Options of Externally Merging {*v*, T, C} – a Comparative Approach

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Abstracting away from linearization, this paper makes the novel proposal that the clausal functional lexical items *v*, T and C can enter the clause in the different ways in (1):

(1) a. $[_{CP}$ C $[_{TP}$ T $[_{vP}$ *v* ...]]] *the analytical (e.g. E(nglish)) type*
b. $[_{CP}$ C $[_{\langle v,T\rangle P}$ ⟨*v*, T⟩ ...]] *the mixed (e.g. G(erman)) type*
c. $[_{\langle v,T,C\rangle P}$ ⟨*v*, T, C⟩ ...] *the synthetic/agglutinative (e.g. J(apanese)) type*

In (1-a), all functional items are introduced by External Set Merge (ESM), giving rise to the corresponding projections and phrases. In (1-b), the amalgam ⟨*v*, T⟩ comprising *v* and T is formed by External Pair Merge (EPM, cf. EKS 2016, Sugimoto 2016) prior to its introduction into the clause by ESM. In (1-c) EPM of the triple of all clausal functional items takes precedence over ESM into the clause. ⟨*v*, T, C⟩ is formed by successive application of EPM(*v*, T) and EPM(⟨*v*, T⟩, C). The amalgams function as the heads of the containing units in (1-b) and (1-c), assuming Chomsky's (2013, 2015) Labeling Algorithm.

Fukui (1988, 1995a) and Fukui and Sakai (2003) propose that *J* has "defective" T- and C-heads that function only as place holders, suggesting that clauses in *J* are essentially VP-projections (Fukui 1986, 1995b). If ⟨*v*, T, C⟩ heads the *J* clause, we capture this intuition naturally because *v* is "most prominent," while maintaining that *J* has T and C. Likewise, Keine & Bhatt (2016) have recently defended that *G* has a cluster, *pace* Wurmbrand (2007), Salzmann (2013), which we reinterpret as (1-b) (cf. Haider 1988, Bayer & Kornfilt 1994).

(1-b) and (1-c) help making sense of a number of the languages' properties and give rise to parameter-induced "clustering" effects reminiscent of Rizzi (1982) without, however, drawing on parameters as lexical properties of functional heads. Such effects are summarized in the table. As an aside, the contiguity of the elements within the complex verb in *J* (2-a) and of the verb cluster in *G* (2-b) (cf. Haider 2010, but see Sabel 2000) are implied by (1-b) and (1-c), contrasting with *E*, which provides for a phrasal edge to adjoin adverbs between T and *v* (2-c), negation being a different matter. (In each case R is the category-neutral root, which IPMs to the affixal functional heads, cf. Chomsky 2015.)

	Japanese	**German**	**English**
(i): expletive requires TP-projection	no	no	yes
(ii): VP-fronting	no	⟨R, *v*, T⟩P-fronting	yes
(iii): VP-ellipsis licensed by free-standing T	no	no	yes
(iv): WH**-movement** licensed by free-standing C	no	yes	yes
(v): subject-verb agreement licensed by free-standing T and/or C	no	yes	yes

(2) a. Bill-wa Mary-ga ku-**ru**(*tabun) **to** omotta.
Bill-TOP Mary-NOM come-NONPAST(*probably) C think
'Bill thinks Mary probably comes.' $[_{\langle R,v,T,C\rangle}$ ... ⟨R, *v*, T, C⟩=*ku-ru to*]
b. dass Cindy das Buch **gelesen** (*wahrscheinlich) **hat**
that Cindy the book read (*probably) has
'that Cindy (probably) read the book' $[_{\langle R,v,T\rangle P}$ ... ⟨R, *v*, T⟩=*gelesen hat*]
c. Cindy **has** often **embraced** Mary. Â $[_{TP}$ T=*has* $[_{\langle R,v\rangle P}$ ⟨R, *v*⟩=*embraced* ...]]

(i): In contrast to *E*, *J* and *G* do not feature structural expletives. This falls out immediately from the absence of a TP-projection. **(ii):** If ⟨*v*, T, C⟩ heads the *J* clause, there is no VP-constituent, which explains why *J* does not have VP-fronting (3), Funakoshi (2020: 118-119). If *G* lacks a TP, EPP-raising of subjects is not forced, unlike in *E*. Thus subjects can remain

VP-internal under VP-fronting (4), Wurmbrand (2006: 198). (We assume T raises to C (in V1/V2-clauses) at PF, following Zwart (2017). It remains to be understood how to label EA-$\langle v, \text{T}\rangle$P and EA-$\langle v, \text{T, C}\rangle$P in G and J (Chomsky 2013: fn. 35), EA=External Argument.)

