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Reduced relatives and the location of agreement

Abstract. This article discusses a syntactic puzzle posed by Hale (2002); namely, the variation in the location of agreement morphology in reduced object-relative clauses. The contribution of this paper is the proposal that *phi* features are uniformly on the super-ordinate D, and the micro-variation in the location of agreement morphology is an outcome of the difference in the adjunction site of the extracted object. This analysis makes predictions for subject relatives as well as non-reduced relative clauses. The major theoretical implication of this paper is that clause-external *phi* features are responsible not only for genitive subject-case licensing but also for overt subject-verb agreement in reduced and non-reduced relative clauses.

Key words: relative clauses, *phi* features, case, agreement, adjunction site, micro-variation.

1. INTRODUCTION

This article explores the distribution of the agreement morphology in object relatives. The intriguing puzzle posed by Dagur and Turkish is initially presented and discussed in Hale (2002). This article proposes an analysis that overcomes the problems posed by the analysis in Hale (2002), and presents attested predictions regarding not only reduced relatives with genitive subjects but also non-reduced relative clauses.

The major construction to be discussed is reduced object relative constructions that exhibit a variation in the location of agreement morphology. The term *reduced relatives* refer to those relative clauses with a smaller inner structure, basically Aspect Phrase within a superordinate DP, and a genitive subject as defined in Krause (2001). *Non-reduced relatives* refer to fully inflected CPs embedded under a superordinate DP with a nominative subject.¹

The variation in the location of agreement first noted in Hale (2002) is illustrated by the Dagur example in (1):

In simple verb clauses, the verb is inflected with subject-verb agreement morphology:

- (2) bi nek mer^y au-sem. (Hale 2002: 110)
 1s.Nom one horse buy-Perf: 1s.Nom
 'I bought a horse.'

In the Dagur relative clause, however, the verb lacks person/number agreement. The relevant agreement morphology appears on the head noun as may be observed in (1).

Hale (2002) also notes the differences and similarities between Dagur and Turkish. Turkish is different from Dagur in that the verb of the dependent clause is inflected with person/number agreement but not the head noun.

- (3) [[Ben-im al-dıg-im] at]
 I-Gen buy-Perf-2s horse
 ‘the horse I bought/have bought’

Other typologically similar Asian languages exhibit a comparable distribution of agreement morphology. In reduced relatives with genitive subject, Tuvan and Kazakh pattern with Dagur and exhibit agreement on the relative head; Japanese and Turkmen pattern with Turkish and exhibit agreement morphology on the predicate of the relative clause. Mongolian, however, bears no agreement on either location simply because it has no subject-verb agreement in its grammar. As for non-reduced relative clauses, Kazakh, Kazan Tatar and Dagur have relative clauses with nominative subjects that co-occur either *with* or *without* the agreement morphology on the head noun.

Observe the table illustrating the distribution in (4):

- (4) Distribution of subject-case and agreement in relative clauses:

	Agr on predicate	Agr on head noun	Agr on neither
Reduced relatives	Turkish, Japanese, Turkmen	Dagur, Tuvan, Kazakh, Tatar	Mongolian (-agr)
Non-reduced relatives	-----	Dagur	Kazakh, Tatar (+agr)

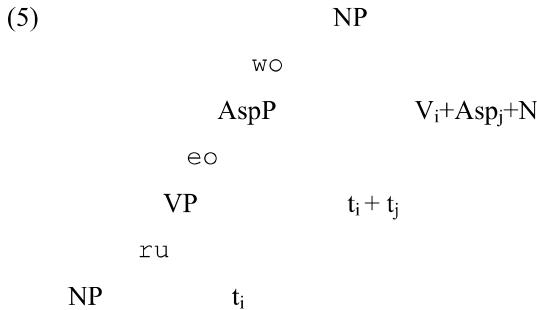
The notation (-agr) refers to the fact that there is no subject-verb agreement in the language, and (+agr), that it does. Kazakh and Tatar non reduced relative clauses do not exhibit overt agreement morphology although these languages have subject-verb agreement in their grammar.

I will propose an analysis that accounts for the distribution above and predicts the gap in (4), namely the lack of non-reduced relative clauses with nominative subject and agreement morphology on the predicate. In section (2), I review the analysis in Hale (2002); in section (3), I present a uniform account for the micro-variation observed in the table (4), and conclude the discussion in section (4).

2. PREVIOUS ANALYSIS OF REDUCED OBJECT RELATIVES²

Hale (2002), which follows Bhatt (1999) and Krause (2001), proposes that object relatives with genitive subject are *reduced* clauses, i.e. AspP embedded under a DP,³ and genitive subjects are licensed⁴ via phi features on the D head external to the clause (Bhatt 1999, Krause 2001, Hale 2002, Aygen 2004). There is some work on relative clauses that analyze the structures that Krause (2001) and Hale(2002) call *reduced* just like any other relative clause (Kornfilt 2000, 2003, 2005 as well as Çağrı 2005). According to such work, these constructions are CPs, and the genitive case is licensed via phi features on C internal to the clause.⁵ The Hale (2002) and Krause (2001) line of analysis differs from the Kornfilt (2003, 2005) and Çağrı (2005) line of analysis in their assumptions about (i) what the structure of object relatives is, (ii) what the location of *phi features* is; and (iii) what the syntactic mechanism that licenses genitive subjects is. Focusing primarily on *reduced* relatives as Krause (2001) defines them, we will adopt the assumptions of Krause (2001), not those of the Kornfilt (2003, 2005) and Çağrı (2005), since Kornfilt and Cagri do not even identify these clauses as reduced clauses.

