Case in Uyghur and Beyond

by

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Abstract

The focus of this dissertation is the syntax and morphology of case, and how case interacts with A-movement and agreement. In chapter 1, I argue on the basis of novel data from Uyghur that noun phrases bearing structural case can still be eligible for raising. I show that raising in Uyghur is EPP-driven, and does not trigger overt agreement. Thus, we must either conclude that pure EPP movement does not depend on Agree (cf. Richards 2009, a.o.), or abandon the Activity Condition proposed by Chomsky (1998, 2001). I suggest that phenomena that have been attributed to the Activity Condition can be reanalyzed by means of other principles, such as the Phase Impenetrability Condition (Chomsky 1998, 2001).

In chapter 2 (based on joint work with Jeremy Hartman), I argue in favor of Chomsky's (2001) weak version of the Phase Impenetrability Condition, and against Chomsky's (1998) stronger version of the Phase Impenetrability Condition more commonly assumed. The argument is based on case assignment and agreement in n Uyghur genitive subject constructions. I furthermore suggest that adopting Chomsky's (2001) version of the Phase Impenetrability Condition makes the concept of a *weak* phase head unnecessary (cf. Richards 2009).

In chapter 3, I propose that quirky case in Faroese is not assigned immediately when a noun phrase enters the derivation. Rather, Faroese quirky case depends on a higher functional projection. This helps explain why quirky case-marked noun phrases in Faroese can trigger number agreement and dependent case licensing, and why quirky case can fail to be assigned in Faroese passive and raising constructions.

In chapter 4, I present the results of a study of multiple case assignment in Russian Right Node Raising constructions. I show that the morphological system can rule out multiple case assignment when no systematically syncretic form is available, and propose a way of extending Distributed Morphology to capture this phenomenon.

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Contents

Overview

The focus of this dissertation is the syntax and morphology of case, and how case interacts with A-movement and agreement. In chapters 1 and 2, I concentrate on the properties of genitive-subject constructions in the Turkic language Uyghur, which I investigate based on original fieldwork. In chapter 1, I consider embedding of nominalized clauses by raising predicates. I argue that raised genitive subjects are structurally case-marked inside the embedded clause. Their ability to raise demonstrates that not all A-movement is subject to the Activity Condition (Chomsky 1998, 2001), which states that noun phrases must bear an unvalued feature (e.g. Case) in order to be valid targets for Agree. I consider the possibility that pure EPP movement, exemplified by raising in Uyghur, does not depend on Agree (cf. Richards 2009, among others). The alternative is to dispense with the Activity Condition entirely. I suggest that phenomena that have been attributed to the Activity Condition can be reanalyzed in other ways, and in particular that the Phase Impenetrability Condition (Chomsky 1998, 2001) offers a means of handling restrictions on raising.

In chapter 2, which is based on joint work with Jeremy Hartman, I consider Uyghur genitive subjects in the context of the Phase Impenetrability Condition. I show that Uyghur relative clauses and noun complement clauses are full CPs, and yet the subjects of these clauses are case-marked by a clause-external head. This violates Chomsky's (1998) version of the Phase Impenetrability Condition, which states that the complement of a phase head (e.g. C) is inaccessible to outside operations. I propose that we should instead adopt Chomsky's (2001) weaker version of the Phase Impenetrability Condition, which states that the complement of a phase head remains accessible until the *next* phase head is merged. I show that Uyghur genitive-subject CPs are not *weak* phases – the Phase Impenetrability Condition applies to these clauses and blocks raising out of them. Furthermore, I suggest that once the weaker version of the Phase Impenetrability Condition is adopted, the concept of a weak phase head (a property generally ascribed to raising, passive and unaccusative v) becomes unnecessary altogether (cf. Richards 2007a).

Chapter 3 focuses on the behavior of *quirky* (lexical) case in Faroese, and compares it with the well-known quirky case patterns in Icelandic. I argue that the properties of quirky case in Faroese arise from the fact that, unlike quirky case in Icelandic, it is not assigned immediately when a noun phrase enters the derivation. Rather, Faroese quirky case depends on a higher functional head. In Faroese dative-subject constructions, number agreement with the subject is possible, and the object generally bears accusative case. In Icelandic, on the other hand, there is no agreement with dative subjects, and the objects in dative-subject constructions are nominative. I propose that dative subjects in Faroese can be agreed with and can license dependent accusative case on the object (Marantz 1991) *before*

they receive dative marking, an option not available in Icelandic. I also address the issue of *preservation* of case under A-movement. I show that there is no universal correspondence between whether a case is structural and whether it is preserved. In the Uyghur raising construction discussed in chapter 1, *structural* genitive case is preserved under raising. On the other hand, *quirky* dative case can be lost in Faroese (but not Icelandic) passive and raising constructions. I suggest that when Faroese quirky case seems to disappear under A-movement, the quirky-case assigning projection is simply missing from the construction (cf. Svenonius 2005, to appear).

In chapter 4, I turn to the phenomenon of resolution of *feature conflicts* by *syncretism*. In certain constructions, an item can be assigned multiple features of the same type. For example, in Right Node Raising (RNR), the RNRed noun phrase receives case from both of the conjuncts. Across languages, these kinds of constructions are generally degraded when a single form cannot spell out all the features that have been assigned to it. However, the construction improves when a single, *syncretic* form corresponds to all the features. In chapter 4, I present the experimental results of an online study I conducted to investigate the effects of multiple case assignment in Russian RNR constructions. I show that while *neutrality* (systematic syncretism) can resolve feature conflicts, *ambiguity* (accidental syncretism) cannot. Resolution by syncretism is thus a *morphological* phenomenon – the morphological system is where neutrality and ambiguity are distinguished. However, Distributed Morphology, and other systems like it, are crash-proof and will never rule out a form that has "too many" features. I propose that in RNR (and other constructions), when an item is assigned multiple features of the same type (e.g. case), that item ends up bearing multiple feature structures. All feature structures must then be spelled out by a single morphological insertion rule. This entails that neutral forms, for which a single rule spells out the features assigned, resolve feature conflicts. Ambiguous forms, for which different morphological rules accidentally yield the same output, do not resolve feature conflicts.

To sum up, in chapter 1 I argue that noun phrases bearing structural case can still be eligible for A-movement. In chapter 2, I show that agreement and case-assignment are subject to Chomsky's (2001) weaker version of the Phase Impenetrability Condition, and not to Chomsky's (1998) stronger version more commonly assumed. In chapter 3, I propose that quirky case in Faroese is not assigned immediately when a noun phrase enters the derivation, but depends on a higher functional projection. In chapter 4, I demonstrate that, in certain environments, the morphological system restricts multiple case assignment, only allowing it for *neutral* syncretic forms.

Abbreviations

1, 2, 3	1st, 2nd, 3rd person
adj	adjective
ATB	across-the-board movement
DKS	Dalrymple et al. (2009)
DM	Distributed Morphology
DO	direct object
evid	evidential
FEM	feminine
fut	future
impf	imperfective
inf	infinitive
IO	indirect object
-ish	a nominalizing suffix, one of whose allomorphs is [iʃ] (Uyghur)
-liq	a complementizer, one of whose allomorphs is [liq] (Uyghur)
	also a nominalizer, one of whose allomorphs is [liq] (Uyghur)
MASC	masculine
MU	focus marker ('also', 'even'), phonologically [mu] (Uyghur)
NCI	negative concord item
neg	negation
NEUT	neuter
nliz	nominalizer
$\emptyset_N$	phonologically null noun
obj	object
pass	passive
perf	perfective
poss	possessor agreement marker
pl/PL	plural
pres	present tense
prog	progressive
P&Z	Pullum and Zwicky (1986)
Q	question marker
QR	quantifier raising
-ran	an embedded clause/aspectual marker, one of whose allomorphs is [ʁan] (Uyghur)
RNR	Right Node Raising

S, subj subject
SA   a conditional marker, phonologically [sa] (Uyghur)
sg/SG   singular
S&H   Sigurðsson and Holmberg (2008)
top   topic marker

Case names

abl   ablative
ACC/acc   accusative
DAT/dat   dative
GEN/gen   genitive
INST   instrumental
LOC/loc   locative
NOM/nom   nominative
PART/part partitive
PREP   prepositional

For examples taken from the literature, I have generally left the glosses as given. I have modified case names to match the abbreviations in this section.

Principles

AC   Activity Condition
PIC   Phase Impenetrability Condition
PIC$_{no-edge}$ a modified version of the PIC (see section 2.5.2)
PIC$_{strong}$ Chomsky's (1998) Phase Impenetrability Condition
PIC$_{weak}$ Chomsky's (2001) Phase Impenetrability Condition

Chapter 1
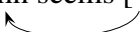
Raising in Uyghur and the Activity Condition

1.1 Introduction

In this chapter, I present an empirical argument showing that there is a type of A-movement that is not subject to the Activity Condition (Chomsky 1998, 2001).

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

The primary consequence of the Activity Condition is that noun phrases whose Case requirements have been satisfied are not eligible to be agreed with again. This comes into play in raising constructions, illustrated in (2).

(2) Raising:
     John seems [t to be singing.]

In the raising construction in (2), T agrees with a noun phrase and attracts that noun phrase to its specifier. The Activity Condition thus implies that case-marked noun phrases cannot raise in English, as illustrated in (3).

(3) Nominative embedded subject cannot raise:
     * John seems [(that) t$_{nom}$ is singing.]
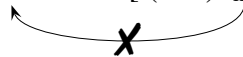
In this chapter, I consider a raising construction in Uyghur, a Turkic language spoken in Central Asia. I will argue that Uyghur *does* exhibit raising of case-marked noun phrases in examples like (4).

(4)   Raising of a genitive subject:

Ötkür-niŋ bu ehtimal-da   [t oqu]-ʃ-i   kirek
Ötkür-gen this probability-loc [t read]-nliz-3.poss necessary

'Ötkür probably has to read.'

As I demonstrate below, the subject in (4) receives structural genitive case inside the em-
bedded clause. Examples like (4) thus show that the Activity Condition does not apply to
raising in Uyghur. I propose that raising in Uyghur is A-movement that is driven purely
by the EPP property of T, and conclude that pure EPP movement (with no accompanying
agreement or case assignment) is not subject to the Activity Condition. I furthermore sug-
gest that the Activity Condition may not be part of Universal Grammar at all, and show that
effects that have been attributed to the Activity Condition can receive alternative explana-
tions.

In section 1.2, I provide some background on the Activity Condition. I argue that while
the Activity Condition can account for English data like (3), the Phase Impenetrability
Condition (Chomsky 1998, 2001) can do so as well (Nevins 2004). In section 1.3, I sketch
some relevant aspects of the Uyghur grammar. In section 1.4, I introduce nominalized
embedding in Uyghur. Then, in section 1.5, I turn to nominalized embedding by *raising*
predicates. Determining whether raising takes place in a head-final language like Uyghur is
a non-trivial task, and I provide several types of supporting evidence: the raising predicates
presented in section 1.5 behave differently from the non-raising predicates introduced in
section 1.4 on a number of tests. In section 1.6, I argue that structurally case-marked
noun phrases can raise in Uyghur, and Uyghur raising is thus not subject to the Activity
Condition. I discuss the theoretical implications of this fact. In section 1.7, I suggest
alternative approaches for some phenomena where the Activity Condition has served as a
key component of the analysis. Section 1.8 concludes.

1.2   Background

Chomsky (1993, 1995) proposes a syntactic system in which items enter the derivation
with sets of valued and unvalued features. For example, T is valued for tense but unvalued
for ϕ-features (person, number, etc.), whereas a noun is valued for ϕ-features but unvalued
for Case. Items can enter into an Agree relationship, under which the *probe* and *goal*
value each other's features. The Activity Condition is a proposed restriction on valid Agree
relationships.

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

Because nouns enter the derivation with an unvalued Case feature, they are valid targets for
Agree. For instance, T can agree with the subject in (6).

(6)   John is singing.

```
                      TP
             ┌─────────┴─────────┐
           John                  T′
                          ┌───────┴───────┐
                         is                vP
                    TENSE: pres      ┌──────┴──────┐
                        φ: __      t_John          v′
                        EPP       CASE:__     ┌─────┴─────┐
                                  φ:3rd,sg      singing
```
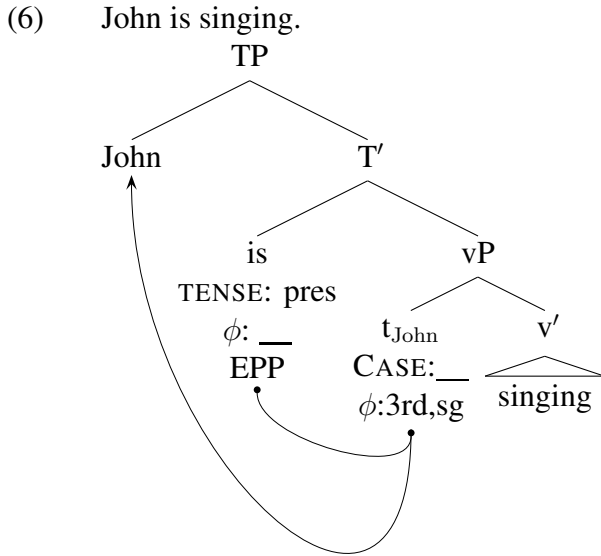
The EPP feature on T encodes the requirement that the specifier of TP must be filled. When the Agree relationship between T and the subject is established, T attracts the subject to its specifier in order to satisfy EPP.

1.2.1   Raising in English

In this section, I discuss the predictions made by the AC for raising in English. The AC can account for the ungrammaticality of raising out of a tensed embedded clause in English, as in (7a).

(7)   No raising from tensed clause:
    a. *John seems [(that) t is singing.]

    b. It seems [(that) John is singing.]

In (7a), *seems* embeds a fully inflected clause. The embedded subject *John* therefore receives nominative case in the embedded clause. Consequently, the AC blocks the matrix T from agreeing with *John*, as *John* has no unvalued feature at the point in the derivation when the matrix T is merged. *John* therefore cannot move to the specifier of the matrix TP to satisfy EPP on T, and an expletive must be used instead, as in (7b). The illicit derivation for (7a) is shown in (8).

(8)   *John seems that is singing.

TP
T′
T
TENSE: pres
ϕ: ___
EPP
VP
seems
CP
that
TP
John
CASE:Nom
ϕ:3rd,sg
T′
is
TENSE: pres
ϕ: ___
EPP
vP
t$_{\text{John}}$
CASE:___
ϕ:3rd,sg
v′
singing
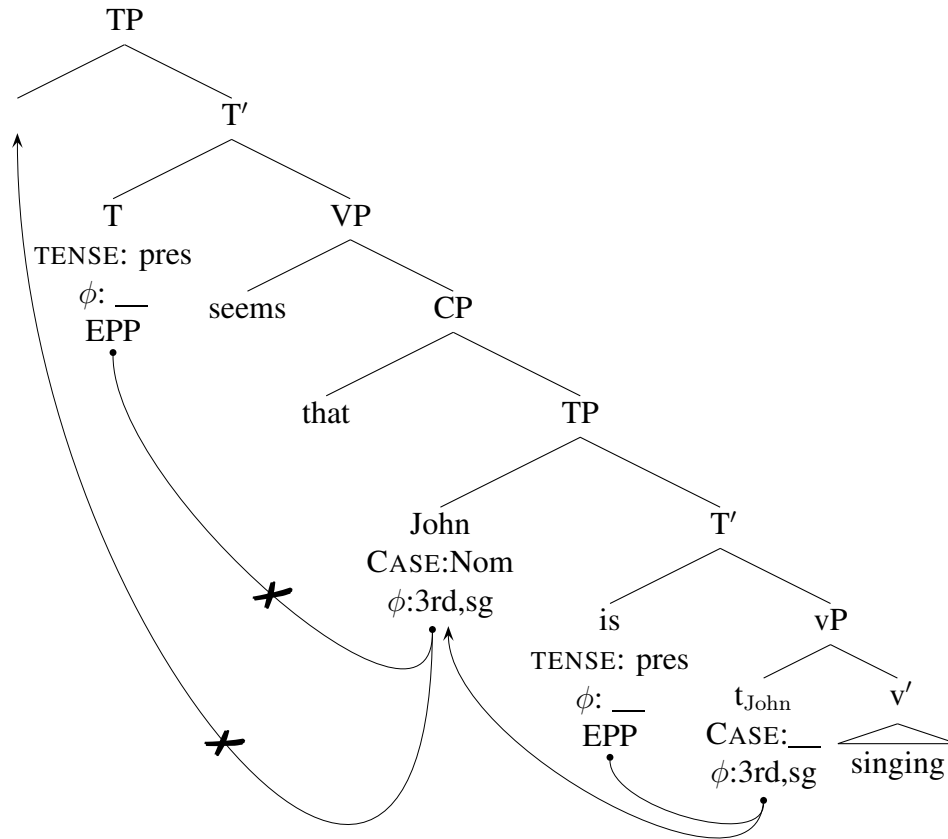
The pattern in (7) contrasts with examples where the embedded clause is infinitive and raising is possible, as in (9a).

(9)   Raising from infinitive:

a.   John seems [t to be singing.]

b.   *It seems [John to be singing.]

Nominative case is not assigned in the infinitive embedded clause (Chomsky 1995), so *John* still has an unvalued Case feature when the matrix T is merged. Consequently, the AC does not block Agree between the matrix T and *John*, and *John* raises to satisfy EPP on the matrix T. The licit raising construction is shown in (10).

(10) John seems to be singing.

```
                      TP
              ╱              ╲
          John                T′
                        ╱           ╲
                      T               VP
                  TENSE: pres      ╱      ╲
                    φ: __       seems      TP
                    EPP                ╱        ╲
                                     to          vP
                                            ╱        ╲
                                         t_John        v′
                                        CASE:__      ╱    ╲
                                        φ:3rd,sg   be singing
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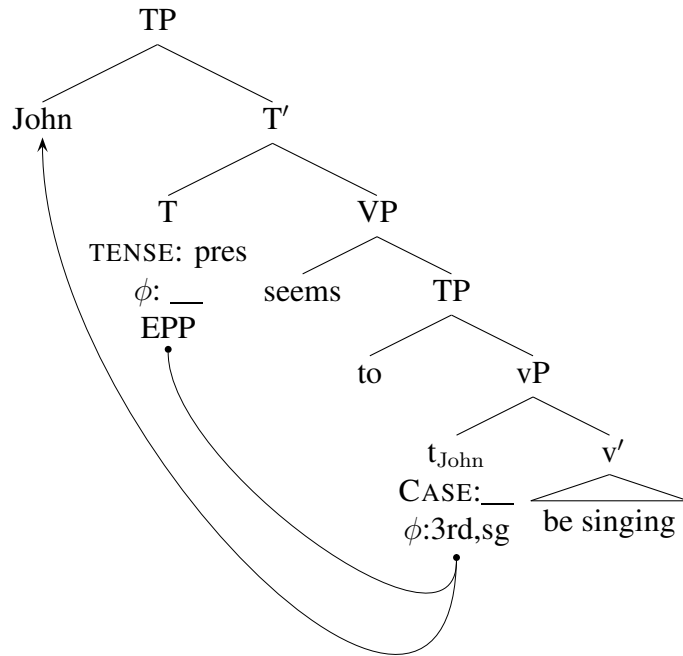
The contrast between (7a) and (9a) has served as evidence for the AC. In the following section, I discuss an alternative account of this contrast.

1.2.2 Why the Activity Condition is not the only way

Consider again the contrast between infinitive and tensed complements discussed above.

(11) Raising from infinitive:

  a. John seems [t to be singing.]

  b. *It seems [John to be singing.]

(12) No raising from tensed clause:

  a. *John seems [(that) t is singing.]

  b. It seems [(that) John is singing.]

The raising predicate *seem* can embed an infinitival clause, as in (11a), with the embedded subject raising to the matrix subject position. *Seem* can also embed a tensed clause, as in (12b), and take an expletive subject. Raising out of an infinitive clause embedded by *seem* is obligatory, as seen in (11b). However, the subject of a tensed clause embedded by *seem* cannot raise to the matrix subject position, as (12a) demonstrates. Unfortunately, the English examples (11a) and (12a) do not form a minimal pair. They differ in the following ways:

21
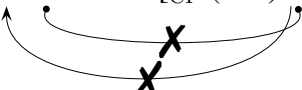
(13)   a.   **Tense:** The embedded clause that permits raising is an infinitive. The embedded clause that prohibits raising is tensed.

        b.   **Agreement:** The embedded clause that permits raising does not show agreement with the subject. The embedded clause that prohibits raising does show agreement with the subject.

        c.   **Case:** No case is assigned to the subject in the embedded clause that permits raising (Chomsky 1995). Case (nominative) is assigned to the subject in the embedded clause that prohibits raising.

        d.   **Clause size:** The embedded clause that permits raising is a TP (though see Gallego 2007; Richards 2007b, to appear). The embedded clause that prohibits raising is a CP.

A priori, any one of the factors in (13), or a combination of these factors, could be responsible for raising being permitted in (11a) but not in (12a). According to the AC, the case properties of the embedded subject are the crucial factor, as discussed in the previous section. According to the Phase Impenetrability Condition (PIC) (Chomsky 1998, 2001), the size of the embedded clause is the relevant factor (cf. Nevins 2004).

(14)   Chomsky's (1998) Phase Impenetrability Condition (PIC):[1]
        In phase α with head H, the domain of H is not accessible to operations outside α; only H and its edge are accessible to such operations.

A *phase* is a chunk of syntactic structure that becomes inaccessible for further syntactic operations. More precisely, according to the PIC (given in (14)), the edge of a phase remains accessible while the rest of the phase is rendered invisible to further syntactic processes. The heads of phases are C and certain types of v. Crucially, v in raising constructions is assumed not to be a (strong) phase head (Chomsky 1998, 2001). I now show that the PIC correctly predicts that raising out of a TP is possible, while raising out of a CP is not.

(15)   John T seems [$_{\text{TP}}$ t to be singing.]

(16)   *John T seems [$_{\text{CP}}$ (that) t is singing.]

There are no phase boundaries between the embedded subject and the matrix T in (15). The matrix T can thus agree with the embedded subject, with the embedded subject consequently raising. In (16), on the other hand, the embedded clause is a CP phase. The embedded subject is in the domain of C, and is thus inaccessible to operations outside the embedded CP. Agree with the matrix T and raising is consequently prohibited.

---

[1]The version of the PIC proposed by Chomsky (2001) differs significantly from the formulation given in Chomsky (1998). Here, I show how the more familiar Chomsky (1998) formulation accounts for the data at hand. In chapter 2, I argue that Chomsky's (2001) PIC should be adopted instead. See chapter 2 for a discussion of how Chomsky's (2001) PIC accounts for the English raising data.

Note that the PIC blocks Agree between the matrix T and an embedded subject in the specifier of the embedded TP (within CP) in (16), but it does not rule out Agree between the matrix T and a noun phrase in the specifier of the embedded CP. Because the specifier of CP is not part of the domain of C, it is accessible to operations outside of CP.

(17)   T ... [$_{CP}$ DP C [$_{TP}$ subject ...]]
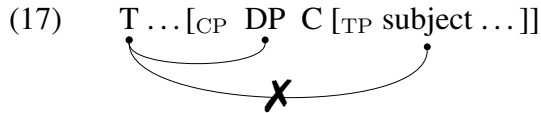
Consequently, for the PIC to block raising in (16), we must assume that the embedded subject cannot raise through the specifier of CP. Raising through the specifier of CP would violate the *ban on improper movement* (Chomsky 1973; May 1979), which prohibits A-bar movement (e.g. to the specifier of CP) that is followed by A-movement (e.g. raising). Various accounts for the ban on improper movement have been proposed (van Riemsdijk and Williams 1981; Müller and Sternefeld 1993; Obata and Epstein 2008). I will simply take it as a given (for English and for Uyghur), but see chapter 2 for a more detailed discussion.

In this section, I have shown that the PIC provides an alternative to the AC in accounting for the contrast between raising out of infinitives and lack of raising out of tensed clauses in English. The overlap between the AC and the PIC has been observed in the literature. Nevins (2004) argues that the AC is incorrect, and that its effects are better explained by other rules of the grammar, including the PIC. Stjepanović and Takahashi (2001) argue that the effects of the PIC should be reduced to other principles, while Bošković (2005) proposes that neither the AC nor the PIC should be assumed. It is thus possible that the AC is not on the right track. Alternatives to the AC for other types of data are discussed in section 1.7.

1.2.3   Raising in Icelandic

In Icelandic, case-marked embedded subjects can undergo raising. Certain verbs in Icelandic assign lexical (*quirky*) case to their subjects (Andrews 1976; Thráinsson 1979; Zaenen et al. 1985). For example, the subject of *leiddist* ('bored') in (18) is dative. Icelandic lexically case-marked subjects can undergo raising, as seen in (19).

(18)   Ólafi   leiddist
         Olaf.dat bored
         'Olaf was bored.'   (*Icelandic*) (Sigurðsson 2002: (22a))

(19)   **Ólafi**   byrjaði [t$_{dat}$ að leiðast]
         Olaf.dat began   [t$_{dat}$ to bore   ]

         'Olaf began to get bored.'   (*Icelandic*) (Sigurðsson 2002: (22b))

Dative case on *Ólaf* in (19) must come from the embedded clause — the matrix verb *byrjaði* ('began') does not assign dative case to its subject, as (20) illustrates.

(20) **Ólafur**   byrjaði [t að lesa bókina   ]
      Olaf.nom began   [t to read book.the.acc]

    'Olaf began to read the book.'   (*Icelandic*) (Sigurðsson 2002: (21b))

    Why is it that well-known Icelandic data like (19) have not caused the AC to be abandoned? After all, the embedded subject in (19) has been case-marked dative at the point in the derivation when it agrees with the matrix T and raises. What unvalued feature does the embedded subject in (19) bear?

    It has been proposed that despite receiving quirky dative case in the embedded clause, the subject in (19) additionally requires abstract Case (i.e. licensing) (Sigurðsson 1989; Holmberg and Hróarsdóttir 2003). The embedded subject is morphologically case-marked in the embedded clause, but it is not licensed in the embedded clause. Lexically case-marked noun phrases in Icelandic have the same distribution as noun phrases that are not lexically case-marked (Falk 1990; Freidin and Sprouse 1991), which suggests that lexical case marking is a separate phenomenon from abstract Case (Schütze 1993). The latter is what is relevant for the Activity Condition: the dative embedded subject in (19) bears an unvalued Case feature and is therefore active.

    Applying the Activity Condition to Icelandic thus depends crucially on a distinction between abstract Case (required by all noun phrases) and morphological case. A noun phrase remains active so long as it has not received abstract Case. Below, I will argue that *structurally* case-marked noun phrases can raise in Uyghur. When a noun phrases receives structural case, its case feature is *valued*. Thus, while raising of Icelandic quirky subjects *may* be reconciled with the Activity Condition, raising of Uyghur genitive subjects is *not* subject to the Activity Condition. For a detailed discussion of lexical case-marking in Icelandic and Faroese, see chapter 3.

1.3   A brief guide to Uyghur syntax

The core argument of this chapter, as well as chapter 2, is based on data from Uyghur. Uyghur is a Turkic language, with about 9 million speakers residing primarily in Xinjiang Uyghur Autonomous Region in China. Like other Turkic languages, Uyghur is head-final, as (21) illustrates.

(21) men [[öj-ge   qarap   ] man-d-im   ]
      I   [[house-dat towards] walk-past-1sg]
      'I walked towards the house.'

In this section, I provide some background on Uyghur grammar. I introduce the patterns of agreement in Uyghur and the structure of Uyghur noun phrases.

1.3.1   Agreement

Uyghur verbs show agreement for person and number. Number agreement is only present in 1st and 2nd person, as illustrated in (22).

(22) a. First-person agreement:

men kel-d-im   / biz kel-d-uq
I   come-past-1sg / we come-past-1pl

'I came.' / 'We came.'

b. Second-person agreement:

sen   kel-d-iŋ   / siler   kel-d-iŋ-ler
you.sg come-past-2sg.familiar / you-pl come-past-2-pl

'You.sg came.' / 'You.pl came.'

c. Third-person agreement:

u   kel-d-i   / u-lar kel-d-i
(s)he come-past-3 / they come-past-3

'(S)he came.' / 'They came.'

Uyghur also displays possessor agreement on possessed nouns, as (23) illustrates.

(23) men-iŋ χet-im   / sen-iŋ   χet-iŋ   / u-niŋ   χet-i
I-gen   letter-1sg.poss / you.sg-gen letter-2sg.poss / (s)he-gen letter-3.poss
'my letter' / 'your letter' / 'his/her letter'

The pronoun and agreement system is given in the following table.[2] Note that vowel harmony can alter the form of the suffix. If the stem ends in a vowel, the initial vowel of 1st and 2nd person suffixes is dropped.

(24) Agreement in Uyghur:

		pronoun	non-past	past	possessor
1st	sg	men	-men	-im	-im
	pl	biz	-imiz	-uq	-imiz
2nd	sg, familiar	sen	-sen	-iŋ	-iŋ
	sg, standard	siz	-siz	-iŋiz	-iŋiz
	sg, polite	sili	-la	-ila	-liri
	pl	siler	-siler	-iŋ-lar	-iŋ-lar
3rd	sg	u	-du	-i	-i/-si
	pl	u-lar			

1.3.2 The noun phrase

There are no overt determiners in Uyghur. Uyghur is consistently head-final, and demonstratives in Uyghur are pre-nominal, like adjectives.

---

[2]Based on De Jong (2007) and Mawkanuli (2008).

(25) a. Adjective:

men-iŋ **uzun** kitiv-im
I-gen **long** book-1sg.poss

'my long book'

b. Demonstrative:

men-iŋ **bu** kitiv-im
I-gen **this** book-1sg.poss

'this book of mine'

Nouns are marked with case suffixes whose form may depend on the phonological proper-
ties of the stem, as shown in (26) for the names *Qurban* and *Ajgül*. Note that nominative
case is unmarked.

(26) Case in Uyghur:

Nominative	Qurban	Ajgül
Accusative	Qurban-ni	Ajgül-ni
Genitive	Qurban-niŋ	Ajgül-nuŋ
Dative	Qurban-ʁa	Ajgül-ge
Ablative	Qurban-din	Ajgül-din
Locative	Qurban-da	Ajgül-de

Case markers follow possessor agreement.

(27) Ötkür [men-iŋ χet-**im-ni**   ] oqu-d-i
Ötkür [I-gen   letter-**1sg.poss-acc**] read-past-3
'Ötkür read my letter.'

1.4   Nominalized embedding

In this section, I introduce an Uyghur nominalized embedding construction. I demonstrate
the nominal nature of the embedded clause based on its ability to bear possessor agreement
and case morphology. There are two case options for the subject of the embedded clause: it
can be genitive or unmarked. I argue that genitive-marked subjects are in a higher position
within the verbal domain than unmarked subjects. I provide both syntactic and semantic
evidence for this distinction. The nominalized clauses presented here are discussed in the
context of raising and the Activity Condition in the following sections.

1.4.1   Nominalized embedded clauses

In this section, I argue that embedded clauses bearing the suffix *-ish* (henceforth *-ish*
phrases) are nominal. An *-ish* phrase is illustrated in (28), with a simple possessed DP
shown for comparison in (29).

(28)   Possessed *-ish* phrase:

men-***(iŋ)** kitap oqu-ʃ-**im**   muhim/eχmijetlik
I-***(gen)**   book read-ISH-**1sg.poss** important/useful

'My reading a book is important/useful.'

(29)   Possessed DP:

men-***(iŋ)** kitav-**im**   muhim/eχmijetlik
I-***(gen)**   book-**1sg.poss** important/useful

'My book is important/useful.'

Two points of similarity between (28) and (29) suggest that *-ish* phrases are nominal. One is that the subject of an *-ish* phrase bears the same case as a possessor (genitive). The second is that the *-ish* phrase bears possessor agreement. The possessee in Uyghur agrees with the possessor in person and number, as discussed in section 1.3.1 above. The first person singular and plural agreement paradigms are repeated in (30). As (31) demonstrates, agreement on an *-ish* phrase falls into the possessor agreement paradigm.

(30)

		pronoun	non-past	past	possessor
1st	sg	men	-men	-im	**-im**
	pl	biz	-imiz	-uq	**-imiz**

(31)   Possessor agreement on *-ish* phrase:
   a.   men-iŋ oqu-ʃ-**im**   jaχʃi
         I-gen   read-ISH-**1sg.poss** good
         'My reading is good.'
   b.   biz-niŋ oqu-ʃ-**imɨz**   jaχʃi
         we-gen read-ISH-**1pl.poss** good
         'Our reading is good.'

A third indicator that *-ish* phrases are nominal is their ability to bear case-marking. There is no overt nominative morphology, so this fact was not evident in the examples above. The embedded *-ish* phrase is case-marked accusative in (32a), and ablative in (32b).

(32)   Overtly case-marked *-ish* phrases:
   a.   Ötkür [Ajgül-nuŋ manta jij-iʃ-i-**ni**   ] ojli-wat-i-du
         Ötkür [Aygül-gen manta eat-ISH-3.poss-**acc**] imagine-prog-non.past-3
         'Ötkür is imagining Aygül eating manta[3].'
   b.   men [Ajgül-nuŋ ömütʃük jij-iʃ-i-**din**   ] qorq-i-men
         I   [Aygül-gen spider   eat-ISH-3.poss-**abl**] fear-non.past-1sg
         'I'm afraid of Aygül eating spiders.'

---

[3]An Uyghur noodle dish.

1.4.2 *-ish* phrase structure

I propose that *-ish* is a nominalizing suffix that selects for a reduced clause, which is smaller than a TP/AspP.

(33)   Structure of an *-ish* phrase embedded by a non-raising predicate (*preliminary, to be revised*):

```
                    DP
                   /  \
                 NP     D
                /  \
              vP     N
             /  \   -iʃ-i
           DP    v′  -nliz-3.poss
          /  \  /  \
   Ajgül-nuŋ  manta jij
   Aygül-gen  manta eat
                      case
```
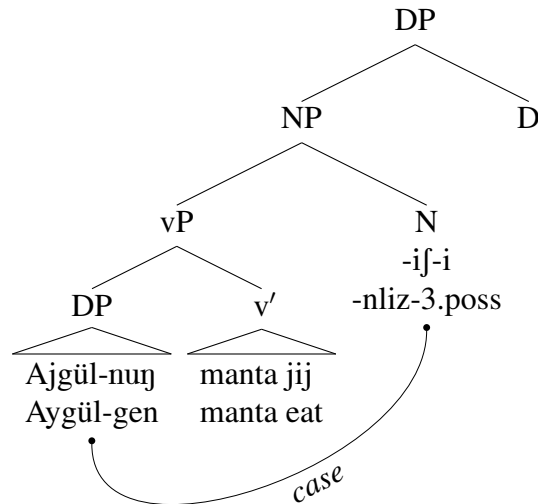
In the remainder of this section, I provide evidence that the verbal clause in an *-ish* phrase is reduced. I then show that the genitive subject of the *-ish* phrase is generated in the verbal domain, and suggest that it remains in the verbal domain throughout the derivation.

1.4.2.1   Size of the embedded clause

No morpheme may intervene between the verb root and *-ish*. In particular, negation and aspectual morphology are prohibited under *-ish*, as (34) and (35) show..

(34)   No negation in *-ish* phrase:

men-iŋ oqu-(***mas**)-iʃ-im   muhim
I-gen   read-(***neg**)-nliz-1sg.poss important

'My (*not) reading is important.'

(35)   No aspect in *-ish* phrase:

*men-iŋ oqu-(wat)-ʁan-iʃ-im   muhim
I-gen   read-(prog)-RAN-nliz-1sg.poss important

intended: 'My {having read}/{reading right now} is important.'

As discussed in chapter 2, negation is permitted in reduced clauses marked by a nominalizing suffix that I treat as an allomorph of *-ish*. Aspectual marking is not possible in *-ish* phrases, however. The verbal clause nominalized by *-ish* (or its allomorph) is thus small enough that it does not include Asp (or T).

1.4.2.2 Position of the genitive subject

Semantic properties show that the genitive subjects of *-ish* phrases are generated inside the verbal clause. Based on the ability of other arguments of the verb to scramble to the left of the genitive subject, I tentatively conclude that the genitive subject remains inside the verbal domain.

I first consider the theta-role properties of the *-ish* phrase subject, which indicate that it is generated inside vP. Kratzer (1996) observes that English *acc-ing* and *poss-ing* gerunds assign a restricted theta-role to the subject, whereas *ing-of* gerunds permit a variety of subject theta-roles. This contrast is illustrated in (36).

(36)   a.   Restricted theta-role (*acc-ing* and *poss-ing*):
              Ötkür('s) reading "Response to Years" is important.
        b.   Variety of theta-roles (*ing-of*):
              Ötkür's reading of "Response to Years" is important.

In (36a), Ötkür has to be the agent of the reading event, i.e. the reader. Example (36b) allows a wider range of interpretations – Ötkür can be the organizer or the host of the reading, for instance. Kratzer (1996) proposes that the semantic difference between (36a) and (36b) corresponds to a structural difference in the base position of the subject. It has been proposed since Abney (1987) that the subject of an *acc-ing* gerund is generated in the verbal domain, whereas the subject of an *ing-of* gerund is generated in the nominal domain.[4]

(37)   a.   *Acc-ing* gerund (cf. Abney 1987):   b.   *Ing-of* gerund (cf. Abney 1987):

The relevant difference between (37a) and (37b) is the structural position of the subject of the gerund. Only the subject in (37a) is obligatorily assigned an agent theta-role in its base position, which is inside the verbal domain. In the Uyghur example in (38), the subject must be the agent of the reading event, just like the subject of (37a).

---

[4]Kratzer (1996) proposes that the subject of a *poss-ing* gerund is generated in the nominal domain, but obligatorily controls a PRO in the verbal domain. The theta-role assigned to PRO is restricted. I will set aside *poss-ing* gerunds in the remainder of this discussion.

(38)   *-ish* phrase subject – restricted theta-role:

Ötkür-nuŋ "jil-lar-ʁa   dʒavap-ni"   oqu-ʃ-i   muhim
Ötkür-gen "year-pl-dat response-acc" read-nliz-3.poss important

✓ 'Ötkür('s) reading "Response to Years" is important.' (Ötkür must be the Agent)
✗ 'Ötkür's reading of "Response to Years" is important.' (e.g. a reading Ötkür organized)

The fact that Ötkür must be the reader in (38) shows that the *-ish* phrase subject is generated in the verbal domain. Turning to surface word order, I show that the genitive subject may be preceded by a range of elements in the embedded clause. Uyghur is a scrambling language, as (39) illustrates.[5]

(39)   Object scrambling:
   a.   Ötkür kitap-ni   oqu-d-i
        Ötkür book-acc read-past-3
        'Ötkür read the book.'
   b.   kitap-ni   Ötkür oqu-d-i
        book-acc Ötkür read-past-3
        'Ötkür read the book.

Just as in matrix clauses, scrambling is also possible in embedded clauses. In the default word order, the genitive subject is the highest element of the *-ish* phrase, as seen in (40a). As (40b) shows, a direct object can scramble to precede the genitive subject. (41) illustrates the availability of scrambling possibilities with both direct and indirect objects. All six orders of the subject, indirect object and direct object are possible.

(40)   Object scrambling in an *-ish* clause:
   a.   Ötkür-niŋ bu kitap-ni oqu-ʃ-i   muhim
        Ötkür-gen this book-acc read-nliz-3.poss important
        'Ötkür reading this book is important.'
   b.   bu kitap-ni Ötkür-nɨŋ oqu-ʃ-i   muhim
        this book-acc Ötkür-gen read-nliz-3.poss important
        'Ötkür reading this book is important.'

---

(41)   Scrambling in an *-ish* clause:

    a.   S-IO-DO (default):

        Ötkür-niŋ Ajgül-ge bu doppa-ni ber-iʃ-i   muhim
        Ötkür-gen Aygül-dat this hat-acc   give-nliz-3.poss important

    b.   S-DO-IO:

        Ötkür-niŋ bu doppa-ni Ajgül-ge ber-iʃ-i   muhim
        Ötkür-gen this hat-acc   Aygül-dat give-nliz-3.poss important

    c.   IO-S-DO:

        Ajgül-ge Ötkür-niŋ bu doppa-ni ber-iʃ-i   muhim
        Aygül-dat Ötkür-gen this hat-acc   give-nliz-3.poss important

    d.   DO-S-IO:

        bu doppa-ni Ötkür-niŋ Ajgül-ge ber-iʃ-i   muhim
        this hat-acc   Ötkür-gen Aygül-dat give-nliz-3.poss important

    e.   IO-DO-S:

        Ajgül-ge bu doppa-ni Ötkür-niŋ ber-iʃ-i   muhim
        Aygül-dat this hat-acc   Ötkür-gen give-nliz-3.poss important

    f.   DO-IO-S:

        bu doppa-ni Ajgül-ge Ötkür-niŋ ber-iʃ-i   muhim
        this hat-acc   Aygül-dat Ötkür-gen give-nliz-3.poss important

        'Ötkür giving this hat to Aygül is important.'

It would be somewhat surprising to find the direct object and indirect object scrambling outside of the verbal domain. It is unclear where *in the nominal structure* these elements could move, and what would trigger such movement. I tentatively assume that scrambling takes place clause-internally in (40) and (41). The fact that the genitive subject can be preceded by scrambled arguments thus suggests that the genitive subject is in the verbal domain on the surface.

1.4.3   Genitive vs. unmarked subjects of *-ish* phrases

In this section, I discuss the unmarked (as opposed to genitive-marked) subject option for *-ish* phrases, illustrated in (42).

(42)   Genitive or unmarked embedded subject:
    qɨz-**(niŋ)** kil-iʃ-i   muhim
    girl-**(gen)** come-nliz-3.poss important

    'It's important for a girl to come.'

Unmarked *-ish* phrase subjects are lower than genitive-marked *-ish* phrase subjects. This can be seen syntactically from the placement options of adverbs. Semantically, unmarked subjects must receive a low-scoping indefinite interpretation, which Diesing (1992)

argues to be a property of low subjects. I thus propose that genitive subjects, but not un-marked subjects, move outside vP. I begin by laying out my proposal in section 1.4.3.1. In section 1.4.3.2, I present syntactic evidence that helps identify the position of unmarked subjects in the structure. The semantic differences between genitive and unmarked subjects are discussed in section 1.4.3.3.

1.4.3.1   Proposed structure

I propose that both unmarked and genitive subjects of *-ish* phrases are generated in the specifier of vP and remain inside the verbal domain throughout the derivation. As discussed below, there is evidence that genitive subjects are higher than unmarked subjects on the surface. I propose that genitive subjects move to the specifier of a higher projection in the verbal domain that I call γP (where *gamma* is intended as a reminder that this is a *g*enitive subject position). The structures I propose are illustrated in (44).[6]

(43)   Genitive or unmarked embedded subject:

oquʁutʃi-?(**niŋ**) kitap oqu-ʃ-i   muhim
student-?(**gen**)   book read-nliz-3.poss important

'It is important for students to read books.'

(44)   a.   Genitive subject (*final version*):
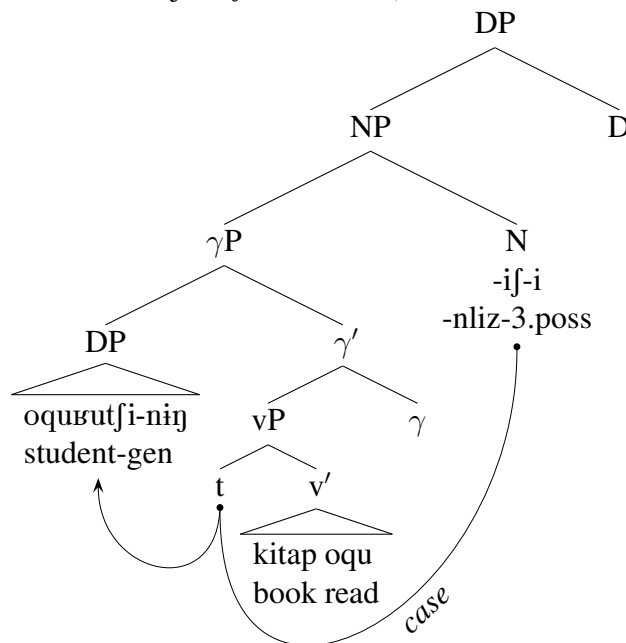
---

b. Unmarked subject:

```
                    DP
                   /  \
                 NP     D
                /  \
              γP     N
             /  \   -iʃ-i
           vP    γ  -nliz-3.poss
          /  \   γ
        DP    v′
       /  \   /  \
  oquʁutʃi  kitap oqu
   student  book read
```

The higher surface position of the genitive-marked subject accounts for word order effects discussed in section 1.4.3.2 below and semantic effects discussed in section 1.4.3.3 below. Movement of the genitive subject in (44a) is discussed in greater detail in section 1.4.3.4.

Note that I have assumed in (44a) that genitive case is assigned by N, rather than by D. That N can be a genitive case assigner has been suggested in prior literature (see Pesetsky (2010) for such an analysis of genitive case in Russian). In section 1.5 below, I propose that genitive case is available to subjects of -*ish* clauses that lack a DP layer. It is thus crucial for my account that genitive case is assigned to the subject of an -*ish* phrase by a head *below* D. However, I have no direct evidence as to precisely which head in the nominal domain acts as a genitive case assigner. I assume that this head is N for the sake of concreteness, but it could just as well be any functional head that is found below D in the nominal domain, such as n, Num, or Poss (Ritter 1991; Szabolcsi 1994; Alexiadou 2001).

1.4.3.2 Syntactic position of unmarked subjects of *-ish* phrases

An *indefinite* subject of an -*ish* phrase can be genitive, or it can be *unmarked*. In this section, I argue that unmarked subjects are syntactically lower than genitive-marked subjects.

(45) Indefinite -*ish* phrase subject – genitive or unmarked:
      qɨz-**(nɨŋ)** kil-iʃ-i   muhim
      girl-**(gen)** come-nliz-3.poss important

      'It's important for a girl to come.'

Unmarked embedded subjects are syntactically lower than genitive-marked ones. For example, as shown in (46), the adverb *æte* ('tomorrow') can follow a genitive-marked subject, but not an unmarked subject.

(46)   Unmarked subject is lower than genitive subject:

a.   Ajgül-nuŋ/qɨz-niŋ **(æte)**   kil-iʃ-i   muhim
     Aygül-gen/girl-gen (**tomorrow**) come-nliz-3.poss important
     'It's important for Aygül/{a girl} to come tomorrow.'

b.   qɨz **(??æte)**   kil-iʃ-i   muhim
     girl (**??tomorrow**) come-nliz-3.poss important
     'It's important for a girl to come (??tomorrow).'

I propose that the adverb *æte* ('tomorrow') must be generated above v, but can be generated below γ. Consequently, it can follow a genitive subject, but not an unmarked one. Note that, as (47) shows, there is no general prohibition against adverbs in unmarked-subject -*ish*-clauses. The adverb *æte* ('tomorrow') is compatible with an unmarked-subject clause so long as it *precedes* the subject.

(47)   Adverb is possible with unmarked subject:
       æte   qɨz-(niŋ) kil-iʃ-i   muhim
       tomorrow girl-(gen) come-nliz-3.poss important

       'It's important for a girl to come tomorrow.'

(48)
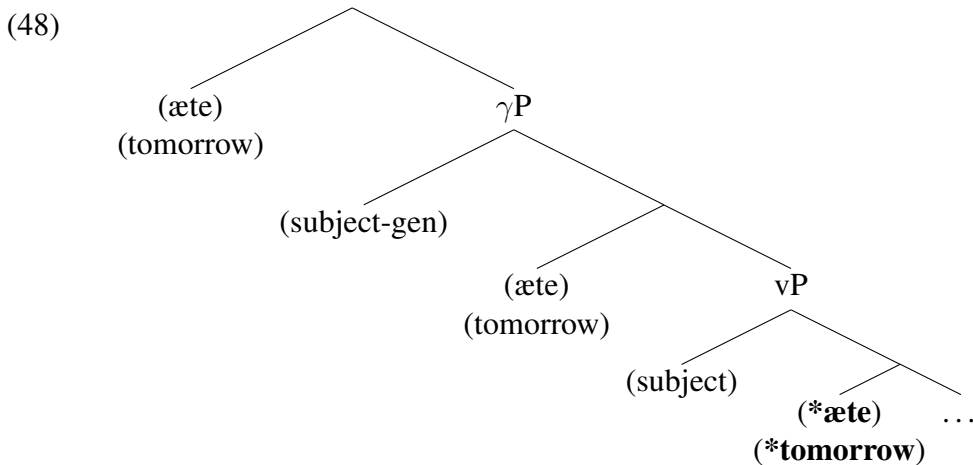
Note also that unmarked subjects need not be *very* low in the structure, unlike unmarked objects. Like other Turkic languages, Uyghur has differential object marking. Accusative-marked objects generally receive a specific interpretation and precede VP-level adverbs. Unmarked objects are non-specific and must follow VP-level adverbs.[7]

---

[7]What exactly it means for a noun phrase to be specific is a much-discussed issue in the literature on Turkish (Enç 1991; von Heusinger and Kornfilt 2005, among many others). I do not delve into this question here.

(49)   Uyghur differential object marking:[8]

    a.   Mehemmet (*jaχʃi) **nan-ni**   (jaχʃi) jaχ-t-i
        Mehemmet (*well) **bread-acc** (well) bake-past-3
        'Mehemmet baked the bread well.'

    b.   Mehemmet (jaχʃi) **nan**   (*jaχʃi) jaχ-t-i
        Mehemmet (well) **bread** (*well) bake-past-3
        'Mehemmet baked bread well.'

(50)   Uyghur differential object marking:

    a.   kino tʃolpani (?tɨz)   **χet-ni**   (tɨz)   jaz-d-i
        movie star   (?quickly) **letter-acc** (quickly) write-past-3
        'The movie star quickly wrote the letter.'

    b.   kino tʃolpani (tɨz)   **χet**   (*tɨz)   jaz-d-i
        movie star   (quickly) **letter** (*quickly) write-past-3
        'The movie star quickly wrote a letter.'

Higher adverbs like *æte* ('tomorrow') can precede or follow accusative-marked objects. They must precede unmarked objects.

(51)   Uyghur differential object marking:

    a.   Mehemmet (æte)   **bu kitap-ni** (æte)   oqu-j-du
        Mehemmet (tomorrow) **this book-acc** (tomorrow) read-non.past-3
        'Mehemmet will read this book tomorrow.'

    b.   Mehemmet (æte)   **kitap** (*æte)   oqu-j-du
        Mehemmet (tomorrow) **book** (*tomorrow) read-non.past-3
        'Mehemmet will read a book tomorrow.'

    Unlike unmarked objects, unmarked subjects can precede a variety of elements in the clause, including both unmarked and accusative-marked direct objects.[9]

(52)   Unmarked subjects followed by other arguments:

    a.   ?kino tʃolpani tɨz   χet jaz-iʃ-i   muhim
        movie star   quickly letter write-nliz-3.poss important
        'It's important for a movie star to quickly write a letter.'

    b.   ?kino tʃolpani χet-ni   jaz-iʃ-i   muhim
        move star   letter-acc write-nliz-3.poss important
        'It's important for a movie star to write the letter.'

---

[8]Data from MIT Spring 2009 graduate field methods (24.942) class notes.

[9]As mentioned above, unmarked subjects are somewhat dispreferred under non-raising predicates, hence the single question mark judgment in examples (52) and (53). The fact that these examples are somewhat degraded is not due to word order, as (i) shows.

(i)   oquʁutʃi-?(niŋ) oqu-ʃ-i   muhim
    student-?(gen)   read-nliz-3.poss important
    'It's important for a student to read.

(53) Unmarked subjects followed by other arguments:[10]
  a. ʔoquʁutʃi kitap oqu-ʃ-i   muhim
      student   book read-nliz-3.poss important
      'It is important for students to read books.'
  b. ʔoquʁutʃi-lar Ujʁur   Tarihe-ni   oqu-ʃ-i   muhim
      student-pl   Uyghur History-acc read-nliz-3.poss important
      'It is important for students to read *Uyghur History*.'

Note that unmarked *objects* cannot precede unmarked subjects, as (54) shows. I assume that unmarked objects are not able to scramble, but leave open the question of how this restriction arises.

(54) Unmarked object – unmarked subject order not possible:
  *kitap oquʁutʃi oqu-ʃ-i   muhim
  book student   read-nliz-3.poss important

  intended: 'It is important for students to read books.'

In this section, I have argued that genitive embedded subjects are higher than unmarked embedded subjects on the basis of the placement of the adverb *æte* ('tomorrow'). I also provided evidence that, unlike unmarked *objects*, unmarked subjects of nominalized clauses are not very low in the structure. They can be followed by low adverbs and direct objects, for example.[11] The structures I have proposed are shown again in (56).

(55) Genitive or unmarked embedded subject:
  oquʁutʃi-?(**niŋ**) kitap oqu-ʃ-i   muhim
  student-?(**gen**)   book read-nliz-3.poss important

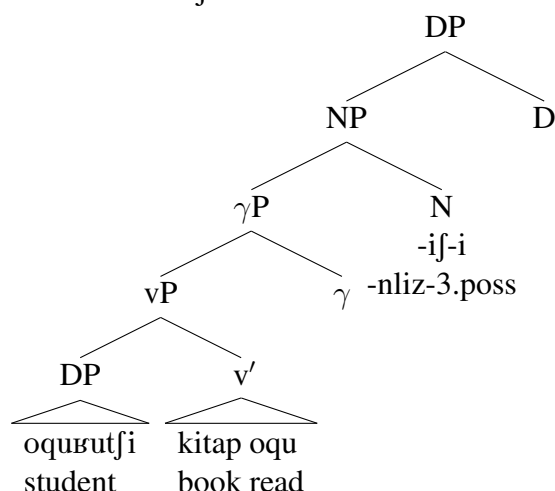 'It is important for students to read books.'

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[10]As seen in the (a) example, plural marking is not required for a noun phrase to receive a plural interpretation in Uyghur.

[11]As discussed above, accusative-marked direct objects can be followed by high adverbs in matrix clauses. However, unmarked embedded subjects can precede accusative objects, but not high adverbs.

(i)   a. ✓ high adverb > accusative direct object > high adverb
      b. ✓ unmarked subject > accusative direct object
      c. ✗ unmarked subject > high adverb

The pattern in (i) suggests that accusative-marked objects end up in a position above high adverbs through scrambling. Unmarked subjects can precede the lowest position available to accusative objects, but not the high adverb position or (presumably) the scrambled position of direct objects.

(56) a. Genitive subject:
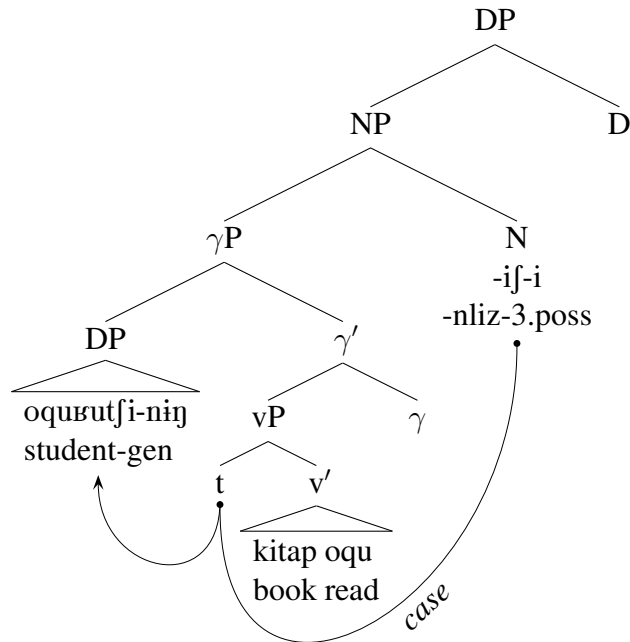
  b. Unmarked subject:
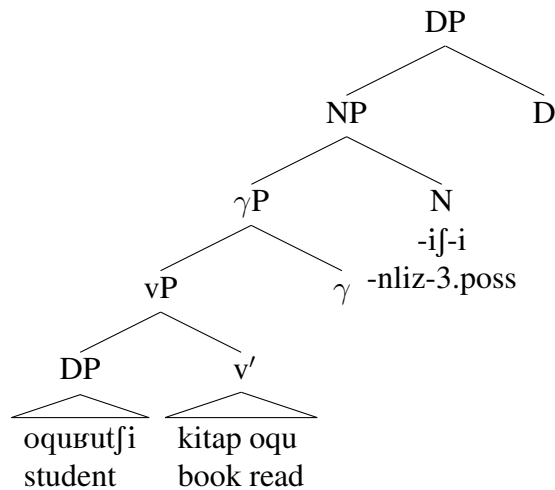
1.4.3.3 Semantic properties of genitive vs. unmarked *-ish* phrase subjects

In this section, I show that the semantic properties of unmarked *-ish* phrase subjects also indicate that they are lower than genitive-marked *-ish* phrase subjects. In particular, unmarked embedded subjects are inside the domain of *existential closure* (Diesing 1992), whereas genitive-marked embedded subjects are outside the domain of existential closure. I thus propose that the existential closure boundary thus lies between v and γ.

As seen throughout this section, an indefinite subject of an *-ish* phrase may be genitive or unmarked. A definite subject of an *-ish* phrase under a non-raising predicate is obligatorily genitive, as seen in (28) above and as (57) further illustrates.

(57)   Definite *-ish* phrase subject – genitive-marked only:
        Ajgül-***(nuŋ)** kil-iʃ-i   muhim
        Aygül-***(gen)** come-nliz-3.poss important

        'It's important for Aygül to come.'

An unmarked *-ish* phrase subject must not only be indefinite – it must be a *low-scoping indefinite*. Whereas a genitive *-ish* phrase subject can take scope above or below the embedding predicate (example (58)), and unmarked *-ish* phrase subject can only take scope below the embedding predicate (example (59)).

(58)   Genitive *-ish* phrase subject – high or low scope:
        qɨz-niŋ kil-iʃ-i   muhim
        girl-gen come-nliz-3.poss important

        'It's important for a girl to come.'
        important $> \exists$; $\exists >$ **important**

(59)   Unmarked *-ish* phrase subject – low scope only:
        qɨz kil-iʃ-i   muhim
        girl come-nliz-3.poss important

        'It's important for a girl to come.'
        important $> \exists$; ***** $\exists >$ **important**

Example (58) can mean that there is a particular girl and it is important for that girl to come, or that it is important that some girl (any girl) come. By contrast, an unmarked subject obligatorily takes low scope – (59) cannot mean that it is important for a particular girl to come. Note that a genitive-marked subject of an *-ish* phrase need not take high scope, as (60) clearly demonstrates.

(60)   Low scope possible:
        bersi-?(niŋ)   qazan-ʁa qar-iʃ-i   muhim   idi
        someone-?(gen) pot-dat   watch-nliz-3.poss important was

        'It was important for someone to watch the pot.'
        important $> \exists$; # $\exists >$ important
        (*Context: The host at a party has been in the kitchen while everybody else was in the living room. The host comes into the living room, and people ask him why he's been in the kitchen this whole time.*)

Diesing (1992) observes that cross-linguistically vP-internal subjects must be low-scoping indefinites. She proposes that there is an existential closure operator at the edge of vP, which binds all free variables in its scope. An indefinite subject inside vP is thus interpreted as a bound variable, whereas indefinites outside of vP are interpreted as existential quantifiers. I propose that in Uyghur, the existential closure boundary lies between v and γ, as (61) illustrates.[12]

---

[12] The question arises as to why specific noun phrases, e.g. a definite accusative-marked object in (i), can

(61)   Existential closure:

```
                        DP
                       /  \
                     NP     D
                    /  \
                  γP    N
                 /  \   -iʃ-agr
        (subject-gen)  vP
                      /  \
                 (subject) v′
                          /\
                         ...
```
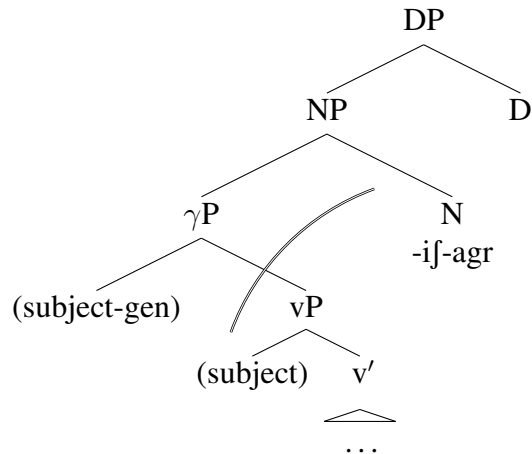
Consider what this entails for the interpretation of *-ish* phrase subjects. If an unmarked subject is in the specifier of vP, as proposed above, it is existentially bound. This results in the following semantic derivation (with English words used for ease of presentation), where the subject must get a low-scope reading.[13]

(62)   Unmarked *-ish* phrase subject inside existential closure:

