

Uyghur Genitive Subjects and the Phase Impenetrability Condition*

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1 Introduction

In this talk, we discuss embedding constructions in Uyghur (Turkic; Xinjiang Uyghur Autonomous Region, China), illustrated in (1) and (2).¹

Complex NP:

- (1) [men-ij ket-ken-(liq)] heqiqet-**im** muhim
[I-gen leave-RAN-(LIQ)] fact-**1sg.poss** important
'The fact that I left is important.' (Uyghur)

Verb complement:

- (2) Ötkür [Ajgül-nu ket-ken-(lik)-I-ni] bil-i-du/di-d-i
Ötkür [Aygül-gen leave-RAN-(LIQ)-**3.poss-acc**] know-impf-3/say-past-3
'Ötkür knows/said that Aygül left.' (Uyghur)

We show that:

- Despite first appearances, possessor agreement shows up in the same place in (1) and (2). Possessor agreement in (2) is on a null head noun.
- *-liq* is a complementizer, so (1) and (2) display agreement across a CP boundary.

Outline:

Section 2. Background: D-licensing vs. C-licensing of genitive embedded subjects in Altaic, and the location of possessor agreement as a diagnostic for type of licensing.

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¹The Uyghur data in this handout comes from the authors' fieldwork.

Section 3. Uyghur data: *Apparent* evidence of both D-licensing and C-licensing in Uyghur, depending on the type of embedded clause.

Section 4. Proposal: Genitive subjects in Uyghur are uniformly licensed by D. Phonologically null head nouns in Uyghur can produce the appearance of clause-internal licensing.

Section 5. Size of the embedded clause: Uyghur embedded clauses with genitive subjects can be full CPs. Contra Kornfilt (2008) and Miyagawa (to appear), D-licensing does not always correspond to a reduced embedded clause.

Section 6. Discussion: Consequences for the theory of phases. Agreement across a CP boundary in Uyghur and other languages.

2 Background

Genitive subjects of embedded clauses have long been discussed in the Altaic literature. Two types of licensing have been proposed for genitive subjects:

- D-licensing: Genitive is licensed by a *clause-external D head*.
- C-licensing: Genitive is licensed by a *clause-internal C head*.

The placement of possessor agreement with the genitive subject has been used as a diagnostic for D-licensing vs. C-licensing. (Kornfilt (2008))

- agreement on external noun → D-licensing
- agreement on verbal complex → C-licensing

C-licensing: agreement on verbal complex in Turkish:

- (3) [ben-im al-diğ-**ım**] at iyi-dir
[I-gen buy-C-**1sg**] horse good-is
'The horse I bought is good.' (Turkish) (Miyagawa (to appear): 3, citing Jaklin Kornfilt (p.c.))

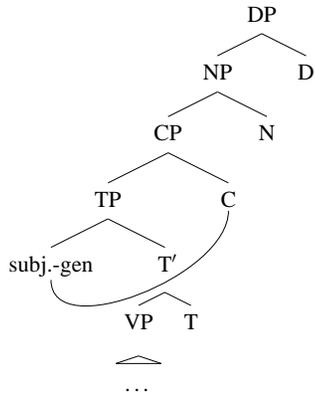
D-licensing: agreement on external head-noun in Dagur:

- (4) [mini au-sen] mer^v-**min**^v sain
[I-gen buy-perf] horse-**1sg** good
'The horse I bought is good.' (Dagur) (Hale (2002): 1)

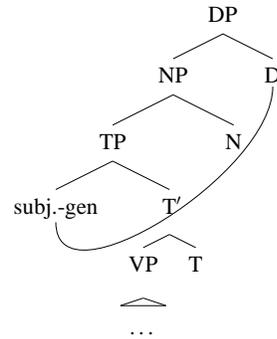
It has been proposed that the variation in genitive licensing correlates with the size of the embedded clause. (Kornfilt (2008), Miyagawa (to appear), see also Hale (2002))

- C-licensing occurs when the embedded clause is a full CP.
- D-licensing occurs when the embedded clause is reduced (TP/AspP).

(5) a. **C-licensing:**



b. **D-licensing:**



3 D-licensing vs. C-licensing in Uyghur

Applying the agreement-placement diagnostic to Uyghur, we find mixed results.

(6) **Agreement with Uyghur genitive subjects:**

agreement on external N:	agreement on verbal complex:
<ul style="list-style-type: none"> • relative clauses • complex NPs 	<ul style="list-style-type: none"> • verb complements • adjective complements • postposition complements • sentential subjects

On our analysis, agreement that looks to be on the verbal complex is actually on a *null* external head noun. Uyghur is thus uniformly D-licensing.

3.1 Agreement on external N in Uyghur (vs. Turkish)

In Uyghur, agreement with genitive subjects is on the external head noun in:

- relative clauses
- complements to nouns

Relative Clauses – agreement on N:

- (7) [Ötkür-niñ oqu-Ɂan] kitav-i uzun
[Ötkür-gen read-RAN] book-3.poss long
'The book that Ötkür read is long.' (Uyghur)

- (8) [men-ij ji-gen] tamaq-**im** jaxƙi
[I-gen eat-RAN] food-1sg.poss good
'The food I ate is good.' (Uyghur)

Noun complements – agreement on N:

- (9) [Ötkür-niñ tamaq ji-gen-(liq)] ifaret-i muhim
[Ötkür-gen food eat-RAN-(LIQ)] sign-3.poss important
'The sign that Ötkür ate food is important.' (Uyghur)
- (10) [men-ij ket-ken-(liq)] heqiqet-**im** muhim
[I-gen leave-RAN-(LIQ)] fact-1sg.poss important
'The fact that I left is important.' (Uyghur)

In these environments, agreement placement in Uyghur contrasts with agreement placement in Turkish. Agreement always shows up on the verbal complex in Turkish.

