

Movement vs. long distance Agree in raising: disappearing phases and feature valuation

Synopsis This paper proposes that cross-linguistic differences in the distribution of subjects in raising constructions follow from whether or not there are phase boundaries between matrix T and the highest subject position in the embedded clause. Languages like (1a) are shown to require movement of the embedded subject, whereas languages like (1b) allow the subject to be licensed in situ via Agree with T. We argue that (1a) is the default structure predicted under a dynamic phase approach, and that (1b) is derived by phase extension due to *v/V*-raising and a particular type of selection of the raising complement.

- (1) a. [TP SUBJECT T [PHASE ... *seem* ... [PHASE SUBJECT ...] Movement-language
 b. [TP T+v ... *seem* ... SUBJECT ...] Agree-language

Agree vs. movement languages While infinitive-internal subjects are prohibited in English raising infinitives such as (2a), similar constructions are possible in Gr(eek), Ro(manian), Sp(anish) (Alexiadou, Anagnostopoulou, Iordachioaia & Marchis [AAIM] 2010, To appear), as well as Hu(ngarian) (and other languages; Szabolcsi 2009), see (2b-d). The above authors show that raising constructions in these languages (GrRoSpHu) have the following properties: the subject can occur within the embedded subjunctive (GrRo) or infinitive (SpHu; in Hu, focused XPs must precede the V they are associated with; since the subject in (2d) follows the matrix V, but precedes the embedded V, this word order is evidence for the subject occurring within the infinitive); it can be an R-expression (i.e., there is no co-indexed matrix *pro*); and it obligatorily agrees with the matrix raising verb.

- (2) a. *There stopped {(the) teachers} to {(the) teachers} scold the children.
 b. Stamatisan/*stamatise [na malonun **i daskali** tus mathites]_{SUBJ} Gr(eek)
 stopped.3PL/*3SG [SUBJ scold.3PL **the teachers** the students]_{SUBJ}
 ‘The teachers stopped scolding the students.’ [AAIM, To appear: (36)]
 c. Dejaron/*Dejó [de reñir **los profesores** a los alumnos]_{INF} Sp(anish)
 stopped.3PL/*3SG [INF scold the teachers ACC.DOM the students]_{INF}
 d. Elkezdték/*Elkezdet [csak a **fiúk** dolgozni éjszaka]_{INF} Hu(ngarian)
 began.3PL/*3SG [**only the boys** work.INF at.night]_{INF}
 ‘It began to be the case that only the boys work at night’ [Szabolcsi 2009: 18]

Furthermore, embedded subjects in GrRoSpHu must take low scope ((2d) cannot mean ‘Only the boys began to work at night’), and cannot establish a (covert) c-command dependency with matrix elements (such as an agreeing modifier, (3a); see AAIM for scope). Overt movement, (3b), as well as backward control, (3c), allow such covert dependencies (for space reasons we only illustrate this for Greek). In this respect, GrRoSpHu differ from Adyghe (Polinsky and Potsdam 2006, 2012), which also allows low subjects in raising constructions, however, these (PF) low subjects are interpreted in the matrix clause.

- (3) a. Arhise (***pikni**) na skepazi **i skoni** ta epipla
 started.3SG (*dense.FEM) SUBJ cover.3SG the dust.FEM the furniture
 b. **I skoni** arhise (**pikni**) na skepazi ta epipla
 the dust.FEM started (dense.FEM) SUBJ cover.3SG the furniture
 ‘The dust started dense to cover the furniture’
 c. Arhise **panikovlitos** na klidoni **mono o Janis** tin porta tu
 Started.3SG panicking.MASC SUBJ lock only the Janis.NOM the door his
 ‘Only Janis began in panic to lock his door’ Backward control

We argue that the properties in (2)-(3) indicate that infinitive/subjunctive-internal subjects in GrRoSpHu neither overtly nor covertly raise to the matrix clause, but that the Case of the embedded subjects is licensed via Agree with matrix T (see e.g., Alboiu 2006, Alexiadou & Anagnostopoulou [A&A] 1999 for the claim that subjunctive T does not license nominative). In contrast, in languages such as English (and Adyghe) no such Agree relation can be established (see below), and unmoved embedded subjects fail to receive Case. The derivation only succeeds if subject movement takes place (which can involve the pronunciation of the lower copy as in Adyghe).

- (4) T [vP v [vP V_{raising} [Infinitive/subjunctive ... SUBJECT]]] Agree: ✓ GrRoSpHu; *EnAd

Dynamic phase approach Bošković (2010) and Wurmbrand (2011, To appear) propose (following Bobaljik and Wurmbrand 2005) that phasehood is determined contextually: the highest projection of a

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cyclic domain (regardless of size or label) constitutes a phase, where cyclic domains are defined as the extended projection of VP (e.g., ν P) and the extended projection of TP (e.g., CP). This predicts that passive and unaccusative ν Ps/VPs as well as raising infinitives constitute phases (Legate 2003 for the former). According to this approach, raising constructions then involve two phase boundaries between matrix T and the embedded subject position, cf. (5): the extended VP projection (ν P or AspP) and the highest projection of the infinitive (XP for simplicity here). We propose that (5) is the structure of raising infinitives in English, whereas Agree languages involve processes that eliminate (or extend) these phase boundaries to the matrix TP.

