

Long-Distance Scrambling in Balkar and the Nature of Edges

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1. Introduction

A great deal of work has argued that syntactic operations are bounded by certain cyclic domains, in current terms *phases* (Chomsky, 2000, 2001, 2008). These are generally taken to be CP, vP, and sometimes DP. Under phase theory, after a given phase has been built, only elements in the specifier or “edge” of that phase can participate in the formation of later syntactic dependencies. This concept entails, among many other consequences, that movement from a phase must always pass through its edge in successive-cyclic fashion, as we see illustrated for movement from CP in (1) below:

(1) *Must exit a phase via its edge*

a. *Legal exit via edge*

✓ [_{CP2} What did you say [_{CP1} *t* that you ate *t*]]]?

b. *Illegal exit from below edge*

* [_{CP2} What did you say [_{CP1} that you ate *t*]]]?

In this paper, we use fieldwork data about scrambling from embedded clauses in Balkar (Turkic) to argue for several concepts about the interaction between movement and phase edges.

Balkar has three types of embedded (nominalized) clause. These are distinguished by the case of their subject, which may be nominative (NOM), accusative (ACC), or genitive (GEN), as (2) below shows. In this paper we used possessed subjects in embedded clauses (often with *pro*-dropped possessors), since in the absence of possessive marking accusative and genitive case are syncretic in Balkar.

(2) *Three possibilities for embedded subjects: NOM, GEN or ACC*

Ustaz [_{CLAUSE} [fatima-ni sabij-i-Ø /sabij-i-**ni** /sabij-i-**n**] alma-ni
teacher.NOM Fatima-GEN child-3-NOM /child-3-GEN /child-3-ACC apple-ACC
aša-ɾan-i-n] ešit-ti.
eat-NFUT-3-ACC hear-PST

‘The teacher heard that Fatima’s child ate her apple.’

Based on the properties of scrambling from each clause type, we argue for three proposals about movement from phases. First, we argue that CP is a phase which allows multiple specifiers provided that *tucking-in* applies (Richards, 1997, 1999). Second, we argue that when a phase has multiple specifiers, their relative structural height determines the order in which they can be accessed for movement (Bošković, 2016). Third, we argue that DP is a phase which (at least in this context) does not allow A'-movement through its edge (Bosque & Gallego, 2014; Reeve, 2018; van Urk, 2019).

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1.1. Contents of this paper

Next, in section 2, we report the relevant long-distance scrambling patterns from Balkar. In section 3, we provide background on the properties of each embedded clause type, based on which we propose an analysis of the scrambling patterns in section 4. In section 5, we extend these concerns to additional facts about the dependencies that embedded subjects can participate in, before concluding in section 6.

2. Subject case and constraints on scrambling

Before turning to long-distance scrambling, notice that clause-internal scrambling of an embedded object to a position above an embedded subject is only possible if that subject is nominative:¹

- (3) *No clause-internal scrambling over ACC/GEN subject, ok over NOM subject*

Ustaz [CLAUSE [tauuš et-dir-ip] **alma-ni**_k [bala-si-Ø /*bala-si-**ni**
teacher.NOM noise make-CAUS-CONV **apple-ACC** child-3-NOM /child-3-GEN
/*bala-si-**n**] _{t_k} aša-Ɂan-i-n] ešit-ti
/child-3-ACC eat-NFUT-3-ACC hear-PST

‘The teacher heard that her child ate the apple loudly (lit. ‘while making noise’).’

Under the hypothesis that embedded clauses are phases, the fact that an object can only scramble to a clause-internal position in front of a nominative embedded subject sits naturally with the further fact that only with a nominative subject can the embedded object scramble into the matrix clause (4):

- (4) *No long-distance scrambling over ACC/GEN subject, ok over NOM subject*

Alma-ni_k ustaz [CLAUSE _{t_k} [fatima-ni sabij-i-Ø/*-ni/*-n] _{t_k}
apple-ACC teacher.NOM Fatima-GEN child-3-NOM/*GEN/*ACC
aša-Ɂan-i-n] ešit-ti.
eat-NFUT-3-ACC hear-PST

‘The teacher heard [that Fatima’s child ate her apple].’