(3) *[Ringo-o tabe] Taroo-ga t_{VP} (si-)ta.
apple-ACC eat Taroo-NOM (do-)PAST

(4) [$_\alpha$ Ein junger Hund einen Briefträger gebissen] hat hier schon oft.
a-NOM young dog a-ACC mailman bitten has here already often
'It has happened often here already that a young dog has bitten a mailman.'

(iii): Sag (1976: 19ff) suggested that the Aux-node preceding the elliptical VP must be overt. We reinterpret this as: VP-ellipsis is licensed by a freely standing (ESMd) T-head. If so, we predict by (1) that E does, while J and G do not, have VP-ellipsis: For G, this is correct (5), López & Winkler (2000), Repp & Struckmeier (2020: 187) and for J, our approach implicates that (6) is argument ellipsis (Sakamoto 2015, *pace* Fanakoshi 2016):

(5) *Leyla WOLLte die Hausaufgaben nicht machen, doch Franz meinte, dass sie HAT.
Leyla wanted the homework not make but Franz meant that she has
'Leyla didn't want to do the homework but Franz said that she has (done it).'

(6) Hanako-wa gakkoo-ni it-ta kedo, Taroo-wa ik-anak-atta.
Hanako-TOP school-to go-PAST but Taroo-TOP go-NEG-PAST
(intended) 'Hanako went to the school, but Taroo didn't go to the school.'

(iv): We assume that the identification of a $\langle$Q, Q$\rangle$-label (Cable 2010, Chomsky 2013) is required to form subordinate WH-questions in WH-ex-situ languages like E and G as in (7). This is the category of the syntactic object which gets selected by the relevant verbs (*wonder* and the like), (9-a)/(9-b). In J, C_Q=*-ka* is "hidden" (cf. Blümel & Goto 2020) in the amalgam $\langle v, \text{T, C}\rangle$. It follows that in J WH-movement cannot enter into a $\langle$Q, Q$\rangle$-labeling-configuration for principled reasons: *Minimal Search* cannot ambiguously find the head of the WH-phrase and the Q-feature hidden within the amalgam. Consequently, J resorts to the alternative strategy: WH-in-situ (9-c), whose structure is shown in (8).

(7) $[_{\langle Q,Q\rangle}\ [_{QP}\ \text{WH}]_i\ [\text{C}_Q\ \ldots t_i\ \ldots]]$ (8) $[_{\langle v,T,C\rangle P}\ \ldots \text{WH}\ \ldots \langle v, \text{T}, \text{C}_Q = ka\rangle]$

(9) a. I don't know what$_i$ John bought t_i
b. Ich fragte mich wen$_i$ Hans t_i sah.
I asked REFL who-ACC Hans saw
'I wondered who Hans saw.' *Sabel (2000: 413, (12-b))*
c. Boku-ga John-ga nani-o katta ka siranai (koto)
I-NOM John-NOM what-ACC bought Q know-NEG-PRES (fact)
'(the fact that) I don't know what John bought.' *Fukui (1988: 256, (12))*

(v): T or C might or might not bear ϕ-features in J: They are hidden in $\langle v, \text{T, C}\rangle$, bleeding both probe-goal and "SPEC-head" agreement, capturing property **(v)**. In G, uϕ on C initiates probe-goal (i.e. subject verb) agreement (see Chomsky 2017 for E, where C inherits uϕ to T upon AGREE).

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Toward the copular status of Chinese clefts----Evidence from diachronic syntax

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Data This paper develops a substantive link between three independent and chronologically separate diachronic patterns in Classical Chinese. In each development, a newly copularized (reanalyzed from lexical sources) morpheme occurs in both a copular clause and a cleft. The three parallel diachronic patterns are shown in the following diagram and exemplified in (1-3). (a)-examples illustrate copular uses (modals, negation and adverbs precede verbal heads in Classical Chinese), and (b)-examples illustrate clefts.

