation in syntax. **/ Pesetsky, D & Torrego, E. 2006.** Probes, goals and syntactic categories. **/ Saito, M. 2012.** Sentence types and the Japanese right periphery. **/ Tomioka, S. 2020.** Japanese embedded questions are nominal. **/ Zeijlstra, H. 2019.** Labeling, selection, and feature checking.