Raising in Uyghur

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Abstract

In this paper, I discuss the properties of raising constructions in Uyghur, a Turkic language spoken in Central Asia. Uyghur exhibits Raising of genitive subjects, which I argue are structurally case-marked. This makes untenable the Activity Condition proposed by Chomsky (1998, 2001). Genitive case assignment to subjects of embedded CPs in Uyghur is also in conflict with the strong version of the Phase Impenetrability Condition proposed by Chomsky (1998). On the basis of Uyghur data, I thus argue in favor of the weaker version of the Phase Impenetrability Condition proposed by Chomsky (2001). Chomsky's (2001) Phase Impenetrability Condition prohibits raising out of CPs, but does not block genitive case assignment.

1 Introduction

In this paper, I argue against the Activity Condition (Chomsky 1998, 2001), and for a weak version of the Phase Impenetrability Condition (Chomsky 2001). My evidence comes from raising constructions in Uyghur, a Turkic language spoken in Central Asia. I begin with a discussion of some English data that motivate the Activity Condition (AC) and the Phase Impenetrability Condition (PIC). The two proposals make overlapping predictions for raising possibilities in English. Consider the following data illustrating the English raising paradigm:

- (1) Infinitive:
 - a. John seems [t to like tea.]
 - b. *It seems [John to like tea.]
- (2) Tensed clause:
 - a. *John seems [(that) t likes tea.]
 - b. It seems [(that) John likes tea.]

The raising predicate seem can embed an infinitival clause, as in (1a), with the embedded subject raising to the matrix subject position. Seem can also embed a tensed clause, as in (2b), and take an expletive subject. Raising out of an infinitive clause embedded by seem is obligatory, as seen in (1b). However, the subject of a tensed clause embedded by seem cannot raise to the matrix subject position, as (2a) demonstrates. Unfortunately, the English examples (1a) and (2a) do not form a minimal pair. They differ in the following ways:

- (3) a. **Tense:** The embedded clause that permits raising is an infinitive. The embedded clause that prohibits raising is tensed.
 - b. **Agreement:** The embedded clause that permits raising does not show agreement with the subject. The embedded clause that prohibits raising does show agreement with the subject.
 - c. Case: No case is assigned to the subject in the embedded clause that permits raising (Chomsky 1995). Case (nominative) is assigned to the subject in the embedded clause that prohibits raising.
 - d. Clause size: The embedded clause that permits raising is a TP (though see Gallego 2007; Richards 2007, to appear). The embedded clause that prohibits raising is a CP.

A priori, any one of the factors in (3), or a combination of these factors, could be responsible for raising being permitted in (1a) but not in (2a). At least two conditions that predict the contrast have featured prominently in the literature: the Activity Condition (given in (4)), and the Phase Impenetrability Condition, two versions of which are given in (5).

- (4) Activity Condition (AC): A goal must be active (i.e. bear some unvalued feature) to be a valid target for Agree. (adapted from Chomsky 2001)
- (5) a. Chomsky's (1998) Phase Impenetrability Condition (PIC_{strong}): 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.
 - b. Chomsky's (2001) Phase Impenetrability Condition (PIC_{weak}): In phase α with head H, the domain of H is accessible to operations outside α only until the next (strong) phase head is merged.

The AC and the PIC both rule out (2a) (repeated as (6b)), but for different reasons.

(6) a. John seems [t to like tea.]
b. *John seems [(that) t likes tea.]

Under the AC, the crucial difference between (6a) and (6b) is (abstract) case assignment. In (6b), but not in (6a), the subject is assigned case in the embedded clause. It thereby loses its only unvalued feature, Case, and cannot be targeted for agreement and raising by the matrix T. Under the PIC, the relevant contrast is the "size" of the embedded clause, and specifically whether or not it is a *phase*. The embedded CP in (6b) is a phase, whereas the embedded TP in (6a) is not. Under the PIC_{strong}, the phasehood of CP suffices to block raising out of the embedded clause. Under the PIC_{weak}, raising out of the embedded clause is also prohibited on the assumption that v, including raising v, is a strong phase. The embedded subject in (6b) cannot agree with the matrix T and raise across both the CP and vP boundaries, as the embedded TP (i.e. the domain of C) is spelled out as soon as matrix v is merged. The embedded TP in (6a) is not the complement of a phase head, so raising is permitted.

For either version of the PIC to rule out raising out of CP, we must assume that raising cannot proceed through the specifier of the embedded CP. Since the edge of CP is spelled out later than the domain of C (i.e. TP), neither implementation of the PIC would block raising from the specifier of CP. However, raising through the specifier of CP would violate the *ban on improper movement* (Chomsky 1973; May 1979), which prohibits A-bar movement (e.g. to the specifier of CP) that is followed by A-movement (e.g. raising). Various accounts for the ban on improper movement have

been proposed (van Riemsdijk and Williams 1981; Müller and Sternefeld 1993; Obata and Epstein 2008). I will simply take it as a given (for English and for Uyghur). Note that under the PIC_{weak} the complement of C becomes opaque *immediately* when the next strong head (the matrix v) is merged. There is thus no opportunity for an embedded subject to raise from the embedded TP to the specifier of the matrix vP – this movement would violate the PIC_{weak} . Consequently, under both versions of the PIC, only the specifier of the embedded CP is potentially an "escape hatch" for movement out of the embedded CP.

The AC and the PIC (either variant) thus both rule out raising out of a CP in English. The overlap between the AC and the PIC has been observed in the literature. Nevins (2004) argues that the AC is incorrect, and that its effects are better explained by other rules of the grammar, including the PIC. Stjepanović and Takahashi (2001) argue that the effects of the PIC should be reduced to other principles, while Bošković (2005) proposes that neither the AC nor the PIC should be assumed. In Uyghur embedding constructions, case and embedded clause size can vary independently, which makes it possible to distinguish the effects of the AC and the PIC. The ability of the embedded subject to raise does not correlate with its case properties, which argues against the validity of the AC. Availability of raising does depend on the size of the embedded clause, which supports the PIC. In particular, the PIC $_{weak}$ makes the right predictions for Uyghur, whereas the PIC $_{strong}$ incorrectly rules out genitive case assignment into an embedded CP.

The rest of the paper is structured as follows. In section 2, I present an analysis of Uyghur nominalized embedding constructions. I use both syntactic and semantic tests to pinpoint the structural position of the embedded subject. In section 3, I turn to raising embedding predicates. Determining whether raising takes place in a head-final language like Uyghur is a non-trivial task, and I provide several independent types of supporting evidence. I also show that the Activity Condition is incompatible with Uyghur data. In section 4, I present data on nominalized CP embedding, and propose an analysis that supports Chomsky's (2001) version of the Phase Impenetrability Condition. Section 5 concludes.

2 Nominalized vP embedding by non-raising predicates

In this section, I introduce an Uyghur nominalized embedding construction. I demonstrate the nominal nature of the embedded clause based on the possessor agreement and case morphology it can bear. I suggest that an embedded clause with a genitive subject is essentially a possessed DP, with the genitive subject moving to the specifier of DP. I show that a subject that is not marked genitive remains inside vP, and must correspondingly be a low-scoping ("non-specific") indefinite, as observed by Diesing (1992) for other languages. The availability of a high-scope or definite interpretation for a noun phrase in Uyghur thus diagnoses its having moved to a position outside vP.

2.1 Nominalization

In this section, I argue that embedded phrases bearing the suffix -ish (henceforth -ish phrases) are nominal. An -ish phrase is illustrated in (7), with a simple possessed DP shown for comparison in (8).

(7) Possessed -ish phrase:
men-*(iη) kitap oqu-ʃ-im muhim/exmijetlik
I-*(gen) book read-ISH-1sg.poss important/useful
'My reading a book is important/useful.'

(8) Possessed DP: men-*(ɨŋ) kitav-im muhim/exmijetlik I-*(gen) book-1sg.poss important/useful 'My book is important/useful.'

Two points of similarity between (7) and (8) suggest that -ish phrases are nominal. One is that the subject of an -ish phrase bears the same case as a possessor (genitive). The second is that the -ish phrase bears possessor agreement.

The possessee in Uyghur agrees with the possessor in person and number. Possessor agreement matches the past tense agreement paradigm except for the first person plural form, which matches the present/future agreement paradigm. First person plural agreement on an -ish phrase and on a simple possessee is illustrated in (9), and contrasted with past tense agreement in (10). The correspondence between agreement on -ish phrases and past tense agreement for other personnumber combinations can be seen in examples throughout the paper.

- (9) a. Possessor agreement on -ish phrase:
 - biz-nɨŋ oqu-ʃ-**imɨz** jaχʃi we-gen read-ISH-**1pl.poss** good 'Our reading is good.'
 - b. Possessor agreement on possessee:
 biz-niŋ kal-imiz
 we-gen cow-1pl.poss
 'our cow'
- (10) Past tense agreement:
 biz χet jaz-d-uq
 we letter write-past-1pl.past
 'We wrote a letter.'

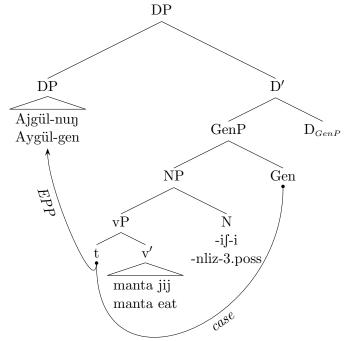
A third indicator that -ish phrases are nominal is their ability to bear case-marking. There is no overt nominative morphology, so this fact was not evident in the examples above. Accusative case-marking on an -ish phrase, however, is seen in (11a), where the -ish phrase is the object of a verb. The -ish phrase may also bear ablative case as the quirky object of qorqmaq ('to fear'), as seen in (11b).