Evidently, then, accusative and genitive subjects ‘plug’ the edge of the embedded clause, preventing the object from scrambling into the matrix clause by passing through that position.

Despite blocking object scrambling, accusative and genitive subjects can themselves scramble into the matrix clause, as we see in (5):

- (5) *Long-distance scrambling of ACC/GEN subject*

[**Fatima-ni bala-si-ni/n**]_k ustaz [CLAUSE _{t_k} alma-ni aša-Ɂan-i-n]
Fatima-GEN child-3-GEN/ACC teacher.NOM apple-ACC eat-NFUT-3-ACC
ešt-gen-di.
hear-PART-3

‘The teacher heard that Fatima’s child ate an apple.’

¹In (3), the adverb ‘loudly’ (noise make-CAUS-CONV) marks the embedded clause’s edge. As we see in (i) below, this adverb cannot scramble outside of an embedded clause in which it originates. This fact allows us to confirm that in (3) the object does not scramble beyond the embedded clause, since it lands below this adverb.

- (i) (***Tauuš et-dir-ip**) ustaz [(**tauuš et-dir-ip**) bala-si (**tauuš**
noise make-CAUS-CONV teacher.NOM **noise make-CAUS-CONV** child-3.NOM **noise**
et-dir-ip) alma-ni aša-Ɂan-i-n] ešit-ti.
make-CAUS-CONV apple-ACC eat-NFUT-3-ACC hear-PST
‘The teacher heard that her child ate the apple loudly.’

Importantly, when an accusative embedded subject scrambles from the embedded clause, the embedded object can do so as well. The moved subject must ultimately precede the moved object, however (6):

(6) *Accusative subject scrambling feeds long object scrambling (with final S < O order)*

- a. [**Fatima-ni sabij-i-n**]_k tünene **alma-ni**_j ustaz [CLAUSE *t_k t_j*
Fatima-GEN child-3-ACC yesterday apple-ACC teacher.NOM
aša-Ɂan-in] ešit-ti.
eat-NFUT-3-ACC hear-PST
‘The teacher heard that Fatima’s child ate the apple yesterday.’
- b. ***Alma-ni**_j tünene [**fatima-ni sabij-i-n**]_k ustaz [CLAUSE *t_k t_j*
apple-ACC yesterday Fatima-GEN child-3-ACC teacher.NOM
aša-Ɂan-in] ešit-ti.
eat-NFUT-3-ACC hear-PST
‘The teacher heard that Fatima’s child ate the apple yesterday.’

In contrast, genitive subject scrambling does not feed long-distance object scrambling of any form (7):

(7) *Genitive subject scrambling does not feed long-distance object scrambling*

- a. ***[Fatima-ni sabij-i-ni]**_k tünene **alma-ni**_j ustaz [CLAUSE *t_k t_j*
Fatima-GEN child-3-GEN yesterday apple-ACC teacher.NOM
aša-Ɂan-in] ešit-ti.
eat-NFUT-3-ACC hear-PST
‘The teacher heard that Fatima’s child ate the apple yesterday.’
- b. ***Alma-ni**_j tünene [**fatima-ni sabij-i-ni**]_k ustaz [CLAUSE *t_k t_j*
apple-ACC yesterday Fatima-GEN child-3-GEN teacher.NOM
aša-Ɂan-in] ešit-ti
eat-NFUT-3-ACC hear-PST
‘The teacher heard that Fatima’s child ate the apple yesterday.’

In summary, object scrambling from an embedded clause always succeeds if the embedded subject is nominative, and always fails if that subject is genitive. However, long-distance object scrambling succeeds if the embedded subject is accusative provided that the subject scrambles from the embedded clause as well. These are the patterns that we focus on explaining in this paper.

3. Background on the characteristics of Balkar embedded clauses

All the embedded clause types we consider in this paper behave like nominals: they appear in argument positions, they carry typical case morphology, and the embedded verb bears agreement marking matching that seen in nominal environments (specifically possessive constructions). These clause types all have some verbal properties as well, however.