Hale (2002) follows Krause (2001) and Bhatt (1999) in his discussion of Dagur and Turkish. Krause (2001) argues that reduced relatives lack the C and I components. They consist of AspPs, and the nominal property of these clauses is due to their selection by a nominal head. Krause's (2001) structure is as the following.⁶

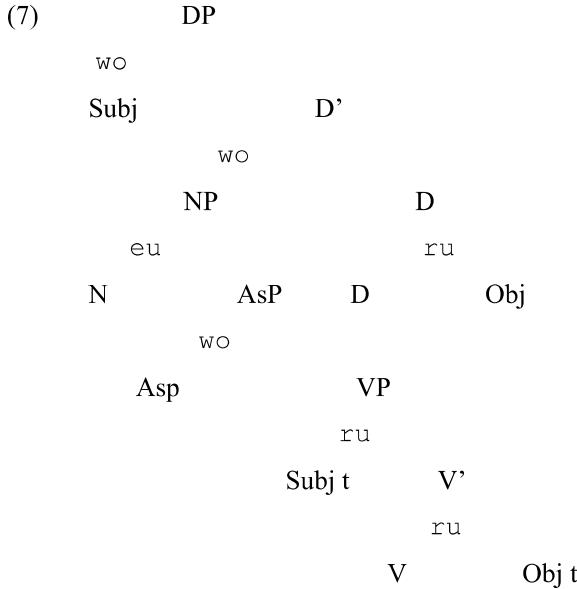


Furthermore, V is adjoins to Asp, after which the V+Asp complex head adjoins to N, yielding the nominalized verb. In the object relative, the subject raises to Spec NP where it receives genitive case. The object right adjoins to NP giving the surface form of the head-final relative clause. This analysis, however, does not account for the person/number agreement on the object heads of Dagur.

Hale (2002) notes that "if the raising right-adjoined head were always an NP, as Krause assumes, then it would be a predicate, not an argument, and would therefore reject case." (Hale 2002:115). He presents a Dagur example in which the extracted object is evidently a DP because it bears an overt determiner:

- (6) [[ini au-sen] tenek mer^y -in^y] mo
 2s.Gen buy-Perf] that horse-2s.Gen] bad
 'That horse you bought is bad.'

Hale's (2002) analysis of how a demonstrative *tenek* appears with the head noun and how the head noun bears agreement morphology is as follows: The demonstrative is merged as D with the super-ordinate NP and the object N raises and right adjoins to D. At this position the object is in a Spec-Head relationship with the subject that has been raised to Spec DP for checking its case features. As such, it bears the person/number morphology. Following is the structure (7) that illustrates the analysis below.



Note that the verbal complex is at N and makes NP transparent for movement. In this case, the object DP passes one head, the complex head N. Hale (2002) suggests that this HMC violation (in the sense of Travis 1984) might be overcome by first adjoining the object N to the complex head at N, and then excorporating it and adjoining to D. The problem with this incorporation + excorporation analysis is that the part of the object extracted would have to be a head; however, as presented in (7) below, Hale also argues and provides evidence for the extracted object to be a DP not a simple N.

Furthermore, Hale (2002) proposes that the difference between Dagur and Turkish lies on the location of *phi* features: they are on D in Dagur and on N in Turkish. The agreement morphology on the predicate in Turkish, then, is accounted merely by the movement of the verbal complex to N. At that position, the predicate is in a Spec-Head relation with the subject that has moved to Spec N for genitive case checking.

3. A UNIFORM ACCOUNT: THE LOCATION OF *PHI* FEATURES AND AGREEMENT MORPHOLOGY

The nominal case and agreement mechanism I am assuming is based on the syntactic position of the relevant constituents. To check its case features, the subject needs to be in a Spec-Head relationship with the inflectional head: if the inflectional head is a D, as is the case in reduced relatives, then the case is genitive; if the inflectional head is an I/T, the case is nominative. A D head checks case features on a nominal constituent in its specifier position, and also specifies the person and number features on its phi features within this configuration with the nominal phrase, i.e. the subject in reduced clauses. For agreement morphology to appear on a constituent, be it a relativized constituent or the predicate, it needs to be either in a Comp-Head relationship with the D head or it has to be at the D head since D has the relevant phi features,. Constituents adjoined above the maximal projection, DP which bears the relevant features, cannot check their features against that head, i.e. D in reduced relatives.

I propose an account for the distribution of agreement morphology which develops Hale's (2002) analysis to account for the additional languages shown in (4). One way to account for the parametric variation between languages like Dagur where the agreement morphology is on the extracted object and those like Turkish where it is on the predicate is to assume that the location of *phi* features is on D in the former and on N in the latter, as Hale suggests. Another logical option is to keep the location of *phi* features a constant on D and account for the parametric variation in terms of the adjunction site of the extracted object.

I propose that we can account for the distribution of agreement morphology in (4) following the latter option and assuming *phi* features at D for all the languages under consideration. An obvious advantage of keeping the location of the *phi* features a constant is maintaining our genitive-case account for reduced relatives. Note that there is no higher

inflectional node than Aspect in reduced clauses for the subject to check/delete Nominative case features, and it checks/deletes its case features against the super-ordinate D (Miyagawa 1993, Ochi 2002, Hale 2002, among others). Alternatively, assuming that the location of *phi* features varies parametrically would require that the genitive subject check/delete its case features against a different head parametrically.