- (11) Nominalized vP embedded by a verb:
 - a. Otkür [Ajgül-nuŋ manta jij-iʃ-i-**ni**] ojli-wat-i-du Ötkür [Aygül-gen manta eat-ISH-3.poss-**acc**] imagine-prog-impf-3 'Ötkür is imagining Aygül eating manta.'
 - b. men [Ajgül-nuŋ ömütʃük jij-iʃ-i-din] qorq-i-men I [Aygül-gen spider eat-ISH-3.poss-abl] fear-impf-1sg 'I'm afraid of Aygül eating spiders.'

2.2 -ish phrase structure

I propose that -ish is a nominalizing suffix that selects for a vP. The genitive subject of an -ish phrase is generated in the specifier of a vP and moves to the specifier of DP, as illustrated in (12).

(12) Structure of an -ish phrase embedded by a non-raising predicate:



I propose that the functional projection Gen assigns genitive case to the *-ish* phrase subject, which is the closest DP. Gen is an independent functional projection, and not a feature of D, as the *-ish* phrases discussed in section 3 are smaller than DP but nevertheless license genitive case for their subjects. I further suggest that there are two variants of D in Uyghur, presented in (13).

(13) D in Uyghur:

 D_{GenP} : selects for GenP, has EPP

 D_{NP} : selects for NP, does not have EPP

In the remainder of this section, I provide evidence that the verbal part of an *-ish* phrase is a vP (and not larger) and that the subject of the *-ish* phrase is generated in the verbal domain. In the following section, I further demonstrate that the genitive subject moves out of the vP.

No morpheme may intervene between the verb root and -ish. In particular, negation and aspectual morphology, which may appear in the nominal clauses discussed in section 4, are prohibited in -ish phases. The lack of negation and aspect in -ish phrases is expected if -ish selects a bare vP.

- (14) No negation in -ish phrase: men-iŋ oqu-(*mas)-i∫-im muhim I-gen read-(*neg)-nliz-1sg.poss important 'My (*not) reading is important.'
- (15) No aspect in -ish phrase:

 *men-iŋ oqu-(wat)-ʁan-iʃ-im muhim

 I-gen read-(prog)-RAN-nliz-1sg.poss important
 intended: 'My {having read}/{reading right now} is important.'

The theta-role properties of the -ish phrase subject indicate that it is generated inside vP, and not as part of the nominal structure. Kratzer (1996) observes for English gerunds that a subject generated in the verbal domain is more restricted in its theta-role than a subject generated in the

nominal domain.

- (16) a. Subject generated in verbal domain restricted theta-role: Ötkür('s) reading "Response to Years" is important.
 - b. Subject generated in nominal domain unrestricted theta-role: Ötkür's reading of "Response to Years" is important.

In (16a), Ötkür has to be the agent of the reading event, i.e. the reader. He cannot, for example, be the organizer or the host of the reading, as is possible in (16b). The semantic difference between (16a) and (16b) corresponds to a structural difference in the base position of the subject. It has been proposed since Abney (1987) that in (16a) the subject of the gerund is generated in the verbal domain, whereas in (16b) the subject is generated in the nominal domain. As a result, only the subject in (16a) is assigned an agent theta-role in its base position. In the Uyghur example in (17), the subject must be the agent of the reading event, just as in (16a).

-ish phrase subject – restricted theta-role:
Ötkür-nuŋ "jil-lar-ʁa dʒavap-ni" oqu-ʃ-i muhim
Ötkür-gen "year-pl-dat response-acc" read-nliz-3.poss important
'Ötkür('s) reading "Response to Years" is important.'
≠ 'Ötkür's reading of "Response to Years" is important.'

The fact that Ötkür must be the reader in (17) indicates that the -ish phrase subject is generated in the verbal domain. In the next section, I demonstrate that the genitive-marked subject does not remain in-situ.

2.3 Unmarked subjects and existential closure

In this section, I discuss the unmarked (as opposed to genitive-marked) subject option for *-ish* phrases. The surface position of the unmarked *-ish* phrase subject is lower than the surface position of the genitive-marked subject. The unmarked subject must receive a low-scoping indefinite interpretation, which Diesing (1992) argues to be a property of vP-internal subjects. I thus propose that unmarked *-ish* phrase subjects are generated in the specifier of vP and remain in that position. The syntactic and semantic contrasts discussed in this section provide evidence that the genitive-marked subject raises out of its base position in the specifier of vP. In the discussion below, I additionally sketch a semantic proposal for why vP-internal subjects may not be definite.

2.3.1 Structure of unmarked subject -ish phrases

An *indefinite* subject of an *-ish* phrase can be genitive, or it can be *unmarked*.

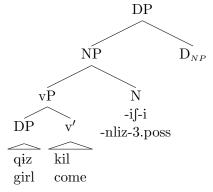
(18) Indefinite -ish phrase subject – genitive or unmarked: qiz-(niη) kil-i∫-i muhim girl-(gen) come-nliz-3.poss important 'It's important for a girl to come.'

Unmarked embedded subjects are syntactically lower than genitive-marked ones. For example, as shown in (19), the adverb αte ('tomorrow') may precede or follow a genitive-marked subject, but has to precede an unmarked subject.

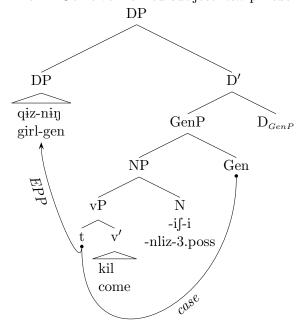
- (19) Unmarked subject is lower than genitive subject:
 - a. (æte) Ajgül-nuŋ/qɨz-nɨŋ (æte) kil-iʃ-i muhim (tomorrow) Aygül-gen/girl-gen (tomorrow) come-nliz-3.poss important 'It's important for Aygül/{a girl} to come tomorrow.'
 - b. (æte) qiz (??æte) kil-iſ-i muhim (tomorrow) girl (??tomorrow) come-nliz-3.poss important 'It's important for a girl to come tomorrow.'

I propose that unmarked and genitive-marked subjects are generated in the same position, the specifier of vP. Genitive-marked subjects then raise, whereas unmarked subjects do not. The syntactic difference between the genitive subject construction and the unmarked subject construction is whether Gen is present in the structure, and correspondingly whether D_{GenP} or D_{NP} is merged. The unmarked subject structure is shown in (20a), with a genitive-marked subject structure given for comparison in (20b).

(20) a. Unmarked subject -ish phrase:



b. Genitive-marked subject -ish phrase:



When Gen is present, it assigns genitive case to the -ish phrase subject. D_{GenP} , which selects for a GenP and bears EPP, heads the DP and attracts the genitive-marked subject to its specifier. When Gen is absent, no genitive case is assigned. The DP is headed by D_{NP} , which selects for an NP and does not have an EPP feature. The unmarked subject consequently remains in situ. Assuming that ate ('tomorrow') must occur at least as high at the edge of vP, the proposed structures in (20) explain why ate must precede an unmarked subject but may follow a genitive-marked subject.

2.3.2 Semantic properties of genitive vs. unmarked -ish phrase subjects

In this section, I show that the semantic properties of unmarked -ish phrase subjects indicate that they are inside vP, whereas genitive-marked subjects are outside the vP domain. As seen above, an indefinite -ish phrase subject may be genitive or unmarked. A definite subject of an -ish phrase under a non-raising predicate is obligatorily genitive, as seen in (7) above and as (21) further illustrates.

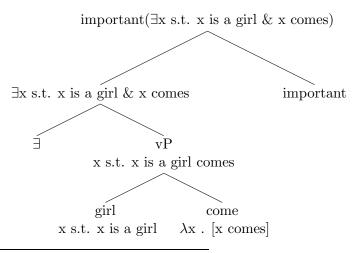
(21) Definite -ish phrase subject – genitive-marked only:
Ajgül-*(nuŋ) kil-i∫-i muhim
Aygül-*(gen) come-nliz-3.poss important
'It's important for Aygül to come.'

An unmarked -ish phrase subject must not only be indefinite – it must be a low-scoping indefinite. Whereas a genitive -ish phrase subject can take scope above or below the embedding predicate (example (22)), and unmarked -ish phrase subject can only take scope below the embedding predicate (example (23)).

- (22) Genitive -ish phrase subject high or low scope:
 qiz-niŋ kil-i∫-i muhim
 girl-gen come-nliz-3.poss important
 'It's important for a girl to come.'
 important > ∃; ∃ > important
- (23) Unmarked -ish phrase subject low scope only:
 qiz kil-i∫-i muhim
 girl come-nliz-3.poss important
 'It's important for a girl to come.'
 important > ∃; * ∃ > important

Example (22) can mean that there is a particular girl and it is important for that girl to come, or that it is important that some girl (any girl) come. By contrast, an unmarked subject obligatorily takes low scope – (23) cannot mean that it is important for a particular girl to come. Diesing (1992) observes that cross-linguistically vP-internal subjects must be low-scoping indefinites. She proposes that there is an existential closure operator at the edge of vP, which binds all free variables in its scope. An indefinite subject inside vP is thus interpreted as a bound variable, whereas indefinites outside of vP are interpreted as existential quantifiers. Consider what this entails for the interpretation of -ish phrase subjects. If an unmarked subject is in the specifier of vP, as proposed above, it is existentially bound. This results in the following semantic derivation (with English words used for ease of presentation), where the subject must get a low-scope reading.¹

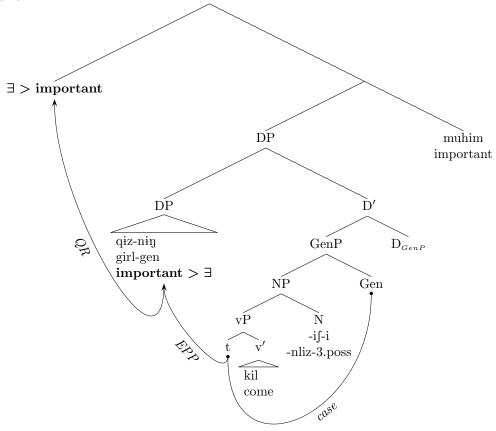
(24) Unmarked -ish phrase subject inside vP:



¹I abstract away from tense and intensionality.

