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Non-Nominative Subjects in Russian and Lithuanian:  
Case, Argument Structure, and Anaphor Binding

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**Abstract**

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In this dissertation, I aim to provide a comprehensive view of subjects in Russian and Lithuanian that have a morphological case other than nominative. Non-nominative subjects (NNSs) provide a window into the notion of subjecthood because they are lacking in some core subject properties and yet are still considered subjects. While the constructions that have dative, genitive, and accusative subjects seem to vary greatly, I show that they fall into two groups: those that have subjects with inherent case and those that have subjects with structural case. I propose a uniform way to account for how case is assigned in each construction and for the apparent “subject” movement that they undergo. In a later portion of the dissertation, I report on an investigation into anaphor binding by these subjects that relies on experimental methodology.

In Chapter 2, I focus on inherent non-nominative subjects, which in both Russian and Lithuanian are dative Experiencers. I argue that the two kinds of predicates in these languages

with dative Experiencer subjects, psychological verbs (e.g. ‘to like’, *nravit’sja* in Russian and *patikti* in Lithuanian) and non-verbal psych predicates (e.g. ‘sorry’, *zal’* in Russian and *gaila* in Lithuanian), have different argument structures. While both datives are specifiers of an Applicative Phrase, the Theme of a psychological verb is the specifier of a  $v_{BE}P$  (following Cuervo’s 2003 proposal for Spanish) and the Theme of a non-verbal psych predicate is the complement to the predicate. In this chapter, I also account for how NNSs seem to undergo subject movement because they appear pre-verbally in discourse neutral contexts. I argue that T can inherit its uninterpretable  $\phi$ -features from Rizzi’s (1997) Fin head separately from the EPP feature via a modification to Feature Inheritance (Chomsky 2008, Richards 2008b) called Split Feature Inheritance. The NNS moves to Spec FinP to check EPP, and the  $[u\phi]$  probe on T is free to undergo Agree with any active DP.

In Chapter 3, I turn to the remaining constructions, which I argue to have subjects with structural case. In Russian, sentences with an infinitive as the predicate (i.e. Fleisher’s 2006 “Main Clause Infinitivals”) have dative subjects. I argue that these are bi-clausal (following Fleisher 2006 and Jung 2008), but that these subjects are assigned dative case by an embedded non-finite Fin head and then raise to the matrix clause. Here, Feature Inheritance has not occurred and Fin still has the  $[u\phi]$  feature bundle which agrees with the subject DP. I argue that this is also the source of the dative case assigned to the subjects of adjunct participial clauses in Lithuanian. The subject in these clauses moves to Spec FinP and is assigned dative via Agree with Fin. Contra Arkadiev (2012), I propose that these clauses are tenseless and therefore lack a TP layer. When these participial clauses are embedded under a matrix verb like *sakyti* ‘say’ or *matyti* ‘see’, Split Feature Inheritance is triggered and an Aspect head is what inherits  $[u\phi]$ . Because this  $[u\phi]$  is now in the verbal domain of the clause, the subject is assigned accusative

case via Agree. Finally, I propose that the genitive subjects of the Lithuanian Inferential Evidential construction are subjects of a gerundial DP and assigned structural genitive case via Agree with D (cf. Lavine 2000, 2010).

The focus of Chapter 4 is an acceptability judgement experiment investigating the ability of dative NNSs to bind anaphors. Russian and Lithuanian both have subject-oriented reflexives, making anaphor binding a common subjecthood diagnostic in these languages (see Rappaport 1986). In addition, pronouns in these languages are anti-subject-oriented in that they can only be bound by non-subjects. The experiment tests predictions made by Nikolaeva's (2014) theory of the (anti) subject-orientation of anaphors in Russian, Index Raising, wherein anaphors and pronouns are the spell-out of an index that raises to certain positions in a clause. I find that dative subjects of psychological clauses cannot bind reflexives, but they can bind pronouns. Dative subjects of Russian infinitival sentences and Lithuanian participial clauses, on the other hand, bind reflexives. Sentences with these subjects binding pronouns are judged to be neither completely unacceptable nor completely acceptable. I show that we can begin to account for this pattern of binding if we assume the argument structures I propose in Chapters 2 and 3.

Chapter 5 concludes the dissertation with a review of the proposals and findings from Chapters 2 through 3.