Turkish relative clause – agreement on verbal complex (= (3)):

- (11) [ben-im al-dıđ-**ım**] at iyi-dir
[I-gen buy-C-1sg] horse good-is
'The horse I bought is good.' (Turkish) (Miyagawa (to appear): 3, citing Jaklin Kornfilt (p.c.))

Turkish complex NP – agreement on the verbal complex:

- (12) [ben-im aile-m-i terket-tiđ-**ım**] söylenti-si
[I-gen family-1sg-acc abandon-C-1sg] rumor-cmpm
'the rumor that I abandoned my family' (Turkish) (Kornfilt (2003))

Further evidence for D-licensing in Uyghur is provided by the following paradigm. We observe from case-marking on possessors that a single D head cannot assign genitive twice.

Two meanings for possessors:

- (13) Aǵgöl-nuñ resim-i
Aygül-gen picture-3.poss
'picture that belongs to Aygül' or
'picture that depicts Aygül'

But no double possessors:

- (14) *Ötkür-niñ Aǵgöl-nuñ resim-i
Ötkür-gen Aygül-gen picture-3.poss
intended: 'picture that depicts Aygül and belongs to Ötkür'

We find the same effect with genitive-marked subjects: they are in complementary distribution with genitive-marked possessors. This contrasts with *unmarked* embedded subjects, which are compatible with possessors.

Possessed head noun – RC subject must be unmarked:

(15) [Ötkür oqu-**Ɓan**] Ajgül-nuñ kitav-i uzun
[Ötkür read-RAN] Aygül-gen book-3.poss long
'Aygül's book that Ötkür read is long.'

(16) *[Ötkür-niñ oqu-**Ɓan**] Ajgül-nuñ kitav-i uzun
[Ötkür-gen read-RAN] Aygül-gen book-3.poss long
intended: 'Aygül's book that Ötkür read is long.'

So far it looks like genitive subjects in Uyghur are always licensed by D.

3.2 Agreement on verbal complex

In Uyghur, agreement with genitive subjects is on the verbal complex in:

- complement clauses to verbs, adjectives, postpositions
- subject clauses

Verb complement – agreement on the verbal complex:

(17) Ötkür [Ajgül-nuñ ket-ken-(lik)-i-ni] bil-i-du/di-d-i
Ötkür [Aygül-gen leave-RAN-(LIQ)-**3.poss-acc**] know-impf-3/say-past-3
'Ötkür knows/said that Aygül left.' (Uyghur)

Adjective complement – agreement on the verbal complex:

(18) men [Tursun-niñ tamaq-ni yi-gin-i-din] χufal
I [Tursun-gen food-acc eat-RAN-**3.poss-abl**] happy
'I am happy that Tursun ate the food.' (Uyghur)

Postposition complement – agreement on the verbal complex:

(19) [Tursun-niñ ket-ken-(lik)-i] utfun, men tamaq ji-d-im
[Tursun-gen leave-RAN-(LIQ)-**3.poss**] because, I food eat-past-1sg
'Because Tursun left, I ate.' (Uyghur)

Sentential subject – agreement on the verbal complex:

(20) [sen-iñ kel-gen-(liq)-**iñ**] meni χufal kil-d-i
[you-gen come-RAN-(LIQ)-**2sg.poss**] I-acc happy do-past-3
'Your coming made me happy.' (Uyghur)

3.3 Summary of Uyghur agreement placement

(21) **Agreement placement in Uyghur:**

Type of subordinate clause:	Agreement appears on:
Relative clauses:	clause-external head noun
Complement clauses to N:	clause-external head noun
Complement clauses to V/A/P:	clause-internal verbal complex
Sentential subject:	clause-internal verbal complex

We *reject* the following interpretation of these facts:

- Overt agreement placement straightforwardly diagnoses the licensing head.
- The licensing of genitive subjects in Uyghur is simply not uniform. Uyghur employs D-licensing in RCs and complement clauses to nouns, and C-licensing in sentential subjects and complement clauses to V/A/P.

Instead, we *propose*:

- **Uyghur is uniformly D-licensing.**
- **The appearance of C-licensing is due to the fact that embedding nouns can be null in Uyghur.**

4 Null nouns

The idea that some subordinate clauses are embedded by null head nouns has been proposed before in the Altaic literature. (See Lees (1965), Aygen (2002) for Turkish; Maki and Uchibori (2008) for Japanese, but cf. Kornfilt (1984, 2003) for arguments against this analysis for Turkish, and Takahashi (2009) for arguments against this analysis for Japanese.) In this section we argue that, for Uyghur, the null head noun analysis:

- straightforwardly accounts for the agreement pattern in (21)
- allows us to maintain that genitive subjects are licensed in a uniform way across subordinate clause types
- is empirically motivated by similarities between null nouns and their overt counterparts
- is plausible on independent grounds, since null head nouns are attested elsewhere in Uyghur

To illustrate, consider again the example in (22) below.