```
        important(∃x s.t. x is a girl & x comes)
                   /                    \
    ∃x s.t. x is a girl & x comes     important
         /              \
        ∃                vP
              x s.t. x is a girl comes
                   /          \
                 girl         come
          x s.t. x is a girl   λx . [x comes]
```
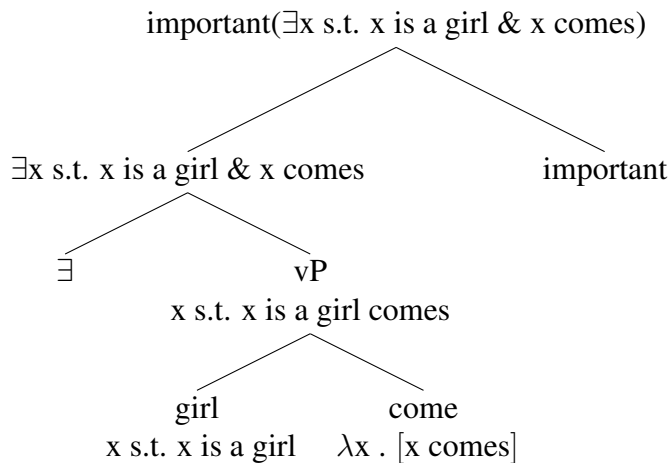
According to (62), the only denotation derived for example (59) with an *unmarked*

___

follow unmarked subjects.

(i)   ʔoquʁutʃi-lar Ujʁur Tarihe-ni   oqu-ʃ-i   muhim
       student-pl   Uyghur History-acc read-nliz-3.poss important
       'It is important for students to read *Uyghur History*.'

The object in (i) is somehow exempt from existential closure. One possibility is that the object is inside a case phrase (KP) that acts like a PP in allowing the object not to be existentially bound. Similarly, a specific reading is available for the quirky dative object in (60). On this view, the fact that accusative-marked objects can be interpreted as specific in matrix clauses (as well as in embedded clauses) is *not* due to the their relatively high structural position. Accusative-marked objects are higher than unmarked objects for independent, syntactic reasons.

[13]I abstract away from tense and intensionality.

subject is one where 'important' takes scope over 'girl': it is important that there exist some girl who comes. This is the right prediction. An indefinite *genitive* subject is not existentially bound, but is interpreted as a quantifier. It takes scope below the embedding predicate in its surface position, but it can also take scope above the embedding predicate through quantifier raising (QR).[14]

(63)   Scope of genitive-marked subject of an *-ish* phrase:
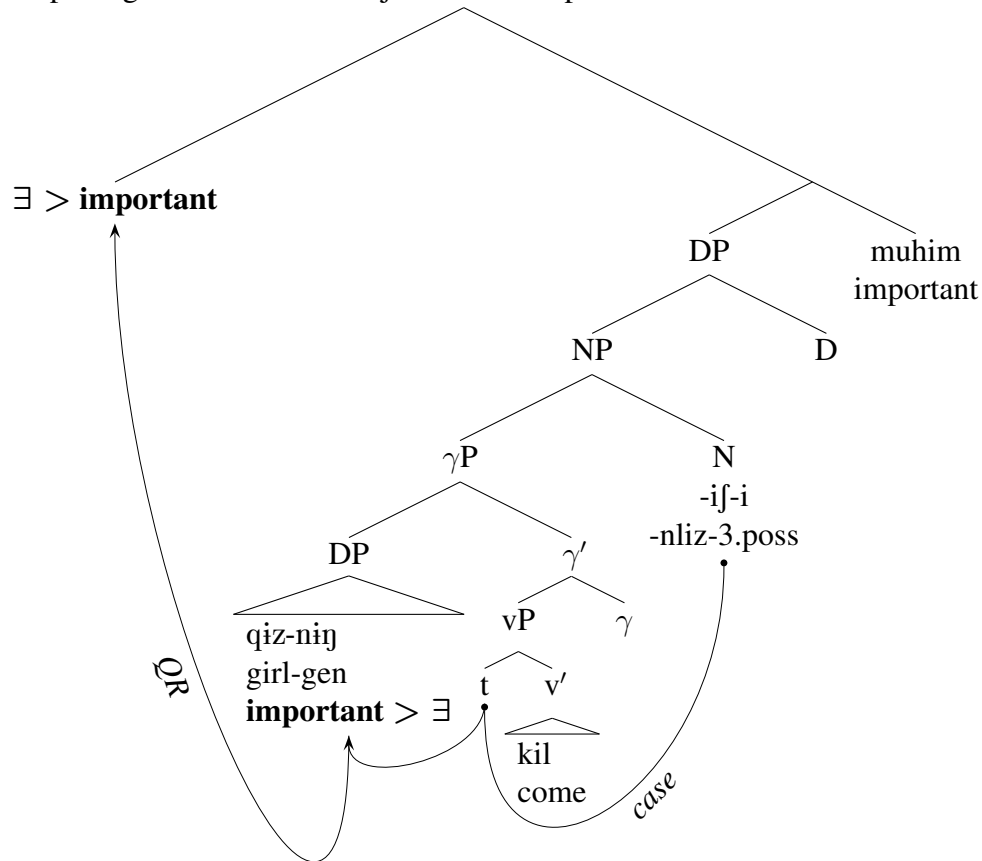
The fact that unmarked indefinite *-ish* phrase subjects take obligatory low scope, while genitive-marked indefinites may take high scope (derived through QR) provides additional confirmation that unmarked *-ish* phrase subjects are lower than genitive *-ish* phrase subjects. Otherwise, we would not have a configuration where genitive subjects are above the scope of existential closure, while unmarked subjects are below the scope of existential closure.

The scope properties of indefinite embedded subjects have now been accounted for. What remains to be addressed is why definite subjects must be genitive-marked. Diesing (1992) observes, but does not explain, the fact that cross-linguistically definites cannot remain inside the scope of existential closure. This generalization extends to Uyghur – recall that definite subjects of *-ish* phrases must be genitive-marked. That is, they must be

---

[14]I propose in section 1.5 that the *-ish* phrase in (63) actually raises to a higher position, but this has no impact on the relative scope of the *-ish* phrase subject and the matrix predicate.

in the specifier of γP and thus outside the scope of existential closure.

(64) Definite *-ish* phrase subject – genitive-marked only:

Ajgül-***(nuŋ)** kil-iʃ-i   muhim
Aygül-***(gen)** come-nliz-3.poss important

'It's important for Aygül to come.'

The theory of Heim (1982) provides a way to express the requirement that definites be outside the scope of existential closure. Heim (1982) treats non-pronominal, non-quantificational DPs as variable-containing expressions of type t. Thus, for instance *a/the girl* would have the denotation **x is a girl**.[15] Diesing (1992) proposes that existential closure obligatorily binds all unbound variables in its scope. Suppose that a separate principle prevents pronouns and variables inside definites from being bound. Pronouns and definites would then be forced to be interpreted outside the scope of existential closure. In the context of *-ish* phrase subjects, this means that a definite subject of an *-ish* phrase must be genitive-marked.

1.4.3.4 Summary and discussion

In this section, I have proposed the following structures for genitive-subject and unmarked-subject *-ish* clauses.

(65) Genitive or unmarked embedded subject:

oquʁutʃi-?**(niŋ)** kitap oqu-ʃ-i   muhim
student-?**(gen)**   book read-nliz-3.poss important

'It is important for students to read books.'

---

[15]This framework yields a different derivation for the unmarked *-ish* phrase subject structure from that given in (62) above, but the outcome that the subject must take low scope carries over.

(66)　　a.　Genitive subject:

```
                              DP
                         ┌────┴────┐
                        NP          D
                   ┌─────┴─────┐
                  γP            N
             ┌────┴────┐       -iʃ-i
            DP         γ′      -nliz-3.poss
       oquʁutʃi-niŋ  ┌──┴──┐
       student-gen  vP      γ
                 ┌──┴──┐
                 t     v′
                    ┌──┴──┐
                   kitap oqu
                   book read
                            case
```

　　b.　Unmarked subject:

```
                        DP
                   ┌────┴────┐
                  NP          D
              ┌────┴────┐
             γP          N
         ┌────┴────┐    -iʃ-i
        vP         γ   -nliz-3.poss
    ┌────┴────┐
   DP         v′
 oquʁutʃi   kitap oqu
 student    book read
```
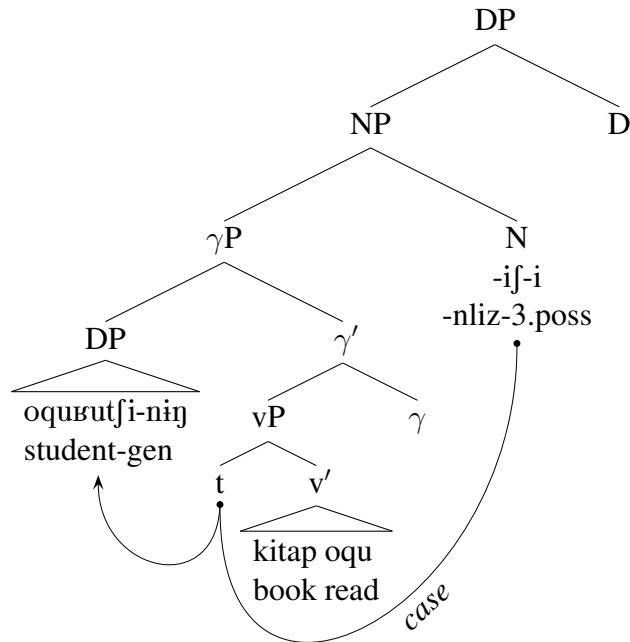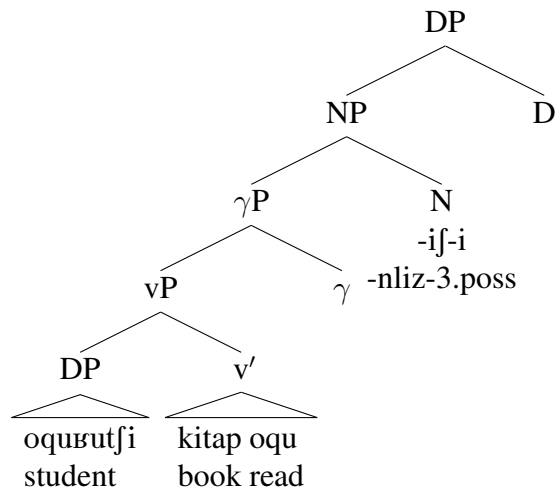
Surface word order and semantic properties of embedded subjects indicate that while unmarked subjects of *-ish* clauses remain inside vP, genitive subjects move outside of vP. I have assumed above that genitive subjects remain inside the verbal domain and move to the specifier of γP; the precise identity of γ remains to be ascertained.

I have proposed that while the embedded subject agrees with and is assigned genitive case by N, it does not move to the specifier of NP. Nothing in this chapter hinges on this assumption. If we assume that arguments of the embedded verb can scramble above NP, then a standard account where agreement with N triggers movement of the genitive subject to the specifier of NP is possible. I have chosen not to adopt this view because lack of movement by a genitive subject to the specifier of a case-assigning NP is crucial for my analysis of the of the genitive-subject constructions discussed in chapter 2. With the aim of

keeping the structures of different types of Uyghur nominal clauses *minimally* different, I thus do not propose movement to the specifier of NP here.

However, as discussed in this section, the genitive subject of an *-ish* phrase does move from its base position in the specifier of vP. What triggers this movement to spec, γP? I tentatively propose that movement to a projection below N is nevertheless triggered by agreement with N. Movement to a position *lower* than the relevant probe has been advocated for certain constructions. Richards (2011) proposes that this is what we find in (67) and (following Black 2000) in (68), where a *wh*-phrase *follows* the complementizer.[16]

(67) Hindi ko   alam [kung   kailan darating   ang estudyante]
      not   NG.I know [C[+wh] when   NOM.will.come ANG student   ]
      'I don't know when the student will come.'   (*Tagalog*) (Richards 2011)

(68) ʔe [dxiin zhe] r-laa   de?
      Q [work WH] HAB-do 2sg
      'What work are you doing?'   (*Quiegolani Zapotec*) (Black 2000)

1.5   Nominalized clauses embedded by raising predicates

In this section, I discuss embedding of *-ish* phrases by modal adjectives, which I argue to be raising predicates. In section 1.5.1, I introduce some data that distinguish embedding by modal adjectives from embedding by other predicates discussed above. I then present my proposal for the structure of modal adjective embedding. Sections 1.5.2 and 1.5.3 provide arguments against a control analysis of modal adjectives and in support of a raising analysis (respectively). Section 1.5.4 provides an interim summary. The implications of the data considered here for A-movement and the Activity Condition are discussed in section 1.6.

1.5.1   Analysis of raising constructions

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

(69) Uyghur modal adjectives:
      kirek: deontic/epistemic necessity
      lazim: deontic/epistemic necessity
      mumkin: epistemic possibility

As (70) shows, an *-ish* phase subject under *kirek* or *lazim* ('necessary') may be genitive or unmarked.[17]

---

[16]Though see Sabbagh (2011) for a PF lowering account of examples like (67).

[17]Genitive subjects are dispreferred with *mumkin* ('possible'); why this is the case is an open question.

(70)   *-ish* phrase embedded by a modal adjective:

qɨz-(nɨŋ) kil-iʃ-i   kirek/lazim
girl-(gen) come-nliz-3.poss necessary

'It is necessary for a girl to come.'

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

(71)   Unmarked subject precedes adverb:

qɨz **ǽte**   kil-iʃ-i   kirek/lazim/mumkin
girl **tomorrow** come-nliz-3.poss necessary/necessary/possible

'It's necessary/possible for a girl to come tomorrow.'

Unmarked subjects of clauses embedded by modal adjectives also do not obey the semantic restrictions discussed above. They can be definite (example (72)) and they can take scope over the embedding predicate (example (73)).

(72)   Definite unmarked *-ish* phrase subject:

men kitap oqu-ʃ-im   kirek/lazim/mumkin
I   book read-nliz-1sg.poss necessary/necessary/possible

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

(73)   Unmarked *-ish* phrase subject – high or low scope:

qɨz kil-iʃ-i   kirek
girl come-nliz-3.poss necessary

'A girl has to come.'
necessary $> \exists$; $\exists >$ **necessary**

These data demonstrate that the unmarked subject of an *-ish* phrase embedded by a modal adjective is not in its base position in the specifier of vP. I argue below that the subject of an *-ish* phrase embedded by a modal adjective raises to the specifier of the matrix TP. The subject of the *-ish* phrase in (74) precedes a matrix-level adverb, which indicates that it is indeed in the matrix clause.

(74)   *-ish* phrase subject precedes matrix adverb:

men-(iŋ) bu ehtimal-da   [oqu-ʃ-im   ] kirek
I-(gen) this probability-loc [read-nliz-1sg.poss] necessary

'I probably have to read.' (not: # 'I have to probably read.')

Note that *bu ehtimalda* ('probably') is incompatible with the embedded clause, as (75) illustrates in a matrix context.

(75)   (*bu ehtimal-da)   Ötkür (*bu ehtimal-da)   oqu-d-i
        (*this probability-loc) Ötkür (*this probability-loc) read-past-3
        'Ötkür (*probably) read.'

When the embedding predicate is a non-raising adjective like *muhim* ('important'), the embedded subject cannot precede a matrix adverb, as (76) shows.[18]

(76)   Matrix adverb cannot immediately follow embedded subject:

    a.   heqiqeten [Ajgül-nuŋ kil-iʃ-i   ] muhim
              truly   [Aygül-gen come-nliz-3.poss] important
              'Aygül coming is truly important.'
    b.   *[Ajgül-nuŋ heqiqeten kil-iʃ-i   ] muhim
              [Aygül-gen truly   come-nliz-3.poss] important
              intended: 'Aygül coming is truly important.'

The adverb *heqiqeten* ('truly') is evidently incompatible with the embedded clause, perhaps because it is a high adverb (Cinque 1999) and the *-ish* clause lacks high functional structure. The genitive subject in (76) does not raise, and must therefore follow the matrix adverb, unlike the subject in (75).[19]

    Following Trinh (2009), I propose that the subject of an *-ish* phrase embedded by a modal adjective raises because the *-ish* phrase that combines with a modal adjective cannot satisfy the EPP of T. Concretely, I propose that T requires a DP to fill its specifier, and an *-ish* phrase embedded by a modal adjective is a bare NP.

(77)   Proposal for modal (vs. non-modal) adjectives:

    a.   The *-ish* phrase that combines with non-modal adjectives (and verbal predicates) is a DP.
    b.   The *-ish* phrase that combines with modal adjectives is an NP.
    c.   T in Uyghur has an EPP property that must be satisfied by a DP.

(78)   Consequently:

    a.   When the embedding predicate is a non-modal adjective, the *-ish* phrase raises to spec, TP to satisfy EPP.
    b.   When the embedding predicate is a modal adjective, the **subject** of the *-ish* phrase raises to spec, TP to satisfy EPP.

Note that in the system I propose here, raising out of an *-ish* clause embedded by a modal adjective takes place only to satisfy EPP on T. The embedded subject does not have any

---

[18]Unfortunately, the predicates *kirek* ('necessary') and *muhim* ('important') are compatible with different adverbs, making minimal pairs difficult to construct. *Bu ehtimalda* ('probably') cannot be used with *muhim* ('important'), and *heqiqeten* ('truly') cannot be used with *kirek* ('necessary').

[19]Note that the adverb *can* follow the entire *-ish* clause embedded by *muhim* ('important').

(i)   [Ajgül-nuŋ kil-iʃ-i   ] heqiqeten muhim
        [Aygül-gen come-nliz-3.poss] truly   important
        'Aygül coming is truly important.'

"needs" that must be satisfied. The implications of this are discussed in section 1.6. I thus propose that the modal adjective example in (79) has the structure shown in (80). I assume that, as in clauses embedded by non-modal adjectives, genitive embedded subjects in clauses embedded by modal adjectives move to spec, γP when they receive genitive case. I am not aware of a way to test this, however. For simplicity, γP is not shown in (80).

(79)   *-ish* phrase embedded by a modal adjective:

qɨz-(nɨŋ) kil-iʃ-i   kirek   i-d-i
girl-(gen) come-nliz-3.poss necessary be-past-3

'It was necessary for a girl to come.'

(80)   Modal adjective – subject of *-ish* phrase satisfies EPP of T:
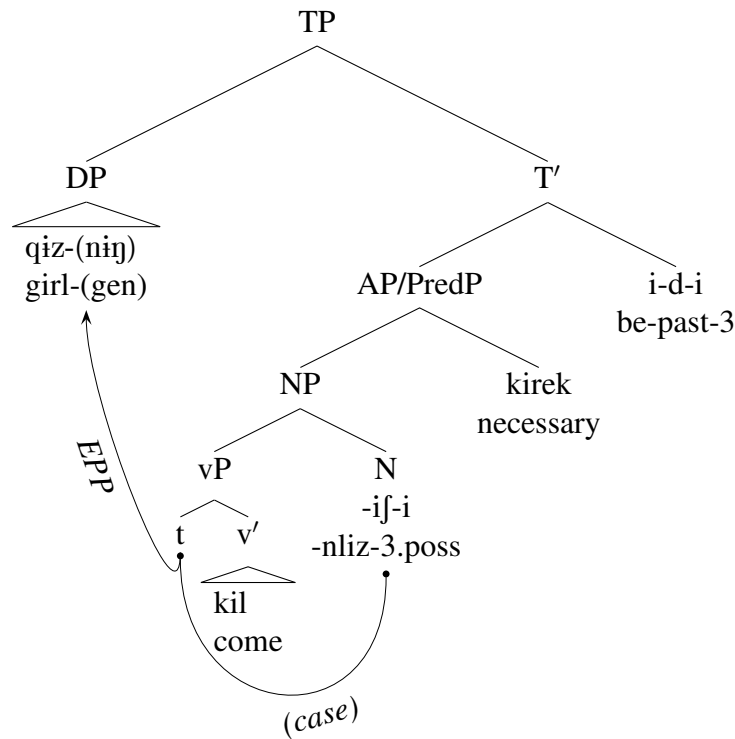
For *-ish* phrase embedding by *non-modal* adjectives, as in (81), I propose the structure shown in (82).

(81)   *-ish* phrase embedded by a non-modal adjective:

qɨz-(nɨŋ) kil-iʃ-i   muhim   i-d-i
girl-(gen) come-nliz-3.poss important be-past-3

'It was important for a girl to come.'

(82)   Non-modal adjective – *-ish* phrase satisfies EPP of T (*structure abbreviated*):

TP

DP   T′

qɨz-(niŋ) kil-iʃ-i
girl-(gen) come-nliz-3.poss

EPP

AP/PredP   i-d-i
be-past-3

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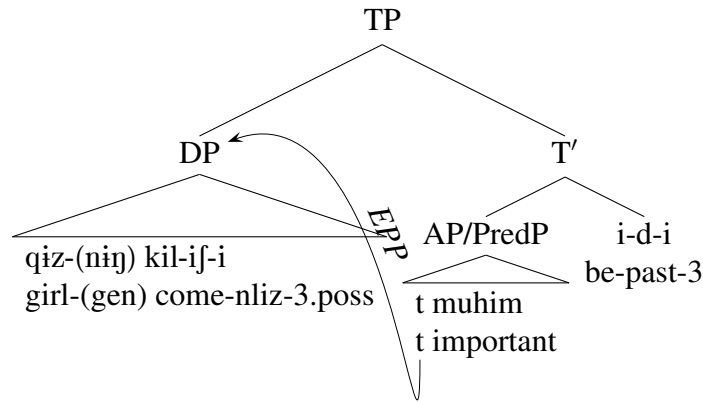
With non-modal adjectives, the *-ish* phrase is a DP and can therefore satisfy the EPP of T, while with modal adjectives the *-ish* phrase is an NP, and so cannot satisfy the EPP of T. The subject of the *-ish* phrase satisfies the EPP property of T instead. This proposal correctly predicts that an unmarked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

1.5.2   Evidence against a control analysis

Before presenting further evidence that the semantic subject of an *-ish* phrase embedded by a modal adjective is in the matrix subject position, I argue against a control analysis of the construction (illustrated in (83)).

(83)   *Not* a possible structure:

TP

DP   T′

qɨz-(niŋ)
girl-(gen)

AP/PredP   T

NP   kirek
necessary

PRO kil-iʃ-i
PRO come-nliz-3.poss
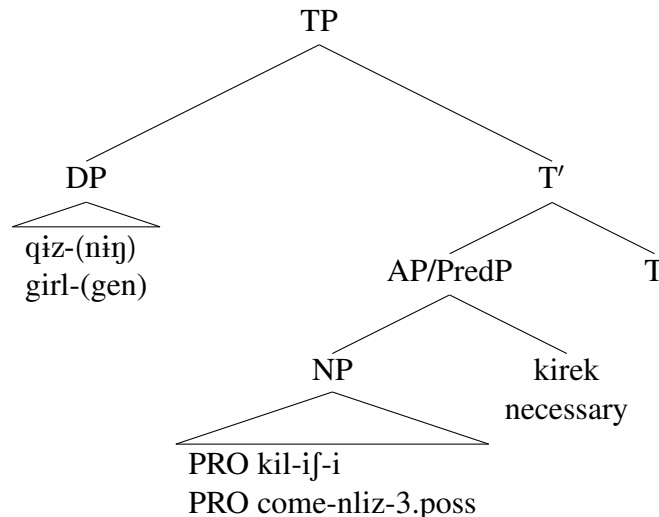
Uyghur control constructions have different case and agreement properties from embedding by modal adjectives. Agreement on the *-ish* phrase under a modal adjective is required with 1st and 2nd person subjects, as seen in (84).[20] This is in contrast with control constructions,

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

where agreement on the *-ish* phrase is prohibited, as (85) shows.

(84)   Modal adjective – agreement on *-ish* phrase required:

men ket-iʃ-***(im)**   kirek/mumkin
I   leave-nliz-***(1sg.poss)** necessary/possible

'It's necessary/possible for me to leave.'

(85)   Control construction – agreement on *-ish* phrase prohibited:

men kitap oqu-ʃ-(***im**)-ni   ojli-wat-i-men/tiriʃ-t-im
I   book read-nliz-(***1sg.poss**)-acc want-prog-non.past-1sg/try-past-1sg

'I want/tried to read a book.'

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

The subject case properties of modal adjective constructions and control predicate constructions also differ. As shown in examples (70) and (74) above and seen again in (86), the matrix subject of a modal adjective construction can bear genitive case.

(86)   Optionally genitive subject under a modal adjective:

men-**(iŋ)** ket-iʃ-im   kirek
I-**(gen)**   leave-nliz-1sg.poss necessary

'My leaving is necessary.'

The matrix subject of a control predicate like *ojlimaq* ('to want'), on the other hand, must be nominative.

(87)   No genitive subject in a control construction:

men-**(??iŋ)** ket-iʃ-ni   ojli-wat-i-men
I-**(??gen)**   leave-nliz-acc want-prog-non.past-1sg

'I want to leave.'

Note that examples like (88) give the *appearance* of a genitive subject in a control construction, but are in fact instances of pro-drop.

(88)   Genitive embedded subject with pro-drop:

pro [uzem-niŋ   ket-iʃ-ni   ] ojli-wat-i-men
pro [myself-gen leave-nliz-acc] want-prog-non.past-1sg

'I want myself to leave.'

As (89) shows, when an *-ish* phrase is embedded by *ojlimaq* ('to want') in a non-control construction, the subject of the *-ish* phrase is genitive, but the matrix subject is nominative.

(89)   Genitive embedded subject, nominative matrix subject:

men [**Ötkür-nuŋ** ket-iʃ-i-ni   ] ojli-wat-i-men
I   [**Ötkür-gen** leave-nliz-3.poss-acc] want-prog-non.past-1sg

'I want Ötkür to leave.'

Uyghur allows pro-drop, as the following examples illustrate.

(90)   a.   (men) tünügün seni   uru-d-um
              (I)   yesterday you.acc hit-past-1sg
              'I hit you yesterday.'
        b.   (u-lar) nan-ni   bu jar-de   qeqi-wet-ip-tu
              (they) bread-acc this place-loc bake-prog-evid-3
              'They are (evidently) baking bread here.'

Examples like (88) are correctly analyzed as instances of pro-drop. The genitive anaphor in (88) is inside the embedded *-ish* phrase, and is licensed by the matrix pro-dropped subject. Example (87) is thus ruled out by a combination of lack of matrix genitive subjects with *ojlimaq* ('to want') and Principle B, which blocks the genitive subject in (87) from being parsed as the embedded *-ish* phrase subject. Of course, nominative case on the subject of a control construction is exactly what we expect to find. Genitive case is licensed in the nominalized embedded clause. Since the subject of a control construction is generated outside of the embedded *-ish* phrase, it has no source of genitive case.

In this section, I have shown that modal adjective constructions differ from control constructions in two ways: agreement properties, and matrix subject case properties. I have thus argued that Uyghur modal adjectives are not control predicates.

1.5.3   Evidence for raising of *-ish* phrase subjects

Above, we saw that adverb placement options indicate that the subject of an *-ish* phrase embedded by a modal adjective can move out of the *-ish* phrase. In this section, I use three additional types of evidence to show that the subject of an *-ish* phrase embedded by a modal adjective raises out of the *-ish* phrase. This is the case both for unmarked and for genitive subjects. Since Uyghur is a head-final language, the task is not a trivial one. T (when overt) is sentence-final, and so the subject does not overtly move over it. The first line of argument in section 1.5.3.1 comes from embedding the adjective construction in an Exceptional Case Marking (ECM) environment. When the predicate is a non-modal adjective, the entire *-ish* phrase acts as its subject. When the predicate is a modal adjective, the subject of the *-ish* phrase acts as the subject of the predicate. The embedding data indicate that the subject of the *-ish* phrase moves *to the matrix subject position*. It thus undergoes raising, and not some A-bar movement operation. Section 1.5.3.2 shows that the subject moves out of the *-ish* phrase in modal adjective constructions but not non-modal adjective constructions using the placement of a topic marker as evidence. Section 1.5.3.3 does the same using the distribution of a focus marker. All three tests indicate that raising out of an *-ish* phrase embedded by a modal adjective is obligatory.

1.5.3.1 Embedding

In this section, I use an Exceptional Case Marking (ECM) operation that targets embedded subjects to identify the *-ish* phrase subject as the subject of the modal adjective clause. As shown by Shklovsky and Sudo (to appear), the subject of a proposition embedded without nominalization in Uyghur can bear nominative or accusative case.

(91)   ECM (optional):

Tursun   [Aχmet(-ni)   ket-ti   ] di-di
Tursun.nom [Ahmet-(acc) leave-past.3] say-past.3

'Tursun said that Ahmet left.'   (Shklovsky and Sudo to appear: (12))

When the embedded subject bears nominative case, any pronoun it contains receives a *shifted* interpretation. That is, the pronoun is interpreted with respect to the embedded context, and not with respect to the matrix context. For example, a first-person pronoun is interpreted as referring to the subject of the sentence, as illustrated in (92).[21]

(92)   Nominative subject – shifted reading:

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

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

The only reading available in (92) is one where the possessor *meniŋ* ('my') is interpreted as referring to Ahmet. It cannot refer to the speaker. The pronoun is thus shifted: it has a first-person referent in the embedded context, and not in the matrix context. Any pronoun in an accusative-marked subject, on the other hand, receives a non-shifted interpretation. Thus the first-person pronoun in the subject of (93) can only refer to the speaker.

(93)   Accusative subject – non-shifted reading:

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

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

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

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

(94)   Accusative-marked embedded subject:

```
                    CP
          ╱          ╲
   subject-acc    ╱      ╲
        ↑    shifter    TP
        │          ╱   ╲
        │      t_subj   T′
        │              ╱ ╲
        └─────────      ⋯
```
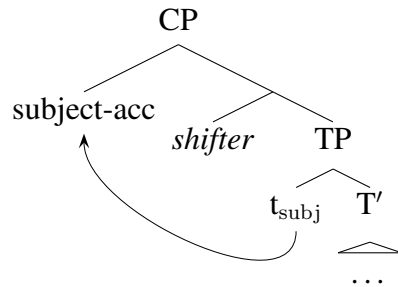
      Embedded *subjects* may thus be exceptionally accusative-marked, with a corresponding non-shifted interpretation. The ECM operation targets subjects: quirky objects, for instance, cannot be marked accusative in the same way (and thereby made to receive a non-shifted interpretation), as (95) shows.

(95)   Ablative object – shifted reading only:
        Ötkür [men-{dɨn/*i} Ajgül qorq-u-du   ] didi
        Ötkür [I-{abl/*acc}   Aygül fear-non.past-3] said

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

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

(96)   Non-modal adjective – nominative *-ish* phrase, shifted reading:
        Ötkür [**men-ɨŋ oqu-ʃ-im**   muhim   ] didi
        Ötkür [**I-gen   read-nliz-1sg.poss** important] said

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

(97)   Non-modal adjective – accusative *-ish* phrase, non-shifted reading:
        Ötkür [**men-ɨŋ oqu-ʃ-im-ni**   muhim   ] didi
        Ötkür [**I-gen   read-nliz-1sg.poss-acc** important] said

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

In (96), the *-ish* phase is unmarked. It is thus below the shifter, and its subject receives a shifted interpretation. On the other hand, the entire *-ish* phrase in (97) is marked accusative, which indicates that the entire *-ish* phrase moves above the shifter. As a result, all pronouns inside the *-ish* phrase receive a non-shifted interpretation. This is confirmed in the contrast

between (98) and (99). A pronominal *object* in an *-ish* phrase embedded by a non-modal adjective receives a shifted interpretation when the *-ish* phrase is unmarked, and a non-shifted interpretation when the *-ish* phrase is marked accusative.

(98)   Non-modal adjective – nominative *-ish* phrase, shifted reading:

Ötkür [Ajɡül-nuŋ **meni kör-iʃ-i** muhim] didi
Ötkür [Aygül-gen **I-acc see-nliz-3.poss** important] said

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

(99)   Non-modal adjective – accusative *-ish* phrase, non-shifted reading:

Ötkür [Ajɡül-nuŋ **meni kör-iʃ-i-ni** muhim] didi
Ötkür [Aygül-gen **I-acc see-nliz-3.poss-acc** important] said

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

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

(100)   Modal adjective – no accusative marking on *-ish* phrase:

*Mehemmet [Ajɡül-{∅/niŋ/ni} oqu-ʃ-i-**ni** kirek] didi
Mehemmet [Aygül-{nom/gen/acc} read-nliz-3.poss-**acc** necessary] said

intended: 'Mehemmet said that Aygül's studying is necessary.'

Instead, the subject of the *-ish* phrase can raise and receive accusative marking. The interpretive difference is the same as above – a nominative (unmarked) pronominal subject must be shifted, while an accusative-marked subject receives a non-shifted reading.[22]

(101)   Modal adjective – nominative subject, shifted reading:

Ötkür [**men** oqu-ʃ-im kirek] didi
Ötkür [**I** study-nliz-1sg.poss necessary] said

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

---

[22]Note that the possessor agreement on the *-ish* phrase in (102) is shifted; I do not address the topic of shifted agreement in this paper.

(102)   Modal adjective – accusative subject, non-shifted reading:
Ötkür [**meni** oqu-ʃ-{i/iŋ} kirek   ] didi
Ötkür [**I-acc** read-{3/2sg} necessary] said

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

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

(103)   Non-modal adjective – no accusative marking on subject of *-ish* phrase:
*Mehemmet [Ajgül-**ni**   oqu-ʃ-i   muhim   ] didi
Mehemmet [Aygül-**acc** study-nliz-3.poss important] said

intended: 'Mehemmet said that Aygül's studying is important.'

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

(104)   Accusative-marked embedded subject:
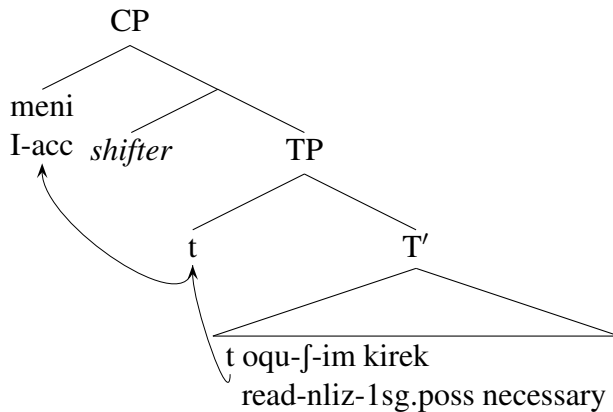
Recall that a quirky object, even if scrambled to the left of the subject, cannot receive accusative marking or (when the subject remains nominative) a non-shifted interpretation, as (105) again shows.

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

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

As (105) shows, scrambling does not feed the assignment of ECM accusative case. Extraction of the subject of an *-ish* phrase embedded by a modal adjective is therefore not scrambling, but (I propose) an A-movement operation (raising). Furthermore, when the

embedding predicate is a modal adjective, raising is *obligatory*. As shown above, only the subject of the *-ish* phrase embedded by a modal adjective, and not the *-ish* phrase itself, can be marked accusative in an ECM construction.

1.5.3.2 Topicalization

In this section, I use topic-marking as a test of constituency. I show that an *-ish* phrase embedded by a non-modal adjective can be topicalized as a single constituent, whereas an *-ish* phase embedded by a modal adjective cannot be. The "conditional copula particle" *bolsa* (composed of *bol* ('be') plus *sa* (conditional marker)) acts as a topic marker (Johanson and Csató 1998; De Jong 2007).[23] The topicalized phrase appears as the leftmost constituent, followed by *bolsa*.

---

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

(i)   Question:
       kitap-ni   kim oqu-d-i?
       book-acc who read-past-3

       'Who read the book?'

(ii)   Answer:
       a.   men (kitap-ni)   oqu-d-um
             I   (book-acc) read-past-1sg
             'I read the book.'
       b.   #men bol-sa-(m)   oqu-d-um
             I   be-SA-(1sg) read-past-1sg
             'As for me, I read the book.'

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

(iii)   men bol-sa-m   tünügün   kitap oqu-d-um
        I   be-SA-1sg yesterday book read-past-1sg
        'As for me, I read a book yesterday.'

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

(106)   Topicalized subject:

men **bolsa** oqu-d-um
I   **top**   read-past-1sg

'As for me, I read.'

For concreteness, I propose that *bolsa* is projected in Top above TP ([Rizzi 1997](#)) and attracts the closest topic-marked noun phrase to its specifier.[24]

(107)   Topicalization:

```
              TopP
            /      \
          DP       Top′
        [+top]    /    \
           ↑    Top     TP
           |   bolsa   ___
           |         ...t_DP ...
           |_____|
```
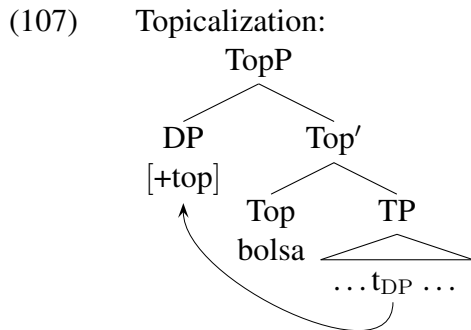
Note that topicalization out of a noun phrase is degraded, as (108) and (109) illustrate.

(108)   No topicalization out of a noun phrase:
    a.   Ötkür-nuŋ gül-i   güzel
          Ötkür-gen flower-3.poss pretty
          'Ötkür's flower is pretty.'
    b. ??Ötkür-nuŋ **bolsa** gül-i   güzel
          Ötkür-gen **top**   flower-3.poss pretty
          intended: 'As for Ötkür, his flower is pretty.'

(109)   No topicalization out of a noun phrase:
    a.   Ötkür-diki Ajgül-nuŋ resim-i   güzel
          Ötkür-loc Aygül-gen picture-3.poss pretty
          'Ötkür's picture of Aygül is pretty.'
    b. *Ötkür-diki **bolsa** Ajgül-nuŋ resim-i   güzel
          Ötkür-loc **top**   Aygül-gen picture-3.poss pretty
          intended: 'As for Ötkür, his picture of Aygül is pretty.'

Topicalizing a DP embedded inside another noun phrase is thus strongly dispreferred in Uyghur. An *-ish* phrase embedded by a non-modal adjective behaves like a possessed subject. It can be topicalized by *bolsa* (as (110) shows), but its subject cannot be topicalized on its own (seen in (111)).[25]

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

[25]The data on the use of *bolsa* with *kirek* ('necessary') and *qimmet* ('expensive') is also found in Trinh (2009).

(110)   Non-modal adjectives – topicalized -*ish* phrase:

men-iŋ oqu-ʃ-im   **bolsa** muhim/eχmijetlik/qimmet
I-gen   read-nliz-1sg.poss **top**   important/useful/expensive

'As for my reading, it's important/useful/expensive.'

(111)   Non-modal adjectives – -*ish* phrase subject cannot be topicalized:

*men-iŋ **bolsa** oqu-ʃ-im   muhim/eχmijetlik/qimmet
I-gen   **top**   read-nliz-1sg.poss important/useful/expensive

intended: 'As for me, my reading is important/useful/expensive.'

The entire nominal clause in (110) can be topicalized, but topicalizing the embedded subject out of the nominalized clause in (111) is impossible. Modal adjectives display the opposite pattern. The subject of the -*ish* phrase can be topicalized (example (112)), whereas it is impossible to topicalize both the -*ish* phrase and its subject (example (113)).

(112)   Modal adjectives – topicalized -*ish* phrase subject:

    a.   men-(iŋ) **bolsa** oqu-ʃ-im   kirek/lazim
        I-(gen)   **top**   read-nliz-1sg.poss necessary
        'My reading is necessary.'
    b.   men **bolsa** oqu-ʃ-im   mumkin.
        I   **top**   read-nliz-1sg.poss possible
        'My reading is possible.'

(113)   Modal adjectives – topicalized -*ish* phrase impossible:

*men-(iŋ) oqu-ʃ-im   **bolsa** kirek/lazim/mumkin.
I-(gen)   read-nliz-1sg.poss **top**   necessary/necessary/possible

intended: 'As for my reading, it's necessary/possible.'

The pattern seen with modal adjectives is expected if the subject of the -*ish* phrase is extracted out of the -*ish* phrase before the topicalization operation applies. It is correctly predicted that unlike a noun phrase embedded inside another noun phrase, the raised subject of an -*ish* phrase *can* be topicalized.[26]

---

[26]I do not offer an account of why topicalization out of a noun phrase is degraded in Uyghur. Certainly, the prohibition against topicalizing a possessor is not unique to Uyghur, as (i) illustrates.

(i)   a.   John's sister, I like __.
    b.   *John('s), I like __ sister.

(114) No topicalization out of a noun phrase:
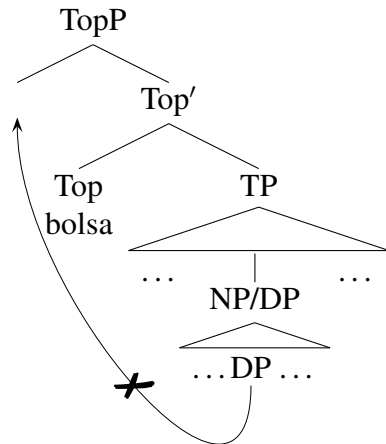
(115) Topicalized raised *-ish* phrase subject:
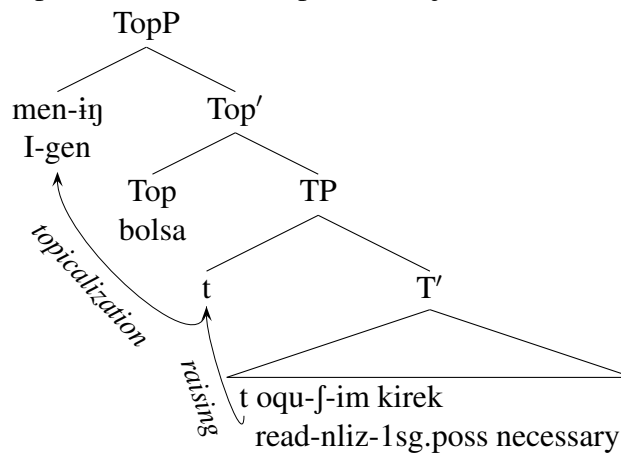
The *-ish* phrase under a modal adjective cannot be topicalized as a whole, because its subject has raised out by the point in the derivation when *bolsa* is merged. The data thus indicate that raising is obligatory. Without the raising proposal, we could not account for the different patterns seen for non-modal and modal adjectives.

1.5.3.3 Focus-marking

The focus particle *-mu* ('also', 'even') can also be used to determine constituency. In particular, it can affix directly to a focused element (example (116)), or *to a phrase containing a focused element* (example (117)).[27]

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[27]*Mu* cannot appear on an element that does not contain (or is not contained in) the target of focus.

(i)   *-mu* prohibited:
     Ötkür kitap-ni oqu-d-i,   we Ötkür-(*mu) χet-ni   oqu-d-i
     Ötkür book-acc read-past-3, and Ötkür-(*MU) *letter-acc* read-past-3

     'Ötkür read a book, and Ötkür read a letter.'   (Hartman 2009)

(116) *-mu* on focused constituent:

    a.   Ötkür eqilliq, we *John*-mu eqilliq
           Ötkür smart   and *John*-MU smart
           'Ötkür is smart, and John is also smart.'   (Hartman 2009)

    b.   men-iŋ qiz-im   eqilliq. *Ötkür-nuŋ*-mu qiz-i   eqilliq.
           I-gen   daughter-1sg.poss smart. *Ötkür-gen*-MU daughter-3.poss smart.
           'My daughter is smart. Ötkür's daughter is also smart.'   (Hartman 2009)

(117) *-mu* on phrase containing the focused constituent:

    men-iŋ qiz-im   eqilliq. [*Ötkür-nuŋ* qiz-i   ]-mu eqilliq.
    I-gen   daughter-1sg.poss smart. [*Ötkür-gen* daughter-3.poss]-MU smart.

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

-Mu can appear on an entire DP when the possessor is focused, as in example (117). Similarly, with non-modal adjectives *-mu* can appear on the *-ish* phrase when subject of the *-ish* phrase is focused.

(118) Non-modal adjectives – focused subject, *-mu* on *-ish* phrase:

    Ötkür-nuŋ ket-iʃ-i   muhim/eχmijetlik/jaχʃi. *Ajgül-nuŋ*-(mu)
    Ötkür-gen leave-nliz-3.poss important/useful/good.   *Aygül-gen*-(MU)
    ket-iʃ-i-(**mu**)   muhim/eχmijetlik/jaχʃi.
    leave-nliz-3.poss-(**MU**) important/useful/good.

    'Ötkür's leaving is important/useful/good. Aygül's leaving is also
    important/useful/good.'

As (119) and (120) show, when the subject of an *-ish* phrase embedded by a *modal* adjective is focused, *-mu cannot* be affixed to the *-ish* phrase.

(119) Modal adjectives – focused subject, **-mu* on *-ish* phrase (genitive subject):

    Ötkür-nuŋ ket-iʃ-i   kirek/lazim. *Ajgül-nuŋ*-(mu)
    Ötkür-gen leave-nliz-3.poss necessary.   *Aygül-gen*-(MU)
    ket-iʃ-i-(***mu**)   kirek/lazim
    leave-nliz-3.poss-(***MU**) necessary

    'Ötkür's leaving is necessary. Aygül's leaving is also necessary.'

(120) Modal adjectives – focused subject, **-mu* on *-ish* phrase (unmarked subject):

    Ötkür ket-iʃ-i   kirek/lazim/mumkin. *Ajgül*-(mu)
    Ötkür leave-nliz-3.poss necessary/nec./possible. *Aygül*-(MU)
    ket-iʃ-i-(***mu**)   kirek/lazim/mumkin.
    leave-nliz-3.poss-(***MU**) necessary/nec./possible

    'Ötkür's leaving is necessary/possible. Aygül's leaving is also necessary/possible.'

The inability of an *-ish* phrase with a focused subject to host *-mu* is predicted if the subject of the *-ish* phrase obligatorily raises out of the *-ish* phrase.[28] Crucially, an *-ish* phrase embedded by a modal adjective *is* able to host *-mu* when the focused element remains inside the *-ish* phrase. This is illustrated for a focused object in (121) and (122).

(121)　Modal adjective – focused *object*, *-mu* on *-ish* phrase (genitive subject):

Ötkür-nuŋ kitap oqu-ʃ-i　　　kirek.　　we u-niŋ *χet*-(mu)
Ötkür-gen book read-nliz-3.poss necessary. and he-gen *letter*-(MU)

oqu-ʃ-i-(**mu**)　　　kirek.
read-nliz-3.poss-(**MU**) necessary.

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

(122)　Modal adjective – focused *object*, *-mu* on *-ish* phrase (unmarked subject):

Ötkür kitap oqu-ʃ-i　　　kirek.　　we u　*χet*-(mu)
Ötkür book read-nliz-3.poss necessary. and he *letter*-(MU)

oqu-ʃ-i-(**mu**)　　　kirek.
read-nliz-3.poss-(**MU**) necessary.

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

1.5.4　Interim Summary

I have proposed that when the embedding predicate is a non-modal adjective, the entire *-ish* phrase raises to subject position. When the embedding predicate is a modal adjective, it is the subject of the *-ish* phrase that raises. I have suggested that the relevant difference between the two constructions is that non-modal adjectives embed a full DP *-ish* phrase, which can satisfy EPP on T, whereas modal adjectives embed an NP *-ish* phrase, which cannot. This illustrated again in (123) and (124).[29]

(123)　Non-modal adjective – *-ish* phrase satisfies EPP of T (= (82)):

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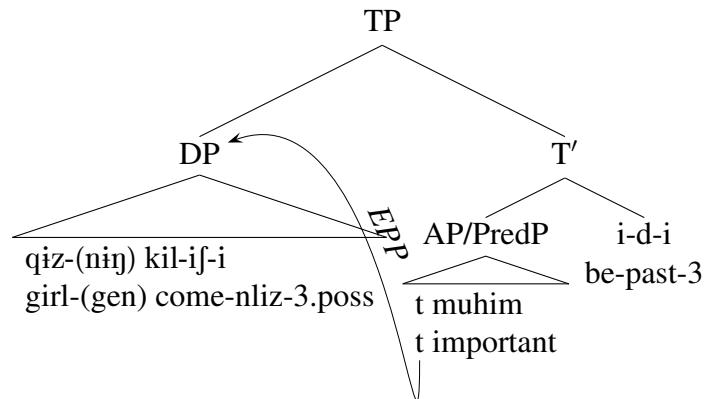
[28]The fact that the subject of the *-ish* phrase is inside it at an earlier point in the derivation evidently does not license *-mu* on the *-ish* phrase.

[29]Again, γP in (124) is not shown.

(124)   Modal adjective – subject of *-ish* phrase satisfies EPP of T (= (80)):

TP
├── DP
│   └── qɨz-(niŋ) / girl-(gen)
└── T′
    ├── AP/PredP
    │   ├── NP
    │   │   ├── vP
    │   │   │   ├── t
    │   │   │   └── v′
    │   │   │   └── kil / come
    │   │   └── N
    │   │   └── -iʃ-i / -nliz-3.poss
    │   └── kirek / necessary
    └── i-d-i / be-past-3

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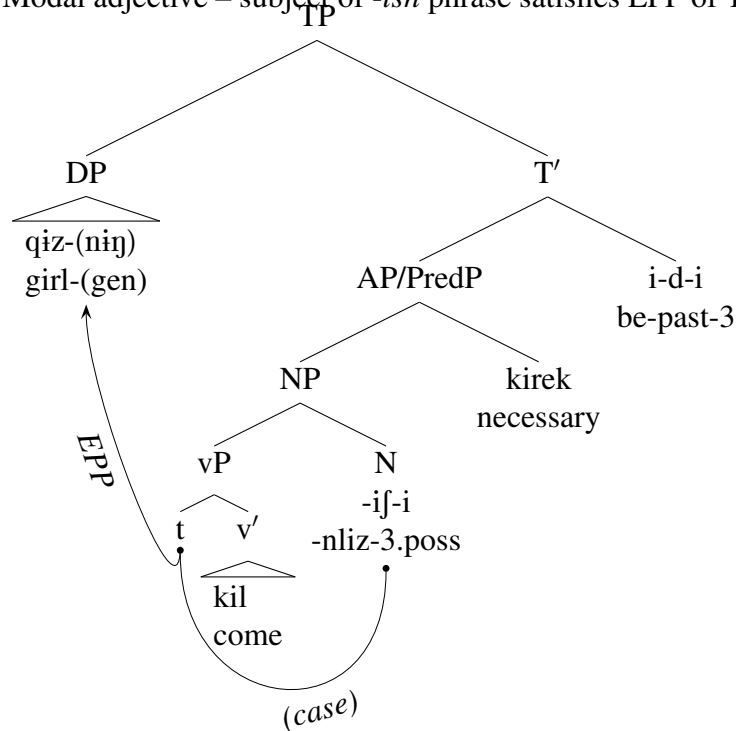
Several lines of evidence converge on the conclusion that modal adjectives are raising predicates, whereas non-modal adjectives are not. I have shown that unmarked *-ish* phrase subjects are low (inside vP) under non-modal adjectives, but not under modal adjectives. In addition, only subjects of *-ish*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

1.6   Implications for the Activity Condition

Having established that the subject of a clause embedded by a modal adjective obligatorily raises, regardless of case-marking, I now show that this means that raising in Uyghur is not subject to the Activity Condition, repeated in (125).

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

As discussed in section 1.2.3, it has been argued that raising of *non-structurally* case-marked noun phrases in Icelandic is consistent with the AC, as these noun phrases lack *structural* case (Sigurðsson 1989; Holmberg and Hróarsdóttir 2003). In this section, I crucially argue that genitive *-ish* phrase subjects in Uyghur bear *structural* genitive case. Consequently, these embedded subjects do not have an unvalued Case feature at the point

in the derivation when raising takes place. Since unvalued Case is the feature that makes nouns active,[30] examples of raising such as (126) show that the Activity condition does not hold for genitive-subject raising in Uyghur.

(126)   Raising of a genitive subject:
         Ötkür-niŋ bu ehtimalda   [t oqu]-ʃ-i   kirek
         Ötkür-gen this probability-loc [t read]-nliz-3.poss necessary

         'Ötkür probably has to read.'

I argue for the structural nature of Uyghur genitive case based on the fact that it is assigned by a head that does not give the genitive subject its theta-role. I also show that the genitive of Uyghur embedded subjects behaves differently from true non-structural (quirky) cases in Uyghur.[31]

Pesetsky (1982); Chomsky (1986) and others propose that if a head assigns non-structural case, it also assigns a theta-role to the same noun phrase. However, I have argued above that an *-ish* phrase subject receives its (agent) theta-role from v, while genitive case is assigned by N. Thus there are different heads responsible for theta-role assignment and case-assignment to *-ish* phrase subjects, and consequently genitive case-assignment must be structural. The pattern of case-assignment and theta-role assignment in Uyghur is illustrated in (128).

(127)   *-ish* phrase embedded by a modal adjective:
         qɨz-niŋ kil-iʃ-i   kirek
         girl-gen come-nliz-3.poss necessary

         'It's necessary for a girl to come.'

---

[30]It is theoretically possible that Uyghur noun phrases have some unvalued feature other than Case that allows the Activity Condition to be satisfied. There is no independent motivations for this approach, however. See appendix A for a discussion of such a proposal made by Carstens (2010) for Bantu.

[31]Note that the argument I present goes against the proposal made by Woolford (2006) that case-preservation under raising is a reliable test for non-structural case. See chapter 3 for a more in-depth discussion of case-preservation.

(128)　　Modal adjective – different sources for case and theta-role:
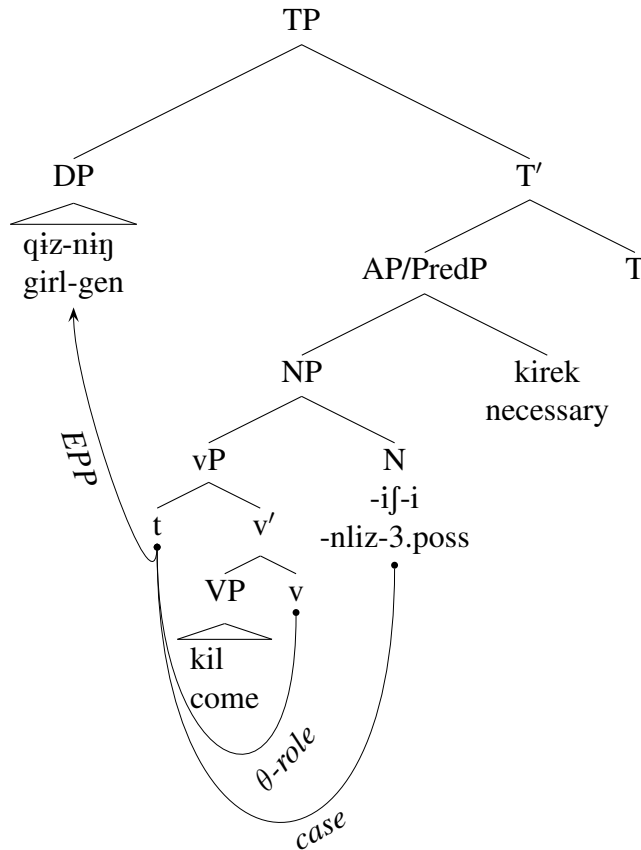
The arguments showing that the genitive subject of an *-ish* phrase receives a theta-role from v (and not from the nominal structure), presented for non-raising embedding predicates above, carry over to raising constructions.[32] A transitive v obligatorily assigns an agent theta role to the genitive subjects in (129). The non-agentive interpretation of the subject, available in English *ing-of* gerunds, is not possible in the Uyghur examples below.

(129)　　*-ish* phrase subject – restricted theta-role:

　　a.　Ötkür-nuŋ "jil-lar-ʁa　dʒavap-ni"　oqu-ʃ-i　　kirek
　　　　Ötkür-gen "year-pl-dat response-acc" read-nliz-3.poss necessary
　　　　✓ 'Ötkür('s) reading "Response to Years" is necessary.' (Ötkür must be the Agent)
　　　　✗ 'Ötkür's reading of "Response to Years" is necessary.' (e.g. a reading Ötkür organized)

　　b.　John-niŋ sham-ni　jandur-iʃ-i　　kirek
　　　　John-gen candle-acc light-nliz-3.poss necessary
　　　　✓ 'John('s) lighting candles is necessary.' (John must be the Agent)
　　　　✗ 'John's lighting of candles is necessary.' (e.g. a lighting John attended)

In (129a), Ötkür must be the one doing the reading – he cannot be an organizer or a host, for instance, for a reading of "Response to Years". Similarly, in (129b), John must be the

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[32]The same facts hold for unmarked subjects of raising predicates, but this is not directly relevant to the present discussion.

one lighting the candles. The candle-lighting may not simply be one that John attended, or depicted in a painting, for example. The embedded genitive subject must thus be the agent in the examples in (129). This is in contrast with the English examples given in (130), where the subject of the gerund receives a less restricted theta-role from the nominal structure.

(130)   a.   Ötkür's reading of "Response to Years" is necessary.
            b.   John's lighting of candles is necessary.

When v in the embedded clause is passive or unaccusative, the genitive subject is interpreted as a theme, as shown in (131) and (132).

(131)   *-ish* phrase subject – theme of a passive:

        χet-niŋ   jez-il-iʃ-i   kirek
        letter-gen write-pass-nliz-3.poss necessary

        'It is necessary for the letter to be written.'

(132)   *-ish* phrase subject – theme of an unaccusative:

        istakan-niŋ ojril-iʃ-i   kirek
        cup-gen   fall-nliz-3.poss necessary

        'It is necessary for the cup to fall.'

There is thus clear evidence that the embedded subject receives its theta-role from v. Genitive case is not assigned by v, however. If it were, we would expect genitive subjects to occur freely in matrix contexts. However, the subject may not be marked genitive in examples like (133) and (134).

(133)   No genitive case on matrix subject:
        Ötkür-(*niŋ) "jil-lar-ʁa   dʒavap-ni"   oqu-j-du
        Ötkür-(*gen) "year-pl-dat response-acc" read-non.past-3

        'Ötkür is reading "Response to Years".'

(134)   No genitive case on matrix subject of a passive:
        χet-(*niŋ)   jez-il-d-i
        letter-(*gen) write-pass-past-3

        'A letter was written.'

There is no embedding noun in (133) and (134). The proposal that genitive case is assigned by a noun correctly predicts that the matrix subjects in these examples cannot be genitive. The source of genitive case on the embedded subject is different from the source of the theta role for the embedded subject, which indicates that this genitive case is not quirky. Furthermore, the genitive case borne by Uyghur embedded subjects shows different behavior from true quirky case in Uyghur. Example (135) illustrates a quirky dative object. When

(135) is passivized, as in (136), the dative case is obligatorily preserved.[33] There is also no alternation with an unmarked or genitive variant when the quirky dative is the subject of an *-ish* phrase, as (137) shows.

(135)   Quirky dative object:

    men it-ke   qara-j-men
    I   dog-dat watch-non.past-1sg

    'I'm watching the dog.'

(136)   Quirky dative subject of a passive:

    it-*(ke)   qara-l-i-du
    dog-*(dat) watch-pass-non.past-3

    'The dog is watched.'

(137)   Quirky dative preserved on subject of *-ish* phrase:

    it-{ke/*niŋ/*∅}   qara-l-iʃ-i   muhim/kirek
    dog-{dat/*gen/*∅} watch-pass-nliz-3.poss important/necessary

    'The dog being watched is important/necessary.'

Genitive subjects in *-ish* clauses embedded by raising predicates regularly alternate with unmarked variants, whereas quirky-case marked subjects in the same environment do not.

I have thus argued that the genitive assigned to subjects of Uyghur *-ish* phrases is *not* a quirky case. Uyghur genitive embedded subjects raise despite having been assigned structural case, and thus no longer bearing an unvalued feature. Uyghur genitive subject raising is therefore not subject to the Activity Condition. The Uyghur data demonstrate that A-movement is not always subject to the AC. Should we therefore assume that the AC does not hold at all, or does the AC apply to some types of A-movement and not others?

Chomsky (2000, 2004) assumes that A-movement always takes place as a consequence of Agree. If the probe that agrees with some goal has an EPP feature, the goal moves to the specifier of the projection headed by the probe. On this view, the fact that EPP-driven A-movement of genitive subjects in Uyghur does not obey the AC presents a strong argument against the AC; this type of argument is made by Nevins (2004) based on data from other languages. In section 3.2, I have argued that a restriction on raising that has been ascribed to the AC can instead be derived from the Phase Impenetrability Condition. In the following section, I show that other phenomena that have been attributed to the AC can also be analyzed without reference to the AC. Thus, there is a lack of clear empirical evidence in support of the AC.

However, there is another way to interpret the Uyghur data. The AC (repeated in (138)) is a condition on Agree.

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[33]As discussed in chapter 3, the verb *qara-maq* ('to watch') allows quirky dative case to be lost in the passive.

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

If the AC is to be preserved, raising of genitive subjects in Uyghur must be analyzed as an operation that does not depend on Agree. This is indeed a plausible analysis, as the canonical effects of agreement with T are absent in these constructions. The embedded genitive subject does not receive Case, and there is no overt agreement on T, as (139a) illustrates.

(139)   No subject agreement on T:
   a.   **sen-iŋ**   kitap oqu-ʃ-iŋ   kirek   i-d-{i/*iŋ}
         you-gen book read-nliz-2sg.poss necessary be-past-{3/*2sg}
         'You had to read a book.'
   b.   **sen** kitap oqu-ʃ-iŋ   kirek   i-d-{i/*iŋ}
         you book read-nliz-2sg.poss necessary be-past-{3/*2sg}
         'You had to read a book.'

It has been proposed that pure EPP movement is a separate system from Agree (Hiraiwa 2001; Holmberg and Hróarsdóttir 2003; Landau 2007; Richards 2009). Richards (2009) points out that if pure EPP movement does *not* depend on Agree, then it is not subject to the AC. It is possible that T cannot overtly agree with the raised genitive subject because the raising operation is not Agree-driven in Uyghur. Curiously, a raised unmarked (nominative) subject also does not trigger agreement on T, as (139b) shows. Suppose agreement absent for the same reason in (139a) and (139b). If this reason is the absence of an Agree operation in (139), then we must conclude that the unmarked subject in (139b) does not receive nominative Case when it raises, as Case licensing is dependent on Agree (Chomsky 1998, 2001, and subsequent literature).[34] However, the absence of overt agreement in (139) does not provide a definitive argument that Agree between T and the embedded subject is not established. Suppose that EPP movement *is* dependent on Agree. The lack of agreement in (139) could be due to the fact that T first agrees with (but fails to attract) the embedded *-ish* phrase. T consequently bears 3rd person/default agreement, which cannot be overwritten when T later agrees with the subject of the *-ish* phrase (cf. den Dikken 2001). The lack of agreement in (139) could thus be due to the absence of Agree or to the presence of an intervening nominal in the structure (the *-ish* phrase).

I have shown that raising of genitive subjects in Uyghur is an instance of A-movement that is not subject to the Activity Condition. There are two possible interpretation of this fact. If we assume that all A-movement depends on Agree (Chomsky 2000, 2004), it follows that the AC does not hold universally. As I argue in section 1.2 above and in section 1.7 below, empirical phenomena that have been analyzed as deriving from the AC can receive other analyses. It is therefore possible to treat A-movement as being uniformly Agree-driven and not subject to the AC (as Nevins (2004) does). Alternatively, we can assume that there are two types of A-movement: Agree-dependent movement and pure EPP movement. On this approach, argued for on theoretical grounds by Richards (2009),

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[34]If so, the subject either does not require licensing (suggested for Uyghur by Shklovsky and Sudo (2010)) or is licensed in the embedded clause, like the non-specific unmarked subjects discussed in section 1.4.3.

Uyghur raising provides clear evidence that the AC does not apply to pure EPP movement. At this point, I leave it to further research to explore which approach is to be preferred.

1.7 Making do without the Activity Condition?

In this section, I show that effects that have been analyzed as deriving from the Activity Condition can receive alternative analyses. It is therefore plausible that all A-movement depends on Agree, and that consequently we cannot assume that the Activity Condition is part of Universal Grammar. In the introduction, we saw that the Phase Impenetrability Condition suffices to rule out raising out of tensed clauses in English. In this section, I discuss alternative views of dative intervention in Icelandic and lack of object-to-subject raising with predicates like *strike* and *surprise* in English.

1.7.1 Dative intervention

The phenomenon of *dative intervention* in Icelandic (Holmberg and Hróarsdóttir 2003) is illustrated in (140).

(140)   No intervening dative:
        Mér   **virðast** t$_{mér}$ [**hestarnir**   vera seinir]
        me.**DAT** seem.**PL** t$_{me}$ [**the-horses.NOM** be   slow]

        'It seems to me that the horses are slow.'
                                        (*Icelandic*) (Holmberg and Hróarsdóttir 2003: (1))

(141)   Dative intervention:
        Það **virðist/*virðast**   einhverjum manni   [**hestarnir**   vera seinir]
        EXPL seem.**SG**/*seem.**PL** some   man.**DAT** [**the-horses.NOM** be   slow]

        'It seems to some man that the horses are slow.'
                                        (*Icelandic*) (Holmberg and Hróarsdóttir 2003: (2))

The verb *virðast* ('seem') in (140) agrees in number with the embedded subject. In (141), however, agreement with the embedded subject is ruled out.[35] The difference between (140) and (141) is that the dative experiencer is fronted in (140), but *intervenes* between the verb and the embedded subject in (141). Consider the relevance of the Activity Condition to these examples.

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

The dative experiencer in (140) is not active (it has already been case-marked) when the matrix T probes for a agreement. Consequently, the AC predicts that an agreement relationship with the experiencer cannot be established in (141). Nevertheless, T does not probe a

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[35]Agreement in (141) is an option for some speakers of Icelandic (Sigurðsson and Holmberg 2008). See chapter 3 for a detailed discussion.

second time, and must therefore appear in its default (3rd person singular) form. In (140), the experiencer has moved out of the way, and the matrix T can consequently agree with the embedded subject (Holmberg and Hróarsdóttir 2003).

The AC is not necessary to explain the absence of agreement in (141), however. It is possible that there is no failure of Agree in (141). Rather, Agree between the matrix T and the dative experiencer is established, but lacks a morphological reflex. Default agreement in (141) is thus the same phenomenon as default agreement in a quirky subject construction, as in (143a).

(143) a. No agreement with DAT subject:
           Strákunum   leiddist/*leiddust.
           the.boys.pl.**DAT** bored.**3sg**/*bored.**3pl**

           'The boys were bored.'
       b. Agreement required with NOM subject:

           Strákarnir   leiddust/*leiddist.
           the.boys.pl.**NOM** walked.hand.in.hand.**3pl**/***3sg**

           'The boys walked hand in hand.'

                                        (*Icelandic*) (Sigurðsson 1996: (1), (2))

The dative noun phrase in (143a) moves to the specifier of TP, as has been argued extensively in the literature (Andrews 1976; Thráinsson 1979; Zaenen et al. 1985). If A-movement is a consequence of Agree (proposed by Chomsky (2000, 2004), but contra other authors, as discussed above), Agree between T and the dative noun phrase must be established in (143a). Overt agreement morphology on T is absent, however. Example (143b) provides a minimal pair to (143a): the verb *leiddist* can be used with a non-quirky nominative subject in (143b) (with a different interpretation than (143a)), and agreement is obligatory when the subject is nominative. The absence of overt agreement in the dative intervention example in (141) could be the same phenomenon as the absence of overt agreement in (143a): *morphological* agreement with datives is absent in Icelandic (Bobaljik 2008).[36] There need not be a failure of Agree in (141).

1.7.2 Object-to-subject raising

A predicate like *strike* or *surprise* can take an expletive subject, as shown in (144).

(144)   It struck/surprised him [that summer has come.]

The predicates in (144) evidently need not assign a theta-role to their subject. Why, then, can't the *object* in (144) raise to subject position instead of an expletive being inserted?

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[36]For a discussion of related issues, see chapter 3.

(145)   *Him/he struck/surprised t [that summer has come.]

Nevins (2004) proposes that the apparent object of *strike/surprise* is actually a PP headed by a null preposition (following McGinnis (1998) for *strike*). He then argues that neither preposition-stranding nor pied-piping would be possible in examples like (145).[37] Preposition stranding is blocked by the prohibition against "internal gaps" (cf. Kuno 1973), which blocks P-stranding when the gap is followed by an argument. This is illustrated with an overt preposition in (146). Pied-piping is ruled out by the inability of PPs to satisfy EPP on T in English.

(146)   *This charity has been given to t a book about adverbs.   (Nevins 2004)

The same approach can rule out raising of the experiencer in (147a). As (147b) illustrates, stranding the preposition *to* is prohibited.

(147)   a. *Him/he seems to t [that summer has come.]

        b. ?*Who does it seem to t [that summer has come?]

An alternative account of why (145) is ruled out is a combination of the Inverse Case Filter (Bošković 1997) and a ban on multiple case assignment (going back to Chomsky's (1986) Chain Condition).[38] The Inverse Case Filter states that traditional case assigners must assign their case, so that T in (145) must assign nominative. Since the object already bears accusative case, if multiple case assignment is not possible, the construction is ruled out.

1.8   Summary

The Activity Condition, proposed by Chomsky (1998, 2001), is a restriction on the Agree operation.

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

In this chapter, I have argued that this restriction does not hold for raising constructions in Uyghur, illustrated in (149).

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[37]Nevins (2004) actually discusses examples where the matrix clause is infinitive, but I assume those kinds of constructions are ruled out for semantic reasons (lack of tense).

[38]The types of configurations where multiple case assignment is possible, even in English, are discussed in chapter 4.

(149)   Raising of genitive subject:

Ötkür-niŋ bu ehtimal-da   [t oqu]-ʃ-i   kirek
Ötkür-gen this probability-loc [t read]-nliz-3.poss necessary

'Ötkür probably has to read.'

On the basis of a variety of evidence, I demonstrated that modal adjectives like *kirek* ('necessary') in (149) are raising predicates in Uyghur. I have shown how exceptional case marking constructions, topic-marking and focus-marking can help identify raising in a head-final language. I have argued that the genitive subject in (149) is structurally case-marked in the embedded clause, but nevertheless raises to the specifier of the matrix TP. There are two possible interpretations of the Uyghur facts. If we assume, following Chomsky (2000, 2004), that all A-movement depends on Agree, then it follows that the Activity Condition is not a part of Universal Grammar. I have argued that this is empirically plausible, as data that have been explained based on the Activity Condition can be analyzed in other ways. The Phase Impenetrability Condition (Chomsky 1998, 2001) can account for some of these data, and is the subject of the following chapter. Alternatively, we can conclude that pure EPP movement, seen in Uyghur genitive-subject raising constructions, is not dependent on Agree. Since the Activity Condition is formulated as a restriction on Agree, it would then be irrelevant for Uyghur raising (cf. Richards 2009).

Chapter 2

Genitive subjects in Uyghur and the Phase Impenetrability Condition[1]

2.1 Introduction

Locality effects in syntax have been accounted for in Minimalist literature in terms of *phases*. The idea is that syntactic structures are built from the bottom up, and part of the syntactic structure at some point becomes inaccessible to further operations. In particular, the complement of a *phase head* later becomes inaccessible, where C and v are designated as phase heads. However, proposals have differed as to *when* exactly the complement of a phase head becomes inaccessible. The most influential proposal along these lines, Chomsky's (1998, 2001) Phase Impenetrability Condition (PIC), exists in two different versions given in (1).[2]

(1)   a.   Chomsky's (1998) Phase Impenetrability Condition (PIC$_{strong}$):
             In phase α with head H, the domain of H is not accessible to operations outside
             α; only H and its edge are accessible to such operations.
       b.   Chomsky's (2001) Phase Impenetrability Condition (PIC$_{weak}$):
             In phase α with head H, the domain of H is accessible to operations outside α
             only until the next (strong) phase head is merged.
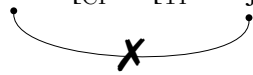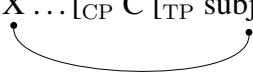
The two versions of the PIC given in (1) differ in their empirical predictions, and this chapter brings data from Uyghur to bear on the choice between them. In particular, PIC$_{strong}$ and PIC$_{weak}$ make different predictions when exactly one phase head intervenes between a probe and its goal. Consider, for instance, a configuration where $\alpha = $ CP, H $=$ C, and the domain of H $=$ TP. While PIC$_{strong}$ predicts that the subject inside TP is not accessible to a CP-external head, PIC$_{weak}$ predicts that the subject inside TP *is* accessible to a CP-external head, as long as no other (strong) phase head intervenes. The predictions are illustrated

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[1]This chapter is based on joint research with Jeremy Hartman. We have worked together to gather the data and develop the analysis I present. In the process of writing this chapter, I have rethought some points here and there. Responsibility for any errors in what you read is, of course, my own.

[2]The formulations given here are reworded from Chomsky (1998, 2001) for clarity and ease of comparison.

below:

(2)   a.   Predicted by PIC$_{\text{strong}}$:
              X ... [$_{\text{CP}}$ C [$_{\text{TP}}$ subject ...]]

       b.   Predicted by PIC$_{\text{weak}}$:
              X ... [$_{\text{CP}}$ C [$_{\text{TP}}$ subject ...]]

In this chapter, I argue that the configuration above is instantiated by agreement with genitive embedded subjects in Uyghur in the constructions illustrated in (3).

(3)   Agreement across a CP boundary in Uyghur:
       a.   [**men-iŋ** ket-ken-(liq)   ] heqiqet-**im**   muhim
             [**I-gen**   leave-RAN-(LIQ)] fact-**1sg.poss** important
             'The fact that I left is important.'
       b.   [**Ötkür-niŋ** oqu-ʁan   ] kitav-**i**   uzun
             [**Ötkür-gen** read-RAN] book-**3.poss** long
             'The book that Ötkür read is long.'

I will argue below that a clause-external functional projection agrees with and assigns case to the genitive subjects in (3), despite the fact that the embedded clauses in (3) are CP phases. Examples in (3) thus instantiate the configuration shown in (2). Since the configuration in (2) is consistent with PIC$_{\text{weak}}$ but not PIC$_{\text{strong}}$, this provides an argument against PIC$_{\text{strong}}$. Before outlining the details of the argument from Uyghur, I will show how PIC$_{\text{weak}}$ can account for the same English data as PIC$_{\text{strong}}$. I will also demonstrate that once PIC$_{\text{weak}}$ is adopted, the concept of "weak" v, which does not act as a phase head for the purposes of the PIC, can be eliminated. In addition to providing an empirical argument favoring PIC$_{\text{weak}}$ over PIC$_{\text{strong}}$, I thus offer a theoretical one as well.
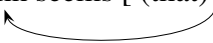
2.1.1   Raising in English and PIC$_{\text{weak}}$

In chapter 1, I discussed the English raising pattern illustrated again in (4) and (5). In particular, I showed that PIC$_{\text{strong}}$ correctly allows raising in (4a), while blocking raising in (5a).[3]

(4)   Raising from infinitive:
       a.   John seems [t to be singing.]

       b.   *It seems [John to be singing.]

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[3]The Activity Condition (Chomsky 1998, 2001) could also capture the pattern in (4) and (5), but I suggested in chapter 1 that the Activity Condition might not be part of Universal Grammar.

(5)   No raising from tensed clause:

    a.   *John seems [(that) t is singing.]

    b.   It seems [(that) John is singing.]

In this section, I show that PIC$_{weak}$ can also account for the pattern seen in (4) and (5). Furthermore, I demonstrate that adopting the PIC$_{strong}$ requires the undesirable assumption that certain v heads are "weak" and do not count as phase heads for the purposes of the PIC. The concept of weak phase heads can be eliminated once we adopt PIC$_{weak}$. At the end of this subsection, I discuss some more intricate data from English, and show that it is consistent with the idea that there is no weak v. The definition of PIC$_{strong}$ is given again in (6).

(6)   Chomsky's (1998) Phase Impenetrability Condition (PIC$_{strong}$):
    In phase α with head H, the domain of H is not accessible to operations outside α; only H and its edge are accessible to such operations.

    Consider, first, what PIC$_{strong}$ predicts for raising out of an infinitive clause in (4). The embedded subject is inside the domain of matrix v. Therefore, if v in the matrix clause is a phase head, PIC$_{strong}$ will incorrectly block Agree between the matrix T and the embedded subject in (7).

(7)   John T [$_{vP}$ seems [t to be singing.]]

To avoid the incorrect prediction that raising is blocked in examples like (7), Chomsky (1998) proposes that raising v (as well as passive and unaccusative v) is "weak", i.e., raising v does not trigger spell-out of its complement under PIC$_{strong}$. With this assumption, no (strong) phase head intervenes between the embedded subject and the matrix T in (7), and raising is permitted.

    PIC$_{strong}$ correctly rules out raising in (5). The C of the embedded clause is a (strong) phase head. Since the embedded subject is in the domain of C, it is inaccessible to operations outside the embedded CP. Agree with matrix T and raising is consequently prohibited, as shown in (8).

(8)   *John T seems [$_{CP}$ (that) t is singing.]
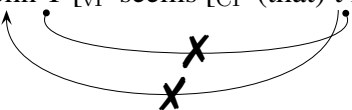
    With the assumption that raising v is weak, PIC$_{strong}$ captures the contrast between raising out of an infinitive TP (permitted) and raising out of CP (prohibited). PIC$_{weak}$ can account for the same contrast if we assume that raising v is a strong phase, i.e. that it *does* count for the PIC.

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

When the embedded clause is a TP, only one phase head intervenes between the embedded
subject and matrix T: matrix v. Because the domain of v is accessible to operations outside
vP until the next phase head is merged, and there is no phase head above v, PIC$_{weak}$ does
not block raising in (10).

(10)   John T [$_{vP}$ seems [t to be singing.]]

In the embedded CP example in (5), there are two phase heads between the embedded
subject and matrix T: C of the embedded clause, and matrix v. According to PIC$_{weak}$, the
embedded subject, which is inside the domain of C, becomes inaccessible to operations
outside of CP once the next phase head is merged. On the crucial assumption that raising v
is *not* weak, the embedded subject is thus inaccessible to operations outside CP once matrix
v is merged.

(11)   *John T [$_{vP}$ seems [$_{CP}$ (that) t is singing.]]

PIC$_{weak}$ thus correctly predicts that matrix T cannot agree with the embedded subject
in (11), and raising out of CP is banned. The contrast between raising out of TP and raising
out of CP predicted by PIC$_{weak}$ is illustrated fully in (12) and (13). Again, note that it is
crucial that raising v is not weak in order for raising out of CP to be ruled out by PIC$_{weak}$.[4]

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[4]As discussed below, there is evidence that the raised subject in (12) actually moves through the specifier
of the embedded TP.

(12) John seems to be singing.

TP
├── John
└── T′
    ├── T
    └── vP
        ├── v
        └── VP
            ├── seems
            └── TP
                ├── to
                └── vP
                    ├── t_John
                    └── v′
                        └── be singing

(13) *John seems that is singing.
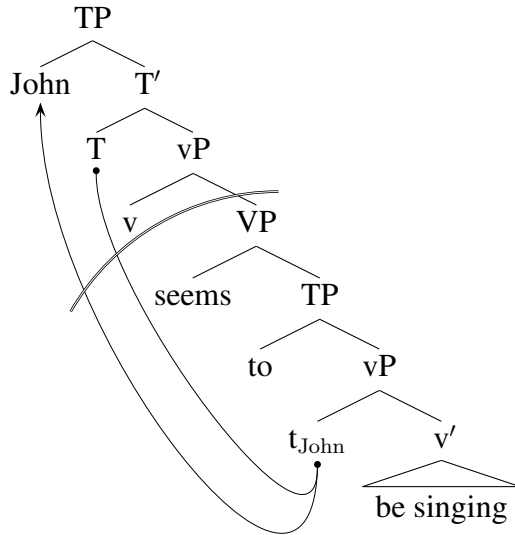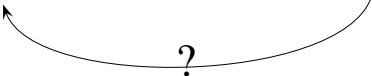
TP
├──
└── T′
    ├── T
    └── vP
        ├── v
        └── VP
            ├── seems
            └── CP
                ├── that
                └── TP
                    ├── John
                    └── T′
                        ├── is
                        └── vP
                            ├── t_John
                            └── v′
                                └── singing
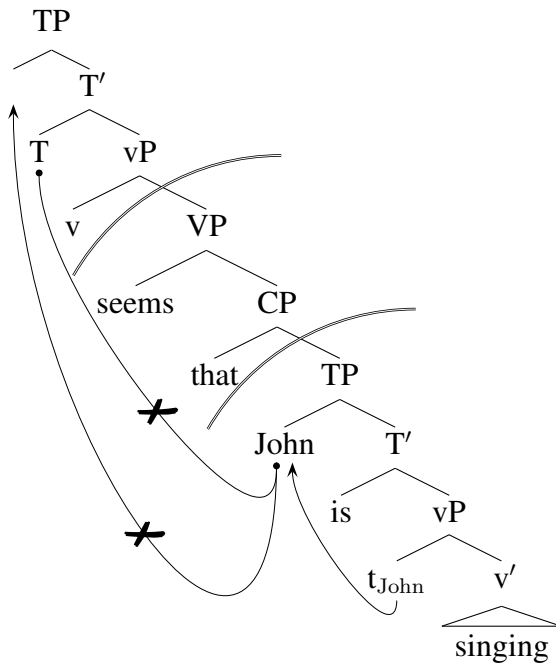
Note that, as discussed in chapter 1, one additional assumption is necessary in order for the PIC to ban raising out of CP: raising though the specifier of CP must not be allowed. Because the specifier of CP is not in the domain of C, but is essentially part of the next phase, neither version of the PIC would block raising if the specifier of CP were a valid stopover position. I therefore assume the *ban on improper movement* (Chomsky 1973; May 1979), which prohibits A-bar movement (e.g. to the specifier of CP) that is followed by A-movement (e.g. raising). Note that only the specifier of the embedded CP, and not the specifier of the matrix v, is a potential "escape hatch" for movement out of the embedded

CP under *both* versions of the PIC. Under PIC$_{weak}$, the complement of C becomes opaque *immediately* when the next phase head (the matrix v) is merged. There is thus no opportunity for an embedded subject to raise from the embedded TP to the specifier of the matrix vP – this movement would violate PIC$_{weak}$.[5]

I have proposed that once we adopt the PIC$_{weak}$, we should abandon the idea that v can be a weak phase. Legate (2003) argues that passive and unaccusative v are strong phases, and not weak phases, as has generally been assumed. If, as I propose, raising v is also a strong phase, we must ask how raising across multiple v heads is possible in (14).

(14)   They [$_{vP}$ seem to [$_{vP}$ be likely [t to win.]]]

                         ?

If raising v is a strong phase, the movement shown in (14) crosses two vP phase boundaries, and should be banned by PIC$_{weak}$. However, raising in examples like (14) actually proceeds successive-cyclically through the specifiers of intermediate TPs, as data like (15) show.

(15)   Successive-cyclic raising (Bošković 2002: (26), attributing Danny Fox):
    a.   Mary seems to John [$_{IP}$ t$_2$ to appear to herself t$_1$ to be in the room.]
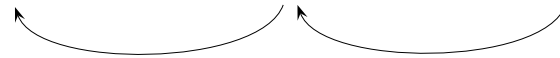
    b.   *Mary seems to John [$_{IP}$ t$_2$ to appear to himself t$_1$ to be in the room.]
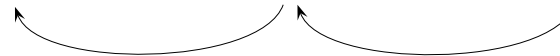
As Bošković (2002) discusses, (15b) is ruled out because the subject (*Mary*) obligatorily moves though the embedded specifier of TP. The trace of *Mary* (marked as t$_2$ in (15)) intervenes between the potential binder (*John*) and the anaphor *himself*, and (15b) is thereby ruled out. Successive-cyclic movement in (14) and (15) crosses one vP boundary at a time, and thus does not violate PIC$_{weak}$. Note that Chomsky (2001), while proposing PIC$_{weak}$, retains the notion that v can be weak. Chomsky (2001) cites the following example as evidence for weak v:

(16)   There [$_{vP}$ seem to [$_{vP}$ have been caught several fish.]]   (Chomsky 2001: (18))

The matrix T in (16) agrees in number with *several fish*, despite the fact that there are two vP boundaries in between. Given the proposal that v is always strong, PIC$_{weak}$ predicts that the complement of the lower v will become inaccessible as soon as the higher v is merged. Agreement between the matrix T and *several fish* should thus be blocked. The same issue can be seen in the expletive variant of a construction with multiple raising predicates.

(17)   a.   There [$_{vP}$ appear to [$_{vP}$ be likely to [$_{vP}$ be some problems.]]]
        b.   There [$_{vP}$ appears to [$_{vP}$ be likely to [$_{vP}$ be a big problem.]]]

---

[5]As an alternative to assuming the ban on improper movement, the PIC could be reformulated *not* to treat the edge differently from the rest of the phase. This possibility is discussed in section 2.5.2.

The matrix T in (17) agrees with *problems/problem* across multiple vP boundaries, which ought to be ruled out by PIC$_{weak}$ if raising v is a strong phase. I propose that agreement here takes place cyclically. Perhaps the matrix T can agree with the T below it, and so on, along the lines of Bhatt (2005). Another alternative is successive-cyclic feature-raising. Polinsky and Potsdam (2001) and Branigan and MacKenzie (2002) propose that covert movement can feed overt agreement, and a covert successive-cyclic movement analysis (similar to a feature-raising proposal) is also possible here.

The combination of PIC$_{weak}$ with the idea that v is always strong correctly predicts that raising can take place out of TP, but not out of CP. Legate (2003); Richards (2004, 2007a) argue that passive v and unaccusative v are strong, and I have shown here that it is plausible that raising v is strong as well. As pointed out by Richards (2004, 2007a), conceptually, this is a simpler theory: no distinction is made between strong and weak phases. Richards (2007a) also shows that PIC$_{strong}$ and PIC$_{weak}$ can both be reformulated in terms of *lexical subarrays*, where the only difference between PIC$_{strong}$ and PIC$_{weak}$ is the precise membership of the lexical subarray of the phase head. PIC$_{strong}$ and PIC$_{weak}$ are thus equally complex, and PIC$_{weak}$ has the advantage of allowing us to discard the distinction between strong and weak phases. Below, I argue for PIC$_{weak}$ and against PIC$_{strong}$ based on empirical evidence from Uyghur.

2.1.2 Outline

In section 2.2, I begin by providing an overview of relative clauses and noun complement clauses in Uyghur. These will serve as the testing ground that supports PIC$_{weak}$, as opposed to PIC$_{strong}$. I also review the literature on similar constructions in Altaic. The next two sections put together the argument against PIC$_{strong}$. In section 2.3, I show that a clause-external head Agrees with Uyghur genitive subjects and licenses their case. In section 2.4, I show that the embedded clause is a full CP. Section 2.5 provides an interim conclusion: since Agree can cross a CP phase boundary, the Uyghur data argues against PIC$_{strong}$. In section 2.6, I show that raising out of the same type of embedded CP clauses is prohibited. This supports PIC$_{weak}$, and shows that the clauses under discussion are indeed strong phases. Section 2.7 concludes.

2.2 Background: Relative clauses and noun complement clauses in Altaic

In this section, I introduce the embedded clauses that are the focus of this chapter. I lay out the structure of Uyghur relative clauses in section 2.2.1, and the structure of Uyghur noun complement clauses in section 2.2.2. Both types of clauses display a genitive-unmarked subject case alternation. The head noun bears possessor agreement when the embedded subject is genitive, but not when it is unmarked. The clause-external source of genitive case on the embedded subjects of these clauses will be crucial to the argument against PIC$_{strong}$. In section 2.2.3, I discuss some recent analyses of the nominative-genitive alternation in Altaic embedded clauses.

2.2.1 Relative clauses

In this section, I introduce Uyghur relative clauses, illustrated in (18):

(18) Uyghur relative clauses:

    a. [Ötkür oqu-ʁan] kitap uzun
       [Ötkür read-RAN] book long
       'The book that Ötkür read is long.'

    b. [**Ötkür-niŋ** oqu-ʁan] kitav-**i** uzun
       [**Ötkür-gen** read-RAN] book-**3.poss** long
       'The book that Ötkür read is long.'

Section 2.2.1.1 addresses the genitive-unmarked subject alternation seen in (18). Section 2.2.1.2 discusses the -ʁan suffix seen on the relative clauses in (18).

2.2.1.1 Genitive-unmarked alternation

There are two options for relative clauses in Uyghur: the subject of the relative clause can be unmarked, as in (18a), or genitive, as in (18b).[6] Genitive and unmarked subjects of relative clauses in Uyghur are generally in free alternation. Unlike the nominalized embedding constructions discussed in chapter 1, overtly headed relative clauses do not display a specificity restriction on unmarked objects; this point is addressed in greater detail in appendix B.[7] When the subject of the relative clause is genitive, the head noun bears *possessor agreement* with the embedded subject. Recall from section 1.3.1 that possessed nouns in Uyghur agree with the possessor in person and number, as (19) illustrates.

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[6]Nominative case is null in Uyghur. I remain neutral as to whether unmarked subjects of relative clauses and noun complement clauses are really assigned nominative by a functional head in the clause, or whether they get default case.

[7]Genitive subjects are banned in at least two environments:

(i) The head of the relative clause is an indirect object:

    a. men [**Ötkür** gül ber-gen] qɨz-ni jaχʃi kör-i-men
       I   [**Ötkür** flower give-RAN] girl-acc well see-non.past-1sg
       'I like the girl Ötkür gave a flower to.'

    b. */# men [**Ötkür-niŋ** gül ber-gen] qɨz-**i**-ni jaχʃi kör-i-men
       I   [**Ötkür-gen** flower give-RAN] girl-**3.poss**-acc well see-non.past-1sg
       intended: 'I like the girl Ötkür gave a flower to.'

(ii) The DP containing the relative clause is an indirect object:

    a. Ötkür [**men** jaχʃi kör-gen] qɨz-ʁa gül ber-d-i
       Ötkür [**I** well see-RAN] girl-dat flower give-past-3
       'Ötkür gave a flower to the girl I like.'

    b. */# Ötkür [**men-iŋ** jaχʃi kör-gen] qɨz-**ɨm**-ʁa gül ber-d-i
       Ötkür [**I-gen** well see-RAN] girl-**1sg.poss**-dat flower give-past-3
       intended: 'Ötkür gave a flower to the girl I like.'

Note that there is nothing morphologically wrong with the dative possessed noun phrase in (iib), as (iii) shows.

(19) men-iŋ χet-im   / biz-niŋ χet-imiz   / u-niŋ   χet-i
     I-gen letter-1sg.poss / we-gen letter-1pl.poss / (s)he-gen letter-3.poss
     'my letter' / 'our letter' / 'his/her letter'

As the table in (20) shows, agreement marking with first person singular and first person plural, taken together, uniquely determines the agreement paradigm. Example (21) demonstrates that the head noun of a genitive-subject relative clause bears possessor agreement, and not either past or non-past verbal agreement.

(20)

		pronoun	non-past	past	possessor
1st	sg	men	-men	-im	**-im**
	pl	biz	-imiz	-uq	**-imiz**

(21) Possessor agreement on head of relative clause:

    a.   [**men-iŋ** ji-gen   ] tamaq-**im**   jaχʃi
           [**I-gen**   eat-RAN] food-**1sg.poss** good
           'The food I ate is good.'

    b.   [**biz-niŋ** oqu-ʁan   ] kitiv-**imiz**   uzun
           [**we-gen** read-RAN] book-**1pl.poss** long
           'The book that we read is long.'

As seen in (18a), the head noun does not bear agreement morphology when the subject of the relative clause is unmarked. Agreement morphology on the head noun is in fact prohibited in this environment, as (22) shows.

(22) Possessor agreement prohibited with unmarked subject:

    [**Ötkür** oqu-ʁan   ] kitav-**(*i)**   uzun
    [**Ötkür** read-RAN] book-**(*3.poss)** long

    'The book that Ötkür read is long.'

2.2.1.2 The *-ran* suffix

I now turn to a piece of morphology in the above examples I have yet to address: the suffix glossed as *-ran*. *-ran* has the phonologically conditioned allomorphs -[ʁan], -[qan], -[gen], and -[ken]. *-ran* plays at least two roles in Uyghur. On one hand, it can serve as a semantically vacuous embedded clause marker, present on both relative clauses and the noun complement clauses discussed in the following section. On the other hand, *-ran* can serve as a perfective marker in matrix or embedded clauses. (For a discussion of the

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(iii)   men **qɨz-ɨm-ʁa**   it   setuwal-d-im
        I   **girl-1sg.poss-dat** dog buy-past-1sg
        'I bought a dog for my daughter.'

    The pattern in (i) resembles the Transitivity Restriction in Japanese, which prohibits genitive subjects in clauses that contain a direct object (Harada 1971 and much subsequent work). Japanese does not have a restriction corresponding to (ii), however (Satoshi Nambu (p.c.)).

semantics of relative clause *-ran* in combination with various aspectual suffixes, see also Csató and Uchturpani (2010).)

Embedded clause *-ran*   In this section, I show that relative clauses marked with *-ran* are ambiguous between a *factative* and a perfective interpretation. Fitzpatrick (2006) discusses constructions which lack any tense marking, illustrated in (23).

(23)   a.   You sell your car?
        b.   You like my cat?   (Fitzpatrick 2006: (26a,d))

Fitzpatrick (2006) shows that these constructions receive a past interpretation with non-statives (as in (23a)), and a present interpretation with statives (as in (23b)). This default interpretation phenomenon is termed the *factative effect*.

Uyghur relative clauses with non-stative verbs and no aspectual morphology (aside from *-ran*) get a past reading, as (24) shows.[8] This expected from the factative effect on the assumption that *-ran* does not convey tense/aspectual information.

(24)   Past non-stative:

        [men ji-gen   ] tamaq jaχʃi
        [I   eat-RAN] food   good

        ✓ 'The food I ate is good.'
        ✗ 'The food I'm eating is good.'

Clauses with stative verbs are ambiguous between a past or present interpretation.

(25)   Past/present stative:

        a.   [Mehemmet (haazir/burun) jaχʃi kör-gen   ] qɨz güzel
              [Mehemmet (now/earlier)   well see-RAN] girl pretty
              ✓ 'The girl Mehemmet liked is pretty.'
              ✓ 'The girl Mehemmet likes is pretty.'
        b.   [Mehemmet-nɨŋ (haazir/burun) jaχʃi kör-gen   ] qɨz-i   güzel
              [Mehemmet-gen (now/earlier)   well see-RAN] girl-3.poss pretty
              ✓ 'The girl Mehemmet liked is pretty.'
              ✓ 'The girl Mehemmet likes is pretty.'

I propose that the ambiguity in (25) arises because the suffix *-ran* is ambiguous. It can be an embedded clause marker with no semantic import, yielding the present (factative) interpretation in (25). Or, *-ran* can be a past/perfective marker, as seen it the matrix clauses discussed below. The latter *-ran* yields the past interpretation in (25).

Relative clauses can be marked with the suffix *-idi/jdi*, which results in a future reading for a non-stative verb, and an ambiguous present or future reading for a stative verb. As seen below, the past/perfective *-ran* in incompatible with *-idi/jdi*.

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[8]I have not investigated carefully whether this is a *past* reading or a *perfective* reading.

(26)   Future non-stative:

[men je-jdi-ʁan   ] tamaq jaχʃi
[I   eat-impf-RAN] food   good

✓ 'The food I will eat is good.'
✗ 'The food I'm eating is good.

(27)   Present/future stative:
   a.   [Mehemmet jaχʃi kör-idi-ʁan   ] qɨz güzel
         [Mehemmet well see-impf-RAN] girl pretty
         ✓ 'The girl that Mehemmet will like is pretty.'
         ✓ 'The girl that Mehemmet likes is pretty.'
   b.   [Mehemmet-niŋ jaχʃi kör-idi-ʁan   ] qɨz-i   güzel
         [Mehemmet-gen well see-impf-RAN] girl-3.poss pretty
         ✓ 'The girl that Mehemmet will like is pretty.'
         ✓ 'The girl that Mehemmet likes is pretty.'

Relative clauses can also also be marked with the progressive suffix *-wat* when the verb is non-stative. The resulting interpretation is ambiguous between a present progressive (factative) and past progressive reading.

(28)   Present/past progressive non-stative:
   a.   [men je-wat-qan   ] tamaq jaχʃi
         [I   eat-prog-RAN] food   good
         'The food I'm eating is good.
   b.   [men je-wat-qan   ] tamaq bek jaχʃi i-d-i,   tʃoŋa ket-mi-d-im
         [I   eat-prog-RAN] food   very good be-past-3, so   leave-neg-past-1sg
         'The food I was eating was very good, so I didn't leave.'
         (*Context: I was at a boring party yesterday.*)

The *-ran* affix in relative clauses is thus ambiguous between a plain embedded clause marker, with no tense/aspectual semantics, and a past/perfective marker.

Matrix clause *-ran* In matrix clauses, the semantic-less embedded clause *-ran* is unavailable. Matrix *-ran* always results in a past (or perhaps perfective) reading, regardless of the stativity of the predicate.

(29)   Past non-stative:

Mehemmet kitap-ni   oqu-ʁan
Mehemmet book-acc read-RAN

✓ 'Mehemmet read the book.'
✗ 'Mehemmet is reading the book.'

(30)   Past stative:

   Mehemmet Ajgül-ni   jaχʃi kör-gen
   Mehemmet Aygül-acc well see-RAN

   ✓ 'Mehemmet liked Aygül.'
   ✗ 'Mehemmet likes Aygül.'

Because matrix *-ran* always encodes past tense, it is incompatible with the imperfective (or future) marker *-idi/jdi*.

(31)   No future marker with matrix *-ran*:
   *men oqu-jdi-ʁan
   I   read-impf-RAN

Combined with *-wat*, *-ran* yields only a *past* progressive reading.

(32)   Past progressive:

   men kitap oqu-wat-qan
   I   book read-prog-RAN

   ✓ 'I was reading a book.'
   ✗ 'I'm reading a book.'

Thus, while the *-ran* marker on embedded clauses can be semantically vacuous, the *-ran* of matrix clauses always conveys a past/perfective semantics.

2.2.2   Noun complement clauses

Uyghur noun complement clauses are illustrated in (33).

(33)   Noun complement clauses:

   a.   [**Ötkür** ket-ken-(liq)   ] heqiqet muhim
        [**Ötkür** leave-RAN-(LIQ)] fact   important
        'The fact that Ötkür left is important.'
   b.   [**Ötkür-niŋ** tamaq ji-gen-(liq)   ] iʃaret-**i**   muhim
        [**Ötkür-gen** food   eat-RAN-(LIQ)] sign-**3.poss** important
        'The sign that Ötkür ate food is important.'

Noun complement clauses have a structure very similar to relative clauses. Just like relative clauses, noun complement clauses can have unmarked subjects (as in (33a)) or genitive subjects (as in (33b)). When the subject is unmarked, the head noun does not bear any special morphology. When the subject is genitive, the head noun bears possessor agreement with the genitive subject. As (34) demonstrates, agreement marking on the head noun is not possible when the embedded subject is unmarked.

(34) Possessor agreement prohibited with unmarked subject:

[sen ket-ken] χever-**(*iŋ)**   muhim
[you leave-RAN] news-**(*2sg.poss)** important

'The news that you left is important.'

Like relative clauses, noun complement clauses are marked with the suffix *-ran*. Noun complement clauses differ from relative clauses in optionally also taking the suffix *-liq*, seen in (33).[9] In section 2.4.1 below, I argue that *-liq* is a complementizer.[10] *-liq* is never obligatory, and it is disallowed with some embedding nouns, as discussed in more detail in section 2.4.1.[11]

Note that these clauses cannot embed the tense morphology seen in matrix clauses, as (35) shows. I thus tentatively assume that the type of embedded clause discussed in this chapter contains an AspP, and not a TP.[12]

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[9]This fact is also observed by Rentzsch (2005).

[10]Note that Uyghur has a homophonous morpheme *-liq* that acts as a categorially flexible derivational suffix, as illustrated in (i).

(i) a. tʃatʃ 'hair', tʃatʃ-laq 'hairy'
     b. Türkije 'Turkey', Türkije-liq, 'Turkish'
     c. xuʃal 'happy', xuʃal-laq 'happiness'
     d. kent 'village', kent-liq 'villager'

The derivational suffixes in (i) are of course obligatory, unlike the *-liq* suffix that marks noun complement clauses.

[11] *-liq* is also somewhat dispreferred with unmarked embedded subjects, as the following table shows. I have no explanation for this dispreference.

(i) Availability of *-liq*:

embedding noun		subject case	
		unmarked	genitive
heqiqet	('fact')	✓	✓
söztʃötʃek	('rumor')	✓	✓
hikaje	('story')	?	?
meχpijet	('secret')	?	✓
iʃaret/belge	('sign')	?	✓
ispat	('evidence')	?*	✓
χever	('news')	*	✓

[12] Surprisingly, complement clauses seem to have a different range of tense interpretation options than relative clauses. Though the verb heading the embedded clause in (i) is non-stative, it can receive a past, present, or future interpretation with no aspectual marking on the clause (other than *-ran*).

(i) Ötkür [men-iŋ hazir/burun/kijin tamaq ji-gen-lik-im-ni   ] bil-i-du
     Ötkür [I-gen   now/earlier/later food eat-RAN-LIQ-1sg.poss-acc] know-non.past-3
     'Ötkür knows that I [ate/am eating/will eat].'

A clause containing the progressive suffix *-wat* is restricted to a present progressive interpretation in (ii); this may be due to an interaction with the present tense embedding verb.

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(35) No tense under *-ran*:
*Mehemmet [men-iŋ oqu-{d/di/dim}-ʁan-liq-im-ni] didi
Mehemmet [I-gen   read-{past/past-3/past-1sg}-RAN-LIQ-1sg.poss-acc] said

intended: 'Mehemmet said that I read.'

(36) No tense under *-ran*:
*sen [men-iŋ æte   oqu-j-(men)-ʁan-liq-im-ni] didiŋ
you [I-gen   tomorrow read-fut-(1sg.non.past)-RAN-LIQ-1sg.poss-acc] said

intended: 'You said that I will read tomorrow.'

In sum, Uyghur relative clauses and noun complement clauses share a number of properties. Both display two options for the embedded subject: unmarked and genitive. The head noun bears possessor agreement with the embedded subject when the subject is genitive, but not when it is unmarked. Unlike relative clauses, noun complement clauses are optionally marked with the overt complementizer *-liq*, which is discussed in greater detail in section 2.4.1.

2.2.3   Genitive subjects in Altaic

Genitive subjects in relative clauses and noun complement clauses are a common property of Altaic languages. Miyagawa (2006, 2008, 2011b) and Kornfilt (2008) discuss the licensing properties of genitive subjects in Altaic. They propose that some languages (including Uyghur, Kornfilt (2008)) have clause-externally licensed genitive subjects, while others have clause-internally licensed genitive subjects.[13] In particular, Kornfilt (2008) argues that possessor agreement appears on the case-licensing element. Agreement on the verbal complex thus indicates clause-internal licensing, whereas agreement on an external head noun indicates clause-external licensing. We have seen agreement on an external head noun in Uyghur above. As (37) shows, agreement on the clause itself is not an option in Uyghur.

(ii)   Ötkür [men-iŋ hazir/?*burun/*kijin tamaq ji-wat-qan-liq-im-ni] bil-i-du
Ötkür [I-gen   now/earlier/later   food   eat-prog-RAN-LIQ-1sg.poss-acc] know-non.past-3
'Ötkür knows that I am eating.'

When the clause contains the imperfective marker *-jdi*, past, present, and future interpretations seem (surprisingly) to be available.

(iii)   Ötkür [men-iŋ hazir/burun/kijin tamaq ji-jdi-ʁan-lik-im-ni] bil-i-du
Ötkür [I-gen   now/earlier/later food eat-impf-RAN-LIQ-1sg.poss-acc] know-non.past-3
'Ötkür knows that I [ate/am eating/will eat].'

A greater range of predicates and embedding verbs should be investigated to determine the tense/aspectual properties of these clauses.

[13]The terms adopted by Miyagawa and Kornfilt are "C-licensing" and "D-licensing", but I use the more neutral "clause-internal licensing" and "clause-external licensing" terminology.

(37)   a.   Relative clause – no agreement on the verbal complex:

*[**Ötkür-niŋ** oqu-ʁan-**i**] kitav-(i) uzun
[**Ötkür-gen** read-RAN-**3.poss**] book-(3.poss) long

intended: 'The book that Ötkür read is long.'

   b.   Noun complement – no agreement on the verbal complex:

*[**Ötkür-niŋ** tamaq ji-gen-(liq)-**i**] iʃaret-(i) muhim
[**Ötkür-gen** food eat-RAN-(LIQ)-**3.poss**] sign-(3.poss) important

intended: 'The sign that Ötkür ate food is important.'

Turkish, on the other hand, displays agreement on the verbal complex, as (38) illustrates.

(38)   a.   Turkish relative clause – agreement on the verbal complex:
[**ben-im** al-dığ-**ım**] at iyi-dir
[**I-gen** buy-nliz-**1sg.poss**] horse good-is

'The horse I bought is good.'
(*Turkish*) (Miyagawa 2011b: (3), citing Jaklin Kornfilt (p.c.))

   b.   Turkish noun complement – agreement on the verbal complex:

[**ben-im** aile-m-i terket-tiğ-**im**] söylenti-si
[**I-gen** family-1sg.poss-acc abandon-DIK-**1sg.poss**] rumor-cmpm

'the rumor that I abandoned my family'   (*Turkish*) (Kornfilt 2003)

Among languages with overt possessor agreement, many pattern with Uyghur in displaying agreement on the head noun, including Dagur (Hale 2002), Uzbek (Kornfilt 2005, Vera Gribanova (p.c.)), Kazakh (my fieldwork), Turkmen (Kornfilt 2005) and Sakha (Kornfilt 2005, 2008; Baker and Vinokurova 2010).

Miyagawa (2006, 2008, 2011b) and Kornfilt (2008) (see also Hale 2002) propose that clause-external licensing corresponds to the absence of a CP layer in the embedded clause. On this view, Turkish, which displays possessor agreement on the embedded clause, has CP relative clauses and noun complement clauses. Uyghur, and other languages that display possessor agreement on the head noun, have TP/AspP relative clauses and noun complement clauses. This proposal is illustrated in (39).

(39)   Proposed by Miyagawa and Kornfilt:
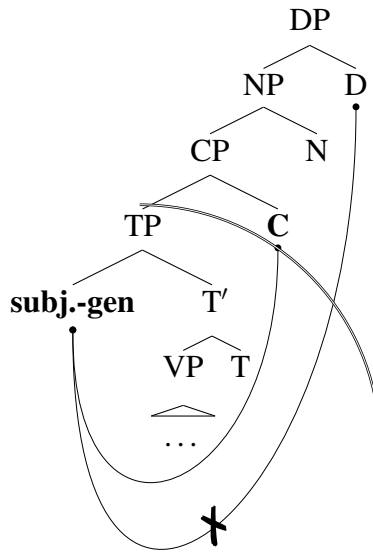
　　　a. **Clause-external licensing:**　　b. **Clause-internal licensing:**
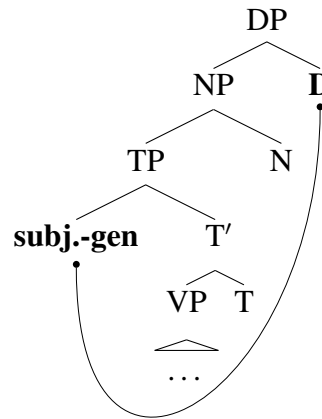
If one assumes PIC$_{\text{strong}}$, as Miyagawa and Kornfilt do, it follows that clause-external licensing should require the embedded clause not to be a full CP phase. Otherwise, the agreement and case-assignment relationship would cross the CP phase boundary, which is prohibited by PIC$_{\text{strong}}$. In the following sections, I argue that this is exactly what we see in Uyghur: genitive case on the subject is licensed clause-externally, yet the embedded clause is a full CP. The Uyghur data thus favor PIC$_{\text{weak}}$ over PIC$_{\text{strong}}$.

　　The analysis I propose raises a new question: if the choice between clause-internal and clause-external licensing does not depend on the size of the embedded clause, what *does* it depend on? I propose that this choice can be reduced to a lexical property of C: Turkish C assigns genitive case (Kornfilt 2008), whereas Uyghur C does not. Thus, what blocks genitive case assignment by an external head in Turkish is not the CP boundary itself, but the fact that the embedded subject is assigned genitive case by C and therefore may not be assigned genitive case again by a higher head. As proposed by Kornfilt (2008), overt agreement on the embedded clause itself indicates that C is the genitive case assigner in Turkish. We can see see in (40) that genitive case assignment by C in Turkish is obligatory – the subject of a relative clause cannot be unmarked. Uyghur, on the other hand, displays a genitive-unmarked subject case alternation, as shown again in (41). This is to be expected, as we know independently that nouns are not obligatory case assigners.

(40)   Relative clause subject must be genitive in Turkish:

　　　[**Ali-*(nin)** pişir-diğ-i　　] yemek
　　　[**Ali-*(gen)** cook-fn-3sg] food

　　　'the food Ali cooked'　　　　　　　　　　　　　(*Turkish*) (Miyagawa 2008: (12b))

(41) Relative clause subject may be unmarked in Uyghur:

[**Ötkür** et-ken] tamaq temlik
[**Ötkür** cook-RAN] food tasty

'The food that Ötkür cooked is tasty.'

The contrast between Turkish and Uyghur thus derives from a language-specific lexical property of C (whether it is a case assigner), rather than from a difference in the size of the embedded clause.[14]

2.3 Uyghur genitive subjects agree with a clause-external head

In this section, I present an analysis of Uyghur genitive-subject embedded clauses. I argue that the subjects of these clauses agree with and are assigned genitive case by a clause-external head, namely the head noun. As mentioned in section 2.2.3 above, overt possessor agreement identifies a clause-external head as the source of genitive case on Uyghur embedded subjects. The fact that genitive subjects are in complementary distribution with regular possessors provides additional confirmation. In the following section, I will argue that the embedded clauses discussed here are full CPs, and consequently, the agreement configuration discussed here provides a clear argument against PIC$_{strong}$. The genitive-subject relative clauses and noun complement clauses discussed above are illustrated again in (42).

(42) Genitive-subject clauses:

a. [**men-iŋ** ji-gen] tamaq-**im** jaχʃi
   [**I-gen** eat-RAN] food-**1sg.poss** good
   'The food I ate is good.'
b. [**Ötkür-niŋ** tamaq ji-gen-(liq)] iʃaret-**i** muhim
   [**Ötkür-gen** food eat-RAN-(LIQ)] sign-**3.poss** important
   'The sign that Ötkür ate food is important.'

The presence of overt possessor agreement on the head nouns in (42) indicates that a projection in the nominal domain agrees with the embedded subject. Furthermore, there is a one-to-one correspondence between possessor agreement and genitive case on the embedded subject in overtly headed clauses,[15] as shown again in (43). This indicates that the same head that agrees with the embedded subject also licenses its genitive case, as Kornfilt (2008) proposes.

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[14]A similar approach, which also derives cross-linguistic variation from the lexical properties of C, is suggested by Miyagawa (2011b), who assumes PIC$_{strong}$, but proposes that strong phasehood is tied to case-licensing ability. However, I argue in section 2.6 that Uyghur embedded CPs are not weak phases.

[15]Clauses without overt heads bear possessor agreement even when the subject is unmarked, as discussed in greater detail in appendix B.

(43) No possessor agreement with unmarked subject:

    a.   [**Ötkür** oqu-ʁan] kitav-**(*i)**   uzun
           [**Ötkür** read-RAN] book-**(*3.poss)** long
           'The book that Ötkür read is long.'

    b.   [sen ket-ken   ] χever-**(*iŋ)**   muhim
           [you leave-RAN] news-**(*2sg.poss)** important
           'The news that you left is important.'

As discussed for a different type of nominalized clause in chapter 1, the genitive case in (43) could be assigned by the head noun itself or by a functional projection in the nominal domain. For concreteness, I assume that N itself is the genitive case is assigner, but nothing hinges on this choice.[16] The head noun also assigns case to the genitive possessor in simple possessed DP examples, as shown in (44).

(44) Possessed DP structure:
    Ötkür-niŋ χet-**i**
    Ötkür-gen letter-**3.poss**

    'Ötkür's letter'
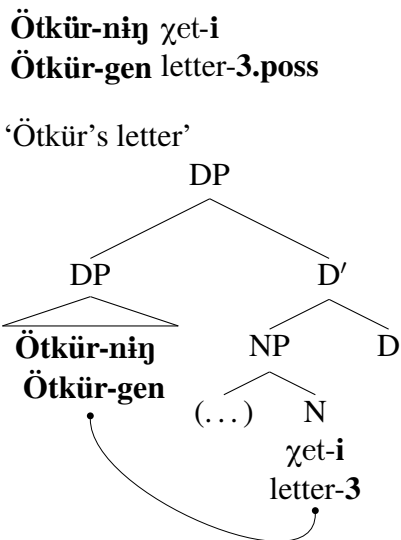
The structures I propose for relative clauses and noun complement clauses are essentially the same as each other, and are shown in (45) and (46), respectively.

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[16]In chapter 1, it was crucial for my analysis of raising that the genitive case is assigner is not D itself, but a lower projection. If DP is a syntactic phase, as commonly assumed (but see Matushansky (2005); Richards (2006); Sabbagh (2007); Gallego (2009) for the opposite view), my analysis of genitive case licensing also requires that the genitive case assigner be a projection below D.

(45)   Relative clause structure:

a.   [**Ötkür-niŋ** ji-gen   ] tamaq-**i**   b.   [**Ötkür** ji-gen   ] tamaq
      [**Ötkür-gen** eat-RAN] food-**3.poss**   [**Ötkür** eat-RAN] food

'the food that Ötkür ate'

```
                        DP
                       /  \
                     NP     D
                    /  \
                  CP    N
                 /  \   tamaq-(i)
              AspP    C  food-(3)
             /_____\
          Ötkür-(nuŋ) ji-gen
          Ötkür-(gen) eat-RAN