Copula morpheme	Grammatical Change Pathway
Wei	Emergence (reanalysis) of copula & cleft (1300~1050 BC) → (Copula & cleft) Simultaneous decline in Classical Chinese (600~400 BC)
Shi	Emergence of copula & cleft (~500 AD) → (Copula & cleft) Simultaneous decline in modern Cantonese & Hakka (18th century AD)
Xi	Emergence of copula & cleft (~1100 AD) → (Copula & cleft) Simultaneous decline in modern Mandarin (18th century AD)

(1) a. Ya bin qi wei chen.
Noble Bin FUT COP minister
"The Noble Bin will be the minister."
(*Collections of Oracle Bones*, 13th - 11th century BC)

b. Wei di ta wo nian
COP god curse my harvest
"It is god who puts a curse on my crop."
(*Collections of Oracle Bones*)

(2) a. Yizhou yuan bu shi yongren.
Yizhou originally NEG COP mediocre.person
"Yizhou was originally not a mediocre person."
(*Lectures on the Vimalakirti Sutra*, 8th century AD)

b. Fei shi du shinai you zhenru ye.
NEG COP deliverance start have dharma PRT
"It is not (via) deliverance that one obtains dharma."
(*Lec. on the Vimalakirti Sutra*)

(3) a. Ci yi bu xi hongwu jiuzhi.
This also NEG COP hongwu old.rule
"This was also not the Hongwu reign's old rule."
(*Collections by Yu Qian*, 1457-1510 AD)

b. Xi ningxia zongbingguan chuzhi.
COP ningxia head.officer in.charge
"It is the Ningxia officer who took charge."
(*Collections by Yu Qian*)

All the three copula morphemes underwent independent decline processes: *Wei* disappeared from copular clauses and clefts by 6 - 4th century BC. *Shi*'s functions in copular clauses and clefts are retained in modern Mandarin yet lost in Cantonese and Hakka (all descendants of Classical Chinese). *Xi* exhibits the opposite pattern: Productive uses in copular clauses and clefts remain in modern Cantonese/Hakka but not in Mandarin. Individual emergence and decline processes are independently observed in previous case studies (Yue-Hashimoto 1969; Peyraube & Wiebusch 1994; Pulleyblank 1995; Bisang 1998; Tang 2009; Meisterernst 2010). The novel observation in this paper is that these three similar processes form a recurring pathway.

The copular approach to Chinese clefts The copular approach to Chinese clefts posits that clefts are underlyingly copular structures. One proposal, by Li & Thompson (1989), proposes that the subject of the copula verb is occupied by a headless relative taking a covert definiteness determiner that extraposes to the right of the focused phrase at surface syntax (cf. Percus 1997). An implementation of (4) is in (5):

(4) Shi Zhangsan yao lai. [modern Mandarin]
COP Zhangsan will come
"It is Zhangsan that will come."

(5) [DEF e$_i$] *shi* [*Zhangsan*] [null head + *yao lai*]$_i$

Another proposal, by Hole (2011), proposes that, in clefts, the copula verb takes a small clause (CP) argument. The focused phrase moves to [Spec, CP] of the small clause, and predicate abstraction applies to the CP predicate. The C^0head functions as a special definite determiner, deriving a maximal event reading of the CP predicate.

(6) [VP *shi* [CP [Spec *Zhangsan*$_i$] [C' C^0 [+def] [TP t_i [VP *yao lai*]]]]]

The focus movement approach to Chinese clefts Under a focus movement approach, Chinese clefts are not headed by a copula verb. Rather, the copula moves to the left periphery with the focused phrase (Teng 1979, Huang 1982, Zhu 1996). Specifically, assuming a Rizzi-style articulated

CP, it is argued that the focused phrase undergoes focus movement to [Spec, FocP] from its base position at FinP to check the [exhaustive] feature. Subsequently, the copula morpheme in FinP undergoes remnant movement to a projection structurally higher than FocP (e.g. TopP, cf. Kiss 1998, Meinunger 1998, Frascarelli & Ramaglia 2014). A focus-based implementation of (4) is as follows.

(7) [TopP *shi*$_k$ [FocP *Zhangsan*$_i$ [Foc' Foc^0 [FinP e$_k$ e$_i$ *yao lai*]]]]

Evidence for a copular approach I argue that the recurring pathway identified in Classical Chinese receives a straightforward explanation under a copular approach to clefts. Specifically, after reanalysis of a lexical item into a copula takes place, learners acquire the newly copularized item as an element of copula verbs within their lexicon. Assuming that lexical insertion is triggered, such that the new element is inserted to the copula verb head position in the syntax, we would expect that the same copula element occurs in all constructions that host a copula verb projection. This includes the cleft construction, which is a copular clause construction within learners' grammar, according to the copular approach. In other words, the recurring diachronic pathway is reduced to a reanalysis-and-extension process (Harris & Campbell 1995): the reanalysis of a morpheme as instantiating a copula verb category results in the extension of this morpheme to structures that host the copula verb category. The copular approach also readily accounts for the coordinated decline pattern witnessed in the three morphemes *wei*, *shi* and *xi*: it follows from the homogeneity of copular and cleft structures that the loss of productivity of a given copula verb predicts that it will cease to be used in both copular clauses and clefts.