Assuming that *phi* features are uniformly on the super-ordinate D head, I propose that the difference in the location of agreement morphology is due to the final destination of the verbal complex. The parametric variation on the location of the verbal complex also determines the variation in the adjunction site of the extracted object. This proposal is in fact an extension of the core idea in Hale's (2002) analysis based on the head movement of V as high as N in these structures. If the *phi* features are uniformly on D, as is argued in this article, then the verbal predicate needs to be in a syntactic configuration in which it can check/delete its *phi* features against the D head. Furthermore, the subject needs to be in a syntactic configuration (Spec Head relationship) with the D head to check its case features and carry genitive case. In reduced relatives, which have genitive subjects by definition, the subject is in a Spec Head relationship with the D head and checks/deletes its case features; the D head identifies its *phi* features in terms of number and person with the subject in its spec position. Either the object or the predicate, whichever one is in the appropriate syntactic location, i.e., the complement position of D or the at D , checks its *phi* features and bears the agreement morphology.

In this section, I argue that reduced relatives in some other Central Asian languages provide further empirical evidence in favor of the proposed analysis.

3.1. Reduced relatives with agreement on the head noun:

Tuvan (8) and Kazakh (9) (as well as Kazan Tatar) are similar to Dagur (10) in that the subject of

relative clauses is in the genitive, and the agreement morphology appears on the head noun:⁷

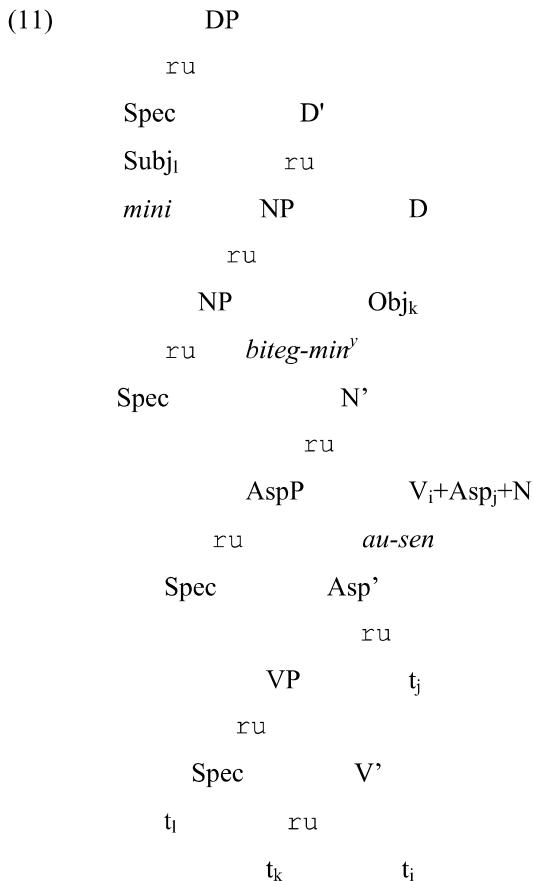
- (8) Tuvan
 [Amur-nuN ket-ip qal-gan] waqit-in]
 Amur-Gen go-Conv aux-Asp time-3s
 ‘the time that Amur went’
- (9) Kazakh
 [Ali-nin aynek-ti sindir-gan] waqit-in
 Ali-Gen glass-Acc break-Perf time-3s
 ‘the time that Ali broke the glass’
- (10) Dagur (Hale 2002:110)
 [[mini au-sen] biteg-min’]
 1s.Gen buy-Perf book-1sg
 ‘The book I bought ’

In these languages, I maintain the V movement to Asp and to N proposed in Krause (2001) and Hale (2002). The [V+Asp+N] complex derived via head movement is crucial for the proposed analysis for two reasons: (a) it makes the NP transparent for extraction out of the AspP, and (b) makes the NP the first adjunction site for the extracted object.

In terms of what the extracted and adjoined constituent is, I propose that the extracted object is a DP, and it adjoins to NP. The former is stated as an option in Hale (2002) and the latter suggested in Krause (2001). One advantage of this analysis is that we do not need the complex morpho-syntactic process consisting of the [adjunction+excorporation] of the object head proposed in Hale (2002). Secondly, extraction of an object DP - rather than an NP (Krause 2001) or the head N (Hale 2002) - accounts for the presence of a demonstrative in extracted objects (5). Finally, the puzzling observation of agreement morphology on the head noun finds a natural explanation with the adjunction of the object to the NP. As an adjunction to the complement of the D, the object DP is in a Head-Complement configuration where the *phi*

features on D can license the agreement on the head noun.

Accordingly, I propose the following structure for Dagur (11). It applies also to the equivalent structures in Tuvan (8) and Kazakh (9).



The syntactic mechanism that allows both the genitive subject and the agreement on the head noun is as the following: V undergoes a cyclic head movement to Asp and N. Subject moves to Spec DP (as suggested in Hale 2002) where the *phi* features on D licenses the genitive case via deletion of the relevant *phi features* as proposed in Chomsky (2001). The extracted object adjoins to NP that is the complement of D and has its *phi* features deleted in a Head-Complement relationship with D; hence the agreement morphology on the object.⁸ Because the

predicate is in a lower position, and the object is closer to the D head, the object checks its *phi* features and bears the agreement morphology, not the predicate. In other words, locality determines the constituent that will bear the agreement morphology.

It should be noted that the structure in (11) is also applicable to examples such as those in (6), in which the extracted object occurs with a demonstrative. The extracted object is a DP, therefore can include a demonstrative, and adjoins to the NP, the first adjunction site above the verbal complex.

3.2. Reduced relatives with agreement on the predicate

Once we assume that the relevant *phi* features are on D uniformly, we need to account for the languages such as Turkish and Japanese, in which agreement morphology occurs on the predicate of the reduced relatives rather than the head. I propose that the final destination of the head movement of the V provides the account for this variation.