                (genitive)
```
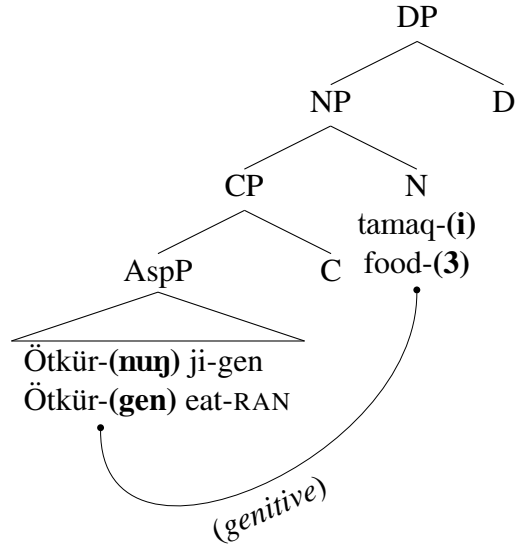
(46)   Noun complement clause structure:

    a.   [**Ötkür-niŋ** tamaq ji-gen-(liq)   ] iʃaret-**i**
        [**Ötkür-gen** food   eat-RAN-(LIQ)] sign-**3.poss**
        'the sign that Ötkür ate food'

    b.   [**Ötkür** tamaq ji-gen-(liq)   ] iʃaret
        [**Ötkür** food   eat-RAN-(LIQ)] sign
        'the sign that Ötkür ate food'
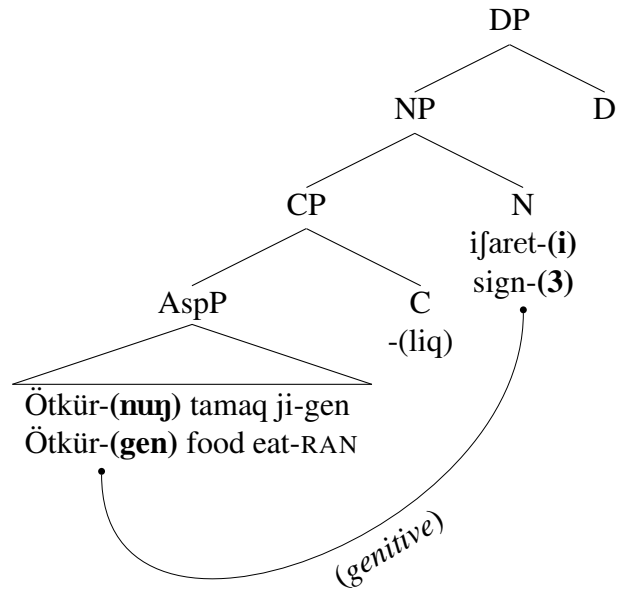
There is evidence that the head noun licenses both genitive possessors and genitive case on embedded subjects. Genitive subjects are in complementary distribution with regular possessors, and I propose that this is due to a single head noun being unable to license genitive case twice. As (47) shows, Uyghur does not permit double possessors.

(47)   No double possessors:

    * **Ötkür-niŋ Ajgül-nuŋ** resim-**i**
      Ötkür-gen Aygül-gen picture-**3.poss**

    intended: 'picture that depicts Aygül and belongs to Ötkür'

I propose that (47) is ruled out because the head noun cannot assign genitive case to both of the possessors in (47). This is illustrated in (48).

(48)   Head noun cannot license genitive twice:
    * **Ötkür-niŋ Ajgül-nuŋ** resim-**i**
      Ötkür-gen Aygül-gen picture-**3.poss**

    intended: 'picture that depicts Aygül and belongs to Ötkür'
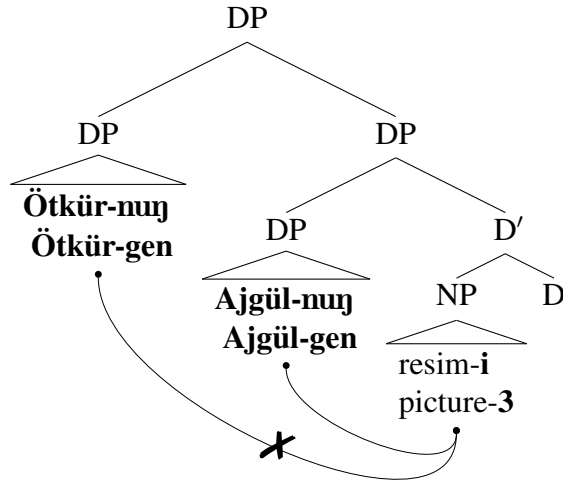
Note that double possessors are ruled out for syntactic reasons, and not semantic ones. Just as in the English possessed construction *Aygül's picture*, the possessor in Uyghur can play different semantic roles. For example, Aygül could be the owner of the picture or the subject of the picture, as (49) shows. Consequently, there would be nothing semantically anomalous about a structure with two possessors, with the same meaning as in (50).

(49)   Two meanings for possessors:
    Ajgül-nuŋ resim-**i**
    Aygül-gen picture-**3.poss**

    'picture that belongs to Aygül' *or*
    'picture that depicts Aygül'

(50)   Alternate construction:
    Ötkür-diki **Ajgül-nuŋ** resim-**i**
    Ötkür-loc   **Aygül-gen** picture-**3.poss**

    'Ötkür's picture of Aygül'

The double possessor construction is thus ruled out syntactically: two genitive possessors cannot be licensed by a single head noun. I furthermore propose that the possessor in (51) is incompatible with a genitive embedded subject (and requires an unmarked subject) for the same reason that (47) is ruled out. The head noun can only assign one instance of genitive case, and thus cannot license genitive on both the possessor and the embedded subject.[17]

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[17]The data are less clear for noun complement clauses:

(51)   Possessed head noun – relative clause subject must be unmarked:

   a.   [Ötkür oqu-ʁan   ] **Ajgül-nuŋ** kitav-**i**   uzun
        [Ötkür read-RAN] **Aygül-gen** book-**3.poss** long
        'Aygül's book that Ötkür read is long.'

   b.   *[**Ötkür-niŋ** oqu-ʁan   ] **Ajgül-nuŋ** kitav-**i**   uzun
        [**Ötkür-gen** read-RAN] **Aygül-gen** book-**3.poss** long
        intended: 'Aygül's book that Ötkür read is long.'

The proposal that the same head noun that assigns genitive case to possessors also assigns genitive case to embedded subjects immediately accounts for the data in (51). The prohibition against a genitive embedded subject in (51) arises from the same principles that prohibit double possessors in Uyghur.

In sum, there is strong evidence that genitive subjects in Uyghur agree with a clause-external nominal head. The external head noun bears possessor agreement with the embedded genitive subject; no agreement is present when the embedded subject is unmarked. Moreover, genitive embedded subjects are in complementary distribution with possessors in the same DP. This fact follows immediately if genitive subjects and possessors are licensed by the same head noun, which may only license genitive case once.

2.4   Full CP embedded clauses

This section establishes that Uyghur embedded clauses of the type discussed above are CPs. I provide three arguments for the existence of a CP layer. In section 2.4.1, I argue that noun complement clauses can contain an overt complementizer, *-liq*. In section 2.4.2, I show that embedded clauses can host adverbs that adjoin at the CP level. Finally, in section 2.4.3, I present an argument from the availability of embedded *wh*-questions in these clauses, following proposals that the CP layer encodes interrogative force (Rizzi 1997) and provides a landing site for *wh*-movement (Stowell 1982). Miyagawa (2011b) argues that Japanese genitive-subject clauses are reduced (TPs, rather than CPs), and I show that Uyghur genitive-subject clauses pattern differently from Japanese on these tests.

(i)   ?[Ötkür kel-gen   ] **Ajgül-nuŋ** ispaat-**i**   muhim
       [Ötkür come-RAN] **Aygül-gen** evidence-**3.poss** important
       'Aygül's evidence that Ötkür came is important.'

(ii)   ??[**Ötkür-niŋ** kel-gen   ] **Ajgül-nuŋ** ispaat-**i**   muhim
       [**Ötkür-gen** come-RAN] **Aygül-gen** evidence-**3.poss** important
       'Aygül's evidence that Ötkür came is important.'

My hope is that there is a lack of strong contrast between (i) and (ii) because (i) is awkward in the first place and it is a difficult judgment, but more investigation is needed.

2.4.1 *-liq* is a complementizer

As shown above and illustrated again in (52), noun complement clauses in Uyghur feature the morpheme *-liq*, which appears optionally at the right edge of the embedded clause.

(52)   Optional *-liq* on noun complement:
       [Ötkür-niŋ tamaq ji-gen-**(liq)**   ] iʃaret-i   muhim
       [Ötkür-gen food   eat-RAN-**(LIQ)**] sign-3.poss important

       'The sign that Ötkür ate food is important.'

In this section, I argue that *-liq* is a complementizer that heads the embedded clause. After showing that the alternative analysis of *-liq* as a nominalizer fails for empirical reasons, I observe that *-liq* exhibits distributional properties (optionality, sensitivity to the type of embedded clause) characteristic of a complementizer. I also discuss embedding nouns whose complements cannot be marked with *-liq*, and suggest that these nouns cannot take a full CP complement for semantic reasons.

2.4.1.1   Why *-liq* is not a nominalizer

Some traditional grammars, as well as some recent generative work (see Gribanova (2010) for Uzbek), have analyzed *-liq* and its cognates as a nominalizer of embedded clauses, based on clausal complements of the sort illustrated in (53):

(53)   Verb complement:
       Ötkür [Ajgül-nuŋ ket-ken-**(lik)**-i-ni   ] di-d-i
       Ötkür [Aygül-gen leave-RAN-**(LIQ)**-3.poss-acc] say-past-3

       'Ötkür said that Aygül left.'

   From examples like (53), the appeal of the nominalizer analysis is understandable: the embedded clause may bear morphology otherwise found with nominals, such as possessor agreement and case-marking. The question, then, is whether *-liq* is the morpheme responsible for the nominal nature of the embedded clause. In section 2.6.1 below, I argue that the clause in (53) is embedded by a phonologically null head noun, which is the true host of the possessor agreement and case-marking. (For similar proposals, see Lees (1965); Aygen (2002) for Turkish; Maki and Uchibori (2008) for Japanese.) On this analysis, *-liq* simply heads the clause and does not create a nominal category.

(54)   Null noun analysis of (53):
       Ötkür [$_{CP}$ Ajgül-nuŋ ket-ken-**(lik)**] -∅$_N$-i-ni   di-d-i
       Ötkür [$_{CP}$ Aygül-gen leave-RAN-**(C)**] -∅$_N$-3.poss-acc say-past-3

       'Ötkür said that Aygül left.'

   Looking only at examples like (53), it is hard to distinguish the "nominalizer" hypothesis from the "complementizer + null head noun" hypothesis. However, in examples where the head noun is overt (as in (55)), we find evidence against the former and in favor of the latter.

(55) Agreement on head noun:

[**Ötkür-nïŋ** tamaq ji-gen-(liq)   ] iʃaret-**i**   muhim
[**Ötkür-gen** food   eat-RAN-(LIQ)] sign-**3.poss** important

'The sign that Ötkür ate food is important.'

Example (55) shows that when the clausal complement is embedded by an overt head noun, possessor agreement appears on the head noun rather than on the *-liq*-clause. Example (56) illustrates that the *-liq*-clause can never bear possessor agreement in complements to overt nouns.

(56) No agreement on *-liq* in noun complement clause:
   a. *[**Ötkür-nïŋ** tamaq ji-gen-(liq)-**i**   ] iʃaret-(i)   muhim
      [**Ötkür-gen** food   eat-RAN-(LIQ)-**3.poss**] sign-(3.poss) important
      intended: 'The sign that Ötkür ate food is important.'
   b. *[**Ötkür-nïŋ** ket-ken-liq-**i**   ] heqiqet-(i)   muhim
      [**Ötkür-gen** leave-RAN-LIQ-**3.poss**] fact-(3.poss) important
      intended: 'The fact that Ötkür left is important.'

If *-liq* is a complementizer, the pattern in (55) and (56) is expected. The *-liq*-clause does not host nominal morphology because it is not actually a nominal category – it merely appeared to be nominal in (53) because its embedding noun was null. The nominalizer analysis, on the other hand, predicts a pattern that is the opposite of (55) and (56): if *-liq* reliably creates a nominal category, the *-liq*-clause should host possessor agreement just as it does in (53). I conclude that *-liq* does not nominalize embedded clauses. Rather, it *heads* clauses that are embedded by (possibly null) nouns. Next I highlight two further properties of *-liq* that corroborate its status as a complementizer.

2.4.1.2 Optionality

As the previous examples have illustrated, whenever *-liq* is available, it is optional (or optionally null). My consultant identifies no difference in meaning for minimal pairs with and without *-liq*. Such optionality is common for complementizers – many languages have null complementizers or allow complementizer-drop (see Stowell (1981); Pesetsky and Torrego (2001); Boškovic and Lasnik (2003); Kishimoto (2006) for discussion). To my knowledge, there are no examples of systematic optionality for a piece of category-changing derivational morphology such as a nominalizer. The nominalizer *-ish* discussed in chapter 1 is obligatory wherever it occurs:

(57) *-ish* obligatory:

Ötkür-nïŋ ket-***(iʃ)**-i   muhim
Ötkür-gen leave-***(nliz)**-3.poss important

'Ötkür leaving is important.'

2.4.1.3 Noun complements vs. relative clauses

The complementizer *-liq* is sensitive to the type of the embedded clause: it is available in complement clauses, but unavailable in relative clauses, as shown in (58) and (59).

(58)   *-liq* in a noun complement clause:
      [Tursun-niŋ ket-ken-**(liq)**   ] heqiqet-i   muhim
      [Tursun-gen leave-RAN-**(LIQ)**] fact-3.poss important

      'The fact that Tursun left is important.'

(59)   No *-liq* in a relative clause:
      [Ötkür-niŋ oqu-ʁan-**(*liq)**   ] kitav-i   uzun
      [Ötkür-gen read-RAN-**(*LIQ)**] book-3.poss long

      'The book that Ötkür read is long.'

Note that *-liq* is unavailable in relative clauses regardless of whether the subject is genitive or unmarked, as (60) illustrates.

(60)   No *-liq* in a relative clause:

      a.   [men oqu-jdi-ʁan-**(*liq**)   ] kitap uzun
           [I   read-impf-RAN-**(*LIQ**)] book long
           'The book that I will read is long.'
      b.   [men-iŋ oqu-jdi-ʁan-**(*liq**)   ] kitav-im   uzun
           [I-gen   read-impf-RAN-**(*LIQ**)] book-1sg.poss long
           'The book that I will read is long.'

     It is crosslinguistically common to observe different complementizer possibilities for different types of embedded clauses (see, e.g., Hiraiwa (2000) for Japanese *to* vs. ∅, and Richards (1999) for related discussion of Tagalog and English), and it appears this is what we find in the distribution of Uyghur *-liq*. Although the implementation is not crucial to my analysis, I will assume for the sake of concreteness that Uyghur has two complementizers, *-liq* and ∅, which embed clauses of the type we have been discussing.[18] Noun complement clauses can be headed by either *-liq* or ∅, while relative clauses can only be headed by ∅.

2.4.1.4 Smaller noun complement clauses

With some head nouns, the complement clause may not bear the suffix *-liq*, and I suggest that these nouns do not embed full CPs. The prohibition against *-liq* is illustrated for *resim*

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[18]Outside the scope of this discussion is another complementizer, *dep*, which introduces true clausal complements to verbs.

(i)   Tensed CP embedding:
      Ötkür [Ajgül-ni   ket-t-i   dep] bil-i-du
      Ötkür [Aygül-acc leave-past-3 that] know-non.past-3

      'Ötkür knows that Aygül left.'

See chapter 1 for a discussion of exceptional case marking (ECM) in examples like (i).

('picture') in (61) and *flim* ('film') in (62).

(61)   No *-liq* with *resim* ('picture'):
        a.   [sen   ket-ken-(***lik**)   ] resim   muhim
              [you   leave-RAN-(***LIQ**)] picture important
              'The picture of you leaving is important.'
        b.   [sen-iŋ   ket-ken-(***lik**)   ] resim-iŋ   muhim
              [you-gen leave-RAN-(***LIQ**)] picture-2sg.poss important
              'The picture of you leaving is important.'

(62)   No *-liq* with *flim* ('film'):
        a.   [sen   ket-ken-(***lik**)   ] flim muhim
              [you   leave-RAN-(***LIQ**)] film important
              'The film of you leaving is important.'
        b.   [sen-iŋ   ken-ken-(***lik**)   ] flim-iŋ   muhim
              [you-gen leave-RAN-(***LIQ**)] film-2sg.poss important
              'The film of you leaving is important.'

I propose that *-liq* is banned in (61) and (62) because the embedded clause is not a full CP. Semantically, the embedded clause cannot be a proposition – pictures and films depict events, not propositions. I would therefore like to suggest that the lack of *-liq* in (61) and (62) has the same (semantic) explanation as the inability of *picture* and *film* to embed a full CP in English. In English, these nouns can only take a gerund.

(63)   a.   The picture of Mary reading a book.
        b.   *The picture that Mary read a book.

(64)   a.   The film of Mary reading a book.
        b.   *The film that Mary read a book.

-liq is thus indicative of complex clausal structure, and, in particular the presence of a CP layer. In this subsection, I have argued that noun complement clauses, including genitive-subject complement clauses, can be headed by an overt complementizer (*-liq*).[19] The next two subsections provide other types of evidence that genitive-subject noun complement clauses and relative clauses behave like full CPs in Uyghur.

2.4.2   CP-level adverbs

In this section, I employ a test used by Miyagawa (2011b) for Japanese to show that Uyghur embedded clauses are full CPs. Miyagawa (2011b) examines the nominative/genitive (*-ga/-no*) subject case alternation in Japanese, and proposes that genitive subjects in Japanese are licensed clause-externally.[20] Furthermore, Miyagawa (2011b) proposes that Japanese

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[19]I will henceforth gloss the *-liq* suffix as C, where appropriate.

[20]Because Japanese lacks possessor agreement marking, the source of genitive case on embedded subjects has been debated in the literature. See references cited in Miyagawa (2011b) for arguments on both sides.

embedded clauses with nominative (NOM) subjects are CPs, while Japanese embedded clauses with genitive (GEN) subjects are reduced (TPs). In support of this claim, Miyagawa (2011b) observes that CP-level adverbs (e.g., 'evidently', 'truly', 'fortunately' (Cinque 1999)) are compatible with NOM-subject relative clauses, but not with GEN-subject relative clauses, as shown in (65a). The same observation extends to noun complement clauses, as (65b) illustrates. This contrasts with lower (TP-level) adverbs, which are compatible with both NOM- and GEN- subject embedded clauses, as shown in (66).

(65)   CP-level adverb with NOM subject only:
   a.   Relative clause:

        [**saiwai-ni**   Taroo-**ga/*no**   yonda] hon
        [**fortunately** Taro-**nom/*gen** read   ] book

        'the book that Taro fortunately read'   (*Japanese*) (Miyagawa 2011b: (26a))
   b.   Complement clause:

        John-wa [kinoo   **saiwaini**   Mary-**ga/?*no**   hanasita koto]-o
        John-top [yesterday **fortunately** Mary-**nom/?*gen** spoke   fact]-acc
        shir-anai
        know-neg

        'John doesn't know (the fact) that Mary fortunately spoke yesterday.'
                                          (*Japanese*) (Shigeru Miyagawa (p.c.))

(66)   TP-level adverb with NOM or GEN subject:[21]
   a.   Relative clause:

        [**kitto**   Taroo-**ga/no**   yonda] hon
        [**probably** Taro-**nom/gen** read   ] book

        'the book that Taro probably read'   (*Japanese*) (Miyagawa (2011b): (26b))
   b.   Complement clause:

        John-wa [kinoo   **kitto**   Mary-**ga/?no**   hanasita to yuu koto]-o
        John-top [yesterday **probably** Mary-**nom/?gen** spoke   C?   fact]-acc
        shir-anai
        know-neg

        'John doesn't know (the fact) that Mary probably spoke yesterday.'
                                          (*Japanese*) (Shigeru Miyagawa (p.c.))

We can extend Miyagawa's (2011) test to diagnose the size of embedded clauses in Uyghur. Unlike Japanese GEN-subject embedded clauses, Uyghur GEN-subject embedded clauses can host CP-level adverbs, as shown in (67) and (68).[22]

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[21]Here and below, the genitive subject is compatible with *to yuu*, which is standardly treated as a complementizer. Given that I assume, with Miyagawa (2011b), that genitive-subject clauses are not full CPs in Japanese, *to yuu* requires an alternative analysis.

[22]It is difficult to find CP-level adverbials in Uyghur that are unambiguously adverbs, rather than parenthetical phrases, which have a freer distribution. Both *evidently* and *unfortunately* were rendered by my

(67) CP-level adverb with GEN subject (relative clause):

    a.   [**xeqiqi** Ajgül-**niŋ** jaz-ʁan   ] kitiv-i-ni   korset!
       [**truly**   Aygül-**gen** write-RAN] book-3.poss-acc show
       'Show (me) the book that Aygül truly wrote!'

    b.   [**χeqiqi** men-**iŋ** jaχʃi kör-i-gen   ] tamaq-im-ni   ber!
       [**truly**   I-**gen**   well see-impf-RAN] food-1sg.poss-acc give
       'Give (me) the food that I truly like!'

(68) CP-level adverb with GEN subject (complement clause)[23]:

    χeqiqi sen-**iŋ**   ket-ken-lik-iŋ-ni   bil-i-men
    truly   you-**gen** leave-RAN-LIQ-2sg.poss-acc know-non.past-1sg

    'I know that you truly left.'
    'I truly know that you left.'

Recall that Turkish, unlike Uyghur, is a clause-internal licensing language, as evidence by possessor agreement marking on the clause itself (seen again in (69)). Miyagawa (2006, 2008, 2011b) and Kornfilt (2008) propose that Turkish embedded clauses are thus CPs, and it is correctly predicted that Turkish embedded clauses are compatible with CP-level adverbs, as (69) shows.

(69) CP-level adverb with GEN subject:

    [**anlaşılan** oğrenci-ler-**in** oku-duk-ları   ] kitap
    [**evidently** student-pl-**gen** read-DIK-3.pl] book

    'the book which the students evidently read'   (*Turkish*) (Jaklin Kornfilt (p.c.))

The availability of CP-level adverbs thus provides further evidence that Uyghur genitive-subject clauses are full CPs, like Turkish genitive-subject clauses and unlike Japanese ones.

2.4.3 Embedded interrogatives

Stowell (1982) shows that clauses without a CP layer, such as English gerunds, cannot host *wh*-questions. This is seen in the contrast between a CP embedded clause in (70a) and a gerund embedded clause in in (70b).

(70)   a.   I don't remember [who we should visit.]
       b.   *I don't remember [who (our) visiting.]   (Stowell 1982: (1a), (3a))

The ability to host *wh*-questions can thus be used as a diagnostic of clause size. Uyghur genitive-subject clauses are expected to host *wh*-questions if, and only if, they are full CP. Indeed, *wh*-questions are possible in genitive-subject clauses in Uyghur, as (71) shows.[24]

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consultant as phrasal elements.

   [23]As discussed in more detail in section 2.6.1 below, the embedding noun is null in this example.

   [24]Embedded yes-no questions are permitted in genitive-subject clauses, but take a different form from matrix yes-no questions.

(71) Embedded interrogative with GEN subject (*qatʃan* ('when')):

    a.   men [Ötkür-**nuŋ qatʃan** kel-idi-ʁan-(liq)-i-ni   ]
        I   [Ötkür-**gen when** come-impf-RAN-(LIQ)-3.poss-acc]
        bil-i-men
        know-non.past-1sg
        'I know when Ötkür will come.'

    b.   men [Ajgül-**nuŋ qatʃan** ket-ken-(lik)   ] heqiqet-i-ni   sordum
        I   [Aygül-**gen when** leave-RAN-(LIQ)] fact-3.poss-acc asked
        'I asked when Aygül left.'

(72) Embedded interrogative with GEN object (*nime* ('what')):

    a.   men [Ötkür-**niŋ nime** al-ʁan-(liq)-i-ni   ] bil-i-men
        I   [Ötkür-**gen what** buy-RAN-(LIQ)-3.poss-acc] know-non.past-1sg
        'I know what Ötkür bought.'

    b.   [Ötkür-**niŋ nime** al-ʁan-(liq)   ] χewer-i   seni   hejran
        [Ötkür-**gen what** buy-RAN-(LIQ)] news-3.poss you-acc surprise
        kal-dur-d-i
        do-caus-past-3
        'The news of what Ötkür bought surprised you.'

(73) Embedded interrogative with GEN subject (*kim* ('who')):

    a.   men [**kim-niŋ** kitap al-ʁan-(liq)-i-ni   ] bil-i-men
        I   [**who-gen** book buy-RAN-(LIQ)-3.poss-acc] know-non.past-1sg
        'I know who bought a book.'

    b.   [**kim-niŋ** ket-ken-(?liq)   ] χewer-i   seni   hejran kal-dur-d-i
        [**who-gen** leave-RAN-(?LIQ)] news-3.poss you-acc surprise do-caus-past-3
        'The news of who left surprised you.'

The ability of Uyghur genitive-subject clauses to host *wh*-questions indicates that these clauses are full CPs. Following Miyagawa's (2011) proposal that genitive-subject clauses in Japanese are TPs/AspPs, it is predicted that an embedded question in Japanese will require a nominative subject. This prediction is borne out in (75) (suggested by Shigeru

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(i)   Matrix question:

    Ajgül kitap al-d-i-mu?
    Aygül book buy-past-3-Q?

    'Did Aygül buy a book?'

(ii)   Genitive-subject question:

    men [Ajgül-nuŋ kitap il-ip   al-mi-ʁan-(liq)-i-ni   ] sor-d-um
    I   [Aygül-gen book buy-IP buy-neg-RAN-(LIQ)-3.poss-acc] ask-past-1sg

    'I asked whether Aygül bought a book.'

Miyagawa (p.c.)).[25]

(74)   Embedded statement:

John-ga/??no   odoru to yuu koto-ga   mondai-ni natta.
John-nom/??gen dance C?   fact-nom problem   became

'The fact that John will dance has become a problem.' (*Japanese*)

(75)   Embedded question:

John-ga/*no   odoru ka to yuu koto-ga   mondai-ni natta.
John-nom/*gen dance Q C?   fact-nom problem   became

'The issue of whether John will dance has become a problem.' (*Japanese*)

We thus have another piece of evidence that genitive-subject embedded clauses in Uyghur are CPs, and not TPs/AspPs.

2.4.4 Summary
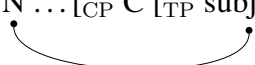
In this section, I have presented three strands of evidence that genitive-subject embedded clauses in Uyghur are full CPs. First, I showed that noun complement clauses can host what by all appearances is an overt complementizer, *-liq*. Second, I showed that Miyagawa's (2011) adverb test for the size of the embedded clause reveals that Uyghur genitive-subject embedded clauses pattern as full CPs (as in Turkish), rather than as TPs (as in Japanese). Third, I noted that Uyghur genitive-subject clauses can be interrogatives (unlike Japanese genitive-subject clauses), which again indicates the presence of a CP layer.

2.5 Discussion and implications

The preceding discussion has established two points about genitive embedded subjects in Uyghur: they are dominated by a CP, and they agree with a nominal head outside this CP. In other words, we have established that Uyghur exhibits the agreement configuration shown in (76).

(76)   Agreement with genitive subjects in Uyghur:
$$N \ldots [_{CP} \text{ C } [_{TP} \text{ subject} \ldots]]$$

The special interest of this configuration, as explained in section 2.1, is that it illustrates the availability of agreement across a single phase head. This result is incompatible with the strong version of the Phase Impenetrability Condition given in (77a), but predicted by the weaker version given in (77b). Uyghur genitive subjects thus provide an empirical argument against the former and in favor of the latter.

---

[25]Unfortunately, confounding factors make the genitive subject in the declarative example in (74) degraded as well. Speakers detect a contrast between the genitives in (74) and (75), but the judgment is subtle.

(77) a. Chomsky's (1998) Phase Impenetrability Condition (PIC$_{strong}$):
In phase α with head H, the domain of H is not accessible to operations outside α; only H and its edge are accessible to such operations.

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

PIC$_{strong}$ predicts that the configuration in (76), instantiated by Uyghur genitive subjects, should be impossible. The subject is inside the domain of the phase head C, and should thus be inaccessible to to operations from outside of CP. PIC$_{strong}$ thus incorrectly predicts that Uyghur genitive subjects cannot be agreed with and assigned case from outside of CP. PIC$_{weak}$, on the other hand, does not rule out the configuration in (76). The complement of C is still accessible when N is merged: no phase head has been merged on top of C. Thus the PIC$_{weak}$ does *not* block the Agree relationship between N and the embedded subject from being established. This provides an argument in favor of PIC$_{weak}$ over PIC$_{strong}$.

In the remainder of this section I consider, and reject, an alternative explanation for the Uyghur facts. In particular, I show that the possibility that genitive subjects in Uyghur are at the edge of CP, and therefore accessible to agreement with the external head even under PIC$_{strong}$, is unmotivated for Uyghur. I also discuss the possibility that the definition of PIC$_{weak}$ should be modified so that phase edges do not have special status. In section 2.6 below, I will argue against the alternative that *-liq* is defective C, i.e., one that does not count as a strong phase head for the purposes of the PIC.

2.5.1 Accessibility at the phase edge: not a solution for Uyghur

Does the configuration of agreement and genitive case assignment in Uyghur necessarily violate the PIC$_{strong}$? For several languages that show clause-external agreement patterns, it has been proposed that the DP agreed with is in fact at the *edge* of the embedded CP (Polinsky and Potsdam (2001) for Tsez; Branigan and MacKenzie (2002) for Innu-aimûn; Şener (2008) for Turkish). Under this configuration, the PIC$_{strong}$ is not actually violated, as illustrated in (78).

(78) X ... [$_{CP}$ DP C [$_{TP}$ subject ...]]
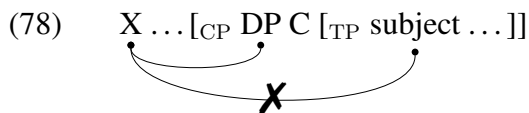
Because the specifier of CP is not inside the domain of C, a DP in this position is accessible to operations outside of CP under PIC$_{strong}$. Uyghur genitive subjects do not occupy a CP-edge position overtly. For example, they can be preceded in the clause by locative or time adverbial phrases, as shown in (79) for relative clauses and in (80) for complement clauses.

(79) Genitive subject preceded by adverb (relative clause):

    a. [sorun-da Mehemmet-niŋ oqu-ʁan] kitav-i   uzun
       [party-loc Mehemmet-gen read-RAN] book-3.poss long
       'The book that Mehemmet read at the party is long.'

    b. [tünügün Mehemmet-niŋ kör-gen] qiz-i   güzel
       [yesterday Mehemmet-gen see-RAN] girl-3.poss pretty
       'The girl Mehemmet saw yesterday is pretty.'

(80) Genitive subject preceded by adverb (complement clause):

    [tünügün sen-iŋ oqu-ʁan-(liq)] χever-iŋ   muhim
    [yesterday you-gen read-RAN-(LIQ)] news-2sg.poss important

    'The news that you read yesterday is important.'

However, it has been proposed that *topics* move to the edge of CP, sometimes covertly. Consequently, agreement with embedded topics can cross a CP boundary without violating the PIC_{strong}, even if the topic DP is not at the edge of CP on the surface. If the embedded DP is not a topic, clause-external agreement or case-licensing is impossible. This pattern is illustrated for Turkish in (81) and (82). (See also Polinsky and Potsdam (2001) for a similar phenomenon in Tsez, and Branigan and MacKenzie (2002) for Innu-aimûn.)

(81) Turkish ECM:

    Pelin   [**Mete-yi** istakoz-dan ye-di   diye] duy-muş.
    Pelin-nom [**Mete-acc** lobster-abl eat-past C   ] hear-evid.past

    'Pelin heard that Mete ate from the lobster.'   (*Turkish*) (Şener 2008: (49b))

(82) Turkish ECM – embedded subject is a topic and cannot be focused:

    Pelin [yalnızca **Sinan-**{∅**/#ı**}   git-ti   diye] duy-muş.
    Pelin [only   **Sinan-**{**nom/#acc**} go-past C   ] hear-evid.past

    'Pelin heard that only *Sinan* went (to the party).'   (*Turkish*) (Şener 2008: (48))

If Uyghur genitive subjects were moving covertly to the edge of CP, we might expect them to display the topichood restriction illustrated above. However, Uyghur genitive subjects need not be topics. As illustrated below, they may be focused, unlike the accusative-marked subject in (82).

(83) Non-topic genitive subjects:

  a. [Ötkür-niŋ-la   kel-gen-lik   ] χever-i   muhim
     [Ötkür-gen-only come-RAN-LIQ] news-3.poss important
     'The news that only *Ötkür* came is important.'

  b. [men-iŋ-la jaχʃi kör-gen] kitav-im   uzun
     [I-only   well see-RAN] book-1sg.poss long
     'The book that only *I* like is long.'

  c. Q: Ötkür [Ajgül-niŋ kel-gen-lik-i-ni   ] didi-mu?
        Ötkür [Ajgül-gen come-RAN-LIQ-3.poss-acc] said-Q
        'Did Ötkür say that Aygül came?'

     A: Yaq, Ötkür [Mehemmet-niŋ kel-gen-lik-i-ni   ] didi.
        no, Ötkür [Mehemmet-gen come-RAN-LIQ-3.poss-acc] said
        'No, Ötkür said that *Mehemmet* came.'

I conclude that there is no evidence to support the idea that Uyghur genitive subjects are at the edge of CP either overtly (which would result in word order effects) or covertly (which should yield discourse effects). The Uyghur data thus provide true evidence against PIC$_{\text{strong}}$.

2.5.2   No phase edge?

Like PIC$_{\text{strong}}$, PIC$_{\text{weak}}$ treats the phase head and its specifier as part of the next higher phase. In this section, I raise the possibility that the entire phase (CP or vP) is spelled out at once.

(84) a. Chomsky's (1998) Phase Impenetrability Condition (PIC$_{\text{strong}}$):
         In phase α with head H, the domain of H is not accessible to operations outside α; only H and its edge are accessible to such operations.
      b. Chomsky's (2001) Phase Impenetrability Condition (PIC$_{\text{weak}}$):
         In phase α with head H, the domain of H is accessible to operations outside α only until the next (strong) phase head is merged.

PIC$_{\text{strong}}$ would clearly be too restrictive if it did not allow the edge of a phase to be an escape hatch: operations, such as agreement and movement, would not be able to cross a phase boundary at all. However, it is not as clear that the PIC$_{\text{weak}}$ should define the edge of a phase as part of a higher domain. As stated, PIC$_{\text{weak}}$ allows operations that are quite long-distance, as (85) illustrates.

(85) Allowed by PIC$_{\text{weak}}$:
      T [$_{vP}$ [$_{TP}$ [$_{vP}$ DP v …]

It is unclear that such long-distance relationships are possible in language. Perhaps PIC$_{\text{weak}}$ should really be reformulated as follows:

(86)   PIC$_{no-edge}$: If H is a (strong) phase head, HP is accessible to outside operations
        only until the next (strong) phase head is merged.

This version of the PIC makes the right predictions for the English raising constructions
discussed in section 2.1.1 under the assumption that raising v is a strong phase head.

(87)   *John T [$_{vP}$ seems [$_{CP}$ (that) t is singing.]]
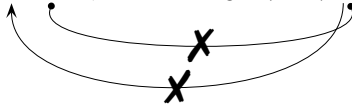
(88)   *John T seems [$_{CP}$ (that) t is singing.]
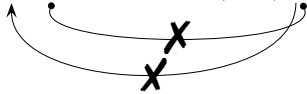
There are two phase heads in (87): embedded v and matrix v. As discussed in section
2.2, raising proceeds through the specifier of the embedded TP. The embedded v thus does
not block raising in (87). Matrix vP is not spelled out before the matrix T is merges, so
raising is possible. In (88), the embedded CP is spelled out when the matrix v is merged,
and raising is therefore ruled out. In fact, raising in (88) is ruled out without the need to
assume the ban on improper movement (Chomsky 1973; May 1979), which is necessary
for PIC$_{strong}$ and PIC$_{weak}$ to make the right predictions. The ban on improper movement
prohibits A-bar movement (e.g. to the specifier of CP) that is followed by A-movement
(e.g. raising). But under the PIC$_{no-edge}$, the specifier of CP does not provide an escape
hatch out of the phase.

    It seems that at this point we have erred on the side of too strong a condition, however.
Chomsky (2001) assumes that, under PIC$_{weak}$, a phase is spelled out immediately when the
next phase head is merged. The next phase head cannot first attract a DP inside the lower
phase. Under this assumption, PIC$_{no-edge}$ blocks agreement of the sort shown in (89).

(89)   C [$_{TP}$ [$_{vP}$ DP v ...]]
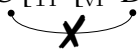
Because C is a phase head, the phase below it (vP in (89)) is spelled out as soon as C merges.
This means that C can never attract a DP out of a lower phase, a highly problematic result
given the existence of long-distance *wh*-movement, for instance. If we adopt PIC$_{no-edge}$,
we must therefore assume that when a phase head merges, it is able to agree with and
attract a DP to its specifier *before* the next lower phase is spelled out.[26] Alternately, we
could assume that a phase is spelled out when the maximal projection of the next higher
phase is completed. Either assumption creates a new problem, as we must now make sure
the embedded subject in (88) cannot escape the CP by raising first to the specifier of the
matrix vP.

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[26]Pesetsky (2010) makes use of the idea that when a head that triggers the spellout of a phase is merged,
that head can assign case into the phase before spellout takes place.

(90)   *John T [$_{vP}$ t v seems [$_{CP}$ (that) t is singing.]]

At this point, it is unclear that PIC$_{no-edge}$ is the way to go. However, it is worth exploring constraints that are intermediate in strength between PIC$_{strong}$ and PIC$_{weak}$, of which PIC$_{no-edge}$ is an example.

2.6 *-liq* CPs are not weak phases

In this section, I provide evidence against an alternative account of the availability of agreement and genitive case assignment across a CP boundary in Uyghur. Recall from section 2.1 that it has commonly been assumed that v can be weak, where a vP headed by weak v does not count as a (strong) phase for the purposes of the PIC. Thus, for example, if raising v is weak, a raising operation can cross the vP boundary without violating PIC$_{strong}$.

(91)   Chomsky's (1998) Phase Impenetrability Condition (PIC$_{strong}$):
        In phase α with head H, the domain of H is not accessible to operations outside α; only H and its edge are accessible to such operations.

(92)   Raising across weak v:
        John T [$_{vP}$ seems [t to be singing.]]
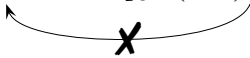
I argued in section 2.1 that once we adopt PIC$_{weak}$, we should discard the notion of weak v. Nevertheless, the Uyghur evidence presented so far has an alternate account: perhaps *-liq* (and its phonologically null variant) is a weak C. Agreement and genitive case-assignment across a *-liq*-clause boundary would then be consistent with PIC$_{strong}$.

(93)   N [$_{CP}$ [subject-gen . . .] *-liq*]

The existence of weak C, while not widely assumed, has been the subject of several recent proposals (Sabel 2006; Gallego 2007; Gallego and Uriagereka 2007; Fortuny 2008; Richards 2007b, to appear; Wenger 2009), often accompanied by conceptual motivations. However, empirical evidence has been scant.[27] The idea that there are no weak phases is conceptually appealing. In this section, I argue on *empirical* grounds that *-ran-*(*liq*) clauses in Uyghur are not weak CPs.

Recall the English contrast discussed in section 2.1: raising out of an embedded TP in (94a) is possible, while raising out of an embedded CP in (94b) is not.

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[27]See appendix A for a discussion of relevant work on Bantu and Brazilian Portuguese.

(94) a. Raising from TP:
           John seems [$_{TP}$ t to be singing.]

      b. No raising from CP:
           * John seems [$_{CP}$ (that) t is singing.]

In this section, I argue that the Uyghur contrast in (95) is the same as the English contrast in (94): raising out of a nominalized vP in (95a) is possible, while raising out of a CP in (95b) is not.[28]

(95) a. Raising out of vP permitted:
           Mehemmet-(nɪŋ) [$_{vP}$ t oqu]-ʃ-i   kirek
           Mehemmet-(gen) [$_{vP}$ t read]-nliz-3.poss necessary

           'Mehemmet has to read.'

      b. Raising out of *-liq* CP prohibited:

           ∗Mehemmet-(nɪŋ) [$_{CP}$ t oqu-wat-qan-liq   ]-i   kirek
           Mehemmet-(gen) [$_{CP}$ t read-prog-RAN-C]-3.poss necessary

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

In chapter 1, I argued extensively that *kirek* ('necessary'), seen in (95), is obligatorily a raising predicate. If *-liq* is a weak C, neither version of the PIC will distinguish raising out of an *-ish* phrase (allowed) from raising out of a *-ran-*(*liq*) clause (prohibited). The contrast in (95) thus provides strong evidence that *-ran-*(*liq*) CPs are indeed (strong) phases, as has been assumed above.

   Note that the *-liq* clause in (95) is not embedded by an overt head noun. In section 2.6.1 below, I argue that the clauses discussed here, when they do not have overt embedding nouns, are embedded by *null* nouns. In section 2.6.2, I present an analysis of the lack of CP embedding by raising predicates, and show that the PIC$_{weak}$ accounts for the contrast in (95). Assuming that C in *-ran-*(*liq*) clauses is weak, on the other hand, gives us no purchase on this data. In section 2.6.3, I show that CP embedding by raising adjectives (which are modal adjectives) is ruled out for syntactic reasons, and not for semantic ones. In section 2.6.4, I discuss a type of clause marked with *-liq* that does not contain the *-ran* suffix (as do all the clauses presented above) and is not a CP.[29]

2.6.1   Null nouns

The key data discussed in this section involves embedded clauses without overt head nouns. In this subsection, I present an analysis of relative clauses and noun complement clauses

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[28]As discussed in chapter 1, the embedded clause in (95a) is probably slightly larger than a vP (a γP). What is crucial here is that it is smaller than a CP.

[29]Sections 2.6.2 through 2.6.4 are based primarily on my own research, rather than on joint work with Jeremy Hartman that forms the basis of the rest of this chapter.

without overt head nouns. In particular, I argue that such clauses are embedded by null head nouns.

   In a number of environments, *-ran*-(*liq*) clauses can be seen without an overt embedding noun. These environments include verb complements, adjective complements, postposition complements, and sentential subjects, as illustrated in examples (96) through (99).

(96)   Verb complement:
       Ötkür [**Ajgül-nuŋ** ket-ken-(lik)-**i**-ni   ] bil-i-du/di-d-i
       Ötkür [**Aygül-gen** leave-RAN-(LIQ)-**3.poss**-acc] know-non.past-3/say-past-3

       'Ötkür knows/said that Aygül left.'

(97)   Adjective complement:
       men [**Tursun-niŋ** tamaq-ni yi-gin-**i**-dın   ] χuʃal
       I   [**Tursun-gen** food-acc eat-RAN-**3.poss**-abl] happy

       'I am happy that Tursun ate the food.'

(98)   Postposition complement:
       [**Tursun-niŋ** ket-ken-(lik)-**i**   ] utʃun,   men tamaq ji-d-im
       [**Tursun-gen** leave-RAN-(LIQ)-**3.poss**] because, I   food   eat-past-1sg

       'Because Tursun left, I ate.'

(99)   Sentential subject:
       [**sen-iŋ**   kel-gen-(liq)-**iŋ**   ] meni χuʃal kıl-d-i
       [**you-gen** come-RAN-(LIQ)-**2sg.poss**] I-acc happy do-past-3

       'Your coming made me happy.'

The idea that some subordinate clauses are embedded by null head nouns has been proposed before in the Altaic literature. (See Lees (1965), Aygen (2002) for Turkish; Maki and Uchibori (2008) for Japanese, but see also Kornfilt (1984, 2003) for arguments against this analysis for Turkish and Takahashi (2009) for arguments against this analysis for Japanese.) In this section, I argue that Uyghur subordinate clauses *are* embedded by null head nouns. This analysis is empirically motivated by similarities between null nouns and their overt counterparts. To illustrate, I propose that in (96) (repeated as (100) below), the embedded clause is a complement to a null head noun, which is then embedded by the verb. The null head noun is the real host of the agreement and case morphemes that morphologically show up on the clause. Uyghur embedded clauses of the type discussed here are *always* embedded by nouns, either overt or covert.

(100)   Structure of an embedded clause:

Ötkür [**Ajgül-nuŋ** ket-ken-(lik)-**i**-ni   ] bil-i-du/di-d-i
Ötkür [**Aygül-gen** leave-RAN-(LIQ)-**3.poss**-acc] know-non.past-3/say-past-3

'Ötkür knows/said that Aygül left.'

```
                          DP
                         /  \
                       NP    D
                      /  \
                    CP    Ø_N-i-ni
                   /  \   Ø_N-3.poss-acc
        Ajgül-nuŋ ket-ken-(lik)
        Aygül-gen leave-RAN-(LIQ)
```

The proposed analysis has the major advantage of keeping the locus of possessor agreement and the licensing of genitive subjects uniform across all CP embedded clauses. Agreement with genitive subjects is always on an external head noun, and genitive case on these subjects is always licensed by the head noun. In sections 2.6.1.1 and 2.6.1.2, I provide empirical support for the null head noun proposal. In particular, I show that null head nouns can be replaced by overt head nouns, that null nouns share idiosyncratic properties of their overt counterparts, and that clauses with null head nouns track the generalization that only complement clauses can be marked with *-liq*.

2.6.1.1   The overt head noun test

In the environments where I propose that a null head noun is present, it is always possible to make the null noun overt. I illustrate this for complement clauses to verbs in (101) through (104).

(101)   Null noun in complement to a verb:

Ötkür [**Tursun-niŋ** tamaq yi-gen   ] **-**Ø_N**-i**-ni
Ötkür [**Tursun-gen** food   eat-RAN] **-**Ø_N**-3.poss**-acc
bil-i-du/di-d-i
know-non.past-3/say-past-3

'Ötkür knows/said that Tursun ate food.'

(102)   Overt noun in complement to a verb:
Ötkür [**Tursun-niŋ** tamaq yi-gen   ] **heqiqet-i**-ni
Ötkür [**Tursun-gen** food   eat-RAN] **fact-3.poss**-acc

bil-i-du/di-d-i
know-non.past-3/say-past-3

'Ötkür knows/said the fact that Tursun ate food.'

(103)   Null noun with an embedded question:
men [**Ajgül-nuŋ** qatʃan ket-ken-(lik)   ] **-∅N-i**-ni   sordum
I   [**Aygül-gen** when   leave-RAN-(LIQ)] **fact-3.poss**-acc asked

'I asked when Aygül left.'

(104)   Overt noun with an embedded question:
men [**Ajgül-nuŋ** qatʃan ket-ken-(lik)   ] **heqiqet-i**-ni   sordum
I   [**Aygül-gen** when   leave-RAN-(LIQ)] **fact-3.poss**-acc asked

'I asked when Aygül left.'

As far as I am aware, overt head nouns are *always* available in clauses like those above. This is suggestive: clauses that are not embedded by null nouns can be incompatible with overt nouns. Note in particular that the English counterparts to some of the above examples with overt nouns are ungrammatical. Thus, unlike the Uyghur verb *didi* ('said'), seen in (102), the English verb *said* cannot take a complement headed by *fact*. Nor can *fact* embed a question, as it does in the Uyghur example in (104).[30]

(105)   a.   *Ötkür said the fact that Tursun ate food.
         b.   *I asked the fact when Aygül left.

The correspondence between null and overt head nouns in the complement of an adjective is shown in (106) and (107).

(106)   Null noun in complement to an adjective:
men [**Tursun-niŋ** tamaq-ni yi-gin   ] **-∅N-i**-din   χuʃal
I   [**Tursun-gen** food-acc eat-RAN] **-∅N-3.poss**-abl happy

'I am happy that Tursun ate the food.'

(107)   Overt noun in complement to an adjective:
men [**Tursun-niŋ** tamaq-ni yi-gin   ] **heqiqet/χever-i**-din χuʃal
I   [**Tursun-gen** food-acc eat-RAN] **fact/news-3.poss**-abl happy

'I am happy with the fact/news that Tursun ate the food.'

In this section, we saw that overt nouns can be inserted in the environments where I propose null nouns. I have found no environments in Uyghur where an overt noun *cannot* be inserted. In the next section, I further demonstrate that the proposed null nouns behave just like their overt counterparts.

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[30]*Heqiqet* ('fact') seems to be semantically bleached in these examples.

2.6.1.2 Null nouns share properties of their overt counterparts

Idiosyncratic properties   Certain head nouns impose idiosyncratic restrictions on their embedded clauses. Genitive subjects of relative clauses are generally in free variation with unmarked subjects of relative clauses. However, unmarked subjects are strongly preferred in relative clauses headed by the overt noun *waqit* ('time'), as (108) shows.[31]

(108)   Restriction against genitive subjects with *waqit* ('time'):

[sen-**(??iŋ)**   ket-ken   ] waqit-(??iŋ)   saet jette idi
[you-**(??gen)** leave-RAN] time-(??2sg.poss) hour 7   was

'The time that you left at was 7 o'clock.'

The null noun counterpart of *waqit* ('time') imposes the same restriction as the overt noun, as shown (109) and (110) show.

(109)   Restriction against genitive subjects with *waqit* ('time') and its null counterpart:
   a.   [sen-**(*iŋ)**   ket-ken   ] waqit-(*iŋ)-din   kijin, men tamaq
         [you-**(*gen)** leave-RAN] time-(*2sg.poss)-abl after, I   food
         ji-d-im
         eat-past-1sg
         'After the time when you left, I ate.'
   b.   [sen-**(*iŋ)**   ket-ken-(*iŋ)-din   ] kijin, men tamaq ji-d-im
         [you-**(*gen)** leave-RAN-(*2sg.poss)-abl] after, I   food   eat-past-1sg
         'After you left, I ate.'

(110)   Restriction against genitive subjects with *waqit* ('time') and its null counterpart:
   a.   [sen-**(??iŋ)**   ket-ken   ] waqit-(??iŋ)-din   hader, men tamaq
         [you-**(??gen)** leave-RAN] time-(??2sg.poss)-abl until, I   food
         ji-d-im
         eat-past-1sg
         'Until the time when you left, I ate.'
   b.   [sen-**(*iŋ)**   ket-ken-(*iŋ)-din   ] hader, men tamaq ji-d-im
         [you-**(*gen)** leave-RAN-(*2sg.poss)-abl] until, I   food   eat-past-1sg
         'Until you left, I ate.'

If there is no null noun in (109b) and (110b), the ungrammaticality of the genitive-subject variant is unrelated to the ungrammaticality of the genitive subject in (109a) and (110a). On the other hand, if a null equivalent of *waqit* ('time') is present, the ungrammaticality of the genitive subject in the (b) examples is the same phenomenon as the ungrammaticality of the genitive subject in the (a) examples. This is a highly desirable consequence of the null noun analysis.

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[31]I assume that the restriction against genitive subjects in these relative clauses has to do with the theta-role assigned to the head noun (*waqit* ('time')). Unfortunately, the effect shown here has been absent in some elicitation sessions, so I have been unable to elicit the relevant minimal pairs.

Noun complements vs. relative clauses As previously discussed in section 2.4.1 and shown again below, the complementizer *-liq* is optionally present in noun complements, but is incompatible with relative clauses.

(111)   *-liq* possible in a noun complement clause:
[Tursun-niŋ ket-ken-**(liq)**   ] heqiqet-i   utʃun,   men tamaq ji-d-im
[Tursun-gen leave-RAN-**(LIQ)**] fact-3sg.poss because, I   food   eat-past-1sg

'Because of the fact that Tursun left, I ate.'

(112)   No *-liq* in a relative clause:
[sen ket-ken-**(*liq)**   ] waqit-dɨn kijin, men tamaq ji-d-im
[you leave-RAN-**(*LIQ)**] time-abl   after, I   food   eat-past-1sg

'After the time when you left, I ate.'

We also find that *-liq* is allowed in embedding by some postpositions and not others, as (113) and (114) illustrate.[32]

(113)   *-liq* possible:
[Tursun-niŋ ket-ken-**(lik)**-i   ] utʃun,   men tamaq ji-d-im
[Tursun-gen leave-RAN-**(LIQ)**-3] because, I   food   eat-past-1sg
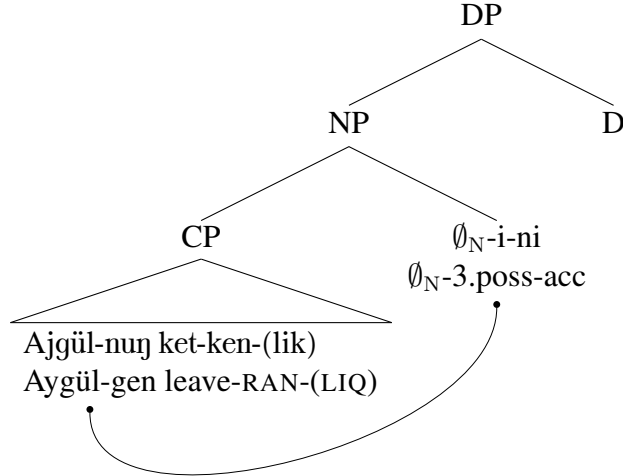
'Because Tursun left, I ate.'

(114)   No *-liq*:
[sen ket-ken-**(*liq)**-dɨn   ] kijin, men tamaq ji-d-im
[you leave-RAN-**(*LIQ)**-abl] after, I   food   eat-past-1sg

'After you left, I ate.'

The contrast between (113) and (114) is not an idiosyncratic property of different postpositions. Rather, *-liq* is prohibited precisely in those contexts where the noun phrase that combines with the postposition contains a relative clause rather than a clausal complement. Given the proposal that the clauses in (113) and (114) are embedded by null nouns, the contrast between (113) and (114) is exactly the same as the contrast between (111) and (112). In (113), the null noun embeds a complement clause, and *-liq* is therefore permitted. In (114), the null noun takes a relative clause, and *-liq* is banned. Without the null noun proposal, the contrast between (113) and (114) would remain mysterious.[33]

I have thus argued that the clauses discussed in this chapter are uniformly embedded by nouns, even in examples like (115), where no overt noun is present.

---

[32]As Miyagawa (2011a) discusses, *because* clauses behave differently from, e.g., *after* clauses in exhibiting main-clause phenomena. However, this would not explain the contrast in (113) and (114), as *-liq* does not occur in main clauses.

[33]An alternative hypothesis, suggested by Marcel den Dikken (p.c.), is that *-liq* is impossible in clauses that contain a *wh-* or time-operator at their edge. This hypothesis would account for the fact that relative clauses and clauses embedded by temporal postpositions are incompatible with *-liq*. However, this hypothesis is falsified by examples like (71b), repeated below, where an an embedded *wh*-question is compatible with *-liq*:

(115)   Null noun in complement to a verb:
Ötkür [**Tursun-niŋ** tamaq yi-gen   ] **-∅_N-i**-ni
Ötkür [**Tursun-gen** food   eat-RAN] **-∅_N-3.poss**-acc
bil-i-du/di-d-i
know-non.past-3/say-past-3

'Ötkür knows/said that Tursun ate food.'

The presence of null nouns is suggested by the fact that an overt noun can always be inserted in these constructions. The null noun hypothesis furthermore explains why certain postpositions seem to disallow genitive embedded subjects – the noun that heads the clause embedded by these postpositions is a covert variant of *waqit* ('time'), which cannot take genitive-subject clauses. Finally, I showed that the fact that certain postpositions cannot embed clauses marked by *-liq* also reduces to an earlier observation, namely that *-liq* marks complement clauses, but not relative clauses.

2.6.2   No raising out of *-liq* CPs in Uyghur

In this section, I show that raising predicates cannot embed *-ran-*(*liq*) clauses. This indicates that *-ran-*(*liq*) clauses are indeed phases, and that PIC_{weak} is active in Uyghur.

Recall from chapter 1 that certain modal adjectives (*kirek* ('necessary'), *lazim* ('necessary'), *mumkin* ('possible')) are raising predicates in Uyghur, while other adjectives (including *muhim* ('important')) are not. Both types of adjectives can embed *-ish* phrases, which are nominalized clauses without tense or aspect marking, as discussed in chapter 1.

(116)   a.   Non-raising predicate:
Mehemmet-niŋ oqu-ʃ-i   muhim
Mehemmet-gen read-nliz-3.poss important

'Mehemmet reading is important.'
b.   Raising predicate:

Mehemmet-(niŋ) oqu-ʃ-i   kirek
Mehemmet-(gen) read-nliz-3.poss necessary

'Mehemmet reading is necessary.'

In chapter 1, I proposed that the nominalized clause in (116a) is a DP, while the nominalized clause in (116b) is an NP. The matrix T has an EPP feature that attracts the closest DP. In (116a), this DP is the *-ish* phrase. In (116b), because the *-ish* phrase is functionally impoverished, the highest DP is the *subject* of the *-ish* phrase. The embedded subject in (116b) thus obligatorily raises to the specifier of the matrix TP.

(i)   *-liq* possible in embedded questions:
men [Ajgül-nuŋ **qatʃan** ket-ken-(**lik**)   ] heqiqet-i-ni   sordum
I   [Aygül-gen **when**   leave-RAN-(**LIQ**)] fact-3.poss-acc asked

'I asked when Aygül left.'

(117)   Raising in Uyghur (structure of (116b)):

```
                         TP
             _____
            /                          \
          DP                            T'
        __/\__                      ____/\____
       /      \                    /          \
   qïz-(niŋ)                      vP            T
   girl-(gen)                 ___/\___
                             /        \
                        AP/PredP       v
                      ___/\___
                     /        \
                   NP          kirek
                ___/\___       necessary
               /        \
         EPP  vP          N
             /\          -iʃ-i
            /  \         -nliz-3.poss
           t    v'
                /\
               /  \
              kil
              come
                    (case)
```
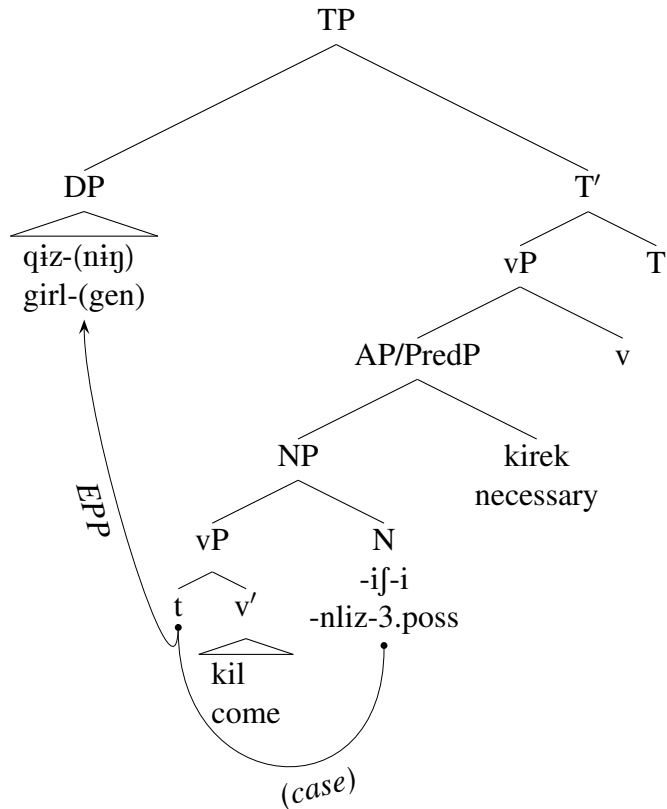
A non-raising adjective can embed a null noun with a CP complement, but a raising adjective cannot, as (118) and (119) show.

(118)   CP under non-raising adjective:
   a.   Mehemmet-niŋ hazir oqu-wat-qan-liq-i   muhim
         Mehemmet-gen now read-prog-RAN-C-3.poss important
         'Mehemmet reading right now is important.'
   b.   Mehemmet-niŋ tünügün oqu-ʁan-(liq)-i   muhim
         Mehemmet-gen yesterday read-RAN-(C)-3.poss important
         'Mehemmet having read yesterday is important.'
   c.   men-iŋ oqu-ʁan-liq-im   muhim
         I-gen   read-RAN-C-1sg.poss important
         'My having read is important.'

(119)   No CP under raising adjective:
   a.   *Mehemmet-(niŋ) oqu-wat-qan-liq-i   kirek/mumkin
         Mehemmet-(gen) read-prog-RAN-C-3.poss necessary/possible
         intended: 'Mehemmet {has to}/might be reading (right now).'
   b.   *Mehemmet-niŋ oqu-ʁan-i   kirek/lazim
         Mehemmet-gen read-RAN-3.poss necessary
         intended: 'Mehemmet has to have read.'

113

I propose that (119) is ungrammatical because raising of the embedded subject is ruled out by the PIC, specifically the PIC$_{weak}$. Consider the structure of (119a), presented in (120).

(120)   Raising out of CP:
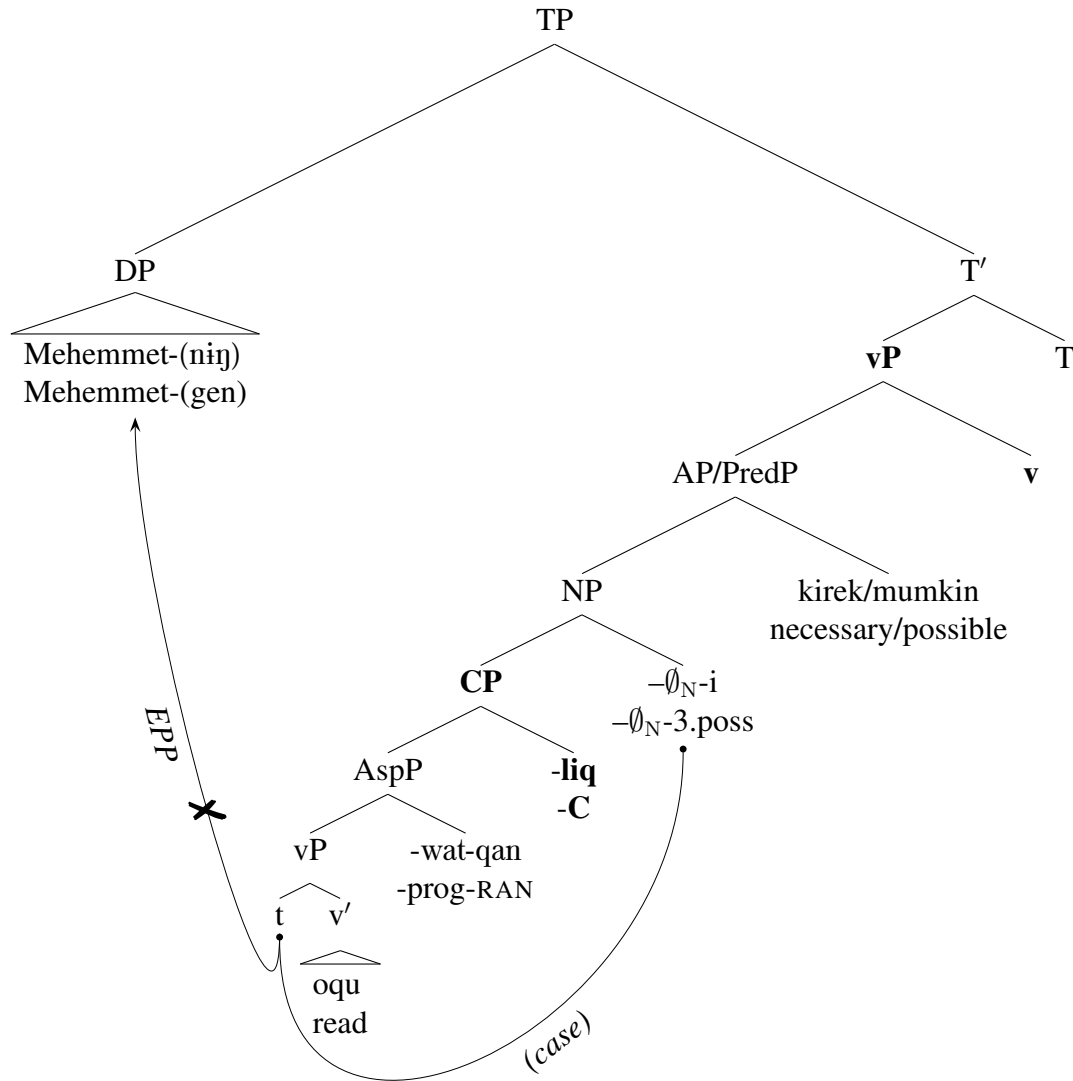
Let us assume that the embedded CP is a (strong) phase, as is the matrix vP. (Recall that the latter assumption is also necessary for the PIC$_{weak}$ to rule out raising out of CP in English.) PIC$_{weak}$ blocks raising in (120).

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

The domain of the phase head C in the embedded clause in (120) is AspP. AspP becomes opaque immediately upon the merger of the next phase head, which is the matrix v. Consequently, raising of the embedded subject to the specifier of the matrix TP is impossible,

regardless of whether movement could proceed through the specifier of vP.[34] The EPP property of the matrix T thus cannot be satisfied, and as a result the construction is ungrammatical. The assumption that *-liq* (and its null variant) is *not* a weak C is necessary in order for (120) to be correctly ruled out by the PIC$_{weak}$.[35] Raising in (120) is blocked in the same way as raising in the English example in (122).

(122)   *John T [$_{vP}$ seems [$_{CP}$ (that) t is singing.]]
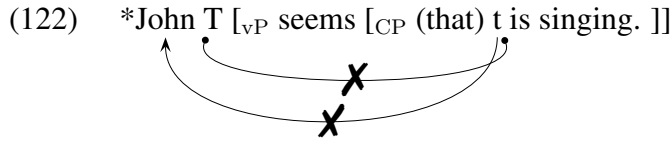
The embedded subject in (122) is separated from the matrix T by two phase boundaries. The complement of the embedded C becomes opaque when matrix v is merged, so PIC$_{weak}$ prohibits the matrix T from attracting the embedded subject.[36] In my analysis, it is incidental that the construction discussed in this section involves pure EPP movement, while the constructions presented above involve Agree and no movement to the probe. As illustrated in (123), what is crucial is the location of the probe, and the type of relationship established.

(123)   a.   Agree with N (genitive subject licensing):   N [$_{CP}$ subj]

          b.   EPP attraction by T (raising out of TP/vP):   T [$_{vP}$ subj]

          c.   EPP attraction by T (no raising out of CP):   T [$_{vP}$ [$_{CP}$ subj]]
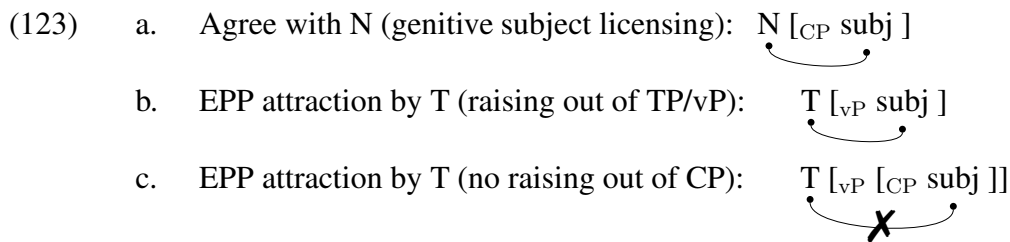
     In this section, I have demonstrated that the clauses discussed in this chapter block raising, and are thus true (strong) phases. In the following subsection, I address two potential objections to this argument. In section 2.6.3, I show that aspect *can* be expressed under modal adjectives, and thus the examples discussed in this section are ruled out for *syntactic* reasons. In section 2.6.4, I show that clauses marked by *-liq* but not by *-ran*, which *can* be embedded by raising predicates, are fundamentally different from *-ran-(liq)* clauses.

2.6.3   Expressing aspect under raising adjectives

An aspect-containing clause *may* be embedded by a modal adjective, as (124) shows. This indicates that embedding of *-ran-(liq)* clauses by modal adjectives is prohibited for syntactic reasons, and not semantic ones.

---

[34]I crucially assume that the specifier of NP is not a valid intermediate position for raising.

[35]If we assumed PIC$_{strong}$, the embedded clause in (119) would still need to be a phase in order for the right predictions to be made. Otherwise, PIC$_{strong}$ could not distinguish permissible raising from *-ish* phrases from prohibited raising from *-ran-(liq)* clauses.

[36] Note that raising out of a *-ran-(liq)* clause is not simply blocked by the presence of a null noun, which is closer to T than the subject of the embedded clause. As I showed in chapter 1, the clauses that *permit* raising are also nominal.

(124)   Aspect under possibility modal:
Mehemmet oqu-wat-qan   bul-iʃ-i   mumkin
Mehemmet read-prog-RAN be-nliz-3.poss possible

'Mehemmet might be reading.'

(125)   Aspect under necessity modal:
   a.   siler-(niŋ)   oqu-wat-qan   bul-iʃ-iŋ-lar   kirek/lazim
          you.pl-(gen) read-prog-RAN be-nliz-2.poss-pl necessary
          'You need to be reading.'
   b.   sen-(iŋ)   bu kitap-ni   oqu-ʁan bul-iʃ-iŋ   kirek
          you-(gen) this book-acc read-RAN be-ISH-2sg.poss necessary
          'You must've read this book.' (epistemic)

I argue below that the subject raises out of the *-ish* phrase in examples like those given in
(124) and (125). I propose the following structure for (125b).

(126)   Structure for (125b):

(*genitive*)
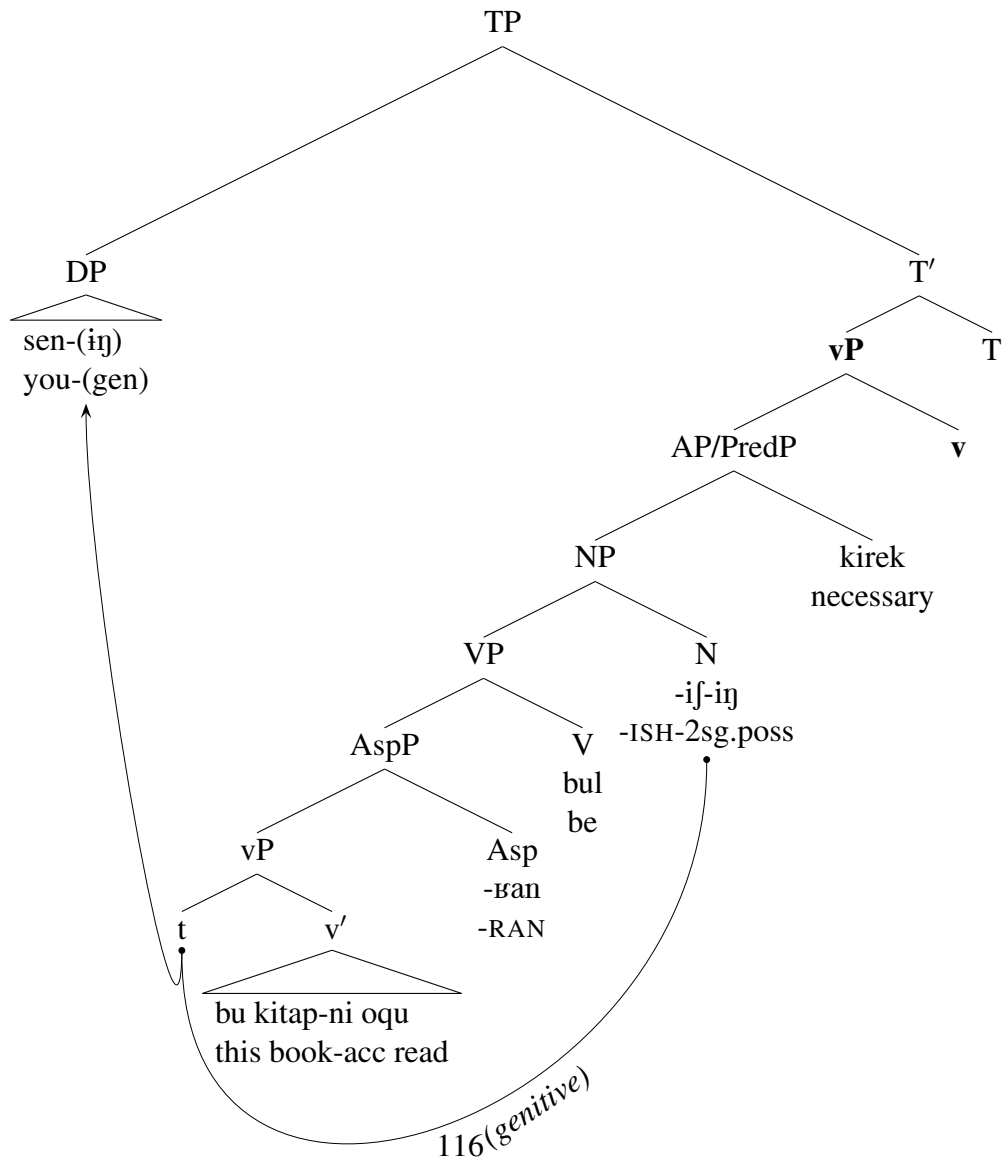
For raising to be possible in (126) under PIC$_{weak}$, it is crucial that there is only one phase boundary between the base position of the embedded subject and the matrix subject position that it raises to. Matrix v is such a phase boundary. An essential part of my proposal is thus that the clause embedded under *bul* ('be') is *not* a CP. This is confirmed by the fact that this clause cannot be marked with the overt form of C, *-liq*.

(127) No *-liq* on embedded clause:
  Ötkür-(niŋ) "jil-lar-ʁa dʒavap-ni" oqu-ʁan-**(*liq)** bul-iʃ-i kirek
  Ötkür-(gen) "year-pl-dat response-acc" read-RAN-**(*LIQ)** be-ISH-3.poss nec.

  'Ötkür must have read "Response to Years".' (epistemic)

(128) No *-liq* on embedded clause:
  Ötkür-nɨŋ "jil-lar-ʁa dʒavap-ni" oqu-ʁan-**(*liq)** bul-iʃ-i mumkin
  Ötkür-gen "year-pl-dat response-acc" read-RAN-**(*LIQ)** be-ISH-3.poss possible

  'Ötkür might have read "Response to Years".'

(129) No *-liq* on embedded clause (non-raising predicate):
  Ötkür-nɨŋ "jil-lar-ʁa dʒavap-ni" oqu-ʁan-**(*liq)** bul-iʃ-i muhim
  Ötkür-gen "year-pl-dat response-acc" read-RAN-**(*LIQ)** be-ISH-3.poss import.

  'Ötkür having read "Response to Years" is important.'

Turning to evidence of raising, I now demonstrate that the topic-marking, focus-marking, and exceptional case marking tests from chapter 1 all show that the subject of the embedded clause raises out of the embedded clause. As seen in (130), the topic marker can follow the raised subject, but cannot follow the entire *-ish* phrase (or, unsurprisingly, the *-ran* phrase). As discussed in chapter 1, this indicates that the subject raises out of the *-ish* clause.

(130) Topic marker (unmarked subject):
  sen **(?bolsa-ŋ)** meʁiz ji-gen **(*bolsa)** bul-iʃ-iŋ **(*bolsa)** kirek
  you **(?top-2sg)** peanut eat-RAN **(*top)** be-ISH-2sg.poss **(*top)** necessary

  'You must have eaten a peanut.' (epistemic)

(131) Topic marker (genitive subject):
  sen-iŋ **(bolsa)** meʁiz ji-gen **(*bolsa)** bul-iʃ-iŋ **(*bolsa)** kirek
  you-gen **(top)** peanut eat-RAN **(*top)** be-ISH-2sg.poss **(*top)** necessary

  'You must have eaten a peanut.' (epistemic)

The focus marker *mu* ('also'), which attaches to a constituent containing the focused phrase, cannot attach to the *-ish* phrase.[37] This again indicates that the subject moves out of the *-ish* clause.

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[37]The *-ran* phrase also cannot be marked with *mu*, but this is independently ruled out, as *mu* can only mark nominals:

(132)   Focus marker:

Ötkür meʁiz ji-gen   bul-iʃ-i   kirek.   *Ajgül*-(mu) meʁiz
Ötkür peanut eat-RAN be-ISH-3.poss necessary. *Aygül*-(**MU**) peanut
ji-gen-(*mu)   bul-iʃ-i-(*mu)   kirek.
eat-RAN-(***MU**) be-ISH-3.poss-(***MU**) necessary.

'Ötkür must have eaten a peanut. *Aygül* also must have eaten a peanut.'

Finally, in the ECM environment discussed in chapter 1, the subject of an embedded clause can be marked accusative and thereby receive a non-shifted interpretation. In the construction under consideration, the subject of the clause embedded by *kirek* ('necessary') raises and can therefore be accusative-marked. The *-ish* clause itself cannot be marked accusative.[38]

(133)   Embedding without ECM:

doχtur [men-(iŋ) meʁiz ji-gen   bul-iʃ-im   kirek   ] didi
doctor [I-(gen)   peanut eat-RAN be-ISH-1sg.poss necessary] said

✗ 'The doctor said that I must've eaten a peanut.' [non-shifted]
✓ 'The doctor said that he must've eaten a peanut.' [shifted]

(134)   ECM accusative on subject:

doχtur [**meni** meʁiz ji-gen   bul-iʃ-iŋ   kirek   ] didi
doctor [**I-acc** peanut eat-RAN be-ISH-2sg.poss necessary] said

✓ 'The doctor said that I must've eaten a peanut.' [non-shifted]
✗ 'The doctor said that he must've eaten a peanut.' [shifted]

(i)   a.   No *mu* on verbs:
            Ötkür oqu-d-i   we jaz-d-i-(*mu)
            Ötkür read-past-3 and write-past-3-(***MU**)

            'Ötkür read and (***also**) wrote.'
       b.   No *mu* on adjectives:

            igiz qɨz eqilliq, we pakar-(***mu**) qɨz-(mu) eqilliq
            tall girl smart, and short-(***MU**) girl-(MU) smart

            'The tall girl is smart, and the short girl is also smart.'

[38]Since the *-ran* clause is not nominal, it of course cannot be marked accusative either:

(i)   *doχtur [men-(iŋ) meʁiz ji-gen-**ni**   bul-iʃ-iŋ   kirek   ] didi
        doctor [I-(gen)   peanut eat-RAN-**acc** be-ISH-2sg.poss necessary] said
        intended: 'The doctor said that I must've eaten a peanut.'

See Shklovsky and Sudo (to appear) for why if this construction were possible, 2sg (shifted) agreement on the *-ish* phrase would be expected.

(135)   No ECM accusative on clause:

*doχtur [men-(iŋ) meʁiz ji-gen   bul-iʃ-im-**ni**   kirek   ] didi
doctor [I-(gen)   peanut eat-RAN be-ISH-1sg.poss-**acc** necessary] said

intended: 'The doctor said that I must've eaten a peanut.'

In sum, an aspect-containing clause can be embedded under a raising adjective, so long as the clause does not contain a CP. Embedding of *-ran-*(*liq*) clauses by raising predicates is thus ruled out because the embedded subject cannot raise out of a CP phase.

2.6.4   *-liq* phases without *-ran* are not CPs

An interesting complication arises when we consider embedding of *-liq* phrases that do not contain an AspP (marked by *-ran*). A *-liq* phrase is used when the embedded clause contains negation, as in (136). (*-ish* phrases cannot host negation, as (137) shows.)

(136)   Negated *-liq* phrase:

Ötkür-niŋ oqu-**mas-liq**-i   muhim/kirek
Ötkür-gen read-**neg-LIQ**-3.poss important/necessary

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

(137)   No negated *-ish* phrase:

*Ötkür-niŋ oqu-**mas-iʃ**-i   muhim/kirek
Ötkür-gen read-**neg-nliz**-3.poss important/necessary

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

Crucially, the aspectless *-liq* phrase in (136) can be embedded by a raising adjective (*kirek* ('necessary')), and not just by a non-raising adjective (*muhim* ('important')). In section 2.6.4.1 below, I argue that the subject of a negated *-liq* phrase embedded by a modal adjective does, in fact, raise. This can be seen based on the availability of unmarked specific subjects, topic marker placement, and accusative marking in ECM constructions. Given the discussion above, it is surprising that the subject of a *-liq* phrase can raise – why is raising not blocked by PIC$_{weak}$?

I propose that the *-liq* of clauses without an AspP is not the same as the *-liq* of aspect-containing clauses. Rather, the *-liq* seen in this subsection is a nominalizing morpheme – it is the allomorph of *-ish* that appears when the nominalizer does not attach directly to the verb root.[39] As shown in section 2.6.4.2 below, properties that contributed to an analysis of *-ran-*(*liq*) clauses as CPs embedded by (sometimes null) nouns do not hold for *-liq* clauses without *-ran*. In the latter construction, *-liq* is *not* optional, and no overt noun can be inserted. In clauses without aspect, *-liq* thus patterns with the nominalizer *-ish*, and not with *-liq* the complementizer.

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[39]This analysis was proposed for *-liq* in general by Thomas (2009).

2.6.4.1 Raising out of *-liq* clauses

In this section, I show that the subject of an aspectless *-liq* clause embedded by a modal adjective raises. I present data on the availability of unmarked specific subjects in these clauses, topic marker placement, and accusative marking in ECM constructions.

As discussed in chapter 1, the ability of unmarked subjects to receive a specific interpretation can serve as a raising diagnostic. When the reduced nominalized clauses discussed in chapter 1 are embedded by *non-raising* predicates, an unmarked subject remains inside vP and must therefore receive a non-specific reading (Diesing 1992). Under a raising predicate, unmarked subjects move out of vP (and out of the embedded clause), and can therefore receive a specific interpretation. As shown in (138), an unmarked subject is possible in an aspectless *-liq* clause embedded by *kirek* ('necessary'). This contrasts with embedding by a non-modal adjective in (139), which is not compatible with specific unmarked subjects. This indicates that the subject (or at least an unmarked subject) of an aspectless *-liq* clause embedded by *kirek* ('necessary') raises out of vP, presumably to the matrix subject position.

(138) Unmarked specific subject:

    a.   Ajgül ket-mas-liq-i   kirek
           Aygül leave-neg-LIQ-3.poss necessary
           'It's necessary that Aygül not leave'

    b.   men æte   χet   jaz-mas-liq-im   mumkin
           I   tomorrow letter write-neg-LIQ-1sg.poss possible
           'I might not write a letter tomorrow.

(139) No unmarked specific subject:

    a.   Ajgül-*(niŋ) ket-mas-liq-i   muhim
           Aygül-*(gen) leave-neg-LIQ-3.poss important
           'It's important for Aygül not to leave tomorrow.'

    b.   men-*(iŋ) æte   χet   jaz-mas-liq-im   muhim
           I-*(gen)   tomorrow letter write-neg-LIQ-1sg.poss important
           'It's important for me not to write a letter tomorrow.'

The placement options for the topic marker in (140) show that subject raising out of a *-liq* phrase embedded by a modal adjective is obligatory.

(140) Obligatory raising out of a negated *-liq* phrase:

    a.   Ajgül-(nuŋ) (**bolsa**) oqu-mas-liq-i   (***bolsa**) kirek/lazim
           Aygül-(gen) (**top**)   read-neg-LIQ-3.poss (***top**)   necessary
           'It's necessary that Aygül not read.'

    b.   Ajgül (**bolsa**) oqu-mas-liq-i   (***bolsa**) mumkin
           Aygül (**top**)   read-neg-LIQ-3.poss (***top**)   possible
           'Aygül might not read.'

The subject of the embedded clause can be topicalized, whereas the entire clause including its subject cannot be. This indicates that the embedded subject raises out of the *-liq* clause. A negated *-liq* phrase under a raising predicate behaves just like an *-ish* phrase under a

raising predicate with respect to topicalization.

When the embedding predicate is the non-raising adjective *muhim* ('important'), the topic marker can directly follow the entire *-liq* clause, in contrast to the examples above.

(141)   Topicalized *-liq* clause:
        Ajgül-nuŋ oqu-mas-liq-i　　　(**?bolsa**) muhim
        Aygül-gen read-neg-LIQ-3.poss (**?top**)　important

        'It's important that Aygül not read.'

The topic marker can also appear inside the *-liq* clause under a non-raising adjective, as (142) shows. This contrasts with (143), where an *-ish* clause embedded by a non-raising adjective cannot contain a topic marker.

(142)   Two positions for the topic marker:
        Ajgül-(nuŋ) (**bolsa**) oqu-mas-liq-i　　　(**?bolsa**) muhim
        Aygül-(gen) (**top**)　read-neg-LIQ-3.poss (**?top**)　important

        'It's important that Aygül not read.'

(143)   One position for the topic marker:
        men-iŋ (***bolsa**) oqu-ʃ-im　　　(**bolsa**) muhim
        I-gen　(***top**)　read-nliz-1sg.poss (**top**)　important

        'It's important for me to read.'

I propose that the *-liq* clause in (142) is actually ambiguous between a small, non-phasal *-liq* clause and a true CP *-liq* clause. Standard *-ran-(liq)* clauses can host a topic marker, as (144) shows.

(144)   men [χet **bolsa** Ötkür-niŋ jaz-ʁan-(liq)-i-ni　　　] bil-i-men
        I　[letter **top**　Ötkür-gen write-RAN-(LIQ)-3.poss-acc] know-non.past-1sg
        'I know that a letter, Ötkür wrote.'

ECM constructions confirm that the subject of a *-liq* phrase embedded by a modal adjective raises. Recall that the subject of the embedded clause can be marked accusative in an ECM environment, and correspondingly receive a non-shifted interpretation. When the predicate in the embedded clause is a modal adjective, the subject of the *-liq* phrase can receive accusative case, whereas the *-liq* phrase itself cannot. This shows that the subject of the *-liq* phrase raises to the subject position of the embedded clause.

(145)   Modal adjective – accusative subject of *-liq* phrase possible:
        doχtur [**meni** oqu-mas-liq-iŋ　　　kirek　　] didi
        doctor [**I-acc** read-neg-LIQ-2sg.poss necessary] said

        ✗ 'The doctor said that he has to not read.' [shifted]
        ✓ 'The doctor said that I have to not read.' [non-shifted]

(146)   Modal adjective – accusative *-liq* phrase banned:

      *doχtur [men-{∅/niŋ/ni} oqu-mas-liq-iŋ-**ni**   kirek   ] didi
      doctor [I-{nom/gen/acc} read-neg-LIQ-2sg.poss-**acc** necessary] said

      intended: 'The doctor said that I have to not read.' [non-shifted]

Just as with the *-ish* clauses discussed in chapter 1, a non-raising adjective like *muhim* ('important') displays the opposite pattern.

(147)   Non-modal adjective – accusative subject of *-liq* phrase banned:

      *doχtur [**meni** oqu-mas-liq-iŋ   muhim   ] didi
      doctor [**I-acc** read-neg-LIQ-2sg important] said

      intended: 'The doctor said it's important for me not to not read.' [non-shifted]

(148)   Modal adjective – accusative *-liq* phrase possible:

      doχtur [men-iŋ oqu-mas-liq-im-**ni**   muhim   ] didi
      doctor [I-gen   read-neg-LIQ-1sg.poss-**acc** important] said

      'The doctor said it's important for me not to not read.' [non-shifted]

2.6.4.2   A whole other *-liq*

In this section, I argue that the *-liq* of clauses that do not contain an AspP can be a nominalizer, and not a complementizer that is further embedded by a null noun. This proposal is supported by the fact that unlike the complementizer *-liq*, the *-liq* embedded by raising adjectives is not optional. Furthermore, while *-ran-*(*liq*) clauses can always be embedded by overt head nouns, this is not the case for *-liq* clauses that do not contain *-ran*. The obligatory nature of *-liq* in the clauses under discussion is illustrated in (149).

(149)   *-liq* is obligatory:

    a.   men oqu-mas-***(liq)**-im   kirek
           I   read-neg-***(LIQ)**-1sg.poss necessary
           'My not reading is necessary.'
    b.   men-iŋ oqu-mas-***(liq)**-im   kirek/muhim
           I-gen   read-neg-***(LIQ)**-1sg.poss necessary/important
           'My not reading is necessary/important.'

-liq in (149) patterns with the nominalizer *-ish*, which cannot be omitted, and not with the complementizer *-liq*, which alternates with a null variant.

(150)   a.   Obligatory nominalizer:
        Ötkür-niŋ ket-**(iʃ)**-i   muhim
        Ötkür-gen leave-**(nliz)**-3.poss important

        'Ötkür leaving is important.'

    b.   Optional complementizer:

        [Ötkür-niŋ ket-ken-**(liq)**]-i   is-im-de   bar
        [Ötkür-gen leave-RAN-**(C)**]-3.poss memory-1sg.poss-loc exists

        'I remember Ötkür leaving.' (lit.: 'Ötkür leaving is in my memory.')

Furthermore, unlike *-liq* clauses containing aspect in (151), an aspectless *-liq* clause under a raising adjective cannot be embedded by an overt head noun in (152).

(151)   Overt head noun possible:
    a.   [sen kel-gen-(liq)   ] **heqiqet** muhim
        [you come-RAN-(LIQ)] **fact**   important
        'The fact of your coming is important.'
    b.   [sen-iŋ   kel-gen-(liq)   ] **heqiqet**-iŋ   muhim
        [you-gen come-RAN-(LIQ)] **fact**-2sg.poss important
        'The fact of your coming is important.'

(152)   No overt head noun:
    a.   *[men oqu-mas-liq] **heqiqet** kirek
        [I   read-neg-LIQ] **fact**   necessary
        intended: 'The fact of my reading is necessary.'
    b.   *[men-iŋ oqu-mas-liq] **heqiqet**-im kirek
        [I-gen   read-neg-LIQ] **fact**-1sg.poss necessary
        intended: 'The fact of my reading is necessary.'

In section 2.6.4.1 above, I have suggested that when an aspectless *-liq* clause is embedded by a *non-raising* adjective, *-liq* is ambiguous between a complementizer and a nominalizer. This is confirmed by (153), where an overt head noun embedding an aspectless *-liq* clause is permitted under a non-raising predicate.

(153)   Overt head noun possible:

    [sen-iŋ   kel-mas-liq   ] **heqiqet**-iŋ   muhim
    [you-gen come-neg-LIQ] **fact**-2sg.poss important

    'The fact that you didn't come is important.'

If *-liq* in (153) can be analyzed as a complementizer, the availability of nominal embedding is expected.[40]

---

[40]Given that I propose that aspectless *-liq* phrase complements of non-raising predicates are ambiguous between nominalized clauses and CPs embedded by null nouns, it is interesting that *-liq* is obligatory in these clauses.

In this section, I have argued that *-liq* in clauses not marked by *-ran* and embedded by a modal adjective is not a complementizer, but a nominalizer. These embedded clauses are not full CPs, and raising out of them is therefore permitted, just as raising out of *-ish* clauses is permitted. In clauses without *-ran* embedded by a non-modal adjective, *-liq* is ambiguous between a nominalizer and a complementizer.

2.6.4.3 Additional argument for raising: negative concord items

An additional argument for a raising (as opposed to control) analysis for modal adjectives comes from the behavior of negative concord items (NCIs). NCI subjects are licensed by negation on the embedded clause under modal adjectives, but not under control predicates. As shown in (154), the NCI *hitʃkim* ('nobody') requires negation in order to be licensed.

(154)   *hitʃkim* is an NCI:
          hitʃkim oqu-***(mi)**-d-i
          n-body read-***(neg)**-past-3

          'Nobody read.'

As (155) shows, an NCI subject of a negated *-liq* phrase embedded by *kirek* ('necessary') can be licensed by negation in the embedded predicate.

(155)   Raising adjective – NCI licensed by negation in embedded clause:
          hitʃkim-(niŋ) ket-**mas**-liq-i   kirek
          n-body-(gen) leave-**neg**-nliz-3.poss necessary

          'It's necessary that nobody leave'

Negation is able to license an NCI subject if, and only if, the subject is in the scope of negation at LF. A raised subject can reconstruct into the embedded clause, and can therefore be licensed by embedded negation.

(156)   NCI can reconstruct into the scope of negation in (155):