The only denotation derived for example (23) with an unmarked subject is one where 'important' takes scope over 'girl': it is important that there exist some girl who comes. This is the right prediction, and provides additional confirmation that unmarked -ish phrase subjects are inside vP, whereas genitive-marked subjects move outside vP. An indefinite genitive subject is not existentially bound, but is interpreted as a quantifier. It takes scope below the embedding predicate in its surface position, but it can also take scope above the embedding predicate through quantifier raising (QR).²

(25) Scope of genitive-marked subject of an -ish phrase:



The fact that unmarked indefinite -ish phrase subjects take obligatory low scope, while genitive-marked indefinites may scope above or below the embedding predicate, has now been accounted for. What remains to be addressed is why definite subjects must be genitive-marked. Diesing (1992) observes, but does not explain, the fact that cross-linguistically definites cannot remain inside the scope of existential closure. This generalization extends to Uyghur – recall that definite subjects of -ish phrases must be genitive-marked, i.e. outside of vP and thus outside the scope of existential closure.

(26) Definite -ish phrase subject – genitive-marked only (= (21)):
Ajgül-*(nuŋ) kil-i∫-i muhim
Aygül-*(gen) come-nliz-3.poss important
'It's important for Aygül to come.'

²I propose in section 3 that the -ish phrase in (25) actually raises to a higher position, but this has no impact on the relative scope of the -ish phrase subject and the matrix predicate.

The theory of Heim (1982) provides a way to express the requirement that definites be outside the scope of existential closure. Heim (1982) treats non-pronominal, non-quantificational DPs as variable-containing expressions of type t. Thus, for instance $a/the\ girl$ would have the denotation ${\bf x}$ is a girl.³ Diesing (1992) proposes that existential closure obligatorily binds all unbound variables in its scope. Suppose that a separate principle prevents pronouns and variables inside definites from being bound. Pronouns and definites would then be forced to be interpreted outside the scope of existential closure. In the context of -ish phrase subjects, this means that a definite subject of an -ish phrase must be genitive-marked.

3 Nominalized vP embedding by raising predicates

In this section, I discuss embedding of *-ish* phrases by modal adjectives, which I argue to be raising predicates. In section 3.1, I introduce some data that distinguish embedding by modal adjectives from embedding by other predicates discussed above. I then present my proposal for the structure of modal adjective embedding. Sections 3.2 and 3.3 provide arguments against a control analysis of modal adjectives and in support of a raising analysis (respectively). After an interim summary in section 3.4, in section 3.5, I discuss how raising of genitive embedded subjects in Uyghur presents a problem for the Activity Condition.

3.1 Structure of raising constructions

In this section, I discuss -ish phrase embedding by three modal adjectives, which I propose are raising predicates.

(27) Uyghur modal adjectives:

kirek: deontic/epistemic necessity **lazim:** deontic/epistemic necessity **mumkin:** epistemic possibility

Unlike unmarked subjects of *-ish* phrases embedded by other predicates, unmarked subjects of *-ish* phrases embedded by modal adjectives may precede adverbs like αte ('tomorrow').

(28) Unmarked subject precedes adverb:

qiz æte kil-ij-i kirek/lazim/mumkin girl tomorrow come-nliz-3.poss necessary/necessary/possible 'It's necessary/possible for a girl to come tomorrow.'

These unmarked subjects also do not obey the semantic restrictions discussed above. They can be definite (example (29)) and they can take scope over the embedding predicate (example (30)).

(29) Unmarked -ish phrase subject – definite:

men kitap oqu-ſ-im kirek/lazim/mumkin

I book read-nliz-1sg.poss necessary/necessary/possible

'I {have to}/might read a book.'

³This framework yields a different derivation for the unmarked -ish phrase subject structure from that given in (24) above, but the outcome that the subject must take low scope carries over.

(30) Unmarked -ish phrase subject – high or low scope:
qiz kil-i∫-i kirek
girl come-nliz-3.poss necessary
'A girl has to come.'
necessary > ∃; ∃ > necessary

These data demonstrate that the unmarked subject of an -ish phrase embedded by a modal adjective is not in its base position inside vP. I argue below that the subject of an -ish phrase embedded by a modal adjective raises to the specifier of the matrix TP. Following Trinh (ms. 2009), I propose that the subject of an -ish phrase embedded by a modal adjective raises because the -ish phrase that combines with a modal adjective is too functionally impoverished to satisfy the EPP of T.

- (31) Proposal for modal (vs. non-modal) adjectives:
 - a. The -ish phrase that combines with non-modal adjectives (and verbal predicates) is a DP.
 - b. The -ish phrase that combines with modal adjectives is an NP/GenP.
 - c. T in Uyghur has an EPP property that must be satisfied by a DP.
- (32) Consequently:
 - a. When the embedding predicate is a non-modal adjective, the -ish phrase raises to spec, TP to satisfy EPP.
 - b. When the embedding predicate is a modal adjective, the **subject** of the *-ish* phrase raises to spec, TP to satisfy EPP.

Note that an -ish phase subject under kirek or lazim ('necessary') may be genitive, as well as unmarked.⁴

(33) -ish phrase subject may be genitive:

men-iŋ kitap oqu-∫-im kirek/lazim

I-gen book read-nliz-1sg.poss necessary

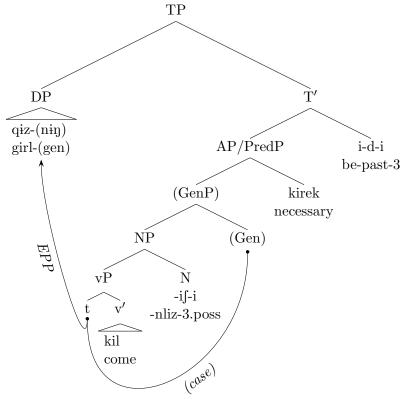
'I have to read a book.'

I propose that the modal adjective example in (34) has the structure shown in (35).

(34) -ish phrase embedded by a modal adjective: qiz-(niŋ) kil-i \int -i kirek i-d-i girl-(gen) come-nliz-3.poss necessary be-past-3 'It was necessary for a girl to come.'

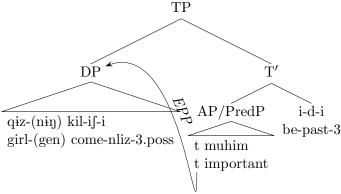
⁴Mumkin ('possible') is incompatible with genitive subjects; why this is the case is an open question.

(35) Modal adjective – subject of -ish phrase satisfies EPP of T:



For -ish phrase embedding by non-modal adjectives, as in (36), I propose the structure shown in (37).

- (36) -ish phrase embedded by a non-modal adjective: qiz-(niŋ) kil-iʃ-i muhim i-d-i girl-(gen) come-nliz-3.poss important be-past-3 'It was important for a girl to come.'
- (37) Non-modal adjective -ish phrase satisfies EPP of T (structure abbreviated):

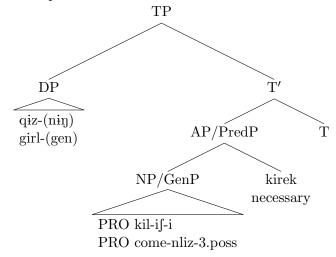


With non-modal adjectives, the *-ish* phrase is a DP and can therefore satisfy the EPP of T, while with modal adjectives the *-ish* phrase is an NP/GenP, and so cannot satisfy the EPP of T. The subject of the *-ish* phrase satisfies the EPP property of T instead. This proposal correctly predicts that an unmarked subject of an *-ish* phrase embedded by a *modal* adjective may precede adverbs and is not existentially bound inside vP – it is in the matrix subject position.

3.2 Evidence against a control analysis

Before presenting further evidence that the semantic subject of an -ish phrase embedded by a modal adjective is in the matrix subject position, I argue against a control analysis of the construction (illustrated in (38)).

(38) Not a possible structure:



Uyghur control constructions have different agreement properties from embedding by modal adjectives. Agreement on the -ish phrase under a modal adjective is required with 1st and 2nd person subjects, as seen in (39).⁵ This is in contrast with control constructions, where agreement on the -ish phrase is prohibited, as (40) shows.

- (39) Modal adjective agreement on -ish phrase required: men ket-if-*(im) kirek/mumkin I leave-nliz-*(1sg.poss) necessary/possible 'It's necessary/possible for me to leave.'
- (40) Control construction agreement on -ish phrase prohibited:
 men kitap oqu-\(\int \) (*im\)-ni ojli-wat-i-men/tiri\(\int \)-t-im
 I book read-nliz-(*1sg.poss)-acc want-prog-impf-1sg/try-past-1sg
 'I want/tried to read a book.'

Since control constructions prohibit agreement on the -ish phrase, whereas modal adjective constructions require it (in the 1st and 2nd person), embedding by modal adjectives cannot receive a control analysis.

3.3 Evidence for raising of -ish phrase subject

In this section, I use three types of evidence to show that the subject of an -ish phrase embedded by a modal adjective raises out of the -ish phrase. This is the case both for unmarked and for genitive subjects. Since Uyghur is a head-final language, the task is not a trivial one. T (when overt) is sentence-final, and so the subject does not overtly move over it. The first line of argument in section 3.3.1 comes from further embedding the adjective construction. We find that when the predicate is a non-modal adjective, the entire -ish phrase acts as its subject. When the predicate is a modal

⁵Agreement on an *-ish* phrase embedded by a modal adjective with an unmarked 3rd person subject is optional. I will not address here how this optionality comes about.

adjective, the subject of the *-ish* phrase acts as the subject of the predicate. The embedding data indicate that the subject of the *-ish* phrase moves to the matrix subject position. It thus undergoes raising, and not some A-bar movement operation. Section 3.3.2 shows that the subject moves out of the *-ish* phrase in modal adjective constructions but not non-modal adjective constructions using the placement of a topic marker as evidence. Section 3.3.3 does the same using the distribution of a focus marker.