Problems for a focus movement approach One issue encountered by a focus-based approach is the lack of clear motivations for why copula morphemes demonstrate a recurring trend of moving to a projection higher than FocP (except for the need to derive the correct word order). A more severe difficulty is that the focus approach fails to account for the simultaneous decline of the copular and cleft use. Such analysis would commit to positing two homophonous lexical entries for the copula morpheme that occurs in copular clauses and in clefts, respectively. A direct consequence is the absence of convincing reasons why both lexical entries' loss should be closely correlated.

Semantic evidence Several recent semantic proposals that derive the exhaustive reading of clefts based on a copular syntax (without focus movement) are applicable in Chinese. Büring & Križ (2013) assume with a copular approach that the cleft structure contains a definite operator. Crucially, the definite description projects a conditional presupposition (8a). Accordingly, an exhaustive reading is derived for (4), as I show in (8b). This semantics is in principle compatible with both the Li & Thompson/Percus syntax and the Hole-syntax.

(8) a. A structure of the form [COP aP] b. Given the structure [*shi* [*Zhangsan*] [*yao lai*]]
Asserts: ⟦P⟧(⟦a⟧) Asserts: ⟦will come⟧ (⟦Zhangsan⟧)
Presupposes: ⟦a⟧ not a proper part of ⟦P⟧. Presupposes: ⟦Zhangsan⟧ not a proper part of ⟦will come⟧.

If the situation includes more than one individual who will come (e.g. Zhangsan and Lisi), ⟦Zhangsan⟧ will be a proper part of ⟦will come⟧, falsifying the presupposition. If no individuals will come in the situation, the presupposition is satisfied, but the at-issue semantic content (i.e. what is asserted) will be false. Thus, the only way to satisfy both the presupposition and the assertion is for Zhangsan to be the maximal (only) individual who will come, hence an exhaustive reading.

Structural Evidence Syntactically, focus movement predicts island sensitivity. This prediction is *not* borne out by the following constructed Complex NP island example in Chinese (based on three Northern Mandarin speakers I consulted):

(9) Shi [na-pian lunwen]$_i$ ta xiangxin you [ken jieshou e$_i$] de pingwei.
COP [that-CLF paper]$_i$ he believe have willing.to accept e$_i$ REL reviewer
"It is [that paper]$_i$ that he believes there will be reviewers [who are willing to accept e$_i$]."

The circumvention of island effects might be due to the availability of empty pronominals within Chinese complex NPs (Lin 2005; Li 2007), suggesting that (9) does not involve a movement-created operator-variable binding relation. This finding is compatible with a copular analysis that posits no focus movement, and confirms the diachronic data.

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Argument ellipsis and topicalization: a view from their interaction with *wh*-dependencies

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In the recent syntactic literature, some cases of null arguments observed across languages are analyzed as the result of *argument ellipsis* (henceforth 'AE'; Oku 1998; Saito 2007; Takahashi 2008; Sakamoto 2018; a.o.), not simply as involving *pro* (e.g., Kuroda 1965): as shown in the Japanese (1), the null argument (marked by '___') can induce the so-called sloppy identity reading:

(1) *Ann$_1$-wa* [*zibun$_1$-no sigoto*]*-o owaraseta. Mary$_2$-mo* ___ *owaraseta.*
Ann-TOP self-GEN task-ACC finished Mary-also finished
'Ann$_1$ finished her$_1$ task. Mary$_2$ finished (her$_2$ task), too.'

This study proposes a novel constraint which urges us to rethink the syntactic/semantic nature of the licensing of AE. I point out a non-trivial correlation between AE and topicalization.

New constraint We observe (2) with a set of Japanese data (I show a larger paradigm in the talk). I assume throughout that the availability of sloppy reading is the indication that AE has taken place.

(2) **The *wh*-scope constraint on AE:**
AE is banned if the ellipsis site is in the c-commanding domain of a *wh*-phrase at LF.