```
                              TP
                  _____
                 /                      \
               DP                        T′
              / \                       /  \
         hit∫kim-(niŋ)            AP/PredP    T
         n-body-(gen)            /       \
                               NP         kirek
                              / \        necessary
                         NegP    N
                        /  \     -liq-i
                      vP   -mas  -nliz-3.poss
                     / \   -neg
                    t   v′
                       / \
                      ket
                      leave
```
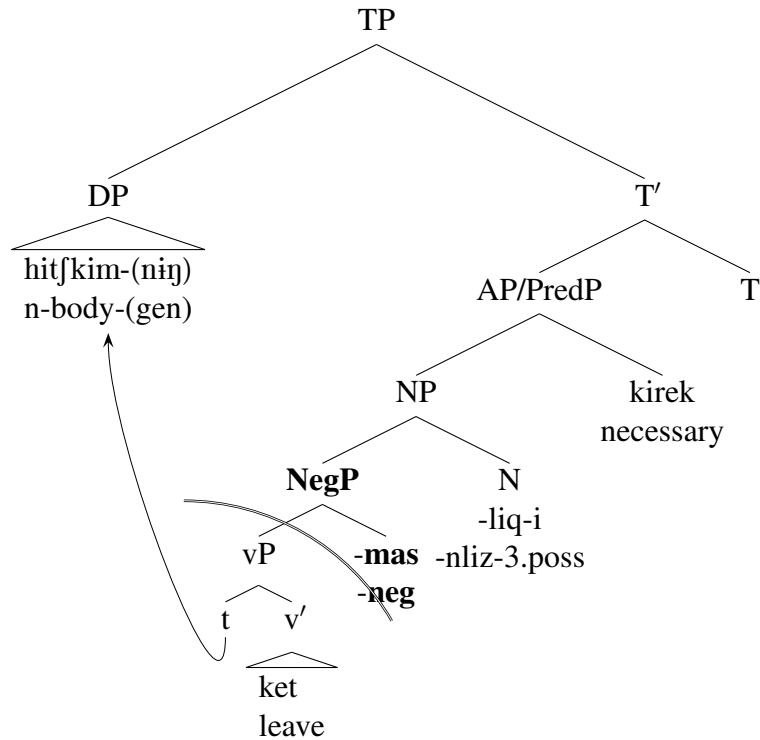
However, in a control construction, embedded negation will be unable to license the subject, because the subject is outside the scope of negation throughout the derivation. This is exactly what we find. In contrast to modal adjectives, only main clause negation licenses a subject NCI with control predicates. Modal adjectives thus have a raising structure.

(157)   Control construction – NCI licensed by main-clause negation:

hit∫kim kitap oqu-∫-qa   tiri∫-**mi**-d-i
n-body book read-nliz-dat try-**neg**-past-3

'Nobody tried to read a book.'

(158)   Control construction – NCI not licensed by negation in embedded clause:
   a.   *hit∫kim kitap oqu-**mas**-liq-qa   tiri∫-t-i
         n-body book read-**neg**-nliz-dat try-past-3
   b.   Ajgül kitap oqu-mas-liq-qa   tiri∫-t-i
         Aygül book read-neg-nliz-dat try-past-3
         'Aygül tried not to read a book.'

Since in control constructions a subject NCI is outside of the embedded clause at all stages of the derivation, it cannot be licensed by negation on the embedded clause.

(159)   NCI cannot reconstruct into the scope of negation in (158a):

```
                          TP
              ┌───────────┴───────────┐
             DP                       T′
          ┌───┴───┐            ┌───────┴───────┐
        hitʃkim              VP                 T
        n-body          ┌─────┴─────┐          -t-i
                       NP            V        -past-3
                   ┌────┴────┐     tiriʃ
                 NegP        N      try
              ┌───┴──┐    -liq-qa
             vP     -mas  -nliz-dat
          ┌───┴──┐  -neg
        PRO      v′
              ┌───┴───┐
            kitap oqu
            book read
```
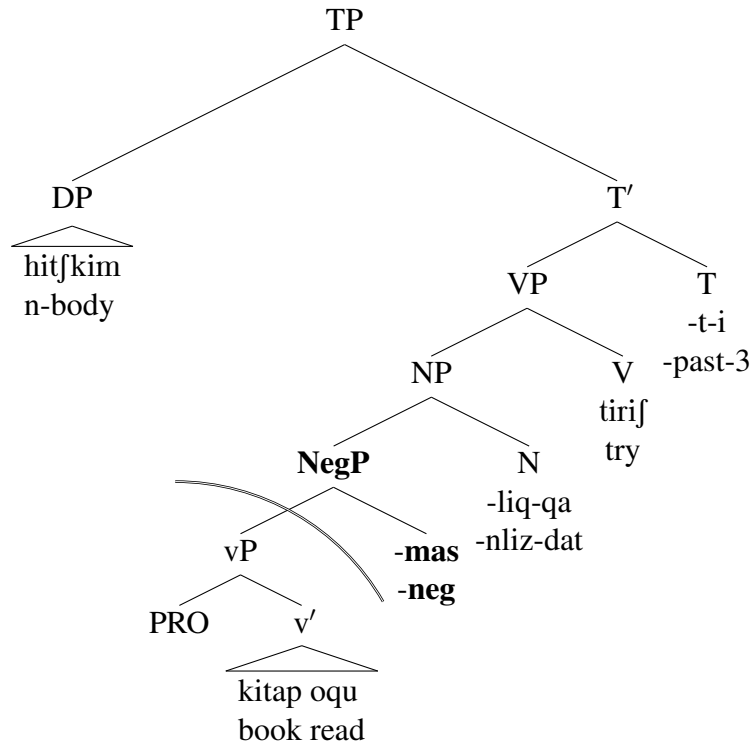
The data above thus shows that a raising structure is available for modal adjectives with an embedded negated *-liq* clause.

2.7   Conclusion

In this chapter, I have presented an empirical argument against Chomsky's (1998) strong version of the Phase Impenetrability Condition, and in favor of the weaker version of phase impenetrability given in Chomsky (2001).

(160)   a.   Chomsky's (1998) Phase Impenetrability Condition (PIC_{strong}):
In phase α with head H, the domain of H is not accessible to operations outside α; only H and its edge are accessible to such operations.
    b.   Chomsky's (2001) Phase Impenetrability Condition (PIC_{weak}):
In phase α with head H, the domain of H is accessible to operations outside α only until the next (strong) phase head is merged.

I showed that Agree in Uyghur (with corresponding genitive case assignment and overt agreement marking) can cross a CP boundary. This is consistent with PIC_{weak}, but not with PIC_{strong}. I presented evidence that the embedded subject that agrees with a clause-external functional head is indeed in the domain of C, and not at the edge of CP. I further demonstrated that the embedded clauses under discussion do act as phases: they block raising across two phase boundaries, as predicted by PIC_{weak}. I suggested that the concept of weak phase heads, which are ignored by the PIC, should be discarded altogether.
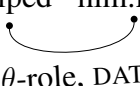
Chapter 3

Structural and non-structural case: Blurring the boundary

3.1   Introduction

In this chapter, I focus on the dichotomy between structural and non-structural case (Chomsky 1981, 1986). Structural case is assigned in a particular structural configuration, and is not associated with a theta-role. For example, subjects receive a theta-role (agent, experiencer, etc.) from v, and are assigned structural nominative case in the specifier of TP position. Objects receive structural accusative case independently of theta-role assignment. By contrast, it is generally assumed that if a head assigns non-structural case, it assigns a theta-role to the same noun phrase (Pesetsky 1982; Chomsky 1986, among others). For instance, in Icelandic, a verb can assign non-structural case to its complement, as (1) illustrates.

(1)   Lexical case and theta-role assigned by V:

    a.   Hún   hjálpaði honum.
         she.NOM helped   him.**DAT**

                 θ-role, DAT
        'She helped him.'

                                (*Icelandic*) (Thráinsson 2007: (4.58a))

Another much-discussed difference between structural and non-structural cases is *case-preservation*.

(2)   Case preservation:

    a.   Structural case is *lost* under A-movement
    b.   Non-structural case is *preserved* under A-movement.

In fact, neither property in (2) holds consistently across languages. Data from Uyghur provides counterexamples to both generalizations. The raising construction described in chapter 1 and illustrated again in (3) shows that *structural* (genitive) case assigned in the embedded clause can be preserved under A-movement. On the other hand, *non-structural*

dative case on the object of *qaramaq* ('to watch') in (4a) can optionally fail to be preserved in the passive in (4b).

(3)   Preservation of structural GEN case under raising in Uyghur:

Ötkür-niŋ bu ehtimal-da   [t$_{dat}$ oqu]-ʃ-i   kirek
Ötkür-**GEN** this probability-loc [t$_{dat}$ read]-nliz-3.poss necessary

'Ötkür probably has to read.'   (*Uyghur*)

(4)   Case loss in the passive in Uyghur:
   a.   men saŋa/*seni   qara-j-men
        I   you.**DAT**/*you.**ACC** watch-fut-1sg
        'I will watch you/take care of you.'   (*Uyghur*)
   b.   sen   qara-l-i-sen
        you.**NOM** watch-pass-fut-2sg
        'You will be watched/taken care of.'   (*Uyghur*)

Whenever case is described as "lost", there are two things this could really mean.

(5)   Options for "lost" case:
   a.   Lost case is assigned, but not pronounced.
   b.   Lost case is not assigned in the first place.

Strictly speaking, case is not exactly lost if it was never assigned, but I continue to use the term *loss of case* throughout this chapter.

   Icelandic patterns of lexical ("quirky") case fit well with this picture of structural vs. non-structural case. (Indeed, Icelandic quirky case data have been instrumental in inspiring treatments of non-structural case in the literature.) In this chapter, I highlight data that shows that the clean dichotomy between structural and non-structural case cannot always be maintained. In particular, I focus on quirky case constructions in Faroese, the language most closely related to Icelandic. In Faroese, quirky case on an object can be lost in the passive, as (6) illustrates (Smith 1996; Thráinsson et al. 2004; Jónsson 2009).

(6)   Loss of quirky case in the passive:
   a.   Politið   steðgaði **honum/*hann**.
        police-the stopped **him.DAT/*him.ACC**
        'The police stopped him.'
   b.   ***Honum**   varð steðgað.
        him.DAT was stopped.sup
        'He was stopped.'
   c.   **Hann**   varð steðgaður.
        he.NOM was stopped.NOM.sg.masc
        'He was stopped.'
                              (*Faroese*) (Thráinsson et al. 2004: (116))

As (6a) shows, the verb *steðgaði* ('stopped') requires a dative (DAT) object. In the passive, however, the DAT object becomes a nominative (NOM) subject. Faroese thus exhibits loss of *non-structural* dative case under A-movement, counter to the generalization presented in (2). My analysis of non-preservation of quirky case, as well as other properties of quirky case in Faroese, further breaks down the distinction between structural and non-structural case. I will propose that lexical case in Faroese is dependent on a higher functional projection, weakening the connection between the assignment of non-structural case and theta-role assignment.

In section 3.2, I introduce the system of case assignment proposed by Marantz (1991), which has been influential in analyses of quirky case in Icelandic. I show that Marantz's (1991) theory makes the right predictions for DAT-subject constructions in Icelandic. Section 3.3 is devoted to quirky-subject constructions in Faroese. I discuss two ways (agreement and object case) in which Faroese DAT-subject constructions differ from Icelandic DAT-subject constructions. I then propose an analysis of Faroese quirky subjects based on the tools developed by Sigurðsson and Holmberg (2008) in their treatment of dative intervention in Icelandic. I also discuss the alternative proposal that Faroese quirky subjects are covertly nominative (Sigurðsson 2003; Jónsson 2009).

After this, I turn to the issue of case preservation under A-movement. In section 3.4, I discuss preservation of quirky case in Icelandic. I suggest that examples of loss of quirky case in Icelandic offered by Svenonius (2005, to appear) are not entirely conclusive. However, as discussed in section 3.5, Faroese *does* provide clear examples of loss of quirky case under A-movement in the passive. I show that a syntactic treatment of the Faroese data is more promising than a morphological approach. In section 3.6, I show that the Uyghur data discussed in chapter 1 argue against the generalization that *structural* case is lost under A-movement. Section 3.7 concludes this chapter.

3.2   Background: Dependent case theory

In this section, I provide background on the theory of case assignment proposed by Marantz (1991). In section 3.2.1, I lay out Marantz's (1991) proposal. In section 3.2.2, I show that this proposal makes the right predictions for Icelandic DAT-subject constructions.

3.2.1   Dependent case theory (Marantz 1991)

In this section, I introduce the theory of case-assignment proposed by Marantz (1991). Marantz (1991) argues that morphological case is divorced from the licensing properties of noun phrases (*Case* with a capital "C"). He proposes that there are four types of morphological case, which are assigned in the order given in (7).

(7)   Case realization disjunctive hierarchy (Marantz 1991):
a.   lexically governed case
b.   dependent case
c.   unmarked case
d.   default case

Lexical case is case assigned by a particular lexical item. For example, verbs and prepositions can assign lexical case to their complements, as illustrated in (8) and (9).

(8)   Lexical case assigned by V:
a.   Hún   hjálpaði honum.
       she.NOM helped   him.**DAT**
       'She helped him.
b.   Hann   saknar hennar.
       he.NOM misses her.**GEN**
       'He misses her.'

                                                    (*Icelandic*) (Thráinsson 2007: (4.57a), (4.58a))

(9)   Lexical case assigned by P:
a.   Ja dumaju pro   Mash-**u**.
       I think   about Mary-**ACC**
       'I'm thinking about Mary.'   (*Russian*)
b.   Ja dumaju o   Mash-**e**.
       I think   about Mary-**DAT**
       'I'm thinking about Mary.'   (*Russian*)

Rather than bearing regular accusative (ACC) case, the objects in (8) are assigned "quirky" lexical case by the verb. As can be seen clearly in (9), lexical case is idiosyncratic. *Pro* ('about') takes a lexically accusative-marked complement in (9a), while *o* ('about'), despite its similar meaning, takes a dative complement in (9b). In Marantz's (1991) hierarchy, lexically governed case takes priority over other modes of case assignment.

The second priority in case assignment goes to dependent case. In a nominative-accusative language, accusative is the dependent case. It is assigned to a noun phrase if there is a higher noun phrase (e.g. the subject) that has not been lexically case-marked. For example, accusative on the object in (10) is *dependent* on the subject.

(10)   Dependent case:
         The guard saw him$_{acc}$.

Note that the objects in (8) are not marked accusative because lexical case takes priority over dependent case. Third priority goes to unmarked case. In a nominative-accusative language, the unmarked case in the verbal domain is nominative, as (11) illustrates.[1]

---

[1]Marantz (1991) also proposes that unmarked case in the nominal domain is genitive.

(11)   Unmarked case:
         He$_{\text{nom}}$ laughed.

The object in (10) is a potential target for unmarked case, but dependent case (ACC) takes precedence over unmarked case (NOM). Finally, default case is assigned when no other case is available. Default case is English is accusative (as argued at length by Schütze (2001)), while default case in Russian is nominative.[2]

(12)   Default case:
         a.   Who wants tea? **Me**$_{\text{acc}}$.
         b.   Kto xochet chaj? Ja.
              who wants tea?   I.**NOM**
              'Who wants tea? Me.'   (*Russian*)

Marantz (1991) discusses the advantages of his proposal in accounting for nominative-accusative and ergative-absolutive languages. In nominative-accusative languages, accusative case is depends on a higher noun phrase. In ergative-absolutive languages, ergative case depends on a lower noun phrase. A single parameter thus captures the two possible case patterns. In the following section, I review the predictions made by Marantz's (1991) proposal for quirky subject constructions in Icelandic.

3.2.2   Icelandic quirky subjects

In this section, I discuss Icelandic quirky-subject constructions. I show that Marantz's (1991) theory of case marking predicts that the *objects* of quirky-subject verbs should receive unmarked nominative case. This prediction is borne out for dative (but not accusative) subjects in Icelandic. Icelandic quirky subjects are illustrated in (13).

(13)   Icelandic quirky subjects:
         a.   Óveðrinu   linir.
              the-storm.**DAT** abates
              'The storm abates.'
         b.   Verkjanna   gætir   ekki.
              the-pains.**GEN** is-noticeable not
              'The pains are not noticeable.'
         c.   Mig   kelur.
              me.**ACC** is-freezing
              'I am freezing/getting frostbitten.'
                                         (*Icelandic*) (Andrews 1982: (50f), (49e), (51a))

It has been argued extensively in the literature that the obliquely case-marked noun phrases like those in (13) are indeed subjects (Andrews 1976; Thráinsson 1979; Zaenen et al. 1985). The subjects in (13) are lexically case-marked – their case depends on the verb. Consider what Marantz (1991) predicts for the case of the *object* when the subject of a transitive verb bears lexical case.

---

[2]I set aside default case for the remainder of this chapter.

(14) Case realization disjunctive hierarchy (Marantz 1991):

    a.   lexically governed case
    b.   dependent case
    c.   unmarked case

Lexical case on the subject is assigned first. Dependent case requires a c-commanding noun phrase that is *not* lexically case-marked, so no dependent case is assigned. It is therefore predicted that the object of a quirky-subject verb will receive unmarked NOM case. This prediction is borne out for DAT-subject verbs, which regularly take NOM objects (Yip et al. 1987; Sigurðsson 1989; Thráinsson 2007, among others).[3] The DAT subject – NOM object pattern is quite common in Icelandic (Andrews 1982; Maling 2002).

(15) DAT subject – NOM object:

    a.   Henni   áskotnaðist bíll.
           her.**DAT** lucked-onto car.**NOM**
           'She got possession of a car by luck.'
    b.   Barninu   batnaði   veikin.
           the-child.**DAT** recovered-from the-disease.**NOM**
           'The child recovered from the disease.'

                                          (*Icelandic*) (Andrews 1982: (50b), (50l))

As predicted by Marantz (1991), the lexically case-marked subjects in (15) are not valid case-competitors, and the objects therefore bear unmarked NOM case. A different pattern is found with verbs that take lexically ACC-marked subjects, however. These verbs take ACC (not NOM) objects in Icelandic.[4]

---

[3]The GEN subject – NOM object pattern is quite rare. The GEN subject – ACC object pattern is non-existent, as predicted by Marantz (1991) (Yip et al. 1987; Thráinsson 2007).

[4]The ACC subject – NOM object pattern is very rare in Icelandic. Yip et al. (1987) describe the pattern is being restricted to one verb, which combines idiomatically with the object in (i):

(i)   Mig   sækir syja.
       me.**ACC** seeks sleepiness.**NOM**
       'I'm getting sleepy.'

                                       (*Icelandic*) (Yip et al. 1987: (9))

Jónsson (2000) writes that at least three verbs in Icelandic take ACC subjects and NOM objects (*henda* ('happen'), *grípa* ('catch'), *sækja* ('fetch')), but points out that with all these verbs, the nominative argument can be the subject as well.

(16)   ACC subject – ACC object:

    a.   Mig   dreymdi draum.
        me.**ACC** dreamt dream.**ACC**
        'I had a dream.'

    b.   Harald   brast kjark.
        Harold.**ACC** failed courage.**ACC**
        'Harold's courage failed him. / Harold wasn't courageous enough.'

                                   (*Icelandic*) (Thráinsson 2007: (4.60b,c))

ACC-subject constructions in Icelandic are discussed in greater detail in section 3.3.2.5 below.

3.3   Quirky-subject constructions in Faroese

In this section, I discuss quirky-subject constructions in Faroese. In section 3.3.1, I introduce the basic ways in which Faroese quirky subject constructions differ from Icelandic quirky subject constructions. A comparison between Icelandic and Faroese DAT-subject constructions is given in (17).

(17)   DAT-subject constructions in Icelandic and Faroese:

	number agreement w/ subject	person agreement w/ subject	object case
Icelandic	none	none	NOM
Faroese	optional	none	ACC (common) or NOM

In section 3.3.2, I offer an analysis of the Faroese data based on the proposal made by Sigurðsson and Holmberg (2008) for dative intervention in Icelandic. I follow Sigurðsson and Holmberg (2008) in assuming that person and number are separate probes. I furthermore propose that the number probe in Faroese assigns quirky dative case to the subject. The timing of agreement and case assignment accounts for the optionality of number agreement (and lack of person agreement) with DAT subjects in Faroese. I suggest that quirky dative case on the subject is assigned by a lower head (perhaps v) in Icelandic. In section 3.3.3, I lay out an alternative analysis of the Faroese data, based on the idea that dative subjects in Faroese are covertly nominative as well (Sigurðsson 2003; Jónsson 2009). This proposal requires a view of case competition different from Marantz (1991) in order to make the right predictions.

3.3.1   Faroese quirky subject data

Like Icelandic, Faroese permits quirky case-marked subjects, illustrated in (18). Accusative subjects are uncommon in modern Faroese (Thráinsson et al. 2004; Jónsson 2009), and I will restrict my attention to DAT-subject constructions in Faroese.

(18)   Quirky subjects in Faroese:

    a.   Meg   nøtrar   í holdið.
        me.**ACC** shudders in flesh-the
        'I shudder.'

    b.   Mær   gongur væl.
        me.**DAT** goes   well
        'I'm doing fine.'

<div align="right">(Faroese) (Thráinsson et al. 2004: (79a), (82d))[5]</div>

In this section, I discuss agreement with DAT subjects in Faroese, and case properties of the *object* in Faroese DAT subject constructions. Faroese behaves differently from Icelandic in both of these respects.

3.3.1.1   Subject agreement

Faroese differs from Icelandic in allowing number agreement with dative subjects. Icelandic does not exhibit agreement with dative subjects (Harley 1995; Sigurðsson 1996; Thráinsson 2007). Lack of agreement with a variety of subjects in Icelandic is illustrated in (19). As (20) shows, agreement with a dative subject is prohibited, while agreement with a nominative subject (combined with the same verb stem with a different semantic interpretation) is required.

(19)   No agreement with DAT subjects:

    Mig/Þig/Hana/Okkur/Ykkur/Þá   grunaði   ekkert.
    [me/you.sg/her/us/you.pl/them.3pl.masc].**DAT** suspected.**3sg** nothing

    'I/You/She/We/You/They suspected nothing.'

<div align="right">(Icelandic) (Thráinsson 2007: (4.47a))</div>

(20)   a.   No agreement with DAT subject:
        Strákunum   leiddist/*leiddust.
        the.boys.pl.**DAT** bored.**3sg**/*bored.**3pl**

        'The boys were bored.'

    b.   Agreement required with NOM subject:
        Strákarnir   leiddust/*leiddist.
        the.boys.pl.**NOM** walked.hand.in.hand.**3pl**/*walked.hand.in.hand.**3sg**

        'The boys walked hand in hand.'

<div align="right">(Icelandic) (Sigurðsson 1996: (1), (2))</div>

---

[5]The example numbers from Thráinsson et al. (2004) in this chapter are all from the Syntax section of the grammar (section 5).

Faroese, on the other hand, allows optional number agreement with dative subjects, as shown in (21).[6] Person agreement is not possible, as (22) shows.[7]

(21) Optional *number* agreement with DAT subject:

     a.   Teimum dáma   at vera saman   í   bólki
         they.DAT like.**3PL** to be   together in band
         'They like to be together in a band.'

     b.   Teimum dámar   at renna kapp
         they.DAT like.**3SG** to run   race
         'They like to run a race.'   (*Faroese*) (Jónsson 2009: (25))

(22) No *person* agreement with DAT subject:

     *Mær dámi   hasa   bókina
     I.DAT like.**1SG** this.ACC book.the.ACC

     'I like this book.'   (*Faroese*) (Jónsson 2009: (27))

We thus have the following patterns of agreement in Icelandic and Faroese.

(23) Agreement in DAT-subject constructions in Icelandic and Faroese:

	number agreement w/ subject	person agreement w/ subject
Icelandic	none	none
Faroese	optional	none

3.3.1.2   Object case

Another difference between Faroese and Icelandic is in the case properties of the *object* in dative-subject constructions. As discussed in section 3.2.2 above, dative-subject verbs in Icelandic take nominative objects (Yip et al. 1987; Sigurðsson 1989; Thráinsson 2007, among others).

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[6]I rely on the data provided by Jónsson (2009). The observation that agreement with dative subjects is possible is contra Thráinsson et al. (2004).

[7]Unfortunately, I lack the relevant examples to determine whether plural number agreement is optional with 1st and 2nd person subjects in Faroese, as it is with 3rd person subjects. Note that, as Jónsson (2009) points out, there are no person agreement distinctions in the plural in Faroese. Therefore, while examples like (22) indicate that person agreement with dative subjects is not possible, there would be no way to distinguish full (person and number) agreement with plural subjects from number agreement only.

(24)   DAT subject – NOM object:

    a.   Henni   áskotnaðist bíll.
        her.**DAT** lucked-onto car.**NOM**
        'She got possession of a car by luck.

    b.   Barninu   batnaði   veikin.
        the-child.**DAT** recovered-from the-disease.**NOM**
        'The child recovered from the disease.'

<div align="right">(Icelandic) (Andrews 1982: (50b), (50l))</div>

However, dative-subject verbs in Faroese can take accusative objects. As (25) illustrates, depending on the verb, accusative may be required, optional, or prohibited. ACC objects are much more prevalent than NOM objects (Jóhannes Jónsson (p.c.)).

(25)   DAT subject – ACC/NOM object:

    a.   Henni   manglar pening/*peningur.
        her.DAT lacks   money.**ACC**/*money.**NOM**
        'She lacks money.'

    b.   Henni   treyt   pening/(?)peningur.
        her.DAT ran-out-of.3sg money.**ACC**/(?)money.**NOM**
        'She ran out of money.'

    c.   Mær   eydnaðist *túrin/tururin   væl.
        me.DAT succeeded *trip-the.**ACC**/trip-the.**NOM** well
        'The trip turned out nicely for me.'

<div align="right">(Faroese) (Thráinsson et al. 2004: (9))</div>

Note that the licensing of accusative case on the object does not seem to correlate directly with subject agreement. Accusative objects are possible regardless of whether the verb agrees in number with the dative subject, as (26) and (27) show.[8]

(26)   ACC object with non-agreeing predicate:

    a.   Teim   dámar   best heitan   mat
        they.DAT like.3SG best hot.ACC food.ACC
        'They like hot food best.'

    b.   Teimum dámar   væl føroyskan   mat
        they.DAT like.3SG well Faroese.ACC food.ACC
        'They like Faroese food.'

<div align="right">(Faroese) (Jónsson 2009: (21a,b))</div>

---

[8]Unfortunately, I do not have data regarding the interaction of number agreement with the DAT subject and the availability of NOM objects. As discussed below, number agreement with NOM objects is possible in Faroese (just as in Icelandic), and it would be interesting to see what agreement options are available.

(27)   ACC object with agreeing predicate:

    a.   Liðunum   mangla venjara
          teams.the.DAT need.3PL trainer.ACC
          'The teams need a trainer.'

    b.   Børnunum   tørva   eina góða   fyrimynd
          children.the.DAT need.3PL a.ACC good.ACC role.model.ACC
          'The children need a good role model.'

                                      (*Faroese*) (Jónsson 2009: (23b,c))

In sum, we have the following pattern of agreement and object-marking in DAT-subject constructions in Icelandic and Faroese.

(28)   DAT-subject constructions in Icelandic and Faroese:

	number agreement w/ subject	person agreement w/ subject	object case
Icelandic	none	none	NOM
Faroese	optional	none	ACC (common) or NOM

3.3.1.3 Faroese quirky-subject constructions: A puzzle

In this section, I show that a standard view of quirky case does not make the right predictions for Faroese quirky-subject constructions. I provide an overview of the possible approaches to quirky-case subjects in Faroese. These include a late quirky-case assignment analysis (which I pursue in the following section), a covert nominative case analysis (discussed in section 3.3.3), and an Optimality Theory approach (Woolford 2003).

As shown above, Icelandic and Faroese DAT subjects pattern differently in terms of agreement and case on the object. Consider, first, the difference in agreement with DAT subjects in Icelandic and Faroese. Agreement with DAT subjects is prohibited in Icelandic. On the other hand, number agreement with DAT subjects is possible in Faroese. Bobaljik (2008) offers an analysis of the lack of agreement with quirky subjects in Icelandic. On the basis of data from a number of languages, he argues for the agreement hierarchy shown in (29).

(29)   Bobaljik's (2008) Revised Moravcsik Hierarchy:
        Unmarked Case > Dependent Case > Lexical/Oblique Case

According to the hierarchy in (29), if a language displays any agreement, it will show agreement with noun phrases bearing unmarked case. Some languages also show agreement with dependent-case marked noun phrases, and some display agreement with lexically case-marked noun phrases as well. Bobaljik (2008) proposes that Icelandic falls into the category of languages that exhibit agreement only with noun phrases bearing unmarked case (NOM).

The fact that Faroese displays number agreement with DAT subjects seems to imply that Faroese has the option of agreeing even with lexically case-marked noun phrases. This is not a desirable approach to agreement in Faroese. Typologically, Faroese would be two

steps away from Icelandic along the hierarchy in (29), which may be surprising for such a closely related language. Furthermore, we would expect to see agreement with dependent-case marked noun phrases in Faroese (e.g. object agreement), which we do not find.

The second property of Faroese DAT-subject constructions discussed above is that they license ACC objects. In contrast, the objects of DAT-subject constructions in Icelandic bear unmarked NOM case. As discussed in section 3.2.2 above, the Icelandic case pattern is predicted by Marantz's (1991) theory of dependent case. Marantz (1991) proposes that dependent ACC case is licensed only if there is a higher noun phrase that is not lexically case-marked. Since a dative subject *is* lexically case-marked, and there is no other noun phrase in the structure that c-commands the object, the object receives unmarked NOM case. For the same reasons, the objects of DAT-subject constructions in Faroese should also be marked NOM, and not ACC.

How might the differences between Icelandic and Faroese quirky subjects be analyzed? In the following section, I propose that the crucial difference is in the timing of dative case assignment. In particular, suppose DAT subject case in Faroese is assigned relatively late in the derivation. It may then be possible for agreement and licensing of dependent ACC case to take place *before* DAT case is assigned to the subject.[9] Thus, at the time when number agreement and dependent case licensing take place, a subject in Faroese that is DAT at the end of the derivation can have the same properties as a subject that is NOM as the end of the derivation. This explains why Faroese dative subjects can behave like nominative subjects with respect to number agreement and dependent case licensing. If in Icelandic, on the other hand, dative case is assigned to the subject as soon as it enters the derivation, Icelandic dative subjects will correctly be predicted *not* to behave like nominative subjects.

Another approach, taken by Sigurðsson (2003) and Jónsson (2009), and discussed in greater detail in section 3.3.3, it to propose that Faroese quirky subjects are actually nominative under-the-hood. The idea is that quirky subjects in Faroese can, like nominative subjects, trigger number agreement and dependent case assignment, because quirky subjects in Faroese are covertly nominative as well. Syntactically, the nominative feature on all subjects in Faroese ensures that they all trigger agreement and dependent case assignment. Morphologically, subjects that bear both nominative and dative case surface with a DAT case suffix. Quirky subjects in Icelandic, Sigurðsson (2003) and Jónsson (2009) propose, are not covertly NOM-marked. As discussed in section 3.3.3, this approach cannot account for the difference between number agreement with DAT subjects (possible in Faroese) and person agreement (not possible) in a non-stipulative fashion.

A third option, which I do not address in great detail in this chapter, is to take an Optimality Theoretic approach. In Optimality Theory (OT) (Prince and Smolensky 1993; McCarthy and Prince 1993), a universal set of constraints has a language-dependent ranking. Woolford (2003) offers an OT account of the difference in case between objects of DAT-subject verbs in Icelandic and Faroese. She proposes that the relevant difference between the two languages is in the relative ranking of a constraint that disfavors accusative case (*ACC) and a constraint that regulates the size of *case checking domains*. In Icelandic, *ACC outranks the constraint that requires a case-checking domain to contain only one tar-

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[9]As discussed below, this proposal requires a modified view of how Marantz's (1991) case assignment hierarchy is implemented.

get DP. The case checking domain of T can thus include both the quirky subject and the object, and T thereby assigns nominative case to the object.[10] In Faroese, the constraint on case checking domains is ranked above *ACC. Consequently, the object cannot be in T's case checking domain along with the subject. The object therefore cannot be assigned NOM by T, and receives ACC instead. Note that Woolford (2003) assumes that all DAT-subject objects in Faroese take ACC objects, which is indeed the dominant pattern. Other analyses of the Icelandic-Faroese object case contrast in an OT framework may also be available. I am not aware of an OT account of the difference in agreement properties between Icelandic and Faroese dative subjects, and I do not choose to venture a specific proposal here. One can imagine an account based on the conflict between a preference for subject agreement and a dispreference for agreement with non-nominative noun phrases. At this point, I set aside the family of OT approaches, and turn to the timing account introduced above.

3.3.2 Analysis of Faroese quirky-subject constructions: A timing account

In this section, I present a tentative analysis of Faroese quirky subject constructions. I propose that the options available in Faroese boil down to the timing of dative case assignment, and whether it precedes agreement and the assignment of dependent case. A dative subject can license agreement and dependent case only if dative case is assigned to it at a later point in the derivation. I thus propose that dative subjects in Faroese are not assigned quirky case immediately when they are merged. Rather, they are assigned dative case by a higher functional projection. (A proposal of this sort is offered by Svenonius (2005, to appear) for quirky-case objects in Icelandic.)

In section 3.3.2.1, I lay out the crucial aspects of the analysis I will pursue. In section 3.3.2.2, I introduce the analysis of dative intervention in Icelandic proposed by Sigurðsson and Holmberg (2008). In sections 3.3.2.3 and 3.3.2.4, I show how Sigurdsson & Holmberg's (2008) proposal can be extended to account for the agreement and object case patterns in Faroese DAT-subject constructions. In section 3.3.2.5, I discuss how differences between Faroese and Icelandic can be treated on my account.

3.3.2.1 Overview of the proposal

In this section, give an overview of my proposal. Essentially, I will argue that quirky DAT case is not assigned to subjects in Faroese immediately as they enter the derivation. Consider the structure for (30) given in (31).

(30) Mær   gongur væl.
      me.DAT goes   well
      'I'm doing fine.'

(*Faroese*) (Thráinsson et al. 2004: (82d))

---

[10]Note that Woolford (2003) does *not* assume Marantz's (1993) theory of case assignment.

(31)   Quirky DAT subject in Faroese:

```
                TP
              /    \
           mær      T′
          me.DAT   /  \
                  T    FP
                      /  \
                     F    ┌─────────────────┐
                     •    │    vP           │
                          │   /  \          │
                          │ t_dat  v′       │
                          │      /   \      │
                          │     v     VP    │
                          │          /\     │
                          │     gongur væl  │
                          │     goes well   │
                          └─────────────────┘
```
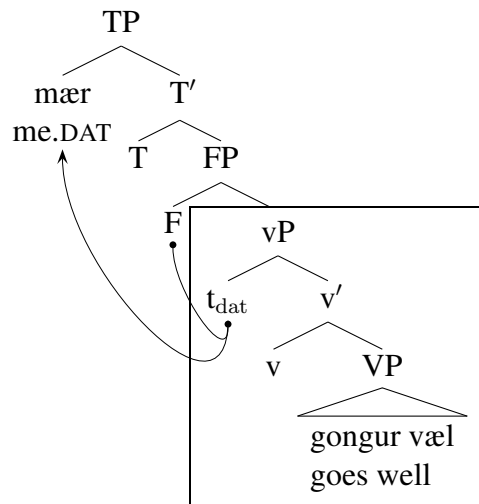
Suppose that quirky DAT subject case in Faroese is assigned by a higher functional projection, here labeled "F". (See Svenonius (2005, to appear) for a similar proposal for Icelandic.) Of course, quirky case on the subject also depends on the verb, which determines whether or not the subject is assigned quirky case. There are several ways of implementing precisely how F "knows" what case to assign. One possibility is that this is accomplished by head-movement of V to F, or by agreement between F and V. F would always be projected, but would only receive the property of assigning quirky case to the subject if a quirky-subject verb raised to or agreed with F. As seen below, we must be careful about when, precisely, this movement or agreement takes place.

Another possibility, which I will tentatively assume, is that the case-assigning information is encoded as selection. The idea is that F, which is always projected in some form, has two variants: one that assigns dative case and one that does not. Dative-assigning F selects a vP/VP headed by a verb that assigns dative case to its subject. [11] Non-dative-assigning F selects a vP/VP headed by a verb that does not take a quirky dative subject. This type of analysis has been proposed for double-object constructions: a dative-assigning v head selects for an ApplP, which introduces an indirect object. An accusative-assigning v selects for a VP, which does not contain an indirect object (cf. Ura 1996, 2000; Pylkkänen 2002).

Below, I propose that F is the number agreement head. Suppose that the number agreement projection can either agree with the embedded subject first and then assign case, or, conversely, first assign case, and then attempt to agree with the subject. Assuming that agreement with lexically case-marked noun phrases is prohibited in Faroese, as it is in Icelandic, it is correctly predicted that number agreement with a dative subject is optional in Faroese. Furthermore, I propose that person agreement is accomplished by a higher probe. Dative case has already been assigned to the subject by the time the person probe is merged, so no person agreement is possible.

I furthermore propose that dependent case assignment is not based on the entire clause. Rather, it applies to the subtree boxed in (31). In this subtree, the subject has been merged, but the DAT case assigner (the head F) has not. The subject does not yet bear lexical case,

_____

[11]In the system proposed below, the selection relationship will additionally need to be mediated by T.

and is therefore a valid case-competitor for ACC to be assigned to the object.

The proposal I make deviates from the traditional view that lexical case is assigned to a noun phrase immediately in the position where it has merged. The traditional view does not allow leeway for agreement and case competition to take place *before* lexical case is assigned. An approach that allows the standard approach to lexical case assignment to be preserved but requires some additional assumptions is discussed in section 3.3.3.

3.3.2.2 Sigurðsson and Holmberg (2008): Icelandic dative intervention

In this section, I present the relevant details of the analysis of dative intervention in Icelandic proposed by Sigurðsson and Holmberg (2008) (henceforth S&H). In the following section, I show how the tools that S&H develop can be used to capture optional number agreement with DAT subjects in Faroese. S&H account for patterns of agreement in two dialects of Icelandic, shown in (32).

(32)   Dative intervention:

    a.   Það   þótti/þóttu   einum málfræðingi [þessi
        EXPL thought.**3SG**/thought.**3PL** one   linguist.DAT [**these**
        rök   sterk.]
        arguments.NOM strong]
        'One linguist thought these arguments to be strong.' (**Icelandic A**)

    b.   Það   þótti/*þóttu   einum málfræðingi [þessi
        EXPL thought.**3SG**/*thought.**3PL** one   linguist.DAT [**these**
        rök   sterk.]
        arguments.NOM strong]
        'One linguist thought these arguments to be strong.' (**Icelandic C**)
                                          (Icelandic) (S&H: (22), (28))

Consider the agreement options for the matrix predicate in (32). The embedded clause in (32) contains a plural NOM DP, which is the only plural DP in the construction. Plural agreement with the nominative embedded subject is optional for speakers of Icelandic A, and prohibited for speakers of Icelandic C. Both dialects also allow the default 3rd person singular form. While number agreement is an option for speakers of Icelandic A, no person agreement with the embedded subject is possible, as (33) shows.

(33)   *Það hafið   einhverjum   alltaf virst   það   (vera) hæfir.
      EXPL have.2PL some.DAT.SG/PL always seemed you.NOM.PL (be)   competent
      intended: 'You have always seemed to some to be competent.'
                                        (Icelandic) (based on S&H: (18b))

S&H propose that Icelandic has separate probes for person (Pn) and number (Nr). T moves to these probes in turn, and agrees separately for person and number in the structural position of each of these probes. Agreement with the nominative embedded subject cannot take place if the dative experiencer intervenes between the relevant probe and the embedded subject.

(34)   Pn   Nr *experiencer*$_{dat}$ subject$_{nom}$
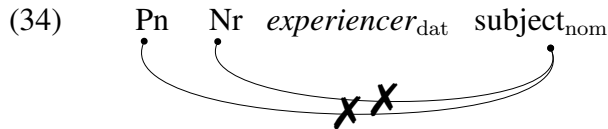
S&H propose that the Pn probe is higher than the Nr probe, and is always above the intervening dative argument. The Nr probe, on the other hand, merges above the dative argument, but the dative argument later moves above Nr (to its specifier, S&H suggest).

(35)   Pn *experiencer*$_{dat}$ Nr t$_{exp}$ subject$_{nom}$
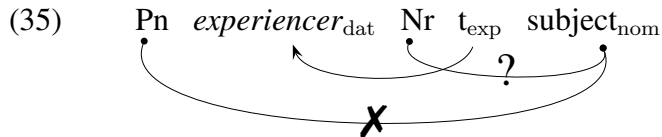
The difference between Icelandic A and Icelandic C is in the timing of dative experiencer raising. In Icelandic A, the experiencer moves before T/Nr probes for agreement. If the nominative subject has moved out of the embedded clause, number agreement results. (Otherwise, we find default number agreement, which is also an option in Icelandic A.) In Icelandic C, T/Nr probes for number agreement before the dative experiencer has moved out of the way, and thus only default (3rd person singular) agreement is possible. The full derivation for both types of Icelandic is illustrated in (36).[12]

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[12]As S&H note, the right word order is obtained by V2 movement (not shown).

(36)

PnP

EXPL Pn′

T/Nr/Pn NrP

experiencer$_{dat}$ Nr′

T/Nr TP

T vP

t$_{exp}$ v′

v VP

V

seem *subject*$_{nom}$ TP

t$_{subj}$ ⋯
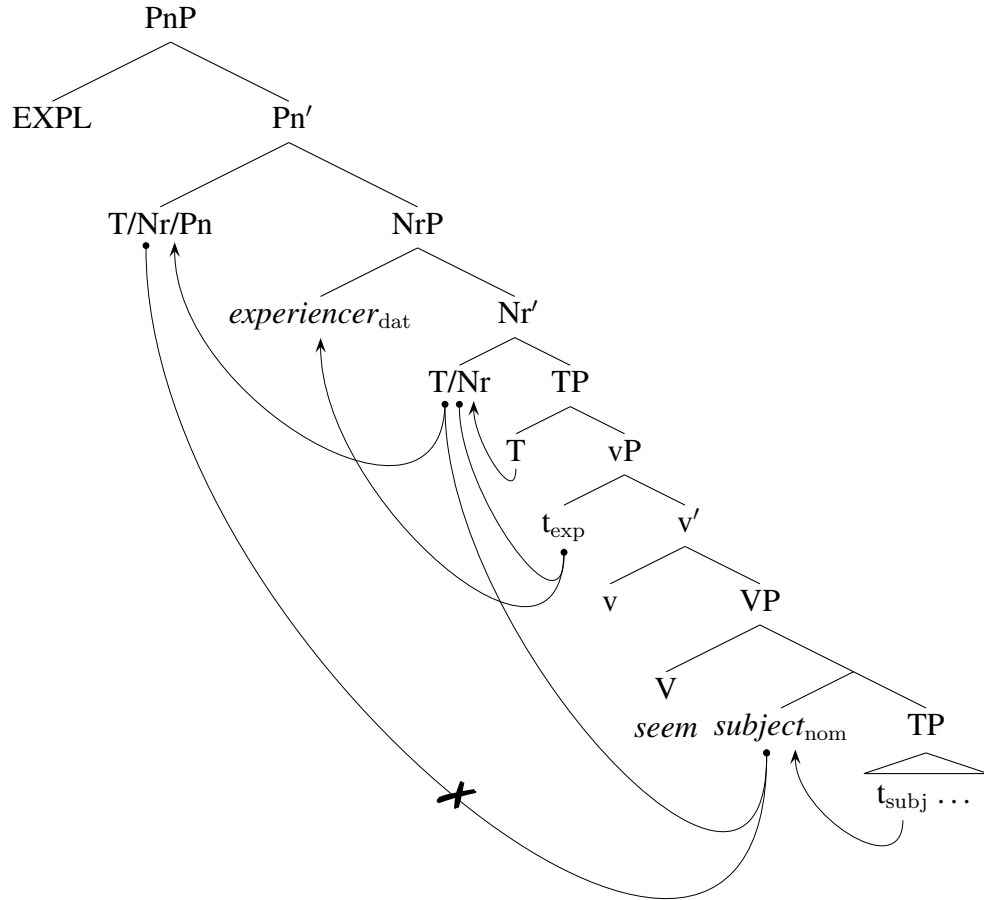
Separate derivations for Icelandic A and Icelandic C are given in (37), with the order of operations indicated on the arrows. For simplicity, I omit the high Pn probe and the (optional) short movement of the embedded subject; Icelandic A and C do not differ in these respects.

(37)   a.   Icelandic A (number agreement):

NrP
experiencer$_{dat}$ Nr′
T/Nr   TP
2
T   vP
1
t$_{exp}$ v′
1
v   VP
3
V
seem   subject$_{nom}$ TP
. . .
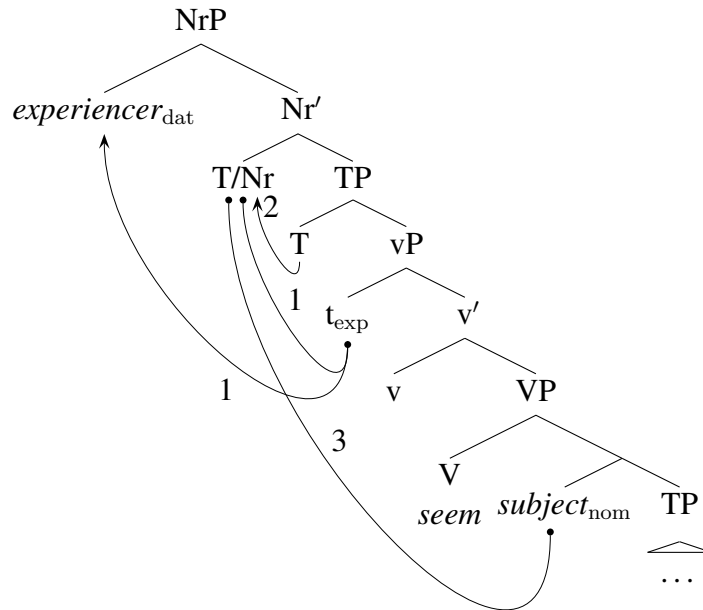
b.   Icelandic C (no number agreement):

NrP
experiencer$_{dat}$ Nr′
T/Nr   TP
1
T   vP
3
t$_{exp}$ v′
3
v   VP
2
V
seem   subject$_{nom}$ TP
. . .
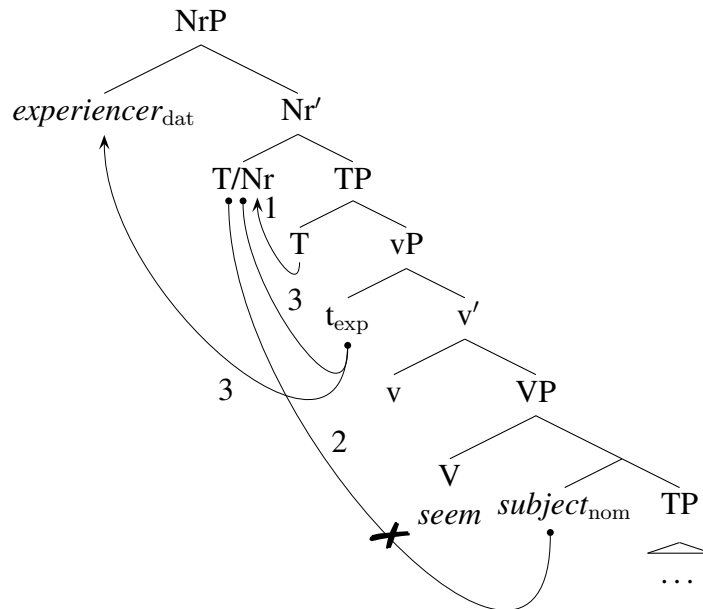
For S&H, the crucial difference between Icelandic A and Icelandic C is the ordering between movement of the dative experiencer and T/Nr probing the embedded subject. In Icelandic A, when Nr is merged, we have the following sequence of events.

(38)   a.   Nr probes and attracts the dative experiencer to its specifier.
        b.   T head-moves to Nr.
        c.   T+Nr probes for number agreement.

Thus, in Icelandic A, the dative experiencer has moved out of the way by the time T/Nr probes and agrees with the embedded subject. In Icelandic C, on the other hand, Nr first attracts T and probes for agreement.

(39) a. T head-moves to Nr.
      b. T+Nr probes for number agreement.
      c. Nr probes and attracts the dative experiencer to its specifier.

In Icelandic C, the dative experiencer intervenes between T+Nr and the embedded subject, so agreement is not possible. The difference between Icelandic A and Icelandic C can thus be expressed as in (40).

(40) Ordering of probing and head-movement:

      a. **Probe before & after**: Probing by head X *both precedes and follows* head movement to X. (**Icelandic A**)
      b. **Probe after**: Probing by head X *follows* head movement to X. (**Icelandic C**)

In the following section, I propose that exactly this type of optionality derives optional number agreement with dative subjects in Faroese.

3.3.2.3 Agreement with Faroese DAT subjects

In this section, I propose that optionality in the order of probing and head movement can account for the agreeing and non-agreeing variants of the dative subject construction in Faroese. Recall that number agreement with dative subjects in Faroese is optional, while person agreement is prohibited.

(41) Optional *number* agreement with DAT subject:

      a. Teimum dáma   at vera saman í bólki
          they.DAT like.**3PL** to be   together in band
          'They like to be together in a band.'
      b. Teimum dámar   at renna kapp
          they.DAT like.**3SG** to run   race
          'They like to run a race.'   (*Faroese*) (Jónsson 2009: (25))

(42) No *person* agreement with DAT subject:

      *Mær dámi   hasa   bókina
      I.DAT like.**1SG** this.ACC book.the.ACC

      'I like this book.'   (*Faroese*) (Jónsson 2009: (27))

I assume that Faroese is no different from Icelandic in terms of the Moravcsik Hierarchy: agreement with lexically case-marked noun-phrases is not possible. Agreement with noun phrases that bear unmarked case or *have not yet received case marking* is possible. Note that this requires a view of agreement as happening in the syntax, advocated by Preminger (2011) – agreement can take place before case is assigned.

(43)   Refined Moravcsik Hierarchy:
        Unmarked Case/**No case** > Dependent Case > Lexical/Oblique Case

        ↗

        Icelandic
        Faroese

I adopt the system of person and number probing proposed by S&H for Icelandic and presented in section 3.3.2.2 above. Furthermore, I propose that the same head that probes for number also assigns quirky dative case to subjects in Faroese. Recall the two options for the order of probing and head-movement required for S&H's account of dative intervention in Icelandic.

(44)   Ordering of probing and head-movement:

        a.   **Probe before & after**: Probing by head X *both precedes and follows* head movement to X.

        b.   **Probe after**: Probing by head X *follows* head movement to X.

I propose that the same two options are available in Faroese. In a Faroese DAT-subject construction, when number first probes and finds the subject, it:

(45)   (i)   assigns DAT case to the subject
        (ii)   attracts the subject to its specifier

Note that I assume that the number probe cannot agree for number by itself, but must first combine with T. If probing precedes (and follows) head movement, DAT is assigned to the subject before number agreement takes place, and default agreement results. If head movement precedes probing, number agreement takes place at the same time as DAT is assigned, and the agreeing construction is derived. Either way, dative case has been assigned to the subject by the time the Pn probe is merged, so person agreement is never an option. The full derivation for the examples in (44) is shown in (46). In (47), I highlight the differences between the agreeing and non-agreeing variants in (41a) and (41b).[13]

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[13]As above, I do not show verb movement.

(46)　Quirky DAT subject in Faroese:
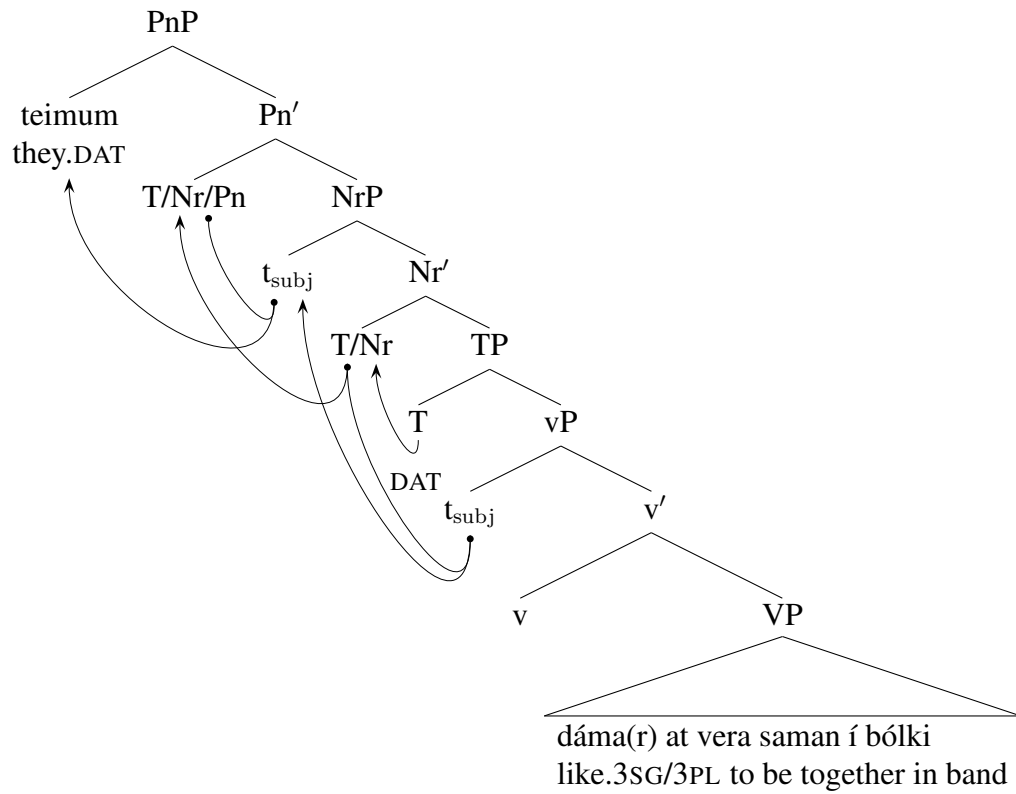
PnP
- teimum / they.DAT
- Pn′
  - T/Nr/Pn
  - NrP
    - t_subj
    - Nr′
      - T/Nr
      - TP
        - T
          - DAT
        - vP
          - t_subj
          - v′
            - v
            - VP

dáma(r) at vera saman í bólki
like.3SG/3PL to be together in band

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(47)   a.   Agreeing quirky DAT subject in Faroese:

```
              NrP
           /      \
      t_subj       Nr'
                 /      \
             T/Nr        TP
              •  1      /    \
                  T    vP
                      /   \
               2    t_subj   v'
              DAT           /  \
             2            v   VP
                              /\
                             ...
```

b.   Non-agreeing quirky DAT subject in Faroese:

```
              NrP
           /      \
      t_subj       Nr'
                 /      \
             T/Nr        TP
              •  2      /    \
                  T    vP
                      /   \
               1    t_subj   v'
              DAT           /  \
             1            v   VP
                              /\
                            dots
```
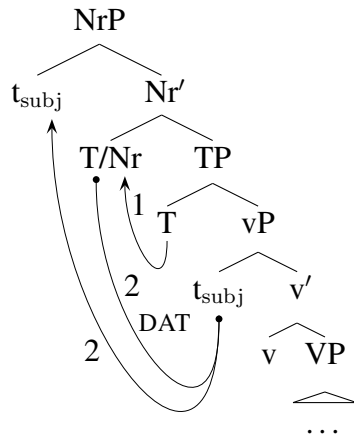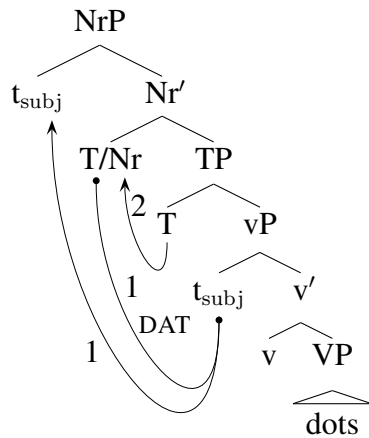
Just as in Icelandic, the difference between the agreeing and non-agreeing variant lies in timing. In the agreeing construction, T moves to Nr. T/Nr then probes and agrees with the subject, at the same time assigning it dative case. In the non-agreeing construction, Nr probes and assigns dative case, with the subject raising as a result. When T head-moves to Nr, the subject is not in the agreement domain of T/Nr, and cannot be agreed with. In both derivations, the subject has been marked DAT by the time the Pn probe merges, and person agreement is thus ruled out.

There is support for the idea that the dative subject moves to the specifier of NrP in Faroese. As in Icelandic, when the subject is DAT and the object is NOM (as opposed to ACC), number agreement with the object is possible (Thráinsson et al. 2004). As S&H propose for Icelandic, if the Nr probe attracts the DAT subject to its specifier before T/Nr probes for agreement, then the DAT subject does not intervene and there is number agreement agreement with the NOM object.

(48) Number agreement with NOM object in Faroese:

Henni munnu ongantíð tróta hesir pengar.
her.DAT will.**3pl** never run-out-of **these.NOM.pl moneys.NOM.pl**

'She will never run out of this money.'

<div align="right">(<i>Faroese</i>) (Thráinsson et al. 2004: (10a))</div>

The proposal laid out in this section correctly predicts that number agreement with DAT subjects is optional in Faroese, while person agreement with DAT subjects is ruled out.

3.3.2.4 Accusative objects in DAT-subject constructions in Faroese

I now turn to the second property of Faroese DAT-subject constructions discussed above. DAT-subject constructions commonly take ACC objects in Faroese, though NOM objects are also possible, as (49) again shows.

(49) DAT subject – ACC/NOM object:

a. Henni manglar pening/*peningur.
    her.DAT lacks money.ACC/*money.NOM
    'She lacks money.'

b. Henni treyt pening/(?)peningur.
    her.DAT ran-out-of.3sg money.ACC/(?)money.NOM
    'She ran out of money.'

c. Mær eydnaðist *túrin/túrurin væl.
    me.DAT succeeded *trip-the.ACC/trip-the.NOM well
    'The trip turned out nicely for me.'

<div align="right">(<i>Faroese</i>) (Thráinsson et al. 2004: (9))</div>

Holding constant the idea that accusative case depends on a higher subject that is not lexically case-marked, I propose that dependent case in (49a) (and, optionally, (49b)) is assigned before the subject is marked with lexical DAT. In particular, suppose the domain of dependent case assignment is not the entire clause, but vP, as illustrated in (50).[14]

(50)