3.3.1 Embedding

In this section, I use an Exceptional Case Marking operation that targets embedded subjects to identify the -ish phrase subject as the subject of the modal adjective clause. As shown by Shklovsky and Sudo (to appear), the subject of a proposition embedded without nominalization in Uyghur can bear nominative or accusative case. When the subject bears nominative case, any pronoun it contains receives a shifted interpretation. That is, the pronoun is interpreted with respect to the embedded context, and not with respect to the matrix context. For example, a first-person pronoun is interpreted as referring to the subject of the sentence, as illustrated in (41).

(41) Nominative subject – shifted reading:

Ahmet [men-iŋ qiz-im ket-t-i] didi Ahmet [I-gen girl-1sg.poss leave-past-3] said

 \checkmark 'Ahmet said that his daughter left.' [shifted]

X 'Ahmet said that my daughter left.' [non-shifted]

Any pronoun in an accusative-marked subject, on the other hand, receives a non-shifted interpretation. Thus the first-person pronoun in the subject of (42) can only refer to the speaker.

(42) Accusative subject – non-shifted reading:

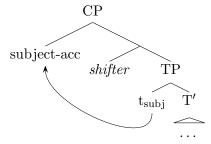
Ahmet [men-iŋ qiz-im-ni ket-t-i] didi Ahmet [I-gen girl-1sg.poss-acc leave-past-3] said

X 'Ahmet said that his daughter left.' [shifted]

✓ 'Ahmet said that my daughter left.' [non-shifted]

Shklovsky and Sudo (to appear) propose that an accusative-marked subject moves from the embedded subject position. It moves above a projection that shifts the context below it, and thereby receives a matrix interpretation, rather than a shifted one.

(43) Accusative-marked embedded subject:



Embedded *subjects* may thus be exceptionally accusative-marked, with a corresponding non-shifted interpretation. The ECM operation targets subjects: quirky objects, for instance, cannot

⁶This data is from my own elicitation sessions, but much of my understanding of these constructions is derived from Shklovsky and Sudo (to appear) and p.c. with the authors.

be marked accusative in the same way (and thereby made to receive a non-shifted interpretation), as (44) shows.

(44) Ablative object – shifted reading only:
Ötkür [men-{din/*i} Ajgül qorq-u-du] didi
Ötkür [I-{abl/*acc} Aygül fear-impf-3] said

✓ 'Ötkür said that Aygül is afraid of him.' [shifted]

✗ 'Ötkür said that Aygül is afraid of me.' [non-shifted]

Since the accusative-marking operation targets the embedded subject, in this section I use the possibility of a noun phrase receiving accusative case in an embedded context as a subjecthood diagnostic. The -ish phrase that combines with a non-modal adjective behaves like a subject. In an embedded context, the -ish phrase can be unmarked (nominative) or accusative-marked. When the -ish phase is unmarked, its pronominal possessor receives a shifted interpretation. When the -ish phase is marked accusative, its pronominal possessor receives a non-shifted interpretation.

- Non-modal adjective nominative -ish phrase, shifted reading: Ötkür [men-iŋ oqu-∫-im muhim] didi Ötkür [I-gen read-nliz-1sg.poss important] said ✓ 'Ötkür said that his studying is important.' [shifted] ✗ 'Ötkür said that my studying is important.' [non-shifted]
- Non-modal adjective accusative -ish phrase, non-shifted reading:
 Ötkür [men-iŋ oqu-ʃ-im-ni muhim] didi
 Ötkür [I-gen read-nliz-1sg.poss-acc important] said

 ✗ 'Ötkür said that his studying is important.' [shifted]

 ✓ 'Ötkür said that my studying is important.' [non-shifted]

Similarly, a pronominal object in an *-ish* phrase embedded by a non-modal adjective receives a shifted interpretation when the *-ish* phrase is unmarked, and a non-shifted interpretation when the *-ish* phrase is marked accusative.

- Non-modal adjective nominative -ish phrase, shifted reading:
 Ötkür [Ajgül-nun meni kör-if-i muhim] didi
 Ötkür [Aygül-gen I-acc see-nliz-3.poss important] said

 'Ötkür said that Aygül seeing him is important.' [shifted]

 'Ötkür said that Aygül seeing me is important.' [non-shifted]
- Non-modal adjective accusative -ish phrase, non-shifted reading:
 Ötkür [Ajgül-nuŋ meni kör-iʃ-i-ni muhim] didi
 Ötkür [Aygül-gen I-acc see-nliz-3.poss-acc important] said

 ✗ 'Ötkür said that Aygül seeing him is important.' [shifted]

 ✓ 'Ötkür said that Aygül seeing me is important.' [non-shifted]

The -ish phrase that combines with a non-modal embedding adjective is in subject position, and can therefore be marked accusative when the whole construction is embedded. Modal adjectives behave differently from non-modal adjectives in direct embedding constructions. With modal adjectives, the -ish phrase as a whole cannot be marked accusative.

Modal adjective – no accusative marking on -ish phrase: (49)*Mehemmet [Ajgül-{Ø/nɨŋ/ni} oqu-∫-i-**ni** kirek didi Mehemmet [Aygül-{nom/gen/acc} read-nliz-3.poss-acc necessary] said intended: 'Mehemmet said that Aygül's studying is necessary.'

Instead, the subject of the -ish phrase can raise and receive accusative marking. The interpretive difference is the same as above – a nominative (unmarked) pronominal subject must be shifted, while an accusative-marked subject receives a non-shifted reading.⁷

- Modal adjective nominative subject, shifted reading: (50)Otkür [men oqu-ʃ-im kirek didi Ötkür [**I** study-nliz-1sg.poss necessary] said ✓ 'Ötkür said that his studying is necessary.' [shifted]
 - X 'Ötkür said that my studying is necessary.' [non-shifted]
- (51)Modal adjective – accusative subject, non-shifted reading:
- Ötkür [meni oqu-[-{i/in} kirek Ötkür [I-acc read-{3/2sg} necessary] said X 'Ötkür said that his studying is necessary.' [shifted]

 - ✓ 'Ötkür said that my studying is necessary.' [non-shifted]

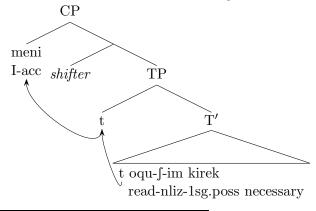
When the embedding predicate is a modal adjective, the subject of the -ish phrase can bear accusative marking in an ECM context. This identifies the subject of the -ish phrase as the subject of the entire embedded clause. Note that the subject of an -ish phrase embedded by a non-modal adjective cannot be accusative-marked.

(52)Non-modal adjective – no accusative marking on subject of -ish phrase:

*Mehemmet [Ajqül-**ni** oqu-f-i muhim l didi Mehemmet [Aygül-acc study-nliz-3.poss important] said intended: 'Mehemmet said that Aygül's studying is important.'

The subject of an -ish phrase under a modal adjective thus raises to the main clause subject position. Following the proposal of Shklovsky and Sudo (to appear), the accusative-marked -ish phrase subject moves further yet, above the shifting projection.

(53)Accusative-marked embedded subject:



⁷Note that the possessor agreement on the -ish phrase in (51) is shifted; I do not address the topic of shifted agreement in this paper.

3.3.2 Topicalization

In this section, I use topic-marking as a test of constituency. I show that an -ish phrase embedded by a non-modal adjective can be topicalized as a single constituent, whereas an -ish phase embedded by a modal adjective cannot be. The "conditional copula particle" bolsa (composed of bol ('be') plus sa (conditional marker)) acts as a topic marker (Johanson and Csató 1998; De Jong 2007). The topicalized phrase appears as the leftmost constituent, followed by bolsa.

(54) Topicalized subject:

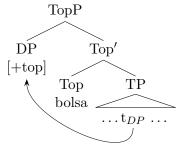
men bolsa oqu-d-um

I **top** read-past-1sg

'As for me, I read.'

For concreteness, I propose that *bolsa* is projected in Top above TP (Rizzi 1997) and attracts the closest topic-marked noun phrase to its specifier.⁹

(55) Topicalization:



Note that topicalization of a possessor out of a noun phrase is degraded.

(i) Question:

kitap-ni kim oqu-d-i? book-acc who read-past-3 'Who read the book?'

(ii) Answer:

a. men (kitap-ni) oqu-d-um
I (book-acc) read-past-1sg
'I read the book.'

b. #men bol-sa-(m) oqu-d-um

I be-sa-(1sg) read-past-1sg

'As for me, I read the book.'

Note that it is not the case that *bolsa* is ruled out in answers to questions. For example, (iii) is a fine answer to the question, "What did you do yesterday?"

(iii) men bol-sa-m tünügün kitap oqu-d-um

I be-SA-1sg yesterday book read-past-1sg

'As for me, I read a book yesterday.'

(Agreement with nominative topicalized DPs appears optionally on bolsa, which I do not address here.)

⁹I set aside the potential concern that *bolsa* is found in the left periphery despite the fact that Uyghur is consistently head-final.

⁸That *bolsa* marks topics can be seen from its incompatibility with focus, as the following examples illustrate for question answers.

(56) Topicalized possessor:

??Ötkür-nuŋ bolsa gül-i güzel
Ötkür-gen top flower-3.poss pretty
'As for Ötkür, his flower is pretty.'

An -ish phrase embedded by a non-modal adjective behaves like a possessed subject. It can be topicalized by bolsa (as (57) shows), but its possessor cannot be topicalized on its own (seen in (58)).¹⁰

- (57) Non-modal adjectives topicalized -ish phrase:
 men-iŋ oqu-ʃ-im bolsa muhim/eҳmijetlik/qimmet
 I-gen read-nliz-1sg.poss top important/useful/expensive
 'As for my reading, it's important/useful/expensive.'
- (58) Non-modal adjectives -ish phrase subject cannot be topicalized:

 *men-iŋ bolsa oqu-ʃ-im muhim/exmijetlik/qimmet
 I-gen top read-nliz-1sg.poss important/useful/expensive
 intended: 'As for me, my reading is important/useful/expensive.'