In (3-b), the elided argument in the embedded object, which is intended to be bound by the matrix subject, cannot induce sloppy reading with a *wh*-phrase located in the embedded subject. In contrast, if a *wh*-phrase is located below the ellipsis site, sloppy reading is available (4-b).

(3) a. *Mary$_1$-wa* [***dare****-ga* [*zibun$_1$-no musuko-ni*] *choko-o watasita ka*] *kyoomigaaru.*
Mary-TOP who-NOM self-GEN son-DAT chocolate-ACC gave Q is.curious
'Mary$_1$ is curious who gave her$_1$ son chocolate.'

b. *Nancy$_2$-mo* [***dare****-ga* ___ *choko-o watasita ka*] *kyoomigaaru.*
Nancy-also who-NOM chocolate-ACC gave Q is.curious
* Sloppy: 'Nancy$_2$, too, is curious who gave her$_2$ son chocolate.'

(4) a. *John$_1$-wa* [*Taroo-ga* [*zibun$_1$-no musume-ni*] ***nani****-o watasita ka*] *kyoomigaaru.*
John-TOP Taroo-NOM self-GEN daughter-DAT what-ACC gave Q is.curious
'John$_1$ is curious what Taroo gave his$_1$ daughter.'

b. *Bill$_2$-mo* [*Taroo-ga* ___ ***nani****-o watasita ka*] *kyoomigaaru.*
Bill-also Taroo-NOM what-ACC gave Q is.curious
✓Sloppy: 'Bill$_2$, too, is curious what Taroo gave his$_2$ daughter.'

Compare (4) with (5). Even if the ellipsis site is c-commanded by no *wh*-phrase in the same clause, sloppy reading is unavailable as long as it is c-commanded by one outside (here the matrix subject).

(5) a. ***Dono kyoozyu****$_1$-ga* [*Taroo-ga* [*zibun$_1$-no musume-ni*] ***nani****-o watasita ka*] *kyoomigaaru no?*
which professor-NOM Taroo-NOM self-GEN daughter-DAT what-ACC gave Q is.curious Q
'Which professor$_1$ is curious what Taroo gave his$_1$ daughter?'

b. [***Dono insei****$_2$-ga* [*Taroo-ga* ___ ***nani****-o watasita ka*] *kyoomigaaru ka*] *mo osiete.*
which grad.stdnt-NOM Taroo-NOM what-ACC gave Q is.curious Q also tell
*Sloppy: 'Also tell me which grad student$_2$ is curious what Taroo gave his$_2$ daughter as well.'

In (6), where the embedded *wh* from (4) is scrambled to the sentential initial position, sloppy reading is still available. Here the *wh* c-commands the ellipsis site on the surface but it doesn't at LF, given that long scrambling is obligatorily undone and the moved phrase reconstructs at LF (Saito 1989, 1992, 2003; Bošković and Takahashi 1998). This confirms that (2) is an LF constraint.

(6) a. ***Nani****-o$_3$ John$_1$-wa* [*Taroo-ga* [*zibun$_1$-no musume-ni*] t_3 *watasita ka*] *kyoomigaaru.*
what-ACC John-TOP Taroo-NOM self-GEN daughter-DAT gave Q is.curious
'John$_1$ is curious what Taroo gave his$_1$ daughter.'

b. ***Nani****-o$_4$ Bill$_2$-mo* [*Taroo-ga* ___ t_4 *watasita ka*] *kyoomigaaru.*
what-ACC Bill-also Taroo-NOM gave Q is.curious
✓Sloppy: 'Bill$_2$, too, is curious what Taroo gave his$_2$ daughter.'

It is unclear how the existing LF-copy analyses can capture the paradigm (Oku 1998, Saito 2007, Sakamoto 2018; a.o.): after all, why would copying be blocked in some contexts but not others?

Dependency in AE The fact that higher *wh*-phrases cause trouble may highlight that they function as 'intervenors', which in turn implies that AE induces a syntactic/semantic dependency that could interact with *wh*-dependencies. In this regard, Fujiwara (to appear), building on the data regarding islands, binding and scope, has proposed that elided arguments undergo movement before ellipsis applies. One thing to note is that while Fujiwara suggests that AE correlates with long scrambling (i.e., A'-movement to the matrix CP), scrambling is 'semantically vacuous' (Saito 1989) and doesn't seem to interact with other A'-dependencies. In fact, scrambling a phrase out of an embedded clause past a *wh* is allowed (7). This contrasts with the impossibility of AE in (3).