```
        NrP
       /   \
      Nr  ┌──────────────┐
          │      vP       │
          │     /  \      │
          │ subject  v′   │
          │        /  \   │
          │   …object…   │
          └──────────────┘
```

---
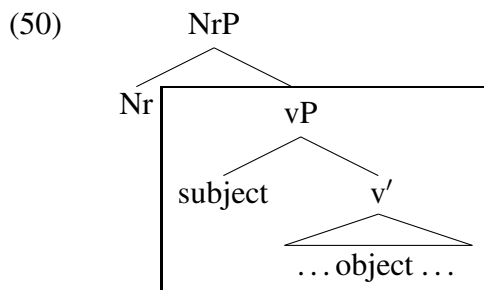
[14]My account is consistent with the entire clause *also* being a dependent case assignment domain.

As seen in (50), vP does not contain the projection (Nr) that assigns dative case to the subject. Therefore, the subject is not lexically case-marked when case competition takes place, and the object receives dependent ACC case. However, as discussed above, some DAT-subject verbs in Faroese actually take NOM objects, and not ACC ones. The are at least two ways the NOM object option in Faroese could be accounted for. These two options make different predictions, but I do not have crucial examples available at present.

One possibility is that when the object is NOM, DAT is assigned to the subject immediately when it enters the derivation. This type of DAT does not depend on Nr; it is what I propose for Icelandic below. This proposal makes the clear prediction that no agreement with the DAT subject should be possible when a NOM object is present. The alternative option is that the domain of dependent case assignment is sometimes larger than vP – as large as NrP or even PnP. DAT is then assigned before case competition takes place, and dependent case is not licensed. On this account, no correlation between agreement and NOM case on the object is expected. The crucial piece of data is thus whether number agreement with a DAT subject is possible in a construction that also contains a NOM object.

3.3.2.5 Quirky subjects in Icelandic

In light of what I have proposed for Faroese, I now turn again to quirky-subject constructions in Icelandic. Recall that Icelandic DAT-subject constructions differ from Faroese DAT-subject constructions.

(51)   DAT-subject constructions in Icelandic and Faroese:

	number agreement w/ subject	person agreement w/ subject	object case
Icelandic	none	none	NOM
Faroese	optional	none	ACC (common) or NOM

In this section, I propose that the differences between Icelandic and Faroese summarized in (51) are accounted for if DAT is assigned to subjects in Icelandic immediately when they enter the derivation. I then discuss ACC-subject constructions in Icelandic, which regularly take ACC objects, as mentioned briefly above. Unfortunately, there is no independent motivation for extending to Icelandic the account of Faroese ACC objects in quirky-subject constructions proposed above.

DAT subject constructions in Icelandic   DAT subject constructions in Icelandic are illustrated again in (52). As seen in (52a), there is no number agreement with the DAT subject.[15] As (52b) shows, the object is marked NOM.

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(52) a. No agreement with DAT subject:
         Strákunum   leiddist/*leiddust.
         the.boys.pl.**DAT** bored.**3sg**/*bored.**3pl**

         'The boys were bored.'

                                        (*Icelandic*) (Sigurðsson 1996: (1))

      b. NOM object:

         Barninu   batnaði   veikin.
         the-child.**DAT** recovered-from the-disease.**NOM**

         'The child recovered from the disease.'

                                        (*Icelandic*) (Andrews 1982: (50l))

I propose that, just as it is generally assumed, DAT case is assigned to subjects in Icelandic immediately in the position where they merge. Consequently, by the time the number probe merges, the subject has been marked dative, and is not a valid target for agreement. Because the subject is immediately lexically case-marked, it is not a valid case-competitor for the object. Dependent ACC case is not assigned, and the object receives unmarked NOM case.

ACC subject constructions in Icelandic   As mentioned briefly in section 3.2.2, ACC-subject constructions in Icelandic regularly take ACC-marked (and not NOM) objects.

(53) ACC subject – ACC object:

      a. Mig   dreymdi draum.
         me.**ACC** dreamt   dream.**ACC**
         'I had a dream.'

      b. Harald   brast kjark.
         Harold.**ACC** failed courage.**ACC**
         'Harold's courage failed him. / Harold wasn't courageous enough.'

                                        (*Icelandic*) (Thráinsson 2007: (4.60b,c))

Examples like those in (53) are surprising from the perspective of dependent case theory. Just like DAT subjects, the subjects in these examples are lexically case-marked. Being lexically case-marked, they should not be valid case competitors for the objects in (53). It is thus expected that the objects in (53) should bear unmarked NOM case.

Could it be that the accusative case on the objects in (53) is not dependent accusative case, but *quirky* accusative case? On this story, the verbs assigning accusative to their subjects would also be assigning lexical accusative case to their objects. There is some evidence against this possibility. ACC object case is the regular pattern with ACC subjects. This would be somewhat surprising (though not inconceivable) if ACC case on the object were quirky, and thus depended on the lexical properties of each ACC-subject verb. Yip et al. (1987) provide additional evidence that, for at least some ACC-subject verbs, accusative case on the object does not seem to be quirky case. Their argument is based on the pattern of *Dative Substitution* (Svavarsdóttir 1982; Halldórsson 1982), where verbs that normally take accusative subjects can for some speakers take dative subjects as well.[16] If accusative

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[16]Quirky-subject verbs cannot be passivized in Icelandic, so case preservation in the passive is not a test that can be used to identify whether objects of accusative-subject verbs are structurally or non-structurally

on the objects of ACC-subject verbs is quirky, we might expect the accusative case of the object to be preserved under Dative Substitution, but this is not always the case. Examples of ACC-subject verbs are given in (54), and the corresponding Dative Substitution variants are shown in (55).

(54)   ACC-subject verbs:
    a.   Mig   brestur kjark.
        me.**ACC** lacks   courage.**ACC**
        'I lack courage.'
    b.   Mennina   þrýtur mat.
        the.men.**ACC** lacks food.**ACC**
        'I lack food.'
    c.   Mig   vantar hníf.
        me.**ACC** lacks knife.**ACC**
        'I lack a knife'

(*Icelandic*) (Yip et al. 1987: (10))

(55)   Dative Substitution:
    a.   Mér   brestur kjarkur.
        me.**DAT** lacks   courage.**NOM**
        'I lack courage.'
    b.   Honum   þraut þrottur.
        him.**DAT** lacked strength.**NOM**
        'I lacked strength.'
    c.   Mér   vantar hníf.
        me.**DAT** lacks knife.**ACC**
        'I lack a knife'

(*Icelandic*) (Yip et al. 1987: (11))

(55c) shows that Dative Substitution preserves accusative case on the object with some verbs. As discussed above, DAT-subject verbs regularly take NOM objects in Icelandic. Accusative case on the object in (54c) and (55c) thus seems to be lexically assigned by the verb. However, in (55a) and (55b), when the subject becomes dative, the object becomes nominative. If the accusative objects in (54a), (54b) were lexically case-marked, we would have to say that (55a) and (55b) undergo two separate changes from their accusative-subject counterparts: the verb assigns lexical dative to the subject instead of lexical accusative, and it ceases to assign lexical accusative to the object. Yip et al. (1987) conclude that a more plausible view is that accusative on the objects in (54a) and (54b) was not lexically assigned to begin with. On this analysis, the verb undergoes only one change from the examples in (54) to the examples in (55): the case it assigns to the *subject*.

In sum, the proposal that ACC case on the objects of ACC-subject verbs in Icelandic is *not* lexically assigned is appealing, though not unavoidable. If we make this assumption, can the account of ACC objects in Faroese DAT-subject constructions be extended to ACC

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case-marked (Yip et al. 1987).

objects in Icelandic ACC-subject constructions? We would need to propose that the domain of dependent case assignment in Icelandic is small (e.g. vP), as in Faroese. This is perfectly plausible. We would also need to say thatACC is assigned to subjects in Icelandic later than DAT. Unlike DAT subjects in Faroese, ACC subjects in Icelandic do not trigger number agreement (Sigurðsson 1996). The case-assigning head would thus need to be lower than the number agreement probe, but higher than the domain of dependent case assignment. While this is not inconceivable, I am not aware of any independent evidence in support of this account. The data discussed in this section thus remain a puzzle. Perhaps we must assume that accusative case on the objects discussed here is lexically assigned after all.

3.3.3 Alternative account: Covert nominative

Sigurðsson (2003) and Jónsson (2009) propose that dative subjects in Faroese (but not Icelandic) have "covert nominative" case. The intuition behind this proposal is clear: triggering agreement on T and licensing of dependent accusative case on the object are properties of nominative subjects, and these properties are shared by dative subjects in Faroese. In this section, I discuss one way of formalizing the covert nominative proposal. I suggest that this is a plausible approach, but that it is less explanatory than the proposal discussed above.

To formalize the idea that DAT subjects bear covert nominative case, one can pursue an analysis along the lines of Bejar and Massam (1999), who propose that non-structural case is syntactically represented in a fundamentally different way from structural case. They suggest that a quirky dative subject in Icelandic, for instance, is marked with the case feature structure in (56a), while a quirky dative object would have the feature structure in (56b).

(56)   a. $CASE_{nom}$ b. $CASE_{acc}$
                  | |
               DAT   DAT

Bejar and Massam (1999) propose that the structures in (55) are overtly realized as dative because dative is the more marked case. An interesting (and, as far as I know, correct) prediction of this proposal is that we should never see quirky nominative, assuming that nominative is the least marked case. Even if quirky nominative were assigned, it would never surface morphologically (except in a structurally nominative environment), as it would be overruled by whatever more marked case is available in the construction.

Unfortunately, if (56) shows the case structures for Icelandic quirky subjects and objects, proposing such structures for Faroese will not help capture the differences between Icelandic and Faroese. Suppose, then, that quirky case-marked noun phrases in Faroese are marked with structures like those in (56), while quirky case-marked noun phrases in Icelandic simply bear the quirky case feature. Let us consider what this proposal has to say about the two crucial properties of Faroese dative subject constructions repeated in (57).

(57)   Properties of Faroese DAT-subject constructions:

      a.   (optional) number agreement with DAT subjects

      b.   DAT subject – ACC object pattern common

Suppose that only nominative (unmarked) noun phrases can be agreed with in Faroese. The presence of a nominative feature on dative subjects can help account for the availability of agreement with dative subjects.

(58)   Bobaljik's (2008) Revised Moravcsik Hierarchy:
      Unmarked Case > Dependent Case > Lexical/Oblique Case

      Icelandic
      Faroese

It is thus proposed that a noun phrase in Faroese must bear unmarked case in order to be agreed with. Crucially, it *may* bear lexical (DAT) case as well. It remains an open question on this view why only number agreement, and not person agreement, is possible with dative subjects (shown again in (59)).

(59)   Optional *number* agreement with DAT subject:

      a.   Teimum dáma   at vera saman   í bólki
            they.DAT like.**3PL** to be   together in band
            'They like to be together in a band.'

      b.   Teimum dámar   at renna kapp
            they.DAT like.**3SG** to run   race
            'They like to run a race.'   (*Faroese*) (Jónsson 2009: (25))

Turning to the widespread availability of ACC case marking on the objects of DAT-subject verbs, a different view of case than that proposed by Marantz (1991) is required in order for the Faroese pattern to follow from the structures given in (56a). Recall the hierarchy of case assignment proposed by Marantz (1991).

(60)   Case realization disjunctive hierarchy (Marantz 1991):

      a.   lexically governed case

      b.   dependent case

      c.   unmarked case

Dative case on the subject is lexical, and is thus the first case to be assigned. Dependent accusative case is assigned based on the presence of a noun phrase that has not been lexically case-marked. As such, it is irrelevant that the dative subject in Faroese will later be assigned nominative case. This information is not even available at the point where dependent case is licensed. Based on the case theories of Yip et al. (1987); Haider (2000); Woolford (2003, 2007), among others, Jónsson (2009) proposes instead that there is a "Nominative First Requirement": nominative case on the subject (whether or not it is visible morphologically) makes accusative case assignment possible. Note that, like Marantz's (1991) case theory, this approach does not extend naturally to ACC objects of ACC-subject constructions in Ice-

landic. As shown above, ACC subjects in Icelandic cannot be agreed with. Thus, they lack a crucial property that motivated the covert NOM hypothesis for Faroese.

I tentatively suggest that the timing account offered above is preferable over the covert nominative approach. The timing account provides a better handle on the difference between number agreement with DAT subjects in Faroese (possible) and person agreement with DAT subjects in Faroese (not possible). However, further investigation is warranted.

3.4 Quirky case preservation in Icelandic

A much-discussed property of Icelandic quirky case is preservation under A-movement. In this section, I review data showing preservation of Icelandic quirky case in passive and raising constructions. I then discuss the data brought up by Svenonius (2005, to appear) to suggest that quirky case in Icelandic is assigned by a relatively high functional head, and can thus be "lost" in certain environments. I suggest that the evidence presented by Svenonius (2005, to appear) may be accounted for in other ways. In section 3.5, I discuss clearer evidence of the loss of quirky case under A-movement provided by Faroese data.

3.4.1 Quirky case and A-movement

Quirky case in Icelandic is famously preserved under A-movement operations, including passivization and raising. As (61) and (62) show, while a structurally case-marked accusative object becomes a nominative subject in the passive, a lexically case-marked dative object becomes a dative subject.

(61)   Loss of structural case:
   a.   Þeir   hafa étið   fiskinn.
        they.NOM have eaten fish-the.**ACC**
        'They have eaten the fish.'
   b.   Fiskurinn   hefur verið étinn.
        fish-the.**NOM** has   been eaten
        'The fish has been eaten.'

   (*Icelandic*) (Thráinsson 2007: (4.86a), (4.87a))

(62)   Preservation of quirky case:
   a.   Þeir   hafa hent   fiskinum.
        they.NOM have discarded fish-the.**DAT**
        'They have thrown the fish away.'
   b.   Fiskinum   hefur verið hent.
        fish-the.**DAT** has   been discarded
        'The fish has been thrown away.'

   (*Icelandic*) (Thráinsson 2007: (4.86b), (4.87b))

Quirky case marking is also preserved under raising, as shown for ACC, DAT and GEN subjects in (63).

(63) a. Hana   virðist [vanta peninga.   ]
          her.**ACC** seems [to-lack money.**ACC**]
          'She seems to lack money.'

      b. Barninu   virðist [hafa   batnað   veikin.   ]
          the-child.**DAT** seems [to-have recovered-from the-disease.**NOM**]
          'The child seems to have recovered from the disease.'

      c. Verkjanna   virðist [ekki gæta.   ]
          the-pains.**GEN** seems [not to-be-noticeable]
          'The pains seem not to be noticeable.'

                                              (*Icelandic*) (Andrews 1982: (53))

The preservation of quirky case in Icelandic is well-documented, and has served as a basis
for our understanding of quirky case.

3.4.2   Can quirky case be lost in Icelandic?

Svenonius (2005, to appear) discusses constructions that he proposes demonstrate that ob-
ject quirky case can be lost (on his account, never assigned in the first place) in Icelandic.
He argues that quirky case is lost in Icelandic middles, adjectival passives, and nominaliza-
tion. In this section, I suggest that these constructions are not truly relevant to the issues
discussed in this chapter. Loss of quirky case in these constructions is consistent with the
standard view of quirky case as being assigned to objects by V and preserved thereafter.[17]

3.4.2.1   Middles

An example of the alleged loss of quirky case in a middle construction in Icelandic is shown
in (64).

(64) a. Active:

          Ég   týndi úrinu.
          I.**NOM** lost   the.watch.**DAT**

          'I lost the watch.'

      b. Middle:

          Úrið   týndist.
          the.watch.**NOM** lost.MIDDLE

          'The watch got lost.'
                              (*Icelandic*) (Svenonius to appear: (4), citing Sigurðsson 1989)

The object in (64a) is assigned DAT case. On the other hand, the subject of (64b), which
has the same theta-role as the object in (64a), is nominative. However, the single argument
in (64b) does not stand in a clear correspondence to the quirky-case marked object in (64a).
The middle construction can have any of a number of semantic effects, as discussed by

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[17]Svenonius (2005) also discusses the causative-inchoative transformation in Icelandic. This alternation
shows both preservation and loss of both structural and non-structural case, and I set it aside.

Anderson (1990). Compare the non-middle forms on the left in (65) with the middle forms on the right (marked by -*st*).

(65) a. klæða ('dress someone') – klæða-st ('dress oneself')
      b. heyra ('hear') – heyra-st ('be audible')
      c. blessa ('bless') – blessa-st ('succeed')
      d. eldri ('older' (adj.)) – elda-st ('get older')
      e. bjálfi ('fool') – bjálfa-st ('behave like an idiot')

<div align="right">(*Icelandic*) (Anderson 1990)</div>

As (65) shows, the middle construction can play many different roles. For example, it can make the verb reflexive, as in (65a). It can have a semantic effect, as in (65b), including a very non-transparent semantic effect, as in (65c). It can be based on an adjective (as in (65d)) or a noun (as in (65e)). Thus, there is not reason to think that there is a true syntactic correspondence between the object of (64a) and the subject (64b). Middle constructions do not provide clear evidence of the "loss" of quirky case.

3.4.2.2 Adjectival passives

An adjectival passive construction in Icelandic is illustrated in (66c), with the active form given in (66a) and the verbal passive given for comparison in (66b). The adjectival passive can be distinguished from the verbal passive by the fact that it permits *un-* prefixation and disallows *by*-phrases.

(66) a. Active:

          María bauð   honum.
          María invited him.**DAT**

          'María invited him.'
      b. Verbal passive:

          Honum   var boðið (af Maríu).
          him.**DAT** was invited (by María)

          'He was invited (by María).'
      c. Adjectival passive:

          Hann   var (ó-)boðinn (*af Maríu).
          he.**NOM** was (un-)invited (*by María)

          'He was (un-)invited.'

<div align="right">(*Icelandic*) (Svenonius to appear: (30))</div>

The object is marked dative in (66a), and dative case is retained in the verbal passive in (66b). However, the dative object of (66a) becomes nominative in the adjectival passive in (66c). Whether the lack of dative case in (66c) is surprising depends on the right analysis of adjectival passives. Borer and Wexler (1987) argue on the basis of acquisition data that while the subject of verbal passives undergoes A-movement, the subject of adjectival pas-

sives is base-generated in the subject position.[18] Children acquire verbal passives later than adjectival passives (Borer and Wexler 1987). Borer and Wexler (1987) propose that the crucial difference is A-movement. Children up to a certain age lack A-movement constructions, and hence lack verbal passives. If adjectival passives do not exhibit A-movement, it is correctly predicted that they will be acquired at an earlier stage. On a base-generation analysis of (66c) offered by Borer and Wexler (1987), the subject is never the complement of the verb, and thus any theory of quirky case will correctly predict that the subject should be nominative, and not dative.

3.4.2.3 Nominalization

Svenonius (to appear) discusses the loss of quirky case in nominalizations, shown in (67).

(67)　　Nominalization:

　　　a.　Sjómennirnir björguðu flóttamanninum.
　　　　　the.sailors　　rescued　the.refugee.**DAT**
　　　　　'The sailors rescued the refugee.'
　　　b.　björgun　　　flóttamannsins
　　　　　rescue[noun] the.refugee.**GEN**
　　　　　'rescue of the refugee'

(*Icelandic*) (Svenonius to appear: (40))

The object is marked with dative in (67a), but becomes genitive in the nominalized variant in (67b). (67) does show that quirky case assignment is tied to the verbal nature of the assigner. Quirky case is thus not assigned by a bare, unspecified for part of speech, root in Icelandic. However, the data in (67) are consistent with the quirky case assigner being quite low, and with quirky case being assigned to the object in its theta position.

　　In this section, I have argued that the Icelandic data presented by Svenonius (2005, to appear) does not require a novel approach to quirky case. In section 3.5 below, I discuss data that *does* demand that standard assumptions about the preservation of quirky case under A-movement be revised.

3.5　Loss of quirky case under A-movement

In this section, I present examples of loss of quirky case in raising and passive constructions. In section 3.5.1, I discuss the general phenomenon of DAT-NOM case alternation in Faroese subjects. This alternation complicates the task of identifying loss of quirky case. However, as discussed in section 3.5.2, there is evidence of loss of quirky case under raising and passivization in Faroese (Jónsson 2009 and p.c.). This contrasts with the Icelandic data discussed above. In section 3.5.3, I point to examples of loss of quirky case in the passive cross-linguistically (in Uyghur and Russian). In section 3.5.4, I discuss the implications of the loss of quirky case under A-movement in these languages.

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[18]However, see Emonds (2006) for a recent movement analysis of adjectival passives.

3.5.1 Case alternations in Faroese

Both subjects and, to a lesser extent, objects display quirky – non-quirky case alternations in Faroese. DAT subjects in Faroese commonly alternate with NOM subjects (Thráinsson et al. 2004; Jónsson 2009), as (68) illustrates.[19]

(68)　DAT/NOM subject case alternation:

    a. Mær dámar føroyskan　tónleik
        I.**DAT** like.3S Faroese.ACC music.ACC
        'I like Faroese music.'

    b. Eg　　dámi　føroyskan　tónleik
        I.**NOM** like.1S Faroese.ACC music.ACC
        'I like Faroese music.'　　　　　　　　(*Faroese*) (Jónsson 2009: (1))

Similarly, DAT objects can alternate with ACC objects (Henriksen 2000; Thráinsson et al. 2004; Jónsson 2009), as (69) shows.

(69)　DAT/ACC object case alternation:

    a. Eg hitti gentuna　　í gjár.
        I　met girl-the.**DAT** yesterday
        'I met the girl yesterday.'

    b. Eg hitti gentuni　　í gjár.
        I　met girl-the.**ACC** yesterday
        'I met the girl yesterday.'

                           (*Faroese*) (Thráinsson et al. 2004: (87))

    The availability of both structurally case-marked and DAT alternants, especially prevalent for subjects, complicates the task of determining whether DAT is preserved under A-movement. Whenever we see what appears to be lack of case preservation, it is possible that the source was marked with structural case in the first place. The survey data discussed by Jónsson (2009) help address this issue.

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[19] In addition to the effect of the verb, there is also a connection between the person of the subject and whether dative or nominative case is preferred. With the verb *dáma* ('to like'), the dative form is preferred for first-person subjects, while the nominative is preferred for third-person subjects. In interviews, speakers used the dative variant 76% of the time with first-person subjects (illustrated in (ia)), but only 15% of the time with third-person subjects (illustrated in (ib)) (Jónsson 2009). It is an interesting question how this dependence on person should be accounted for.

(i)　Person and case-marking:

    a. Mær dámar væl sterkan　mat
        I.DAT like.3SG well spicy.ACC food.ACC
        'I like spicy food.'

    b. Tey　　dáma　væl at spæla eitt sindur
        they.NOM like.3PL well to play　a　bit
        'They like to play a bit.'

                       (*Faroese*) (Jónsson 2009: (19a), (22b))

3.5.2 Loss of quirky case under A-movement in Faroese

In this section, I present data showing that quirky case in Faroese can be lost in passive and (somewhat more tentatively) raising constructions. Thráinsson et al. (2004) discuss quirky case loss in passive constructions. They present data showing that quirky dative is retained in passives of some verbs (as in (70)), but lost in passives of other verbs (as in (71)). Thráinsson et al. (2004) illustrate eight different verbs that require DAT objects in the active (as opposed to displaying a DAT/ACC object case alternation), but cannot take DAT subjects in the passive. The phenomenon of case loss in the passive is thus quite prevalent in Faroese.

(70) Quirky case preservation in the passive:
    a. Teir dugnaðu honum.
        they helped   him.**DAT**
        'They helped him.'
    b. Honum varð dugnað.
        he.**DAT** was helped.sup
        'He was helped.'
    c. *Hann   varð dugnað.
        he.**NOM** was helped.sup
        'He was helped.'

                                    (*Faroese*) (Thráinsson et al. 2004: (105))

(71) Loss of quirky case in the passive:[20]
    a. Politið   steðgaði honum/*hann.
        police-the stopped him.**DAT**/*him.**ACC**
        'The police stopped him.'
    b. *Honum   varð steðgað   (av politinum).
        him.**DAT** was stopped.sup (by police-the)
        'He was stopped (by the police).'
    c. Hann   varð steðgaður   (av politinum).
        he.**NOM** was stopped.NOM.sg.masc (by police-the)
        'He was stopped (by the police).'

                                    (*Faroese*) (Thráinsson et al. 2004: (116))

Survey data discussed by Jónsson (2009) confirms that *steðga* ('to stop') requires a NOM subject in the passive (100% of responses). Other verbs show more variation.

I now turn to raising of quirky-case subjects in Faroese. As mentioned in a footnote above, first person subjects of *dáma* ('to like') are preferentially dative. In interviews, speakers used the dative variant 76% of the time with first-person subjects (Jónsson 2009). However, when the subject raises out of a *dáma*-clause, the nominative is preferred (Jóhannes Jónsson (p.c.)), as illustrated in (72). There is thus some loss of quirky case

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[20]Note that the by-phrase in this example demonstrates that we're dealing with a verbal passive, not an adjectival passive. The loss of DAT case in this example is thus a different phenomenon from the lack of quirky case in Icelandic adjectival passives discussed in section 3.4.2.2.

under raising in Faroese.[21]

(72)   DAT lost under raising:[22]

    a.   Eg   byrjaði [at dáma tað væl sem frá leið   ]
        I.**NOM** started [to like   it   well as time passed]
        'I started to like it as times went by.' (20 ✓; 2 ??)

    b.   Mær byrjaði [at dáma tað betur við tíðina]
        I.**DAT** started [to like   it   better in time   ]
        'I started to like it as times went by.' (12 ✓; 6 ??; 4 *)

<div align="right">(Faroese) (Jóhannes Jónsson (p.c.))</div>

A potential concern about the data in (72) is whether the speakers that require nominative case on the subject might be treating *byrjaði* ('started') as a control verb. In a control construction, the subject would not be expected to receive quirky case from the embedded clause. I do not have the relevant data to address this issue directly. However, cross-linguistically *begin* can function as a raising predicate. The Icelandic cognate of *byrjaði* ('begin') acts as a raising predicate. As (74) shows, the quirky case assigned to the subject in the Icelandic equivalent of (72) is preserved.

(73)   Quirky-subject verb:
      Ólafi   leiddist
      Olaf.dat bored

      'Olaf was bored.'

<div align="right">(Icelandic) (Sigurðsson 2002: (22a))</div>

(74)   Quirky case preserved under raising in Icelandic:
      Ólafi   byrjaði [að leiðast]
      Olaf.dat began [to bore   ]

      'Olaf began to get bored.'

<div align="right">(Icelandic) (Sigurðsson 2002: (22b))</div>

I thus tentatively assume that (72) does demonstrate optional loss of dative case under raising in Faroese, and is not simply accounted for by speakers treating *byrjaði* ('started') as a control predicate. Interestingly, quirky case seems to be preserved in ECM constructions (Jónsson 2009) in Faroese. As (75b) shows, the verb *manglar* ('need') is compatible with a DAT subject for 46.3% of speakers. A very similar fraction of speakers (41.5%) accepts a DAT subject of *manglar* ('need') under an ECM predicate in (76b).

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[21]As mentioned above, a NOM first-person subject is possible in a matrix clause with *dáma* ('to like'), though dispreferred. One could therefore analyze the NOM subject in (72) as deriving from the non-quirky-subject variant of the verb. However, we would need to explain why the non-quirky-subject variant would be preferred in embedded clauses and not in matrix clauses.

[22]Unfortunately, I do not know the precise gloss for *sem frá lei*ð in (a).

(75) a. Flakavinnan   á landi manglar nógv   fólk
          fishing.work.the.NOM in land need.3S many.ACC people.ACC
          'The fishing industry on shore needs many people.' (85.0%)
      b. Flakavinnuni   á landi manglar Nógv   fólk
          fishing.work.the.DAT in land need.3S many.ACC people.ACC
          'The fishing industry on shore needs many people.' (46.3%)

                                                    (*Faroese*) (Jónsson 2009: (4))

(76) a. Eg haldi   meg   mangla hug   til avbjóðingarnar fyri framman
          I   believe me.ACC lack   courage to challenges.the for ahead
          'I think I need courage for the challenges ahead.' (63.4%)
      b. Eg haldi   mær   mangla hug   til avbjóðingarnar fyri framman
          I   believe me.DAT lack   courage to challenges.the for ahead
          'I think I need courage for the challenges ahead.' (41.5%)

                                                    (*Faroese*) (Jónsson 2009: (5))

Faroese thus exhibits loss of quirky case in both passive and raising constructions. The data indicating loss of quirky case in raising constructions is somewhat tentative. On the other hand, case seems to be preserved in ECM constructions. Possible analyses of the pattern of quirky case loss in Faroese are discussed in section 3.5.4.

3.5.3 Loss of quirky-case in passives cross-linguistically

The loss of quirky case under A-movement (in the passive) is not limited to Faroese. In this section, I present examples of this phenomenon from Uyghur and Russian. See also Smith (1996) for similar examples from Ancient Greek and (for a limited set of verbs) French.

3.5.3.1 Uyghur

Certain verbs in Uyghur take quirky objects.[23] *Qara-maq* ('to watch') requires a dative object, but allows a either a NOM or a DAT subject in the passive.[24] The NOM subject triggers agreement on the verb. When the subject is DAT, default 3rd person agreement is used.

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[23]Some verbs show quirky-structural object case alternations, as in Faroese.

(i)   Quirky-structural object case alternation:
       men saŋa/seni   baq-i-men
       I   you.**DAT**/you.**ACC** take.care.of-impf-1sg

       'I will take care of you.'   (*Uyghur*)

[24]This is the only Uyghur verb I have discovered so far that clearly exhibits the loss of quirky case under passivization.

(77) Case loss in the passive in Uyghur:

    a.   men saŋa/*seni   qara-j-men
          I   you.**DAT**/*you.**ACC** watch-fut-1sg
          'I will watch you/take care of you.'   (*Uyghur*)

    b.   saŋa   qara-l-i-du
          you.**DAT** watch-pass-fut-3
          'You will be watched/taken care of.'   (*Uyghur*)

    c.   sen   qara-l-i-sen
          you.**NOM** watch-pass-fut-2sg
          'You will be watched/taken care of.'   (*Uyghur*)

3.5.3.2 Russian

Many Russian verbs taking quirky objects fail to passivize (Fowler 1996), plausibly for semantic reasons. However, certain verbs require instrumental objects, but take nominative subjects in the passive, as illustrated in the following examples.[25]

(78) a.   Tolpa prenebregaet im/*ego.
          crowd disregards   him.**INST**/*him.**ACC**
          'The crowd disregards him.'   (*Russian*)

     b.   Gospod'   teper' otverzhen, prenebrezhen   tolpoj.
          Lord.**NOM** now   rejected,   disregarded.pass.perf crowd.INST
          'The Lord is now rejected, disregarded by the crowd.'   (*Russian*)
                         (from `http://hvep.z16.ru/song.php?id_st=798`)

(79) a.   Ljudi   prenebregajut prav-om/*o   golosovat' na vyborax.
          people disregard   right-**INST**/*ACC vote.inf   on elections
          'People disregard the right to vote in elections.'   (*Russian*)

     b.   Pravo   golosovat' na vyborax prenebregaetsja   ljud'mi.
          right.**NOM** vote.inf   on elections disregard.pass.impf people.INST
          'The right to vote in elections is disregarded by people.'   (*Russian*)
                         (from `http://politiko.ua/debate730`)

(80) a.   Ljudi   zloupotrebljajut [étimi   veshchestvami]/[*éti
          people abuse   [these.**INST** substances.**INST**]/[*these.**ACC**
          veshchestva].
          substances.**ACC**]
          'People abuse these substances.'   (*Russian*)

     b.   Éti   veshchestva   tak chasto   zloupotrebljajutsja ljud'mi,
          these.**NOM** substances.NOM so frequently abuse.pass.impf   people.INST,
          tak kak oni vyzyvajut chuvstvo sil'noj   éjforii.
          because they evoke   feeling   powerful euphoria
          'These substances are so frequently abused by people because they evoke a

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[25]Note that *by*-phrases in Russian passives are marked with instrumental case.

powerful feeling of euphoria.'   (*Russian*)
       (from `http://narcomania.eurolab.ua/about/article/id/457`)

   In this section, we saw examples of loss of quirky case in Uyghur in Russian passives. This phenomenon is lexically restricted in Uyghur, but applies more generally in Russian.

3.5.4   Discussion

In this section, I discuss some implications of the disappearance of quirky case under A-movement. There are two major ways of analyzing the case loss phenomenon: a morphological approach, and a syntactic approach. The morphological approach it to say that quirky case that disappears is assigned but not pronounced. For example, an object gets marked with quirky DAT or INST, but nevertheless can receive (unmarked) NOM case when it becomes the subject of a passive. This nominative case is what surfaces overtly in Faroese. The syntactic approach, used by Svenonius (2005, to appear) in his analysis of Icelandic, is to say that "disappearing" quirky case was never assigned in the first place. For example, object quirky case might require an active v, and would therefore not be assigned in the passive. At this point, I am not prepared to present a full analysis of the data discussed in this section. However, I would like to suggest that the syntactic approach is more promising than the morphological approach.[26]

3.5.4.1   The morphological approach

Consider what a morphological account of loss of quirky case would look like.

(81)   Morphological analysis:
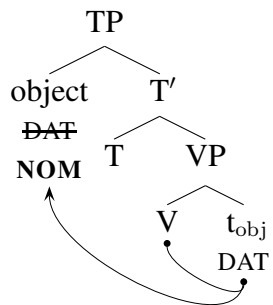
   For this analysis, I make the standard assumption that the object in (81) is assigned quirky DAT by the verb in its base position. The object then moves to the specifier of TP, where it is eligible for NOM. The first question is what makes the dative noun phrase eligible for NOM despite having already received DAT case. In a Chomskian system, where nominative case is assigned when a noun phrase agrees with T, Holmberg and Hróarsdóttir (2003) have proposed that quirky case in Icelandic is irrelevant to this process. A DAT-marked noun phrase is thus still eligible to receive structural nominative case. It is harder to see what to say in a Marantzian system of case assignment. Proposing that lexically

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[26]I do not delve into a third possibility: that a combination of the morphological approach and the syntactic approach is needed.

case-marked noun phrases are eligible for unmarked case would open up a can of worms – if the DAT-marked subject of a passive in Faroese can receive unmarked case, why can't the DAT-marked object do the same? One approach to restricting the range of multiple case assignment environments might be to say that a noun phrase can only receive one case in a single domain. A lexically case-marked noun phrase could later be marked with default case in a higher domain. I do not attempt to work out the specifics here.

Once we have a system where DAT objects can also receive NOM when they become subjects, the next task is to come up with a theory of what case will surface. If both case features are present, the system of morphological spellout will determine which case takes priority. The difference between Icelandic (quirky case preserved in the passive) and Faroese (quirky case lost in the passive) would then lie in the morphology. The rule that inserts DAT case morphology takes precedence in Icelandic, whereas the NOM rule takes precedence in Faroese. A detailed analysis of the case systems in the two languages would be necessary in order to determine how plausible this is. The other possibility is that the NOM case feature overwrites the DAT case feature in Faroese, but does not do so in Icelandic.

A large problem for this account is to not *over*predict the loss of quirky case. Loss of quirky case in the passive depends on the verb being passivized, at least in Faroese and Uyghur. For instance, while Uyghur *qara-maq* ('to watch') shows a DAT-NOM subject case alternation in the passive in (82), case preservation is required for the verb *jardem kɨl-maq* ('to help') in (83)

(82)   Case loss in the passive in Uyghur:

    a.   saŋa   qara-l-i-du
        you.**DAT** watch-pass-fut-3
        'You will be watched/taken care of.'   (*Uyghur*)

    b.   sen   qara-l-i-sen
        you.**NOM** watch-pass-fut-2sg
        'You will be watched/taken care of.'   (*Uyghur*)

(83)   Case preservation in the passive in Uyghur:

    a.   saŋa   jardem kɨl-n-i-du
        you.**DAT** help   do-pass-fut-3
        'You will be helped.'   (*Uyghur*)

    b. *sen   jardem kɨl-n-i-sen
        you.**NOM** help do-pass-fut-2sg
        'You will be helped.'   (*Uyghur*)

Because the crux lies in the spellout of features on the noun, it is difficult to see how the relevance of what verb assigned DAT to the object could be built into the system. Even more problematic is the fact that DAT on *indirect objects* in Faroese is never lost under passivization. Passive constructions in which the indirect object becomes the subject are dispreferred but not impossible in Faroese. It is completely impossible for the DAT indirect object to become nominative in these constructions, however (Thráinsson et al. 2004).

(84)   DAT case preservation in passive of ditransitive:

a. ??Bóndanum   varð seld   kúgvin.
   farmer-the.**DAT** was sold.NOM.sg.fem cow-the.NOM
   'The farmer was sold the cow.'

b. *Bóndin   varð seldur   kúgvin/kúnna.
   farmer-the.**NOM** was sold.NOM.sg.masc cow-the.NOM/cow-the.ACC
   intended: 'The farmer was sold the cow.'
                                    (*Faroese*) (Thráinsson et al. 2004: (117c), (123a))

(85)   DAT case preservation in passive of ditransitive:

a. ??Gentuni   bleiv givin   teldan.
   girl-the.**DAT** was   given.NOM.sg.fem computer-the.NOM
   'The girl was given the computer.'

b. *Gentan   bleiv givin
   girl-the.**NOM** was   given.NOM.sg.fem
   teldan/telduna.
   computer-the.NOM/computer-the.ACC
   intended: 'The girl was given the computer.'
                                    (*Faroese*) (Thráinsson et al. 2004: (118c), (123b))

Morphologically, there should be no difference between a quirky DAT object that becomes the subject of a passive and a DAT indirect object that becomes the subject of a passive. It is therefore hard to see how case loss can be predicted for quirky objects while case preservation is predicted for indirect objects.

3.5.4.2   The syntactic approach

The syntactic approach to loss of quirky case is to say that quirky case that seems to "disappear" was never assigned to begin with. This exactly what Svenonius (2005, to appear) proposes for instances of what he argues to be disappearing quirky case in Icelandic (see section 3.4.2 above, where I question the strength of some of his arguments). The idea, then, is that certain functional projections are required for quirky case assignment, and these functional projections are missing in the structures where quirky case "disappears".

   Let us begin by applying this approach to the loss of quirky case in Faroese raising constructions. I have proposed above that the number probe is crucial for assignment of quirky case to subjects in Faroese. It is possible that the infinitive clause in (86a) is missing the Nr probe, so that DAT case is not assigned to the embedded subject.

(86)   DAT lost under raising:

   a.   Eg   byrjaði [at dáma tað væl sem frá leið   ]
        I.**NOM** started [to like   it   well as time passed]
        'I started to like it as times went by.' (20 ✓; 2 ??)

   b.   Mær byrjaði [at dáma tað betur við tíðina]
        I.**DAT** started [to like   it   better in time   ]
        'I started to like it as times went by.' (12 ✓; 6 ??; 4 *)

   (*Faroese*) (Jóhannes Jónsson (p.c.))

There is no agreement on the verb in an infinitive clause. Consequently, it is plausible that the agreement probes Nr and Pn are preferably absent in embedded clauses like those in (86).

(87)   Faroese infinitive:

   $[_{TP}$ T_{inf} $[_{vP}$ subject   v . . .]]

As shown above, ECM constructions in Faroese do not seem to exhibit case loss. The quirky subject of *manglar* ('need') is accepted just as frequently in a matrix environment (example (88a)) as in an ECM environment (example (88b)).

(88)   Preservation of quirky case under ECM in Faroese:

   a.   Flakavinnuni   á landi manglar Nógv   fólk
        fishing.work.the.DAT in land need.3S many.ACC people.ACC
        'The fishing industry on shore needs many people.' (46.3%)

   b.   Eg haldi   mær   mangla hug   til avbjóðingarnar fyri framman
        I   believe me.DAT lack   courage to challenges.the for ahead
        'I think I need courage for the challenges ahead.' (41.5%)

   (*Faroese*) (Jónsson 2009: (4b, 5b))

   On the line of analysis offered here, the fact that quirky subject case is preserved in ECM constructions in Faroese indicates that infinitive clauses in an ECM environment contain the quirky case-assigning head. Thus, while only some speakers allow a Nr head in an infinitive complement of a raising predicate, it appear that speakers consistently allow a Nr head in the infinitive complement of an ECM predicate. As (89) shows, there is no increase in the acceptability of nominative subjects in ECM constructions compared to a matrix context. This suggests that Nr is obligatory in ECM infinitives.[27]

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[27]I do not no know why there seems to be a *decrease* in the acceptability of nominative subjects in an ECM (as opposed to matrix) context, or whether this decrease is statistically significant.

(89)   No increase in non-quirky subjects under ECM embedding:

    a.   Flakavinnan   á landi manglar nógv   fólk
        fishing.work.the.NOM in land need.3S many.ACC people.ACC
        'The fishing industry on shore needs many people.' (85.0%)

    b.   Eg haldi   meg   mangla hug   til avbjóðingarnar fyri framman
        I   believe me.ACC lack   courage to challenges.the for ahead
        'I think I need courage for the challenges ahead.' (63.4%)

                                  (*Faroese*) (Jónsson 2009: (4a, 5a))

Thus, it seems that ECM infinitives in Faroese have more structure than raising infinitives. ECM infinitives contain at least a Nr head, which may be missing in raising infinitives. I leave for further research the question of whether there is independent evidence for structural differences between raising and ECM infinitives, in Faroese or cross-linguistically.

For Icelandic, I have proposed that the head that assigns quirky case to subjects is lower (v, not Nr) than in Faroese. This means that quirky case is assigned to the subject of an infinitive clause in Icelandic, even if that clause is reduced.

(90)   Icelandic infinitive:

$$[_{TP}\ T_{inf}\ [_{vP}\ subject\ \underbrace{\quad}\ v\ \dots]]$$
$$\text{DAT}$$
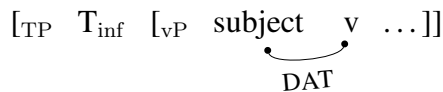
It is correctly predicted that quirky case is preserved under raising in Icelandic. This analysis suggests that languages in which quirky case is assigned to subjects late enough that they can first be agreed with are also languages in which quirky subjects can lose their quirky case under A-movement. If agreement with quirky subjects is possible, then the agreeing head is at least as high as the quirky case assigning head.

(91)
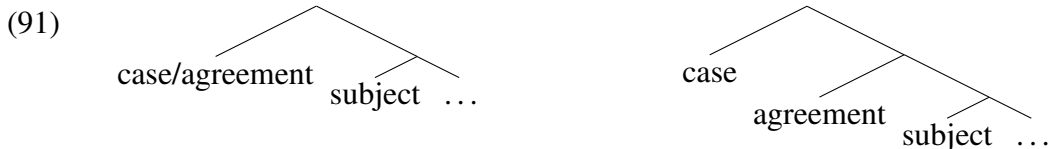
If the embedded clause in a raising construction is a non-agreeing infinitive, we might expect that the agreement head can be missing.[28] If this is the same head that assigns quirky subject case (and we therefore see variation in agreement with quirky subjects, as in Faroese), when this head is missing, quirky case is lost. Or, if the agreeing head is above the case-assigning head (and thus we always see agreement with the subject), we might also expect this head to be missing in a reduced structure like an infinitive. I leave these cross-linguistic questions for further research.

Turning now to passives, it becomes relevant what head assigns quirky case to the *object*. If quirky case is assigned by the verb itself, it will always be preserved in the passive, as in Icelandic. If quirky case is assigned by (non-passive) v, quirky case should be lost in the passive, just like structural accusative.[29] However, what we need to capture

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[28]In fact, the question may be why the agreement head (Nr) can be *present* in Faroese.
[29]That is, unless passive v is capable of assigning quirky case.

is variation, including intra-linguistic variation. With some verbs in Faroese, quirky object case is preserved in the passive, while with others, it is not. There can even be variation for a single verb – case preservation is optional in Uyghur with the verb *qara-maq* ('to watch'), as discussed above.[30]

On the syntactic account, variation in case-marking corresponds either to variation in the presence of the case-assigning head, or to variation in which head acts as the case assigner. If the former hypothesis is right, we might expect to see some semantic correlate to case loss and preservation, if the head assigning quirky case is semantically relevant. The latter hypothesis might essentially say that some verbs in Faroese are like verbs in Icelandic – they assign quirky case to their objects without requiring any additional functional structure. With these verbs, quirky case is preserved in the passive. Other verbs in Faroese do not assign quirky case on their own, but require a functional head (such as non-passive v) to be present in order for case assignment to take place. In a language with object agreement, a similar prediction would be made to what is discussed for subject raising above – quirky case on objects that disappears in the passive should go hand-in-hand with agreement with these objects.

Unlike the morphological approach, the syntactic approach has no trouble distinguishing indirect objects from quirky DAT objects. While an analysis of the case properties of indirect objects is beyond the scope of this discussion, they are assigned case in a different syntactic configuration from quirky DAT. The passive construction in Faroese does not interfere with the configuration in which DAT indirect objects are case-marked, so case on indirect objects is preserved. Thus, while the details of a syntactic account still need to be worked out, and cross-linguistic predictions should be investigated, the syntactic approach to disappearing quirky case is more promising than the morphological approach.

3.6   Preservation of structural case

As discussed in the introduction, it has been proposed that structural case is lost under A-movement, whereas non-structural case is lost under A-movement (Woolford 2006, among others).

(92)   Case preservation:

    a.   Structural case is *lost* under A-movement

    b.   Non-structural case is *preserved* under A-movement.

Above, I have shown that quirky case in Faroese, among other languages, can be *lost* under A-movement. I have proposed that when quirky case appears to be lost, it is in fact never assigned in the first place. In this section, I turn to the issue of loss of *structural* case under A-movement. Based on Uyghur data discussed in chapter 1, I show that structural case is, like quirky case, preserved under A-movement. When structural case appears to be

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[30]In Faroese, some verbs seem to exhibit variation as to whether the subject is DAT or NOM in the passive, but it looks like most of the variation is inter-speaker. Jónsson (2009) gives acceptance rates that indicate 9.3% of speakers accepting both variants with *leiðbeint* ('instructed') and 4.6% accepting both variants with *eggjarð* ('encouraged'). (I assume that all speakers accepted at least one variant.)

lost, it was never assigned to begin with. The phenomenon that has been described as loss of structural case is found in all constructions that do not violate the Activity Condition (Chomsky 1998, 2001), given in (93).

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

Structurally case-marked DPs do not have an unvalued Case feature. The AC therefore entails that structurally case-marked DPs cannot be targeted for Agree, and thus cannot undergo A-movement. In a world view consistent with the Activity Condition, one cannot say that structural case is lost under A-movement, because structurally case-marked DPs do not undergo A-movement in the first place. Rather, what has been described as the "loss" of structural case is simply the observation that DPs that undergo A-movement are not assigned structural case before they do so. In this way, structural accusative on the object of (94a) is lost in the passive in (94b).

(94)   a.   The guard saw **him**$_{acc}$.
         b.   **He**$_{nom}$ was seen (by the guard).

The object in (94a) becomes nominative in (94b) not because it *loses* its accusative case in the process of A-movement, but because accusative case is never assigned to it to begin with. Under a Chomskian view of case assignment, the passive v in (94b) is not capable of assigning accusative case. Under a Marantzian approach, there is no case competitor for the underlying object (surface subject) in (94b), so depended ACC case is not assigned.

   In chapter 1, I have argued at length that not all A-movement obeys the Activity Condition. The argument was based on the raising of structurally genitive-marked embedded subjects in Uyghur, illustrated in (95).[31]

(95)   Raising of genitive subject:
         Ötkür-niŋ bu ehtimalda [$_{vP}$ t oqu]-ʃ-i   kirek
         Ötkür-gen probably   [$_{vP}$ t read]-nliz-3.poss necessary

         'Ötkür has to read.'

   As discussed in chapter 1, (95) is an instance of raising of a structurally GEN-marked noun phrase. This noun phrase retains its overt genitive marking under A-movement. Uyghur raising thus provides a counterexample to the claim that structural case is not preserved under A-movement.

3.7   Conclusion

In this chapter, I discussed the differences and similarities in the behavior of structural and non-structural case. The prime example of non-structural ("quirky") case has been Icelandic, where quirky case behaves very differently from structural case. Subjects bearing

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[31]See chapter 1 for arguments that (95) is indeed a raising construction, and that the genitive case on the embedded subject is structural.

quirky case in Icelandic cannot be agreed with, and quirky DAT subjects do not license dependent ACC case on the object. Quirky case in Icelandic is preserved under A-movement, whereas structural case is not.

The clean cut between structural and non-structural case is lost once we turn to Faroese. Faroese quirky DAT subjects can be agreed with in number, and they license dependent ACC case on the object. Moreover, quirky case can be lost under A-movement in Faroese. Following the approach take by Svenonius (2005, to appear) for Icelandic, I have proposed that quirky case in Faroese requires a higher functional projection in order to be licensed. I have argued that if that functional projection for quirky subjects is number, the system developed by Sigurðsson and Holmberg (2008) for dative intervention in Icelandic also makes the right predictions for agreement with DAT subjects in Faroese.

I have thus presented evidence that a number of assumptions regarding differences between structural and non-structural case must be adjusted. The data I presented in chapter 1 shows that non-structural case can be preserved under A-movement. Assignment of non-structural case can require more than just the theta-role assigning projection. Because a higher projection is required for non-structural case assignment in some languages, non-structural case can fail to be assigned in certain configurations, such as passives and raising infinitives. Non-structural case can thus be "lost" under A-movement.

Chapter 4

Neutrality vs. ambiguity in resolution by syncretism: Experimental evidence and consequences

4.1   Introduction

In this chapter, I consider constructions in which a lexical item is eligible for multiple features of the same type. This is illustrated for person/number agreement in (1).

(1)   Agreement with disjunct subject (Pullum and Zwicky 1986: (5), (6)):
    a.   *Either they or I are/am/is going to have to go.
    b.   Either they or you are going to have to go.

In (1a), *be* cannot agree with both disjuncts in the subject. The sentence is ungrammatical regardless of which form of *be* is used. In (1b), however, *be* can agree with both *they* and *you*. The form *are* thus agrees with both the 3rd person plural and the 2nd person pronouns. The issue in (1a) is thus not simply an impossible combination of formal features (*feature conflict*). Some kind of morphological or phonological identity (*syncretism*), as opposed to syntactic feature identity, is evidently sufficient in (1b).

Resolution by syncretism presents two challenges for any theory: *ruling out* examples like (1a), where conflicting agreement requirements make the sentence ungrammatical, and *allowing* examples like (1b), where syncretism makes it possible for conflicting agreement requirements to be satisfied. The fact that (1a) is ungrammatical means that person/number agreement (and feature assignment more generally) is not optional – the example is somehow ruled out by the excess of features on the copula. On the other hand, the syntax must allow an item to bear contradictory features for (1b) to go through. Examples (1a) and (1b) are distinguished by the *morphology* of the copula, which means that the morphological system is not "fail-safe", but can rule out inputs such as (1b). The last point is a problem for Distributed Morphology (Halle and Marantz 1993) and any other system which assumes the Subset Principle.

What kind of identity between forms allows the feature conflict in (1b) to be resolved? Two types of syncretism have been discussed in the literature – *neutrality* and *ambiguity*.

A *neutral* form is one that is *underspecified* for a certain feature. For example, English past tense verbs (other than *be*) are neutral for person and number: the past tense morpheme *-ed* simply does not encode person or number features. An *ambiguous* form is one that does not have an underspecified representation. Rather, two sets of features are *accidentally* represented in the same way. Syncretism between the English noun plural suffix *-z* and verbal present tense 3rd person singular suffix *-z* is an instance of ambiguity.

There is no consensus in the literature as to whether only neutral forms resolve feature conflicts (Zaenen and Karttunen 1984; Ingria 1990; Dalrymple et al. 2009), or whether ambiguous forms do so as well (Pullum and Zwicky 1986).[1] In order to clarify the situation, I conducted an experiment to determine what kinds of resolution by syncretism are possible. The experiment involved systematically gathering judgments within a limited domain – case syncretism in Russian Right Node Raising (RNR) constructions, illustrated in (2).

(2)   Russian RNR with different case requirements and no NOM-ACC syncretism:

> *On ne ostavil, tak kak emu nadoela,   tarelk-u/a   s   chërnoj kaëmkoj.
> he not *kept$_{acc}$*, as   him **sick.of$_{nom}$**, plate-*ACC*/**NOM** with black   border

> 'He didn't keep, as he was sick of, the plate with a black border.'

(3)   Russian RNR with different case requirements and NOM-ACC syncretism:

> On ne ostavil, tak kak emu nadoelo,   bljudc-e   s   krasnoj
> he not *kept$_{acc}$*, as   him **sick.of$_{nom}$**, saucer-***ACC&NOM*** with red
> kaëmkoj.
> border

> 'He didn't keep, as he was sick of, the saucer with a red border.'

As (4) shows, the RNRed noun phrase is assigned accusative (ACC) in the first clause in (3), but nominative (NOM) in the second.

(4)   a.   Accusative (ACC):

> On ne ostavil tarelk-u/bljudc-e.
> he not kept$_{acc}$ plate-ACC/saucer-ACC

> 'He didn't keep the plate/saucer.'

        b.   Nominative (NOM):

> Emu nadoel-a/o   tarelk-a/bljudc-e.
> him sick.of-fem/neut$_{nom}$ plate-NOM/saucer-NOM

> 'He's sick of the plate/saucer.'

When the RNRed noun is not syncretic for the two cases assigned (ACC and NOM), as in (2), the construction is ungrammatical. On the other hand, when the RNRed noun is syncretic

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[1]For Zaenen and Karttunen (1984) and Ingria (1990), feature conflict must additionally be semantically irrelevant in order for resolution to be possible. For Pullum and Zwicky (1986), resolution by an ambiguous form requires that the feature involved be "syntactically imposed".

for NOM and ACC, as in (3), the sentence is grammatical. The possibilities considered in the experiment were resolution by neutrality (seen in (3)), and resolution by two types of ambiguity – morphological ambiguity and phonological ambiguity. The experiment demonstrates that only *neutral* forms resolve feature conflicts. This conclusion has some important consequences. It places resolution by syncretism squarely in the morphological (as opposed to syntactic or phonological) domain, as the distinction between neutral and ambiguous forms is only available in the morphology. It thus shows that morphological insertion is not a crash-proof process, but can lead to ungrammaticality. It also provides an empirical means of distinguishing neutrality from ambiguity, as only neutral forms resolve feature conflicts. The distinction between neutral and ambiguous forms is thus not a theory-internal construct, but something that can be tested with speaker intuitions.

Below, I will argue that the RNRed noun in examples like (3) is marked with two separate feature structures, one for each case it bears. The two feature structures must be spelled out (given phonological form) by a single morphological rule. This is possible for neutral forms, but not for ambiguous (or non-syncretic) forms. As a consequence, only neutral forms resolve feature conflicts. When all feature structures cannot be spelled out by a single rule, the derivation crashes, and ungrammaticality results.

In section 4.2, I discuss three types of syncretism – *neutrality*, *morphological ambiguity*, and *phonological ambiguity* – and how they are instantiated in Russian. In section 4.3, I present the experiment I conducted to evaluate what types of syncretism resolve feature conflicts. The conclusion of the experiment is that only neutrality does so. In section 4.4, I introduce Distributed Morphology, and show that it cannot immediately capture the resolution by syncretism pattern. In section 4.5, I propose a morphological system (an extension of Distributed Morphology) that captures the syncretism data. I suggest that multiple feature structures on a single item arise in constructions best analyzed as *multidominant*. In section 4.6, I discuss some alternative analyses of resolution by syncretism, and the difficulties they face. Finally, in section 4.7, I provide an overview of resolution by syncretism cross-linguistically, as discussed in the literature. I suggest that all example of resolution by syncretism can be analyzed as resolution by neutrality in multidominant constructions. Section 4.8 concludes.

4.2   Syncretism types in Russian

In this section, I consider three ways in which a morpheme can be syncretic: *neutrality*, *morphological ambiguity*, and *phonological ambiguity*. Suppose a morpheme is assigned two sets of features, α and β. *Neutrality* is when a single morpheme is compatible with both α and β. *Ambiguity* is when α and β are treated differently by the morphological system and identity of outputs is accidental. I further break down ambiguity into *morphological ambiguity* and *phonological ambiguity*.

(5)   *Morphological ambiguity:* The underlying phonological representations corresponding to α and β are (accidentally) the same.
         Phonological ambiguity: The underlying forms for α and β are distinct, but the surface forms are identical due to the phonology of the language.

The experiment presented below shows that (at least in Russian RNR constructions) only *neutral* forms resolve feature conflicts. In this section, I establish that the three types of syncretism are found in Russian; a detailed morphological analysis is required to distinguish neutrality from ambiguity with certainty. The forms discussed in this section were used in the stimuli in the experiment I conducted. The experimental results suggest a new way of identifying neutral (as opposed to ambiguous) forms, which complements theoretical considerations – neutral forms are those that resolve feature conflicts.

4.2.1 Russian noun declension paradigms

Russian has four nominal declensions (the two of them that overlap greatly have traditionally been grouped together), two numbers (singular and plural), and six basic cases (nominative, genitive, dative, accusative, instrumental, and prepositional). The singular declension patterns are illustrated in the following table.

(6)   Russian singular noun declension system:

declension / case	Ia	Ib	II	III
Nominative (NOM)	stol-∅	oblak-o	lamp-a	kost'-∅
Genitive (GEN)	stol-a	oblak-a	lamp-y	kost-i
Dative (DAT)	stol-u	oblak-u	lamp-e	kost-i
Accusative (ACC)	stol-∅*	oblak-o	lamp-u	kost'-∅
Instrumental (INST)	stol-om	oblak-om	lamp-oj	kost'-ju
Prepositional (PREP)	stol-e	oblak-e	lamp-e	kost-i

stol – 'table'; *oblako* – 'cloud'; *lampa* – 'lamp'; *kost'* – 'bone'
*The accusative is syncretic with the nominative for inanimates, and with the genitive for animates.

In section 4.2.2 below, I argue that NOM-ACC syncretism in declensions I and III (seen in the table above) is an instance of *neutrality*. In section 4.2.4, I show that ACC and PREP forms of class Ib nouns with unstressed endings are *phonologically ambiguous*.[2]

Partitive case and locative case in Russian are largely syncretic with genitive and prepositional (respectively). Each is distinguished in a limited subset of singular class Ia nouns.

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[2]The ACC and PREP class Ib forms have the same spelling and phonological form when the ending is unstressed and follows a palatalized consonant.

(7)   Partitive and locative, class Ia:

Genitive	partitive (PART)	chaj-**u** sok-**u** les-a grob-a
	non-partitive	chaj-**a** sok-**a** les-a grob-a
Prepositional	locative (LOC)	chaj-e sok-e les-**ú** grob-**ú**
	non-locative	chaj-e sok-e les-**e** grob-**e**

> *chaj* – 'tea'; *sok* – 'juice'; *les* – 'forest'; *grob* – 'casket'

I argue in section 4.2.3 that PART-DAT syncretism for class Ia nouns is an instance of *morphological ambiguity*.

4.2.2 Neutrality

In this section, I argue that NOM-ACC syncretism in Russian is an instance of neutrality, where a single morpheme is compatible with two sets of features. In particular, my experiment uses NOM-ACC syncretism for neuter (declension class Ib) nouns such as *bljudc-e* ('saucer'-NOM/ACC).

(8)   Nominal declension – NOM and ACC:

declension / case	Ia	Ib		II	III
Nominative (NOM)	stol-∅	oblak-**o**	bljudc-**e**	lamp-a	kost'-∅
Accusative (ACC)	stol-∅*	oblak-**o**	bljudc-**e**	lamp-u	kost'-∅

> *stol* – 'table'; *oblako* – 'cloud'; *bljudce* – 'saucer'; *lampa* – 'lamp'; *kost'* – 'bone'
> *The accusative is syncretic with the nominative for inanimates, and with the genitive for animates.

Morphological analyses of Russian have consistently treated NOM-ACC syncretism as an instance of neutrality (Jakobson 1958; Neidle 1988; Wiese 2004; Müller 2004; Dalrymple et al. 2009).[3] Important reasons for this analysis include *metasyncretism* (Williams 1994) and the syntactic connection between NOM and ACC.

Metasyncretism is the presence of the same type of syncretism across different paradigms. NOM-ACC syncretism is found throughout the Russian declension system. NOM and ACC are syncretic in Russian for all class Ia (masculine) inanimate nouns, as well as all class Ib (neuter) and all class III (feminine) nouns. Adjectives and demonstratives that agree with masculine or plural inanimate nouns, or with neuter nouns (animate or inanimate), also display NOM-ACC syncretism.

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[3]I am not aware of any work which has not done so.

(9)　NOM-ACC syncretic forms:

nouns	class Ia inanimate	stol-∅	('table')
	class Ib	oblak-o	('cloud')
	class III	kost'-∅	('bone')
	plural inanimate	lamp-y	('lamps')
adjectives	masculine (w/ inanimate)	krasn-yj	('red')
	neuter	krasn-oe	('red')
	plural (w/ inanimate)	krasn-ye	('red')
demonstratives	masculine (w/ inanimate)	étot	('this')
	neuter	éto	('this')
	plural (w/ inanimate)	éti	('these')

Metasyncretism motivates treating nominative and accusative as forming a category.[4] That is, there is some feature (or features) that NOM and ACCshare. If NOM and ACC *share* a feature (or features), each instance of syncretism can be systematic. The syncretic form is inserted in the context of the shared feature. On the other hand, if NOM and ACC *do not share* a feature, each instance of syncretism is accidental. If each occurrence of NOM-ACC syncretism is an accident, we should be very surprised to find it showing up again and again in Russian.

Grouping NOM with ACC in Russian is well-motivated syntactically. NOM and ACC are structural cases. Thus for Wiese (2004); Müller (2004) the [non-oblique]/[−oblique] feature is what unifies NOM and ACC, to the exclusion of other cases. Additionally, nominative and accusative environments pattern together in Russian in allowing the genitive of negation (Babby 1980; Pesetsky 1982). Paucal numeral constructions also behave identically in NOM and ACC environments, and distinctly in oblique contexts.

Genitive of negation is illustrated in (10) and (11), where NOM and ACC alternate with GEN in a negative context. Other cases cannot alternate with GEN, as (12) shows.

(10)　NOM-GEN alternation:

    a.　Pis'm-a　　ne prishl-i.
       letters-**NOM** not came-pl
       'The letters haven't come.'

    b.　Pisem　　ne prishl-o.
       letters.**GEN** not came-neut.sg
       'Letters haven't come.'

(11)　ACC-GEN alternation:

    Ja ne　chital pis'm-a/pisem.
    I　not read　letters-**ACC**/letters.**GEN**

    'I haven't read (the) letters.'

---

[4]It has been argued that metasyncretism is actually best handled by rules of *impoverishment* – deletion of features (Bobaljik 2001; Harley 2008). This possibility is discussed in greater detail in section 4.6.1.

(12)   No DAT-GEN, INST-GEN, PREP-GEN alternation:

    a.   Ja ne rad pis'm-am/*pisem.
          I   not glad letters-**DAT**/*letters.**GEN**
          'I'm not glad of (the) letters.'

    b.   Ja ne dovolen pis'm-ami/*pisem.
          I   not pleased letters-**INST**/*letters.**GEN**
          'I'm not pleased with (the) letters.'

    c.   Ja ne dumaju o   pis'm-ax/*pisem.
          I   not think   about letters-**PREP**/*letters.**GEN**
          'I don't think about (the) letters.'

Paucal numeral constructions also distinguish NOM and ACC from other cases – paucal numerals combine with genitive singular nouns in nominative and accusative environments (seen in (13)), but with plural nouns in the appropriate case form in all other environments (seen in (14)).

(13)   GEN singular noun:

    dv-a   stol-a
    two-**NOM/ACC** table-**GEN.SG**

(14)   Oblique plural noun:

    a.   dv-ux   stol-ov
          two-**GEN** table-**GEN.PL**

    b.   dv-um   stol-am
          two-**DAT** table-**DAT.PL**

    c.   dv-umja   stol-ami
          two-**INST** table-**INST.PL**

    d.   dv-ux   stol-ax
          two-**PREP** table-**PREP.PL**

The fact that nominative and accusative pattern together syntactically motivates proposing that they form a non-oblique category to the exclusion of other cases. Considerations of economy then suggest that NOM-ACC syncretism is an instance of neutrality, as the syncretic form can either be derived by one rule (neutrality, shown in (15a)), or by two (ambiguity, shown in (15b)).

(15)   Class Ib:

    a.   non-oblique → -o
    b.   nominative → -o
          accusative → -o

There are thus strong arguments for analyzing NOM-ACC syncretism in Russian as an instance of neutrality, as a number of authors have done.

4.2.3 Morphological ambiguity

A form is *morphologically ambiguous* when the underlying phonological representations corresponding to two sets of features are *accidentally* the same. A subset of masculine (class Ia) nouns is syncretic for partitive-dative (PART-DAT) in Russian, and this syncretism is an instance of morphological ambiguity.

(16)   Nominal declension – GEN/PART and DAT:

declension / case		Ia	Ib	II	III
Genitive (GEN)	partitive (PART)	chaj-**u** sok-**u** stol-a	oblak-a	lamp-y	kost-i
	non-partitive	chaj-a sok-a			
Dative (DAT)		chaj-**u** sok-**u** stol-u	oblak-u	lamp-e	kost-i

chaj – 'tea'; *sok* – 'juice'; *stol* – 'table'; *oblako* – 'cloud'; *lampa* – 'lamp'; *kost'* – 'bone'

PART-DAT syncretism has been treated as ambiguity by Jakobson (1958), Neidle (1988), and Wiese (2004).[5] This is practically necessitated by the fact that unlike DAT -*u*, PART -*u* is lexically restricted. Additionally, there is a strong syntactic connection between PART and GEN, and not PART and DAT.

PART and DAT -*u* endings appear on different sets on nouns. DAT -*u* shows up on all class Ia and class Ib nouns, whereas PART -*u* only appears on a lexically specified subset of class Ia nouns. Consequently, if a single rule were to insert both the PART and the DAT -*u* morphemes, we would have to make some highly undesirable stipulations.[6]

Furthermore, PART is morphologically and syntactically tied to GEN, and not to DAT. Russian exhibits PART-GEN metasyncretism – PART is syncretic with non-partitive GEN in all parts of the declension system other than a subset of singular class Ia nouns. Furthermore, GEN case marking is permitted in environments where PART can be used, as the following example illustrates.

(17)   Partitive and genitive:

Nalej mne sok-u/sok-a.
pour me   juice-PART/juice-GEN

'Pour me some juice.'

PART-DAT syncretism is thus an instance of (morphological) ambiguity in Russian, and not neutrality. Experimental evidence discussed below indicates that PART-DAT syncretism does not resolve feature conflicts.

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[5]Again, I am not aware of any analyses that have not done so.

[6]One way to analyze PART-DAT syncretism as neutrality is to propose a genitive insertion rule that is lexically specified to apply to all nouns *other* than those that have a special partitive ending, and precedes the rule inserting -*u*. Another way is to treat the syncretism between *dative* forms of nouns with partitive -*u* and *dative* forms of nouns without partitive -*u* as accidental. Neither approach is tenable.

4.2.4 Phonological ambiguity

Phonological ambiguity is found when underlying forms for two sets of features are distinct, but the surface forms are identical due to the phonology of the language. Russian exhibits phonological ambiguity in accusative-prepositional (ACC-PREP) syncretism for neuter (class Ib) nouns with unstressed endings.

(18)   Nominal declension – ACC and PREP:

declension case	Ia	Ib		II	III
Accusative (ACC)	stol-∅*	sedl-ó	pól-[i]**	lamp-u	kost'-∅
Prepositional (PREP)	stol-e	sedl-é	pól-[i]**	lamp-e	kost-i

> *stol* – 'table'; *sedlo* – 'saddle'; *pole* ('field'); *lampa* – 'lamp'; *kost'* – 'bone'
> *The accusative is syncretic with the nominative for inanimates, and with the genitive for animates.
> **[póli] is spelled as *pole*.

ACC and PREP neuter (class Ib) forms are distinct when the ending is stressed, as seen in the table above. However, there is a general process of vowel reduction in Russian:[7]

(19)   unstressed o, e → i after a palatalized consonant

Consequently, unstressed ACC and PREP endings after a palatalized consonant yield the same surface phonological form, as (20b) shows.

(20)   a.   sedl-ó   – sedl-é   b. pól-i
              saddle-ACC – saddle-PREP   field-ACC/PREP

Examples of PART-DAT syncretism are used in the phonological ambiguity condition of the experiment discussed in the next section.

4.2.5 Summary

In this section, I have presented three types of syncretism found in the Russian nominal declension system, as summarized in (21). In the next section, I describe an experiment based on these three syncretism types.

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[7]More generally, unstressed vowels preceded by a palatalized consonant are traditionally described as reducing to one of two vowels:

(i)   a.   i, e, a, o → i
       b.   u → u

Padgett and Tabain (2005) conduct a detailed phonetic study of vowel reduction in Russian, which shows that even in a palatalized, unstressed context, vowel reduction is not always complete. Which vowels are differentiated, if any, varies both between speakers and between vowels. Padgett and Tabain (2005) show that in a palatalized context, unstressed i-e and o-e pairs are the most likely to collapse. ACC-PREP syncretism depends on identity between unstressed o and e.

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(21) **Neutrality:** NOM-ACC (neuter, class Ib)

Morphological ambiguity: PART-DAT (masculine, class Ia; lexically specified subset)

Phonological ambiguity: ACC-PREP (neuter with unstressed ending, class Ib)

4.3 Experiment

I conducted an experiment with the goal of determining what types of syncretism resolve feature conflicts. In particular, I evaluated three types of syncretism found in Russian (as discussed in the previous section) – neutrality, morphological ambiguity, and phonological ambiguity. The experimental results show that neutrality resolves feature conflicts, but ambiguity (of either type) does not. I tentatively assume that the results of this experiment carry over to other languages and constructions. In this section, I present the experimental setup and findings.

4.3.1 Stimuli

The three test conditions for the experiment were neutrality, morphological ambiguity, and phonological ambiguity. The paradigm used was Russian RNR constructions where the RNRed noun phrase is assigned one case in the first clause, and a different case in the second clause. A test sentence and a control sentence were presented for each experimental condition. In the test sentences, the RNRed noun is syncretic for the cases assigned by the two clauses. In the control sentences, the RNRed noun is from a different declension class, is not syncretic for the cases assigned by the two clauses. Rather, it bears the case assigned by the second clause.[8] Controls were constructed to be minimally different from the test sentences. The only difference between a test sentence and the corresponding control is the RNRed noun phrase, as (22) and (23) illustrate.

(22)   NOM-ACC syncretism (neutrality):

On ne ostavil, tak kak emu nadoelo, bljudc-e s krasnoj
he not *kept_{acc}*, as him **sick.of_{nom}**, saucer-***ACC&NOM*** with red
kaëmkoj.
border

'He didn't keep, as he was sick of, the saucer with a red border.'

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[8]Sentences where the RNRed noun bears the case assigned by the first clause instead are markedly worse (according to my own judgments and those of two other informants).

(23)   NOM-ACC syncretism (neutrality) control:

        *On ne ostavil, tak kak emu nadoela,   tarelk-a   s   chërnoj kaëmkoj.
        he not *kept$_{acc}$*, as   him **sick.of$_{nom}$**, plate-**NOM** with black   border

        'He didn't keep, as he was sick of, the plate with a black border.'

Note that in all instances of syncretism used, including phonological syncretism, the two relevant forms have the same spelling. For example, the underlying *lózh-o* ('bed-ACC') and *lózh-e* ('bed-PREP'), which are both pronounced [lózh-i] due to vowel reduction, are spelled identically as "lozhe". The written form thus provides no indication that different case suffixes are required in the two clauses.

RNR examples where the same case is assigned in both clauses were used as a baseline. The fillers used involve case assignment across an intervening parenthetical, and are of comparable length with the RNR sentences. There was a mix of fillers with correct and incorrect case forms. Sample sentences for each condition can be found in appendix D. It is predicted that test sentences are more acceptable than the corresponding controls if, and only if, the type of syncretism involved (neutrality, morphological ambiguity, phonological ambiguity) can resolve feature conflicts.

4.3.2   Setup and participants

The experiment was conducted online through Amazon Mechanical Turk. Russian speakers (as opposed to other Turk users) were identified by their answers to preliminary free-response questions. Results from 41 participants were used. The sentences were presented in written form.[9] The participants were asked, "Can you say this?" (presented in Russian); the possible responses were "yes" or "no". Each participant judged up to five sets of sixteen sentences. Each set included one test sentence of each type (neutrality, morphological ambiguity, phonological ambiguity), one control for each type of test sentence (with closest conjunct agreement), two RNR sentences with the two clauses assigning the same case, and eight filler sentences.

4.3.3   Results

The key result of this experiment is that sentences with neutrality are significantly more acceptable than the corresponding controls, whereas sentences with ambiguity are not.

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[9]Audio recordings were used in a pilot for this experiment.

(24)   **Results at-a-glance:**

Condition	# accepted	# total	% accepted
Fillers (grammatical)	191	261	73%
Fillers (ungrammatical)	52	235	22%
RNR, no case conflict	66	124	53%
Neutrality	41	62	66%
Neutrality controls	20	62	32%
Morphological ambiguity	27	62	44%
Morphological ambiguity controls	23	62	37%
Phonological ambiguity	32	62	52%
Phonological ambiguity controls	41	62	66%

The acceptance rate for examples of RNR with no case conflict is surprisingly low. However, it is not necessarily appropriate to compare results across paradigms, as the items are non-minimally different. I continue to assume that RNR examples with no case conflict are "grammatical". This is supported by the pilot study, in which RNR examples with no case conflict were accepted more frequently than any other type of RNR. The experimental results are analyzed using a mixed effects logistic regression with maximum likelihood fitting. The model includes the following factors:

(25)   • paradigm (neutrality, morphological ambiguity, or phonological ambiguity)
   • neutral form? (yes/no)
   • morphologically ambiguous form? (yes/no)
   • phonologically ambiguous form? (yes/no)
   • random effect: participant ID

The significant factors ($p < .05$) are whether the form is neutral ($p < .001$), and whether the sentence is part of the phonological ambiguity paradigm ($p < .001$).[10] Whether the form is ambiguous (morphologically or phonologically) is not significant. A likelihood ratio test for the significance of the three experimental conditions further demonstrates that only neutrality yields a significant improvement over the corresponding controls.

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[10]I do not have much to say about why sentences in the phonological ambiguity paradigm were significantly better than sentences in the other paradigms. This point highlights the fact that we do not have minimal comparisons across paradigms; I restrict the analysis to intra-paradigm effects.

(26)   **Significance of neutrality, morphological ambiguity, phonological ambiguity:**

Condition	χ^2	p (χ^2)	significant?
Neutrality	13.6	< .001	yes
Morphological ambiguity	2.1	.146	no
Phonological ambiguity	3.4	.064	no

Neutrality contributes significantly to explaining the data, whereas ambiguity does not. (Note that the trend with phonological ambiguity is for the controls to actually be better than the test sentences, but this is not a significant result.) Thus, out of the three conditions, only *neutrality* significantly raises acceptability. I conclude that neutral forms resolve feature conflicts, whereas ambiguous forms do not. I suppose that my experimental results carry over to other languages and constructions, but further investigation is warranted.

4.4   Resolution by syncretism and morphological systems

The fact that resolution of feature conflicts requires a neutral form means that resolution by syncretism takes place in the morphological component of the grammar. Neutrality, as distinguished from ambiguity, is a property of the morphological system: two sets of features (e.g. [NOM] and [ACC]) are spelled out by a single morphological rule. We thus need a morphological system that is able to capture resolution by syncretic (specifically, neutral) forms.

In this section, I provide some background on Distributed Morphology (DM), an influential morphological system proposed by Halle and Marantz (1993). I then show that DM as-is, and any other system that shares its Subset Principle, cannot adequately account for resolution by neutrality. Such a system is crash-proof: the presence of "too many" features (e.g. [DAT] and [PART]) will never prevent the insertion of *some* morphological form. In the next section, I will propose an extension of DM that accounts for the pattern of resolution by syncretism.

4.4.1   Distributed Morphology

Halle and Marantz (1993) propose that there are two types of primitive morphological elements: abstract morphemes (which will be our focus) and roots. Abstract morphemes are functional elements, with no phonetic features associated with them. Examples might include [past], [plural], or [NOM]. Roots are lexical elements (e.g. $\sqrt{\text{CAT}}$, $\sqrt{\text{SIT}}$), and do have associated phonetic features.

Of course, abstract morphemes must at some point be associated with their phonological form. This happens through the process of *vocabulary insertion*. A *vocabulary item* in Distributed Morphology (DM) is a rule that pairs a morphosyntactic context with a phonological form, as exemplified in (27).

(27) Vocabulary items:

    a.   T[past] ↔ -d

    b.   T[past] ↔ -t/{LEAVE, BEND, BUY,. . . } + ___

    c.   T[past] ↔ -∅/{HIT, SING, SIT,. . . } + ___

Vocabulary insertion follows the *Subset Principle*.

(28) **Subset Principle:** A vocabulary item is inserted into a given morpheme if:

    i.   its features form a subset of the features specified in the morpheme

    ii.   it matches more features in the target morpheme than any other vocabulary item

The first part of the Subset Principle states that that a vocabulary item is a potential candidate for insertion so long as its set of features is a subset of the features specified by the morpheme. For example, if a morpheme is specified as [NOM, singular], a vocabulary item specified as [NOM, singular], [NOM], [singular], or [ ] (default) could potentially be inserted. The second part of the Subset Principle states that more specific rules take priority over less specific rules. For instance, if there is a vocabulary item mapping [NOM, singular] to a phonological form, then that is the vocabulary item that must be inserted for the abstract morpheme [NOM, singular]. Less specific items, such as ones mapping [NOM] or [singular] to a phonological form, could not be used. In the past tense example in (27), whenever the -∅ past tense insertion rule in (27c) is applicable, it takes priority over the default rule in (28a), which inserts -d in a past tense environment. This allows us to derive the unmarked past tense of *hit*, for instance.

(29)   *hit* + [past] → *hit*, **hitted*

In DM proposals, the last rule to apply is generally a default insertion rule, which spells out all the forms that more specific rules have failed to rule out. Default rules allow the same morpheme to be inserted in featurally disjoint environments based on a single rule. For example, English 2nd person singular *are* and 3rd person plural *are* can be treated as a default form.

4.4.2 Morphological systems and resolution by syncretism

In this section, I show that the syncretism data discussed present a problem for Distributed Morphology, and any morphological system that shares its key properties. The issue is that DM cannot rule out an input based on the presence of "too many" features. Consider, for instance, an item with the features [NOM, ACC]. Nominative and accusative are *not* syncretic for class II nouns. These nouns served as controls in the experiment presented above, and were ruled out in RNR constructions that assigned both NOM and ACC to the RNRed noun.

(30)   No syncretism – RNR construction ruled out:

   *On ne ostavil, tak kak emu nadoela,   tarelk-a/u   s   chërnoj
   he not *kept_acc*, as   him **sick.of_nom**, plate[II]-**NOM**/*ACC* with black
   kaëmkoj.
   border

   'He didn't keep, as he was sick of, the plate with a black border.'

Consider the types of vocabulary items that could spell out a class II singular noun with both [NOM] and [ACC] features, shown in (31). (Number and class features are omitted here for simplicity.)[11]

(31)   Possible rules:

   1. NOM, ACC ↔ ?
   2. NOM   ↔ -a
   3. ACC   ↔ -u
   4.   ↔ ?

   There is no rule like 1 in the morphological system. This rule would only apply in environments where a noun is assigned more than one case. It would be unlearnable, and would incorrectly result in some form being inserted in examples like (30), perhaps even a form that corresponds to neither the nominative nor the accusative. However, a noun bearing the features [NOM, ACC] could be spelled out by rule 2 or 3 (whichever one applies first), or by the default rule 4. Because the grammar can spell out [NOM] and [ACC] on their own, the first part of the Subset Principle ensures that [NOM, ACC] can also be spelled out.

(32)   **Subset Principle:** A vocabulary item is inserted into a given morpheme if:
   i.   its features form a subset of the features specified in the morpheme
   ii.   . . .

The more features an abstract morpheme bears, the more vocabulary items are candidates for insertion for that morpheme. In classic DM, spellout will never crash because an morpheme has "too many" features. Intuitively, however, that kind of crash is precisely what we see in examples like (30): the RNRed noun is assigned both [NOM] and [ACC], and therefore cannot be spelled out. DM thus requires modification to capture the fact that non-syncretic and ambiguous forms are blocked in RNR constructions in Russian due to the presence of too many case features. The same problem arises for any morphological system that allows insertion rules to apply as long as the rule depends on a subset of the features present in the environment. In the next section, I discuss how DM can be extended to capture the resolution by syncretism facts.

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[11]For convenience, simple privative case features are used throughout much of this discussion. The same points would carry over to a more elaborate analysis of the case system.

4.5 Analysis of feature conflict resolution by neutral forms

In this section, I present my analysis of feature conflict resolution by neutral forms. I propose that items are marked with feature *structures*, rather than simply with sets of features. An item in a multidominant construction (such as RNR) can bear more than one feature structure. When this is the case, both feature structures must be spelled out by the same morphological insertion rule. The proposal correctly predicts that neutral forms, but not ambiguous forms, resolve feature conflicts.

I now lay out the analysis in greater detail. In section 4.5.1, I present a proposal as to how features are organized in the grammar. I propose that when an item is assigned multiple features of the same category, that item is marked with more than one feature structure. In section 4.5.2, I show how the multiple feature structure proposal can be used to capture the pattern of resolution by syncretism. Finally, in section 4.5.3, I offer a connection between an item being marked with more than one feature structure and multidominance.

4.5.1 Feature structures

In this section, I propose that when an item is assigned two features for the same feature category, multiple feature structures are generated. For example, when a noun is assigned DAT and PART (both of which are case features), a split into two feature structures occurs. In the following section, I will argue that all feature structures on a single item must be spelled out at the same time, by the same morphological rule. This proposal correctly predicts that neutrality resolves feature conflicts, whereas ambiguity does not. In section 4.5.1.1, I lay out what I mean by two features being part of the same feature category. The proposal depends on a view of features as being organized into hierarchies. In section 4.5.1.2, I illustrate what happens when a split into multiple feature structures occurs.[12]

4.5.1.1 Feature hierarchies

In this section, I propose that the features on an item will split into two separate feature structures when the item is assigned two features from the same feature hierarchy. Many authors have proposed that features are organized into *hierarchies*. An item that bears a feature in the hierarchy will also bear all the features above it. For example, consider a fragment of the feature hierarchy of Russian case proposed by Wiese (2004):

(33)   Fragment of Russian case feature hierarchy (Wiese 2004):
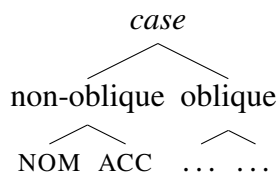
A noun that is assigned NOM or ACC will necessarily also bear the [non-oblique] feature, as this feature dominates NOM and ACC in the hierarchy. The case suffix on a noun in a

---

[12]My account is inspired by the proposal of Bjorkman (2009).

nominative (or accusative) environment can therefore be spelled out by an insertion rule for [non-oblique].

I propose than when an item is assigned two features from the same feature hierarchy, as a result the feature structure on that item splits in two. The mechanics of feature structure *splitting* are discussed in section 4.5.1.2 below. My proposal is not tied to any particular hierarchy for case in Russian. What is crucial is that an item is being assigned features from the same hierarchy, e.g. NOM and ACC *case* features. For the sake of concreteness, I will adopt the hierarchy proposed by Wiese (2004), given in (34).

(34)   Hierarchy of Russian case (Wiese 2004):
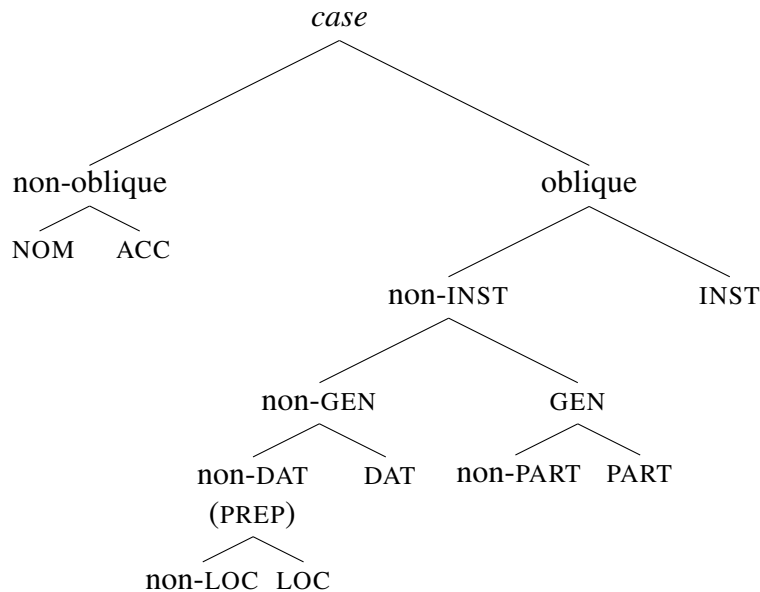
The proposal I make could be implemented for a different analysis of Russian case. In some analyses of the Russian case system, there are no privative features corresponding to the cases. Rather, each case corresponds to a combination of features. E.g., for Müller (2004), the Russian case system is based on the features [±subject, ±governed, ±oblique], as shown in (35).

(35)   **Subject**: nominative, genitive, instrumental
        Governed: accusative, genitive, dative
        Oblique: dative, genitive, instrumental, prepositional

On this view, there are essentially three separate, very small, case feature hierarchies, illustrated in (36).

(36)   Russian case feature hierarchies for Müller's (2004) system:
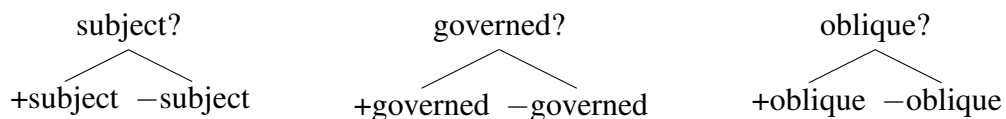
When case is assigned to a noun, it receives values for all three types of features above. All cases have a unique combination of features. For instance, ACC and DAT are both [-subject, +governed], but have different specifications for [oblique] ([-oblique] for ACC and [+oblique] for DAT). If a noun is assigned case twice, it will be specified for subject?, governed? and oblique? features twice, and the feature structure associated with it will therefore split in two. In the remainder of this discussion, I present my proposal in the context of the Wiese (2004) theory of Russian case. This simplifies the presentation, but is not crucial to the analysis.

4.5.1.2 Feature structures

In this section, I discuss the mechanics of the split into multiple feature structures when an item is assigned features from the same feature hierarchy. Suppose that every lexical item is associated with a feature structure, or matrix. Each slot in the feature matrix is associated with a single feature hierarchy of the sort discussed above. For Russian nouns, this matrix contains declension class, number, and case.[13] Consider the following RNR example (simplified from an example used in the experiment).

(37)   Morphological ambiguity:

*On otlil,   no poradovalsja, chaju.
he *poured*$_{part}$, but **was.glad**$_{dat}$, tea[Ia]-***PART/DAT***

'He poured off, but was glad of, the tea.'

The RNRed noun *chaj* ('tea') is inherently class Ib and singular, as shown in (38).

(38) $\begin{bmatrix} \text{CLASS} & \text{Ib} \\ \text{NUMBER} & \text{singular} \end{bmatrix}$

Chaj is assigned case by *otlil* ('poured') and *poradovalsja* ('was glad') in (37). *Otlil* assigns PART case to the RNRed noun, while *poradovalsja* assigns DAT case. PART and DAT are both associated with the case slot of the feature matrix, and thus cannot be inserted into the

---

[13]One might think that the feature matrix for a Russian nouns should also include gender. The gender agreement triggered by Russian nouns is not entirely predictable from declension class. For example, declension I nouns are normally masculine, but profession nouns such as *vrach* ('doctor') can trigger feminine agreement when referring to a woman (seen in (ia)). Declension II nouns are generally feminine, but certain declension II nouns refer to males and trigger masculine agreement (seen in (ib)).

(i)   a.   Vrach   ushl-a.
            doctor[I] left-fem
            'The (female) doctor left.'
       b.   Djadja   ushel.
            uncle[II] left.masc
            'The uncle left.'

I have argued elsewhere (Asarina 2009) that gender is a separate functional projection, and not a feature of the noun. However, for the present purposes, it would make no difference if gender were also included in the feature matrix.

same feature matrix. Consequently, a second feature matrix is created. All non-conflicting values (in this instance, class and number) are the same in the two matrices, but different values are inserted for case. The RNRed noun in (37) thus bears both of the feature matrices in (39):

$$
(39) \quad \begin{bmatrix} \text{CLASS} & \text{Ib} \\ \text{NUMBER} & \text{singular} \\ \text{CASE} & \textbf{PART} \end{bmatrix} \qquad \begin{bmatrix} \text{CLASS} & \text{Ib} \\ \text{NUMBER} & \text{singular} \\ \text{CASE} & \textbf{DAT} \end{bmatrix}
$$

As discussed in greater detail in the following section, I propose that all the feature structures an item bears must be spelled out by a single insertion rule.

4.5.2 Spellout of multiple feature structures

I have proposed that in certain constructions, such as RNR, a single item is assigned more than one feature of the same type. In this case, the item ends up bearing two feature structures. I furthermore make the following proposal:

(40)   Spellout of multiple feature structures:

  All feature structures on a single item must be spelled out by a single insertion rule.

If all feature structures are *not* spelled out by a single insertion rule, the derivation crashes. In this section, I show that my proposal correctly predicts that non-syncretic and ambiguous forms do not resolve feature conflicts, whereas neutral ones do. I illustrate the point using the Russian RNR constructions from the experiment I conducted, though of course the predictions I make are general.[14]

4.5.2.1   No syncretism

Consider a Russian RNR construction where the RNRed noun is assigned different cases in the two clauses, and there is no syncretism between the two case forms, as exemplified in (41).

(41)   No syncretism; PART/DAT case:

  *On ne sosedu podlil, a naoborot poradovalsja, moloku s
  he not neighbor-dat *poured*$_{\text{part}}$, but opposite **was.glad**$_{\text{dat}}$, milk[Ib]-**DAT** with
  saxarom i likërom.
  sugar and liqueur

  'He didn't pour some to his neighbor, but rather was glad of, milk with sugar and liqueur.'

---

[14]The examples in the remainder of this subsection were all used as experimental stimuli.

The RNRed noun phrase in (41) receives PART from the first clause and DAT from the second clause. Following the proposal above, the RNRed noun *moloko* ('milk') has two feature structures, one from each clause, as shown in (42).[15]

(42)
$$\begin{bmatrix} \text{CLASS} & \text{Ib} \\ \text{NUMBER} & \text{singular} \\ \text{CASE} & \text{GEN} - \textbf{PART} \end{bmatrix} \qquad \begin{bmatrix} \text{CLASS} & \text{Ib} \\ \text{NUMBER} & \text{singular} \\ \text{CASE} & \textbf{DAT} \end{bmatrix}$$

As (42) indicates, PART is a subtype of GEN. Because PART is uniformly syncretic with non-PART GEN for class Ib nouns, I assume that the first feature structure in (42) is spelled out by the rule for GEN given in (43a). The second feature structure is spelled out by rule given in (43b). The two rules correspond to two different phonological forms.

(43) a. **GEN**, singular, class Ib → -a
      b. **DAT**, singular, class Ib → -u

Because the two feature structures on the RNRed noun are spelled out by two different rules, the RNR construction in (41) is ungrammatical.

4.5.2.2 Ambiguity

In the following Russian example, the RNRed noun phrase receives PART from the first clause and DAT from the second clause, as in the previous section.
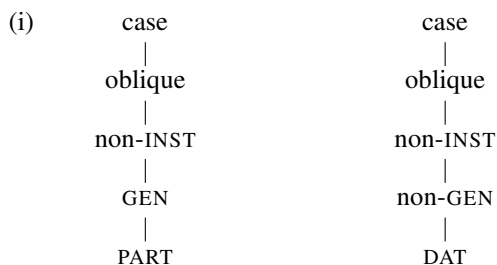
(44) Ambiguity; PART/DAT case:

*On ne sosedu   podlil,   a naoborot poradovalsja, chaju
he not neighbor-dat *poured*$_{\text{part}}$, but opposite **was.glad**$_{\text{dat}}$, tea[Ia]-***PART/DAT***
so   sgushchënym molokom.
with condensed   milk

'He didn't pour some to his neighbor, but rather was glad of, tea with condensed milk.'

The feature structures on the RNRed noun are the same as shown in the previous section:

---

[15]In the feature matrices, I do not show the complete subparts of the feature hierarchy that PART and DAT bring in with them. These are illustrated in (i).

(i)   case   case
            | |
         oblique   oblique
            | |
        non-INST   non-INST
            | |
          GEN   non-GEN
            | |
         PART   DAT

$$(45) \quad \begin{bmatrix} \text{CLASS} & \text{Ib} \\ \text{NUMBER} & \text{singular} \\ \text{CASE} & \text{GEN} - \textbf{PART} \end{bmatrix} \qquad \begin{bmatrix} \text{CLASS} & \text{Ib} \\ \text{NUMBER} & \text{singular} \\ \text{CASE} & \textbf{DAT} \end{bmatrix}$$

However, this time, the RNRed noun *chaj* ('tea') has an ambiguous PART/DAT form: the two feature structures it bears are spelled out by two separate rules that happen to yield identical suffixes, as shown in (46). Just as for a non-syncretic form, since the two feature structures are spelled out by two different rules, the result is ungrammatical.

(46)   a.   **PART**, singular, class Ia $\rightarrow$ -u / {CHAJ ('tea'), SOK ('juice'), ... } + ___ [16]
        b.   **DAT**, singular, class Ia $\rightarrow$ -u

4.5.2.3 Identity

In the example below, the same case (ACC) is assigned to the RNRed noun in the two clauses.

(47)   Identity; ACC/ACC case:

On ne soxranil, a vybrosil, pechen'-e iz poezdki v Angliju.
he not **kept**$_{\text{acc}}$, but **discarded**$_{\text{acc}}$, cookie-**ACC** from trip to England

'He did not keep, but rather threw out, cookies from a trip to England.'

The RNRed noun *pechen'e* ('cookie') receives ACC from both clauses, and thus bears two copies of the same feature structure, shown in (48).[17]

$$(48) \quad \begin{bmatrix} \text{CLASS} & \text{Ib} \\ \text{NUMBER} & \text{singular} \\ \text{CASE} & \text{non-oblique} - \textbf{ACC} \end{bmatrix} \qquad \begin{bmatrix} \text{CLASS} & \text{Ib} \\ \text{NUMBER} & \text{singular} \\ \text{CASE} & \text{non-oblique} - \textbf{ACC} \end{bmatrix}$$

These two identical structures are spelled out by the single rule given in (49).[18] Since a single rule can spell out all the feature structures on the RNRed noun, example (47) is grammatical.

(49)   **non-oblique**, singular, class Ib $\rightarrow$ -o

4.5.2.4 Neutrality

In the following example, the RNRed noun receives ACC from the first clause and NOM from the second clause.

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[16]As mentioned in section 4.2.3, this rule applies to a lexically specified subset of class Ia nouns.

[17]Equivalently, we could assume that no split takes place when the two case values inserted into the structure are identical.

[18]When unstressed, the underlying suffix *-o* systematically surfaces as [i] (spelled as *-e*) after a palatalized consonant. See section 4.2.4 for discussion.

(i)   *pechen'-e* ('cookie'), *bljudc-e* ('saucer')

(50) Neutrality; ACC/NOM case:

On ne ostavil, tak kak emu nadoelo,   bljudce   s   krasnoj
he not *kept*_{acc}, as   him **sick.of**_{**nom**}, saucer[Ib]-***ACC&NOM*** with red
kaëmkoj.
border

'He didn't keep, as he was sick of, the saucer with a red border.'

The RNRed class Ib noun *bljudce* ('saucer') bears the two feature structures shown in (51).

(51)

$$
\begin{bmatrix}
\text{CLASS} & \text{Ib} \\
\text{NUMBER} & \text{singular} \\
\text{CASE} & \text{non-oblique — \textbf{ACC}}
\end{bmatrix}
\qquad
\begin{bmatrix}
\text{CLASS} & \text{Ib} \\
\text{NUMBER} & \text{singular} \\
\text{CASE} & \text{non-oblique — \textbf{NOM}}
\end{bmatrix}
$$

As discussed above in section 4.2.2, class Ib nouns are neutral for NOM and ACC. The suffix corresponding to the two feature structures in (51) is thus inserted by the single rule given in (52). Since a single rule spells out all the feature structures on the neutral RNRed noun, (50) is grammatical.

(52)   **non-oblique**, singular, class Ib → -o

4.5.2.5 Summary

I have proposed that in constructions where syncretism effects are found, some item bears more than one feature structure. When an item bears two feature structures, both structures must be spelled out by the same morphological insertion rule. This allows neutral forms to be assigned conflicting features so long as these features are spelled out by the same rule. When a form is non-syncretic or ambiguous, feature conflicts are prohibited, as no single rule can spell out all the feature structures assigned. The predictions made by this proposal thus match the results of the experiment discussed in section 4.3 above: only neutral forms resolve feature conflicts.

4.5.3 Multidominance

In this section, I present the multidominance analysis of RNR, first offered by McCawley (1982), and argued for recently by Wilder (2008); Bachrach and Katzir (2009); Kluck and de Vries (2009), among others. I propose that multidominance constructions allow multiple sources to simultaneously assign features to the same item. For example, an RNRed noun phrase can be simultaneously case-marked in the two clauses.

Multidominant accounts propose that it is possible for a node in the syntactic structure to have more than one mother, as illustrated symbolically in (53).

(53)   Multidominance:

a. A → B, C; B → D, E; C → E, F

b. A → B, C; B → D; B, C → E, F (shared)

(53a) illustrates a simple multidominant structure, where the node E has two mothers: B and C. The kind of structure that has been proposed for RNR constructions is illustrated schematically in (53b). Linearization (i.e. word ordering) possibilities (and impossibilities) for multidominant structures have been used to derive constraints on RNR constructions (and across-the-board movement, see discussion of Citko (2005) below). For example, Wilder (1999) proposes that the reason that the gap corresponding to the RNRed constituent must be at the right edge of the clause (seen in (54)) is that the multidominant structure otherwise cannot be consistently linearized. The details of the analysis are beyond the scope of this discussion.

(54)   a.   I [invited into my house _] and [congratulated *all the winners.*]
        b.   *I [gave _ a present] and [congratulated *all the winners.*] (Wilder 1999: (6))

Consider the following example or RNR in Russian, where the raised noun is ambiguous for the two cases (PART and DAT) assigned to it. A multidominant structure for (55), which looks essentially like (53b), is shown in (56).

(55)   Morphological ambiguity:

*On otlil,   no poradovalsja, chaju.
he *poured*~part~, but **was.glad**~dat~, tea[Ia]-***PART/DAT***

'He poured off, but was glad of, the tea.'

(56)   Multidominant structure for RNR:

on
he

otlil   no
poured~part~   but   *poradovalsja*   ***chaju***
                          was.glad~dat~   ***tea***
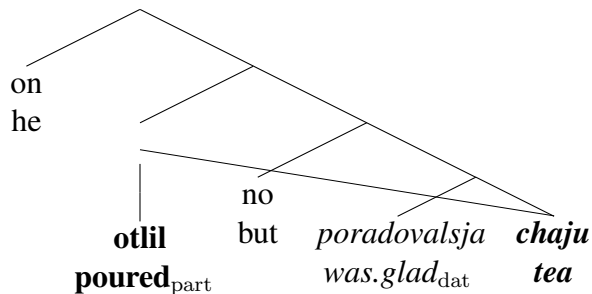
The RNRed noun phrase, *chaju* ('tea'), is shared by two constituents. It is the sister of the verbs in both of the clauses. The two clauses are built in parallel. Consequently, the RNRed noun phrase is simultaneously assigned partitive case by *otlil* ('poured') in the first clause and dative case by *poradovalsja* ('was glad') in the second clause. As discussed above, this results in *chaju* ('tea') bearing two feature structures. The two feature structures

cannot be spelled out by a single rule, and the derivation in (55) crashes. In section 4.7 below, I show that a multidominance analysis is plausible in the range of constructions for which resolution by syncretism effects have been observed.

4.5.4 Summary

In this section, I have argued that feature conflicts are permitted by the syntax. Feature conflicts are *resolved* when the morphology treats the features assigned in the same way, as for neutral forms. Feature conflicts are *not resolved* by accidentally syncretic forms. The fate of an item with conflicting feature specifications is thus determined at the intermediate level of morphological spellout, which is where neutral and ambiguous forms are distinguished. The ability to resolve feature conflicts can be used to empirically distinguish neutrality from ambiguity.

I have proposed that, in a multidominant structure, an item can receive two specifications for the same type of feature (e.g. case). When this happens, that item ends up bearing multiple feature structures. These feature structures must all be spelled out by a single morphological insertion rule. This is possible when the feature structures are identical, or when there is a *neutral* form for the relevant features. Otherwise, when there is ambiguity or no syncretism, the feature structures cannot be spelled out, and the result is ungrammatical.

4.6 Alternative accounts

In this section, I discuss two alternative approaches to analyzing resolution by syncretism. In section 4.6.1, I discuss the idea that there is really no resolution by syncretism after all. When resolution seems to be possible in instances of neutrality, *feature impoverishment* (i.e feature deletion) ensures that the relevant item actually bears a single feature structure at the point of morphological spellout. I argue that while this proposal is initially attractive for the Russian data discussed here, there are cases of feature resolution by syncretic forms for which this analysis cannot be applied.

In section 4.6.2, I discuss a proposal made within the LFG framework by Dalrymple et al. (2009). The framework assumed by Dalrymple et al. (2009) provides a fairly straightforward way of treating the syncretism facts; I will discuss a problem for this family of approaches more generally.

4.6.1 Feature impoverishment

As mentioned briefly in section 4.2.2, it has been argued that metasyncretism (syncretism of the same sort in many paradigms) is best accounted for by rules of *impoverishment*, i.e. feature deletion. (Bobaljik 2001; Harley 2008) An impoverishment account of NOM-ACC syncretism in Russian simplifies the analysis proposed in the previous section, but runs into problems with other instances of resolution by syncretism.

NOM-ACC syncretism is prevalent in Russian. On an impoverishment analysis of metasyncretism, NOM and ACC features on syncretic forms are deleted prior to vocabulary in-

sertion. Restricting our attention to NOM-ACC syncretism for class Ib forms, the following impoverishment rule applies:[19]

(57)   [{ACC, NOM}, class Ib] → [class Ib]

An RNRed noun assigned ACC in one clause and NOM in the other clause ends up bearing the following set of feature structures.

(58) $\left\{ \begin{bmatrix} \text{CLASS} & \text{Ib} \\ \text{NUMBER} & \text{singular} \\ \text{CASE} & \text{non-oblique} - \textbf{ACC} \end{bmatrix} \begin{bmatrix} \text{CLASS} & \text{Ib} \\ \text{NUMBER} & \text{singular} \\ \text{CASE} & \text{non-oblique} - \textbf{NOM} \end{bmatrix} \right\}$

The impoverishment rule in (57) deletes NOM and ACC features, making the two feature structures in (58) identical. If the feature structures on a noun are truly in a *set*, bearing two identical structures is equivalent to bearing one copy of that structure. After feature impoverishment, the set of features in (57) is thus reduced to:

(59) $\left\{ \begin{bmatrix} \text{CLASS} & \text{Ib} \\ \text{NUMBER} & \text{singular} \\ \text{CASE} & \text{non-oblique} \end{bmatrix} \right\}$

By contrast, an ambiguous or non-syncretic form that is assigned multiple case features will retain multiple feature structures after impoverishment, for example:

(60) $\left\{ \begin{bmatrix} \text{CLASS} & \text{Ib} \\ \text{NUMBER} & \text{singular} \\ \text{CASE} & \text{GEN} - \textbf{PART} \end{bmatrix} \begin{bmatrix} \text{CLASS} & \text{Ib} \\ \text{NUMBER} & \text{singular} \\ \text{CASE} & \textbf{DAT} \end{bmatrix} \right\}$

If Russian NOM-ACC syncretism comes about through impoverishment, a simple proposal will account for the experimental results:

(61)   Multiple feature structures on a single item can *never* be spelled out.

If all instances of feature resolution by neutral forms involve a sufficient amount of impoverishment, this proposal will capture the syncretism facts in general. However, resolution by syncretism is found in paradigms that cannot be effectively analyzed with standard impoverishment rules. For example, the feature conflict-resolving form *are* in (62b) is straightforwardly analyzed as a *default*, and not an impoverished form.

(62)   Resolution by syncretism in English – subject agreement (Pullum and Zwicky 1986: (5), (6)):
         a.   *Either they or I are/am/is going to have to go.
         b.   Either they or you are going to have to go.

Consider the agreement paradigm for English *be*:

---

[19]To account for metasyncretism, the rule should really apply to multiple declension classes and/or parts of speech, but that is beyond the scope of this discussion.

(63)

	singular	plural
1st	am	are
2nd	are	are
3rd	is	are

In order for the 2nd person singular and 3rd person plural *are* forms to bear identical sets of features, all of their person and number features must be impoverished. The English verbal agreement system shows systematic syncretism between all persons in the plural. It is thus plausible that person features are impoverished in the plural:

(64)   [{person features}, plural] → [plural]

However, the [plural] feature assigned by *they* in (63b) would also need to be impoverished in order to match the 2nd person singular form. This move is *not* motivated; there is no systematic singular-plural syncretism to account for. An alternative is to assume that there is no plural feature (only [singular]), and to allow rules of impoverishment to refer to the *complement* of a specifiable class.

(65)   {person features} → ∅ *unless* [singular]

In addition to the rule in (65), we would need only to impoverish the [singular] feature on the 2nd person singular form. This impoverishment rule *is* motivated, as Modern English never distinguishes 2nd person singular from 2nd person plural. However, as far as I am aware, rules like (65) have not been argued for in the literature. I thus tentatively conclude that the analysis proposed in section 4.5.2 is to be preferred over an impoverishment-based analysis.

4.6.2 System without post-syntactic vocabulary insertion (Dalrymple et al. (2009))

Dalrymple et al. (2009) (henceforth DKS) propose a system for case conflict resolution by neutral (and not ambiguous) forms. They approach the problem of resolution by syncretism from an LFG perspective. For them, lexical items are part of the syntactic structure. This allows for a different kind of approach from the DM-style late-insertion account proposed above. In this section, I present the analysis of resolution by neutrality proposed by DKS. I then discuss a general problem for the view that lexical items (including their morphological properties) are part of the syntactic structure. The discussion is based on the argument for late insertion made by Pfau (2007) on the basis of speech error data.

For DKS, the case feature of a noun is a structure indicating which values that noun does not have (marked by "−"), and which ones it may have. For example, a noun that is neutral for NOM/ACC, but is distinct from the genitive and dative forms, would have the following feature structure:[20]

---

[20]For simplicity, only four cases are shown.

(66)
$$\begin{bmatrix} \text{NOM} & \\ \text{ACC} & \\ \text{PART} & - \\ \text{DAT} & - \end{bmatrix}$$

Ambiguous forms are not underspecified, so a noun that is ambiguous (and not neutral) between partitive and dative, for instance, would have one of the following two case feature structures:

(67) a. $\begin{bmatrix} \text{NOM} & - \\ \text{ACC} & - \\ \text{PART} & \\ \text{DAT} & - \end{bmatrix}$ b. $\begin{bmatrix} \text{NOM} & - \\ \text{ACC} & - \\ \text{PART} & - \\ \text{DAT} & \end{bmatrix}$

In a sentence, a verb specifies what case its object (and subject) must take (marked by "+"). For example, a noun neutral for nominative/accusative (as in (66)) in an accusative environment would have the following feature structure:

(68)
$$\begin{bmatrix} \text{NOM} & \\ \text{ACC} & + \\ \text{PART} & - \\ \text{DAT} & - \end{bmatrix}$$

An unambiguously nominative noun cannot be used in an accusative environment, as indicated by the occurrence of "+" and "−" in the same cell:
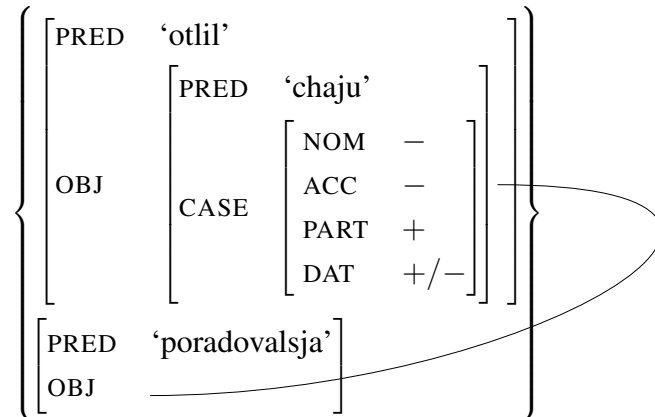
(69) $*\begin{bmatrix} \text{NOM} & \\ \text{ACC} & +/- \\ \text{PART} & - \\ \text{DAT} & - \end{bmatrix}$

Now consider an environment where two cases are assigned to the same noun, as in RNR constructions. The functional structure for the noun is shared between the two clauses. A single case feature structure thus receives case specifications from both clauses. When there is no form that is neutral for the cases assigned, the result is ungrammatical. For instance, in the RNR example discussed above (repeated in (70)), neither the partitive nor the dative form is permitted, as illustrated in (71).
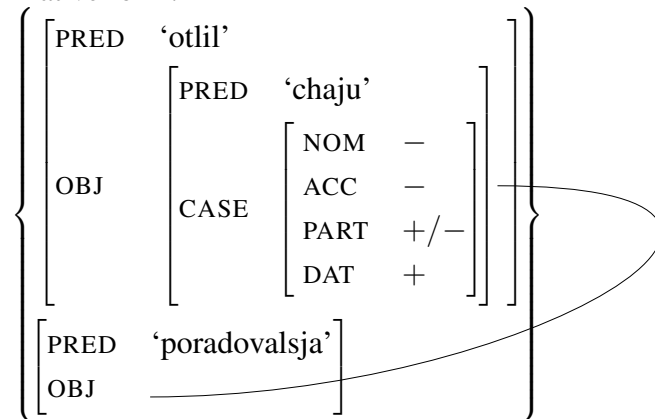
(70)   Morphological ambiguity:

*On otlil,   no poradovalsja, chaju.
he *poured*$_{\text{part}}$, but **was.glad**$_{\text{dat}}$, tea[Ia]-***PART/DAT***

'He poured off, but was glad of, the tea.'

(71) a. Partitive form:

$$
\left\{
\begin{bmatrix}
\text{PRED} & \text{'otlil'} \\[2ex]
\text{OBJ} & \begin{bmatrix}
\text{PRED} & \text{'chaju'} \\[1ex]
\text{CASE} & \begin{bmatrix}
\text{NOM} & - \\
\text{ACC} & - \\
\text{PART} & + \\
\text{DAT} & +/-
\end{bmatrix}
\end{bmatrix} \\[6ex]
\begin{bmatrix}
\text{PRED} & \text{'poradovalsja'} \\
\text{OBJ} &
\end{bmatrix}
\end{bmatrix}
\right\}
$$

b. Dative form:

$$
\left\{
\begin{bmatrix}
\text{PRED} & \text{'otlil'} \\[2ex]
\text{OBJ} & \begin{bmatrix}
\text{PRED} & \text{'chaju'} \\[1ex]
\text{CASE} & \begin{bmatrix}
\text{NOM} & - \\
\text{ACC} & - \\
\text{PART} & +/- \\
\text{DAT} & +
\end{bmatrix}
\end{bmatrix} \\[6ex]
\begin{bmatrix}
\text{PRED} & \text{'poradovalsja'} \\
\text{OBJ} &
\end{bmatrix}
\end{bmatrix}
\right\}
$$

One the other hand, it is possible for a neutral form to be assigned two different cases. For instance, a noun neutral for NOM/ACC and receiving both has the following representation:

(72)
$$
\begin{bmatrix}
\text{NOM} & + \\
\text{ACC} & + \\
\text{PART} & - \\
\text{DAT} & -
\end{bmatrix}
$$

As in the multidominance approach proposed above, this account assumes that the shared noun at some level combines with both predicates. Because the system does not assume late insertion, it is rather natural to build in syncretism effects.

However, there are arguments in the literature that support late insertion. Pfau (2007) argues that a late-insertion framework (specifically, DM) accounts very naturally for repairs in cases of speech errors. For example, in the Frankfurt error corpus Pfau (2007) considers, meaning-based speech errors result in agreement accommodation, whereas form-based speech errors (with one exception) do not. Examples of the two types of error are given in (73) and (74).

(73)   Meaning-based error – gender accommodation:

Du muss-t **die   Tür**   dann festhalten, Quatsch, das
you must-2sg **the.fem door[fem]** then hold,   rubbish, the.neut
Fenster.
window[neut]

'You'll have to hold the window then.' (Pfau 2007: (15a))

(74)   Form-based error – no accommodation:

*Oh, ein   neu-er   **Luft**,   äh, *Duft.*
oh, *a.masc new-masc* **air[fem]**, er, *fragrance[masc]*

'Oh, a new fragrance!' (Pfau 2007: (17b))

As Pfau (2007) discusses, the contrast between (73) and (74) receives a natural account within the DM late-insertion framework. The meaning-based substitution in (73) takes place before agreement copies features to the determiner. The determiner therefore bears a the feature [feminine], rather than [neuter], and is spelled out as *die* ('the.fem'). In (74), because substitution is based on phonological form, it must take place after agreement determines the features on the adjective and determiner. Consequently, the adjective and determiner bear the feature [masculine] assigned by *Duft* ('fragrance' [masc]) (the intended noun), and are spelled out as the masculine forms.

It is harder to account for the contrast between (73) and (74) within the lexical framework assumed by DKS. If the feature structure for *Luft* ('air' [fem]) is part of the structure for (74), it is expected that the determiner and adjective should correspondingly show the appropriate feminine agreement. A special process would be needed to substitute the phonological form *Luft* for *Duft* without altering the features in the structure. There is no built-in explanation for why such a substitution would be possible in (74) but not in (73). Thus, while it would not be impossible to account for the speech substitution data discussed by Pfau (2007) within the LFG framework, additional stipulations would be required, which are not needed in a DM account. While the LFG framework provides a natural way to account for resolution by neutrality, there are other reasons to avoid this treatment.

4.7   Resolution by syncretism across constructions and languages

Resolution by syncretism has been discussed for a number of languages and constructions. In section 4.5.3, I show that a multidominance account is available for the range of constructions that exhibit resolution by syncretism. In section 4.7.2, I discuss the instances of alleged resolution by ambiguous forms offered by cite Pullum and Zwicky (1986). I suggest that the forms Pullum and Zwicky (1986) discuss may actually be neutral, and not ambiguous.

4.7.1 Resolution by syncretism and multidominance

The experiment presented in this chapter demonstrated that neutral forms resolve case feature conflicts in RNR constructions in Russian. In this section, I discus the range of constructions that exhibit resolution by syncretic forms, as discussed in the literature. In addition to RNR, these constructions include across-the-board (ATB) movement, free relative clauses, and certain coordination structures. I argue that all these environments are compatible with a multidominance analysis.

Resolution of case conflicts by syncretic forms in RNR constructions has been discussed for German (Pullum and Zwicky 1986), French and Icelandic (Zaenen and Karttunen 1984). Another environment where syncretic forms can resolve case conflicts is across-the-board (ATB) movement constructions. Resolution by syncretism in ATB constructions in Polish has been discussed by Borsley (1983) and Citko (2005), and is illustrated in (76).

(75) a. Czego   Jan nienawidzi?
          what.GEN Jan hates
          'What does Jan hate?'
      b. Co   Maria lubi?
          what.ACC Maria likes
          'What does Maria like?'

(76) a. *Czego/Co   Jan nienawidzi a   Maria lubi?
          what.**GEN**/what.*ACC* Jan **hates$_{\mathbf{gen}}$**   and Maria *likes$_{acc}$*
          'What does Jan hate and Maria like?'
      b. Kogo   Jan nienawidzi a   Maria lubi?
          who.***ACC&GEN*** Jan **hate$_{\mathbf{gen}}$**   and Maria *likes$_{acc}$*
          'Whom does Jan hate and Maria like?' (Citko 2005: (24))

Like RNR, ATB movement has been analyzed in terms of multidominance. In the proposal made by Citko (2005), the *wh*-word is generated as the sister of both verbs in (76). Citko (2005) shows that the multidominance proposal for ATB movement, together with the right assumptions about the linearization process, correctly predicts the absence of covert ATB movement and multiple ATB movement. The same proposal for resolution by syncretism made for RNR in Russian can thus extend to ATB movement. The multidominant structure results in case being assigned to the *wh*-word in both clauses at once. The *wh*-word consequently bears two feature structures, which can be spelled out in the case of syncretism (neutrality) in (76b), but not in the non-syncretic variant in (76a).

In addition to RNR and ATB constructions, case conflict resolution by syncretic forms has been observed in free relatives in German (Groos and Van Riemsdijk 1981), Russian (Levy 2001 via Dalrymple et al. 2009) and Greek (Sabine Iatridou (p.c.)). In general, the case assigned to the relative clause must match the case assigned to the relative pronoun inside the relative clause. For instance, *nehmen* ('take') and *empfehlen* ('recommend') both assign ACC, so the following example is grammatical:

(77) Ich nehme, wen   du mir empfiehlst.
     I   *take_acc* who.ACC you me *recommend_acc*
     'I take whomever you recommend to me.' (Groos and Van Riemsdijk 1981: (13a))

Consider the following examples, where the relative pronoun is assigned different cases in the two clauses.

(78) a. *Ich nehme, wen/wem   du vertraust.
        I   *take_acc* who.*ACC*/who.**DAT** you **trust_gen**
        intended: 'I take whomever you trust.' (Groos and Van Riemsdijk 1981: (13b))
     b. Ich habe gegessen was   noch übrig war.
        I   have *eaten_acc* what.***NOM/ACC*** still left **was_nom**
        'I ate what was left.' (Groos and Van Riemsdijk 1981: (88c))

Because *vertrauen* ('trust') assigns dative while *nehmen* ('take') assigns accusative, (78b) is ungrammatical. However, German *was* ('what') is syncretic for NOM and ACC. (78b) is therefore grammatical, even though the object of *gegessen* ('eaten') receives ACC, while inside the relative clause the wh-word receives NOM.

Riemsdijk (2000) proposes a multidominant structure for free relatives, where the relative pronoun in (78), for example, would be both the object in the matrix clause and the subject in the embedded clause (which moves to spec, CP in the embedded clause). Again, as in the RNR examples discussed above, the relative pronoun in (77) is simultaneously assigned nominative and accusative case, which can be spelled out by the same rule. When no syncretic form of the relative pronoun is available, as in (78a), the structure cannot be spelled out and is ungrammatical.

With coordination below the DP level, examples with a gender or number conflict on N can be rescued by syncretism. This is illustrated in the German examples in (79) and (80).

(79) Gender resolution in German (Pullum and Zwicky 1986: (44)):
     a. *der   oder die   Lehrer
        the.*MASC* or   the.**FEM** teacher[*MASC*]
     b. *der   oder die   Lehrerin
        the.*MASC* or   the.**FEM** teacher[**FEM**]
     c. der   oder die   Abgeordnete
        the.*MASC* or   the.**FEM** candidate[***MASC/FEM***]
        'the male or female candidate'

(80) Number resolution in German (Zaenen and Karttunen 1984: (9), (10)):

    a. *der Antrag des   oder der   Professors
        the petition the.*SG* or   the.**PL** professor[*SG*]

    b. *der Antrag des   oder der   Professoren
        the petition the.*SG* or   the.**PL** professor[**PL**]

    c. der Antrag des   oder der   Dozenten
        the petition the.*SG* or   the.**PL** docent[***SG/PL***]
        'the petition of the docent or docents'

I suggest that the constructions in (79) and (80) can receive a multidominant analysis, as illustrated in (81).

(81) Possible multidominant structure for (79c):
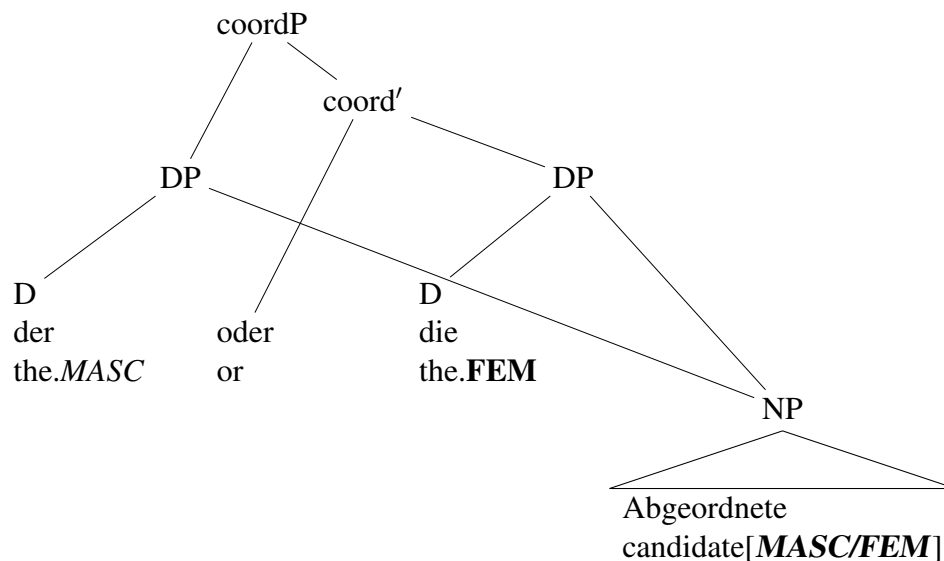
In this section, I have suggested that a multidominance analysis is plausible for the constructions where resolution by syncretism effects have been observed.[21] For RNR, ATB movement, and free relatives, accounts in terms of multidominance have been proposed in prior literature. Multidominant constructions allow more than one instance of the same feature to be simultaneously assigned to the shared constituent. As discussed above, this results in the shared item bearing multiple feature structures, which must be spelled out by a single morphological insertion rule.

4.7.2 Neutrality vs. ambiguity in resolution by syncretism

Pullum and Zwicky (1986) (henceforth P&Z) propose that resolution by syncretism is not restricted to cases of neutrality. They argue that ambiguous forms can also resolve feature

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[21]A multidominance treatment is also plausible for resolution of person agreement on verbs in English and German (Pullum and Zwicky 1986 and Eisenberg 1973 (via Pullum and Zwicky 1986)) and noun class agreement on adjectives in Xhosa (Voeltz 1971 (via Pullum and Zwicky 1986)). These data are discussed in the context of the neutrality vs. ambiguity distinction in the following section.

conflicts, albeit in a more restricted fashion. In this section, I address the data P&Z present in favor of resolution by ambiguous forms. It can be difficult to distinguish neutrality from ambiguity, and I suggest that it is plausible to treat these forms as neutral, rather than ambiguous. P&Z thus fail to present clear counterexamples to the generalization that only neutral forms resolve feature conflicts. I address singular/plural noun syncretism in German, noun class syncretism in Xhosa, and participle/infinitive syncretism in English.

4.7.2.1 German number and gender syncretism

P&Z propose that feature conflict resolution in (83) is an instance of resolution by an ambiguous form.

(82)   a.   Sie findet Männer.
             she finds men.ACC
             'She finds men.'
     b.   Sie hilft Männer-n.
             she helps men-DAT
             'She helps men.'

(83)   Number resolution in German (P&Z: (37)):
     a.   *Sie findet und hilft   Männer/Männer-n.
             she *finds$_{acc}$ and **helps$_{dat}$** men.*ACC*/men-**DAT**
             intended: 'She finds and helps men.'

     b.   Sie findet und hilft   Frauen.
             she *finds$_{acc}$* and **helps$_{dat}$** women.***ACC&DAT***
             'She finds and helps women.'

The dative plural ending is -n, as can be seen in (82b). However, when the base ends in [n], P&Z claim that a degemination rule applies, making the accusative and dative forms homophonous. This means that the syncretism in (83b) would be an instance of ambiguity, and not neutrality.

    However, the syncretic form in (83b) could be analyzed as neutral, rather than ambiguous. Degemination does not apply universally in German; minimally different *eben-en* ('even (pl.)') shows that a form like **Frauen-en* is phonologically possible. It is thus reasonable to suppose that the German dative suffix is not always -n, but has a null allomorph that is used after n-final stems (Adam Albright (p.c.)).[22] On this view, the null suffix in (82b) could be neutral between dative and accusative. Since *Frauen* has the same form in all cases, a DM-style vocabulary insertion rule for case on *Frauen* would simply be the default rule in (84).

(84) $\leftrightarrow \emptyset$

---

[22]An alternative possibility is that we find *ebenen* but not **Frauenen* because in the former case the suffix is [ən], while in the latter it is [n]. However, Wiese (1996) argues that ə in German is generally epenthetic, and not underlying.

4.7.2.2 Noun class in Xhosa

P&Z also present an example with adjective agreement in Xhosa. Adjectives agree for noun class, so that an adjective cannot agree with two nouns from different classes, unless the two adjective forms required happen to match:

(85)　a.　*Izandla　　neendlebe　　zi-hle/zin-tle.
　　　　　　hands[7/8] and-ears[9/10] [7/8]-beautiful/[9/10]-beautiful
　　　　b.　Izandla　　neendlebe　　zincinane.
　　　　　　hands[7/8] and-ears[9/10] [7/8]/[9/10]-small

As can be seen in (85a), the agreement prefix for classes 7/8 is *zi-*, while the prefix for classes 9/10 is *zin-*. According to P&Z, when the stem that *zin-* attaches to is n-initial, degemination applies. As a result, the 7/8 and 9/10 agreeing forms are homophonous. If this is the right analysis, (85b) would be an instance of feature conflict resolution by an ambiguous form. However, one would need to investigate whether degemination applies universally in Xhosa. If it does not, it would be reasonable to treat *zi-* as either a default prefix for n-initial stems like *ncinane* ('small') or a prefix inserted based on features shared by classes 7/8 and 9/10. Analogously to the alternative treatment I propose for German *Frauen* ('women') in 4.7.2.1 above, the syncretism in (85b) would then be an instance of neutrality.

4.7.2.3 English verbal syncretism

P&Z discuss resolution by syncretism in examples like (86) (P&Z: (27), (28)).

(86)　a.　*I certainly *will*, and you already **have**, *clarify*/**clarified** the situation
　　　　　　with the respect to the budget.
　　　　b.　I certainly *will*, and you already **have**, ***set*** the record straight with the respect
　　　　　　to the budget.

P&Z claim that (86b), with the syncretic form *set*, is an instance of resolution by ambiguity. They suggest that syncretism between the infinitive and participle forms of *set* is unlikely to be neutrality, because of the small number of verbs that exhibit such syncretism. However, the fact that this type of syncretism does not extend to very many verbs does not guarantee that it is not neutrality. The base form *set* could well be the default form for this verb, which would make the syncretism in (86b) neutrality after all.

4.8　Conclusion

In this chapter, I have presented experimental evidence showing that *neutral* forms resolve feature conflicts, whereas *ambiguous* forms do not. Since neutrality vs. ambiguity is a morphological distinction, we learn that a failure in morphological insertion can result in ungrammaticality. A standard Distributed Morphology system never crashes, and thus cannot capture the resolution by syncretism data. I thus propose that DM be modified with the idea that an item can sometimes bear multiple feature structures. These structures must

be spelled out by a single rule. Multiple feature structures on a single item are generated when that item is shared in a multidominant structure and receives two values for the same type of feature. My proposal successfully accounts for the fact that only neutral forms resolve feature conflicts. The pattern of resolution by syncretism demonstrates that feature conflicts are permitted in the syntax, and that the system of morphological spellout is not crash-proof.

Chapter 5

Conclusion

In this dissertation, I have considered a range of case-related phenomena. In chapter 2 (based on joint work with Jeremy Hartman), I examined genitive case assignment to subjects of Uyghur relative clauses and noun complement clauses. The subjects of these clauses are assigned case by a clause-external head, which is correspondingly marked with overt possessor agreement, as illustrated in (1).
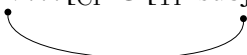
(1)   Genitive embedded subject:

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

I have argued that the embedded clause in (1) is a full CP and that, moreover, the genitive subject in (1) does not move to the edge of CP. Example (1) therefore exhibits the agreement configuration shown schematically in (2).

(2)   Agreement with genitive subjects in Uyghur:
N ... [$_{\text{CP}}$ C [$_{\text{TP}}$ subject ...]]

The structure in (2) violates Chomsky's (1998) version of the Phase Impenetrability Condition (PIC$_{\text{strong}}$), which states that the complement of a phase head (e.g. a TP embedded by C) becomes opaque to further operations as soon as the phase head is merged. However, this configuration *is* compatible with Chomsky's (2001) version of the Phase Impenetrability Condition (PIC$_{\text{weak}}$).
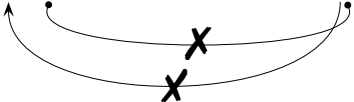
(3)   Chomsky's (2001) Phase Impenetrability Condition (PIC$_{\text{weak}}$):
In phase α with head H, the domain of H is accessible to operations outside α only until the next (strong) phase head is merged.

PIC$_{\text{weak}}$ entails that the TP complement of C in (2) is accessible to outside operations (such as agreement and case assignment) until the next phase head is merged. No phase head intervenes between the case-assigning noun and the embedded subject in (1), so the PIC$_{\text{weak}}$ correctly permits this structure. Furthermore, adopting PIC$_{\text{weak}}$ has the theoretical advantage of allowing us to dispense with the notion of a *weak* phase, one that does not
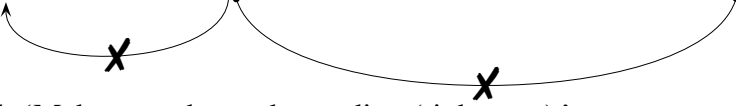
trigger PIC effects (Richards 2007a). If we assume that raising v is a strong phase, PIC$_{weak}$ correctly blocks raising out of CP clauses, as illustrated for English and Uyghur in (4) and (5).

(4)   No raising out of CP (English):
        John T [$_{vP}$ seems [$_{CP}$ (that) t is singing.]]

(5)   No raising out of CP (Uyghur):

        * Mehemmet-(niŋ) [$_{vP}$ [$_{CP}$ t oqu-wat-qan-liq   ]-i   kirek   ]
          Mehemmet-(gen) [$_{vP}$ [$_{CP}$ t read-prog-RAN-C]-3.poss necessary] T

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

The examples in (4) and (5) are ruled out for the same reasons. Assuming that raising v is not weak, PIC$_{weak}$ entails that the TP clause inside the embedded CP becomes opaque to further operations when matrix v is merged. Matrix T therefore cannot attract the embedded subject, and raising is ruled out.

Note that raising in these examples is ruled out without any reference being made to the Activity Condition (AC) (Chomsky 1998, 2001). In chapter 1, I show that raising in Uyghur (illustrated in (6)) is not subject to the Activity Condition.

(6)   Raising of genitive subject:

        Ötkür-niŋ bu   ehtimalda   [$_{vP}$ t oqu]-ʃ-i   kirek
        Ötkür-gen this probability-loc [$_{vP}$ t read]-nliz-3.poss necessary

        'Ötkür probably has to read.'

Using a variety of tests, I showed that the genitive subject in (6) raises out of the embedded clause. This is surprising in the context of the Activity Condition.

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

The AC asserts that a noun phrase must have an unvalued feature in order to be a valid target for Agree, and it is generally assumed that the only unvalued feature on noun phrases is Case. Nevertheless, I argued that the genitive subject in (6) is structurally case-marked in the embedded clause, and therefore does *not* bear an unvalued Case feature. Its ability to raise demonstrates that not all A-movement is subject to the Activity Condition. I considered the possibility that pure EPP movement, exemplified by raising in Uyghur, does not depend on Agree (cf. Richards 2009, among others). The alternative is to dispense with the Activity Condition entirely.

A crucial part of the argument from Uyghur is that the raised subject in (6) is *structurally* case-marked. Genitive subjects of embedded clauses like that in (6) are generated inside the verbal domain. They receive their theta-role from the embedded verb, and (in non-raising constructions) can be preceded by other arguments of the embedded verb. However, the genitive case of these subject depends on the *nominal* structure of the embedded clause. Genitive subjects are not possible when the same verb appears in a matrix clause, for instance. Thus, I have argued for the structural nature of genitive case on embedded subjects in Uyghur based on the fact that their case comes from outside of the domain where they are first merged.

However, in chapter 3, I argued that even quirky case is not always assigned in the position where a noun phrase enters the derivation. I have proposed that in Faroese, quirky datives receive their case from a higher functional head (cf. the proposal made by Svenonius (2005, to appear) for Icelandic). Faroese dative subjects share certain properties with nominative subjects. Unlike dative subjects in Icelandic, they trigger optional number agreement, license dependent accusative case on the object, and can become nominative in raising constructions, as (8) illustrates.[1] Quirky objects in Faroese commonly lose their quirky case as well, becoming nominative in the passive.

(8)   a.   Optional number agreement:

Teimum dáma   at vera saman   í bólki
they.DAT like.**3PL** to be   together in band

'They like to be together in a band.'

b.   Accusative object:

Henni   manglar pening/*peningur.
her.DAT lacks   money.**ACC**/*money.**NOM**

'She lacks money.'

c.   Loss of dative in raising:[2]

Eg   byrjaði [at dáma tað væl sem frá leið   ]
I.**NOM** started [to like   it   well as time passed]

'I started to like it as times went by.' (20 ✓; 2 ??)

I have proposed that all three properties of Faroese dative subjects shown in (8) can be explained if a higher functional head assigns quirky dative in Faroese. Agreement in (8a) and the licensing of accusative case in (8b) take place *before* dative case is assigned. In (8c), the infinitive clause is reduced, and is missing the projection responsible for dative case assignment.

The data I discuss shows that the differences between structural case and quirky case are less extensive than commonly assumed. Certainly, there is a crucial difference between genitive embedded subjects in Uyghur and quirky dative subjects in Faroese. Genitive case in Uyghur nominalized clauses is independent of the verb whose argument structure the

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[1]Note that I assumed that accusative case in Icelandic and Faroese is licensed by case competition, while genitive case in Uyghur is licensed by means of Agree. Baker and Vinokurova (2010) argue that the two modes of case assignment are not incompatible, and are in fact both instantiated in Sakha.

[2]In a matrix context, the verb *dáma* ('to like') generally takes *dative* first-person subjects.

embedded subject is a part of, whereas Faroese quirky case does depend on the verb in some way, perhaps through selectional properties of the case-assigning head. However, I have argued against a some ways in which structural case and quirky case have been supposed to differ, shown in (9).

(9)   a.   **Source of case:** Based on languages like Icelandic, it is generally assumed that quirky case is assigned to a DP in its theta-role position. I have argued that, like structural case, quirky case in Faroese is assigned by a higher functional head.

        b.   **Case preservation:** It has been proposed that quirky case is preserved under A-movement, while structural case is lost under A-movement. I have argued that neither type of case is really *lost* under A-movement. Structural genitive case is preserved under raising in Uyghur. When case (structural or quirky) appears to be lost, it is because this case was never assigned in the first place.

The issue of case preservation arises when a single noun phrase is potentially eligible for more than one case. I have suggested that instances of case loss under A-movement only *appear* to be such environments, and in fact the noun phrase is assigned case only in its moved position. In instances of case preservation, such as A-movement of quirky case-marked noun phrases in Icelandic, the first case assigned to the noun phrase is the one that surfaces. An interesting issue is whether the crucial property is which case is assigned *first*, or which case is more *marked*. These hypothesis are hard to distinguish, because the first case assigned (quirky case) is generally assumed to be more marked than the second case assigned (nominative or accusative).

There is another sort of environment where a noun phrase is eligible for multiple cases at once. In chapter 4, I examine what happens when a noun phrase is assigned two different cases in a Russian Right Node Raising (RNR) construction, illustrated in (10).

(10)   Russian RNR with different case requirements:

    *On otlil,   no poradovalsja, chaju.
   he *poured*$_{part}$, but **was.glad**$_{dat}$, tea[Ia]-***PART/DAT***

    'He poured off, but was glad of, the tea.'

The RNRed noun phrase in (10) is assigned partitive case in the first clause, but dative case in the second clause. This kind of construction is grammatical only when the RNRed noun exhibits systematic syncretism (neutrality) for the two cases assigned. More generally, it has been observed that in a number of environments where multiple cases or other features of the same type are assigned to a single item, syncretism is required (Zaenen and Karttunen 1984; Pullum and Zwicky 1986, among others). This pattern is entirely different from A-movement of quirky case-marked DPs in Icelandic. No syncretism is required for a quirky case-marked DP to move to a position where it is eligible for a different (structural) case.

We need a way to capture the difference between the environments that require syncretism (e.g. RNR in Russian) and environments that do not (e.g. A-movement of a quirky case-marked DP in Icelandic). I have proposed that the environments that require syn-

cretism are ones where multiple cases (or other features) are assigned simultaneously in a multidominant configuration, as illustrated in (11).

(11)　　Multidominant structure for RNR:

on
he

otlil　　but　*poradovalsja*　***chaju***
poured_{part}　*was.glad*_{dat}　***tea***
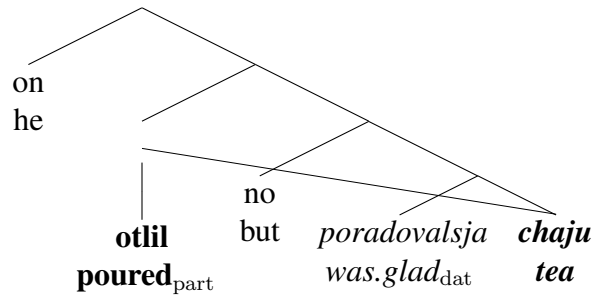
The RNRed noun phrase in (11) receives different cases (partitive and dative) in the two clauses. A systematically syncretic form is required for such a configuration to be licensed. I have suggested that all constructions where syncretism is required are *multidominant* configurations. This is the distinguishing property that causes a single noun phrase to bear two feature structures corresponding to the two features assigned. Both feature structures must then be spelled out with a single rule. In non-multidominant structures, a noun phrase simply surfaces with the first (or perhaps the more marked) case assigned to it.

Appendix A

Appendix: Puzzles for the Activity Condition and Phase Impenetrability Condition

In this section, I discuss some data from Bantu (Baker 2003; Carstens 2010; Carstens and Diercks to appear) and Brazilian Portuguese (Martins and Nunes 2010). The patterns of agreement and raising in Bantu, and raising in Brazilian Portuguese, provide a challenge for both the Activity Condition and the Phase Impenetrability Condition (Chomsky 1998, 2001). Carstens (2010), Carstens and Diercks (to appear) and Martins and Nunes (2010) attempt to reconcile the data with both the Activity Condition and the Phase Impenetrability Condition. In this appendix, I present an overview of the data and the accounts proposed. I suggest that there is a lack of independent evidence supporting the analyses offered. The proposal made by Carstens (2010) (and adopted by Carstens and Diercks (to appear)) faces some theoretical issues as well. The data discussed in this appendix thus continue to offer a challenge current theories.

A.1 Bantu

Carstens (2010) presents a range of data showing that noun phrases that do not require Case nevertheless undergo Agree. (In fact, Carstens (2010) follows Diercks (2010) in suggesting that Bantu lacks abstract Case altogether.[1]) Examples presented by Carstens (2010) include subject-object reversal, where an object moves to the specifier of TP, and hyper-raising, where the subject of a tensed clause raises into the matrix clause.

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[1]Similarly, Halpert (2011) proposes for Zulu that only noun phrases that lack an augment require Case licensing.

(1) a. Bantu subject-object reversal:
Ibitabo bi-á-ra-somye   Johani.
8book 8SA-past-read.perf John

'John (not Peter) has read (the) books.'   (*Kirundi*) (Ndayiragije 1999: (30a))

  b. Bantu hyper-raising:

Efula yi-bonekhana i-na-kwa   muchiri.
9rain 9SA-appear   9SA-fut-fall tomorrow

'It seems that it will rain tomorrow.'

(*Lusaamia*) (Carstens and Diercks to appear: (6))

If Bantu noun phrases require Case, presumably *ibitabo* ('book') in (1a) gets accusative
(object) case from the verb, and *efula* ('rain') in (1b) gets nominative case as the subject of
the embedded clause. Both examples in (1) contain fully inflected clauses, and the relevant
noun phrases can be licensed in such clauses without undergoing an additional instance of
Agree. Nevertheless, the matrix T displays overt agreement with *ibitabo* ('book') in (1a)
and *efula* ('rain') in (1b). The examples in (1) thus seem to violate the Activity Condition,
given again in (2).

(2) **Activity Condition:** A goal must be active (i.e. bear some unvalued feature, e.g.
Case) to be a valid target for Agree. (adapted from Chomsky 2001)

For Uyghur, I suggested that the Activity Condition can be maintained if pure EPP A-
movement does not depend on Agree. The Activity Condition then does not apply to
Uyghur raising. This solution is not available for the Bantu data in (1), which display overt
agreement (and, therefore, Agree) with noun phrases that do not require Case. Carstens
(2010) takes these data to mean that there is a different feature that makes noun phrases in
Bantu active – gender. In the system of Carstens (2010), nouns come into the derivation
with valued but uninterpretable gender features. Bearing an uninterpretable feature is what
makes something active.[2] Gender features are accessible outside of the noun phrase (e.g.
to T) only if the noun moves to the edge of DP, as it does in Bantu.

The proposal made by Carstens (2010) makes broad theoretical implications that seem
to be problematic. Observe that the proposal is a large departure from the system laid out
by Chomsky (2001), as Carstens (2010) herself points out. For Carstens (2010), uninter-
pretable features need not be deleted over the course of the syntactic derivation. This has
the potential to open up a can of worms. For example, Pesetsky and Torrego (2007) suggest
that wh-phrases enter the derivation with a valued but uninterpretable Q feature. They point
out that if this Q feature did not need to Agree with an interpretable counterpart, we might
expect examples like (3) to be possible.

(3) *Mary bought which book.

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[2]In the formulation of the AC given throughout this dissertation, it is bearing an *unvalued* feature that
makes something active. For Chomsky (2001), there is a direct correspondence between uninterpretable and
unvalued features on lexical items, so the two formulations are equivalent. I do not explore the possibility that
some items may enter the derivation with, e.g., valued but uninterpretable features (as for Carstens (2010)),
so for me also nothing hinges on this point.

The view advocated by Carstens (2010) is thus problematic given at least one influential proposal that breaks the connection between unvaluedness and uninterpretability.

Empirically, within Bantu, there is no direct motivation for Carstens' (2010) proposal. The data are all consistent with the Activity Condition being absent altogether, a possibility I consider in chapter 1. It would be interesting to explore the cross-linguistics implications of Carstens' (2010) analysis. It is predicted that, in a language with grammatical gender, a DP can be targeted for multiple Agree operations when the head noun moves to the edge of DP. Variation in noun movement to the edge of DP is found in Italian. Longobardi (1994) shows that proper names in Italian move obligatorily to the edge of DP when no article is present. It is thus predicted that multiple agreement with proper names (but not other noun phrases) is possible in Italian, as long as the proper syntactic configuration can be obtained. It would therefore be interesting to explore whether there are configurations in which proper names behave differently from other noun phrases for the purposes of agreement in Italian.

Carstens and Diercks (to appear) discuss Bantu data that is problematic not only for the Activity Condition, but for the Phase Impenetrability Condition as well. They argue that examples like (4) involve raising out of a CP clause.

(4)   Raising across C in Lubukusu:

Chisaang'i chi-lolekhana [$_{CP}$ mbo t chi-kona   ]
10animal   10SA-seem   [$_{CP}$ that t 10SA-sleep.PRS]

'The animals seem to be sleeping.'

(*Lubukusu*) (Carstens and Diercks to appear: (11b))

The data in (4) presents the same issue for the Activity Condition as (1). In addition, it displays raising out of a full CP clause, which is surprising in the context of the Phase Impenetrability Condition, given in (5).

(5)   a. Chomsky's (1998) Phase Impenetrability Condition (PIC$_{strong}$):
            In phase α with head H, the domain of H is not accessible to operations outside α; only H and its edge are accessible to such operations.
        b. Chomsky's (2001) Phase Impenetrability Condition (PIC$_{weak}$):
            In phase α with head H, the domain of H is accessible to operations outside α only until the next (strong) phase head is merged.

As discussed in chapters 1 and 2, the Phase Impenetrability Condition, in both its forms, can block raising out of CPs. Under the PIC$_{strong}$ (given in (5a)), the complement of C, including the embedded subject, is inaccessible to operations from outside of CP. Raising out of a CP in (4) should therefore be impossible. In chapter 2, I have argued in favor of adopting PIC$_{weak}$, rather than PIC$_{strong}$. I have also proposed that we should discard the idea that raising v is weak, and therefore does not "count" as a phase for the purposes of the PIC. Under this assumption, the embedded CP in (5) should be spelled out when matrix v is merged, again making the embedded subject inaccessible for Agree with the matrix T. Thus, if we assume that the embedded subject cannot raise through the specifier of CP, as follows from the ban on improper movement (Chomsky (1973); May (1979)), it is predicted that raising in (4) should not be possible.

There are several approaches that could allow the PIC to be maintained in the face of data like (4). Carstens and Diercks (to appear) propose that the CP in (4) is not a strong phase. They show that the complementizer *mbo* in (4) is syntactically relatively low – it can occur below *sekir* ('because'), unlike the agreeing complementizer *li*.

(6)   *mbo* is a low complementizer:

Alfred a-likho   a-cha   [sikila mbo (*a-li)   a-likho   a-elekesia
Alfred 1SA-PROG 1SA-leave [because that (*1-comp) 1SA-PROG 1SA-escort
Sifuna]
Sifuna]

'Alfred is leaving because he is escorting Sifuna.'

(*Lubukusu*) (Carstens and Diercks to appear: (27))

Carstens and Diercks (to appear) propose that, being a low complementizer, *mbo* does not head a strong phase in Lubukusu. This takes us back to the idea that certain v and/or C heads are not strong phase heads – an idea I have suggested that we abandon in chapter 2. A possible reimplementation of the proposal made by Carstens and Diercks (to appear) is to say that *mbo*, which is not (necessarily) the highest functional head in its clause, is not an instance of C, but rather instantiates some other, lower functional projection. The analysis offered by Carstens and Diercks (to appear), or the reformulation I suggest, seems like the most promising approach to reconciling examples like (4) with the PIC. Alternatives include abandoning the ban on improper movement as a universal principle. Another option is to assume the PIC$_{weak}$ but retain the idea that raising v can be weak, at least in examples like (4). The latter tack is taken by Martins and Nunes (2010) for analyzing raising in Brazilian Portuguese, which I turn to in the following section.

A.2   Brazilian Portuguese

Martins and Nunes (2010) discusses *hyper-raising* in Brazilian Portuguese, illustrated in (7). Like the Bantu data discussed above, hyper-raising in Brazilian Portuguese presents a potential challenge to both the Activity Condition and the Phase Impenetrability Condition.

(7)   Hyper-raising in Brazilian Portuguese:

Os meninos parecem [que t viajaram   ontem.   ]
the boys   seem-3pl [that t traveled-3pl yesterday]

'The boys seem to have traveled yesterday.'

(*Brazilian Portuguese*) (Martins and Nunes 2010: 3a)

The embedded clause in (7) is fully inflected, and as (8) shows, a subject can be Case-licensed in such an embedded clause.

(8)   Subject licensed in embedded clause:

Os meninos parecem [que **eles** viajaram   ontem.   ]
the boys   seem-3pl [that **they** traveled-3pl yesterday]

'The boys seem to have traveled yesterday.'

(*Brazilian Portuguese*) (Martins and Nunes 2010: 3b)

The embedded subject in (8) remains in the embedded clause, and must therefore be licensed inside the embedded clause. On the surface, there is no difference between the embedded clauses in (7), where the subject raises, and (8), where it does not. These examples thus seem to present a problem for the Activity Condition, shown again in (9).

(9)   **Activity Condition:** A goal must be active (i.e. bear some unvalued feature, e.g. Case) to be a valid target for Agree. (adapted from Chomsky 2001)

If the embedded clause in (7) is the same as in (8), the embedded subject in (7) should receive nominative case inside the embedded clause. It would therefore lack an unvalued Case feature, and be ineligible for further Agree operations under the AC. However, the subject in (7) raises out of the embedded clause (as Martins and Nunes (2010) argue) and triggers overt agreement on the matrix verb. We therefore have clear evidence that the matrix T can agree with the embedded subject.

Martins and Nunes (2010) attempt to reconcile examples like (7) with the AC by proposing that the embedded clauses in (7) and (8) are actually different. Martins and Nunes (2010) propose that the T of the embedded clause Case-licenses the embedded subject in (8), but not in (7). They formally capture this by suggesting that T in the embedded clause in (7) is ϕ-incomplete, and lacks a person feature. However, there is no evidence to support the idea that T is ϕ-incomplete in (7) beyond the observation that (7) is not ruled out by the Activity Condition. Thus, while allowing the Activity Condition to be maintained, the analysis offered by Martins and Nunes (2010) is stipulative. The alternative is to give up on the Activity Condition as a universal, which I suggest as a possibility in chapter 1. This would allow us to assume that the subject *os meninos* ('the boys') in (7) is assigned nominative case in the embedded clause, just as *eles* ('they') is assigned nominative case in the embedded clause in (8).

Another puzzle presented by (7) is how the Phase Impenetrability Condition (PIC) is circumvented: the embedded clause in (7) is a CP, and yet raising out of it is possible. Martins and Nunes (2010) combine Chomsky's (2001) version of the PIC with the assumption that raising v is not a (strong) phase head for the purposes of the PIC. Of course, if the PIC is to rule out raising out of CP in English, we would need to assume that (strong) phasehood of raising v varies across languages. Alternatively, the phasehood status of C could vary, as Carstens and Diercks (to appear) propose for Bantu. Unfortunately, neither view is particularly satisfying unless we can find other correlates of non-(strong) phasehood of these heads.

Appendix B

Appendix to chapter 2: More on Uyghur embedded clauses

B.1 Where is the relative clause?

In chapter 2, I discussed the fact that only unmarked-subject relative clauses are compatible with possessed head nouns, as illustrated again in (1).

(1) Possessed head noun – relative clause subject must be unmarked:

    a.   [Ötkür oqu-ʁan] **Ajgül-nuŋ** kitav-**i**   uzun
        [Ötkür read-RAN] **Aygül-gen** book-**3.poss** long
        'Aygül's book that Ötkür read is long.'

    b. *[**Ötkür-niŋ** oqu-ʁan] **Ajgül-nuŋ** kitav-**i**   uzun
        [**Ötkür-gen** read-RAN] **Aygül-gen** book-**3.poss** long
        intended: 'Aygül's book that Ötkür read is long.'

    Observe that the possessor in (1) *follows* the relative clause, as (2) again shows.

(2) Relative clause followed by possessor:

    #[Ötkür soj-gen   ] men-iŋ ana-m   bolsa güzel
    [Ötkür kiss-RAN] I-gen   mother-1sg.poss be-SA beautiful

    ✓ 'The mother of mine that Ötkür kissed is beautiful.'
    ✗ 'My mother, whom Ötkür kissed, is beautiful.'

The order of constituents in (2) is surprising. Uyghur relative clauses are preferentially (or perhaps necessarily) interpreted restrictively, so that only the odd reading requiring the speaker to have more than one mother is available in (2). Thus, semantically, the noun combines first with the relative clause, and then with the possessor. Yet this bracketing is inconsistent with the surface word order seen in (2). As (3) shows, this issue arises not only with possessors, but with adjectives as well. The relative clause in (3) takes scope *below* the adjective it precedes.

(3) [Ajgül oqu-ʁan   ] æŋ   uzun kitap *Ujʁur Tarihe*
     [Aygül read-RAN] most long book *Uyghur History*
     'The longest book that Aygül read is *Uyghur History*.'
     (not: 'Out of the longest book(s), Aygül read *Uyghur History*.')

A relative clause not only *can*, but *must* precede other modifiers such as possessors, as (4) illustrates.

(4) Possessor cannot precede relative clause:

     * **Ajgül-nuŋ** [Ötkür oqu-ʁan   ] kitav-**i**   uzun
       Aygül-gen [Ötkür read-RAN] book-**3.poss** long

     intended: 'Aygül's book that Ötkür read is long.'

Noun complement clauses, too, must precede other modifiers. This is illustrated with for a possessor in (5), and for an adjective in (6).

(5) Noun complement clause must precede possessor:
     a. ?[Ötkür kel-gen   ] **Ajgül-nuŋ** ispaat-**i**   muhim
         [Ötkür come-RAN] **Aygül-gen** evidence-**3.poss** important
         'Aygül's evidence that Ötkür came is important.'
     b. ***men-iŋ** [Ötkür kel-gen   ] ispaat-**im**   muhim
         I-gen   [Ötkür come-RAN] evidence-**1sg.poss** important
         intended: 'My evidence that Ötkür came is important.'

(6) Noun complement clause must precede adjective:
     a. men [(***jeni**) [Otkur-niŋ ket-ken   ] (**jeni**) söztʃötʃek-i-ni   ]
         I   [(***new**) [Ötkür-gen leave-RAN] (**new**) rumor-3.poss-acc]
         aŋli-d-im
         hear-past-1sg
         'I heard the new rumor that Ötkür left.'
     b. men [(***jeni**) [Otkur ket-ken   ] (**jeni**) söztʃötʃek-ni] aŋli-d-im
         I   [(***new**) [Ötkür leave-RAN] (**new**) rumor-acc   ] hear-past-1sg
         'I heard the new rumor that Ötkür left.'

The semantic bracketing indicates that relative clauses and noun complement clauses are low, while the surface order demonstrates that they are high. It thus appears that relative clauses and noun complement clauses obligatorily move to the left edge of the DP, as illustrated in (7).

(7)   Structure for relative clauses and noun complement clauses:
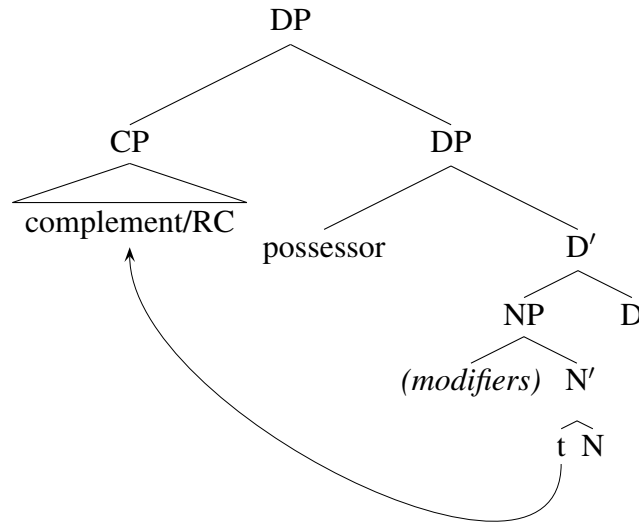
I assume that the movement in (7) is clausal extraposition. Interestingly, this movement seems to be dialectal. Csató and Uchturpani (2010) give examples like (8), where the possessor precedes the relative clause.

(8)   Possessor precedes relative clause:

öj   igi-si-niŋ   [men qorq-idi-ʁan   ] it-i
house owner-3.poss-gen [I   afraid-impf–*ran*] dog-3.poss

'the landlord's dog which I am afraid of'   (Csató and Uchturpani 2010: (81))

As shown again in (9), examples with the same word order as in (8) are ungrammatical for my consultant.

(9)   Possessor cannot precede relative clause:

*
Ajgül-nuŋ [Ötkür oqu-ʁan   ] kitav-**i**   uzun
Aygül-gen [Ötkür read-RAN] book-**3.poss** long

intended: 'Aygül's book that Ötkür read is long.'

B.2   More on null nouns

In this section, I discuss some differences between clauses embedded by null nouns and clauses embedded by overt nouns. These differences arise when the subject of the embedded clause is unmarked. In clauses embedded by null nouns, unmarked subjects are structurally low and trigger possessor agreement, whereas neither of these properties holds for subjects of overtly-headed clauses. I make tentative suggestions about the data presented here, but the contrast remains a puzzle.

B.2.1   Noun complement clauses

In null-noun complement clauses, unmarked subjects must be non-specific, as shown in (10) and (11).

(10) a. Non-specific subject:

  Ötkür [**qɨz-(nɨŋ)** kel-gen-lik-i-ni   ] didi
  Ötkür [**girl**   come-RAN-C-3.poss-acc] said

  'Ötkür said that a girl came.'
  b. Specific subject (proper name):

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

  'Ötkür said that Aygül came.'
  c. Specific subject (pronoun):

  Ötkür [**men-*(ɨŋ)** kel-gen-lik-im-ni   ] didi
  Ötkür [**I-*(gen)**   come-RAN-C-1sg.poss-acc] said

  'Ötkür said that I came.'

(11) a. Non-specific subject:

  [**üt∫** qɨz   kel-gen-(liq)-i   ] meni χu∫al kɨl-d-i
  [**three girl** come-RAN-(C)-3.poss] I-acc happy do-past-3

  'Three girls' coming made me happy.'
  b. Specific subject (proper name):

  [**Tursun-*(nɨŋ)** ket-ken-(liq)-i   ] jaχ∫i e-mes
  [**Tursun-*(gen)** leave-RAN-(C)-3] good cop-neg

  'Tursun leaving is not good.'
  c. Specific subject (pronoun):

  [**sen-*(ɨŋ)**   kel-gen-(liq)-iŋ   ] mini χu∫al kɨl-d-i
  [**you-*(gen)** come-RAN-C-2sg.poss] I-acc happy do-past-3

  'Your coming made me happy.'

As seen in numerous examples in chapter 2, and again in (12) and (13), there is no such restriction for overtly-headed complement clauses.

(12)   Specific unmarked subjects with overt head noun:

    a.   Specific subject (proper name):

       men [Mehemmet doχtur bol-ʁan   ] hekaje-ni aŋli-d-im
       I   [Mehemmet doctor become-RAN] story-acc hear-past-1sg

       'I heard the story that Mehemmet became a doctor.'

    b.   Specific subject (pronoun):

       [sen ket-ken   ] χever-ni oqu-wat-i-men
       [you leave-RAN] news-acc read-prog-imfp-1sg

       'I'm reading the news that you left.'

(13)   Specific unmarked subjects with overt head noun:

    a.   Specific subject (proper name):

       [Ötkür roman jaz-ʁan   ] χever qiziqqaʁlaq
       [Ötkür novel write-RAN] news interesting

       'Th news that Ötkür wrote a novel is interesting.'

    b.   Specific subject (pronoun):

       [sen kel-gen-(liq)   ] heqiqet muhim
       [you come-RAN-(C)] fact   important
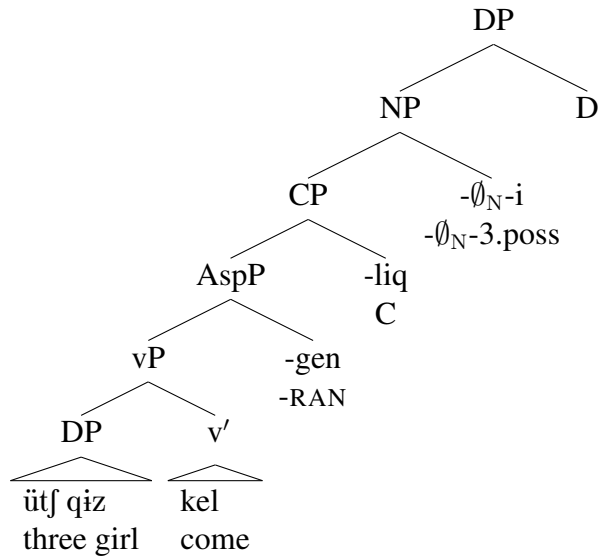
       'The fact that you came is important.'

As in the *-ish* nominalized clauses discussed in chapter 1, the restriction against specific unmarked subjects arises from a structural difference between genitive subjects and unmarked subjects. When there is no over head noun, unmarked subjects must be low. For example, the unmarked subject in (14) must follow the adjunct, whereas no such restriction applies to the genitive subject in (15).

(14)   Unmarked subject *cannot* precede adjunct:
    Mehemmet [(sorun-ʁa) qiz (**??sorun-ʁa**) kel-gen-lik-i-ni   ] didi
    Mehemmet [(party-dat) girl (**??party-dat**) come-RAN-C-3.poss-acc] said

    'Mehemmet said that a girl came to the party.'

(15)   Genitive subject *can* precede adjunct:
    Mehemmet [(sorun-ʁa) qiz-niŋ (**sorun-ʁa**) kel-gen-lik-i-ni   ] didi
    Mehemmet [(party-dat) girl-gen (**party-dat**) come-RAN-C-3.poss-acc] said

    'Mehemmet said that a girl came to the party.'

Following Diesing (1992), I propose that the unmarked subjects of covertly-headed noun complement clauses cannot be specific because they remain inside vP. As a result, they must be existentially bound (resulting in the non-specificity requirement) and must appear close to the verb. The structure of a covertly-headed noun complement clause with an unmarked subject is shown in (16).

(16) Covertly-headed noun complement:

üt∫ qɨz kel-gen-liq-i
three girl come-RAN-C-3.poss

