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Control and intermediate scrambling: An investigation of Kazakh relative clauses

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This paper investigates apparent locality violations in Kazakh (Turkic) relative clauses. The empirical starting point of this study is the configuration where the genitive-marked relative clause subject establishes agreement with the noun phrase modified by the relative clause, constituting an ostensibly non-local Agree relation, a phenomenon that is common among Turkic, Mongolic, Tungusic and Finno-Ugric languages. Contra previous proposals arguing that the subject is situated inside a defective relative clause and it gets case from the D head of the modified noun phrase, this paper proposes a novel analysis of this phenomenon: the genitive phrase is base-generated in the possessor position and it controls a PRO subject in the relative clause. After establishing that the genitive “subjects” are relative clause-external, the paper turns to extraction out of the relative clause: RC constituents can undergo intermediate scrambling to the left of the genitive-marked phrase. This is unexpected under the assumption that relative clauses are strong islands for extraction. The paper suggests that this type of RC allows extraction because it is not an adjunct.

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1 Introduction

Locality conditions on the Agree operation have been one of the most extensively studied and robust cross-linguistic observations (Chomsky 2000; 2001; Boeckx 2008; Gallego 2010; Abels 2012; Citko 2014). Out of the many applications of the operation Agree (movement, Case licensing, Negative Concord, etc.), this paper focuses on ϕ -agreement. Linguistic research has aimed at attaining a locality generalization that rules out empirically unattested Agree relations while allows for the attested ones. For example, in the following Kazakh¹ (Turkic) sentence the matrix subject *men* ‘I’ can establish Agree with the matrix T head but the embedded clause’s subject *Aisha* cannot. We want a theory that can account for these facts.

- (1) Men [Ajja-nun] erten Almatu-ga bar-atun-un] ajt-tu-m /-*Ø.
 I [**Aisha-GEN** tomorrow Almaty-DAT go-PRSP-3SG.ACC] say-PST-**1SG** /***3SG**
 ‘I said [that Aisha was going to Almaty tomorrow].’

In the Minimalist Program, Agreement is defined as interaction between matching interpretable and uninterpretable features. Additionally, the existence of locality domains called phases is proposed, which have special spell-out rules (Chomsky 2000; 2001; Boeckx 2008; Gallego 2010; Abels 2012; Citko 2014). Thus, the locality constraints on the Agree operation are attributed to spell-out rules that govern at what point in the derivation a chunk of syntactic structure is sent to the other components of the grammar and leaves that structure inaccessible to subsequent syntactic operations (Epstein et al. 1998; Chomsky 2000; 2001; Uriagereka 1999; 2012). As a result, the material contained in a subordinate phase is not accessible to establish Agree with probes located in a superordinate phase, with the exception of the subordinate phase edge, where a phrase can establish Agree with superordinate probes. This phenomenon is known as

¹ Kazakh is a Kipchak Turkic language spoken by about 16.4 million L1 speakers in Kazakhstan and in the neighboring countries (Xinjiang Province of China, Western Mongolia, Northern Kyrgyzstan and Uzbekistan, in Astrakhan, Orenburg, Omsk, Saratov Oblasts in the Russian Federation) (Ethnologue). Kazakh is a suffixing language; the vowel in most suffixes undergoes vowel harmony with the last vowel of the stem, and the first consonant of the affix may undergo voicing assimilation and is subject to the effects of the so-called Syllable Contact Law upon suffixation. Capitalized letters in the underlying form of suffixes indicate that the relevant sound undergoes (at least) one of these processes.

If not otherwise stated, the Kazakh data in this paper come from the author’s elicitations with eight Kazakhstani Kazakh native speaker consultants. The work on this project had two main stages: in 2018–2019, I conducted a study with seven native speakers using grammaticality judgement tests and felicity judgements in contexts, mostly (but not exclusively) pertaining to NCI licensing patterns, interpretation of the genitive DP, adjective placement and scrambling patterns. In 2022–2023, I augmented the already elicited set of data with elicitations on ellipsis, reconstruction and Weak Crossover amelioration conducted with one native speaker. Additionally, one Kazakh speaker from Xinjiang (China) was consulted in connection to the data in section 3.2. While no systematic study was conducted, I found no difference between Kazakhstani Kazakh and Kazakh as spoken in China in terms of the investigated grammatical structure (naturally, lexical differences do exist).

the (strong) Phase Impenetrability Condition (Chomsky 2000; Svenonius 2004; Richards 2003; 2011; Müller 2004; 2010).

Since the original formulation of Agree and its locality generalizations, a number of novel empirical observations have emerged posing a challenge to the cross-linguistic validity of the original proposal, and in the wake of these new data a number of adjustments and parametrizations have been suggested to either the formulation of the Agree operation or the locality domain in which Agree can be established (e.g., weak Phase Impenetrability Condition (Chomsky 2001); the “weak” vs. “strong” status of the vP (Legate 2003); articulation of probes (Béjar 2003); Multiple Agree (Ura 1995; Hiraiwa 2001; Béjar & Rezac 2009); directionality of Agree (Upward Agree: Zeijlstra (2004; 2008; 2012); Bjorkman & Zeijlstra (2019); Arregi & Hanink (2022) or Downward Agree: Preminger (2013); Rudnev (2021); Bárány & van der Wal (2022); Deal (2023)); long-distance Agree (Polinsky & Potsdam 2001; Bhatt 2005; Bhatt & Keine 2017); failure of feature valuation and default agreement (Preminger 2014), etc.) For this reason, empirical data that appear to be in violation of the well-known locality generalizations are of heightened interest for linguistic theory. The empirical puzzle that provides the starting point for this paper is agreement data that poses an apparent challenge to the locality constraint discussed above.

There are two strategies to form relative clauses² (henceforth, RC) in Kazakh: (i) (2a) illustrates the first strategy, where the RC subject is nominative and there is no phonologically overt subject agreement suffix present either on the RC predicate (*bar-atun* ‘go-PRSP’) or on the modified noun phrase (*zer* ‘place’). I refer to this as the “nominative RC strategy.” (ii) The second strategy in (2b), which I call “genitive RC strategy,” will be the main focus of this paper. In this type of relative clauses, the RC subject is genitive and the subject agreement is obligatorily. However, the agreement suffix shows up in an unexpected location: subject agreement with the genitive RC subject is marked in a non-local fashion on the modified noun phrase (*zer* ‘place’), agreement cannot be indicated locally on the RC predicate.

- (2) a. [Ajja- \emptyset] erteŋ bar-atun-[*u]] zer-[*i] alus-ta.
 [Aisha-NOM tomorrow go-PRSP-(*3SG)] place-(*POSS.3SG) far-LOC
 ‘The place [where Aisha will go tomorrow] is far.’
- b. [Ajja-nuŋ] erteŋ bar-atun-[*u]] zer-*(i) alus-ta.
 [Aisha-GEN tomorrow go-PRSP-(*3SG)] place-*(POSS.3SG) far-LOC
 ‘The place [where Aisha will go tomorrow] is far.’

That is, the puzzle that serves as our starting point is the following: typically, Agree cannot be established between an embedded clause subject and a matrix ϕ -probe, as illustrated by (1), but

² Relative clauses in Kazakh are marked by the suffixes /GAn/ or /(j)AtIn/. The choice between /GAn/ and /(j)AtIn/ reflects an aspectual distinction: /(j)AtIn/ is exclusively used in the case of the prospective aspect, whereas /GAn/ is the elsewhere form.

the genitive subject of a RC can agree with a matrix probe, as in (2b). Thus, genitive subject RCs pose a challenge to the well-established locality generalizations. Relative clauses with seemingly non-local agreement are not only observed in Kazakh but in many other Turkic and Mongolic languages:³ in the Turkic language family in Sakha (Kornfilt 2008a; b; 2015; Baker & Vinokurova 2010), Kyrgyz (Kornfilt 2008b; 2015; Laszakovits 2019), Karachay-Balkar (Gürer 2020), Uyghur (Kornfilt 2008b; 2015; Asarina 2011), Uzbek (Csató & Uchturpani 2010; Griбанова 2018), Türkmen, Altai (Schönig 1992) and in the Mongolic language Dagur (Hale 2002).

Prior research has proposed analyses that derive this ostensibly non-local agree relation by appealing to configurations that abide by the standard locality constraints. There are three main ideas relating to this puzzle. The first one submits that the RC subject undergoes raising from the adjunct RC clause to the possessor position of the modified noun phrase. The raising is motivated by the Case Filter as the RC lacking Agr cannot license a subject (Hale 2002). The second family of analyses maintains that the genitive RC subject is RC-internal and it is assigned morphological case by the D head of the modified noun. Under this account, the D head can probe into the RC because it does not constitute a phasal domain (Kornfilt 2008a; b; 2015). This latter analysis is motivated by Kornfilt’s seminal observation relating to “adverb placement” in the genitive strategy. She observes that a modifier of the RC’s predicate can appear to the left of the genitive-marked RC subject, as illustrated in (3). As RC modifiers are otherwise banned to appear in the matrix clause, examples such as (3) lead Kornfilt to propose that the genitive subject is RC-internal.

- (3) Adapted from Kornfilt (2015), ex. (27)
- [Erteŋ Ajša-nuŋ bar-atun] 3er-i alus-ta.
 [tomorrow Aisha-GEN go-PRSP] place-POSS.3SG far-LOC
 ‘The place [where tomorrow Aisha will go] is far.’

More recently, some approaches suggest that the genitive-marked noun phrase is in the possessor position (see for Kazakh: Ótött-Kovács (2021), for Kyrgyz: Laszakovits (2019), for Finno-Ugric languages such as Udmurt and Mari: Dékány & Georgieva (2021), Pleshak (2022)). Based on novel Kazakh data, this paper concurs with the third analysis: the genitive-marked noun phrase is base-generated in the possessor position. Thus, the apparently non-local agreement is not

³ In addition to Turkic and Mongolic, a number of languages spoken in Eurasia have RCs exhibiting the same general pattern (for an excellent typological overview see Ackerman & Nikolaeva (2013)). The phenomenon can be found in Tungusic and Yukaghir languages (Ackerman & Nikolaeva 2013), in Armenian (Ackerman & Nikolaeva 1997) and in a number of Finno-Ugric languages. Within the Finno-Ugric language family such RCs are found in Permic languages such as Udmurt (Dékány & Georgieva 2021), Khanty (Nikolaeva 1999), for the Kazym (i.e., northwestern) dialect of Khanty see Bikina et al. (2022), Mansi (Ackerman & Nikolaeva 2013), (Forest) Enets (Ackerman & Nikolaeva 2013), Mari (Volkova 2017; Pleshak 2022) and Nganasan (Ackerman & Nikolaeva 2013). At this point, it is unclear if these RCs share only superficial similarity with the Kazakh (or in general, Turkic) genitive subject RCs or whether there are also structural similarities between them.

established between the RC subject and the probe in the modified noun phrase, but between the possessor and the uninterpretable ϕ -feature on the possessee's D head, which are in a local configuration. Additionally, this work also puts forth the novel claim that the genitive-marked possessor is co-indexed with a PRO subject in the RC, that is, there is a control relation between the possessor and the RC subject. Furthermore, the paper presents the novel observation that the movement to the left of the genitive-marked noun phrase, as in (3), has mixed A and \bar{A} -properties (it can create new binding relations, it remedies WCO, but it also reconstructs for Condition C and it does not affect case assignment) and I argue that it is an instance of local intermediate scrambling. As the genitive-marked phrase is RC-external, movement to the left of the possessor constitutes extraction from a relative clause. While on the face of it, this appears to be an island violation, I speculate that extraction from this type of RC is possible because it is not an adjunct (according to the configurational definition of adjuncthood).

The paper is structured as follows: following some introductory descriptive remarks, section 2.1 offers an overview of previous approaches to genitive subject RC with special attention to the approach presented by Kornfilt (2008a; b; 2015). Then section 2.2 presents arguments against the RC-internal-genitive-subject analysis relying on data such as Negative Concord Item licensing (section 2.2.1), adjectival intervention (section 2.2.2) and the interpretation of the genitive noun phrase (section 2.2.3). Section 3 presents the proposed analysis: section 3.1 argues that the genitive phrase is in the possessor position, then section 3.2 considers potential proposals for the phonologically covert pronoun in the RC subject position: *pro* (section 3.2.1), trace (section 3.2.2), or PRO (section 3.2.3). The conclusion this paper draws is that the genitive-marked noun phrase in the possessor position is co-indexed with a PRO subject in the RC. Section 4 discusses the properties of extraction out of genitive-subject relative clauses and speculates on why extraction is allowed in this RC type. Section 5 concludes.

2 Is the genitive subject inside the RC?

Before turning to the discussion of previous accounts, a few introductory remarks are due on the nominative and genitive subject RC strategies. I call these “strategies” because they are not in complementary distribution, i.e., the genitive subject RC cannot be derived from the nominative subject RC. This claim is based on extensive work with consultants where I attempted to discover a difference in meaning or usage between the nominative and genitive subject RCs. Ultimately, the only difference I was able to find between them is that the genitive is also interpreted as the possessor of the modified noun, in addition to being understood as the subject of the RC. Consider the following contrast between the genitive subject strategy in (4a)⁴ and the nominative subject RC in (4b). Consultants point out that in (4a) *Aisha* sends the letter but she is also interpreted

⁴ Note that I do not use bracketing in the genitive subject RC until I present my analysis.

as the author of the letter (authorship being the most salient interpretation of the “possessive” relation in this context, but note that other interpretations are possible too). No readily available possessive relation can be attested between the nominative RC subject and the modified noun in (4b).⁵

- (4) a. Ajfa-nuŋ ziber-gen χat-u munaw.
 Aisha-GEN send-PRF letter-POSS.3SG this
 ‘This is the letter that Aisha sent.’ (Consultants’ comment: Aisha also wrote the letter.)
- b. [Ajfa-Ø ziber-gen] χat munaw.
 [Aisha-NOM send-PRF] letter this
 ‘This is the letter that Aisha sent.’ (Consultants’ comment: the “Aisha also wrote the letter” interpretation is not available.)

Before moving on, it is worth ruling out two potential contrasts that the nominative–genitive “alternation” could potentially correlate with. The first one is the restrictive–non-restrictive RC contrast, the other is anaphoric–non-anaphoric reference. As for the first one, the choice between nominative and genitive subjects has nothing to do with restrictive or non-restrictive RCs. (5) presents a context where the embedded clause is a restrictive RC, and both the nominative and genitive subject cases are available.⁶ Additionally, both nominative and genitive marking are compatible with non-restrictive RCs, as illustrated in (6).⁷ Examples (5) and (6) are adapted from Ótrott-Kovács (2021: 115–6).

⁵ The presented judgement in (4b) should be considered pragmatically motivated. This sentence does not *explicitly* express that Aisha is the author but it may be compatible with such scenario. That is, it could be the case that the letter that Aisha sent is accidentally also a letter that she wrote (without the sentence explicitly stating the authorship relation).

⁶ In section 2.2, I propose that the genitive phrase is in the possessor position. In connection with this proposal, a reviewer asks if this analysis contradicts with the data in (5) and (6). Specifically, the question is whether it is not a contradiction to say ‘you’ is the possessor of Saule’s car. Section 2.2.3 formulates a nuanced account of what it means to be a “possessor:” possessors are not necessarily the owners of an entity, rather they are in some pragmatically defined relation with the so-called possessee. This relation can be any given relation depending on the context (Barker 1991; Partee & Borschev 1998; 2003; Vikner & Jensen 2002).