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## Abbreviations

1	First person
2	Second person
3	Third person
-AGR	Non-agreeing
ACC	Accusative
AI	Adversity Impersonal
AppIP	Applicative Phrase
ACT	Active
CP	Complementizer Phrase
DAT	Dative
DP	Determiner Phrase
ECM	Exceptional case marking
EPP	Extended Projection Principle
FEM	Feminine
Fin	Finiteness
FinP	Finiteness Phrase
Foc	Focus
GEN	Genitive
GenNeg	Genitive of negation
INF	Infinitive
INSTR	Instrumental
LA	Labeling Algorithm
LOC	Locative
MASC	Masculine
MCI	Main Clause Infinitival
N	Nominal
<i>n</i>	Little <i>n</i>
NEG	Negation
NEUT	Neuter
NOM	Nominative
<i>n</i> P	Little <i>n</i> Phrase
O	Object
PART	Participle
PASS	Passive
PERF	Perfect
PL	Plural
PP	Prepositional Phrase
PRES	Present
Q	Yes/no question particle
QR	quantifier raising
REFL	Reflexive
S	Subject
SC	Small clause
SG	Singular
SO	Syntactic object
T	Tense
TP	Tense Phrase
Top	Topic
TopP	Topic Phrase
V	Verb
<i>v</i>	Little <i>v</i>
VP	Verb Phrase
<i>v</i> P	Little <i>v</i> Phrase

# Chapter 1: Introduction

## 1. Introduction

### 1.1 Goals

Russian and Lithuanian, both members of the Balto-Slavic family, are two languages known for constructions with subjects that have a case other than nominative. In (1) below, the subject bears genitive (GEN) case and in (2) the subject bears dative (DAT) case.

- (1) Genitive subject  
Mokytojo ištaisyta studentų klaidos. *Lithuanian*  
teacher<sub>GEN</sub> corrected<sub>-AGR</sub> student<sub>GEN</sub> mistakes<sub>NOM</sub>  
'The teacher apparently corrected the students' mistakes'
- (2) Dative subject  
Mne ne spit-sja. *Russian*  
me<sub>DAT</sub> NEG sleep<sub>3.SG-SJA</sub>  
'I can't/don't sleep.'

These subjects are different from canonical (i.e. nominative) subjects, most obviously with respect to case. From here on, I will refer to these arguments as non-nominative subjects (NNSs), avoiding the often-used term “quirky subjects”, as this term is usually associated only with datives. The goal of this thesis is two-fold: (i) to provide a clearer picture of how these subjects come to be assigned a case other than nominative (NOM), and (ii) to explore how these subjects behave with respect to the classic subjecthood diagnostic of anaphor binding. I show how subjects can be assigned DAT, ACC, and GEN structurally, how to account for the alternation between DAT and ACC on participial subjects in Lithuanian, and discuss how to account for different binding properties of dative subjects.

As we will see later in this chapter, subjects are special arguments for many reasons. They participate in many operations or constructions differently from any other argument. They

trigger agreement on the verb, while objects do not (*He runs* vs. *\*I sees him*)<sup>1</sup>. They can be controlled in embedded clauses (*I want you<sub>i</sub> PRO<sub>i</sub> to go to the store* vs. *\*I want you<sub>i</sub> him to see PRO<sub>i</sub>*) and omitted in coordinate clauses (*He<sub>i</sub> walked the dog, and (he<sub>i</sub>) will make coffee* vs. *The dog saw him<sub>i</sub>, and the dog licked \*(him<sub>i</sub>)*). Similarly, they can undergo raising to subject positions and object positions in a higher clause (*We seem to be having trouble* vs. *\*Trouble seems us to have*). The non-nominative subjects of several languages have been investigated with respect to these canonical subject properties with varying results (see, for example, Dziwirek 1994 for Polish, Moore and Perlmutter 2000 for Russian, Sigurdsson 1989 for Icelandic, Fanselow 2002 for German, Poole 2015 for Hindi). In this thesis, I focus on one of the main subjecthood diagnostics for Balto-Slavic: anaphor binding. There has been some discussion of binding in the literature without clear conclusions or inclusion of all types of NNSs (Franks 1995, Moore and Perlmutter 2000, Slioussar 2011, Nikolaeva 2014). In this dissertation I aim to provide a clearer picture using experimental methods.

## 1.2 Dissertation overview

This dissertation covers three main topics: non-nominative subject case, the argument structure of predicates with non-nominative subjects, and the anaphor binding properties of these subjects. By taking a comparative perspective, we will see that not all subjects are created equal, and that they can actually be divided into three groups: nominative, inherent NNS, and structural NNS. It is important to highlight here that, as I compare Russian and Lithuanian, I expect to see many similarities between the two languages in how these subjects behave. While these

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<sup>1</sup> As we will see, psychological predicates in Russian (and in Icelandic) agree with nominative Themes. Also, object agreement in the presence of a canonical subject is possible in, for example, Bantu languages and Hungarian. The point here is that where a language has verbal agreement, and there is a canonical subject, a (finite) verb will agree with it. If object agreement is possible in the language, that may also occur.

languages are mutually unintelligible, they share many syntactic features, including the system of aspect and verbal morphology, case paradigms, and cross-clausal phenomena like the lack of Exceptional Case Marking (ECM).