Remember that the verb movement ends at N in Dagur and similar languages (Hale 2002). However, there is no obvious reason for the head movement to stop at the N head in Turkish and other languages where agreement morphology is on the predicate. On the contrary, there is evidence from Turkish that provides motivation for the movement of the [Verb+Asp+N] complex to D, which we will discuss shortly. For the time being, let us just assume that the verb movement ends at D in languages where agreement morphology is on the predicate.

I propose that the following structure in (12) accounts for languages such as Turkish, and possibly Japanese, in which the relevant subject-verb agreement morphology appears on the predicate. The subject moves to Spec of the super-ordinate DP for case reasons since there is no head to check/delete its case features within the reduced clause. The [Verb+Asp+N] complex moves to D. With the verb complex at D, the first and only available adjunction site for the

extracted object is the super-ordinate DP - because the edge of the DP is occupied by the predicate:

(12)	DP	
	ru	
DP	Obj _k	
ru	<i>mektup</i>	
Spec	D'	
Subj ₁	ru	
<i>Sen-in</i>	NP	V _i +Asp _j +N _k + D
ru	<i>yaz-diğ-in</i>	
Spec	N'	
	ru	
AspP	t _k	
ru		
Spec	Asp'	
	ru	
VP	t _j	
ru		
Spec	V'	
t _l	ru	
t _k	t _j	

The structure in (12) allows us to account for multiple facts with the additional advantage of keeping the location of *phi* features constant on the D head where we expect them to be: the subject DP is in a Spec-head relationship with D; the configuration of the object DP with respect to the D head does not allow for *phi* features to be checked/deleted, since it is in neither a Spec-Head nor a Head-Complement relationship with it; hence the lack of such morphology on the head noun. However, the predicate complex [V+Asp+N] is adjoined to D where its *phi* features reside and those features are specified as to what person and number through the subject in the

Spec position. Consequently, the predicate bears the agreement morphology.

The crucial point in this analysis is the final target of the V movement: because of the verb complex at D, the object is forced to adjoin to the super-ordinate DP, yielding the head noun with no agreement morphology.

An argument in favor of this analysis is that it provides an alternative and a much simpler account than the existing accounts for a long-observed fact in Turkish: subject relative clauses, which are of the reduced type, bear no case morphology on the subject, unlike the subjects in object relative counterparts. The external syntax determines its case:⁹

- (13) [[Mektub-u yaz-an] adam]
letter-Acc write-Asp¹⁰ man
'The man who has written/wrote the letter'

Due to the verb movement as high as D, a relativized subject has no adjunction site available other than the DP. At this position, the relativized subject cannot check/delete its case features with the D head since it is neither Spec-Head nor a Head-Complement relation with the head. Therefore, it cannot bear genitive case. It checks/deletes its case features with a higher inflectional head (T or v) depending on its location in the external syntax: nominative if it is an external argument of the matrix clause (14a) or accusative (14b) if it is an internal argument, as illustrated in (14a&b) respectively:

- (14) a. [[Kamyon-u kullan-an] kadın] benim komşu-m.
truck-Acc drive-Asp woman my neighbor-1sg.
'The woman who has driven/drove the truck is my neighbor.'
b. [[Kamyon-u kullan-an] kadın]ı gör-dü-m
truck-Acc drive-Asp woman see-Perf/Past-1sg
'I have seen the woman who has driven/drove the truck.'

Secondly, the predicate does not bear the subject-verb agreement morphology in subject

relatives such as (13) and (14) above. My proposal accounts for this fact as well: for the predicate to bear the agreement morphology, it has to be in a Spec-Head relationship with the subject DP that bears the interpretable *phi* features. The predicate is at D due to the Verb movement to Asp, N and D consecutively; however, the subject is *not* at Spec DP. It is adjoined to the super-ordinate DP due to relativization, and it is not in a local position to D; consequently, the phi features on D cannot be specified as to what person and number in the absence of the actual subject in a syntactic configuration (such as Spec DP) to check and specify them. Hence the lack of agreement on the predicate. Turkish Subject Relatives are like Dagur Object Relatives in that the predicate does not bear any agreement morphology. The similarity lies in the fact that the verb complex is not in a proper, i.e. local syntactic configuration in which it could check/delete its phi features.

An independent piece of evidence supporting this analysis is that the object DP has wider scope than the subject DP in object relatives. Consider the scope interaction between the subject and the object in Turkish:

- (15) a. Herkes makale oku-du.
 everyone-Nom article read-Perf
 'Everyone has read an article.'
 everyone > article
- b. Herkes-in oku-duğ-u makale¹¹
 everyone-Gen read-Perf-3s article
 'the article that everyone read'
 article > everyone

In a root clause (15a), the quantifier in the subject position has wide scope; whereas, in an object relative clause, the object has wide scope (15b). This is expected only if the object DP is higher than the subject DP that is located at Spec DP.¹²

The proposed analysis accounts for the reduced relatives with agreement on the predicate and makes the correct predictions about subject relatives with no agreement on either the object or the predicate. However, this analysis is based on the assumption that the verb complex moves to D rather than remaining at N. Fortunately, as is discussed below, there is an independent piece of evidence from Turkish indicating that the verb does move as high as D.

Turkish has another type of clause with genitive subject and identical morphology on the predicate: complement clauses with a null nominal head. Compare the Turkish relative clause in (16) and the complement clause with a null head in (17) below:

(16) *Reduced Relative Clause*

Ben [[sen-in yaz-dığ-in] mektub]-u] bil-iyor-um.
 I you-Gen write-Asp-2sletter-Acc know-Prog-1sg
 'I know the letter you wrote/have written.'