⁷ A reviewer asks whether proper names and pronouns can be modified by both type of RCs. This question is intertwined with the restrictions on genitive subjects, to be discussed in section 2.2.3, which shows that the genitive RC subject has a possessor interpretation. While proper names can be modified by RCs with both nominative and genitive subjects, they receive a different interpretation. When proper names are modified by a RC with a genitive subject, a familiar relation is conveyed between the genitive phrase and the proper name (see fn. 26 and ex. (12) in Ótrott-Kovács (2021)). No such relation is expressed by the RC with nominative subject (see ex. (11) in Ótrott-Kovács (2021)). Pronouns can be modified by a nominative-subject RC (although speakers find these somewhat clunky), but not by genitive-subject RCs. This is because pronouns cannot be possessed (see section 2.2.3).

- (5) We are talking about Saule's cars (Saule has more than one car).
 Keʃe sen- \emptyset /- in kœr-gen maʃina-(ŋ) œte kumbat.
 Yesterday you-NOM /-GEN see-PRF car-POSS.2SG very expensive
 'The car that you saw yesterday is very expensive.'
- (6) We are talking about Saule's car (Saule has only one car).
 Keʃe sen- \emptyset /- in kœr-gen maʃina-(ŋ) œte kumbat.
 Yesterday you-NOM /-GEN see-PRF car-POSS.2SG very expensive
 'The car, which you saw yesterday, is very expensive.'

Second, Ótrott-Kovács (2023) observes that nominative and genitive subjects in nominalized complement clauses are in complementary distribution, genitive subjects have anaphoric definite reference whereas nominative ones have either unique definite or indefinite interpretation. Illustrative examples are offered in (8) and (7) (cited from Ótrott-Kovács (2023), ex. (67) and (80)): the genitive subject can only be used in a context where the referent is discourse-old, as in (8), but not in scenarios where the individual has unique reference, as in (7). The nominative subject case has the opposite distribution.

- (7) Two friends who live in England are chatting. They are both very busy people and don't have time to watch the news. They get the news from their friend, Aisha. A: What's on the news? Did Aisha say something? B:...
- Ajʃa [patʃajum- \emptyset / # nuŋ] koronavirus-tan awur-up ʒat-kan-un]- \emptyset
 Aisha [queen- **NOM** / #**GEN** COVID-ABL be.sick-IP AUX-PRF-3SG]-ACC
 ajt-tu.
 say-pst.3
 'Aisha said that the Queen is sick with COVID.' (*the Queen* is unique definite)
- (8) Two friends who live in England are chatting. A: What's up with the Queen, any news about her? B: Yes,....
- Ajʃa [patʃajum - $\# \emptyset$ / - nuŋ] koronavirus-tan awur-up ʒat-kan-un]- \emptyset
 Aisha [queen- **#NOM** / **GEN** COVID-ABL be.sick-IP AUX-PRF-3SG]-ACC
 ajt-tu.
 say-PST.3
 'Aisha said that the Queen is sick with COVID.' (*the Queen* is anaphoric definite)

Importantly, this nominative-genitive pattern can only be observed in nominalized complement clauses. In relative clauses, nominative and genitive subjects can both have anaphoric and unique definite reference, illustrated in (9) and (10). In (10), the RC subject *the Queen* is anaphoric

definite, and both nominative and genitive marking are acceptable. Similarly, both subject cases are available in (9) where the subject is interpreted as a unique definite.

- (9) Two friends are walking in London. One points at a building and says:
 Pat[ajum- \emptyset] / [nuŋ] tu-gan yj-(i) munaw.
 queen- NOM / GEN be.born-PRF house-(POSS.3SG) this
 ‘This is the house where the Queen was born.’ (*the Queen* is unique definite)

- (10) Two friends are walking in London while they are chatting about the Queen.
 One points at a building and says:
 Pat[ajum- \emptyset] / [nuŋ] tu-gan yj-(i) munaw.
 queen- NOM / GEN be.born-PRF house-(POSS.3SG) this
 ‘This is the house where the Queen was born.’ (*the Queen* is anaphoric definite)

2.1 Previous accounts

Kornfilt (2008a; b; 2015) makes the influential observation that an adverb⁸ modifying a relative clause can precede the genitive subject. This is illustrated in (11), where the adverb *erterj* ‘tomorrow’ comes before the genitive RC subject. This adverb placement pattern has since been described in a number of Turkic languages that display the seemingly non-local agreement marking pattern, see in Uyghur (Asarina 2011), Kyrgyz (Laszakovits 2019), Uzbek, Sakha (Kornfilt 2008b; 2015), Karachay-Balkar (Gürer 2020) among others. The adverb placement in (11) is especially surprising in the light of data in (12), which shows that the adverb construing with the RC predicate cannot raise above the matrix subject. This prompts Kornfilt to suggest that constituents cannot be extracted out of the relative clause, and the adverb ‘tomorrow’ is located in the relative and not in the matrix clause. That is, Kornfilt (2008b; 2015)⁹ interprets the adverb

⁸ Although Kornfilt (2008a; b; 2015) makes this observation about adverbs, it also extends to other types of RC constituents, e.g., arguments. In (i) the dative marked phrase *Sæule-ge* ‘to Saule’ is the recipient argument of the ditransitive verb ‘send.’ As shown in (ib), this argument can undergo movement to a position preceding the genitive noun phrase interpreted as the RC subject. For more data see section 4.

- (i) a. Ajja-nuŋ **Sæule-ge** ziber-gen χat-w munaw.
 Aisha-GEN **Saule-DAT** send-PRF letter-POSS.3SG this
 ‘This is the letter that Aisha sent to Saule.’
 b. **Sæule-ge** Ajja-nuŋ ziber-gen χat-w munaw.
Saule-DAT Aisha-GEN send-PRF letter-POSS.3SG this
 ‘This is the letter that Aisha sent to Saule.’ (Can be followed up by: “And that other letter is the one that Aisha sent to Almas.”)

⁹ In earlier work, Kornfilt (2008a) presents a different analysis: in this paper, she takes the Kaynean approach (Kayne 1994) to relative clauses and argues that the nominative subject RC moves to Spec,DP of the modified noun phrase to derive the word order (the RC precedes the modified noun). She submits that when the genitive subject RC moves to Spec,DP it leaves the agreement marker stranded, which then cliticizes onto the modified noun phrase. The overview of these two analyses is presented in (i).

- (i) a. [_{DP} [_{RC} **Aisha-NOM** *e_j* **go-PRSP**]_i [_D D [_{CP} [_{NP} place]_j [_C C [_{IP=RC} *e_i*]]]]]
 b. [_{DP} [_{RC} **Aisha-GEN** *e_j* **go-PRSP**]_i [_D D [_{CP} [_{NP} place]_j [_C C [_{IP=RC} *e_i* + **AGR**]]]]]

placement illustrated in (11) as indicative of the genitive subject's syntactic position: if the adverb 'yesterday' is situated within the RC, so must be the genitive subject, which the adverb precedes.

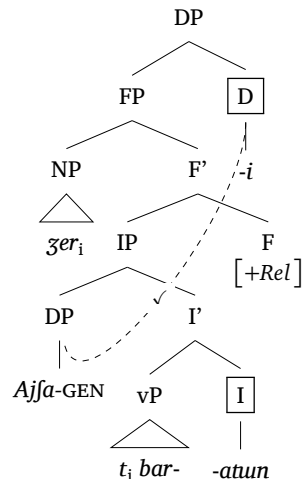
(11) Simplified from Kornfilt (2015), ex. (27)

Erteṅ menin bar-atun ʒer-im alus-ta.
tomorrow I.GEN go-PRSP place-POSS.1SG far-LOC
 'The place where I will go tomorrow is far.'

(12) ***Erteṅ** Ajfa menin bar-atun ʒer-im-di bil-me-j-di.
tomorrow Aisha I.GEN go-PRSP place-POSS.1SG-ACC know-NEG-PRS-3
 Intended: 'Aisha does not know the place where I will go tomorrow.'

Furthermore, Kornfilt (2008b; 2015) proposes that the subject gets genitive inside the relative clause. The assigner of the genitive case is the D head of the modified noun phrase, that is, the genitive originates from a RC-external licenser. To explain how the RC subject is accessible to the probe on the domain-external D, Kornfilt contends that the RC in these languages does not constitute a phase, therefore it is transparent to outside probes. (13) provides the tree representation¹⁰ of this analysis: the relative clause, represented as FP on the tree, is not a phase (phase heads are indicated in a frame box), therefore it is accessible for the ϕ -probe located on D. D probes down, and finds the highest accessible DP, the RC subject, establishes Agree (in the sense of Chomsky (2000; 2001)) with it and values the DP's uninterpretable Case features. The agreement suffix [i] on the modified noun phrase ʒer 'place' is the exponent of the valued ϕ -features on D.

(13) Kornfilt-style analysis of the RC with a genitive subject (see (2b))



¹⁰ The genitive-subject relative clause structure is rendered as per the raising analysis (Schachter 1973; Kayne 1994; Bianchi 1999; Bhatt 2002). Note that the raising analysis involves an additional step of moving the IP of the relative clause to Spec,DP to derive the correct word order (following Kornfilt (2008a)), this is discussed in more detail in section 4.3. Below, I represent nominative-subject RCs utilizing the matching analysis of relative clauses (Lees 1960; 1961; Chomsky 1965; Sauerland 1998; 2003; Salzmann 2006; 2017). Kornfilt's analysis does not include this detail, and my understanding is that both relative clause analyses would be compatible with Kornfilt's account. The reason why I represent the relative clauses this way is the extraction differences between these clauses, as shown in section 4.

Kornfilt’s analysis crucially relies on the RC not being a phase. Her first argument in favor of this view is that subject and non-subject relative clauses are not distinguished morphologically in Kazakh and in other Turkic languages that display the alleged non-local agreement on the modified noun phrase: (14a) is an example of non-subject RC, as the modified DP (‘place’) does not match the subject of the modifying RC (‘the girl’). (14b) offers a subject relative, where the modified noun phrase *kuuz* ‘girl’ is co-referential with the RC’s subject; the subject RC’s predicate is marked by the same suffix that was used in the case of non-subject RCs, namely [atun].

- (14) a. *Kuuz-duwǵ erterǵ bar-atun zer-i aluis-ta.*
 girl-GEN tomorrow go-PRSP place-POSS.3SG far-LOC
 ‘The place where the girl will go tomorrow is far.’
- b. [*Erterǵ mektep-ke bar-atun*] *kuuz kim?*
 [tomorrow school-DAT go-PRSP] girl who
 ‘Who is the girl [who will go to school tomorrow]?’

The invariable subject versus non-subject RC marking is in sharp contrast with the pattern attested in Turkish, where subject RCs are marked by the suffix /*(y)An/*, whereas the non-subject RCs are marked by the suffix /*DIK/* or /*(y)AcAK/* (the choice between these is determined by the aspectual properties of the clause). The Turkish non-subject RC in (15a) is headed by [tiğ] (an allomorph of /*DIK/*), in contrast /*DIK/* cannot be used as the exponent of C inside the subject relative in (15b), instead it is spelt out by /*(y)An/*.¹¹

- (15) *Turkish*
- a. [*Kız-ın git-tiğ-i*] *yer buradan uzak.*
 [girl-GEN go-PRF-POSS.3SG] place from.here far
 ‘The place where the girl goes/went is far from here.’
- b. [*Okul-a gid-en/ *git-tiğ-(i)*] *kız kim?*
 [tomorrow go-AN/ *go-PRF-(POSS.3SG)] girl who
 ‘Who is the girl who goes/went to school?’

Kornfilt argues that the choice between /*(y)An/* and /*DIK/* in Turkish is driven by complementizer agreement (for a recent account on how this can be implemented see Gračanin-Yüksek (2022)), and the lack of the morphological distinction between subject and non-subject relative clauses in Kazakh is due to the lack of the C projection, which is the locus of the complementizer agreement.

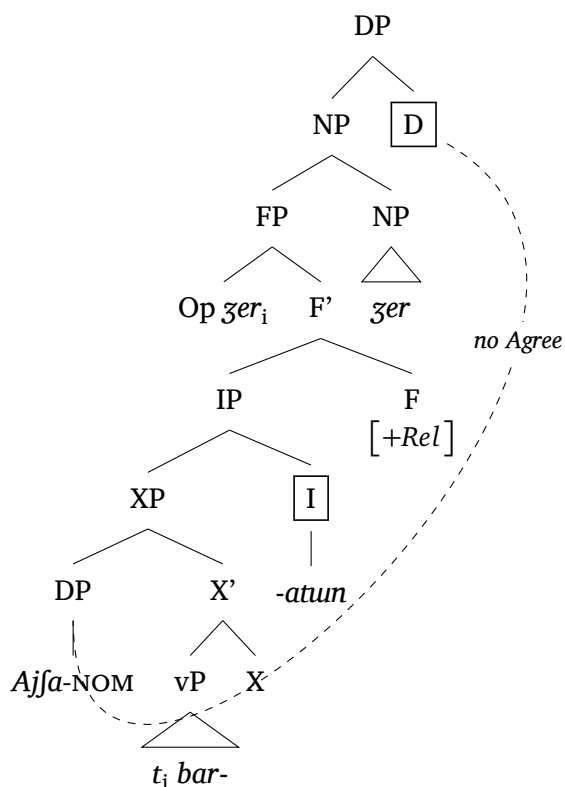
Secondly, recall that the agreement with the subject cannot be indicated on the RC predicate in Kazakh, as in (2b), similarly to other Turkic languages with apparent non-local agreement. This contrasts with Turkish, where subject agreement is marked on the non-subject RC predicate, see the agreement marker [i] following the /*DIK/* head in (15a). Kornfilt maintains that the lack

¹¹ The distribution of /*(y)An/* and /*DIK/* is more complex than this work allows us to do justice; an interested reader can consult Underhill (1972); Hankamer & Knecht (1976); Csató (1996); Kornfilt (2000); Çağrı (2005; 2009); Gračanin-Yüksek (2022) for more details.

of agreement on the RC predicate is a further indicator of the missing C-layer in this type of RCs. Correlation between agreement and phasehood has been shown to be relevant in other languages as well, for instance, in Japanese (Miyagawa 2011).

The final point to make with regards to the Kornfilt-style analysis is how it would treat nominative subject RCs. The challenge here is how to make sure that the RC-external D head does not establish Agree with the subject, and as a result the subject does not get assigned genitive and the ϕ -features on D remain unvalued (i.e., no overt agreement morphology appears on the modified noun). While Kornfilt never explicitly addresses this question, one assumes that the nominative subject would need to be in a lower position than the Inflection head, which this analysis must take to be a phase head. A potential such structure is given in (16). Under this analysis, the nominative RC subject is hosted by some projection rendered as XP in (16),¹² which is in the domain of the strong phase head, I(nflection). Assuming the weak version of the Phase Impenetrability Condition,¹³ the RC subject is inaccessible for the probe on D, as a result Agree cannot be established between the D head and the RC subject. The subject presumably gets default nominative case in this configuration.

(16) Kornfilt-style analysis of the RC with a nominative subject (see (2a))



¹² Alternatively, the subject could remain in its base position, Spec,VoiceP.

¹³ Chomsky (2001) defines the Weak PIC the following way: In phase α with head H, the domain of H is accessible to operations outside of α only until the next (strong) phase head is merged.