(5) $[_{TP} \text{SUBJ } T [_{\nu P=\text{PHASE}} \text{SUBJ } \textcircled{3} [_{\nu P} \textit{seem} [_{XP=\text{INF}=\text{PHASE}} \text{SUBJ } \textcircled{2} [_{\nu P} \text{SUBJ } \textcircled{1} \dots]]]]]]$

English raising The structure in (5) entails, as desired, that matrix T can neither Agree with an embedded subject in situ (position ①) nor a subject in the embedded Spec,XP (position ②), cf. (2a). Furthermore, *there*-constructions cannot involve Agree. We follow Hazout (2004a, b), who argues that there is no Agree relation between matrix T and the associate in *there*-constructions, but that the ‘associate’ is licensed in a subject (*there*)—predicate (associate) configuration. Infinitive-internal subjects are restricted to existential constructions such as (6) in English, and agreement with the *there*-associate is optional (see Koopman 2004). This contrasts sharply with the properties of GrRoSpHu and would be unaccounted for if English also involved an Agree relation between T and the embedded subject.

(6) Essentially there seems/seem to be five compelling issues that...

Lastly, (5) predicts that raising infinitives are locality domains for movement, and movement must proceed through the edges of both XP_{INF} (position ②) and matrix ν P (position ③). Evidence comes from binding, reconstruction, and scope. Following Lebeaux (1995), Fox (1999, 2000), Q(uantifier) R(aising) is impossible out of English raising infinitives, which Wurmbrand (To appear) attributes to the phasal status of raising infinitives and Scope Economy, which prohibits successive cyclic QR. Case-driven movement of the subject is allowed, however, it must pass through the edges of both XP_{INF} (position ②) and matrix ν P (position ③). The former is illustrated by the binding properties in (7) (Pesetsky and Torrego 2007 among others). Evidence for movement through position ③ is provided by the bound variable interpretations in (8), which are possible even under the scope options given (Sauerland 2003).

(7) a. [John seems to Mary $[_{XP} \text{John}$ to appear to himself $[_{\nu P} \text{John}$ to be...]]
 b. *[Mary seems to John $[_{XP} \text{Mary}$ to appear to himself $[_{\nu P} \text{Mary}$ to be ...]]

(8) a. Every child_i doesn't \checkmark seem to his_i father [* νb \underline{bd} to be smart] $\rightarrow \gg \forall$
 b. A boy_i doesn't \checkmark seem to his_i father [* νb \underline{bd} to be a loser]. $\rightarrow \gg \exists$

Disappearing phases First, AAIM (2010, To appear) note that the Agree-languages allow VSO orders with VP-internal subjects as well as EPP licensing via V-movement (A&A 1998). Combining these properties with approaches that assume that movement of certain phase heads extends the phase to the higher projection (den Dikken 2007, Gallego 2005, 2010, Gallego and Uriagereka 2006), immediately accounts for why the matrix ν P/VP is not a phase, and T can see below VP in GrRoSpHu. Note that only *pro*-drop related ν /V-raising extends the phase. For example, French, which has V-raising but lacks *pro*-drop, behaves like English regarding subject raising. Updating the A&A (1998) analysis, we propose that GrRoSpHu have ν /V-raising, which values φ -features on T, thereby allowing null subjects, while in French V-raising only involves a T-feature relation between ν /V and T, and T's φ -features require an additional DP to move to Spec,TP. Crucially, ν /V-raising extends the ν P-phase to TP only when there is φ -feature valuation. Second, Wurmbrand (To appear) argues that subjunctives and infinitives with a specific selected tense value (e.g., irrealis) involve an obligatory selectional valuation relation between the matrix V and the highest head in the embedded clause, which extends the phasehood of the top embedded projection. The same mechanism applies to subjunctives in GrRo, i.e., the subjunctive projection loses phasehood, as well as in Spanish, given that the specific infinitival marker (*a, de...*) is selected by the matrix verb. Lastly, we propose that subject agreement in (2) is established via a feature sharing relation (Pesetsky and Torrego 2007) between matrix V (moved to T) and the top T- ν -V head of the infinitive/subjunctive, which in turn Agrees with the subject. We propose that feature sharing is possible only between heads with identical content (in this case T and ν /V in both positions). This derives Szabolcsi's (2009) observation that only languages that have V-movement also in infinitives/subjunctives are Agree-languages.