Chapter 2 is devoted to inherent NNSs, and I will take an in-depth look at dative Experiencers, contrasting the predicates that select for them: full psychological verbs (e.g. Russian *nravit'sja* and Lithuanian *patikti* ‘to like’) and non-verbal psychological predicates (e.g. Russian *žal'* and Lithuanian *gaila* ‘sorry’). In Chapter 3, I will return to structural NNSs and explore the mechanisms behind the assignment of a structural non-NOM case to a subject. In Chapter 4, I will report the results of an acceptability judgment experiment investigating the effect that membership in one of these groups has on the acceptability of anaphor binding by dative subjects. I will discuss Nikolaeva’s (2014) theory of the (anti) subject-orientation of anaphors in Russian, in which pronouns and anaphors raise covertly in the course of a derivation. We will see that, combined with the argument structure I propose for NNS constructions, we can start to explain the pattern of binding across NNSs. I conclude the dissertation in Chapter 5.

## **2. Subjecthood**

In this section, I clarify what I mean by the latter half of the label “non-nominative subject”. My aim is to show why we should care about subjects as a class of argument or grammatical function at all. I will give an account of the current state of our understanding of what exactly a canonical subject is by exploring the following questions.

- (3) a. How do we define the notion of subject in our theory of syntax? Is it a grammatical relation, a function or a position?
- b. If it’s a position, is it the position the argument is merged into or the position it moves to?

- c. Where can a subject originate in the clause? Where can it move to?
- d. How can we account for nominative case?

### 2.1 *Why subjects?*

There are many well-documented reasons why our model of the grammar should single out subjects. McCloskey (1997) gives the following list as a rationale for treating subjects as different from other arguments.

- (4)
  - a. Subjects tend to have the same semantic roles: Agent, Cause, Experiencer.
  - b. They are the most prominent argument.
  - c. They are formally marked.
  - d. No other argument has been claimed to be obligatory in every clause.
  - e. Unlike other positions, it has to be occupied by a nominal.
  - f. They are the locus of promotion/advancement of nominals.

Falk (2006) also adds the properties in (5) below. I will discuss (5a,b) and give an example of (5c) above. I refer the reader to Falk (2006) for examples of (5d,e).

- (5)
  - a. Agents are realized as subjects.
  - b. Subjects have anaphoric prominence.
  - c. Subjects can be omitted in coordinated or subordinate clauses, unlike objects.
  - d. Subjects are more prone cross-linguistically to undergo *wh*-movement to form relative clauses.
  - e. Subjects with quantificational semantics usually have wide scope.

In his discussion of how to characterize subjects in a way that predicts all of these properties, Falk (2006) identifies three traditional approaches to subjects. These approaches differ in whether they view subjects as elements occupying a particular structural position, as a grammatical *relation*, or as a grammatical *function*. He argues against the structural position definition, claiming that: (i) non-configurational languages cannot be shown to have a VP<sup>2</sup>, (ii) the reasoning behind a dedicated position is circular, and (iii) a dedicated subject position is also a property even though proponents of the structural approach claim it is not. In arguing against a

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<sup>2</sup> But see Legate's (2002) study of Walpiri, refuting the notion that non-configurationality exists in language at all.

grammatical relation approach like Relational Grammar, he points out that a “relation” is defined as nothing more than the set of properties, leaving the properties themselves unexplained. He settles on the grammatical function approach, defining a subject by the “function” it has. In this dissertation I will primarily rely on the structural position approach to characterize the types of subjects I am referring to, but it will be important to keep in mind the two functions that Falk singles out. They are: i) a subject expresses the most prominent argument of a verb, and ii) it singles out the “actant” to be the nexus for “cross-clausal activity” (i.e. the Pivot).

In the remainder of this section, I discuss three ways to define subjecthood that touch on the properties listed above (position, discourse status, and thematic role). The goal will be to settle on a benchmark for comparing NNSs to NSs.

## *2.2 Position*

As we will see when discussing the case assignment of NNSs, syntactic position is actually a very helpful way to think about subjects. For example, NNSs such as dative Experiencers fulfill Falk’s (2006) first subject function (most prominent argument of verb), but they are analyzed as originating in different positions from NSs. McCloskey’s (1997) claim that DPs get referential and semantic properties based on the position they originate in makes the very strong prediction that a DP merged in a different position will have different properties.

It is important to avoid circularity in our discussion of position. We do not want to claim that some DPs are different from others and account for these differences by proposing they originate in a different position only to argue later that they are in different positions *because* they have these different properties. The properties of different structural positions have to first

be established independently and then can be called on to account for other clusterings of properties.

In arguing that subjects are merged in Spec VP and objects are merged as complements of V, King (1995) discusses a few subject-object asymmetries that are apparent in Russian. For one, extraction of objects out of finite clauses headed by the complementizer *čtoby* ‘that’, (6a), is permitted while extraction of subjects is disallowed, shown in (6b).