While this hypothetical account offers an explanation for how the subject can surface without genitive marking, it is based on two independently unmotivated steps: (i) it stipulates that the Inflection and not the relative clause head is the phasal head, and (ii) it requires an additional projection to host the nominative subject or, alternatively, the subject to remain in its base position, both of which options are unmotivated under this derivation.

Thus, the account that considers the genitive subject as being located inside the relative clause ultimately would require us to make some unmotivated assumptions when it comes to analyzing the nominative subject. The following sections show that this is not the biggest problem with the genitive-subject-inside-the-RC analysis. Additional empirical data, such as NCI licensing (section 2.2.1), adjectival modification intervening between the genitive subject and the RC (section 2.2.2), and semantic restrictions on the genitive subject (section 2.2.3), cast serious doubt on this account and instead indicate that the genitive noun phrase is in the Spec,DP position.

2.2 The genitive subject is not RC-internal

2.2.1 NCI licensing

This section looks at Negative Concord Items (henceforth, NCI) in the RC subject position under RC-internal and RC-external negation. The data introduced in this section are at odds with the view that the genitive subject is RC-internal, instead they indicate that the genitive phrase is at the edge of the DP, i.e., in the possessor position.

2.2.1.1 Negative Concord

Negative Concord is the phenomenon whereby a clause contains two (or more) negative elements, yet the interpretation of the clause is not construed with double (or multiple) negation but with single negation (Labov 1972; Progovac 1988; 1994; Haegeman & Zanuttini 1996; Giannakidou 2000; Zeijlstra 2004; Giannakidou 2006; Collins & Postal 2014; Giannakidou & Zeijlstra 2017). This can be accounted for under the assumption that the clause contains just one element expressing the logical negation (i.e., the one with the interpretable negative, [iNEG], feature), and other negative elements are Negative Concord Items carrying the uninterpretable negative feature and requiring to be licensed by the head that is the locus of the logical negation.

The sentence in (17) contains two negative elements: the NCI *efkim* ‘n-body’ and the negation head *ʒok*. Despite there being two negative elements, the sentence cannot be construed with double negation, the only available interpretation is the one with single negation. Note that the NCI *efkim* would be ungrammatical without the sentential negation *ʒok*. Additionally, (17) also illustrates that NCIs can be in the subject position.

- (17) **Ef-kim** bul ojũmʃũk-pen ojna-gan *(ʒok).
n-who_[iNEG] this toy-INS play-PRF *(NEG_[iNEG])
 Yes: ‘Nobody has been playing/ is playing with this toy.’ (single negation)
 Not: ‘Nobody does not play with this toy.’ (double negation)

I treat *efkim*, along with other similar items formed with *ef-* such as *ef-kafan* ‘n-when’, *ef nærse* ‘n-thing’ etc., as NCIs (see Jeretič (2022) for the same conclusion regarding the equivalent Turkish elements). The definition of NCIs is given in (18), cited from Giannakidou (2006). (17) demonstrated that the negative element *efkim* satisfies the (a) part of the definition in (18).

(18) Giannakidou (2006)

An expression α is an NCI iff:

- a. α can be used in structures containing sentential negation or another α -expression yielding a reading equivalent to one logical negation; and
- b. α can provide a negative fragment answer.

(19) shows that *efkim* is also in compliance with (b.) in (18), as *efkim* can serve as a fragment answer. Consequently, *efkim* can be considered a Negative Concord Item given the definition in (18). Negative Concord Items are to be distinguished from Negative Polarity Items (NPIs) (Zeijlstra 2008; Giannakidou 2006; Penka 2011).¹⁴ NPIs, in contrast to NCIs, cannot occur as fragment answers. For instance, the English NPI *anybody* cannot be used as a fragment answer to the question in (19).

(19)	–Bul ojunʃuk-pen kim ojna-du?	–Eʃkim.
	–this toy-INS who play-PST.3	–n-who
	‘–Who played with this toy?’	–‘Nobody.’

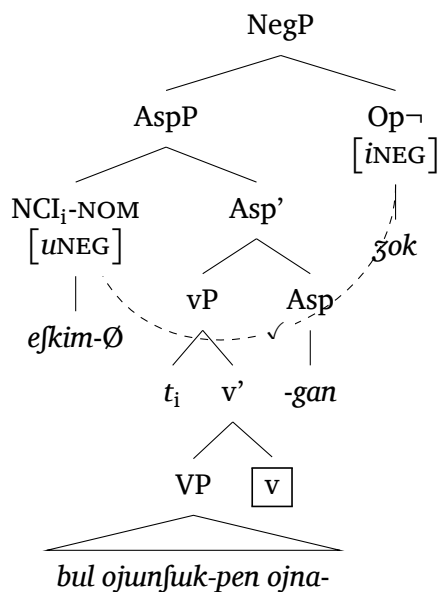
The distinction between NCIs and NPIs is crucial for our purposes, as NPI licensing is subject to different locality constraints than NCI licensing (Giannakidou 2000; Zeijlstra 2008). Negative Concord instantiates an Agree relation (Zeijlstra 2004; 2008; 2012), thus the relevant locality domain for NCI licensing is the same as for any other Agree operation. In contrast, NPI licensing is not an Agree operation, i.e., NPIs can be licensed across phase boundaries in a way that does not obey either the strong (Chomsky 2000) or the weak version of the Phase Impenetrability Condition (Chomsky 2001). Therefore, identifying *efkim* as an NCI is crucial for the discussion to follow, as it is important to know that the negative element licensing adheres to the well-established syntactic locality conditions.

Given these assumptions, the sentence in (17) has the structure given in (20). The NCI *efkim* ‘n-who’ bears uninterpretable negative features and is within the scope of the head bearing interpretable negation, spelt out by *ʒok*. Under this analysis, the head bearing [uNEG] enters into an Agree relation with a Goal with [iNEG]. Note that I tentatively assume that this is an instance of Upward Agree (Zeijlstra 2004). The directionality of Agree has been a heavily studied area of research, some arguing that such bottom-up evaluation exists or even that these are the only type of Agree (Zeijlstra 2004; 2008; 2012; Bjorkman & Zeijlstra 2019; Arregi & Hanink 2022). Others argue that Agree operates in a top-down fashion (Preminger 2013; Rudnev 2021; Bány &

¹⁴ See Zeijlstra (2008) for detailed arguments why NCIs are not a special type of NPIs, a position defended in Giannakidou (1997; 2000; 2006).

van der Wal 2022). Negative Concord clearly challenges the latter downward Agree approaches, as in Negative Concord languages [iNEG] is syntactically higher than elements with [uNEG]. In this paper, I adopt the Upward Agree approach for NCI licensing (and *only* for NCI licensing), but I note that there are attempts to recast NC in terms of Downward Agree (Deal 2023). The presented analysis could be easily reformulated in the spirit of Deal (2023).

(20) Analysis of (17)



As Negative Concord is an Agree operation, it obeys locality constraints pertaining to Agree. The discussion to follow considers locality to be determined by phases and spell-out rules that allow an escape hatch at the edge of the phase (Chomsky 2000; 2001).¹⁵ I assume that the relevant locality generalization for NCI licensing is the weak Phase Impenetrability Condition (Chomsky 2001), which (informally) states that the domain of a phase head is accessible to outside operations until the next phase head is merged. In contrast, the strong Phase Impenetrability Condition (Chomsky 2000) holds that the domain of a phase head is not accessible to outside operations. The strong PIC cannot be the correct locality generalization for NCI licensing because the negative operator can license NCIs in object or oblique argument position, which would not be allowed under the weak PIC. An illustrative example is offered in (21), where the interpretable negation can license the oblique (ablative) argument of the verb *kork-* ‘be afraid.’ The oblique arguments are contained within the domain of the phase head little-*v* (i.e., in VP).¹⁶ According to the strong PIC, material

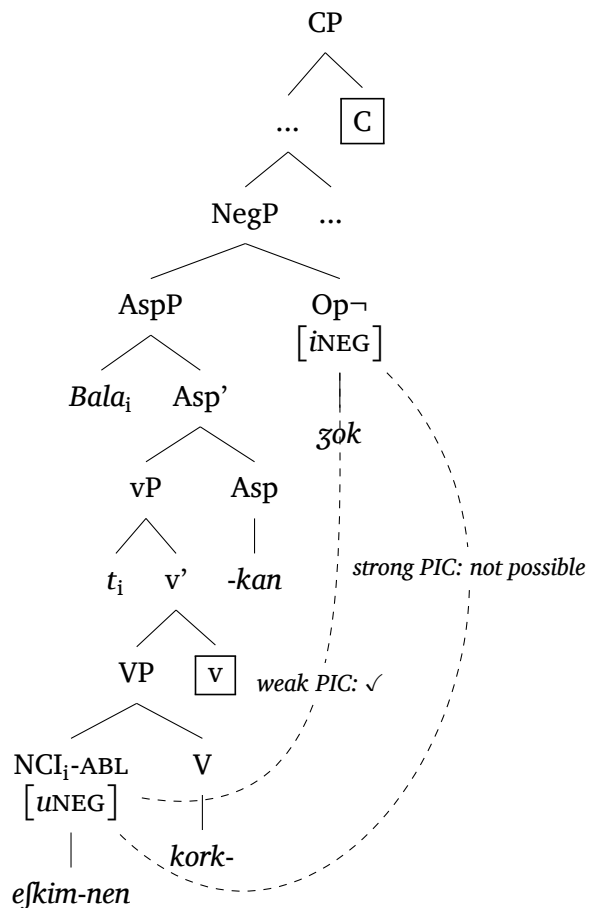
¹⁵ This is not the only way to define locality. For instance, Fox & Pesetsky (2005) introduce a linearization algorithm which can account for escape hatch-related phenomena without having to stipulate the existence of escape hatches. The arguments formulated in this section could be recast in a linearization-based account to locality.

¹⁶ I make the standard assumption that little-*v*, C and D are phase heads. Throughout the paper (except in section 4), I indicate phase heads with a framebox in syntactic trees.

contained within the domain of the phase head v cannot enter in an Agree relation with vP -external probes/goals. In contrast, the weak PIC allows Agree to be established between the domain of vP and vP -external material below the next phase head (in this case, C). As the NCI in oblique argument position can clearly be licensed, we can conclude that the weak PIC, but not the strong PIC, makes the correct generalization with respect to the locality domain of Negative Concord.¹⁷

- (21) Bala **efkim**_[uNEG]-**nen** kork-kan **zok**_[iNEG].
 child **n.who**-ABL be.afraid-PRF NEG
 ‘The child is not afraid of anyone.’

- (22) Analysis of (21)



¹⁷ I make use of NCIs in oblique argument position as direct objects are argued to undergo object shift to a vP -adjoined position (Diesing 1992; Zidani-Eroğlu 1997; Keleşir 2001). In theory, shifted NCI objects could be accessible to the negative operator under both the strong and the weak PIC. As I am not aware of any analysis that assumes that oblique arguments of the sort presented in (21) ever undergo movement, I consider them a good example to show the different predictions made by the weak and strong PIC. I should mention that, as expected, NCIs can be licensed in the direct object position as well.

Before turning to the RCs, a final note is in order concerning the location of the negative operator. The common assumption is that the head with the interpretable negation feature is located between the vP and AspP/TP. This is based on data such as (23), where the so-called negative suffix /MA/, which is commonly (but, in my view, incorrectly) assumed to be the locus of interpretable negation, is between the vP and the aspect/tense marker. That is, while the negative element *ʒok* in (17) follows the Aspect marker,¹⁸ the negative suffix /MA/ in (23) precedes it.¹⁹

- (23) **Eʃ-kim** bul ojuunʃuuk-pen ojna-*(**ma**)-gan.
n-who_[UNEG] this toy-INS play-*(**NEG?**_[i?NEG])-PRF
 ‘Nobody has (ever) played with this toy.’

The first point to make is that the exact location of the negative operator (i.e., whether it is between vP and Asp or above AspP) is not pertinent to the discussion of the relevant NPI licensing facts because the negative operator is between the phase heads little-v and C under both approaches. This said, it is worth clarifying why the representations below state that negation is higher than AspP. The main motivation for this comes from the interpretation attested in the propositional disjunction formed with *ne...ne* (Ótrott-Kovács 2023: 22–29). *Ne...ne* ‘either...or’ in Kazakh is not a NCI (in contrast to Turkish, see Jeretič (2022)). When *ne...ne* connects two clauses that contain the negative suffix /MA/, an “unexpected” ambiguity arises, shown in (24). If /MA/ is the locus of interpretable negation, only interpretation (a) should be available in (24), while (b) is unexpected. Ótrott-Kovács (2023) argues that the interpretation in (b) can be accounted for if we posit a phonologically zero negative operator that scopes over the disjunction. If this is on the right track, the negative suffix cannot be the host of the interpretable negative feature (for a more detailed discussion see Ótrott-Kovács (2023); note that Jeretič (2023) reaches the same conclusion based on a very different set of Turkish data).

¹⁸ Negation with *ʒok*, to the best of my knowledge, has not been studied in Turkic languages. I assume that *ʒok* is above Asp, and not T, because the subject agreement marker follows *ʒok* (for more details on the Aspect and Tense categories see Jendraschek (2011)). Under the view that the $[u\phi]$ -features indexing the subject are on T, the word order facts could potentially indicate that the negative head is between Asp and T. Of course, this is merely a preliminary discussion; I leave this issue for future research.

¹⁹ There is a meaning difference between negation with *ʒok* and /MA/. One of my consultants noted that (17) means (roughly) ‘Currently, no one is playing/no one has been playing with this toy,’ whereas (23) expresses that ‘No one ever played with the toy.’ At this point, it is unclear how to derive this meaning difference. I leave this for future work.

(24) Ótrott-Kovács (2023: 25), ex. (35)

Ne Ajfa bi bile-me-di ne Ajnur æn ajt-pa-du.

either Aisha dance dance-MA-PST.3 or Ainur song say-MA-PST.3

(a) ‘Aisha didn’t dance or Ainur didn’t sing.’

$\neg p \vee \neg q$

(b) ‘Neither did Aisha dance nor did Ainur sing.’

$\neg p \wedge \neg q$

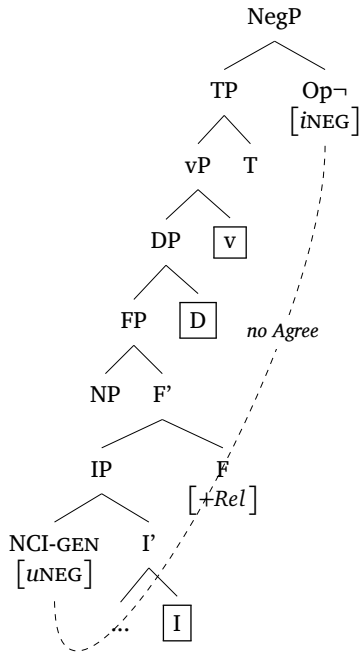
2.2.1.2 Predictions by the genitive-subject-inside-the-RC analysis

Given this background, we turn to the predictions made by the RC-internal genitive subject analysis regarding NCI licensing in the RC subject position under RC-internal and external negation.