All three of these embedded clause types have at least enough verbal structure to host VP-level adverbs, as (8) below shows with a manner adverb:

(8) *VP-level adverb in all clause types*

Ustaz [[bala-si-Ø /bala-si-ni /bala-si-n] **tauuš et-dir-ip** alma-ni
teacher.NOM child-3-NOM /child-3-GEN /child-3-ACC **noise make-CAUS-CONV** apple-ACC
aša-Ɂan-i-n] ešit-ti.
eat-NFUT-3-ACC hear-PST

‘The teacher heard that her child ate the apple loudly.’

All three also plausibly contain some degree of functional material relating to tense/aspect, since all can be built from either a non-future participle (*-van* ‘NFUT’) or a future-oriented one (*-riq* ‘FUT’). Most of the examples we have shown so far use *-van*. Example (9) below illustrates the *-riq* form with all embedded subject cases:

(9) *Future marking -riq allowed in all clause types*

Ol [[bala-si-Ø /bala-si-ni /bala-si-n] (tambla) alma-si-n aša-riq-i-n]
 (s)he.NOM child-3-NOM /child-3-GEN /child-3-ACC (tomorrow) apple-3-ACC eat-FUT-3-ACC
 ajt-a-di.
 say-IPFV-3SG
 ‘(S)he is saying that (someone’s) child will be eating his/her apple (tomorrow).’

All three embedded clause types also permit negation:

(10) *Negation in all clause types*

Ustaz [[fatima-ni sabij-i-Ø /sabij-i-ni /sabij-i-n] alma aša-**ma**-van-i-n]
 teacher.NOM fatima-GEN child-3-NOM /child-3-GEN /child-3-ACC apple eat-NEG-NFUT-3-ACC
 kör-dö.
 see-PST
 ‘The teacher saw that Fatima’s child did not eat an apple.’

Unlike embedded clauses with accusative and nominative subjects, those with genitive subjects cannot include a temporal adverb which contradicts the time specified by another such adverb in the matrix clause. This contrast is shown in the examples of (11) below, where the matrix clause is modified by ‘yesterday’, but the embedded one is modified by ‘tomorrow’:

(11) *Tense of GEN subject clause must match that of matrix clause*

- a. Kerim **tünene** [[fatima-ni bala-si-Ø /bala-si-n] **tambla** alim-ni
 Kerim.NOM yesterday Fatima-GEN child-3-NOM /child-3-ACC tomorrow Alim-GEN
 kištig-i-n bağar-liq-i-n] bil-di.
 cat-3-ACC feed-FUT-3-ACC know-PST
 ‘Kerim found out yesterday that Fatima’s child will feed Alim’s cat tomorrow.’
- b. *Kerim **tünene** [[fatima-ni bala-si-ni] **tambla** alim-ni kištig-i-n
 Kerim.NOM yesterday Fatima-GEN child-3-GEN tomorrow Alim-GEN cat-3-ACC
 bağar-liq-i-n] bil-di.
 feed-FUT-3-ACC know-PST
 ‘Kerim found out yesterday that Fatima’s child will feed Alim’s cat tomorrow.’

We therefore hypothesize that embedded clauses with genitive subjects lack T (or perhaps have one that is ‘defective’ (Chomsky 2001) and thus semantically deficient). We also suggest that embedded clauses with genitive subjects are ‘more nominal’ than the others, since they can more easily be used with elements like quantifiers and numerals (though this is not an absolute contrast):

(12) *Nominal modification most natural for genitive subject clauses*

- a. Tünene ustaz [[fatima-ni bala-si-ni^{/?}-Ø^{/?}-n] alma-ni **xar**
 yesterday teacher Fatima-GEN child-3-GEN/-NOM/-ACC apple-ACC **EVERY**
 aša-van-i-n] ešt-gen-di.
 eat-NFUT-3-ACC hear-NFUT-3SG
 ‘The teacher heard every eating of the apple by Fatima’s child yesterday.’

- b. Tünene ustaz [[fatima-ni bala-si-ni/²-Ø/²-n] alma-ni **eki** aša-ʁan-i-n]
yesterday teacher Fatima-GEN child-3-GEN/-NOM/-ACC apple-ACC **TWO** eat-NFUT-3-ACC
ešt-gen-di.
hear-NFUT-3SG
‘The teacher heard two eatings of the apple by Fatima’s child yesterday.’