- (6) a. Parin’<sub>i</sub>, kotorogo ja xotel, čtoby Maša ubila <sub>t<sub>i</sub></sub> *Russian*  
 guy<sub>NOM</sub> who<sub>ACC</sub> I wanted that Masha<sub>NOM</sub> killed  
 ‘The guy, who I wanted Masha to kill’
- b. \*Parin’<sub>i</sub>, kotoryj ja xotel, čtoby <sub>t<sub>i</sub></sub> ubil Mašu  
 guy<sub>NOM</sub> who<sub>NOM</sub> I wanted that killed Masha<sub>ACC</sub>  
 ‘The guy, who I wanted to kill Masha’
- (King 1995, citing Pesetsky 1982b: 299)

Another asymmetry can be seen in the case of extraction *out* of DPs. Results from experimental work by Polinsky et al. (2013) show that wh-extraction in Russian is permitted out of unaccusative subjects, but not out of unergative or transitive subjects, regardless of whether they are pre-verbal (i.e. freezing effects from movement to Spec TP do not effect unaccusatives (p. 30) (cf. Stepanov 2007).

- (7) *Russian*  
 Kakie ty mečtaeš’ [čtoby \_\_\_\_ aktjory okazalis’ na scene ]  
 what.kind.of<sub>NOM</sub> you dream [that actors<sub>NOM</sub> appears on stage ]  
 ‘What kind of actors do you hope to appear on stage?’ (Polinsky et al. 2013: 25)

This case provides us with an opportunity to avoid this circularity problem. Given that we know independently that unaccusative subjects occupy a different position underlyingly from unergative subjects or transitive subject (i.e. VP internal subjects), then we can attribute the difference with respect to extraction to the difference in position. Independent evidence for different positions for unaccusative subjects in Russian comes from the assignment of the

Genitive of Negation and of passivization (see Perlmutter 1978, Babby 1980, Harves 2002, Partee and Borshcev 2004, and Irwin 2012 for discussion).

### 2.3 Information structure status

Subjects are generally accepted to be topics, but the notion of topichood does not seem to be a good definition of subjecthood. One description of topichood that touches on this connection is Kiss's (1995) "subject-of-predication" wherein a topic DP becomes the element predicated of by the VP. This does not get us closer to the definition of a subject because any argument may be the "subject-of-predication". The following data in (8) from Hungarian illustrate that Kiss's notion of "subject-of-predication" here can apply to objects as well.

- (8) a. [Évát] János várta a mozi előtt. *Hungarian*  
Eve<sub>ACC</sub> John waited the cinema in.front.of  
'Eve<sub>S,PRED</sub> was waited for in front of the cinema by John.'
- b. [János] Évát várta a mozi előtt.  
'John<sub>S,PRED</sub> waited for Eve in front of the cinema.' (Kiss 1995: 208-9)

Indeed, King (1995) argues against a dedicated subject position outside of the VP, claiming that the only predictor of a DP being preverbal is its being a topic. For her, subjects are not preverbal because they're subjects, but rather "[they] tend to appear pre-verbally because thematically highest arguments tend to appear pre-verbally" (King 1995: 135). She proposes that Russian is actually underlyingly VSO, with V moving to I and no movement of the subject to a dedicated subject position. This is meant to account for presentational sentences in which every element is in focus and the verb precedes its arguments, as shown by the infelicitous (9b). The response in (9c) with the predicate *prislal* 'sent', shows also that this ordering is not restricted to unaccusative predicates with VP-internal subjects.

- (9) Q: What happened yesterday? *Russian*
- a. Včera [priexal brat]  
yesterday arrived brother  
'Yesterday (my) brother-FOC arrived-FOC'
- b. #Včera [brat priexal]  
yesterday brother arrived  
'Yesterday (my) brother-FOC arrived-FOC'
- c. Včera [prislal muž den'gi]  
yesterday sent husband money  
'Yesterday (my) husband-FOC sent-FOC money-FOC'

The claim that thematically higher arguments appear pre-verbally because thematically high arguments are “excellent candidates for topics” (King 1995: 135) is also meant to account for why non-nominative DPs of impersonal clauses appear pre-verbally. This runs into a problem with the following observation by Slioussar (2011). In (10a) below, the dative Experiencer *Saše* ‘Sasha’ appears pre-verbally in an answer which contains all discourse new or neutral elements.

- (10) a. Saše ne nraivitsja Boris *Russian*  
Sasha<sub>DAT</sub> NEG please<sub>3.SG</sub> Boris<sub>NOM</sub>  
'Sasha does not like Boris.' Answer to: Do you foresee any problems with our group trip?
- b. Boris ne nraivitsja Saše  
Boris<sub>NOM</sub> NEG please<sub>3.SG</sub> Sasha<sub>DAT</sub>  
'Sasha does not like Boris.' Not answer to: Do you foresee any problems with our group trip? Answer to: Who likes Boris?
- (Slioussar 2011: 2059)

While it is the case that VSO in (9) encodes non-topic status for the arguments, the SVO order in (10) does not necessarily show that the subject is a topic. In this thesis, I will therefore follow the spirit of Chomsky’s (1981) Extended Projection Principle in assuming that movement to a higher specifier position by subject can happen for non-discourse reasons.

