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
      \[
      \begin{array}{c}
      [CP_2 \text{ What did you say } [CP_1 \text{ that you ate } t ]]? \\
      \end{array}
      \]
   b. Illegal exit from below edge
      \[
      \begin{array}{c}
      * [CP_2 \text{ What did you say } [CP_1 \text{ that you ate } t ]]? \\
      \end{array}
      \]

In this paper, we use fieldwork data about scrambling from embedded clauses in Balkar (Turkic) to argue for several concepts about phase edges, and the way that they interact with long-distance movement.

Balkar has three types of embedded (nominalized) clauses, which differ based on their subject’s case—nominative (NOM), accusative (ACC), or genitive (GEN), all of which (2) below shows. Throughout 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
    \[
    \begin{array}{c}
    \text{Ustaz teacher}[: \text{Fatima-ni sabilj-i-∅} /sabilj-i-ni /sabilj-i-n] \text{ alma-ni} \\
    \text{Fatima-GEN child-3-NOM}/child-3-GEN/child-3-ACC} \text{ apple-ACC} \\
    \text{aˇsa-iran-i-n} \text{ eat-NFUT-3-ACC} \text{ hear-PST} \\
    \end{array}
    \]
    ‘The teacher heard that Fatima’s child ate her apple.’

Based on differences in the behavior of scrambling from each clause type, we argue for three general concepts about phases and their edges. First, we argue that CP is a phase which allows multiple specifiers provided that tucking-in applies (Richards, 1997, 1999). Second, we argue that the highest of multiple edge constituents within a phase is privileged, such that a higher specifier must move before a lower one can be accessed (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 these 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

Utaz [CLAUSE tauuš et-dir-ip] alma-ni₃k [bala-si-∅ /#bala-si-ni
teacher.NOM noise make-CAUS-CONV apple-ACC child-3-NOM /child-3-GEN
/#bala-si-n] tₗ aša-iran-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 an the embedded object scramble into the matrix clause (4):

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

Alma-ni₃k ustaz [CLAUSE tₗ [fatima-ni sabij-i-∅/ni/∅-n] tₗ
apple-ACC teacher.NOM Fatima-GEN child-3-NOM/GEN/#ACC
aša-iran-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 can scramble into the matrix clause, as we see in (5):

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

[Fatima-ni bala-si-ni/n₃]ₗ ustaz [CLAUSE tₗ alma-ni aša-iran-i-n ]
Fatima-GEN child-3-GEN/ACC teacher.NOM apple-ACC eat-NFUT-3-ACC
eš-t-gen-di.
hear-PART-3

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

Importantly, when an accusative subject scrambles from an embedded clause, its clause-mate embedded object can do so as well. The final order S < O is necessary in this situation (6a vs. 6b):

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-iran-i-n] ešit-ti.
makes-CAUS-CONV apple-ACC eat-NFUT-3-ACC hear-PST

‘The teacher heard that her child ate the apple loudly.’
Accusative subject scrambling feeds long object scrambling

a. [Fatima-ni sabij-i-ni]k tünenec alma-ni ustaz [CLAUSE lk tj]
   Fatima-GEN child-3-ACC yesterday apple-ACC teacher.NOM
   eat-NFUT-3-ACC hear-PST
   ‘The teacher heard that Fatima’s child ate the apple yesterday.’

b. *Alma-ni j tünenec [fatima-ni sabij-i-ni]k ustaz [CLAUSE lk tj]
   apple-ACC yesterday Fatima-GEN child-3-ACC teacher.NOM
   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 object scrambling of any form:

Genitive subject scrambling does not feed object scrambling

a. *[Fatima-ni sabij-i-ni]k tünenec alma-ni ustaz [CLAUSE lk tj]
   Fatima-GEN child-3-GEN yesterday apple-ACC teacher.NOM
   eat-NFUT-3-ACC hear-PST
   ‘The teacher heard that Fatima’s child ate the apple yesterday.’

b. *Alma-ni j tünenec [fatima-ni sabij-i-ni]k ustaz [CLAUSE lk tj]
   apple-ACC yesterday Fatima-GEN child-3-GEN teacher.NOM
   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, object scrambling succeeds if that
subject is accusative provided that the accusative subject scrambles into the matrix clause as well. These
are the patterns that we focus on explaining in this paper.