This account predicts that RC-external negation, e.g., in the sentence “Aisha did *not* see the toy [that *n-one* played with],” cannot license either a genitive or a nominative-marked NCI in the RC subject position. As both nominative and genitive RC subjects are claimed to be located inside the relative clause, NCI licensing in these positions can be ruled out on the basis of an island violation. The relative clause constitutes an island for matrix operations, therefore the interpretable negation in the matrix clause cannot establish Agree with a RC-internal head bearing uninterpretable negative feature. This said, it has been noted in the literature that in some languages (e.g., in Danish, Swedish, Norwegian, Japanese, Hebrew, English, Italian, Spanish, French, Shupamem) RCs do not count as island domains (Sichel 2018; Kandybowicz & Nchare 2022), and therefore they are transparent to matrix operations, including NCI licensing by RC-external negation (Kandybowicz & Nchare 2022). Even if this were the case in Kazakh, the Agree relation between interpretable and uninterpretable negative features could not be established because it would constitute the violation of the Weak Phase Impenetrability Condition (Chomsky 2001),²⁰ as the probe would need to cross two phasal domains even in the case of the, higher, genitive RC subject. (25) offers a representation of this structural configuration: the matrix *v* and the D projection of the modified noun phrase are strong phase heads; the negation is above the matrix temporal phrase. When the matrix little-*v* head merges, the domain of the immediately preceding strong phase head, i.e., D, is sent to Spell-Out, therefore no Agree operation can be established between any material contained in the domain of D, i.e., NP in (25), and material above the matrix little-*v*. As the nominative RC subject is assumed to be lower than the genitive subject, it is also not expected to be able to host an NCI under matrix negation.

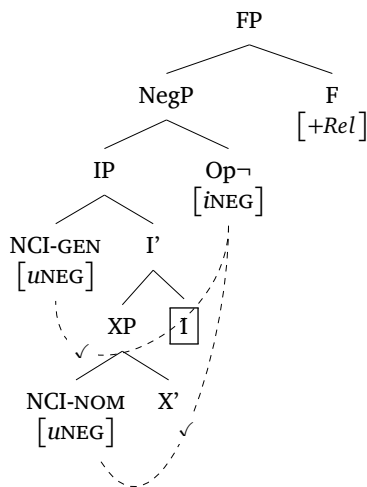
²⁰ Naturally, this would also violate the Strong Phase Impenetrability Condition (Chomsky 2000) as well. Note that Ótrott-Kovács (2023) argues that the relevant locality condition for Negative Concord is the weak version of the Phase Impenetrability Condition.

(25) Prediction-1: NCI licensing by matrix negation fails in the GEN RC subject position



Turning to NCI licensing by RC-internal negation, the RC-internal genitive subject analysis predicts that RC-internal negation can license NCIs in both nominative and genitive subject positions. As shown in (26), the negation head is above the temporal phrase, IP, and both the nominative and the genitive subjects are accessible for it, as per the Weak PIC. (26) combines the nominative and genitive subject RCs in a single tree representation.

(26) Prediction-2: NCI licensing in the GEN and NOM RC subject positions is possible under RC-internal negation



To summarize, the RC-internal genitive subject analysis predicts that RC-external negation can never license NCIs in the RC subject position, whereas RC-internal negation could license NCIs in both the nominative and the genitive subject positions. A summary of these predictions is given in Table 1.

RC-external negation	GEN NCI subject	✗
	NOM NCI subject	✗
RC-internal negation	GEN NCI subject	✓
	NOM NCI subject	✓

Table 1: Summary of predictions by the genitive-subject-inside-the-RC analysis.

2.2.1.3 NCI licensing data and their implications

The RC-internal genitive subject analysis predicts that nominative and genitive NCI subjects pattern uniformly with respect to clause-external and internal NCI licensing. While this account makes accurate predictions regarding nominative subjects, it falls short when it comes to genitive NCI subjects.

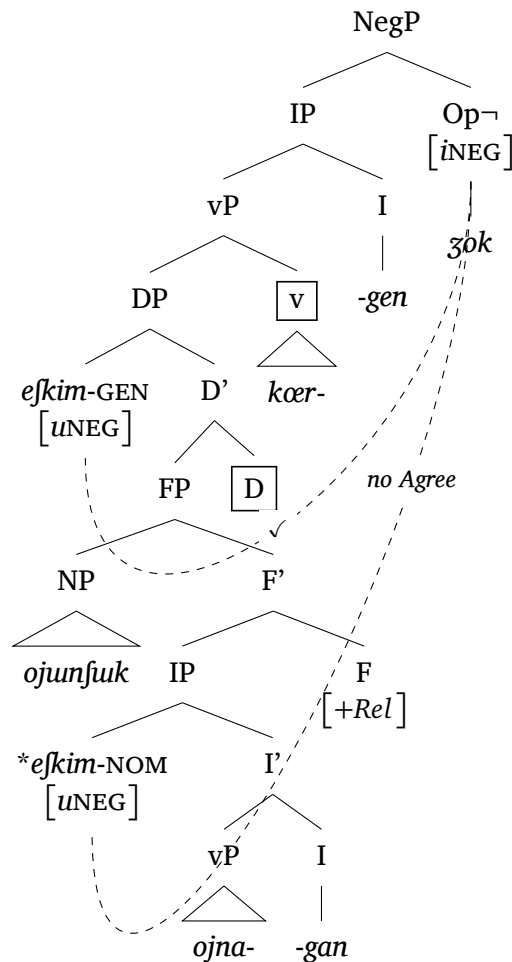
The prediction was that RC-external negation cannot license either nominative or genitive subjects. The following example demonstrates that this is not borne out. The RC subject in both sentences is the Negative Concord Item *eʃkim* ‘n-who,’ which is nominative in (27a) and genitive in (27b); the interpretable negative operator is in the matrix clause. As anticipated, the nominative NCI subject cannot be licensed by matrix negation. However, all consultants accept the genitive NCI RC subject under matrix clause negation. This is unexpected under any formulation of the RC-internal genitive subject approach as the only position where the superordinate negation can license an NCI is in the RC-external Spec,DP position, as discussed in connection with the configuration in (25).

- (27) a. *[Eʃkim-Ø balabakʃa-da ojna-gan] ojuɯɯtuk-tu kœr-gen ʒok-puɯ.
 [n.who-NOM kindergarten-LOC play-PRF] toy-ACC see-PRF NEG-1SG
 Intended: ‘I didn’t see the toy with which anybody plays in the kindergarten.’
- b. Eʃkim-nuɯ balabakʃa-da ojna-gan ojuɯɯug-uɯ kœr-gen ʒok-puɯ.
 n.who-GEN kindergarten-LOC play-PRF toy-POSS.3.ACC see-PRF NEG-1SG
 ‘I didn’t see anybody_i’s toy with which they_i play in the kindergarten.’

The availability of genitive NCI subjects in this configuration clearly locates the genitive RC subject in Spec,DP of the modified noun phrase as this is the only position within the DP where Agree can be established with the matrix negative operator. This is shown in (28). That is, the only possible analysis for the well-formed (27b) is that the genitive subject is RC-external.

The nominative subject is situated within the RC, shown in Spec,IP in (28), consequently, it is not accessible for Agree with the matrix negative operator. As the uninterpretable negative features of the nominative NCI cannot get valued in this configuration, the derivation fails and the result is the ungrammatical sentence in (27a). Note that (28) presents both the nominative and the genitive NCI subjects within one tree representation.

(28) Licensing NOM and GEN NCI subjects under matrix negation



Furthermore, the RC-internal genitive subject analysis also predicts that RC-internal negation can license both nominative and genitive subjects. This prediction is not borne out either. The RC-internal negation can license the nominative RC subject, as shown in (29a),²¹ but not the genitive subject, as in (29b).²²

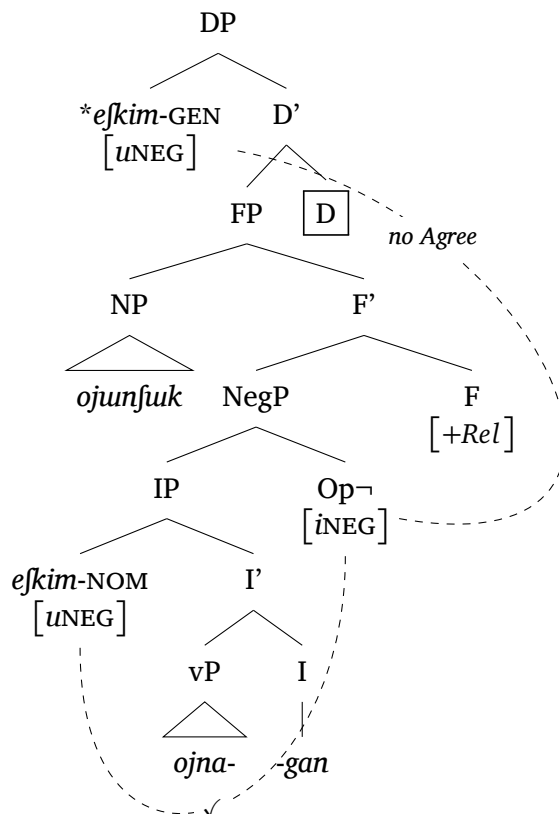
²¹ Note that following Ótrott-Kovács (2023), I do not consider the so-called “negative suffix” /MA/ to be the locus of the interpretable negative feature (see also Jeretič (2023) for the same claim about Turkish).

²² Some of my native speaker consultants found the judgements on examples similar to (29b) tricky. In such sentences the genitive NCI immediately preceded the RC predicate; some consultants expressed that these sentences are “diffi-

- (29) a. [Op \neg Eʃkim- \emptyset balabakʃa-da ojna-**ma**-gan] ojuɲʃuk munaw.
 [NEG n.who-NOM kindergarten-LOC play-**MA**-PRF] toy this
 ‘This is the toy with which nobody plays in the kindergarten.’
- b. *Eʃkim-**nuɲ** Op \neg balabakʃa-da ojna-**ma**-gan ojuɲʃuɲg-u munaw.
 n.who-**GEN** NEG kindergarten-LOC play-**MA**-PRF toy-POSS.3SG this
 Intended: ‘This is the toy with which nobody plays in the kindergarten.’

Again, this is consistent with the idea that the genitive subject is not RC-internal, therefore it cannot be within the scope of the negative operator. The nominative NCI subject can be licensed because it is within the scope of the RC-internal negative operator. The configuration that is consistent with the NCI facts upon RC-internal negation is given in (30).

- (30) Licensing NOM and GEN NCI subjects under RC-internal negation



cult” or maybe even accepted them (for data and the distribution of judgements see Ótrott-Kovács (2021)). However, it is noteworthy that even these speakers reject sentences where there is one or more phrase separating the genitive NCI and the RC predicate, as the one in (29b). I am assuming that the proximity between a potential licenser and the NCI is responsible for these murky judgements.

Table 2 offers a summary of the predictions made by the RC-internal genitive subject analysis and the actual NCI licensing data. The table shows that the RC-internal genitive subject analysis makes wrong predictions about genitive NCI subjects under both clause-external and internal negation. Thus, the genitive NCI facts are puzzling if we assume that the genitive subject is located inside the RC. However, they can be accounted for if we posit that the genitive phrase is in the canonical possessor position. The following subsections present additional pieces of evidence in support of this conclusion.

		Prediction	Data
RC-external negation	GEN NCI subject	✗	✓
	NOM NCI subject	✗	✗
RC-internal negation	GEN NCI subject	✓	✗
	NOM NCI subject	✓	✓

Table 2: Predictions by the genitive-subject-inside-the-RC analysis and the actual data.

2.2.2 Intervening adjectives

Another piece of data that is at odds with the RC-internal genitive subject analysis comes from adjective placement. The argument in a nutshell is the following: adjectives composing with the noun phrase modified by the RC can intervene between the genitive noun phrase and the relative clause. This is unexpected if the genitive subject is situated inside the RC.

The suffix /GI/ marks attributive adjectival phrases, which cannot display ambiguity between adjectives and adverbs (for a description of the corresponding Turkish construction /gi/ see Göksel & Kerslake (2004): 174–175). The /GI/ suffix attaches to a locative-marked noun phrase in (31), and forms an adjective with the meaning ‘belonging to/ situated in/ of [that place].’

- (31) Vengrija-da-**gu** 3er
 Hungary-LOC-**ADJ** place
 ‘the place (situated) in Hungary’

/GI/-marked phrases cannot modify verb phrases, that is, they can never serve as adverbial modifiers. The ungrammaticality of (32a), where the /GI/ phrase is intended to be used as a modifier of the verbal predicates ‘live’ and ‘go,’ demonstrates that /GI/ phrases cannot function as adverbs. (32a) is only grammatical if the adjectival marker /GI/ is omitted, shown in (32b).

- (32) a. *Vengrija-da-**gu** tur-a-muun / bar-a-muun.
 Hungary-LOC-**ADJ** live-PRS-1SG / go-PRS-1SG
 Intended: ‘I live in / go to Hungary.’

- b. Vengrija-da tur-a-mun. / Vengrija-ga bar-a-mun.
 Hungary-LOC live-PRS-1SG / Hungary-DAT go-PRS-1SG
 ‘I live in Hungary. / I go to Hungary.’

That is, /GI/ unambiguously marks adjectival modifiers. If the RC-internal genitive subject analysis is on the right track, /GI/-phrases are predicted to be available only before the RC (and the genitive subject contained in the RC) or between the RC predicate and the modified noun phrase, shown in (33). The /GI/-phrase is not expected to surface in any other position.

(33) Prediction: (/GI/ **phrase**) [_{RC} GEN-subject ...] (/GI/ **phrase**) modified-DP

The prediction in (33) is not borne out. I found that all native speakers I consulted accept sentences where an adjectival /GI/ phrase intervenes between the genitive DP and the RC. In (34), the /GI/-marked adjectival modifier²³ of the target noun phrase ‘place’ comes after the genitive-marked RC subject *men-ij* ‘I-GEN.’ The adjectival /GI/ phrase *Vengrija-da-gu* ‘situated in Hungary’ is not a modifier of the RC predicate *bar-atun*, as a /GI/ phrase cannot modify verbal predicates, shown above in (32a). The adjectival placement in (34) is unexpected under the RC-internal-genitive-subject approach because it would not predict that an adjectival phrase modifying the target noun ‘place’ can intervene between the genitive RC subject and the RC predicate. It is noteworthy that the high temporal adverb *ertej* ‘tomorrow’, which modifies the RC predicate,²⁴ can precede the genitive DP even if a /GI/ adjectival phrase intervenes between the genitive DP and the RC.²⁵

²³ Note that there is no special “parenthetical” intonation before and after the /GI/ phrase.

²⁴ *Ertelj* ‘tomorrow’ can only modify a noun phrase if we add the adjectival suffix /GI/ to it, illustrated by the ill-formed (ia) without /GI/ and the grammatical (ib) with /GI/. It follows that *ertelj* in (34) is not a modifier of the noun phrase *zer* ‘place,’ but the RC predicate *bar-atun*.

- (i) a. **ertelj* *sabak*
 tomorrow class
 Intended: ‘the class (happening) tomorrow’
 b. *ertelj-gi* *sabak*
 tomorrow-ADJ class
 ‘the class (happening) tomorrow’

²⁵ As expected, the /GI/-phrase cannot follow the nominative RC subject, as shown in (i).

- (i) a. ***Men-Ø** *Vengrija-da-gu* *bar-atun* *zer* *alus-ta*.
 I-NOM Hungary-LOC-ADJ go-PRSP place far-LOC
 Intended: ‘The place, situated in Hungary, where I am going is far.’
 b. *Vengrija-da-gu* **men-Ø** *bar-atun* *zer* *alus-ta*.
 Hungary-LOC-ADJ **I-NOM** go-PRSP place far-LOC
 ‘The place, situated in Hungary, where I am going is far.’