## 2.4 Thematic properties

The discussion above brings us to the third way to define subjecthood: thematic roles. As McCloskey (1997) points out, subjects of active voice clauses tend to be Agents, Causers, and Experiencers. While this is true, I will not be using specific thematic roles as a way to define what a canonical subject is, for a few reasons. First of all, canonical subjects can bear any of these three roles and NNSs can also bear any of these three.<sup>3</sup>

- (11) Agent NNS  
Mokytojo ištaisyta studentų klaidos *Lithuanian*  
teacher<sub>GEN</sub> corrected<sub>AGR</sub> student<sub>GEN</sub> mistakes<sub>NOM</sub>  
'The teacher apparently corrected the students' mistakes.'
- (12) Causer NNS  
Ingos nuraminta vaikas *Lithuanian*  
Inga<sub>GEN</sub> calm.down<sub>AGR</sub> vaikas<sub>NOM</sub>  
'Inga must have calmed down the child.' (Lavine 2010: 116)
- (13) Experiencer/Agent NNS  
Mne khočitsja est' *Russian*  
me<sub>DAT</sub> want<sub>3SG-REFL</sub> eat<sub>INF</sub>  
'I feel like eating.' (Slobodchikoff 2008: 109)
- Second, objects can have several of these thematic roles too. In (14) the cause of the fear is the neighbor's dog, and in (15) the child is experiencing shame.
- (14) Causer  
Ja bojus' sobaky sosedu. *Russian*  
I<sub>NOM</sub> fear<sub>1SG-REFL</sub> dog<sub>GEN</sub> neighbor<sub>GEN</sub>  
'I fear the neighbor's dog.'
- (15) Experiencer  
Mokytojas sugėdino vaiką. *Lithuanian*  
teacher<sub>NOM</sub> shamed<sub>3SG</sub> child<sub>ACC</sub>  
'The teacher shamed the child.'

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<sup>3</sup> Dziwirek (1994: 65) observes the same thing for Polish dative subjects.

DPs that are Agents always surface as subjects, but subjects are not the only elements that bear the Agent thematic role. Agentive by-phrases are instrumental DPs in Russian and genitive DPs in Lithuanian.

- (16) a. Blyny byly prigotovlenny Ivanom. *Russian*  
 Pancakes<sub>NOM</sub> were cooked<sub>PART.PL</sub> Ivan<sub>INS</sub>  
 ‘The pancakes were cooked by Ivan.’
- b. Blynai buvo iškepti Jono. *Lithuanian*  
 Pancakes<sub>NOM</sub> were cooked<sub>PART.PL</sub> Jonas<sub>GEN</sub>  
 ‘The pancakes were cooked by Jonas.’

Finally, reference to thematic height raises the question of the connection between thematic roles and syntactic position. What exactly does it mean to be thematically high? If we follow a ranking such as that of Jackendoff (1972), then perhaps it is humanness or agentivity.

- (17) Thematic Hierarchy (Jackendoff 1972)  
 Agent > Causer > Experiencer > Instrument/Goal/Source > Theme > Location

What notions like Dowty’s (1991) proto-Agent and proto-Patient do is divorce thematic roles from structural position. Functional approaches to language view proto-roles as lists of role characteristics, and they capitalize on this system to explain why certain arguments have certain cases (i.e., the argument with the most proto-Agent characteristics will be marked with whatever case that language uses to distinguish Agents, nominative or ergative).<sup>4</sup> Similarly, the non-generative framework of Construction Grammar organizes constructions in terms of “pure” or “core” constructions that have all of the properties, much like a Platonic ideal, and constructions on the periphery that deviate from this central one, sharing only a subset of the properties (see, for example, analyses in Helasvuo and Huumo 2015). For these frameworks, an Agent in the

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<sup>4</sup> I refer the reader to Wiemer and Bjarnadóttir (2014) for an example of a functionalist analysis of Lithuanian and Icelandic non-canonical subjects in the framework of Role and Reference Grammar. Also see Primus (2009) for a summary of structural versus functional approaches to thematic roles and case.

sense of Dowty (1991) is the core notion of a subject and other thematic roles that subjects can have are instantiations of the periphery. Experiencer role has a subset of the features that an Agent does; for instance it is [+human] or [+animate], but not [+volitional]. This is exemplified by the continuum of agentivity that Janda and Divjak (2015) posit in their discussion of Russian non-canonical subjects, given in (18).