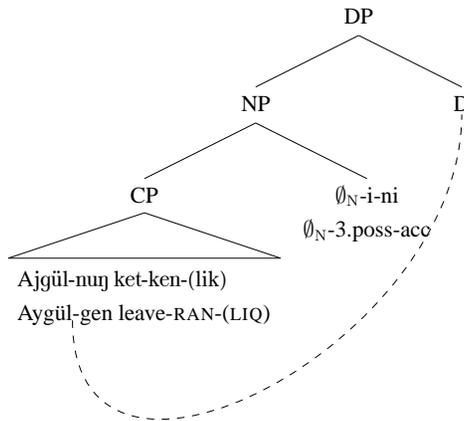
Verb complement – agreement on the verbal complex (= (17)):

(22) Ötkür [Ajgül-nuñ ket-ken-(lik)-i-ni] bil-i-du/di-d-i
Ötkür [Aygül-gen leave-RAN-(LIQ)-**3.poss-acc**] know-impf-3/say-past-3
'Ötkür knows/said that Aygül left.' (Uyghur)

We propose that:

- The embedded clause in (22) is a complement to a null head noun, which is then embedded by the verb.
- The null head noun is the real host of the agreement and case-marking that morphologically shows up on the verbal complex. This creates the illusion of clause-internal licensing.
- Uyghur embedded clauses of the type we are discussing are always embedded by nouns, either overt or null.

(23) Structure for embedded clause in (22):



This analysis has the major advantage of keeping the locus of possessor agreement (and the licensing of genitive subjects) uniform across all types of embedded clauses. We present several types of evidence for the null head-noun analysis below.

4.1 The overt head noun test

It is always possible to make the null noun overt. This includes:

- complement clauses to verbs
- complement clauses to adjectives
- sentential subjects

Null/overt N's with complements to verbs:

- (24) Ötkür [Tursun-niñ tamaq yi-gen] Ø_N-i-ni bil-i-du/di-d-i
 Ötkür [Tursun-gen food eat-RAN] Ø_N-3.poss-acc know-impf-3/say-past-3
 'Ötkür knows/said that Tursun ate food.' (Uyghur)

- (25) Ötkür [Tursun-niñ tamaq yi-gen] heqiqet-i-ni bil-i-du/di-d-i
 Ötkür [Tursun-gen food eat-RAN] fact-3.poss-acc know-impf-3/say-past-3
 'Ötkür knows/said the fact that Tursun ate food.' (Uyghur)

- (26) [sen-iñ tamaq yi-gen] Ø_N-iñ-ni afkarli-d-im
 [you-gen food eat-RAN] Ø_N-2sg.poss-acc reveal-past-1sg
 'I revealed that you ate the food.' (Uyghur)

- (27) [sen-iñ tamaq yi-gen] mexpijet-iñ-ni afkarli-d-im
 [you-gen food eat-RAN] secret-2sg.poss-acc reveal-past-1sg
 'I revealed the secret that you ate the food.' (Uyghur)

Null/overt N's with complements to adjectives:

- (28) men [Tursun-niñ tamaq-ni yi-gin] Ø_N-i-din χuƣal
 I [Tursun-gen food-acc eat-RAN] Ø_N-3.poss-abl happy
 'I am happy that Tursun ate the food.' (Uyghur)

- (29) men [Tursun-niñ tamaq-ni yi-gin] heqiqet/χever-i-din χuƣal
 I [Tursun-gen food-acc eat-RAN] fact/news-3.poss-abl happy
 'I am happy with the fact/news that Tursun ate the food.' (Uyghur)

Null/overt N's with sentential subjects:

- (30) [sen-iñ kel-gen-(liq)] Ø_N-iñ mini χuƣal kil-d-i
 [you-gen come-RAN-(LIQ)] Ø_N-2sg.poss I-acc happy do-past-3
 'Your coming made me happy.' (Uyghur)

- (31) [sen-iñ kel-gen] χever-iñ mini χuƣal kil-d-i
 [you-gen come-RAN] news-2sg.poss I-acc happy do-past-3
 'The news that you came made me happy.' (Uyghur)

4.2 Null nouns share properties of their overt counterparts

In this section, we show that null nouns behave like their overt counterparts in terms of:

- case on the embedded subject
- relationship to the subordinate clause (relative clause vs. complement)

4.2.1 Idiosyncratic properties

Certain head nouns impose idiosyncratic restrictions on their embedded clauses.

- Genitive RC subjects are generally in free variation with unmarked RC subjects.
- RCs headed by the overt noun *waqit* ('time') strongly prefer unmarked subjects.

Restriction against genitive subjects w/ *waqit* ('time'):

- (32) [sen-(??iŋ) ket-ken] waqit-(??iŋ) saet jette idi
[you-(??gen) leave-RAN] time-(??2sg.poss) hour 7 was
'The time that you left at was 7 o'clock.' (Uyghur)
- (33) [sen-(*iŋ) ket-ken] waqit-(*iŋ)-din kiyin, men tamaq ji-d-im
[you-(*gen) leave-RAN] time-(*2sg.poss)-abl after, I food eat-past-1sg
'After the time when you left, I ate.' (Uyghur)

The null counterpart of *waqit* ('time') imposes the same restriction.

Restriction against genitive subjects w/ null variant of *waqit* ('time'):

- (34) [sen-(*iŋ) ket-ken-(*iŋ)-din] kiyin, men tamaq ji-d-im
[you-(*gen) leave-RAN-(*gen)-abl] after, I food eat-past-1sg
'After you left, I ate.' (Uyghur)

- If (34) contains a null head noun, the ungrammaticality of (34) is reducible to that of (33).
- If the clause in (34) were embedded directly by the postposition, its ungrammaticality would require an independent explanation.

4.2.2 Noun complements vs. relative clauses

As discussed in more detail below, *-liq* is optionally present in noun complements, but is incompatible with relative clauses.