- (34) (Erteŋ) **men-ij** Vengrija-da-**gu** (erteŋ) bar-atun ʒer-im alus-ta.
 (tomorrow) **I-GEN** Hungary-LOC-**ADJ** (tomorrow) go-PRSP place-POSS.1SG far-LOC
 ‘The place, situated in Hungary, where I am going tomorrow is far.’

Thus, the adjective placement patterns are inconsistent with the RC-internal genitive subject account, whereas they support the view that considers the genitive-marked noun phrase RC-external. Under this latter analysis, the genitive DP is in the RC-external possessor position, shown in (35a), which is the labelled version of (34), and it predicts that an adjectival modifier could intervene between the DP in the possessor position (*men-ij*) and the possessee (*ʒer-im*). Note that the possessor-/GI/ phrase-possessee sequence is also well-formed when the noun phrase is not modified by an RC, shown in (35b).

- (35) a. (Erteŋ) **men-ij** Vengrija-da-**gu** [_{RC} (erteŋ) bar-atun]
 (tomorrow) **I-GEN** Hungary-LOC-**ADJ** [_{RC} (tomorrow) go-PRSP]
 ʒer-im alus-ta.
 place-POSS.1SG far-LOC
 ‘The place, situated in Hungary, where I am going tomorrow is far.’
- b. **Men-ij** Vengrija-da-**gu** ʒer-im alus-ta.
I-GEN Hungary-LOC-**ADJ** place-POSS.1SG far-LOC
 ‘My place, situated in Hungary, is far.’

In conclusion, /GI/-marked adjectives construing with the DP modified by the RC can follow the genitive-marked noun phrase suggesting that the genitive-DP is not in a RC-internal position.

2.2.3 Restrictions on genitive subjects

If the RC subject gets its genitive case inside the relative clause from a RC-external licenser, it is predicted that the type of the modified DP would not have any effect on the availability of the genitive subject marking. This section shows that this prediction is not borne out. Similar but not identical data have been presented in Ótrott-Kovács (2021) (see also Laszakovits (2019) for the closely related Turkic language, Kyrgyz).

The main empirical observation put forth in this section is that the genitive-marked noun phrase is always interpreted as the possessor of the modified DP. Consequently, the genitive strategy can only be felicitously used when some sort of “possessive” relationship (Barker 1991; Partee & Borschev 1998; 2003; Vikner & Jensen 2002) can be construed between the modified noun phrase and the genitive DP. In contexts that do not support the possessive relation between the genitive phrase and the modified noun the genitive strategy is disallowed. Additionally, when the modified DP is a relational noun such as ‘father’ or ‘eye,’ the genitive DP must be interpreted as the relational noun’s argument. This section introduces the relevant empirical data and shows that they are not compatible with the RC-internal genitive subject analysis.

2.2.3.1 No contextually construable possessive relation between the genitive DP and the modified DP

It is possible to find examples where the nominative RC subject strategy is perfectly acceptable, whereas the genitive strategy is either infelicitous or only felicitous in a narrower set of contexts than the nominative subject strategy. (36) offer an illustrative pair of examples, where the modified noun phrase is *the Sun*. (36a) demonstrates that the nominative-subject RC is acceptable with the modified DP *Sun*. On the other hand, the genitive subject strategy in (36b) is not compatible with this type of modified noun phrase in the given context. The first point to make regarding this example pair is that the RC-internal-genitive-subject analysis predicts no difference between nominative and genitive subject RCs in this context. This prediction is shown to be false by the infelicity of (36b).

(36) Adapted from Ótrott-Kovács (2021: 115), ex. (13)-(14)

A physics teacher asks a student (out-of-the-blue): – Which celestial body would you like to know more about? The student responds:

a. [Galum-dar-Ø zertte-p zat-kan] kyn twralu.
[scientist-PL-NOM study-IP AUX-PRF] sun about
'About the Sun, which scientists are investigating.'

b. #[Galum-dar-duŋ zertte-p zat-kan] kyn-i twralu.
[scientist-PL-GEN study-IP AUX-PRF] sun-POSS.3PL about
Intended: 'About the Sun, which scientists are investigating.'

Why is the genitive subject not suitable in this example? Recall that the genitive and nominative RC strategies can both construct non-restrictive relative clauses (see (5)-(6)), so the unavailability of the genitive subject cannot be due to the RC being non-restrictive in (36b). The degraded judgements in (36b) are parallel to those attested in (37), where there is no relative clause and the genitive-marked *scientists* is the intended possessor of *the Sun*. Before we turn to the relevant example, it is worth making clear our underlying assumptions about possessive constructions.

Following Barker (1991), Partee & Borschev (1998; 2003) and Vikner & Jensen (2002), I consider the relation between the so-called possessor and the possessee to be a not explicitly defined relation R, which can express various associations between possessor and possessee depending on various factors such as the possessee's lexical meaning (formalized in terms of qualia roles by Vikner & Jensen (2002), cf. Pustejovsky (1998)) and pragmatic information. That is, a wide array of relations can potentially be established between a possessor and a possessee depending on contextual and lexical semantic factors. For instance, in the possessive construction *the girl's poem* the possessor *the girl* might have written the *poem*, or she could have read the *poem* out loud, or, given contextual support, it could be a *poem* that she keeps talking about, or discovered, etc. (Vikner & Jensen 2002).

Given this background, it is expected that the *scientists* and *the Sun* could, in theory, be felicitously used in a possessive construction. This is in fact what we see in (38). Crucially, the context in (37) does not provide sufficient support to establish a salient relation between the *scientist* and *the Sun*, which results in infelicity.

- (37) A physics teacher asks a student (out-of-the-blue): – Which celestial body would you like to know more about? The student responds:

#**Galum-dar-duŋ** kyn-i twralu.
 scientist-PL-GEN sun-POSS.3PL about
 Intended: ‘About the scientists’ Sun.’

- (38) Teams of scientists, astronauts and engineers are asked to provide an artistic rendition of the Sun. I ask you: – Which one do you like the most? You respond:

Galum-dar-duŋ kyn-in.
 scientist-PL-GEN sun-POSS.3PL.ACC
 ‘(I like) The scientists’ Sun.’

Turning back to the genitive subject RC in (36b), I propose that (36b) is infelicitous in the given context for the exact same reason why the possessive construction in (37) is infelicitous. The parallelisms²⁶ between the the contexts where possessors and genitive subject RCs are felicitous strongly suggests that the genitive noun phrase in such RCs serves as the possessor, consequently it is situated in an RC-external position. This pattern constitutes a powerful counterargument against the RC-internal genitive subject hypothesis.

²⁶ I have conducted a detailed study with several native speakers in this respect, and I found that the contexts where possessors and genitive RC subjects are available are completely overlapping. Ótött-Kovács (2021) offers additional examples to illustrate these parallelisms. Note that the “restrictions” on genitives are not limited to proper name denoting terms, they can arise between any two terms where there is insufficient contextual support for establishing the relevant relation. An illustrative example follows. No salient relationship is established in the context between the ‘tree’ and the ‘window,’ consequently the possessive construction in (ia) is infelicitous. As predicted, the genitive subject RC in (ib) is also judged infelicitous in this context, patterning with the possessive construction. In contrast, the nominative subject RC in (ic) is acceptable.

- (i) Aisha and Bolat are looking at Aisha’s house. Bolat asks: “Which is your window?” Aisha points to a window that has a tree branch poking through it and responds:

- a. #**Agaŋ-tuŋ** tereze-si.
 tree-GEN window-POSS.3SG
 Intended: ‘The tree’s window.’
- b. #**Agaŋ-tuŋ** sundur-gan tereze-si.
 tree-GEN break-PRF window-POSS.3SG
 Intended: ‘The window that the tree broke.’
- c. [Agaŋ-Ø sundur-gan] tereze.
 [tree-NOM break-PRF] window
 ‘The window that the tree broke.’

2.2.3.2 Relational nouns as modified DPs

Relational nouns, such as *father*, *eye*, *neighbor*, *center*, *mayor*, are considered argument taking nouns; their argument is realized as the possessor, i.e., *Aisha's father/eye/neighbor*, *Almaty's center/mayor*. Note that it is controversial if *all* possessors should be considered arguments (as opposed to adjuncts) of the possessee, and it may very well be that the argumenthood of possessors is subject to cross-linguistic variation (see Partee & Borschev (2003) for a detailed discussion). We limit the discussion to canonical relational nouns, which are widely regarded as argument taking nouns.

When the modified DP is a relational noun such as *father*, the RC-internal genitive subject analysis predicts that the genitive subject can be interpreted not as an argument (i.e., not the possessor) of the relational noun. Consider first the felicitous nominative subject RC in (39a): as expected, the RC subject *Saule* is not interpreted as the relational noun's argument (i.e., the meaning is not 'Saule's father'). Contrast (39a) with the infelicitous genitive subject RC (39b). The RC-internal genitive subject analysis would predict that (39b) should be felicitous in this context, as the genitive DP is assumed to be not in the possessor position. Yet again, this prediction is not borne out. The genitive-marked DP in (39b) can only be interpreted as the argument of the relational noun, *father*. This suggests that the genitive DP is in the RC-external possessor position.

(39) Adapted from Ótrott-Kovács (2021: 117), ex. (25)-(26)

Saule is a teacher. She participated in a teacher-parent event yesterday, where she talked to several parents. We are talking about the parents:

a. [Sæule-Ø keʃe uzak sœjles-ken] æke Ajnur-duŋ æke-si.
[Saule-NOM yesterday long chat-PRF] **father** Ainur-GEN father-poss.3sg
'The father with whom Saule chatted for a long time yesterday is Ainur's father.'

b. #Sæule-niŋ keʃe uzak sœjles-ken æke-si Ajnur-duŋ
Saule-GEN yesterday long chat-PRF **father-POSS.3SG** Ainur-GEN
æke-si.
father-POSS.3SG

Intended: 'The father with whom Saule chatted for a long time yesterday is Ainur's father.'

2.3 Interim summary

This section presented the outlines and motivations of the RC-internal genitive subject analysis. This approach contends that the genitive-marked subject is inside the relative clause and it gets case from the RC-external D head as a result of the RC not constituting a phasal domain. A particularly strong argument in favor of this analysis comes from the adverb placement with respect to the genitive subject (first observed by Kornfilt): modifiers (and arguments) of the RC predicate can precede the genitive subject.

This section showed that despite the convincing adverb placement (or more accurately, scrambling) data, the RC-internal genitive subject analysis makes some incorrect predictions with respect to (i) NCI licensing, (ii) adjectival modifier placement, and (iii) restrictions on the availability of genitive RC subjects. These novel data call for a novel analysis that can accommodate the scrambling facts, along with these novel empirical observations. This is what the next section sets out to accomplish.

3 Analysis

3.1 The genitive RC subject is in Spec,DP

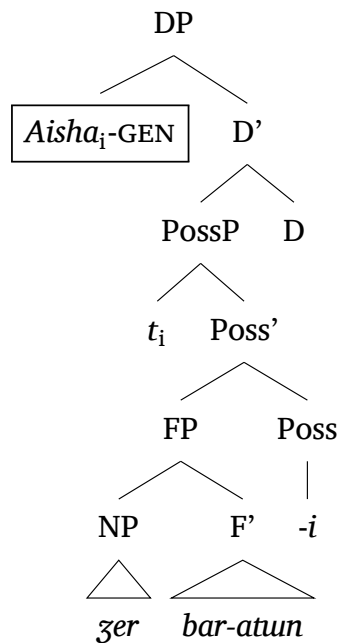
Setting aside the scrambling facts for the time being, the empirical observations presented in sections 2.2.1–2.2.3 strongly support the view that the genitive subject is RC-external and is situated in the Spec,DP, i.e., in the canonical possessor position. That is, the presented data indicate that the genitive-marked phrase must be in a high (possessor) position, and not in a low, RC-internal position. The first piece of evidence came from NCI licensing: RC-external negation can license genitive NCI RC subjects, whereas RC-internal negation cannot. Section 2.2.1 argued in detail that this pattern can only arise if the genitive subject is in Spec,DP. Secondly, adjectives composing with the noun phrase modified by the RC can intervene between the genitive subject and the RC. Section 2.2.2 takes this to indicate that the genitive DP is not RC-internal but in a RC-external position. Third, section 2.2.3 presented evidence that the genitive RC subject is interpreted as the possessor of the modified noun phrase. These data call for an analysis that places the genitive-marked DP in the possessor position of the modified noun phrase (and an independent explanation is required for the scrambling facts, cf. Section 4).

The preliminary version of the proposal is presented in (40). The possessive construction is assumed to consist of a PossP and a DP projection, and the possessor moves from Spec,PossP to Spec,DP following the influential account of Szabolcsi (1983; 1994) and Kayne (1993). Kazakh possessive constructions appear to be very similar (if not identical) to the better-studied Turkish possessives (for the latter see Kornfilt (1984); Kharytonava (2011); Tat (2013); Öztürk & Taylan (2016), *inter alia*). Following Öztürk & Taylan (2016), I adopt a layered approach to possessive constructions with the possessor raising from Spec,PossP to Spec,DP (note that Öztürk & Taylan (2016) label what I call PossP as nP). This paper does not take a stance on what the correct structure of the possessive construction should be, the one presented in (40) follows mainstream ideas about possessives, but other potential structures would be compatible with our proposal.²⁷ Under the proposed approach, the seemingly non-local agreement pattern no longer poses a

²⁷ One potential modification to (40) would be to assume that the PossP does not project a specifier and the Possessor thematic role is satisfied via Delayed Gratification when the DP is merged (Myler 2016). This approach would not require that we posit possessor raising, a phenomenon that lacks straightforward empirical support in Turkic languages as these languages do not display nominative and genitive possessors with (roughly) identical meanings (as it is the case in Hungarian (Szabolcsi 1983; 1994)). I leave it for future work to further explore this idea.

problem since in the suggested configuration the Agree relation is established in a local fashion between the head noun and the genitive-marked noun phrase.

(40) The position of the genitive RC subject (for sentence (2b)) (first version)



The proposed structure can readily account for the empirical facts in sections 2.2.1–2.2.3. (i) The genitive noun phrase in Spec,DP is contained within an accessible domain to the matrix negative operator, therefore NCI licensing under matrix negation can take place. Conversely, the genitive NCI is not within the scope of the RC-internal negation at LF, which renders such sentences ungrammatical. (ii) The adjective placement facts receive a straightforward explanation under this approach: since genitive-marked DPs are not part of the RC, it is not surprising that adjectives can intervene between them and the RC. (iii) The fact that the genitive-marked DP patterns as a possessor is no longer surprising either: it is interpreted as the possessor because it is the possessor.