Ultimately, as (13) below shows, we hypothesize that in genitive subject clauses the non-nominal functional material is dominated by NP and DP. In contrast, we assume the presence of only an NP layer in embedded clauses with nominative and accusative subjects.

(13) *Embedded clause structures (building from Bondarenko (2018))*

Subject case	Nominal structure	Verbal structure
NOM, ACC	NP	CP TP Asp(ect)P vP VP
GEN	DP NP	Asp(ect)P vP VP

3.1. *Embedded subject positions and case assignment*

We posit a distinct position for each type of embedded subject, based on which we derive their interaction with cross-clausal object scrambling. First, we hypothesize that when the embedded clause’s subject is nominative, the subject is assigned case by T and thus A-moves to the specifier of TP:

- (14) *Nominalized clause with nominative subject in spec-TP²*
... [NP [CP [TP **S_{NOM}** [_{vP} t_S O V-v] T [_{uNom}]] C] N] V

Second, we hypothesize that what distinguishes embedded clauses with nominative and accusative subjects is that in the latter type, T lacks the ability to assign nominative case. We thus assume that a subject gains accusative case marking by bypassing TP and landing via A-movement in the edge of CP, where it is accessible for case assignment by the matrix V:³

- (15) *Nominalized clause with accusative subject in spec-CP*
... [NP [CP **S_{ACC}** [TP [_{vP} t_S O V-v] T] C] N] V [_{uAcc}]

That accusative case on an embedded subject is assigned by matrix V is supported by the fact that accusative subjects are banned in clauses that are subjects and thus not in the VP (16), and the fact that when the matrix V cannot assign accusative case, an accusative embedded subject is impossible (17):⁴

- (16) *No ACC subject within a clausal subject*
[[Fatima-ni sabij-i /sabij-i-ni /*sabij-i-n] alma aša-ʁan-i] igi-di.
Fatima-GEN child-3.NOM /child-3-GEN /child-3-ACC apple eat-NFUT-3.NOM good-3
‘That Fatima’s child ate an apple is good.’

²Above, we stated that embedded clauses contain an Asp(ect) phrase, though we omit this from (14) and from all subsequent diagrams for convenience, since this does not affect the present analysis.

³We will assume that CP is a phase. If this is so, in order to be visible for case assignment by matrix V, the embedded subject will indeed need to move to the edge of the CP phase rather than remain in its interior.

⁴In particular, the matrix verb ‘be afraid of’ in (17) assigns ablative case, not accusative. In (17) this ablative marking ends up on the embedded clause itself, not the embedded subject, which must be nominative or genitive. Interestingly, under usual circumstances an embedded clause in object position bears accusative case marking (expressed on the embedded verb), which can co-occur with accusative marking on the embedded subject, as we see for instance in (2) above. We leave an account of such multiple accusative marking aside in this paper: What is important here is that in a configuration like (17), an accusative subject is unavailable, as expected if an embedded subject can only bear accusative case marking if local to a verb that is able to assign it.

- (17) *No ACC subject if matrix V does not independently assign ACC*

Alim [[fatima-ni sabij-i /sabij-i-ni /*sabij-i-n] mašina buz-~~van~~-dan]
 Alim Fatima-GEN child-3.NOM /child-3-GEN /child-3-ACC car break-NFUT-ABL
 qurqu-ruq-du.
 be.afraid-FUT-3

‘Alim will be afraid of Fatima’s child breaking a car.’

Finally, we assume that in embedded clauses with genitive subjects, an absence of T (or perhaps the presence of a totally inert/defective one) is compensated for by merge of D, which assigns case to and triggers A-movement of the subject:

- (18) *Nominalized clause with GEN subject in spec-DP*

... [_{DP} **S_{GEN}** [_{NP} [_{vP} *t_S* O V-v] N] D_[uGen]] V

4. Analyzing the scrambling facts

Following the assumptions of much current work, we take CP and DP to be phases, but not NP and TP (we leave the phasehood of vP aside here). We begin the analysis with embedded nominative subjects, which do not interfere with object scrambling.