(17) *Complement Clause*¹³

Ben [[sen-in mektub-u yaz-dığ-in]]-ı bil-iyor-um.
 I you-Gen letter-Acc write-Asp-2s -Acc know-Prog-1sg
 'I know that you wrote/have written a letter.'

Both (16) and (17) consist of super-ordinate DPs containing an AspP (Aygen 2004, following Kennely 1997). The structure of (17) with a null head differs from (16) in that the former has no gaps since there is no relativization involved. The former has nominal head extracted from the clause; the latter has a null head which can be filled with a lexical noun from a restricted list: fact, truth, etc. Both of them have genitive subjects licensed by the *phi* features on the external D.

In the complement clause in (17), the complex predicate bears the accusative case. The only way the complex nominal predicate can check/delete its case feature with the external verbal head is to move to D. A complex [V+Asp+N+D] head would provide a lexical constituent

on the edge of the complement clause (a reduced clause) within the c-command domain of the matrix verb. The accusative morphology needs a lexical constituent to attach to; however, with an empty D head, this would not be possible. With the V-complex at D, this problem does not arise.¹⁴

In the reduced relative in (16), the nominal position is not null, it is filled and it bears the accusative case. This structure, however, is a relative clause structure and the object DP is extracted from within the clause and adjoined above the AspP.

I propose that in both (16) and (17) the verb complex is at D. In the reduced relative in (16), the adjunction site is the higher D, and the actual D is filled by the verbal complex. Based on the evidence and the attested predictions of the analysis above, the micro-variance between Turkish/Turkmen reduced relatives and Dagur /Tuvan /Kazakh reduced relatives is simply the following: the difference in the final destination of the verb movement, and consequently, in the adjunction site of the relativized object. Verb movement ends at N in Dagur/Tuvan/ Kazakh, and the object relativization targets the NP; Verb movement ends at D in Turkish (and possibly in Japanese), and the object relativization targets DP. There is no parametric variation in terms of the location of the relevant *phi* features.

The correlation between the location of the verbal complex and the location of the adjunction site of the relativized object is significant. The causal relationship is plausible from a theory internal perspective. Relative extraction targets a position outside of the clause embedded under the DP layer, and it has two options: the NP or the DP. NP adjunction would be the favored site for reasons of economy. The NP adjunction in Dagur/Tuvan/Kazakh may be regarded as a default case in this sense. DP adjunction proposed for Turkish/Turkmen is not an option but a requirement since the verbal complex is already as high as D in these languages, the

only available adjunction site is DP. This obligatory movement to the closest available adjunction site, either NP in Dagur or DP in Turkish gives the desired effect on the morphological make up of the head noun respectively.

One attested prediction of this analysis is that Turkish reduced relatives are expected to be "stackable."¹⁵ Since the head noun is adjoined to the superordinate DP, other reduced relatives may be stacked, i.e. adjoined to the superordinate NP as adjuncts and modify the same head. Turkish reduced relatives are stackable as may be observed below ¹⁶ (Aygen 2003):

- (18) Hasan-in yaz-dıg-ı Ahmet-in oku-duğ-u mektup
 Hasan-Gen write-Perf-3s Ahmet-Gen read-Perf-3s letter
 'the letter that Hasan wrote and Ahmet read'

3.3. Further evidence: the Mongolian case, non-reduced Relative Clauses and a gap

Further arguments that support the proposed analysis come from non-reduced relative clauses and a gap in the paradigm in Table (4). The proposed analysis sheds light on nominative-subject relative clauses in Dagur and Kazakh; finally, the fact that there is no language with non-reduced relative clauses with nominative subject and agreement on the predicate is predicted by the proposed analysis.

3.3.1. The Mongolian case

Standard Mongolian resembles Dagur: the subject is in the genitive; however, there is no subject/person inflection on the head noun:

- (19) [mini^y uz-sen] oxin (Mongolian, Binnick (1979:80)
 1s.Gen see-asp¹⁷ girl
 'a girl whom I saw'

In Mongolian, agreement morphology appears neither on the predicate nor on the object. Consequently, the *phi* features cannot be on either head, which is attested by the fact that there is

no subject-verb agreement. Of Mongolian's close relatives, only Buriat has subject verb agreement and this fact is analyzed as a recent innovation (Comrie 1981).¹⁸ Without subject-verb-agreement in the grammar, this gap is anticipated and a discussion on the location of *phi* features becomes futile.

3.3.2. Non-reduced Relative Clauses

In languages with both reduced and non-reduced relative clauses, unlike reduced relative clauses that consist of an inner structure only as high as AspP, non-reduced relative clauses consist of full CPs with a C and a T head. Because they are fully inflected, they bear nominative subjects. Dagur non-reduced relative clauses have a nominative subject and agreement morphology on the object relative head¹⁹:

- (20) [DP[CP bi tende uk-sen] mer^y -min^y] Hale (2002)
 I-nom 3s-dat give-perf horse-1s
 'the horse that I gave him'

It may be observed that the predicate of (20) is inflected with an aspectual morpheme only, implying the clause to be an aspect phrase. The agreement morphology is on the extracted DP.