***-liq* in a noun complement clause:**

- (35) [Tursun-niŋ ket-ken-(liq)] heqiqet-i
[Tursun-gen leave-RAN-(LIQ)] fact-3.poss
'the fact that Tursun left' (Uyghur)

No *-liq* in a relative clause:

- (36) [sen ket-ken-(*liq)] waqit
[you leave-RAN-(*LIQ)] time
'the time when you left' (Uyghur)

We also find that *-liq* is allowed in embedding by some postpositions and not others, as (37) and (38) illustrate.

***-liq* possible:**

- (37) [Tursun-niŋ ket-ken-(lik)-i] utfun, men tamaq ji-d-im
[Tursun-gen leave-RAN-(LIQ)-3.poss] because, I food eat-past-1sg
'Because Tursun left, I ate.' (Uyghur)

No *-liq*:

- (38) [sen ket-ken-(*liq)-din] kijin, men tamaq ji-d-im
[you leave-RAN-(*LIQ)-abl] after, I food eat-past-1sg
'After you left, I ate.' (Uyghur)

- The contrast between (37) and (38) is not an idiosyncratic property of different postpositions.
- Rather, *-liq* is prohibited precisely in those contexts where the noun phrase that combines with the postposition contains a relative clause rather than a clausal complement.

Consider:

***-liq* in a noun complement clause:**

- (39) [Tursun-niŋ ket-ken-(liq)] heqiqet-i utfun, men tamaq ji-d-im
[Tursun-gen leave-RAN-(LIQ)] fact-3.poss because, I food eat-past-1sg
'Because of the fact that Tursun left, I ate.' (Uyghur)

No *-liq* in a relative clause:

- (40) [sen ket-ken-(*liq)] waqit-din kijin, men tamaq ji-d-im
[you leave-RAN-(*LIQ)] time-abl after, I food eat-past-1sg
'After the time when you left, I ate.' (Uyghur)

Given our proposal that the clauses in (37) and (38) are embedded by null nouns, the contrast between (37) and (38) is exactly the same as the contrast between (39) and (40). In (37), the null noun embeds a complement clause, and *-liq* is therefore permitted. In (38), the null noun takes a relative clause, and *-liq* is banned. Without the null noun proposal, the contrast between (37) and (38) would remain mysterious.

What we have proposed so far:

- Uyghur genitive subjects are uniformly licensed by clause-external D heads.
- The appearance of C-licensing is the result of *null head nouns*.

4.3 Null head nouns elsewhere in Uyghur

Null head nouns are independently attested in a similar Uyghur construction, which shows the same agreement placement. We argue that "headless" RCs, illustrated in (41) and (42) are in fact headed by null nouns.

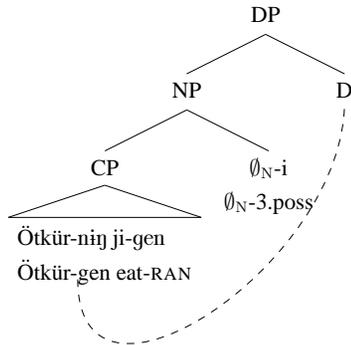
"Headless" RCs:

- (41) [Ötkür-niŋ ji-gen-i] jaɣfi
[Ötkür-gen eat-RAN-3.poss] good
'What Ötkür ate is good.'

- (42) [men-iŋ al-ɓan-im] nan/qizil
[I-gen buy-RAN-1sg.poss] bread/red
'The thing I bought is bread/red.'

We assume the following structure.

- (43) "Headless" RC structure:



What we proposed:

- The apparent "C-licensing" discussed above is the same phenomenon as seen in (43).
- Verbs, postpositions, etc. do not directly embed a clause, but rather embed a complex DP with a null head noun.
- In both cases, the null head noun is the real host of the agreement (and case) that shows up on the clause.

5 -liq and the size of the embedded clause

In this section, we turn to the properties of the morpheme *-liq* and the corresponding implications for the size of the embedded clause in Uyghur. We observed *-liq* in many of the examples above; it appears optionally at the right of the verbal complex, between *-ran* (an aspectual morpheme) and any agreement or case markers. This is illustrated in (2), repeated as (44) below:

Verb complement:

- (44) Ötkür [Aŋgöl-nuŋ ket-ken-(lik)-i-ni] di-d-i
Ötkür [Aygöl-gen leave-RAN-(LIQ)-3.poss-acc] say-past-3
'Ötkür said that Aygöl left.' (Uyghur)

5.1 -liq is a complementizer

- We analyze *-liq* as a complementizer that introduces clausal complements to (possibly null) nouns.
- An alternative analysis, superficially consistent with the example above: *-liq* is itself a nominalizer that attaches to the embedded clause. This analysis would explain why *-liq* seems to bear nominal morphology.
- Examining the behavior of *-liq* more closely, we highlight three properties that are expected on the complementizer analysis, but not straightforwardly consistent with the nominalizer analysis.

5.1.1 Distribution of -liq

- The availability of *-liq* crucially depends on the syntactic type of the embedded clause.
- Specifically, *-liq* is available in complement clauses, as shown in (45) and (46), but not in relative clauses, as shown in (47):

Optional -liq in complement clauses (= (1) and (2), respectively):

- (45) [men-iŋ ket-ken-(lik)] heqiqet-im muhim
[I-gen leave-RAN-(LIQ)] fact-1sg.poss important
'The fact that I left is important.' (Uyghur)
- (46) Ötkür [Aŋgöl-nuŋ ket-ken-(lik)-i-ni] di-d-i
Ötkür [Aygöl-gen leave-RAN-(LIQ)-3.poss-acc] say-past-3
'Ötkür said that Aygöl left.' (Uyghur)

No -liq on RC:

- (47) [Ötkür-niŋ oqu-ɓan-(*lik)] kitav-i uzun
[Ötkür-gen read-RAN-(*LIQ)] book-3.poss long
'The book that Ötkür read is long.' (Uyghur)

- It is crosslinguistically common to observe different complementizer possibilities for different types of embedded clauses (see, e.g., Hiraiwa (2000) for Japanese *to* vs. \emptyset , and Richards (1999) for Tagalog and English).
- This distributional pattern is not characteristic of a nominalizer.