3.2 Developing the proposal

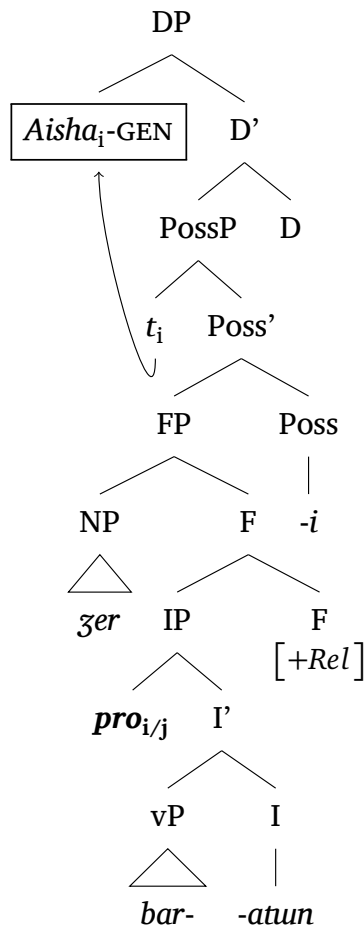
After establishing that the genitive-marked noun phrase is in Spec,DP, the next question is how it gets interpreted as the subject of the relative clause. There are three potential analyses, which make different predictions with respect to the interpretation of the RC subject. The first analytical option is that the genitive noun phrase is base-generated in Spec,Poss and it is co-referent with a *pro* subject in the RC subject position. The second alternative is that the RC-subject raises to Spec,DP (i.e., Hale-style analysis). The third option is that the genitive noun phrase is base-generated in Spec,Poss and it controls the PRO subject in the RC. The following sections take

a closer look at these potential accounts and their implications. The empirical data presented below supports the control analysis.

3.2.1 First attempt: Base-generation in Spec, PossP, pro RC subject

The first option is to analyze the genitive noun phrase as being base-generated in PossP, with subsequent movement to Spec,DP; the RC contains a *pro* subject, which is co-indexed with the possessor. This is shown in (41). This account would essentially say that the genitive subject RC strategy is the result of the combination of a possessive construction with a nominative subject RC containing a covert pronominal subject.

(41) The base-generation analysis, with *pro* RC subject (to be dismissed)



This analysis makes two predictions: (i) the RC subject may have a different referent than the possessor, and (ii) moving the adverb modifying the RC predicate over the possessor is possible with overt nominative RC subject. In what follows, these two predictions are evaluated against novel data and both of them are shown to be contradicted by these empirical findings.

The first prediction concerns the coreference between the possessor and the RC subject. If the RC subject is *pro*, it does not need to display obligatory coreference with the possessor. To test out this prediction, we need to exercise some caution because even if the genitive RC strategy does not employ the structure presented in (41), this structure should be independently available. That is, asking consultants to determine whether the RC subject can have a different referent from the possessor in a sentence such as (2b), could potentially misguide us because, irrespective of how we analyze the genitive subject RC strategy, the absence of coreference should be available on independent grounds (i.e., because the nominative subject RC with a covert subject can, in theory, compose with a possessive construction).

In order to develop more reliable diagnostics, I refer to canonical tests to distinguish between *pro* and PRO. The lexical pronoun *pro* allows for both sloppy and strict readings under ellipsis, it can be interpreted either *de se* or *de re*, and it does not obviate Weak Cross-Over effects (Chierchia 1989; Higginbotham 1992; Hornstein 1999; Landau 2000; 2004). Out of these tests only the ellipsis test can be applied for the genitive RC subject construction.

The overarching idea is that PRO only allows sloppy reading under ellipsis, whereas lexical pronouns support both sloppy and strict readings. In the following Hebrew examples the complement clause in the second conjunct is elided under identity, i.e., *but not her mother* [~~complement clause~~]. The PRO subject of the elided complement clause in (42a) can only be interpreted as being coreferent with ‘her mother’ (sloppy reading) but not with ‘Rina’ (strict reading). In contrast, the lexical pronoun subject in (42b) can be coreferent with either ‘her mother’ (sloppy reading) or ‘Rina’ (strict reading).

(42) *Hebrew*, adapted from Landau (2004: 824), ex. (14ab)

- a. Gil bikeš me-Rina_i [PRO_i la’azor lo] aval lo me-ima šela.
 Gil asked from-Rina [PRO to.help to.him] but not from-mother her
 ‘Gil asked Rina_i [PRO_i to help him] but not her mother_j [~~PRO_{j/*i} to help him~~].’
 (only sloppy reading)
- b. Gil bikeš me-Rina_i [še-hi_i ta’azor lo] aval lo me-ima šela.
 Gil asked from-Rina [that-she will.help.3SG.F to.him] but not from-mother her
 ‘Gil asked Rina_i [that she_i to help him] but not her mother_j [~~that she_{j/i} to help him~~].’
 (strict and sloppy readings)

Against this backdrop, we have a clear prediction: if the RC subject is a lexical pronoun such as the phonologically covert *pro*, both strict and sloppy readings should be available. But if the RC subject is not a lexical pronoun (i.e., if it is a PRO or a trace), only the sloppy reading is possible. Now consider the Kazakh example in (43): in the second conjunct the RC and the head noun is elided, i.e., that is *Saule’s one that* [~~e-promised to clean~~].²⁸ If the RC subject is *pro*, the reading

²⁸ Whenever the noun head is elided in a possessive construction the possessor must be marked with the suffix /GI/ following the genitive case marker.

where the RC subject is coreferent with *Aisha* should be available (strict reading). This is not what we see, the elided RC subject must be coreferent with *Saule*. The fact that the elided RCs only support the sloppy reading suggests that the RC subject is not the lexical pronoun *pro*.²⁹

- (43) Ajfa_i-nuwŋ [e_i tazala-w-ga soez ber-gen] kilem-i munaw, al
 Aisha-GEN [clean-NMLZ-DAT word give-PRF] carpet-POSS.3SG this and
 Sæule-ni-ki anaw.
 Saule-GEN-GI that
 Yes: ‘This is Aisha_i’s carpet that [e_i promised to clean] and that is Saule_j’s
 one that [~~e_{j/i} promised to clean~~].’ (only sloppy reading)
 Not: ‘This is Aisha_i’s carpet that [e_i promised to clean] and that is Saule_j’s
 one that [~~e_{j/i} promised to clean~~].’ (the strict reading is not available)

The second prediction the analysis in (41) makes is that scrambling out of a RC-internal phrase to a pre-possessor position is possible over an overt nominative RC subject. The consideration behind this prediction is the following: for the sake of argument let us assume that the genitive subject RC strategy is simply the combination of a possessor and a nominative subject RC with a *pro* subject, as in (44a). I have already established that an RC-internal phrase, e.g., the adverb ‘yesterday,’ can move to a position where it precedes the genitive phrase (recall that this was Kornfilt’s seminal observation about the genitive RC strategy). If the RC subject is *pro* in this construction, then we would expect the same scrambling pattern to be possible over an overt lexical noun phrase in the RC subject position, as shown in (44b). However, (44b) is unanimously

²⁹ The reviewers point out that this result is unexpected because possessors should be compatible with the nominative strategy with covert *pro* subject. That is, the structure in (i) should always be available, and therefore the strict reading of (43) should always be available.

(i) [_{DP} DP_i-GEN [_{RC} *pro*_{i/j} ...] NP D]

I agree with the reviewers’ point that the data in (43) is not compatible with (i). I speculate that the reason why my consultants could not get the strict reading in (43) is related to the general preference to avoid possessors with RCs having a *pro* subject, which is presumably related to language processing reasons. I found that speakers are extremely reluctant to interpret covert RC subjects coindexed with a DP other than the possessor (i.e., in the configuration given in (i)). This type of example had to be offered with abundant contextual support and even then consultants were hesitant to interpret the covert subject as a *pro*, coreferent with the contextually salient non-possessor DP. As (43) was presented without any contextual support, it is maybe not so surprising that the consultants would not have any contextually salient referent available for the *pro* subject under the nominative RC strategy.

While I recognize that this diagnostics has some shortcomings, it still tells us something about the covert subject in the genitive RC subject strategy: if the covert element is a *pro*, it is expected that the strict reading should be available. This is not what we see. That is, relative clauses can have PRO subjects. The reason why the nominative-subject RC with *pro* subject parse, associated with the strict reading, is not salient here is probably related to (1) general avoidance of this strategy with possessors (related to discourse factors lying beyond the scope of the paper), and (2) lack of contextual support. I am very grateful to the reviewers for bringing this issue to my attention.

judged as ungrammatical by native speaker consultants. (44c) illustrates that the ill-formed (44b) can be corrected if the adverb ‘yesterday’ is placed in a RC-internal position. The contrast between (44a) and (44b) suggests that these sentences contain different types of RC, and that the genitive RC strategy is not reducible to the nominative subject RC with a *pro* subject plus a possessor.

- (44) a. **Keʃe** ata-m-nuŋ [*pro?* ʒœnde-gen] sagat-u munaw.
yesterday grandfather-POSS.1SG-GEN [fix-PRF] clock-POSS.3SG this
 ‘This is my grandfather’s clock that my grandfather fixed yesterday.’
- b. ***Keʃe** ata-m-nuŋ [Ajʃa-Ø ʒœnde-gen] sagat-u
yesterday grandfather-POSS.1SG-GEN [Aisha-NOM fix-PRF] clock-POSS.3SG
 munaw.
 this
 Intended: ‘This is my grandfather’s clock that Aisha fixed yesterday.’
- c. Ata-m-nuŋ [**keʃe** Ajʃa-Ø ʒœnde-gen] sagat-u
 grandfather-POSS.1SG-GEN [**yesterday** Aisha-NOM fix-PRF] clock-POSS.3SG
 munaw.
 this
 ‘This is my grandfather’s clock that Aisha fixed yesterday.’

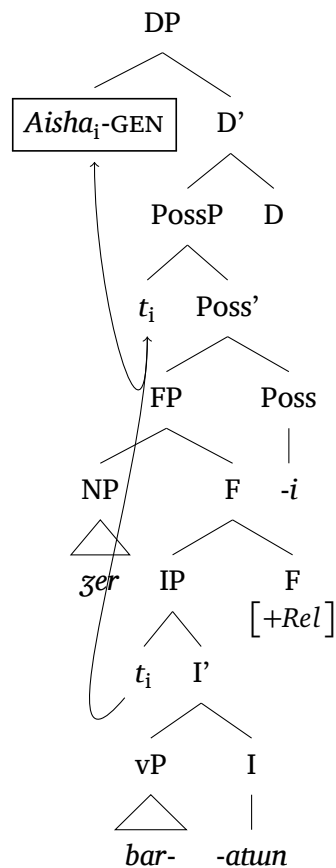
This section explored two predictions made by the analysis in (41), and concluded that the empirical data are not consistent with this account. For this reason, the analysis according to which the genitive phrase is base-generated in an RC-external position and combines with a nominative subject RC containing a *pro* subject should be rejected.

3.2.2 Second attempt: Raising

The second analytical option, laid out in (45), is a raising account in the spirit of Hale (2002). Note that the underlying assumption of this and the following section is that raising and control are distinct phenomena. There has been a debate in the literature whether it is possible to unify raising and control (Bowers 1973; 2008; Hornstein 1999; 2000; Boeckx & Hornstein 2003; 2004; 2006; Boeckx et al. 2010) or whether they ought to be distinguished from one another (Landau 2003; 2004; 2007; 2015; Bobaljik & Landau 2009; Culicover & Jackendoff 2001; 2005; 2006; Jackendoff & Culicover 2003; Polinsky & Potsdam 2006; Runner 2006). The former family of approaches argues that PRO in the so-called control clauses is better treated as an A-movement trace, whereas the latter holds that the independent status of PRO in such constructions should be maintained. This work has no direct bearing on this debate, it simply adopts the view that raising and control are different.

The raising analysis in (45) would go like this: the RC's Inflection head cannot assign Case to (i.e., cannot license) its subject, for this reason the subject DP moves through Spec,PossP to Spec,DP, where it gets genitive.

(45) Raising analysis (to be dismissed)



The first issue with this approach is conceptual: the already θ -marked RC subject is raised into Spec,PossP, which assigns an additional θ -role to the noun phrase (recall that section 2.2.3 presented ample evidence that the genitive-marked RC subject is interpreted as the possessor of the modified noun). This would constitute a violation of the θ -Criterion (Chomsky 1981; 1995; Carlson 1984; 1998).³⁰ Note that we do not have sufficient data to determine whether the RC subject in Dagur, for which the raising analysis was first proposed by Hale (2002), also bears the Possessive thematic role. It is conceivable that the RC subject is not interpreted as the possessor in Dagur, which makes the raising analysis more appealing for that language. In addition to this

³⁰ Several approaches, primarily in the context of control-as-movement-type analyses, abandon the θ -Criterion and adopt the position that A-chains may receive more than one θ -role. As this work does not follow this approach, abandoning the otherwise well-established θ -Criterion seems unnecessary.

theoretical objection, there are also empirical problems with the raising analysis, which makes wrong predictions when it comes to idioms, Condition A reconstruction effects and WCO facts. We turn to these issues now.

A well-established property of raising is that when an idiom chunk undergoes raising the idiomatic meaning is preserved. This famously contrasts with control constructions,³¹ where the idiomatic reading gets lost (first observed by Rosenbaum (1965)). Rosenbaum’s classic example illustrating this contrast is offered in (46). (46a) shows that the raising of *the shit* does not bleed the availability of the idiomatic meaning. In contrast, the idiomatic meaning is not preserved in the control construction in (46b).

- (46) a. The shit_i seems [_{t_i} to have hit the fan]. (raising)
 b. #The shit_i expects [_{PRO_i} to have hit the fan]. (control)

If the genitive RC strategy involves raising, idiomatic meanings are anticipated to be preserved upon marking an idiom chunk with the genitive. To test this hypothesis, I use the (subject) idiom *kanatu kataj-* ‘grow, develop (skills); lit. for someone’s wing to harden,’ where *kanatu* ‘wing-POSS.3’ serves as the subject of the predicate *kataj-* ‘to harden.’ (47a) demonstrates that this idiom can be used in a nominative subject RC (the example was adapted from Mukan (2012)). If the RC subject is raised to Spec,DP, we predict that the idiomatic meaning is preserved when the subject idiom-part is genitive-marked. (47b) shows that this is not borne out: the idiomatic meaning disappears when ‘their wing’ is genitive. This suggests that the RC subject does not undergo raising.

- (47) a. [Ataktu basketbol ojuɯŋʃusɯ-nɯŋ kanat-u-∅ kataj-gan] alaŋ
 [famous basketball player-GEN wing-POSS.3SG-NOM harden-PRF] arena
 munaw.
 this
 ‘This is the arena where the famous basketball player’s skills developed.’ (lit.
 where their wings hardened)
- b. #Ataktu basketbol ojuɯŋʃusɯ-nɯŋ kanat-u_i-nɯŋ [e_i kataj-gan]
 famous basketball player-GEN wing-POSS.3SG-GEN [harden-PRF]
 alaŋ-u munaw.
 arena-POSS.3SG this
 Intended: ‘This is the arena where the famous basketball player’s skills developed.’

The second empirical problem concerns Condition A reconstruction effects. Raising and control constructions pattern differently with respect to anaphor binding. The A-moved anaphor in a

³¹ Another well-known difference between raising and control in English is the use of the expletive *there*: *there* is allowed with raising verbs (“*There* seems to be problem.”) but not with control verbs (“**There* expects to be a problem.”). As Kazakh does not have an expletive, this test is not applicable in the language.

raising construction can reconstruct to its base position for Condition A, as shown in (48a). In contrast, the anaphor contained in the controller cannot be bound in a control construction, as illustrated in (48b) (the contrast was first observed by Langendoen & Battistella (1982); for an in-depth discussion see Belletti & Rizzi (1988)). The assumption underlying this argumentation is that Condition A can be satisfied at any point in the derivation (i.e., in the D-structure following GB terminology) (Barss 1986; Belletti & Rizzi 1988; Lebeaux 2000; 1991). In the raising construction in (48a), the phrase containing the anaphor (*replicants of themselves*) originates in the embedded clause where it gets bound by a c-commanding antecedent (*the boys*). As the controller (*replicants of themselves*) does not originate from the embedded clause in (48b), the anaphor *themselves* does not get bound at any point in the derivation.