If embedded nominative subjects sit in the specifier of a TP dominated by CP as assumed above (14), such subjects are not expected to have any interaction with scrambling of an object from the embedded clause. The object should be able to long-distance scramble via spec-CP without issue, as in (19) below. As we saw in (4) above, such a configuration is indeed acceptable:

- (19) *Nominative subject does not interrupt long-distance object scrambling*

O ... [VP [NP [CP t_O [TP S_{NOM} [vP t_S t_O V-v] T] C] N] V]

In contrast, we have seen that object scrambling from a clause with an accusative subject is usually unacceptable (4). We have hypothesized that accusative subjects skip spec-TP and land in spec-CP, where they are assigned case by the matrix V (15). If CP is a phase, object scrambling from a clause with an accusative subject will have to pass through the CP edge, which in this context the subject also inhabits. Furthermore, following Richards (1997, 1999, a.o.), secondary specifiers formed by movement to a given head are required to tuck-in to a lower specifier of that head. We hypothesize that for this reason, the scrambling object tucks-in to a lower specifier of CP below the accusative subject, as in (20):

- (20) *Predicted tucking-in below ACC subject prior to further object scrambling*

... [_{NP} [_{CP} S_{ACC} O [_{TP} [_{vP} t_S t_O V-v] T] C] N]

If such a structure is indeed the input to attempted scrambling across an accusative subject, we correctly predict the unacceptability of such scrambling with one additional concept. Specifically, if in a multiple specifier configuration the outer specifier must move before the inner one can be accessed (Bošković, 2016), then we indeed expect scrambling of the object to fail here, since this would require illegally extracting the object from a lower specifier of CP:

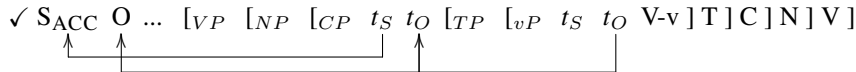
- (21) *No long-distance scrambling of object from lower spec-CP below ACC subject*

$$*O \dots [_{VP} [_{NP} [_{CP} S_{ACC} t_O [_{TP} [_{vP} t_S t_O V-v] T] C] N] V]$$

Importantly, this account accurately predicts that if the accusative subject moves into the matrix clause, then such movement becomes possible for the object as well, as we saw in (6) above. If the accusative

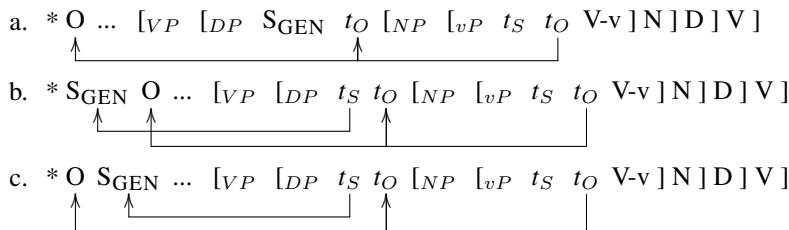
subject moves from the embedded clause after an object scrambles to a spec-CP below it, then that object becomes the outermost phrase remaining in the CP edge. In this context, the object can then move on:⁵

(22) *Object scrambling fed by ACC subject movement*



Above we hypothesized that embedded clauses with genitive subjects include DP, to whose specifier the subject moves for case reasons (18). We have seen that the genitive subject can scramble into the matrix clause (5), which is unsurprising if it occupies the edge of the DP phase prior to the application of any A'-movement. More surprising is the fact that, as we saw in (4/7), object scrambling from such an embedded clause is impossible whether the genitive subject scrambles out or not:

(23) *GEN subject movement never feeds long-distance object scrambling*



This fact is predicted if A'-extraction cannot pass through spec-DP. If this is so, while the genitive subject can A'-move from DP after A-moving to spec-DP for case assignment, an object cannot A'-move through spec-DP regardless of whether the genitive subject moves or not.

Though nothing we have said so far explains why DP should differ from CP (or vP) in this way, a few works have independently made this proposal. Bosque & Gallego (2014) argue that extraction from Spanish DPs cannot occur, and that when it appears to have, reanalysis is involved. Reeve (2018) argues that nominal phrases are phases that uniquely lack edges, and proposes that apparent extraction from them involves base generation in a higher position. van Urk (2019) points out that while nominal phrases have many of the hallmarks of phase-hood, it remains unclear if there is good evidence for successive-cyclic movement from them. Thus there is independent precedent for drawing a distinction between DPs and other phases. Future work should seek to better understand the source of this difference.⁶

⁵In (22), we see a derivation that results in the final order S < O. As we saw in (6) above, this final order is required here. We account for this effect in the following way.