Modal adjectives display the opposite pattern. The subject of the -ish phrase can be topicalized (example (59)), whereas it is impossible to topicalize both the -ish phrase and its subject (example (60)).

- (59) Modal adjectives topicalized -ish phrase subject:
 - a. men-(iŋ) **bolsa** oqu-∫-im kirek/lazim I-(gen) **top** read-nliz-1sg.poss necessary 'My reading is necessary.'
 - b. men **bolsa** oqu-ſ-im mumkin. I **top** read-nliz-1sg.poss possible 'My reading is possible.'
- (60) Modal adjectives topicalized -ish phrase impossible:

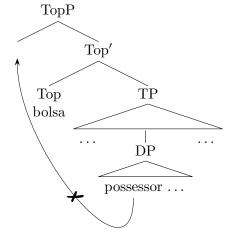
 *men-(iŋ) oqu-ʃ-im bolsa kirek/lazim/mumkin.

 I-(gen) read-nliz-1sg.poss top necessary/necessary/possible intended: 'As for my reading, it's necessary/possible.'

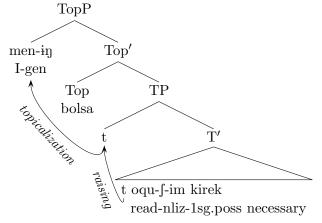
The pattern seen with modal adjectives is expected if the subject of the -ish phrase is extracted out of the -ish phrase before the topicalization operation applies. It is correctly predicted that unlike possessors, the raised subject of an -ish phrase can be topicalized.

¹⁰The data on the use of bolsa with kirek ('necessary') and qimmet ('expensive') is also found in Trinh (ms. 2009).

(61) No topicalization of possessor:



(62) Topicalized raised -ish phrase subject:



The -ish phrase under a modal adjective cannot be topicalized as a whole, because its subject has raised out by the point in the derivation when bolsa is merged. The data thus indicate that raising is obligatory. Without the raising proposal, we could not account for the different patterns seen for non-modal and modal adjectives.

3.3.3 Focus-marking

The focus particle -mu ('also', 'even') can also be used to determine constituency. In particular, it can affix directly to a focused element (example (63)), or to a phrase containing a focused element (example (64)).¹¹

Ötkür kitap-ni oqu-d-i, we Ötkür-(*mu) χ et-ni oqu-d-i. Ötkür book-acc read-past-3, and Ötkür-(*mu) letter-acc write-past-3

 $^{^{11}}Mu$ cannot appear on an element that does not contain (or is not contained in) the target of focus.

⁽i) -mu prohibited: Ötkür kitap-ni oqu-d-i,

^{&#}x27;Ötkür read a book, and Ötkür wrote a letter.' (Hartman (ms. 2009))

- (63) -mu on focused constituent:
 Ötkür eqilliq, we John-mu eqilliq
 Ötkür smart and John-MU smart
 'Ötkür is smart, and John is also smart.' (Hartman (ms. 2009))
- -mu on phrase containing the focused constituent:

 men-iŋ qiz-im eqilliq. [Ötkür-nuŋ qiz-i]-mu eqilliq.

 I-gen daughter-1sg.poss smart. [Ötkür-gen daughter-3.poss]-MU smart.

 'My daughter is smart. Ötkür's daughter is also smart.' (Hartman (ms. 2009))

-Mu can appear on an entire DP when the possessor is focused, as in example (64). Similarly, with non-modal adjectives -mu can appear on the -ish phrase when subject of the -ish phrase is focused.

Non-modal adjectives – focused subject, -mu on -ish phrase:
Ötkür-nuŋ ket-iʃ-i muhim/eҳmijetlik/jaҳʃi. Ajgül-nuŋ-(mu)
Ötkür-gen leave-nliz-3.poss important/useful/good. Aygül-gen-(MU)
ket-iʃ-i-(mu) muhim/eҳmijetlik/jaҳʃi.
leave-nliz-3.poss-(MU) important/useful/good.
'Ötkür's leaving is important/useful/good. Aygül's leaving is also important/useful/good.'

As (66) and (67) show, when the subject of an -ish phrase embedded by a modal adjective is focused, -mu cannot be affixed to the -ish phrase.

- (66) Modal adjectives focused subject, *-mu on -ish phrase (genitive subject):
 Ötkür-nuŋ ket-iʃ-i kirek/lazim. Ajgül-nuŋ-(mu) ket-iʃ-i-(*mu)
 Ötkür-gen leave-nliz-3.poss necessary. Aygül-gen-(MU) leave-nliz-3.poss-(*MU)
 kirek/lazim
 necessary
 'Ötkür's leaving is necessary. Aygül's leaving is also necessary.'
- Modal adjectives focused subject, *-mu on -ish phrase (unmarked subject):
 Ötkür ket-iſ-i kirek/lazim/mumkin. Ajgül-(mu) ket-iʃ-i-(*mu)
 Ötkür leave-nliz-3.poss- necessary/nec./possible. Aygül-(MU) leave-nliz-3.poss-(*MU)
 kirek/lazim/mumkin.
 necessary/nec./possible
 'Ötkür's leaving is necessary/possible. Aygül's leaving is also necessary/possible.'

The inability of an -ish phrase with a focused subject to host -mu is predicted if the subject of the -ish phrase obligatorily raises out of the -ish phrase.¹² Crucially, an -ish phrase embedded by a modal adjective is able to host -mu when the focused element remains inside the -ish phrase. This is illustrated for a focused object in (68) and (69).

 $^{^{12}}$ The fact that the subject of the -ish phrase is inside it at an earlier point in the derivation evidently does not license -mu on the -ish phrase.

Modal adjective – focused *object*, -mu on -ish phrase (genitive subject):
Ötkür-nuŋ kitap oqu-∫-i kirek. we u-nɨŋ χet-(mu) oqu-∫-i-(mu)
Ötkür-gen book read-nliz-3.poss necessary. and he-gen letter-(MU) read-nliz-3.poss-(MU) kirek.
necessary.

'Ötkür has to read a book. And he also has to read a letter.'

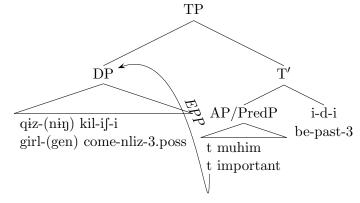
(69) Modal adjective – focused object, -mu on -ish phrase (unmarked subject): Ötkür kitap oqu-∫-i kirek. we u χet-(mu) oqu-∫-i-(mu) Ötkür book read-nliz-3.poss necessary. and he letter-(MU) read-nliz-3.poss-(MU) kirek. necessary.

'Ötkür has to read a book. And he also has to read a letter.

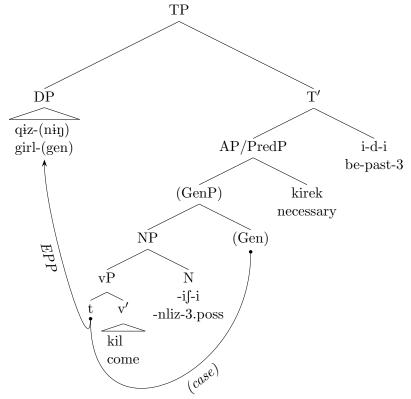
3.4 Interim Summary

I have proposed that when the embedding predicate is a non-modal adjective, the entire -ish phrase raises to subject position. When the embedding predicate is a modal adjective, it is the subject of the -ish phrase that raises. I have suggested that the relevant difference between the two constructions is that non-modal adjectives embed a full DP -ish phrase, which can satisfy EPP on T, whereas modal adjectives embed an NP/GenP -ish phrase, which cannot. This illustrated again in (70) and (71).

(70) Non-modal adjective – -ish phrase satisfies EPP of T (structure abbreviated) (= (37)):



(71) Modal adjective – subject of -ish phrase satisfies EPP of T = (35):



Several lines of evidence converge on the conclusion that modal adjectives are raising predicates, whereas non-modal adjectives are not. I have shown that unmarked -ish phrase subjects are low (inside vP) under non-modal adjectives, but not under modal adjectives. I have also shown that when an -ish phrase is embedded under a non-modal adjective, it behaves as a subject for the purposes of ECM, and as a unit for topicalization and focus. When an -ish phrase is embedded under a modal adjective, the -ish phrase subject behaves as a sentential subject for ECM. The -ish phrase does not behave as a unit for topicalization and focus.

3.5 Implications for the Activity Condition

Having established that the subject of a clause embedded by a modal adjective obligatorily raises, regardless of case-marking, I now show that this presents a problem for the Activity Condition, repeated in (72).

(72) Activity Condition (AC): A goal must be active (i.e. bear some unvalued feature) to be a valid target for Agree. (adapted from Chomsky 2001)

In this section, I argue that genitive *-ish* phrase subjects in Uyghur bear *structural* genitive case. Consequently, these embedded subjects do not bear an unvalued Case feature at the point in the derivation when raising takes place. Since unvalued Case is the feature that makes nouns active, ¹³ examples of raising such as (73) show that the Activity condition does not hold in Uyghur.

¹³It is theoretically possible that Uyghur noun phrases have some unvalued feature other than Case that allows the Activity Condition to be satisfied. For example, Carstens and Diercks (to appear) propose that noun class plays such a role in Luiya. I discard this approach as unmotivated for Uyghur.

(73) Uyghur raising:

Mehemmet-(nɨŋ) [t oqu-ʃ-i] kirek

Mehemmet-(gen) [t read-nliz-3.poss] necessary

'Mehemmet has to read.'

The raised subject in (73) may bear genitive case, which is assigned to it in the embedded clause. The genitive morphology is preserved under raising. A similar phenomenon is found in Icelandic, where inherent ("quirky") case assigned in the embedded clause is retained when the embedded subject raises.