5.1.2 The placement of nominal morphology

In example (46), repeated again below, *-liq* immediately precedes the possessor agreement and case markers.

Optional -liq in complement clauses (= (2)):

- (48) Ötkür [Aŋgöl-nuŋ ket-ken-(lik)-i-ni] di-d-i
Ötkür [Aygöl-gen leave-RAN-(LIQ)-3.poss-acc] say-past-3
'Ötkür said that Aygöl left.' (Uyghur)

- This placement is expected on the nominalizer analysis, where *-liq* simply creates the nominal category that hosts these suffixes.
- It is also expected on our complementizer analysis, where the host of these suffixes is a null head noun that embeds a clausal complement headed by *-liq*, producing the same linear order.

But now consider the example of the complex NP in (45), repeated below.

Optional *-liq* in complement clauses (= (1)):

- (49) [men-ij ket-ken-(**liq**)] heqiqet-im muhim
[I-gen leave-RAN-(**LIQ**)] fact-1sg.poss important
'The fact that I left is important.' (Uyghur)

No possessor agreement on *-liq* in noun complement clause:

- (50) *[Ötkür-nij ket-ken-liq-i] heqiqet-(i) muhim
[Ötkür-gen leave-RAN-LIQ-3.poss] fact-(3.poss) important
intended: 'The fact that Ötkür left is important.' (Uyghur)

- Here the clause is embedded by an overt head noun, and possessor agreement appears on this overt noun rather than on *-liq*.
- Indeed, *-liq* cannot bear possessor agreement in complements to overt nouns, as shown in (50).
- We conclude that *-liq* does not itself create a category that hosts nominal morphology. It merely *appears* to create a nominal category when its subordinating noun is null, as in (48).
- When this noun is made overt, as in (49), the placement of agreement reveals that the head noun, rather than *-liq*, is the true source of the nominal category.
- This behavior is straightforwardly expected of a complementizer, since there is no reason to suspect it would create a nominal category.

5.1.3 Optionality

- In all cases where *-liq* is available, it is optional (or optionally null), as the preceding examples have illustrated.
- No difference in meaning between minimal pairs with and without *-liq*.
- Optionality is common for complementizers—many languages have null complementizers or allow complementizer-drop (see Stowell (1981), Pesetsky and Torrego (2001), Bošković and Lasnik (2003), Kishimoto (2006) for discussion).
- No well-known examples, to our knowledge, of systematic optionality for a piece of category-changing derivational morphology such as a nominalizer.

5.1.4 In summary

We have identified three distinctive properties of *-liq*:

Properties of *-liq*:

- (51) a. It is sensitive to the type of the embedded clause.
b. It does not reliably create a category that hosts nominal agreement and case-marking.
c. It is optional and can be dropped without obvious semantic effects.
- This cluster of properties is characteristic of a complementizer. We therefore analyze *-liq* as a complementizer that introduces clausal complements to overt and null nouns², and conclude that Uyghur genitive subjects appear in full-CP embedded clauses.³

5.2 Corroborating evidence that Uyghur *-liq*-clauses are CPs: Miyagawa's Test

Miyagawa (to appear) examines the familiar *-ga/-no* paradigm, and argues for a D-licensing approach to GEN subjects in Japanese. The claim is that:

- Embedded clauses with NOM subjects are CPs.
- Embedded clauses with GEN subjects are reduced (TPs).

One piece of evidence: CP-level adverbs (e.g., 'evidently', 'truly', 'fortunately'; Cinque (1999)) are compatible with NOM-subject embedded clauses, but not with GEN-subject embedded clauses.

CP-level adverb with NOM subject only:

- (52) [**saiwai-ni** taroo-**ga**/*-**no** yonda] hon
[**fortunately** Taro-**nom**/*-**gen** read] book
'the book that Taro fortunately read' (Japanese) (Miyagawa (to appear), ex. 26a)

In contrast, lower TP-level adverbs are compatible with both NOM and GEN subj embedded clauses.

TP-level adverb with NOM or GEN subject:

- (53) [**kitto** taroo-**ga**/*-**no** yonda] hon
[**probably** Taro-**nom**/*-**gen** read] book
'the book that Taro probably read' (Japanese) (Miyagawa (to appear), ex. 26b)

- If Miyagawa's test reliably diagnoses size of the embedded clause, we should be able to extend it to Turkish and Uyghur.

²Uyghur has another complementizer, *dep*, which introduces true clausal complements to verbs, and embeds fully tensed TPs.

³To implement the optionality of *-liq*, we assume that Uyghur has a null complementizer " \emptyset ", and that *-liq* and \emptyset differ in their distribution. In complement clauses, either *-liq* or \emptyset is available. In relative clauses, \emptyset is the only option.

- Prediction for Turkish, a C-licensing language: CP-level adverbs should be compatible with GEN-subject embedded clauses.

This prediction is borne out. Turkish embedded clauses allow CP-level adverbs.