In Kazakh and Kazan Tatar, nominative subject relative clauses have no agreement on the head noun as may be observed in (21-22) below:

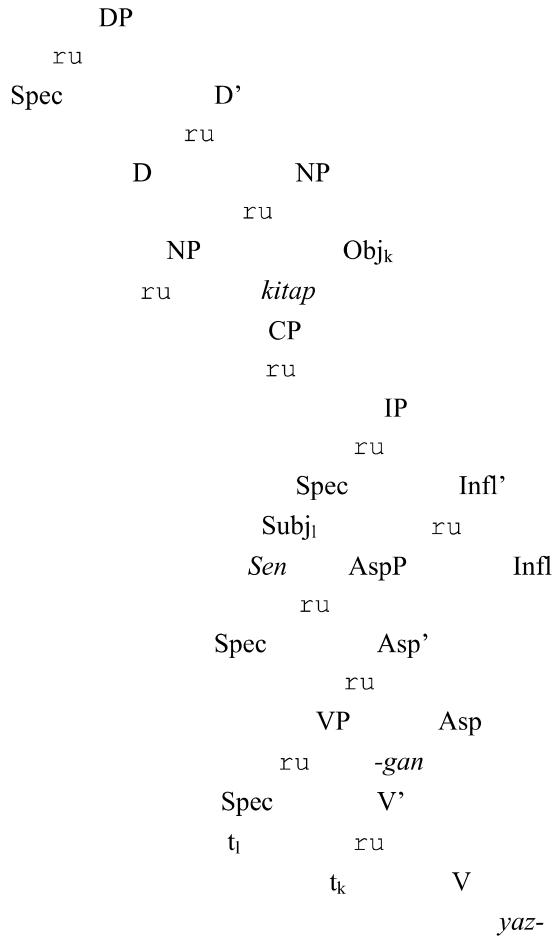
- (21) [[Sen jaz-gan] kitap] Kazakh (Karabulut 2003)
 you-nom write-asp book
 'The book you wrote/have written'
 (22) [[Sin yaz-gan] khat] Kazan Tatar (Sahan 2002)
 you-nom write-asp letter
 'The letter you wrote/ have written'

These are not reduced relatives as apparent from the lack of a major property of reduced

object relatives, namely the lack of a genitive subject (Krause 2001). Nominative subject constructions are predicted to be fully finite CPs cross-linguistically. Accordingly, there is no V movement as high as N assumed for reduced relatives.

As for the location of the agreement morphology, our proposed analysis based on *phi* features being on D seems to account for Kazakh and Kazan facts (21-22) as well. Consider (23):

- (23) Nominative subject and no agreement: Kazakh and Kazan (example 21):



The extracted object adjoins to the NP as proposed for Dagur and Kazakh reduced relatives and ends up in a Head-Complement relation with the D head; however, the subject DP that has the interpretable *phi* features is *not* in the Spec position of the super-ordinate DP because

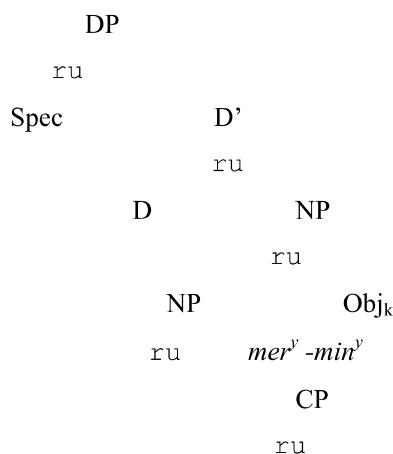
it checks/deletes its case feature with the Infl head of the lower CP and resides in Spec of INFL.

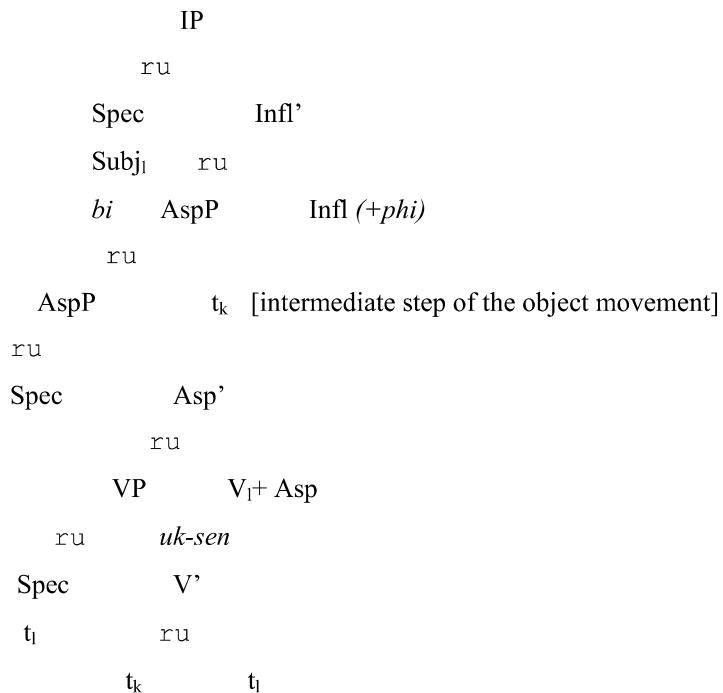
In this configuration, the object does not and cannot carry the agreement morphology.

In Dagur, however, the object does bear the relevant agreement features. If we want to maintain our analysis that accounts for the reduced relatives in Kazakh, Kazan and Dagur alike, we are forced to stipulate that the object in Dagur checks/deletes its *phi* features somewhere on its way before it adjoins the higher NP. Its adjunction to NP is motivated by relativization. The intermediate step in this movement would be motivated by checking/deleting its *phi* features. Then the task at hand is a) to determine the exact location where it stops to check/delete its *phi* features, b) to explain why Dagur objects do and Kazakh/Kazan objects do not stop at this location.