(7) [*Zibun*$_1$*-no musuko-ni*]$_2$ *Mary*$_1$*-wa* [***dare****-ga* t_2 *choko-o watasita ka*] *kyoomigaaru.*
self-GEN son-DAT Mary-TOP who-NOM chocolate-ACC gave Q is.curious
'Mary$_1$ is curious who gave her$_1$ son chocolate.'

Thus, while AE and long scrambling may partially correlate, the former seems to encode some semantically 'non-vacuous' effects. But if AE induces a meaningful dependency, what is it then?

Topicalization We observe that the judgment distribution of AE above correlates with that of topicalization. Japanese marks topic by the particle *'-wa'*. While it has been controversial whether Japanese topicalization involves base-generation or movement (Kuno 1973; Hoji 1985), it is at least a consensus that *wa*-marked PPs (including datives) are derived by movement (Saito 1985). The generalization is that preposing *wa*-marked PPs past *wh*-phrases is prohibited. Notice crucially that (3)&(8), (4)&(9), (5)&(10), and (6)&(11) each correspond in terms of configuration and judgment.

(8) *[*Zibun*$_1$*-no musuko-ni-****wa***]$_2$ *Mary*$_1$*-wa* [***dare****-ga* t_2 *choko-o watasita ka*] *kyoomigaaru.*
self-GEN son-DAT-TOP Mary-TOP who-NOM chocolate-ACC gave Q is.curious
lit. 'To her$_1$ son, Mary$_1$ is curious who gave chocolate.'

(9) [*Zibun*$_1$*-no musume-ni-****wa***]$_2$ *John*$_1$*-wa* [*Taroo-ga* t_2 ***nani****-o watasita ka*] *kyoomigaaru.*
self-GEN daughter-DAT-TOP John-TOP Taroo-NOM what-ACC gave Q is.curious
lit. 'To his$_1$ daughter, John$_1$ is curious what Taroo gave.'

(10) *[*Zibun*$_1$*-no musume-ni-****wa***]$_2$ ***dare***$_1$*-ga* [*Taroo-ga* t_2 ***nani****-o watasita ka*] *kyoomigaaru no?*
self-GEN daughter-DAT-TOP who-NOM Taroo-NOM what-ACC gave Q is.curious Q
lit. 'To his$_1$ daughter, who$_1$ is curious what Taroo gave?'

(11) [*Zibun*$_1$*-no musume-ni-****wa***]$_2$ [***nani****-o*]$_3$ *John*$_1$*-wa* [*Taroo-ga* t_2 t_3 *watasita ka*] *kyoomigaaru.*
self-GEN daughter-DAT-TOP what-ACC John-TOP Taroo-NOM gave Q is.curious
lit. 'To his$_1$ daughter, John$_1$ is curious what Taroo gave.'

This leads us to the hypothesis that AE involves topicalization in its derivation: to-be-elided arguments undergo topicalization to create a topic dependency before ellipsis applies (a similar idea is suggested for VP-ellipsis by Johnson 2001; Aelbrecht and Haegeman 2012); AE is banned in the c-commanding domain of a *wh* because topicalization crossing an (in-situ) *wh* is disallowed.

Implications This hypothesis brings a number of implications. It straightforwardly explains why *wh*-phrases and disjunctive phrases cannot undergo AE (Funakoshi 2013; Sugisaki 2013; Saito 2017; a.o.): they are what Tomioka (2007) calls 'Anti-Topic Items', items that cannot function as topics. Moreover, while quantificational phrases are also reported to undergo AE (Takahashi 2008), Tomioka (2016) observes that downward monotone (DM) quantifiers, unlike upward monotone ones, cannot be elided (12). This fact, while somewhat mysterious under previous accounts, follows simply from the fact that DM quantifiers cannot be topicalized (13) (Grohmann 2006).

(12) a. *Kyonen-wa* [*30%-*{*(i) izyoo / (ii) miman*}*-no gakusei-ga*] *ukatta.* b. *Kotosi-mo* ___ *ukatta.*
last.year-TOP 30%-{more.than / less.than}-GEN student-NOM passed this.year-also passed
a. 'Last year, {(i) more than / (ii) less than} 30% of the students passed.' b-i. ✓'This year too, (more than 30% of the students) passed.' b-ii. *'This year too, (less than 30% of the students) passed.'

(13) *Kyonen-wa* [*30%-*{*(i) izyoo / (ii) *miman*}*-no gakusei-****wa***] *ukatta.*
last.year-TOP 30%-{more.than / less.than}-GEN student-TOP passed.
'Last year, {more than / less than} 30% of the students passed.'