- (74) Ólafi leiddist Olaf-dat bored 'Olaf was bored.' (*Icelandic*, Sigurðsson (2002):(22a))
- (75) Ólafi byrjaði [t að leiðast]
 Olaf-dat began [t to bore]
 'Olaf began to get bored.' (*Icelandic*, Sigurðsson (2002):(22b))

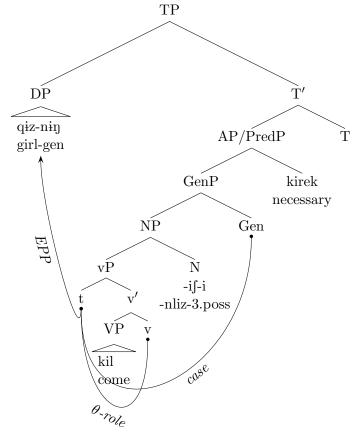
It has been proposed that despite receiving "quirky" dative case in the embedded clause, the subject in (75) additionally requires abstract structural Case (Sigurðsson 1989; Holmberg and Hróarsdóttir 2003). This allows the Activity Condition to be maintained, as the dative-marked subject still bears an unvalued Case feature. Applying the Activity Condition to Icelandic thus depends crucially on a distinction between structural Case (required by all noun phrases) and non-structural Case. A noun phrase remains "active" so long as it has not received structural Case. I argue that the genitive on -ish phrase subjects in Uyghur is a structural Case. The fact that genitive subjects in Uyghur raise thus indicates that the Activity Condition does not hold. In this way, Uyghur provides a novel argument against the Activity Condition not offered by Icelandic data. I argue for the structural nature of Uyghur genitive case based on the fact that it is assigned by a head that does not give the genitive subject its theta-role. I also show that the genitive of Uyghur embedded subjects behaves differently from true quirky cases in Uyghur.¹⁴

Pesetsky (1982); Chomsky (1986) and others propose that if a head assigns non-structural case, it also assigns a theta-role to the same noun phrase. However, I have argued above that an - ish phrase subject receives its (agent) theta-role from v, while genitive case is assigned by Gen. Thus there are different heads responsible for theta-role assignment and case-assignment to -ish phrase subjects, and consequently genitive case-assignment must be structural. The pattern of case-assignment and theta-role assignment in Uyghur is illustrated in (77).

(76) -ish phrase embedded by a modal adjective: qiz-niŋ kil-i∫-i kirek girl-gen come-nliz-3.poss necessary 'It's necessary for a girl to come.'

¹⁴Note that the argument I present goes against the proposal made by Woolford (2006) that case-preservation under raising is a reliable test for non-structural case.

(77) Modal adjective – different sources for case and theta-role:



The arguments showing that the genitive subject of an *-ish* phrase receives a theta-role from v, and not from Gen, presented for non-raising embedding predicates above, carry over to raising constructions.¹⁵ A transitive v obligatorily assigns an agent theta role to the genitive subjects in (78). The non-agentive interpretation of the subject, available in English *ing-of* gerunds, is not possible in the Uvghur examples below.

- (78) -ish phrase subject restricted theta-role:
 - a. Ötkür-nun "jil-lar-ʁa dʒavap-ni" oqu-ʃ-i kirek Ötkür-gen "year-pl-dat response-acc" read-nliz-3.poss necessary 'Ötkür('s) reading "Response to Years" is necessary.'

 ≠ 'Ötkür's reading of "Response to Years" is necessary.'
 - b. John-nɨŋ sham-ni jandur-iʃ-i kirek
 John-gen candle-acc light-nliz-3.poss necessary
 'John('s) lighting candles is necessary.'
 ≠ 'John's lighting of candles is necessary.'

In (78a), Ötkür must be the one doing the reading – he cannot be an organizer or a host, for instance, for a reading of "Response to Years". Similarly, in (78b), John must be the one lighting the candles. The candle-lighting may not simply be one that John attended, or depicted in a painting, for example. The embedded genitive subject must thus be the agent in the examples in

 $^{^{15}}$ The same facts hold for unmarked subjects of raising predicates, but this is not directly relevant to the present discussion.

- (78). This is in contrast with the English examples given in (79), where the subject of the gerund receives a less restricted theta-role from the nominal structure.
- (79) a. Ötkür's reading of "Response to Years" is necessary.
 - b. John's lighting of candles is necessary.

As expected, when v in the embedded clause is passive or unaccusative, the genitive subject is interpreted as a theme, as shown in (80) and (81).

- (80) -ish phrase subject theme of a passive: χet-niŋ jez-il-i∫-i kirek letter-gen write-pass-nliz-3.poss necessary 'It is necessary for the letter to be written.'
- (81) -ish phrase subject theme of an unaccusative: istakan-niŋ ojril-i∫-i kirek cup-gen fall-nliz-3.poss necessary 'It is necessary for the cup to fall.'

There is thus clear evidence that the embedded subject receives its theta-role from v. Genitive case is not assigned by v, however. If it were, we would expect genitive subjects to occur freely in matrix contexts. However, the subject may not be marked genitive in examples like (82) and (83).

- (82) No genitive case on matrix subject:
 Ötkür-(*nɨŋ) "jil-lar-ʁa dʒavap-ni" oqu-j-du
 Ötkür-(*gen) "year-pl-dat response-acc" read-impf-3
 'Ötkür is reading "Response to Years".'
- (83) No genitive case on matrix subject of passive: $\chi \text{et-(*nii)}$ jez-il-d-i letter-(*gen) write-pass-past-3 'A letter was written.'

I propose that Gen is not available in matrix contexts because it selects for an NP complement, and not for a vP or TP. On the hypothesis that the source of genitive case is Gen, and not v, the lack of genitive on matrix subjects in (82) and (83) follows. The source of genitive case on the embedded subject is thus different from the source of the theta role for the embedded subject, which indicates that this genitive case is not quirky. Furthermore, the genitive case borne by Uyghur embedded subjects shows different behavior from true quirky case in Uyghur. Example (84) illustrates a quirky dative object. When (84) is passivized, as in (85), the dative case is obligatorily preserved. There is also no alternation with an unmarked or genitive variant when the quirky dative is the subject of an -ish phrase, as (86) shows.

- (84) Quirky dative object:
 men it-ke qara-j-men
 I dog-dat watch-impf-1sg
 'I'm watching the dog.'
- (85) Quirky dative subject of a passive: it-*(ke) qara-l-i-du dog-*(dat) watch-pass-impf-3 'The dog is watched.'

(86) Quirky dative preserved on subject of -ish phrase: it-{ke/*niŋ/*∅} qara-l-iʃ-i muhim/kirek dog-{dat/*gen/*∅} watch-pass-nliz-3 important/necessary 'The dog being watched is important/necessary.'

We thus expect a head assigning quirky case in Uyghur to do so obligatorily, and we expect the quirky case to be preserved under A-movement. The only available explanation for the genitive-unmarked alternation is consequently (as I have proposed) that the genitive-assigning head is itself optional. However, if the genitive-assigning head also assigns the subject theta role, its absence is predicted to result in different theta-role options for the embedded subject. This is not what we find: there is no difference in the theta-roles available to genitive subjects and unmarked subjects in the raising construction. I have thus argued that the genitive assigned to subjects of Uyghur-ish phrases is not a quirky case. Uyghur genitive embedded subjects raise despite having been assigned structural case, and thus no longer bearing an unvalued feature. Uyghur genitive subject raising is therefore not consistent with the Activity Condition. In the next section, we will see that the PIC_{weak} does hold in Uyghur.

4 CP embedding

In this section, I discuss one type of CP embedding available in Uyghur. 16 I show that the subject case-assignment properties of these embedded CPs argue against the PIC $_{strong}$: the embedded subject is marked with genitive case across a CP boundary. I demonstrate that the PIC $_{weak}$ is consistent with the case properties of the subject, while at the same time correctly ruling out raising out of an embedded CP. Section 4.1 presents the structure of embedded CPs. I review arguments given by Asarina and Hartman (to appear) that the clauses discussed are indeed full CPs, as evidenced by the presence of an overt complementizer. In section 4.2, I show that embedded CPs display a subject case alternation of the same type as seen in -ish phrases above. I again use the differences between unmarked and genitive-marked subjects to pin down the properties of each. In section 4.3, I argue that the PIC $_{strong}$ is too strong to be consistent with the structure of embedded CPs with genitive subjects. Section 4.4 addresses embedding of CPs by raising predicates. I argue that the inability of raising predicates to embed aspect-containing CPs shows that the PIC $_{weak}$ plays an active role. I also suggest that a CP that does not contain tense or aspect is "defective" in Uyghur. Finally, I provide one more argument for the raising nature of modal adjectives.

4.1 Structure of an embedded CP

Let us examine embedded clauses whose verb bears a different suffix: -liq. I propose that these clauses are CPs inside nominal morphology. Consider the construction shown in (87) and (88), with the same non-raising embedding predicates as seen above, but a different type of embedded clause.

(87) "-liq phrase" embedding under 'say':
Ötkür [Ajgül-nuŋ kel-gen-lik-i-ni] didi
Ötkür [Aygül-gen come-RAN-LIQ-3.poss-acc] said
'Ötkür said that Aygül came.'

 $^{^{16}}$ As seen it section 3.3.1 above, a verb like 'say' can also embed a fully inflected clause without nominal structure. I do not discuss this type of embedding here.

(88) "-liq phrase" embedding under 'important':

[Mehemmet-nuŋ hazir oqu-wat-ʁan-liq-i] muhim
[Mehemmet-gen now read-prog-RAN-LIQ-3.poss] important 'Mehemmet reading right now is important.'