Recall our proposal that an accusative subject sits in the specifier of the embedded CP, and is assigned case by the higher V. Following the proposal of (Bošković, 2016) that only the highest of multiple specifiers of a phase can be accessed for the formation of syntactic dependencies, if an object were to scramble to an outer specifier of CP above the subject rather than to a lower spec-CP, then accusative case assignment to that subject would fail. Thus the order S < O in the embedded CP edge is necessary. When both the accusative subject and object will scramble into the matrix clause, we assume that both bear a scrambling feature (call this [Scr]). Importantly, any head in the matrix clause sensitive to [Scr] will necessarily attract the subject before the object, since in the this configuration the subject is the higher of the two. The object will thus be the second phrase attracted, and so it will tuck-in below the subject again in the edge of the scrambling-triggering head. Any additional scrambling-triggering heads will, for the same reasons, always attract the subject before the object. This maintains the order S < O, as in (22).

⁶Extraction from DPs is of course attested, but as van Urk (2019) points out, the absence of clear evidence for successive cyclic movement via DP edges raises a significant puzzle about how this occurs. One possibility is that extraction from DP, when available, is always facilitated by unlocking of the DP phase under agreement, as posited by Rackowski & Richards (2005) and a number of following works which argue that agreeing with a phase removes the need to extract from it successive-cyclically.

5. Locality and the accessibility of embedded subjects

Here we extend the above concepts to account for some additional properties of embedded subjects. First, we observe that accusative and genitive subjects, but not nominative ones, can be anaphors bound by an antecedent in the matrix clause:

- (24) *Matrix subject can bind only ACC/GEN subject anaphor*⁷

Ustaz_k [CLAUSE [kesi-kes-i-ni/n/*Ø]_k alma aša-ʁan-i-n] ešit-ti
 teacher.NOM self-self-3-GEN/ACC/*NOM apple eat-NFUT-3-ACC hear-PST
 ‘The teacher heard herself eating an apple.’

If binding is phase-bounded just as movement is (Charnavel & Sportiche, 2016; Bošković, 2016), then our hypothesis that accusative and genitive subjects sit in the edge of their respective local phases (CP and DP), while nominative subjects remain in spec-TP, correctly predicts this fact: only a subject that inhabits its local phase edge is accessible for binding by an element outside of that phase.⁸

Second, nominative subjects in Balkar are frozen in place, and thus unlike accusative and genitive ones, cannot move from the embedded clause:⁹

- (25) *No scrambling of NOM subject*¹⁰

*[Fatima-ni bala-si]_k (tünene) ustaz [t_k alma-ni aša-ʁan-i-n]
 Fatima-GEN child-3.NOM (yesterday) teacher.NOM apple-ACC eat-NFUT-3-ACC
 ešt-gen-di.
 hear-NFUT-3
 ‘The teacher heard that Fatima’s child ate an apple (yesterday).’

The impossibility of both the binding of the nominative subject in (24), and its inability to scramble from the embedded clause in (25), would be predicted if there were an independent reason to expect the unavailability of movement from spec-TP to spec-CP. If this movement is banned, then the nominative subject cannot reach the edge of its local phase and thus can never be accessible for dependencies relating to the higher clause, such as binding, or cross-clausal scrambling.

- (26) *To be ruled out: Subject movement from spec-TP to spec-CP*

*[CP DP_{NOM} [TP t_S vP T] C]
 ↑

⁷Since the acceptable accusative and genitive subject anaphors here participate in usual subject agreement, we cannot attribute the illicitness of the nominative subject anaphor to an anaphor agreement effect. If such a principle were active in Balkar, the genitive and accusative variants of this sentence would be unacceptable as well.

⁸This connection between binding and edges is also evident in English, in which an anaphor in an embedded clause must reach the clause edge to be bound by a phrase in the matrix clause (Nissenbaum, 2000):

- (i) a. *Mary₁ said [CP that we should keep [this picture of herself₁]].
 b. Mary₁ said [CP [which picture of herself₁]₂ we should keep t₂].