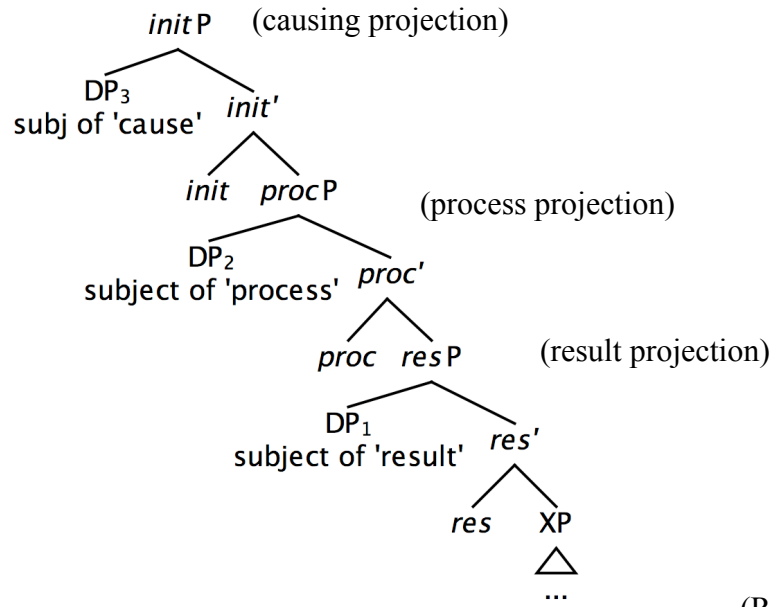
- (18) Scale of Agentivity  
True Agent > Agentive Experiencer > True Experiencer  
(Janda & Divjak 2015: 310)

There are several approaches to thematic roles that view them as determined by syntactic position. The two ways to go about modeling this connection are to designate specific syntactic positions (e.g. sister to V) as the position where certain thematic roles are assigned or to allow an argument's type of participation in an event to be dictated in the course of the derivation. Baker's (1988) Uniformity of Theta Assignment Hypothesis is an example of the first, and Ramchand's (2008) First Phase Syntax and Borer's (2004) "severing of the object" proposal are examples of the second. Marantz (2013) simply states that different languages make use of different methods for adding arguments to a structure and associating them with thematic roles. In some, Recipient indirect objects are introduced through the addition of a PP. In others, an Applicative head is added at some point in the VP that introduces an additional argument, such as an Experiencer, to the argument structure.

One implication of the Borer and Ramchand approach to building argument structure is the notion that there is not necessarily a one-to-one match-up between thematic role and argument structure. In this approach a DP could theoretically accumulate multiple thematic roles by virtue of movement to newly built positions. This is how Ramchand accounts for Themes that are also end points of an event (e.g. 'the boy' in *The boy got hit by a ball*). In First Phase Syntax,

thematic roles are not actually assigned, arguments are simply the subject of different parts of the event, Initiation (*init*), Process (*proc*), or Result (*res*), schematized in (19). What this means for “traditional” subjects is that they can no longer be partially defined in terms of how they are merged into a clause; that is, we cannot characterize subjects as specifiers and objects as complements (of V).

(19)



(Ramchand 2008: 46)

A dynamic approach to thematic role assignment is what Hornstein (1999) capitalizes on in his Movement Theory of Control (MTC). If a DP can acquire multiple thematic roles via movement in the course of building argument structure, a subject DP should be able to acquire multiple the thematic roles in the course of constructing a multi-clausal structure. For Hornstein (1999) and Hornstein and Polinsky (2010) all control clauses are simply cases of movement where a subject gains a second (or third) thematic role from the higher, embedding predicate. I note, however, that either movement through multiple thematic positions or control of an agentive PRO by an Experiencer will gain the interpretation that we are looking for, that of the Agentive Experiencer

in (13). It is enough for this dissertation to assume that thematic roles can be explained by “association” with one or more structural position(s).

Notice, though, that even under the assumption that thematic roles are not “fixed” to a certain defined structural position, it is consistently the argument with the highest ranked role in a given structure that undergoes movement to a higher clause. Now, if it is the case that thematic height corresponds in some way to structural height, then it could be that a DP appears pre-verbally by virtue of its structural position, not by virtue of its being a subject. The relationship between thematic height and subjecthood thus leads us to a circular argument if we are going to use it to define subjecthood. I will end this discussion of thematic roles by contending that movement to a preverbal position is a superiority issue (i.e. a syntactic one, not a functional one.). In Chapter 2 I will argue, following Germain (2015), that movement of the highest argument need not always target the subject-related position of Spec TP. Instead movement of a highest argument can target a CP position not associated with discourse status or verbal agreement. In the next section will explore the notion of a dedicated subject position and subject movement.

### *2.5 Subject positions and movement*

In Chapters 2 and 3 I will argue that non-nominative subjects do not move to the canonical subject position. In this subsection I review what exactly we mean by a dedicated or canonical subject position. Two positions need to be considered: the first position that a subject is merged into, Spec vP, and the landing site of the subject after movement, Spec TP.