3. Background: Characteristics of Balkar embedded clauses

All the embedded clauses we consider here behave like nominals: they have agreement marking
matching that seen in nominal phrases (specifically possessive constructions), appear in argument
positions, and carry case morphology. All also have some verbal properties, however. We hypothesize
the following embedded clause structures:

<table>
<thead>
<tr>
<th>Case of the subject</th>
<th>Nominal structure</th>
<th>Verbal structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOM, ACC</td>
<td>NP</td>
<td>CP TP AspP vP VP</td>
</tr>
<tr>
<td>GEN</td>
<td>DP NP</td>
<td>AspP vP VP</td>
</tr>
</tbody>
</table>

All three clause types have at least enough verbal structure to host VP-level adverbs, as (9) below shows
with a manner adverb:

VP-level adverb in all clause types

Ustaz [ [bala-si-∅ /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-tran-i-n] ešš-ti.
   eat-NFUT-3-ACC hear-PST
   ‘The teacher heard that her child ate the apple loudly.’

All clause types also permit negation:
(10) **Negation in all clause types**

Ustaz [fatima-ni sabij-i-∅ /sabij-i-ni /sabij-i-n] alma aša-ma-iran-i-n

teacher.NOM fatima-GEN child-3-NOM /child-3-GEN /child-3-ACC apple eat-NFUT-3-ACC

cör-dö.

see-PST

‘The teacher saw that Fatima’s child did not eat an apple.’

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 (-an ‘NFUT’) or a future-oriented one (-riq ‘FUT’). Most examples shown so far use -an. Example (11) below illustrates -riq:

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

Ol [bala-si-∅ /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).’

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. For instance, as (12b) shows, an attempt to modify the embedded clause with ‘tomorrow’ when the matrix verb is in the past and is modified with ‘yesterday’ leads to unacceptability.

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


Kerim.NOM yesterday Fatima-GEN child-3-NOM /child-3-ACC tomorrow Alim-GEN

kištig-i-n ḫurar-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

barar-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 may be in a sense ‘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):

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

a. Tünene ustaz [[fatima-ni bala-si-ni/*-∅/*-n] alma-ni xar

yesterday teacher Fatima-GEN child-3-GEN/*-NOM/*-ACC apple-ACC EVERY

aša-iran-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/*-∅/*-n] alma-ni eki aša-iran-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.’

We hypothesize that genitive subject clauses are unique in containing the DP layer, as (8) showed, while those with nominative and accusative subjects contain a more minimal amount of nominal structure, perhaps just NP. This thus leaves us with a two-way split in clause types, which will expand to a three-way distinction, once we consider the properties of each variety of embedded subject.
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-TP**

\[\ldots [\text{CP} [\text{TP} \text{S}^{\text{nom}} [\text{vP} \text{O V-v} | \text{T} | \text{C} | \text{N} ]] \text{V}]\]

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:

(15) **Nominalized clause with accusative subject in spec-CP**

\[\ldots [\text{NP} [\text{CP} \text{S}^{\text{acc}} [\text{vP} \text{O V-v} | \text{T} | \text{C} | \text{N} ]] \text{V}]\]

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

(16) **No ACC subject within a clausal subject**

\[
\text{Fatima-gen child-3.NOM /child-3-gen /child-3-ACC apple eat-NFUT-3.NOM good-3}
\]

‘That Fatima’s child ate an apple is good.’

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

\[
\text{Alim }\text{Fatima-gen child-3.NOM /child-3-gen /child-3-ACC car break-NFUT-ABL}
\]

\[
\text{be.afraid-FUT-3}
\]

‘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**

\[\ldots [\text{DP} \text{S}^{\text{gen}} [\text{NP} [\text{vP} \text{O V-v} | \text{N} ]] \text{D}^{\text{gen}} ] \text{V}]\]

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 interact 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 scramble via spec-CP straightforwardly with no issues, as in (19) below. As we saw in (4) above, such a configuration is indeed acceptable:

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

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

\[4\text{In particular, the matrix verb ‘be afraid of’ in (17) independently assigns ablative case, not accusative. In the embedding configuration in (17), this ablative marking ends up on the embedded clause itself, not the embedded subject. What is important, however, is that accusative case for the embedded subject is impossible here, unlike numerous configurations shown above where the matrix verb assigns accusative case, which is expressed both on the embedded clause and (potentially) its subject as well.}\]
Nominative subject does not interact with long-distance object scrambling

O ... \[ V_P \quad [N_P \quad [C_P \quad t_O \quad [T_P \quad \text{S}_{\text{NOM}} \quad [v_P \quad t_S \quad t_O \quad \text{V-v} \quad T \quad C \quad N \quad V] \quad N] \quad V] \quad N] \quad V] \quad N] \quad V] \quad N] \quad V]

In contrast, we have seen that object scrambling from a clause with an accusative subject is usually unacceptable (4). We 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 should be 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):