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Differential Subject Marking in Kazakh

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It is well-known that Turkic languages have differential object marking: direct objects are accusative-marked when they are specific/presuppositional (Enç 1991, Diesing 1992, Kelepir 2001, Öztürk 2005, Kornfilt 2008, a.o.). Parallelisms between differential object marking (nominative vs. accusative) and differential subject marking (nominative vs. genitive in non-finite clauses) have long been alleged (Kornfilt 1984, Öztürk 2005, van Heusinger & Kornfilt 2017, a.o.): similarly to accusative, genitive also seems to correlate with specificity. However, this proposed parallelism can be challenged by data from Central Asian Turkic languages, such as Uzbek (Gribanova 2019), Kazakh and Kyrgyz (author's fieldwork below). For instance, proper names can be nominative (i.e., not genitive) in these languages (see ex. (1)), however this is not possible for proper name objects, which are obligatorily in the accusative. This paper investigates the differential subject marking in Kazakh based on novel data coming from extensive elicitations with native speakers. I propose that the discrepancies between accusative and genitive case marking can be explained by positing that these cases are sensitive for different semantic features.

Differential object marking. Turkish referential and non-referential but specific objects undergo object shift and are obligatorily accusative-marked. In contrast, non-specific NPs remain in their base position and are nominative (Enç 1991, Kelepir 2001, Aydemir 2004, a.o.). This also holds in Kazakh. Baker & Vinokurova 2010 and Baker 2015 argue that accusative marking is the result of object shift, because after object shift the object ends up in the same phase as the external argument, and it gets dependent case.

Novel data on Kazakh differential subject marking. Differential subject marking is only encountered in certain types of non-finite nominalized clauses where the nominal D head can assign genitive. This paper focuses on Kazakh factive complement clauses headed by *-GAn* (perfect) and *-y/AtIn* (prospective, habitual). Proper name subjects can be nominative (*-Ø*) or genitive (*-NIŋ*) marked. Some speakers do not accept nominative proper name subjects (I consider this a dialectal variation); others accept both nominative and genitive and report a slight difference in meaning between them. (1b), where the subject is genitive, cannot be uttered in a context where the interlocutors don't know who *Ahmet* is (*Ahmet* must be in the common ground).

(1a) % Ækim [Aχmet-**Ø** biz-diŋ kala-mɯz-ga kel-etin-in] ajt-tɯ.
mayor [Ahmet-**NOM** we-GEN town-1PL.POSS-DAT come-NF-3POSS]ACC say-3PST

(1b) Ækim [Aχmet-**tiŋ** biz-diŋ kala-mɯz-ga kel-etin-in] ajt-tɯ.
mayor [Ahmet-**GEN** we-GEN town-1PL.POSS-DAT come-NF-3POSS]ACC say-3PST
'The mayor said that Ahmet would come to our town.'

We see a similar contrast between NOM and GEN with referential (non-proper name) noun phrases. (2a), in contrast to (2b), can be followed up by the sentence: 'Whoever the best student may be,' i.e., when the subject is nominative, we are not familiar with the individual denoted by the subject. On the other hand, (2b), but not (2a), can be followed up by: 'That student is Aisha' indicating that when the subject is genitive we are familiar with the individual denoted by the noun phrase.

(2a) Ajnur [klass-ta-gi eŋ ʒaksɯ student-**Ø** bul kitap-tɯ okɯ-gan-ɯn] ajt-tɯ.
Ajnur [class-LOC-ADJ SPL good student-**NOM** this book-ACC read-NF-3.POSS]ACC say-3PST
✓ Whoever the best student may be. # That student is Aisha.

(2b) Ajnur [klass-ta-gi eŋ ʒaksɯ student-**tiŋ** bul kitap-tɯ okɯ-gan-ɯn] ajt-tɯ.
Ajnur [class-LOC-ADJ SPL good student-**GEN** this book-ACC read-NF-3.POSS]ACC say-3PST
Whoever the best student may be. ✓ That student is Aisha.
'Ainur said that the best student in class read this book.'