### 2.5.1 The origin of nominative subjects

For King (1995), there is no dedicated position that the grammatical subject moves to it. The only thing in her system that could be said to be a “subject position” is Spec VP, a subject’s base position. King (1995), attributes subject-asymmetries like the ban on subject extraction to the GB notion of lack of government. An object that is extracted leaves a trace that is lexically governed by V, while a subject that is extracted out of Spec VP leaves a trace that is not.

Other theories of subjects propose that canonical subjects originate some place in the vP/VP and move to a subject position. I refer the reader to McCloskey (1997) for a discussion of the history of the theory of where subjects originate, but in this thesis I assume that the Specifier of a vP is the base position for an NS in an active clause, following Kratzer (1996).

### 2.5.2 Landing site

Since the emergence of the Internal Subject Hypothesis, which proposed that subjects are not base merged in Spec IP, but rather in Spec VP, subjects have had the distinction of being the one argument that must move for no other reason than that it needs to be in its dedicated position (Speas 1986, Larson 1988, Kuroda 1988). Chomsky’s (1981) assertion that clauses must have a subject, the Extended Projection Principle, has been reinterpreted as the presence of an EPP feature on T. Whereas in earlier Minimalist approaches subjects move to check nominative case in Spec TP, in modern Minimalist models features can be checked at a distance (i.e. long distance Agree; see Section 4 below), and it is the EPP on T or I that drives movement of the subject to Spec TP or IP.<sup>5</sup> Here, I review some of the properties that have been attributed to DPs

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<sup>5</sup> In some current conceptualizations of the EPP, it has been further abstracted to the point where it can be the feature of any head (or possibly only phase heads, see Abels 2003), where serves the function of “demanding” that the specifier position of that head be filled. Short of assuming “agnostic” movement (e.g. in Franks and Lavine 2006), the EPP is our best mechanism for accounting for movement that is not discourse driven. See, however, the discussion below on labeling as motivation for movement.

by virtue of their moving to a dedicated subject position, Spec TP or IP or to a higher left-periphery position. I will also cover some recent proposals about labeling phrases that call into question the idea that subjects move to Spec TP simply because that is the place for subjects.

### 2.5.2.1 Argument position

The traditional subject position (Spec TP or IP) has long been argued to be an Argument position (A-position). One property that has been associated with A-positions, is anaphor binding. As (20) shows, c-command alone is not enough in Russian (and Lithuanian) to predict binding. If it were, the c-commanding object *arestovannogo* ‘suspect’ would be able to bind the reflexive anaphor *sebe* ‘self’.

- (20) Militционер<sub>i</sub> rassprašival arestovannogo<sub>j</sub> o **sebe**<sub>i/\*j</sub> *Russian*  
 policeman<sub>NOM</sub> questioned suspect<sub>ACC</sub> about **self**<sub>PREP</sub>  
 ‘The policeman<sub>i</sub> questioned the suspect<sub>j</sub> about himself<sub>i/j</sub>.’ (Rappaport 1986: 101)

We have known that reflexive anaphors are subject-oriented in Russian since Peskovskij (1956). The way that this has traditionally been modeled in the generative framework is to say that binding happens “from the subject position” (i.e. Spec TP) (see Rappaport 1986). This notion has lead other researchers to analyze NNSs which have the power to bind anaphors as having gained this ability by moving to Spec TP.

- (21) a. Mne<sub>i</sub> žal **sebja**<sub>i</sub> *Russian*  
 me<sub>DAT</sub> sorry **self**<sub>ACC</sub>  
 ‘I feel sorry for myself’
- b. Mne<sub>i</sub> legko govorit’ o **sebe**<sub>i</sub>  
 me<sub>DAT</sub> easy speak<sub>INF</sub> about **self**<sub>LOC</sub>  
 ‘It is easy for me to speak about myself’
- c. Mne<sub>i</sub> **svoix**<sub>i</sub> nagrad nečego stydit’ sja  
 me<sub>DAT</sub> **self**’s awards<sub>GEN</sub> nothing be.ashamed<sub>INF</sub>  
 ‘There’s no reason for me to be ashamed of my awards.’  
(Franks 1995: 253)

I discuss this property and the ability (or lack thereof) of NNSs to bind anaphors extensively in Chapter 4.

A second property that is associated with A-positions is that they are the landing site for passivization “transformations”. If an argument is going to be promoted, it will move to Spec TP to “become” the grammatical subject of a clause (e.g. Theme *John* in *John was bitten.*). Only the most local argument may be promoted to Spec TP, however. In American English double object constructions, only the indirect object can be moved out of VP to Spec TP, as in (22b).<sup>6</sup>

- (22) a. John was given the book  
b. \*The book was given John.