For the former, I will tentatively propose the following account: The fact that aspect morphology appears on the predicate suggests that there is a [Verb+Aspect] complex derived by the head movement of the Verb to Aspect. No further movement is suggested by the morphology on the predicate. In the presence of a [Verb+Aspect] complex, AspP is the first and the only available adjunction site for the object within the CP.²⁰

(24) Nominative subject and agreement: Dagur





Once the object adjoins to AspP, it is in a Head-Complement relation with the IP; the subject DP that bears the interpretable *phi* features is located at Spec IP since it has to move there to check/delete its Nominative case features.

As for the question why Dagur objects do and Kazakh/Kazan objects do not stop at this intermediate position to check/delete its *phi* features, the answer might simply be “analogy” with reduced clauses in which the object bears agreement. The analogy might be better understood if we remember that in Dagur reduced relatives, the object adjoins to the complement (NP) of the inflectional head (D) that bears the phi features and checks the case and phi features of the subject in its Spec position. In non reduced ones, it adjoins to the complement (AspP) of the head (T/Infl) that bears the phi features and checks the case and phi features of the subject in its Spec position. In both positions, the head can check/delete its phi features and bear the agreement morphology. Until further research proposes a better answer, I will assume this account for

Dagur non-reduced relatives.

3.3.3. A Prediction of the analysis: The Gap in the Paradigm

Another interesting observation is that there seems to be no language among the ones studied in this article with *nominative subject* and *agreement* on the predicate of a relative clause. That is, there is no non-reduced relative clause with *agreement* on the predicate. This gap is illustrated in Table (4) above.

This gap has no direct relevance to the location of *phi* features simply because both Hale's (2002) account based on the parametrization of the location as N or D and the proposed analysis based on a unified location on D require the verbal complex to be out of the lower clause in reduced relatives.²¹

However, non-reduced relatives included in this article consist of a CP and a nominative subject. For agreement morphology to appear clause-internally, i.e., on the predicate, the following syntactic conditions are required: a reduced clause contained within a DP; the verbal complex [V+Asp+N+D]. It follows that these two contradictory conditions cannot co-occur; hence the lack of relative clauses with a nominative subject and agreement on the predicate.²²

4. CONCLUSION AND THEORETICAL IMPLICATIONS

I have argued that object relatives in a number of Asian languages can be accounted for by an analysis adopting the insight of Hale (2002). Unlike Hale's (2002) proposal, I have proposed that we can maintain the location of *phi* features a constant on D because it makes correct predictions about independent facts such as the lack agreement on the predicates and extracted subjects of subject relatives in Turkish. Moreover, the proposed analysis can also be extended to include non-reduced relatives.

In brief, we have provided the following to account for the micro-variance in the location

of agreement morphology (among some typologically similar Asian languages): In reduced relatives, the final destination of the V-complex varies parametrically, and, in turn, causes the parametric variation in the adjunction site of the extracted object relative. In languages like Dagur, the [V+Asp] complex moves to N, and the object relative adjoins to NP where it bears agreement morphology. In languages like Turkish, the head movement of the V and subsequent heads ends up at D, and the object relative adjoins to DP where it cannot bear agreement morphology. Because the verbal complex is at the *phi* feature bearing head D with the subject in its spec, the predicate bears agreement morphology. The proposed analysis and the structure independently accounts for the lack of agreement morphology on the extracted subject and the predicate of a subject relative clause in Turkish-type languages.

In non-reduced relative clauses of languages such as Dagur, Kazakh, and Kazan Tatar, the adjunction site of the object is NP is the same as the one in reduced relatives, namely, the super-ordinate NP. However, because the subject of the clause does not move out of the clause for case reasons, the object cannot bear the relevant agreement morphology in Kazakh and Kazan Tatar. In Dagur, however, the extracted object first adjoins to the [V+Asp] complex where it deletes its *phi* features since it is in the complement of the Infl that bears the relevant *phi* features (having checked them against the subject in its Spec). Complement relationship with the subject, and then adjoins to the super-ordinate NP; therefore, bears the relevant agreement morphology.

The major theoretical implications of the proposed analysis are the following: The proposed analysis provides further arguments to support the basic idea in Hale (2002): the idea that *phi* features on the nominal head external to a reduced relative clause provides a simpler account for both the occurrence of genitive subject and the variation on location of agreement

morphology in reduced relatives. Secondly, keeping the location of the phi features a constant provides a uniform and simple account for the micro-variation on the location of the agreement morphology.

Notes

¹ The variation in subject case has been thoroughly discussed in the Japanese literature as the GA/NO phenomenon (Ochi 2002, Hiraiwa 2001, Miyagawa 1993, Watanabe 1996, and the references therein) as well as in Turkish (Aygen 2002, Kornfilt 2005). Genitive case is a product of the subject checking/deleting its features in a Spec-Head relationship with the super-ordinate D head, the exact mechanism of which will not be our concern in this article. The scope of this article excludes language specific constructions where Genitive subject is observed in matrix clauses (Russian and Bengali).

² To be fair to an exceptional linguist, the late Ken Hale, we need to remember that he was still working on this topic when he passed away; this is why Hale (2002) ends abruptly, and is incomplete.

³ As duly noted by a reader this would mean that the RC under the D head would not be modified by a high-level adverb: a speaker-oriented adverb like 'maybe', or 'definitely', which is indeed the case: In the following example the adverb 'maybe' modifies the matrix predicative adjective "pure-bred," not the reduced relative in the subject position.