I propose that the embedded clause in (88) (and, similarly, in (87)) has the following morphological structure:

```
(89) Structure of the embedded clause: ... oqu -wat -\mu an -liq --\emptyset<sub>N</sub> -i ... verb -progressive -Asp/perfective -C -\emptyset<sub>N</sub> -agreement.poss
```

Just like -ish phrases, embedded -liq phrases bear case marking, as can be seen in (87). The subject of the -liq phrase is genitive, and the clause bears corresponding possessor agreement. Like an -ish phrase, then, this type of embedded clause is nominal "on the outside". Asarina and Hartman (to appear) argue that the nominal properties derive from a null embedding noun.¹⁷ I assume their analysis here, but the details of how the nominal nature of the clause comes about are not crucial for our present purposes.

What is crucial is the nature of the morpheme -liq. Unlike -ish, -liq is not a nominalizer, but a complementizer. Asarina and Hartman (to appear) argue for this analysis based on several properties of -liq. As is common for a complementizer (Stowell 1981; Pesetsky and Torrego 2001; Boškovic and Lasnik 2003; Kishimoto 2006), -liq alternates with a null variant (seen in (90) and (91)). 18 -liq cannot bear possessor agreement and accusative case marking when an overt noun is present (examples (90) and (91)), which indicates that it is not a nominalizer.

```
(90) Possessor agreement on N in noun complement clause; optional -liq:

[ Ötkür-nun 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.' (Asarina and Hartman (to appear): (7))
```

The properties of -liq are in contrast with the properties of the nominalizer -ish, which is obligatory in the environments where it occurs, and which reliably hosts possessor agreement.

(92) -ish obligatory:
Ötkür-nuŋ ket-*(i∫)-i muhim
Ötkür-gen leave-*(nliz)-3.poss important
'Ötkür leaving is important.'

An embedded -liq clause is thus a full CP. The suffix glossed as -ran, which appears immediately to the left of -liq in the above examples, is a clause marker that expresses a perfective meaning when

¹⁷Arguments for a null head noun, as opposed to "nominalization", include the consistent availability of overt head nouns, and the fact that the proposed null head nouns match the properties of their overt counterparts.

¹⁸-liq is required in (88), but being obligatory in certain contexts is also consistent with properties of a complementizer.

no other aspectual morphology is present, as in (87). When other aspectual morphology is used, such as the progressive marker -wat, -ran becomes semantically vacuous, as in (88). Note that it is not possible to embed tense morphology under -ran in these constructions.

(93) No tense under -ran:

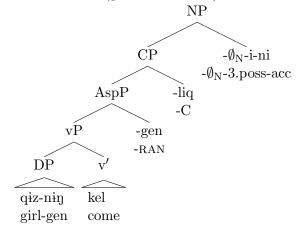
```
*Mehemmet [ men-iŋ oqu-{d/di/dim}-ʁan-liq-im-ni ] didi
Mehemmet [ I-gen read-{past/past-3/past-1sg}-RAN-LIQ-1sg.poss-acc ] said
intended: 'Mehemmet said that I read.'
```

I thus assume that the complementizer -liq embeds an AspP, and not a vP or TP. In sum, I propose the following structure for the embedded CP shown in (94).²⁰

(94) Embedded CP:

Ötkür [qɨz-nɨŋ kel-gen-lik-i-ni] didi Ötkür [girl-gen come-RAN-LIQ-3.poss-acc] said 'Ötkür said that a girl came.'

(95) Embedded CP (partial structure):



4.2 Subject case alternation

In this section, I discuss the properties of the embedded CP subject. I show that, just like a genitive subject of an -ish phrase, a genitive subject of an embedded CP moves out of the specifier of vP. This can be seen from the properties of unmarked embedded subjects, which again are subject to definiteness and scope restrictions that do not apply to genitive subjects. As in -ish phrases, genitive case on the subject of a -liq phrase embedded by a non-modal adjective is obligatory for definites (example (96)) but not for indefinites (example (97)).

(96) Definite subject – genitive obligatory:

Ötkür [Ajgül-?*(nuŋ) kel-gen-lik-i-ni] didi Ötkür [Aygül-?*(gen) come-RAN-C-3.poss-acc] said

'Ötkür said that Aygül came.'

¹⁹Phonologically-conditioned allomorphs of -ran include -[gen] (as in (87)) and -[\text{kan}] (as in (88)).

²⁰In section 4.2 below, I address the structural position and case properties of the embedded subject.

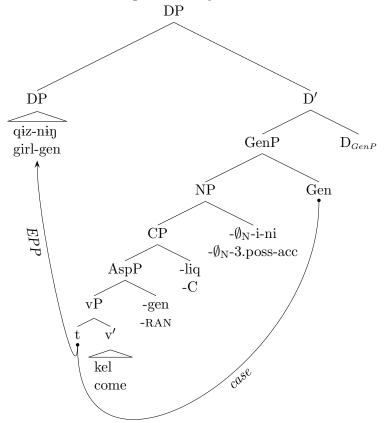
(97) Indefinite subject – genitive optional:
Ötkür [qɨz-(nɨŋ) kel-gen-lik-i-ni] didi
Ötkür [girl-(gen) come-RAN-C-3.poss-acc] said
'Ötkür said that a girl came.'

Just as with -ish phrases, word order restrictions show that an unmarked subject of the embedded phrase is lower than a genitive-marked subject. In particular, a locative phrase can follow a genitive-marked subject, but must precede an unmarked subject.

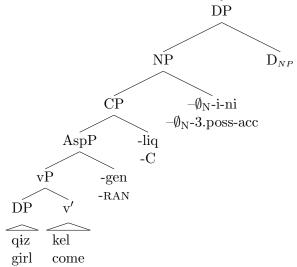
- (98) Unmarked subject is lower than genitive subject:
 - a. Mehemmet [(sorun-ва) qiz-niŋ (**sorun-ва**) kel-gen-lik-i-ni] didi Mehemmet [(party-dat) girl-gen (**party-dat**) come-RAN-C-3.poss-acc] said 'Mehemmet said that a girl came to the party.'
 - b. Mehemmet [(sorun-ва) qɨz (??sorun-ва) kel-gen-lik-i-ni] didi Mehemmet [(party-dat) girl (??party-dat) come-RAN-C-3.poss-acc] said 'Mehemmet said that a girl came to the party.'

This pattern suggests that again two options are possible: Gen in the embedded phrase can be present or absent. When Gen is present, the subject of the -liq phrase receives genitive case, and is attracted to the specifier of D_{GenP} , as (99) illustrates. When Gen is absent, the subject of the -liq phrase does not receive genitive case. D_{NP} does not bear an EPP feature, so the subject is not attracted to the specifier of DP, as shown in (100).

(99) Embedded CP with genitive subject:



(100) Embedded CP with unmarked subject:



The unmarked subject thus remains inside the scope of existential closure (vP), and it is correctly predicted that it must be indefinite. Note that it is crucial that the -liq phrase contains an AspP, and not a TP. I propose that Asp, unlike T, does not bear an EPP feature. The unmarked embedded subject consequently does not raise, but remains inside vP. I thus predict that just like an unmarked subject of an -ish phrase, an unmarked indefinite subject of a -liq phrase embedded by a non-modal adjective must take low scope with respect to the embedding predicate. An indefinite genitive-marked subject, on the other hand, should be able to take high or low scope. These predictions are borne out, as (101) and (102) demonstrate.

- (101) Genitive-marked embedded subject high or low scope: Ötkür [qiz-niŋ kel-gen-lik-i-ni] didi Ötkür [girl-gen come-RAN-C-3.poss-acc] said 'Ötkür said that a girl came.' say $> \exists$; $\exists > say$
- (102) Unmarked embedded subject low scope only:
 Ötkür [qiz kel-gen-lik-i-ni] didi
 Ötkür [girl come-RAN-C-3.poss-acc] said
 'Ötkür said that a girl came.'
 say > ∃; * ∃ > say

Example (101) can mean that there is a particular girl about whom Ötkür said that she came, or that Ötkür said that some unspecified girl came.²¹ Example (102), on the other hand, cannot mean that there is a particular girl about whom Ötkür said that she came. The unmarked subject is existentially bound, and must take low scope. Embedded CPs thus display the same case alternation as embedded -ish phrases. The facts discussed in this section show that genitive subjects of -liq phrases raise out of vP, unlike unmarked subjects. The unmarked subject data demonstrate that aspectual marking (-ran) differs from real tense in Uyghur in lacking an EPP property.

²¹I again assume that the high scope of the genitive subject is obtained through quantifier raising (QR).

4.3 Phase Impenetrability Condition

Consider the case-assignment relationship established between the embedded -liq phrase subject and Gen, and the EPP-attraction relationship between the embedded subject and D_{GenP} . These relationships cross the embedded CP boundary. The structure in (102) thus violates the PIC_{strong}, repeated in (103).

(103) Chomsky's (1998) Phase Impenetrability Condition (PIC_{strong}): 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 structure given in (99), the CP is a phase, and the domain of C is AspP. A noun phrase contained inside AspP should thus be inaccessible to operations outside of CP. Note that I assume here that A-bar movement to the specifier of CP is not freely available in order to feed movement to the specifier of DP. This is an instance of the ban on improper movement, as discussed in section 1

The structure in (102) does *not* violate the PIC_{weak} (repeated below) on the (admittedly controversial) assumption that DPs are not strong phases (Richards 2006; Sabbagh 2007; Gallego 2009).

(104) Chomsky's (2001) Phase Impenetrability Condition (PIC_{weak}): In phase α with head H, the domain of H is accessible to operations outside α only until the next (strong) phase head is merged.

Assuming that D_{GenP} does not head a strong phase, no strong phase head has been merged above C at the point where the embedded subject receives genitive case and moves to the specifier of D_{GenP} . The data discussed in this section thus provide an argument for the PIC_{weak} over the PIC_{strong} : constructions violating the PIC_{strong} but not the PIC_{weak} are possible in Uyghur.