CP-level adverb with GEN subject:

- (54) [**anlaşılan** öğrenci-ler-**in** oku-duk-lar] kitap
 [**evidently** student-pl-**gen** read-DIK-3.pl] book
 ‘the book which the students evidently read’ (*Turkish*) (Jaklin Kornfilt (p.c.))

Prediction for Uyghur:

- If Uyghur *-liq*-clauses are indeed full CPs, Uyghur should pattern like Turkish and allow CP-level adverbs in GEN-subj embedded clauses.
- If Uyghur *-liq*-clauses are reduced, Uyghur should pattern like Japanese and disallow CP-level adverbs in GEN-subj embedded clauses.

As illustrated in the examples below, Uyghur does indeed allow CP-level adverbs in GEN-subject embedded clauses.

CP-level adverbs with GEN subject:

- (55) [**xeqiqi** Ajgül-**niñ** jaz-ban] kitiv-i-ni korset!
 [**truly** Aygül-**gen** write-RAN] book-3-acc show
 ‘Show (me) the book that Aygül truly wrote!’ (*Uyghur*)
- (56) [**xeqiqi** men-**in** jayfi kör-i-gen] tamaq-im-ni ber!
 [**truly** I-**gen** well see-impf-RAN] food-1sg-acc give
 ‘Give (me) the food that I truly like!’ (*Uyghur*)
- (57) **xeqiqi** sen-**in** ket-ken-lik-in-ni bil-i-men
truly you-**gen** leave-RAN-LIQ-2sg-acc know-impf-1sg
‘I know that you truly left.’
 ‘I truly know that you left.’ (*Uyghur*)

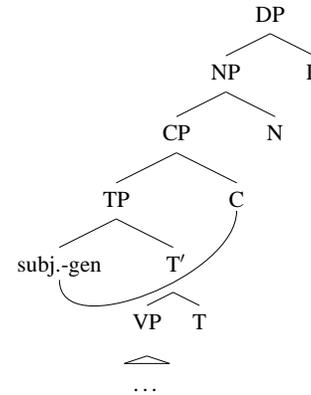
6 Implications of the analysis

6.1 What we have seen

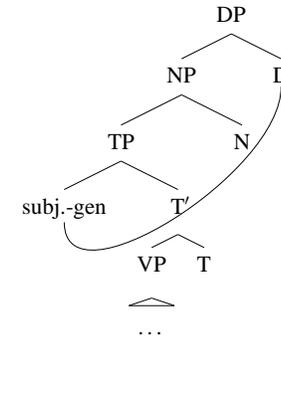
Recall Kornfilt’s (2008) proposal:

- C-licensing occurs when the embedded clause is a full CP.
- D-licensing occurs when the embedded clause is reduced (TP/AspP).

(58) a. **C-licensing:**



b. **D-licensing:**

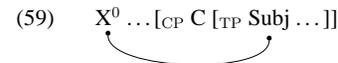


- Prediction: C-licensing vs. D-licensing should correlate with size of the embedded clause.
- Uyghur, on our analysis, poses a challenge to this correlation.

We have argued that:

- Uyghur is a D-licensing language.
- The embedded clauses that house genitive subjects at least *can* be full CPs. They contain an overt complementizer (*-liq*), and are able to host CP-level adverbs.
- *-liq* is a C head, but it appears to be transparent for purposes of Agreement/Case-assignment by a higher head D.

We have thus argued that Uyghur displays agreement across a CP boundary:



This is surprising in the context of Chomsky’s (1998) Phase Impenetrability Condition.

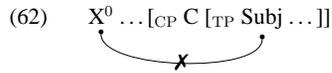
Chomsky’s (1998) Phase Impenetrability Condition (PIC_{strong}):

- (60) In phase α with head H, the domain of H is not accessible to operations outside α , only H and its edge are accessible to such operations.

In the case at hand:

- (61) a. $\alpha = \text{CP}$
 b. $H = C$
 c. domain of H = TP

Predicted by PIC_{strong}:



- So the PIC_{strong} seems to be in direct conflict with the Uyghur data.
- However, some version of the PIC_{strong} remains desirable, in order to account for familiar and crosslinguistically robust patterns like the following:

English data supporting the PIC_{strong}:

(63) a. John seems [TP t to be sick.]



b. *John seems [CP that t is sick.]



(64) a. I consider [TP her to be intelligent.]



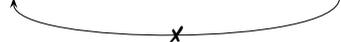
b. *I consider [CP (that) her is intelligent.]



(65) a. What do you think [CP t (that) Mary bought t?]



b. *What do you wonder [CP who bought t?]



So the PIC is probably worth preserving. Data seemingly violating the PIC have been handled in several ways in the literature:

Approaches to data seemingly in conflict with the PIC:

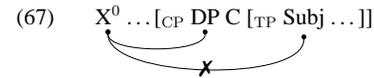
- (66) a. The DP agreed with is at the *edge* of CP, and the PIC is not actually violated. (Polinsky and Potsdam (2001) for Tsez, Branigan and MacKenzie (2002) for Innu-aimûn, Şener (2008) for Turkish)
- b. The weaker formulation of the PIC proposed in Chomsky (2001) should be adopted. (Martins and Nunes (2010) for Brazilian Portuguese)
- c. C can be *defective* (C_{def}), i.e. not a phase head that counts for PIC purposes. (Carstens and Diercks (to appear) for Lubukusu (Bantu))

We show below:

- option (66a) is not viable for Uyghur
- options (66b) and (66c) are viable for Uyghur, with some evidence favoring option (66b)

6.2 Agreement at the edge of CP

The PIC_{strong} *does* allow agreement and case-assignment across a CP boundary, as long as the target noun phrase is at the *edge* of CP.