Belki	benim	aldigim	at	cins
Maybe	I-gen	buy-perf-lagr	horse	pure-bred
'Maybe the horse I bought is pure-bred'				

⁴ The term "license" is a theory-neutral one: in the listed references, there are differences in mechanisms assumed for feature *checking* or *deleting* or *marking for deletion*. This term "licensing" is used instead of any other one i.e. checking, deleting, etc, to imply that the mechanism does not have an effect on the proposal.

⁵ For a CP-based discussion and a Kayneian (1994) derivation of non-subject relative clauses, see Kornfilt (2005).

⁶ The linear order in the original work is changed to yield the head final structure. The subject is omitted because it is not relevant for this particular argument.

⁷ Unless otherwise stated, examples are elicited from native speakers of the relevant language.

⁸ A reviewer notes that in complement clauses, right-adjunction is restricted to background information basically. The constraints on rightward adjunction, particularly extraction and right adjunction of NPs/DPs out of complement clauses are discussed in Aygen (2002). The constraint is not on right adjunction but rather a constraint on extracting a DP with the same case morphology as that of the complement clause. That is, right adjunction of any DP with any case is allowed out of relative clauses since they are not marked with case themselves. For other major similarities and differences between complement clause sand reduced relatives in Turkish, see Aygen (2004) and the discussion on examples (16) and (17) in this article.

⁹ See Kornfilt (2000) for a discussion on this fact. For an overview and analysis of relative clauses in Turkish, see Haig (1998).

¹⁰ {-an} is a cognate of {gan} the perfect marker in other Turkic languages as well as Dagur and Mongolian.

¹¹ The noun 'article' *makale* is non-specific in (15a) and it inevitably ends up being specific in (15b) when modified by a relative clause. This is still a relevant contrast, since for a specific reading, the object has to be at a non-nuclear scope position in the sense of Diesing (1992), and that is exactly the location proposed.

¹² The wider scope of the object indicates the object to be adjoined to DP. One should note, however, that this analysis is correct only if there is a phrasal movement of the subject to Spec DP as proposed in Hale (2002) for Dagur and Aygen (2004) for Turkish; not if genitive case is checked/deleted via feature movement as proposed for Japanese in Ochi (2001). In the latter case, the subject is interpreted in situ and the extracted object would have a wide scope even if it does not adjoin to the super-ordinate DP. Note

further that a relativized object noun loses its non-specific reading due to the extraction to a higher position. Unless it is further modified by an indefinite or numeric quantifier, it is interpreted as specific.

¹³ These are analyzed as noun complexes (Lees 1965, Kornfilt 1984, and subsequent work in Turkish linguistics).

¹⁴ I present the case-marking on the embedded verbs in Turkish complement clauses as a result of V-to-D movement. This predicts that in languages where I propose the V can only move up to N, the verbs in the complement clauses cannot bear case morphology. One would rightfully ask if this prediction is attested, for instance in Dagur. Unfortunately, I could not have access to Dagur data to respond to this question.

¹⁵ Whereas, Dagur ones are predicted to be “unstackable.” Whereas, in Dagur type languages the head noun is within the superordinate NP, and multiple reduced relatives cannot be adjoined to modify the same head since their own heads are within their own NPs. Unfortunately, we do not have the data on the availability of stacking in Dagur.

¹⁶ The English translation includes a coordinator but this is not a coordinated structure in Turkish. The difference between "stacked" and "coordinated" clauses in Turkish is that the latter utilizes a coordinating suffix -(y)Ip after each predicate before the final one. A coordinated version of the example would be

Hasan-in	yaz -ip	Ahmet-in	oku-düğ-u	mektup
Hasan-Gen	write-Coordinator	Ahmet-Gen	read-Perf-3s	letter
'the letter that Hasan wrote and Ahmet read'				

¹⁷ Binnick (1979) uses ‘Verbal Noun’ as the gloss for the morpheme *-sen*, which in fact is a cognate with the same morpheme that refers to aspect in Dagur.

¹⁸ Buriat does illustrate subject-verb agreement unlike Mongolian as may be observed in the example below. Due to lack of sufficient data, Buriat has not been included in the discussion.

[[minii aba-han] mory -miny] hain. (Timour Kozyrev, p.c.)
 [[1s.Gen buy-Perf] horse-1s.Gen good
 'The horse I bought is good.'

¹⁹ As has been observed by a reviewer, the morphology on the predicate on reduced clauses (10) and non reduced relative clauses (20) in Dagur look identical: they both consist of aspect morphology -{*sen*} only. -{*sen*} is the cognate of {-*an*} in Turkish and of {*gan*} in Mongolian. In other Turkic languages, such as Tuvan, the overt morphology on the predicate of fully inflected clauses may consist of aspect only, with a null tense and null agreement on 3rd person singular subjects. The primary evidence for postulating a full CP in non-reduced clauses is the presence of Nominative subjects, which are licensed by the presence of Tense, and the observation of syntactic constraints that are unique to fully inflected CPs. For the particulars of such facts, see Aygen (2004).

²⁰ Remember that throughout our analysis of the reduced relatives, we have asserted the adjunction site of the extracted argument as the final location of the verb movement for economy reasons. In non-reduced relatives, i.e. CPs, this site would have to be the Aspect Phrase where the verb resides.

²¹ Moreover, Hale (2002) does not cover non-reduced relatives.

²² This gap is particularly problematic for analyses that assume genitive-subject relative clauses to consist of CPs just like non-reduced ones (Kornfilt 2005). That line of inquiry requires clause internal phi features (specifically suggested to occur on C) to be responsible for agreement morphology on the predicate. Agreement morphology on the extracted objects would be excorporated from the predicate and incorporated into the objects. For the particulars of such an analysis see Kornfilt (2005).

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