- (48) Belletti & Rizzi (1988: 316), ex. (66), credited to Kyle Johnson
- a. Replicants of themselves_i seemed to the boys_i [*t* to be ugly]. (raising)
 - b. *Replicants of themselves_i promised the boys_i [PRO to become ugly]. (control)

In order to apply this diagnostic to the genitive subject RC, I make use of passivized causative predicates, where the subject can contain a bound anaphor. In the causative construction in (49a) the dative causee *Bolat* binds the anaphor in the object position (for the same observation in Turkish see Key (2013); Akkuş (2021)). When the causative predicate undergoes passivization, the original object is promoted to the subject position.³² The subject of this passive sentence ‘himself’s picture’ can occur either to the right or to the left of the dative causee, which binds the anaphor in the subject; this is shown in (49b) and (49c). In (49c), where the anaphor precedes its antecedent, contrastive focus can facilitate establishing the coreference, but it is not obligatory.³³ I note that a speaker mentioned that it is easier to get the coreference between the anaphor and antecedent when the focus (*kefe* ‘yesterday’ in (49c)) is present.

- (49) a. Men Bolat_i-ka œzi_{i/j}-niñ suret-in sal-**dur**-du-m.
I Bolat-DAT self-GEN picture-POSS.3SG.ACC draw-CAUS-PST-1SG
‘I had Bolat_i draw himself_{i/j}’s picture.’
- b. Bolat_i-ka œzi_{i/j}-niñ suret-i sal-**dur**-ul-du.
Bolat-DAT self-GEN picture-POSS.3SG draw-CAUS-PASS-PST-1SG
‘Himself_{i/j}’s picture was such that Bolat_i was made to draw it.’
- c. œzi_{i/j}-niñ suret-i Bolat_i-ka (*kefe*) sal-**dur**-ul-du.
self-GEN picture-POSS.3SG Bolat-DAT (*yesterday*) draw-CAUS-PASS-PST-1SG
‘Himself_{i/j}’s picture was such that Bolat_i was made to draw it (YESTERDAY).’

³² The dative causee cannot become the subject in the passivized sentence; the same is true in standard Turkish varieties (Legate et al. 2020; Akkuş 2021).

³³ It is noteworthy that Akkuş (2021: 256–264) offers a detailed description of how leftward scrambling can disrupt anaphor binding in Turkish, but reconstruction is possible in the presence of contrastive focus (see also Kural (1992); Öztürk (2005)). This is not directly relevant here, because Akkuş’s focus is on scrambling and binding involving PP antecedents.

As expected, it is possible to establish coreference between the causee and an anaphor-containing nominative RC subject to the left of the causee, as shown in (50a). Just as in (49c), the reconstruction of the subject to the internal argument position in (50a) is possible, feeding binding between the causee and the anaphora.³⁴ Turning to the genitive RC “subject,” we have the following prediction: a genitive-marked RC subject containing an anaphor is expected to be grammatical under the raising analysis, but if it is ill-formed, it supports the control analysis. (50b) demonstrates that when the anaphor-containing “subject” is genitive-marked, the anaphor cannot be coindexed with the causee, it can only be bound logophorically.³⁵ This indicates that the genitive noun phrase is not raised to the possessor position because if it was, it would be expected to be able to reconstruct for Condition A similarly to the example in (49c). In contrast, the control analysis predicts the absence of anaphor binding.

- (50) a. [œzi_{i,j}-niŋ suret-i-Ø Bolat_i-ka t_i kefe sal-**dur**-ul-gan]
 [self-GEN picture-POSS.3SG-NOM Bolat-DAT yesterday draw-CAUS-PASS-PRF]
 ʒer munaw.
 place this
 ‘This is the place where himself_{i,j}’s picture was such that Bolat_i was made to draw it YESTERDAY.’
- b. œzi_{i,j}-niŋ suret-i-niŋ [Bolat_i-ka kefe sal-**dur**-ul-gan]
 self-GEN picture-POSS.3SG-GEN [Bolat-DAT yesterday draw-CAUS-PASS-PRF]
 ʒer-i munaw.
 place-POSS.3SG this
 ‘This is the place where himself_{i,j}’s picture was such that Bolat_i was made to draw it YESTERDAY.’

The third issue with the raising analysis is related to Weak Crossover effects (for an overview see Safir (2017) and references therein). Consider the contrast between the raising and control constructions in (51). When the phrase undergoing raising contains a pronoun, the bound variable interpretation can be established if the phrase was in the scope of the quantifier before movement. In contrast, the pronoun in the controller cannot be interpreted as a bound variable in the control construction in (51b) because the controller does not reconstruct into a position where it could be within the scope of the quantifier (Landau 2013).

- (51) *English*, Landau (2013: 15), ex. (36)
- a. His_i employees appeared to every boss_i [*t* to be surprisingly efficient]. (raising)
- b. ??His_i employees promised to every boss_i [PRO to be more efficient]. (control)

(52b) is the passivized version of the causative in (52a). In the passivized causative constructions, the pronoun contained in subject, ‘his picture,’³⁶ can be bound by the quantifier in the causee

³⁴ One of my consultants noted that in this example it is much easier to get the coreference when contrastive focus is present.

³⁵ The contrastive focus has no amelioration effect here.

³⁶ The pronoun here is the phonologically covert *pro* in the possessor position.

position, ‘every student.’³⁷ Just as before in (49), binding can be established even if the antecedent comes after the pronoun because the pronoun reconstructs to its base-position where it is under the scope of the antecedent. This is shown in (52c).

- (52) a. *Ajfa ær student_i-ke pro_{i/j} suret-in-Ø sal-duur-duu.*
 Aisha every student-DAT picture-POSS.3SG-ACC draw-CAUS-PST.3
 ‘Aisha made every student_i to draw his_{i/j} picture.’
- b. *ær student_i-ke pro_{i/j} suret-i sal-duur-ul-duu.*
 every student-DAT picture-POSS.3SG draw-CAUS-PASS-PST.3
 ‘Every student_i was made to draw his_{i/j} picture.’
- c. *pro_{i/j} suret-i ær student_i-ke e (kefe) sal-duur-ul-duu.*
 picture-POSS.3SG every student-DAT (yesterday) draw-CAUS-PASS-PST.3
 ‘Every student_i was made to draw his_{i/j} picture (YESTERDAY).’

In RCs with nominative subjects such as (53a), the bound variable reading is available even if the pronoun precedes its antecedent at the surface structure.³⁸ When it comes to genitive-subject RCs, the prediction is that the genitive-marked phrase containing a pronoun can only have a bound variable reading if the phrase is raised from the RC to the clause-external possessor position. (53b) shows that this prediction is not borne out as the genitive-marked ‘his picture’ receives more degraded judgements when it is interpreted within the scope of the universal quantifier in the embedded clause.³⁹ The lack of reconstruction effects once again indicates that the genitive RC subject is not moved to the possessor position.

- (53) a. [*pro_{i/j} suret-i-Ø ær student_i-ke e kefe*
 [*picture-POSS.3SG-NOM every student-DAT yesterday*
sal-duur-ul-gan] 3er munaw.
 draw-CAUS-PASS-PRF] place this
 ‘This is the place where every student_i was made to draw his_{i/j} picture YESTERDAY.’
- b. *pro_{??i/j} suret-i-nij [ær student_i-ke kefe*
picture-POSS.3SG-GEN [every student-DAT yesterday
sal-duur-ul-gan] 3er-i munaw.
 draw-CAUS-PASS-PRF] place-POSS.3SG this
 ‘This is the place where every student_i was made to draw his_{??i/j} picture YESTERDAY.’

³⁷ A consultant noted that a more salient reading would be to interpret the dative-marked phrase as the beneficiary, i.e., ‘Someone was made to draw his_{i/j} picture for every student_i.’ As the beneficiary ‘every student’ c-commands the direct object, binding is predicted to be possible between the beneficiary and the object. I continue translating the following sentences with an overt causee but note that in each example the dative phrase can be construed as the beneficiary.

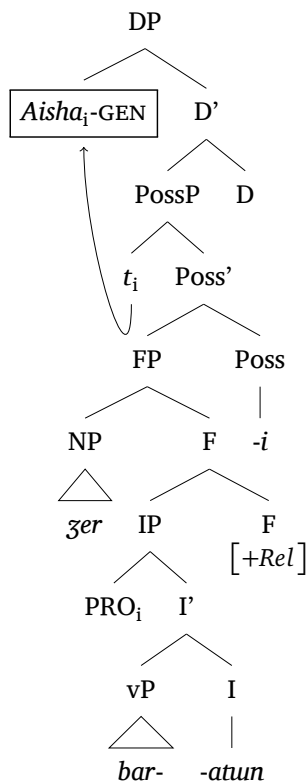
³⁸ I note that contrastive focus is not obligatory for construing the coreference in (53a), but it facilitates it.

³⁹ One speaker noted that the coreference is “much weaker” here.

3.2.3 Proposal: Base-generation in Spec, PossP, PRO RC subject

The previous sections established that the RC subject is not *pro* or an A-movement trace. This section draws the conclusion that the RC subject is a PRO obligatorily controlled by the genitive-marked possessor of the modified noun phrase.⁴⁰ This analysis is presented in (54). Crucially, the proposed analysis makes no reference to the phasal status of the relative clause (cf. Kornfilt’s approach in section 2.1). Kornfilt’s claim about Kazakh and other similar Turkic languages having no full-fledged CP in their relative clauses as evidenced by the lack of complementizer agreement, could be on the right track. However, the proposal in this paper is that the phasal status of the RC is independent from the reason why the RC “subject” is in the genitive.

(54) Control analysis



This analysis can capture the empirical data presented so far in section 3: (i) the obligatory sloppy reading under ellipsis (Rosenbaum 1965; Landau 2000; 2004), (ii) the loss of the idiomatic reading when the subject idiom chunk is genitive-marked (Landau 2003; 2007), and (iii) the lack of reconstruction effects for Condition A and variable binding (Landau 2013), all of which are properties of control constructions.

⁴⁰ A reviewer asks what regulates the distribution of overt subjects, *pro* and PRO in the RC subject position. When there is a genitive-marked possessor in the structure, all three types of RC subjects are possible (but only the PRO-subject RC has the structure in (54)). Note that RCs with PRO subjects but without a possessor are not expected to ever surface because PRO cannot be coindexed with remote controllers. As DP is likely to be a phase in Kazakh, control cannot be established between DP-external elements and the PRO subject of the RC.

4 Extraction from the relative clause

The last remaining puzzle concerns the movement of a RC-internal phrase to the left of the genitive-marked possessor, i.e., Kornfilt’s seminal observation about “adverb placement.” Recall that these movement facts constituted the main empirical motivation for analyzing the genitive-marked phrase as RC-internal, consequently such data are usually assumed to be problematic for analyses that consider the genitive-marked phrase RC-external. As this paper analyzes the genitive DP as base-generated in the RC-external possessor position, it also needs to say something about the movement facts. After showing that extraction is licit from one type of RC but not the other, I show that this movement is an instance of intermediate scrambling, as it has both A and \bar{A} -properties. While this paper has to leave the analysis of RC-extraction for future research, it outlines a tentative direction that a future account could take.⁴¹

4.1 Two RC types

The paper has so far established that there are two relative clause types in Kazakh: (i) one that has a nominative subject (overt DP or *pro*), and (ii) another that has a PRO subject coindexed with the RC-external possessor. As section 3.2.1 mentioned in passing (see example (44)), movement facts differ in these two RC types. The relevant data are repeated in (55). (55a) shows that extraction out of the RC with nominative subject is banned, whereas extraction is possible from the second RC type, which has a PRO subject, as shown in (55b).

- (55) a. *Ke_j ata-m-nu_n [A_j]a- \emptyset t_j ʒœnde-gen] sagat-u
 yesterday grandfather-POSS.1SG-GEN [Aisha-NOM fix-PRF] clock-POSS.3SG
 munaw.
 this
 Intended: ‘This is my grandfather’s clock that Aisha fixed yesterday.’ (NOM-subject RC)
- b. Ke_j ata-m-nu_n_i [PRO_i t_j ʒœnde-gen] sagat-u
 yesterday grandfather-POSS.1SG-GEN [fix-PRF] clock-POSS.3SG
 munaw.
 this
 ‘This is my grandfather’s clock that my grandfather fixed yesterday.’ (GEN-
 “subject” RC)

The next section investigates the properties of the movement out of the RC with PRO subject, and then section 4.3 formulates a proposal to account for the extraction differences between the two RC types.

⁴¹ I am grateful for the reviewers’ comments on this section. The section greatly benefited from a reviewer’s suggestions about how to analyze extraction from RCs.

4.2 Intermediate scrambling

This section submits that RC-internal phrases can undergo local intermediate scrambling, exhibiting mixed A and \bar{A} -properties, to the left of the possessor in the superordinate DP domain.

An extensive body of literature investigates the relationship between the A/ \bar{A} -movement and scrambling (Saito 1985; 1992; Webelhuth 1990; 1992; Mahajan 1989; 1990; 1994; Nemoto 1993; Tada 1993; Yoshimura 1993; Cho 1994; Miyagawa 1997; 2003; 2006; 2010; Grewendorf & Sabel 1999; Karimi 2005; Takano 2010; Ko 2018).⁴² This line of research distinguishes local (or clause-internal) scrambling and long-distance scrambling. In many (but not all, see Ko (2018)) languages, long-distance scrambling exhibits \bar{A} -properties (Mahajan 1990; Tada 1993; Saito 1992), whereas local scrambling may exhibit both A and \bar{A} -characteristics (Mahajan 1990; 1994; Saito 1992). I show below that movement to the left of the possessor exhibits both A and \bar{A} -properties (it ameliorates WCO effects, creates new anaphor binding relations, but it reconstructs for Principle C and it does not affect case assignment).

Local intermediate scrambling⁴³ was shown in other languages such as in Hindi and Japanese to exhibit both A and \bar{A} -properties based on (i) WCO effects, (ii) anaphor binding, and (iii) inducing a Condition C violation. WCO effects can be ameliorated by scrambling (Mahajan 1990; Saito 1992; Yoshimura 1993): (56a) is degraded because of the WCO effect, (56b) shows that scrambling to the left of the subject remedies the WCO violation. As \bar{A} -movement is not expected to improve WCO violation, the clause-internal scrambling patterns with A-movement in this respect.

(56) *Japanese*, Saito (1992: 73), ex. (10)

- a. ?*[[Soitu_i-no hahaoya]-ga [**dare_i-o** aisiteru]] no.
 the.guy-GEN mother-NOM **who-ACC** love Q
 Intended: ‘His_i mother loves who_i.’
- b. ?**Dare_i-o** [[soitu_i-no hahaoya]-ga [_i aisiteru]] no.
who-ACC the.guy-GEN mother-NOM love Q
 ‘Who_i, his_i mother loves t_i.’

A further A-property exhibited by clause-internal scrambling is that it can establish a new binder for anaphors (Mahajan 1989; Saito 1992). (57a) is ill-formed because the anaphor ‘each other’ is not bound, but scrambling to the left of the anaphor in (57b) satisfies the binding requirement. As \bar{A} -movement cannot create new binders, clause-internal scrambling displays A-properties in (57b).