```
                              DP
                             /  \
                           NP     D
                          /   \
                        CP    -∅_N-i
                       /  \   -∅_N-3.poss
                    AspP   -liq
                    /  \    C
                  vP   -gen
                 /  \  -RAN
               DP    v′
              / \   / \
          üt∫ qɨz  kel
        three girl  come
```

Another difference between overtly-headed and covertly-headed noun complement clauses is the presence of possessor agreement with unmarked subjects. As discussed in chapter 2 and shown again in (17), possessor agreement with an unmarked subject is prohibited in overtly-headed noun complement clauses.

(17) Possessor agreement prohibited with unmarked subject:

[sen ket-ken   ] χever-**(*ɨŋ)**   muhim
[you leave-RAN] news-**(*2sg.poss)** important

'The news that you left is important.'

When the head noun is null, on the other hand, possessor agreement is always possible.[1]

(18) Possessor agreement with unmarked subject:

a. [**qɨz** kel-gen-liq-**?(i)**   ] toʁrisidiki söztʃötʃek toʁra
    [**girl** come-RAN-C-**?(3.poss)**] about   rumor   true
    'The rumor about a girl coming is true.'

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

There are thus two key differences between overtly-headed and covertly-headed noun complement clauses with unmarked subjects. Unmarked subjects of overtly-headed noun complement clauses are outside of vP (and thus may be specific), and do not trigger possessor agreement. Unmarked subjects of covertly-headed noun complement clauses are inside vP (and thus must be non-specific), and do trigger possessor agreement, at least optionally.

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[1]I have not explored in detail whether agreement is generally optional or obligatory.

B.2.2 Relative clauses

Relative clauses without overt head nouns pattern similarly to complement clauses without overt head nouns. The unmarked subject of a relative clauses with no overt head must be low, though unlike noun complement clauses, this does not trigger a specificity restriction. The low position of an unmarked subject in a null-headed relative clause is seen in (19), where the unmarked subject cannot be followed by an adverb or locative. There is no such restriction when the subject is genitive, as (20) shows.

(19)   Unmarked subject is low:
        [Ajgül (*tɨz/*sorun-da)   oqu-ʁan-i   ] uzun
        [Aygül (*quickly/*party-loc) read-RAN-3.poss] long

        'What Aygül read (*quickly/*at the party) is long.'

(20)   Genitive subject is high:
        [Ajgül-nuŋ (tɨz/sorun-da)   oqu-ʁan-i   ] uzun
        [Aygül-gen (quickly/party-loc) read-RAN-3.poss] long

        'What Aygül read (quickly/at the party) is long.'

Observe that the low unmarked subject in (19) is a proper name, which demonstrates that there is no requirement for unmarked subjects of null-headed relative clauses to be non-specific. In contrast to null-headed relative clauses, the unmarked subject of an overtly-headed relative clause *can* be followed by adverbials.

(21)   Unmarked subject of overtly-headed relative clause is high:
        [Ajgül (tɨz/sorun-da)   oqu-ʁan] kitap uzun
        [Aygül (quickly/party-loc) read-RAN] book long

        'The book that Aygül read (quickly/at the party) is long.'

    An unmarked subject of an overtly-headed relative clause is thus higher than an unmarked subject of a covertly-headed relative clause. Note that both unmarked and genitive subjects can be *preceded* by the locative, as in (22). There is thus no general restriction against adverbials in null-headed relative clauses.

(22)   Subject preceded by locative:
        [sorun-da Ajgül-(nuŋ) oqu-ʁan-i   ] uzun
        [party-loc Aygül-(gen) read-RAN-3.poss] long

        'What Aygül read at the party is long.'

The adverb *tɨz* ('quickly'), on the other hand, may not precede the subject, regardless of case.

(23) Subject cannot be preceded by *tɨz* ('quickly'):
    [(*tɨz)   Ajgül-(nuŋ) oqu-ʁan-i   ] uzun
    [(*quickly) Aygül-(gen) read-RAN-3.poss] long

    'What Aygül read (*quickly) is long.'

Quickly is a VP-level adverb ([Cinque 1999](#)), and thus cross-linguistically appears inside vP. Its inability to precede an unmarked subject in (23) is therefore expected assuming the embedded subject is in the specifier of vP. What is surprising is that it nevertheless cannot *follow* the embedded subject either.

    Again, the agreement pattern with unmarked subjects is different depending on whether the head noun is null. As shown above, in overtly-headed relative clauses, no agreement with an unmarked subject is possible:

(24) Possessor agreement prohibited with unmarked subject:
    [**Ötkür** oqu-ʁan   ] kitav-(***i**)   uzun
    [**Ötkür** read-RAN] book-(***3.poss**) long

    'The book that Ötkür read is long.'

On the other hand, agreement on an null-headed relative clause is possible, and some-times obligatory, as (25) shows. As seen in (26), agreement may also be absent. The very tentative generalization is that agreement is absent whenever the relative clause bears case-marking.

(25) Agreement on null-headed relative clause:
    a.   [men oqu-ʁan-*(**im**)   ] uzun
           [I   read-RAN-*(**1sg.poss**)] long
           'What I read is long.'
    b.   [Ötkür ji-gen-*(**i**)   ] jaχʃi
           [Ötkür eat-RAN-*(**3.poss**)] good
           'What Ötkür ate is good.'

(26) No agreement:
    a.   [sen tamaq yi-wat-qan-(**??iŋ**)-da,   ] men kettim
           [you food   eat-wat-qan-(**??2sg**)-loc,] I   left
           'As you were eating, I left.'
    b.   [Ajgül ket-ken-(***i**)-din   ] kijin, men tamaq ji-d-im
           [Aygül leave-RAN-(***3.poss**)-abl] after, I   food   eat-past-1sg
           'After Aygül left, I ate.'

    There are thus two differences between overtly-headed and covertly-headed relative clauses with unmarked subjects. The unmarked subjects of overtly-headed relative clauses are structurally higher than unmarked subjects of covertly-headed relative clauses. The un-marked subjects of overtly-headed relative clauses do not trigger possessor agreement on the head noun, whereas unmarked subjects of covertly-headed relative clauses do, appar-ently when the clause does not bear oblique case-marking.

B.2.3 Discussion

As seen above, there are two differences between clauses embedded by overt nouns and clauses embedded by covert nouns when the subject of the clause is not marked genitive.

(27) Unmarked-subject clauses:

	subject position	agreement?
Overt N	high	no
Covert N	low	yes/sometimes

It is not clear to me at this point whether the two differences between clauses embedded by overt vs. covert nouns can receive a unified explanation. At this point, I leave open the question of why subjects in clauses embedded by overt nouns are higher than subjects in clauses embedded by covert nouns. As for the difference in agreement, it is possible that null nouns bear agreement (even with unmarked subject) because they must be supported by overt morphology. This idea can explain the contrast seen above between covertly-headed relative clauses in nominative positions and in oblique-case positions. As shown again in (28), the former, but not the latter, display possessor agreement.

(28)   Agreement on relative clause without overt case-marking only:

    a.   [men oqu-ʁan-*(**im**)   ] uzun
            [I   read-RAN-*(**1sg.poss**)] long
            'What I read is long.'

    b.   [Ajgül ket-ken-**(*i)**-din   ] kijin, men tamaq ji-d-im
            [Aygül leave-RAN-**(*3.poss)**-abl] after, I   food   eat-past-1sg
            'After Aygül left, I ate.'

If a null noun can be supported by overt case morphology, as well as by possessor agreement, it is correctly predicted that possessor agreement should be present in (28a), but not in (28b). In (28b), the case suffix (-*din*) fulfills the morphological support requirement for the null noun. Note that there are other constructions in Uyghur that display possessor agreement with unmarked nouns. These include the nominalized clauses discussed in chapter 1 and shown in (29a), as well as compounds (shown in (29b)).

(29)   Possessor agreement with unmarked noun:

    a.   qïz kil-iʃ-i   muhim
            girl come-nliz-3.poss important
            'It's important for a girl to come.'

    b.   dunja heriti-si
            world map-3.poss
            'world map'

Appendix C

Appendix to chapter 2: Genitive-subject licensing in Turkic

As discussed in chapter 2, Uyghur displays genitive case licensing across a CP boundary. This case-licensing pattern presents an argument against Chomsky's (1998) version of the Phase Impenetrability Condition (PIC_{strong}). Instead, I argue in chapter 2 in favor of Chomsky's (2001) version of the Phase Impenetrability Condition (PIC_{weak}). Preliminary evidence suggests that not just Uyghur, but other Turkic languages as well, combine full CP embedded clauses with clause-external licensing. In this appendix, I briefly discuss data from Kazakh and Turkmen.

C.1   Kazakh[1]

Like Uyghur, Kazakh displays an unmarked/genitive subject case alternation in relative clauses. And just as in Uyghur, whenever the subject is genitive, the head noun bears possessor agreement, as illustrated in (1).

(1)   Relative clauses:

    a.   [**Jarʒan-niŋ**   oqu-ʁan] ketab-**i** qiziqti
         [**Yarzhan**-gen read-RAN] book-**3** interesting
         'The book that Yarzhan read is interesting.' (*Kazakh*)
    b.   [Jarʒan   oqu-ʁan] ketap qiziqti   iken
         [Yarzhan read-RAN] book interesting is
         'The book that Yarzhan read is interesting.' (*Kazakh*)

The diagnostic shown for Uyghur in chapter 2 confirms that genitive embedded subjects in Kazakh are case-marked by the same head that assigns genitive case to possessors. Kazakh prohibits two possessors on a single noun phrase (seen in (2)). Thus, as in Uyghur, a single genitive-assigning head cannot assign genitive twice.

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(2)   Two possessors prohibited:

    *Aidana-niŋ Jarʒan-niŋ   surjet-e
    Aidana-gen Yarzhan-gen picture-3

    intended: 'Aidana's picture of Yarzhan' (*Kazakh*)

When the head of a relative clause is possessed, the subject of that relative clause must be unmarked, rather than genitive (seen in (3)). This follows immediately if a single head assigns genitive case to possessors and embedded subjects, and as seen above, that head cannot assign genitive twice.

(3)   Unmarked subject required when head noun is possessed:

    a.   [Jarʒan   oqu-ʁan] **aidana-niŋ** ketab-**i** qiziqti
        [Yarzhan read-RAN] **Aidana-gen** book-**3** interesting
        'Aidana's book that Yarzhan read is interesting.'

    b.   *[**Jarʒan-niŋ**   oqu-ʁan] **aidana-niŋ** ketab-**i** qiziqti
        [**Yarzhan-gen** read-RAN] **Aidana-gen** book-**3** interesting
        intended: 'Aidana's book that Yarzhan read is interesting.' (*Kazakh*)

Note that there is nothing semantically implausible about two possessors, as (5) shows. The double possessor construction in (2) is thus ruled out for syntactic reasons.

(4)   No semantic problem with two possessors:

    a.   Jarʒan-niŋ   surjete
        Yarzhan-gen picture
        'picture that belongs to Yarzhan' *or*
        'picture depicting Yarzhan' (etc.) (*Kazakh*)

    b.   Aidana-daʁe Jarʒan-niŋ   surjet-e
        Aidana-DARE Yarzhan-gen picture-3
        'Aidana's picture of Yarzhan' (*Kazakh*)

Like Uyghur embedded clauses, Kazakh embedded clauses appear to be CPs. Noun complement clauses in Kazakh contain an optional morpheme *-diʁ* (evidently a cognate of Uyghur *-liq*), which I suggest is also a complementizer. Like Uyghur *-liq*, Kazakh *-diʁ* is banned in relative clauses.

(5)   Optional *-diʁ* in complement clause:

    Jarʒan   [mjeniŋ kjet-ip   qal-ʁan-**(diʁ)**-im-di   ] ajtti
    Yarzhan [I-gen   leave-IP do-RAN-**(diʁ)**-1sg-acc] said

    'Yarzhan said that I left.' (*Kazakh*)

(6)   No -*dɯ* in relative clause:

    a.   [Jarʒan-niŋ   oqu-ʁan-(**dɯ**)] ketab-i qiziqti
         [Yarzhan-gen read-RAN-(**dɯ**)] book-3 interesting
         'The book that Yarzhan read is interesting.' (*Kazakh*)

    b.   [Jarʒan   oqu-ʁan-(**dɯ**)] ketab qiziqti
         [Yarzhan-gen read-RAN-(**dɯ**)] book-3 interesting
         'The book that Yarzhan read is interesting.' (*Kazakh*)

Like Uyghur, Kazakh genitive-subject embedded clauses allow wh-questions, another indication that they are full CPs.

(7)   Wh-question in genitive-subject clause:
    [Aidana-niŋ qaʃan ket-ip   qal-ʁan-i-ŋ   ] bilje-min
    [Aidana-gen when leave-IP do-RAN-3-acc] know-1sg

    'I know when Aidana left.' (*Kazakh*)

Unfortunately, it was difficult to elicit complements of overt head nouns. At this point, there is evidence that the genitive subjects of *relative* clauses are licensed clause-externally and that *complement* clauses are full CPs, but no data that combines the two features. However, as Kazakh patterns with Uyghur in many relevant respects, it is very plausible that a more careful investigation would provide another clear case of agreement and genitive-case licensing across a CP boundary.

C.2   Turkmen

The data I have available for Turkmen is unfortunately flawed in the same way as the Kazakh data above. (8) shows that the genitive subject of a *relative* clause in Turkmen is licensed clause-externally, with possessor agreement appearing on the head noun. The genitive-subject *complement* clause in (9) contains a wh-question, which indicates that it is a full CP.

(8)   Agreement on head noun:
    yašulu-lar [šeyle pis adam-lar-iŋ   gel-en] öy-ler-in-i   yüze
    elder-pl   [these bad person-pl-gen come-P] house-pl-3-acc point
    çïkar-malï-dïrlar
    out-necc-3pl

    'Elders must point out the houses which these bad people visited.'
    (*Turkmen*) (Frank 1995: (100), via Kornfilt 2005)

(9)   Embedded question:
       Mïrat [on-non näːč-inǰi   klaθ-θa   oko-n-un-ï   ] θoːr-odï
       Mïrat [he-gen what-ordinal class-loc study-P-3sg-acc] ask-past

       'Mïrat asked in which class he studied.'
        (*Turkmen*) (Hanser 1977: (190), via Kornfilt 2005)

   Again, more data is needed to determine whether Turkmen has genitive-assignment and
agreement across a CP boundary, but preliminary data is suggestive.

Appendix D

Appendix to chapter 4: Sample stimuli for syncretism experiment

In this appendix, I present sample stimuli for the experiment discussed in chapter 4. The experiment addressed the possibility of Right Node Raising in Russian where the RNRed noun phrase is assigned different cases in the two clauses. The results of the experiment showed that this configuration is possible when the RNRed noun is systematically syncretic for the two cases assigned (*neutral*), but not when there is accidentally syncretism (or no syncretism at all). Please see chapter 4 for discussion.

D.1   Neutrality (NOM-ACC)

Experimental sentences: neuter (class Ib)

Control sentences: feminine (class II)

(1)   Neutrality:
On ne ostavil, tak kak emu nadoelo,   bljudce   s   krasnoj
he not *kept_{acc}*, as   him **sick.of_{nom}**, saucer[Ib]-***ACC&NOM*** with red
kaëmkoj.
border
'He didn't keep, as he was sick of, the saucer with a red border.'

(2)   No syncretism; second conjunct agreement:
On ne ostavil, tak kak emu nadoela,   tarelka   s   chërnoj kaëmkoj.
he not *kept_{acc}*, as   him **sick.of_{nom}**, plate[II]-**NOM** with black   border
'He didn't keep, as he was sick of, the plate with a black border.'

D.2   Morphological ambiguity (PART-DAT)

Experimental sentences: masculine (class Ia)

Control sentences: neuter (class Ib)

(3)   Morphological ambiguity:

On ne sosedu   podlil,   a   naoborot poradovalsja, chaju
he not neighbor-dat *poured*_{part}, but opposite **was.glad**_{dat}, tea[Ia]-***PART/DAT***
so   sgushchënym molokom.
with condensed   milk

'He didn't pour some to his neighbor, but rather was glad of, tea with condensed milk.'

(4)   No syncretism; second conjunct agreement:

On ne sosedu   podlil,   a   naoborot poradovalsja, moloku   s
he not neighbor-dat *poured*_{part}, but opposite **was.glad**_{dat}, milk[Ib]-**DAT** with
saxarom i   likërom.
sugar   and liqueur

'He didn't pour some to his neighbor, but rather was glad of, milk with sugar and liqueur.'

D.3   Phonological ambiguity (ACC-PREP)

Experimental sentences: neuter (class Ib), unstressed ending

Control sentences: neuter (class Ib), stressed ending

(5)   Phonological ambiguity:

On ne nastupil, a sidel, na lózhe   s   serym pokryvalom.
he not *stepped*_{acc}, but **sat**_{prep}, on bed[Ib]-***ACC/PREP*** with gray   bedspread

'He did not step on, but sat on, the bed with a gray bedspread.'

(6)   No syncretism; second conjunct agreement:

On ne nastupil, a sidel, na vedré   s   bol'shoj dyrkoj.
he not *stepped*_{acc}, but **sat**_{prep}, on bucket[Ib]-**PREP** with big   hole

'He did not step on, but sat on, the bucket with a big hole.'

D.4   Other

(7)   Baseline – RNR without case conflict:

On ne soxranil, a vybrosil,   pechen'e   iz   poezdki v Angliju.
he not **kept**_{acc}, but **discarded**_{acc}, cookie-**ACC** from trip   to England

'He did not keep, but rather threw out, cookies from a trip to England.'

(8)   Filler – grammatical:

On vchera vybrosil,   ponimaja chto postupaet glupo, tarelku   iz
he yesterday **discarded**_{acc}, realizing that acts   stupidly, plate-**ACC** from
tonkogo fajansa.
thin   faience

'He threw away yesterday, realizing that he's acting stupidly, a fine faience plate.'

(9)   Filler – ungrammatical:

*On vchera   vybrosil,   ponimaja chto postupaet glupo,   tarelka   iz
he yesterday **discarded**_{acc}, realizing, that acts   stupidly, plate-*NOM* from
tonkogo fajansa.
thin   faience

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