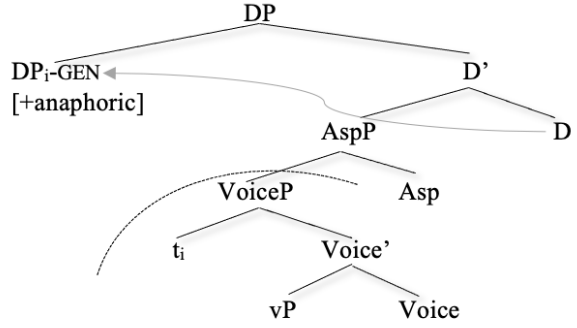
The subjects in (1)-(2) are in a high (i.e., not base-generated) position, as indicated by the intervening object/PP between the subject and the verb (shown with underlining). Subjects may remain in a low (base-generated) position (as in (3) and (4)), in which case nothing can intervene between them and the verb. As (3) and (4) illustrate, subjects in their base positions can be nominative or genitive. The nominative subject (in (3)) is interpreted as a non-specific indefinite, whereas the genitive subject (in (4)) has the interpretation 'some/a mullah from a contextually salient set of mullahs'. These interpretations are apparent when the sentence: 'I don't know which mullah(s)' follows these sentences: it is infelicitous following (3), but felicitous after (4).

(3) Ækim [biz-diŋ kala-mɯz-ga molda-**Ø** kel-etin-in] ajt-tɯ.
mayor [we-GEN town-1PL.POSS-DAT mullah-**NOM** come-NF-3POSS]ACC say-3PST
'The mayor said that some mullah(s) would come to our town.'
✓ I don't know who he is/they are. # I don't know which mullah(s).

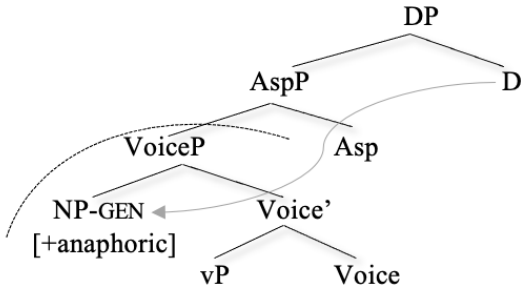
(4) Ækim [biz-diŋ kala-mɯz-ga molda-**nɯŋ** kel-etin-in] ajt-tɯ.
mayor [we-GEN town-1PL.POSS-DAT mullah-**GEN** come-NF-3POSS]ACC say-3PST
'The mayor said that a mullah (from a given set of mullahs) would come to our town.'
✓ I don't know who he is. ✓ I don't know which mullah.

Analysis. The genitive subject case originates from the clausal nominalizer D head, as it is only available when the clause is nominalized. The D head does not have EPP feature, therefore it does not trigger movement, which allows base-generated subjects to remain in-situ. Genitive can only be marked on noun phrases that are [+anaphoric]. Genitive is therefore assigned to every noun phrase within its domain that has this feature. Because external arguments in their base position are at the edge of their phase, they can be reached by the probe on D. If the subject is referential (as in (1) and (2)), it moves out of its base position, and it is not under the existential closure. Non-referential NPs remain in-situ, thus under the existential closure (as in (3) and (4)). The interpretation in (4), 'some mullah from a contextually salient set of mullahs', is a result of the [+anaphoric] feature and the NP remaining under the existential closure. The corresponding tree representation is given in (6). If the noun phrase is referential, it moves out of the existential closure, but only gets genitive if it is anaphoric (as shown in (5)).

(5) Derivation of (1b)



(6) Derivation of (4)



Thus, the distinction between differential object and subject marking in Kazakh lies in the fact that accusative and genitive are sensitive to different features: accusative indexes specificity, whereas genitive indexes anaphoricity. This analysis indicates that differential case marking is not

necessarily the result of shift out of the existential closure (as in Baker & Vinokurova 2010 and Baker 2015), but rather that differential case marking indexes semantic features.

References. AYDEMIR 2004 Are Turkish Preverbal Bare Nouns Syntactic Arguments? • BAKER & VINOKUROVA 2010 Two modalities of case assignment in Sakha • BAKER 2015 Case • DIESING 1992 Indefinites • ENÇ 1991 The semantics of specificity • GRIBANOVA 2019 Case, agreement and differential subject marking across Uzbek nonfinite clause types • KELEPIR 2001 Issues in Turkish Syntax: Clausal Structure and Scope • ÖZTÜRK 2005 Case, Referentiality and Phase Structure • KORNFILT 1984 Case marking, agreement and empty categories in Turkish • KORNFILT 2008 DOM and two types of DSM in Turkish • VAN HEUSINGER & KORNFILT 2017 Partitivity and case marking in Turkish and related languages