⁹For some speakers, while scrambling of the nominative subject is usually illegal, it becomes licit if and only if the object also scrambles, provided that O < S word order holds. We must leave this puzzle unsolved for now:

- (i) % Alma-ni_j tünene [fatima-ni sabij-i]_k ustaz [t_k t_j aša-ʁan-in] ešit-ti.
 apple-ACC yesterday Fatima-GEN child-3.NOM teacher.NOM eat-NFUT-3-ACC hear-PST

‘The teacher heard that Fatima’s child ate the apple yesterday. (Also OK: Fatima’s child heard that the teacher ate the apple yesterday.)’

¹⁰This sentence is possible under an interpretation that does not involve scrambling: ‘Fatima’s child heard that the teacher ate an apple (yesterday).’

Such movement is ruled out by the principle of anti-locality pursued by Bošković (2005); Erlewine (2016); Brillman & Hirsch (2016), among others. This principle bans movement from the edge of a given phrase XP to the edge of the phrase that immediately dominates XP.¹¹ This principle prevents movement from spec-TP to spec-CP, but permits movement to spec-CP from lower in the clause. Given our proposal above that accusative and genitive subjects do not pass through spec-TP, but rather move directly to the edges of their respective phases (CP and DP), this account accurately predicts that only these subjects are accessible for binding and further movement from the embedded clause.

Alternatively, one might posit that nominative subjects can move from spec-TP, but that they gain accusative case upon passing through the spec-CP of the embedded clause. However, this analysis does not obviously account for further facts showing that nominative subjects also cannot move covertly.

When an embedded subject is a quantifier phrase, its case affects its possibilities for scope relative to the matrix subject. When the embedded subject is genitive or accusative, either surface scope or inverse scope with respect to the matrix subject is possible:

- (27) [Eki qız] [[**fatima-ni xar** **žaš-i-ni/-n**] šaxar-*wa* bar-*van-i-n*] ešit-ti-le.
 two girl Fatima-GEN every boy-3-GEN/ACC city-DAT go-NFUT-3-ACC hear-PST-PL
 1. *Two* > *every*: ‘There were two girls such that they heard that Fatima’s every boy went to the city.’
 2. *Every* > *two*: ‘For Fatima’s every boy, there were two (potentially different) girls that heard that he went to the city.’

In contrast, when the embedded subject is nominative, only surface scope is available:

- (28) [Eki qız] [[**xar** **žaš**] šaxar-*wa* bar-*van-i-n*] ešit-ti-le.
 two girl every boy-3.NOM city-DAT go-NFUT-3-ACC hear-PST-PL
 1. *Two* > *every*: ‘There were two girls such that they heard that every boy went to the city.’
 2. **Every* > *two*: *‘For every boy, there were two (potentially different) girls that heard that he went to the city.’

This is what we expect if inverse scope is derived by covert Quantifier Raising, an instance of movement. Since cross-clausal movement is independently possible for accusative/genitive subjects, inverse scope via covert movement is possible for them (27). In contrast, anti-locality traps nominative subjects in the embedded clause and thus they cannot take scope over material in the matrix clause (28).

Similar evidence comes from negative polarity items (NPIs). The NPI *kiši-da* for instance, is an NPI pronoun licensed by negation. Though the accusative and genitive forms of this item are entirely syncretic, we can see that when used as an accusative/genitive subject of an embedded clause, either embedded or matrix negation can license it:

- (29) a. Ustaz [**kiši-ni-da** alma aša-**ma**-*van-i-n*] kör-gen-di.
 teacher man-GEN/ACC-PTCL apple eat-NEG-NFUT-3-ACC see-NFUT-3
 ‘The teacher saw that no one ate an apple.’
 b. Ustaz [**kiši-ni-da** alma aša-*van-i-n*] kör-**me**-gen-di.
 teacher man-GEN/ACC-PTCL apple eat-NFUT-3-ACC see-NEG-NFUT-3
 ‘The teacher didn’t see any x such that x ate an apple.’