Predicted tucking-in below ACC subject prior to further object scrambling

... \[ N_P \quad [C_P \quad \text{S}_{\text{ACC}} \quad O \quad [T_P \quad [v_P \quad t_S \quad t_O \quad ...] \quad T \quad C \quad N \quad N] \quad V] \quad N] \quad V] \quad N] \quad V]

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:

No scrambling object from spec-CP below ACC subject

* O ... \[ V_P \quad [N_P \quad [C_P \quad t_O \quad [T_P \quad [v_P \quad t_S \quad t_O \quad \text{V-v} \quad T \quad C \quad N \quad N] \quad V] \quad N] \quad V] \quad N] \quad V]

Importantly, this understanding accurately predicts that if the accusative subject moves into the matrix clause, then such movement of the object becomes possible as well, as we saw in (6) above. After the accusative subject moves, the scrambled object in spec-CP is, at that time, the highest specifier of CP, and thus can move as well:

Object scrambling fed by ACC subject movement

✓ \[ S_{\text{ACC}} \quad O \quad ... \quad [V_P \quad [N_P \quad [C_P \quad t_S \quad t_O \quad [T_P \quad [v_P \quad t_S \quad t_O \quad \text{V-v} \quad T \quad C \quad N \quad N] \quad V] \quad N] \quad V] \quad N] \quad V]

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:

GEN subject movement never feeds long-distance object scrambling

a. * O ... \[ V_P \quad [D_P \quad \text{S}_{\text{GEN}} \quad t_O \quad [N_P \quad [v_P \quad t_S \quad t_O \quad \text{V-v} \quad N \quad D \quad V] \quad N] \quad D \quad V] \quad N] \quad D \quad V] \quad N] \quad D \quad V]
b. * S_{\text{GEN}} \quad O ... \quad [V_P \quad [D_P \quad t_S \quad t_O \quad [N_P \quad [v_P \quad t_S \quad t_O \quad \text{V-v} \quad N \quad D \quad V] \quad N] \quad D \quad V] \quad N] \quad D \quad V]

\(^5\)In (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: the order O < S is not acceptable (6b). We assume that the derivation that gives rise to this effect is as follows. First, within vP, the scrambling object tucks-in beneath the in situ subject. Since in this configuration the subject is the outermost specifier of vP, this element must be attracted to C before the scrambling object. Being attracted second, that object will tuck-in below the subject within CP as well, as (22) shows. From here, the accusative subject and object will both scramble into the matrix clause. Thus we assume that both bear a feature relevant to scrambling (call this [Scr]). Any head in the matrix clause sensitive to [Scr] will necessarily attract the subject before the object, both because at this point the subject is the higher specifier of CP, and because of superiority. The object will thus be the second phrase to move, and so it will tuck-in below the subject once more. Any additional scrambling-triggering heads will, for the same reasons, always attract the subject before the object, maintaining the order S < O.
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 suggestion. 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 solid evidence for successive-cyclic movement through them. Thus it appears that a distinction between DPs and other phases must be maintained, but a deeper explanation of this fact is beyond the scope of this paper.  

5. Extension: 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*

\[
\text{Ustaz}_k \quad \text{[CLAUSE [kesi-k\text{-}kes-i-n/n/*\emptyset]_k \quad \text{alma aša\text{-}iran\text{-}i-n] \quad eši\text{-}ti.}}
\]

\[
\text{[teacher.NOM \quad self\text{-}self\text{-}3\text{-}GEN/ACC/*NOM \quad apple \text{-}NFUT\text{-}3\text{-}ACC \quad hear-PST]}
\]

‘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 the formation of a binding dependency with an element outside of that phase.  

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

\[\text{\%Alma-n}_1 \quad \text{j} \quad \text{apple-A\text{-}ACC \quad t\text{-}b\text{-}t\text{-}j aša\text{-}iran\text{-}i-n \quad eši\text{-}ti.}
\]

\[\text{[teacher.NOM \quad child\text{-}3.NOM \quad eat\text{-}NFUT\text{-}3\text{-}ACC \quad hear-PST]}
\]

‘The teacher heard that Fatima’s child ate the apple yesterday. (Also OK: Fatima’s child heard that the teacher ate the apple yesterday.)’
No scrambling of NOM subject

*[Fatima-ni bala-si]1] (tunene) ustaz [t_h alma-ni aša-iran-i-n]
Fatima-GEN child-3.NOM (yesterday) teacher.NOM apple-ACC eat-NFUT-3-ACC
eši-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.