Uyghur genitive subjects do not appear to occupy this CP-edge position overtly. E.g., they can be preceded in the clause by adverbial phrases, as shown below:

Genitive subject preceded by locative:

(68) [sobun-da Mehemmet-niñ oqu-ğan] kitav-i uzun
 [party-loc Mehemmet-gen read-RAN] book-3.poss long
 ‘The book that Mehemmet read at the party is long.’ (Uyghur)

It has been proposed that *topics* move to the edge of CP, sometimes covertly. Consequently, agreement with embedded topics can cross a CP boundary without violating the PIC_{strong}.

- Case-assignment to topics across a CP boundary is shown in (69). Agreement with topics across a CP boundary is shown in (70) and (71b).
- As shown below, Uyghur genitive subjects need not be topics, so it would be unmotivated to propose that they move to the edge of CP covertly.

Turkish ECM – embedded subject is a topic:

- (69) Q: Mert’ in partisine herkes gitmiş mi?
 ‘Do you know if everyone (he invited) went to Mert’s party?’
 A: Mert’le konuşmadım ama ...
 ‘I haven’t talked to Mert but ...’
- a. Pelin [yalnızca **Sinan** git-ti diye] duy-muş.
 Pelin [only **Sinan-nom** go-past C] hear-evid.past
 ‘Pelin heard that only Sinan went (to the party).’
- b. #Pelin [yalnızca **Sinan-ı** git-ti diye] duy-muş.
 Pelin [only **Sinan-acc** go-past C] hear-evid.past
 ‘Pelin heard that only Sinan went (to the party).’ (Turkish, Şener (2008): 48)

To account for raising out of CPs in Brazilian Portuguese, Martins and Nunes (2010) combine PIC_{weak} with a raising *v* that *is not* a strong phase.

Raising out of CP in Brazilian Portuguese:

(79) Os meninos [_{VP} *v* parecem [_{CP} que *t* viajaram ontem.]
the boys [_{VP} *v* seem-3PL [_{CP} **that** *t* traveled-3PL yesterday]]

‘The boys seem to have traveled yesterday.’ (*Brazilian Portuguese*, Martins and Nunes (2010): 3a)

On this kind of analysis of Brazilian Portuguese, the phase head status of raising *v* thus varies across languages (e.g. Brazilian Portuguese vs. English).⁴ Note that our analysis of Uyghur along these lines makes no claims about the status of *v*.

6.4 Defective C

An alternative proposal is that C can be *defective*, and *-liq* is an instance of defective C (C_{def}).

- In phase theory (Chomsky (1998) et seq.) “defectivity” encodes the fact that certain phasal categories seem to be transparent for locality of Agreement/movement (e.g., defective *v* in passives and unaccusatives).
- Defectivity of a head is sometimes tied to other properties: ϕ -featural incompleteness, inability to license case, etc.
- Here we remain neutral on the correlates of defectivity, and use “defective” simply to describe *a phase head across which Agree operations are possible*.
- Defective C has been the subject of many recent proposals (Sabel (2006); Gallego (2007); Gallego and Uriagereka (2007); Fortuny (2008); M. Richards (2007, 2009); Wenger (2009)), but empirical evidence has been scant.

6.4.1 Previous, very conceptual arguments for defective C

- C_{def} fills a gap in the inventory of Core Functional Categories (CFCs). (Gallego and Uriagereka (2007), Richards (2007))
- C_{def} is the logical extension of the Chomsky’s (2005) “feature-inheritance” between C and T. (Richards (2007, 2009))
- Gallego (2007) proposes that all defective clausal domains are introduced by C_{def}.

⁴Alternatively, (78b) may be ruled out through other means.

C_{def} in English raising/Exceptional Case Marking (ECM) clauses: (Gallego (2007):176)

- (80) a. John_i seems to Mary [C_{def} t_i to T_{def} [t_i *v** like Susan]] (*Raising*)
b. Mary_i believes [John V [C_{def} t_i to T_{def} [t_i *v** like Susan]]] (*ECM*)

- Suspiciously, C_{def} is null here.
- The crucial question: Do we ever see overt C_{def}? Specifically, do we ever see agreement or case-marking over an overt complementizer that is not accounted for by either of the two approaches above?⁵

6.4.2 Defective C in Lubukusu (Bantu)

Carstens and Diercks (to appear) argue that Lubukusu displays raising out of CP.

Raising across C in Lubukusu:

(81) Chisaang’i chi-lolekhana [_{CP} mbo t chi-kona]
10animal 10SA-seem [_{CP} that t 10SA-sleep.PRS]

‘The animals seem to be sleeping.’ (*Lubukusu*, Carstens and Diercks (to appear): (11b))

Carstens and Diercks (to appear) propose that:

- *mbo* is syntactically relatively low (lower than ‘because’).
- *mbo* is in contrast with a higher complementizer, *li*.
- A low complementizer in Lubukusu does not head a (strong) phase.

If some Cs are phase heads and some are not, we might expect to see cross-linguistic correlates of defectivity. One candidate property is that the embedded TP is not fully inflected (see above), but this does not apply to Lubukusu.

6.5 Summary

Three ways in which case-assignment, raising and/or agreement across a CP boundary has been reconciled with the Phase Impenetrability Condition:

Approaches to data seemingly in conflict with the PIC:

- (82) a. The DP agreed with is at the *edge* of CP, and the PIC is not actually violated. → This seems right for some constructions, but is not an appropriate analysis for Uyghur genitive subjects.
b. The weaker formulation of the PIC proposed in Chomsky (2001) should be adopted. → This may be the right treatment for Uyghur genitive subjects.