¹¹This anti-locality hypothesis begs the question of why some languages evidently do allow cross-clausal movement of nominative subjects. English is, of course, such a language. Brillman & Hirsch (2016) suggest following Doherty (1997) that subject extraction in English requires a bare TP complement, which avoids an anti-locality violation and yields the *that*-trace effect:

(i) Who₁ does Bill think (*that) [_{TP} *t*₁ saw John]?

Another account consistent with the relevant principle of anti-locality comes from McCloskey (2000), who hypothesizes that subject extraction in English may proceed directly from spec-vP to spec-CP.

In contrast, when this item is a nominative embedded subject, it must be licensed by embedded negation:

- (30) a. Ustaz [kiši-da alma aša-ma-ɣan-i-n] kör-gen-di.
 teacher man.NOM-PTCL apple eat-NEG-NFUT-3-ACC see-NFUT-3
 ‘The teacher saw that no one ate an apple.’
 b. *Ustaz [kiši-da alma aša-ɣan-i-n] kör-me-gen-di.
 teacher man.NOM-PTCL apple eat-NFUT-3-ACC see-NEG-NFUT-3
 ‘The teacher didn’t see of any x that x ate an apple.’

We hypothesize that when genitive/accusative this NPI is licensed by matrix negation due to inhabiting the edge of its local phase (and potentially covertly moving from it). However, when nominative, this NPI is trapped in the embedded TP by anti-locality, and thus is too far from matrix negation.

Further evidence along these lines comes from the indefinite *kim ese da* (‘someone’). This element is a wide scope indefinite which normally takes scope over clause-mate negation. When this indefinite is an accusative/genitive embedded subject, it obligatorily takes wide scope over matrix negation also:

- (31) Ustaz [kim-ni-ese-da alma aša-ɣan-i-n] ešit-me-gen-di.
 teacher who-GEN/ACC-PTCL-PTCL apple eat-NFUT-3-ACC hear-NEG-NFUT-3
 ‘The teacher didn’t hear that someone ate an apple.’
 $\exists > \neg$: ‘There exists someone about whom the teacher didn’t hear that they ate an apple.’
 $\neg > \exists$: *‘The teacher didn’t hear that anyone ate an apple.’

In contrast, when it is a nominative embedded subject, this element must take narrow scope with respect to matrix negation:

- (32) Ustaz [kim-ese-da alma aša-ɣan-i-n] ešit-me-gen-di.
 teacher who.NOM-PTCL-PTCL apple eat-NFUT-3-ACC hear-NEG-NFUT-3
 ‘The teacher didn’t hear that someone ate an apple.’
 $\exists > \neg$: *‘There exists someone about whom the teacher didn’t hear that they ate an apple.’
 $\neg > \exists$: ‘The teacher didn’t hear that anyone ate an apple.’

Just as in the previous two scenarios, we expect this interpretive constraint if the nominative embedded subject is frozen in the embedded spec-TP and thus cannot move whatsoever, even covertly.

6. Conclusion

Primarily, we have argued that cross-clausal scrambling in Balkar reveals evidence for the following concepts. First, we argued that CP is a phase which allows multiple specifiers provided that *tucking-in* applies (Richards, 1997, 1999). Second, we argued that when a phase has multiple specifiers, their relative structural height determines the order in which they can be accessed by syntactic operations (Bošković, 2016). Third, we argued that DP is a phase which does not allow A'-movement through its edge (Bosque & Gallego, 2014; Reeve, 2018; van Urk, 2019). The relevant patterns also emerge in part from the hypothesis that nominative embedded subjects inhabit TP, while accusative and genitive ones move respectively into CP and DP, which are phases. We went on to relate these findings to asymmetries in the accessibility of embedded subjects, which we argued emerge from the same proposals about phases used to explain the central scrambling facts, along with a particular proposal about anti-locality.

We have observed that other Altaic languages, like Turkish and Buryat, display patterns that resemble these Balkar facts, though we cannot show this due to space constraints. This suggests that the considerations we explored here are not unique to Balkar, but rather are likely more general. Further, our analysis has focused on subjects and objects, but we predict that the various embedded subjects should interact with the scrambling of any non-subject element in the same way, including adjuncts. The judgments of some of our Balkar consultants fit this description, though we have observed inter-speaker variation in this domain. Further research will be necessary to understand these details.

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