An alternative suggestion (entertained for other languages and constructions in a number of recent papers, including Sabel 2006; Gallego 2007; Gallego and Uriagereka 2007; Fortuny 2008; Richards 2007, to appear; Wenger 2009; Carstens and Diercks to appear) would be to propose that -liq is an instance of "defective" C, which does not instantiate a phase boundary after all. I argue against this proposal for -liq in general in section 4.4. Instead, I propose that -liq is "defective" when it does not embed an aspectual phrase.

4.4 Raising predicates

This section addresses embedding of -liq phrases by raising predicates. I argue that the inability of raising predicates to embed -liq phrases that contain aspectual marking indicates that the PIC_{weak} is active in Uyghur. I also suggest that -liq phrases that contain negation but no aspect, which can be embedded by raising predicates, are "defective", i.e. not (strong) phases.

Consider the contrast between the non-raising adjective construction in (105) and the raising adjective construction in (106).

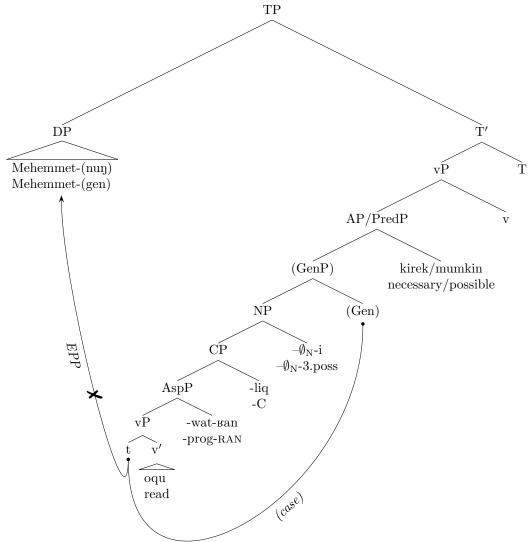
(105) Aspect-containing CP under non-raising adjective (= (88)):
Mehemmet-nun hazir oqu-wat-ʁan-liq-i muhim
Mehemmet-gen now read-prog-RAN-C-3.poss important
'Mehemmet reading right now is important.'

(106) No aspect-containing CP under raising predicate:

*Mehemmet-(nun) oqu-wat-Ban-liq-i kirek/mumkin
Mehemmet-(gen) read-prog-RAN-C-3.poss necessary/possible
intended: 'Mehemmet {has to}/might be reading (right now).'

I propose that (106) is ungrammatical because raising of the embedded subject is ruled out by the PIC, specifically the PIC_{weak}. Consider the structure of (106), presented in (107).²²

(107) Raising out of CP:



Let us assume that the embedded CP is a (strong) phase, as is the matrix vP. Recall that the latter assumption is also necessary for the PIC_{weak} to rule out raising out of CP in English. Raising in (107) is blocked in the same way as raising in the English example in (108).

 $^{^{22}}$ The matrix v head was not shown in previous trees for the sake of simplicity; it is assumed to be present throughout.

The AspP in the embedded CP in (107) is spelled out immediately upon the merger of the matrix v. Consequently, raising of the embedded subject to the specifier of the matrix TP is impossible, regardless of whether movement proceeds through the specifier of vP. The EPP property of the matrix T thus cannot be satisfied, and as a result the construction is ungrammatical. The assumption that -liq is not a "defective" complementizer is necessary in order for (107) to be correctly ruled out by the PIC_{weak} .²³ I crucially assume that the specifier of GenP is not a valid intermediate position for raising.

An aspect-containing clause *may* be embedded by a modal adjective, so long as there is another layer of embedding in between. This suggests that (106) is blocked by syntactic restrictions, and not by semantic ones.

- (109) Aspect under possibility modal:

 Mehemmet oqu-wat-ʁan bul-i∫-i mumkin

 Mehemmet read-prog-RAN be-nliz-3.poss possible

 'Mehemmet might be reading.'
- (110) Aspect under necessity modal: siler-(niŋ) oqu-wat-вап bul-iʃ-iŋ-lar kirek/lazim you.pl-(gen) read-prog-RAN be-nliz-2.poss-pl necessary 'You need to be reading.'

An interesting complication arises when we consider embedding of -liq phrases that do not contain aspect. A -liq phrase is used when the embedded clause contains negation, as in (111). (-ish phrases are too small to host negation, as (112) shows.)

(111) Negated -liq phrase: Ötkür-nuŋ oqu-mas-liq-i muhim/kirek Ötkür-gen read-neg-C-3.poss important/necessary 'It's important/necessary for Ötkür not to read.'

(112) No negated -ish phrase:

*Ötkür-nuŋ oqu-**mas-i∫**-i muhim/kirek

Ötkür-gen read-neg-nliz-3.poss important/necessary

intended: 'It's important/necessary for Ötkür not to read.'

Crucially, the aspect-less -liq phrase in (112) can be embedded by a raising adjective (kirek), and not just by a non-raising adjective (muhim). The subject of a negated -liq phrase embedded by a modal adjective raises. This can been seen from example (113), where a definite unmarked subject is permitted.

(113) Unmarked definite subject possible:
Ajgül ket-mas-liq-i kirek
Aygül leave-neg-C-3.poss necessary
'It's necessary that Aygül not leave'

Example (114) shows that subject raising out of a -liq phrase embedded by a modal adjective is obligatory. A negated -liq phrase behaves just like an -ish phrase with respect to topicalization.

 $^{^{23}}$ The PIC_{strong} would also make correct predictions here, but, as discussed above, it blocks operations that are possible in Uyghur.

- (114) Obligatory raising out of a negated -liq phrase:
 - a. Ajgül-(nuŋ) (**bolsa**) oqu-mas-liq-i (***bolsa**) kirek/lazim Aygül-(gen) (**top**) read-neg-C-3.poss (***top**) necessary 'It's necessary that Aygül not read.'
 - b. Ajgül (**bolsa**) oqu-mas-liq-i (***bolsa**) mumkin Aygül (**top**) read-neg-C-3.poss (***top**) possible 'Aygül might not read.'

The subject of the embedded phrase can be topicalized, whereas the entire phrase including its subject cannot, indicating that the embedded subject raises out of the CP. ECM constructions confirm that the subject of a -liq phrase embedded by a modal adjective raises. The subject of the -liq phrase can receive accusative case (and move out of the scope of shifting), whereas the -liq phrase itself cannot.

- (115) Modal adjective accusative subject of -liq phrase possible:
 doχtur [meni oqu-mas-liq-iŋ kirek] didi
 doctor [I-acc read-neg-C-2sg.poss necessary] said
 - X 'The doctor said that he has to not read.' [shifted]
 - ✓ 'The doctor said that I have to not read.' [non-shifted]
- (116) Modal adjective accusative -liq phrase banned:

 *dextured memolycity/nisaidequationality-in-nist read. kirek] didi doctor [I-{nom/gen/acc} read-neg-C-2sg.poss-acc necessary] said

Given the discussion above, it is surprising that the subject of a -liq phrase can raise – why is raising not blocked by the PIC_{weak} ? I propose that unlike aspect-containing -liq phrases, -liq phrases that do not contain aspect are not (strong) phases. This distinction follows from the idea advocated by Gallego (2007) and Richards (2007, to appear) (among others) that there is a correspondence between phasal C and the complement of C being a finite TP (or, for us, AspP). Not being a (strong) phase, the CP in (111) does not block raising of the embedded subject.

4.4.1 Additional argument for raising: negative concord items

An additional argument for a raising analysis for modal adjectives comes from the behavior of negative concord items (NCIs). NCI subjects are licensed by negation on the embedded clause under modal adjectives, but not under control predicates. As shown in (117), the NCI hitskim ('nobody') requires negation in order to be licensed.

(117) hit∫kim is an NCI: hit∫kim oqu-*(mi)-d-i n-body read-*(neg)-past-3 'Nobody read.'

As (118) shows, an NCI subject of a -liq phrase with kirek can be licensed by negation in the embedded predicate, regardless of case on the NCI.

(118) Modal adjective – NCI licensed by negation on embedded phrase: hit∫kim-(nɨŋ) ket-mas-liq-i kirek n-body-(gen) leave-neg-C-3 necessary 'It's necessary that nobody leave' Embedded negation should be able to license an NCI subject if, and only if, the subject is in the scope of negation at LF. A raised subject is expected to be able to reconstruct into the embedded clause, and can therefore be licensed by embedded negation. However, in a control construction, embedded negation will be unable to license the subject. This is exactly what we find. In contrast to modal adjectives, only main clause negation licenses a subject NCI with control predicates. Modal adjectives thus have a raising structure.

- (119) Control construction NCI licensed by main-clause negation: hit∫kim kitap oqu-∫-qa tiri∫-**mi**-d-i n-body book read-nliz-dat try-**neg**-past-3 'Nobody tried to read a book.'
- (120) Control construction NCI not licensed by negation on embedded phrase:
 - a. *hit∫kim kitap oqu-mas-liq-qa tiri∫-t-i
 n-body book read-neg-C-dat try-past-3
 - b. Ajgül kitap oqu-mas-liq-qa tiri∫-t-i Aygül book read-neg-C-dat try-past-3 'Aygül tried not to read a book.'

Since in control constructions a subject NCI is outside of the embedded phrase at all stages of the derivation, it cannot be licensed by negation on the embedded phrase. The data above thus shows that a raising structure is available for modal adjectives with an embedded -*liq* phrase.

5 Conclusion

In this paper, I examined the Activity Condition and the Phase Impenetrability Condition in the context of Uyghur genitive-subject embedded clauses. I presented a number of arguments showing that modal adjectives are raising predicates in Uyghur. On the basis of raising of genitive embedded subjects, I argued that the Activity Condition cannot be maintained for Uyghur. I then examined the properties of CP embedding in Uyghur. I showed that the possibility of genitive case licensing for subjects embedded in CPs argues against the PIC_{strong} , but is consistent with the PIC_{weak} . I then demonstrated that the PIC_{weak} successfully rules out raising out of Uyghur CP clauses. A clear avenue for further research is to investigate what these conclusions imply cross-linguistically.

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