⁴² Additionally, see Lohninger et al. (2022) for a cross-linguistic survey on A and \bar{A} -movement in embedded clauses.

⁴³ This type of scrambling usually involves the movement of the object to the left of the subject. Another type of local scrambling is short scrambling, which refers to the movement of the direct object over the indirect object (for a discussion see Gong (2022), who shows that short scrambling in Khalkha only exhibits A-properties).

- (57) *Japanese*, Saito (1992: 74–75), ex. (13b), (14b)
- a. ?*[Otagai_i-no sensei]-ga [karera_i-o hihansita] (koto).
 each.other-GEN teacher-NOM **they-ACC** criticized fact
 Intended: ‘Each other’s_i teachers criticized them_i.’
- b. ?Karera_i-o [[otagai_i-no sensei]-ga [_{t_i} hihansita]] (koto).
they-ACC each.other-GEN teacher-NOM criticized fact
 ‘Them_i, each other’s_i teachers criticized _{t_i}.’

In addition to these A-properties, clause-internal scrambling also exhibits \bar{A} -properties: if an anaphor undergoes scrambling to the left of its binder, it can reconstruct to its base position (Mahajan 1994; Saito 1992). Saito argues that if the anaphor *zibunzisin* ‘self’ is in an A-position, (58) should be rendered ill-formed on the basis of Condition C violation: *Hanako* in (58) is coindexed with a c-commanding element. However, (58) is well-formed, which indicates that the anaphor undergoes reconstruction to its base position where it does not induce Condition C violation and can get bound by its antecedent. Saito characterizes this as an \bar{A} -property of clause-internal scrambling.

- (58) *Japanese*, Saito (1992: 76), ex. (17)
- Zibunzisin_i-o [Hanako_i-ga _{t_i} hihansita] (koto).
 self-ACC Hanako-NOM criticized fact
 ‘Herself_i, Hanako_i criticized _{t_i}.’

Scrambling to the left of the possessor exhibits the same WCO amelioration effect that was observed for Japanese intermediate scrambling in (56b). The phonologically covert pronoun in the possessor position cannot display covariation with the QP ‘every child’ in the RC in (59a) because the pronoun is not in the scope of the universal quantifier. Scrambling the QP to the left of the possessor in (59b) remedies the WCO effect.

- (59) a. *pro*_{*i/j} Mama-suu-nuuŋ [PRO ær bala_i-ga dop ber-gen]
 mother-POSS.3SG-GEN [every child-DAT ball give-PRF]
 zer-i munaw.
 place-POSS.3SG this
 ‘This is the place where his/her_{*i/j} mother gave a ball to every child.’
- b. ær bala_i-ga *pro*_i mama-suu-nuuŋ [PRO _{t_i} dop ber-gen]
 every child-DAT mother-POSS.3SG-GEN [ball give-PRF]
 zer-i munaw.
 place-POSS.3SG this
 ‘This is the place where to every child_i his/her_i mother gave a ball.’

Moreover, the scrambled phrase can establish a new binder for c-commanded anaphors. The anaphor contained in the possessor phrase in (60a) cannot be bound by *Bolat* because *Bolat* does not c-command the anaphor (at any level of the representation). In contrast, scrambling *Bolat* to the left of the possessor in (60b) creates a new binder for the anaphor, and binding can be established between *Bolat* and the ‘self.’ Examples (59b) and (60b) demonstrate that movement to the left of the possessor displays A-movement properties.

- (60) a. $\text{\ae zi}_{*i/j}\text{-ni}\eta$ suret-i-ni η [PRO **Bolat**_i-ka sal-duur-ul-gan]
 self-GEN picture-POSS.3SG-GEN [**Bolat-DAT** draw-CAUS-PASS-PRF]
 zer-i munaw.
 place-POSS.3SG this
 ‘This is the place where Bolat_i was made to draw himself_{*i/j}’s picture.’
- b. **Bolat**_i-ka $\text{\ae zi}_i\text{-ni}\eta$ suret-i-ni η [PRO t_i sal-duur-ul-gan]
Bolat-DAT self-GEN picture-POSS.3SG-GEN [draw-CAUS-PASS-PRF]
 zer-i munaw.
 place-POSS.3SG this
 ‘This is the place where Bolat_i was made to draw himself_i’s picture.’

Additionally, scrambling to the left of the possessor also displays \bar{A} -characteristics with respect to inducing a Principle C violation. (61a) illustrates that the genitive-marked DP can bind an anaphor in the RC.⁴⁴ Scrambling the RC-internal anaphor to the left of the possessor does not incur Principle C violation, as shown in (61b). (61b) does not violate Principle C because the anaphor undergoes reconstruction to its base-position, a typical \bar{A} -property. Thus, scrambling to the left of the possessor patterns like Hindi/Japanese clause-internal intermediate scrambling.

- (61) a. Ajsa_i-nu η [PRO **\ae zin**_i-e satup al-gan] kitab-u munaw.
 Aisha-GEN [**self-DAT** purchase-PRF] book-POSS.3SG this
 ‘This is the book that Aisha_i bought for herself_i.’
- b. **\ae zin-e**_i Ajsa_i-nu η [PRO t_i satup al-gan] kitab-u munaw.
self.ACC Aisha-GEN [purchase-PRF] book-POSS.3SG this
 ‘This is the book that for herself_i, Aisha_i bought.’

Additionally, the scrambled phrase does not affect dependent (accusative and dative) or unmarked case (nominative and genitive) valuation. This is a typical \bar{A} -property (see Van Urk & Richards (2015) and the discussion therein).

⁴⁴ To be precise, the genitive subject controls the RC-subject PRO, which then binds the anaphor.

Table 3 offers a summary of the above discussion.

		Intermediate Scrambling	Scrambling over the possessor
A-properties	remedies WCO	✓	✓
	remedies Condition A violation	✓	✓
\bar{A} -properties	reconstructs for Principle C	✓	✓
	does not affect case assignment	✓	✓

Table 3: Summary of the scrambling data.

4.3 Towards an analysis

The relative clause in (55b) seemingly violates the Adjunct Island Condition, given in (62), as extraction is available from a modifier clause. However, the application of the Adjunct Island Condition depends on our definition of adjuncthood. The proposal I outline below calls for distinguishing semantic modifiers from (configurational) adjuncts.

(62) Johnson (2003)

Adjunct Island Condition:

If an XP is in an adjunct position, nothing may move out of it.

Certain types of semantic modifiers have long been known to allow movement out of them. It has been observed that relative clauses allow overt extraction in languages such as Hebrew (Sichel 2018), Swedish and Norwegian (Kush et al. 2013), Danish (Erteschik-Shir 1973), Icelandic (Maling & Zaenen 1982), English (Kuno 1973; Chung & McCloskey 1983) (for a detailed overview see Sichel (2018) and references therein). Additionally, RCs are not the only modifiers that allow extraction. For instance, converb⁴⁵ clauses in Balkar (Turkic) have also been noted to admit movement out of them (Privoznov 2021; 2022). The wide range of cross-linguistic data indicating that extraction from semantic modifiers is allowed suggests that a more nuanced view of the relationship between (semantic) modifiers and islands is necessary.

In order to offer such an account, Privoznov (2021; 2022) distinguishes two main approaches to adjunct islands. The so-called “modifier accounts” derive adjunct islandhood by appealing to the semantic modifier status of adjuncts and argue that they are added to the structure via “special” rules due to their semantic role. In contrast, “configurational accounts” (Huang 1982; Johnson 2003; Privoznov 2021; 2022) define adjuncthood in configurational terms and, crucially, detached from the phrase’s semantic contribution. One potential formulation of adjuncthood is given in (63).⁴⁶ This latter approach defines adjuncts as sisters of phrases that do not project a

⁴⁵ Converbs are adverbial clausal modifiers. The term is widely used in the Turkic and Mongolic linguistic literature.

⁴⁶ See Privoznov (2021; 2022) for a more detailed account building on Johnson (2003).

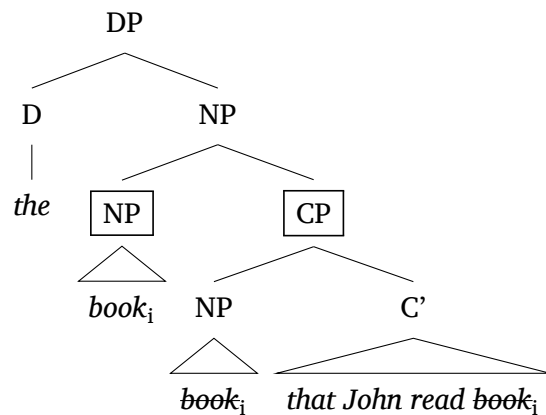
category (for a more nuanced view see Privoznov (2021, 2022)). Importantly, a phrase can be a semantic modifier but not an adjunct if it is the sister of a *head*.

(63) Johnson (2003)

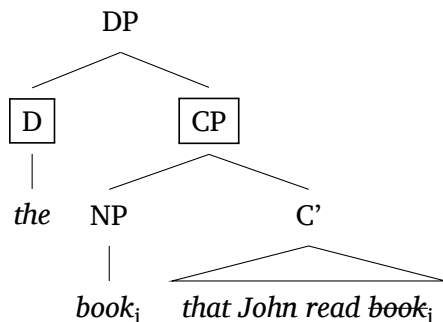
An adjunct is a phrase whose sister is also a phrase and whose mother is not its projection.

Given this background, a potential way to analyze the extraction distinction between the two Kazakh RC types is to posit that they differ in their attachment site. The nominative-subject RCs are the sisters of the NP phrase; whereas the genitive “subject” RCs merge with a head (presumably D). Interestingly, a similar explanation has been proposed to account for extraction differences between different types of RCs. Adopting the view that RCs can be structurally ambiguous (Grosu & Landman 1998; Sauerland 1998; 2003; Bhatt 2002), Sichel (2018) shows that head-raising RCs allow extraction, but not matching RCs based on binding considerations, weak island effects and multiple chain interactions. Crucially, the two types of RCs merge differently into the structure: matching RCs are adjoined to the NP, in contrast raising RCs are complements to D. The relevant representations are given in (64) and (65), based on Sichel (2018: 340).

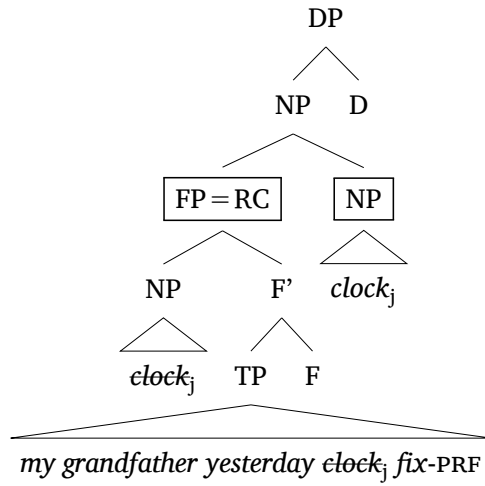
(64) Matching RC (Sichel (2018: 340))



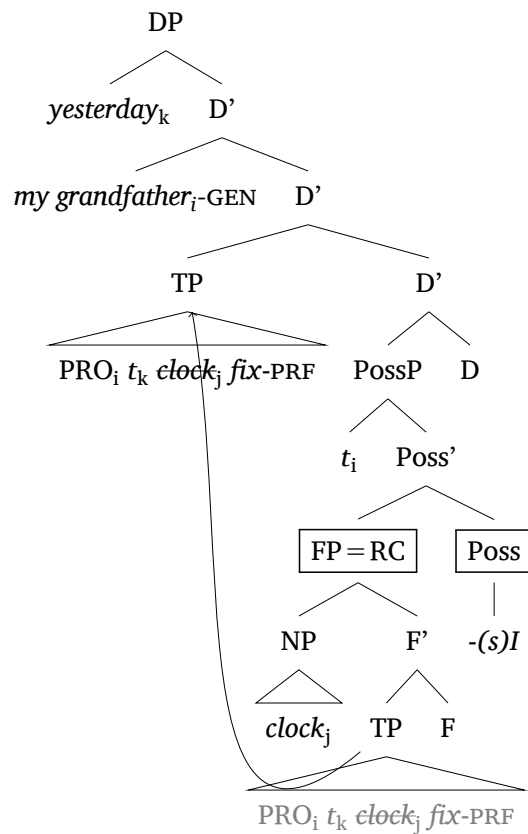
(65) Raising RC (Sichel (2018: 340))



(67) A possible matching RC analysis of the NOM-subject RC in (66a)



(68) A possible raising RC analysis of the GEN-“subject” RC in (66b)



5 Conclusions

This paper investigated Kazakh relative clauses in which the agreement with the genitive-marked RC subject is indicated seemingly non-locally on the modified noun phrase. Based on Negative Concord Item licensing facts, adjective placement data and the restrictions on the availability of the genitive RC subject, I argued that the genitive-marked noun phrase is not located inside the RC but in the canonical possessor position. The paper also looked at novel genitive RC subject data in relation to sloppy and strict readings under ellipsis (as a diagnostic of *pro* vs. *PRO*), availability of idiomatic meanings in subject idioms, Condition A reconstruction and Weak Crossover effects (to distinguish between movement trace vs. *PRO* RC subjects), and concluded that the genitive-marked possessor controls a *PRO* subject in the relative clause.

Additionally, the paper also examined the availability of scrambling RC-internal elements over the possessor (as first observed by Kornfilt (2008b; 2015)), which constituted one of the primary motivations for the relative clause-internal analyses of the genitive-marked noun phrase. First, I demonstrated that this is an instance of intermediate scrambling, as it exhibits both A (it can create new binders and ameliorate Weak Crossover violations) and \bar{A} -properties (it reconstructs for Condition C and it does not affect case assignment). Secondly, the paper also showed that only genitive-“subject” RCs allow extraction, in contrast, nominative-subject RCs ban extraction. I formulated the tentative proposal that the attachment site of these two RCs might be different: genitive-“subject” RCs merge with a head, whereas nominative-subject RCs attach to the NP. As only the latter satisfies that configurational definition of adjuncthood, extraction is only banned from this RC type.

The ostensibly non-local agreement relation in relative clauses has been observed in a number of Turkic, Mongolic, Tungusic and Finno-Ugric languages (Schönig 1992; Hale 2002; Kornfilt 2008b; 2015; Ackerman & Nikolaeva 2013). At this point, there is not enough data at our disposal to determine whether the relative clauses in these languages have identical underlying syntactic structure to Kazakh RCs, or whether the apparent non-local agreement has divergent sources in these languages. However, the presented examination of relative clauses can hopefully pave the way for establishing cross-linguistic parameters in “possessive relative clauses.” Further research can determine if in these languages (i) the genitive subject patterns as a possessor, (ii) if so, the nature of the empty category in the relative clause coindexed with the possessor (*pro*, *PRO* or trace), and (iii) the extraction possibilities (if extraction is possible, the RC is predicted to be merged with a head).

Abbreviations

ABL = ablative, ACC = accusative, ADJ = adjective, AUX = auxiliary, CAUS = causative, DAT = dative, DEM = demonstrative, F = feminine, GEN = genitive, INS = instrumental, LOC = locative, NEG = negative, NMLZ = nominalizer, NOM = nominative, PASS = passive, PRS = present, PL = plural, POSS = possessive, PRF = perfect, PRSP = prospective, PST = past, Q = question particle, SG = singular

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Competing interests

The author has no competing interests to declare.

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