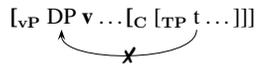
⁵Gallego (2007) suggests that the complementizers introducing subjunctive clauses in Romance are C_{def}, based on the fact that they don’t delimit binding domains. However, binding is not reliable test for defective phasehood, because binding domains do not reliably correspond to strong phases in the first place.

c. C can be *defective*, i.e. not a phase head for the PIC. → This may be the right treatment for Uyghur genitive subjects.

- We saw that the (82a) is not motivated by the Uyghur facts.
- What hinges on selecting the analysis in (82b) vs. (82c)?

Empirical predictions – PIC_{weak} vs. C_{def}:

PIC_{weak}: A relationship *cannot* be established across both C and a higher phase boundary. For example, raising to the specifier of a higher vP will be banned:



C_{def}: A relationship *can* be established across both C and a higher phase boundary. For example, raising to the specifier of a higher vP is possible:



Asarina (in prep.) suggests that the structure shown above is ruled out in Uyghur, resulting in ungrammaticality of examples like (83), where *kirek* ('necessary') is a raising predicate.⁶

No raising out of CP:

(83) * $[_{TP} \text{Mehemmet-(nuj)}] [_{vP} [_{CP} t \text{ oqu-wat-} \nu \text{-} \text{ban-liq-i}] \text{ kirek } \nu]$
 $[_{TP} \text{Mehemmet-(gen)}] [_{vP} [_{CP} t \text{ read-prog-RAN-LIQ-3.poss}] \text{ necessary } \nu]$

intended: 'Mehemmet has to be reading (right now).'

7 Conclusions and consequences

Conclusions for Uyghur:

- Genitive subjects of subordinate clauses are uniformly licensed by a clause-external D-head.
- Genitive-subject clauses are embedded by (optionally null) head nouns.
- Null head nouns in Uyghur give rise to the *illusion* of clause-internal licensing.
- Genitive subjects in Uyghur can be licensed across an overt C⁰(-liq).

Consequences for the cross-linguistic variation in licensing of genitive embedded subjects in Altaic:

- The difference between D-licensing and C-licensing is not reducible to a difference in size of embedded clause.
- It *is* reducible, we argue, to the lexical properties of phase heads—in particular, the case-licensing property of C⁰.

⁶Asarina (in prep.) argues that the nominalized phrase in (83) is not a full DP, which means that even if DPs are phases, the nominal structure is not what blocks raising.

- For C-licensing languages (Turkish), we concur with Kornfilt (2008): a “nominalizing” C⁰ (-dik) is able to license genitive case. It can therefore agree with the embedded subject and host possessor agreement.
- For at least one D-licensing language (Uyghur), we have proposed that C⁰ (-liq) *cannot* license genitive case. Therefore, the closest licenser is the higher phase head D⁰, which agrees with the embedded subject and hosts possessor agreement.
- Avenue for further research: Do other D-licensing languages have counterparts to Uyghur -liq?

Broader consequences:

- Uyghur presents a rare example of agreement/case-assignment across an overt C⁰.
- Yet another motivation for modified approaches to phase impenetrability.
- A weaker version of PIC, combined with cross-linguistic variation in lexical properties of C⁰, can account for both the theoretical and empirical challenge.
- I.e., we have a prospective answer to the question of *why* and where agreement over a CP boundary is possible.

A The case alternation

As mentioned above, genitive subjects alternate with unmarked ones.⁷

Complex NPs:

(84) [men-ij ket-ken-(liq)] heqiqet-**im** muhim
 [I-gen leave-RAN-(LIQ)] fact-**1sg.poss** important
 ‘The fact that I left is important.’ (Uyghur)

(85) [men ket-ken-(liq)] heqiqet muhim
 [I leave-RAN-(LIQ)] fact important
 ‘The fact that I left is important.’ (Uyghur)

Relative clauses:

(86) [Ötkür-nij oqu-**ban**] kitav-**i** uzun
 [Ötkür-gen read-RAN] book-**3.poss** long
 ‘The book that Ötkür read is long.’ (Uyghur)

(87) [Ötkür oqu-**ban**] kitap uzun
 [Ötkür-gen read-RAN] book long
 ‘The book that Ötkür read is long.’ (Uyghur)

⁷The alternation seems to be free for overtly-headed clauses. For null-headed complement clauses, unmarked subjects must be low-scoping (“non-specific”) indefinites.

There is no overt nominative case in Uyghur. This complicates the interesting question as to the case status of Uyghur embedded subjects. Possible answers:

- **Nominative always assigned:** Both unmarked and genitive subjects are assigned nominative case, which can be overwritten (or stacked) with genitive case.
Pros: Case-assigning properties of the verbal morphology are kept constant. (There is no direct support for not doing so.)
Cons: We must make non-standard assumptions about case-assignment – no Activity Condition or ban on multiple case assignment.
- **Nominative sometimes assigned:** Only unmarked subjects receive nominative case.
Pros: The case properties of the subject are in line with standard assumptions.
Cons: Case-assigning properties of the verbal morphology are not kept constant.
- **Nominative case never assigned:** (Unmarked) subjects do not need to be case-licensed. (Shklovsky and Sudo (2010))
Pros: Case-assigning properties of the verbal morphology are kept constant.
Cons: Requires non-standard (but perhaps correct) assumptions about case.

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