To be ruled out: Subject movement from spec-TP to spec-CP

Such movement is ruled out by the formulation of anti-locality in Brillman & Hirsch (2016) and Erlewine (2016), who argue for the impossibility of movement from a specifier of a given phrase to the specifier of the next highest phrase. This concept prevents movement from spec-TP to spec-CP, but permits movement to spec-CP from lower in the clause. Given our conclusion above that accusative and genitive subjects bypass spec-TP and move directly to the edges of their respective phases (CP and DP) for case assignment, this theory 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, but that they gain accusative case marking upon passing through spec-CP in order to exit the clause. Such an analysis is invalidated by a number of additional facts which reveal that nominative subjects cannot move covertly either, as expected if they are truly frozen in place.

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 are possible:

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:

Another account consistent with such anti-locality comes from McCloskey (2000), who suggests based on facts about stranding in West Ulster English that subject extraction may proceed directly from spec-vP to spec-CP.

Alternatively, we might posit that the ban on nominative subject scrambling comes from pressure to parse the scrambled nominative subject as the subject of the matrix clause, causing a garden path effect. Under such an analysis, it is not obvious why English speakers would not have comparable trouble with a sentence like (i):

(i) John1, Mary thinks [ t1 likes this kind of food].

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

11This anti-locality hypothesis begs the question of why some languages evidently do allow cross-clausal scrambling 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 the locality problem and yields the that-trace effect:

(i) Who1 does Bill think (*that) [TP t1 saw John ]?
(28) [Eki qiz] [xar žaš] šaxar-ıra bar-ıran-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 the needed cross-clausal movement is possible for accusative/genitive subjects, inverse scope via covert movement is possible for them (27), whereas for locality reasons nominative subjects are trapped in the embedded clause and thus 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 syncretism of the accusative and genitive of this item prevents distinguishing these cases, we can see that when used as an accusative/genitive subject of an embedded clause, either embedded or matrix negation can license it:

teacher man-GEN/ACC-PTCL apple eat-NEG-NFUT-3-ACC see-NFUT-3
‘The teacher saw that no one ate an apple.’
teacher man-GEN/ACC-PTCL apple eat-NEG-NFUT-3-ACC see-NEG-NFUT-3
‘The teacher didn’t see of any x that x ate an apple.’

When this element is a nominative embedded subject, it must be licensed by embedded negation:

teacher man.NOM-PTCL apple eat-NEG-NFUT-3-ACC see-NFUT-3
‘The teacher saw that no one ate an apple.’
teacher man.NOM-PTCL apple eat-NFUT-3-ACC see-NEG-NFUT-3
Expected: ‘The teacher didn’t see of any x that x ate an apple.’

We argue that this NPI can covertly move into a negated matrix clause in order to be licensed, when it is an accusative/genitive embedded subject. In contrast, when this NPI is a nominative embedded subject, it can only be licensed by clause-mate negation, since it cannot escape the clause in which it originates.

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:

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.’
∃ >¬: ‘There exists someone about whom the teacher didn’t hear that they ate an apple.’
¬ >∃: *‘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:

teacher who.NOM-PTCL-PTCL apple eat-NFUT-3-ACC hear-NEG-NFUT-3
‘The teacher didn’t hear that someone ate an apple.’
∃ >¬: *‘There exists someone about whom the teacher didn’t hear that they ate an apple.’
¬ >∃: ‘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 cannot exit its local clause, even covertly.
6. Conclusion

We have argued that patterns of cross-clausal scrambling in Balkar reveal evidence for the following concepts. #1: That CP is a phase which allows multiple specifiers provided that tucking-in applies (Richards 1997; 1999). #2: That the highest phrase in a multiple specifier phase is privileged, such that the higher specifier must move before the lower one can be accessed. (Bošković 2016). #3: 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). These results stem 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 this result to asymmetries in the accessibility of embedded subjects, which we argue emerge from the same proposals about phases used to explain the central interactions of object scrambling and embedded subjects, along with a particular version of anti-locality.

While space concerns prevent showing this, we observe that other Altaic languages, like Turkish and Buryat, display patterns that resemble these Balkar facts, suggesting that the interactions we explore here are not unique Balkar, but manifestations of more general principles. Our analysis has focused on the interaction of subject and object scrambling, but we predict that subject should interact with scrambling of any variety of non-subject element, including adjuncts, in the same way. The judgments of some of our Balkar consultants fit this description, though we have observed inter-speaker variation in this domain, which further research will be necessary to understand in detail.

References


van Urk, Coppe (2019). A taxonomy of successive cyclicity effects. Unpublished manuscript, QMUL.