It is also relevant to mention here the theory of Criterial Positions, the notion put forth by Rizzi (2006) that at some point movement must stop (see also Rizzi and Shlonsky 2007). A Criterial Position is a specifier position in which the element occupying it and the head share a “critical” interpretable feature. Rizzi and Shlonsky (2007) propose that the relevant stopping point for subjects is the specifier of a Subject Phrase. In this A-position, the subject DP shares a [subj] feature with the Subj head. I will not be pursuing this concept at length in this dissertation, but will discuss it later when it is relevant for my analysis.

One alternative account for the need for an extra subject position in Spec TP comes from work on labeling projections that are the product of two phrases being merged together. For Chomsky (2013), one of the problems for generating phrases is how to label a new constituent. In order for that constituent to be interpreted by the semantic parser it must be identifiable. Chomsky’s (2013) Labeling Algorithm assigns a new constituent the label of the closest head. In the simplest case, that of a head and its complement, the Labeling Algorithm finds the head and

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<sup>6</sup> This construction is known to be acceptable for some dialects of British English (see Haddican 2010 and references therein for discussion).

the head projects its label. When a transitive verb forms a constituent with its object DP, as in (23), the head V provides the label for the VP.

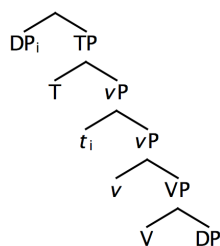
(23) [VP V DP]

When two phrases are merged, there is no way to decide which head gets to project its label, as minimal search returns two heads. This situation arises when the subject is merged with the newly constructed VP/vP, shown in (24).

(24) [<sub>TP</sub> DP [<sub>vP</sub> v VP]]

Building on Moro’s (2000) proposal for “dynamic antisymmetry” in small clauses, Chomsky (2013) proposes two ways to resolve this tension. Either both phrases share a “prominent” feature, which becomes the label (e.g. Q or  $\phi$ ) or one phrase vacates the newly formed constituent. With the assumption that traces cannot contribute to a labeling decision, the remaining phrase projects its label. This process is what Chomsky (2013) suggests prompts A-movement of a subject out of vP to Spec TP.

(25)



It is worth mentioning these ideas in a discussion of subjecthood because they strip Spec TP of its status as a “subject position”. Under this formulation of A-movement, there is nothing about Spec TP that contributes to a DP’s status as a subject; it is simply the landing site for this labeling driven movement. In Chomsky’s (2014) revision of this labeling issue, subject movement to Spec TP is driven by whether or not T is “strong enough” to project the TP label on

its own. The subject moves up to strengthen it as they both share the same  $\phi$ -features, which allows the result of the merge of these two phrases to be labeled. In either case, A-movement is not driven by any need to ‘gain subjecthood’, but rather it helps resolve issues with labeling newly formed constituents. I will return to the topic of labeling and what it predicts for the movement of non-nominative, non-agreeing subjects in Chapter 2.

As the above discussion shows, it seems problematic to try to define subject status or properties in terms of only movement to Spec TP. In the next subsection, I will try to reinforce this point by discussing how subjects should or shouldn’t be associated with A’-positions.

#### 2.5.2.2 Non-argument position

Branigan (1992, 2004) points out that subjects in English have properties that have traditionally been attributed to movement to a non-argument position. For example, subject DPs that contain the operator *only* can license an NPI.

(26) *Only Mary* showed *any* respect for the visitors

By contrast, other *only* phrases can only license an NPI from a left-peripheral position (Progovac 1992).

- (27) a. Only his girlfriend does John give any flowers  
b. ?\*John gives only his girlfriend any flowers.

(Branigan 2004: 63, citing Progovac 1992)

Branigan (1992, 2004) concludes that the easiest way to explain this is to assume that subjects move to a dedicated subject position that is not an A-position, which he refers to as a Spec IIP, an A’-position above TP. Babyonyshev (1996) follows Branigan (1992) in arguing that Russian subjects also move to a Spec IIP and that the I head, not T, is the head endowed with the EPP.<sup>7</sup>

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<sup>7</sup> Williams (2003, 2006), in his Representation Theory, also argues for a higher subject position above Spec TP to account for apparent A’-properties of subjects in Russian.

This position is similar to the Spec FinP position I propose to be the landing site for NNSs moving out of  $vP$  in Germain (2015) in that it is not associated with Topic or Focus features.<sup>8,9</sup> In Chapter 2, I assume that nominative subjects in Russian and Lithuanian move to Spec TP. The brief discussion here goes to show, however, that a “subject” position (i.e. landing site) is unlikely to always be an A-position for all languages and all subjects.

In addition, subjects have been singled out as undergoing A'-movement in a different way from other arguments (e.g. anti-agreement phenomena in Afro-Asiatic and Niger-Congo questions and relative clauses, the *that*-trace effect in English, the Subject Condition, etc).<sup>10</sup> It might seem reasonable then to define a subject based on restrictions on A'-movement (i.e. a subject is something that is constrained in how it may move to the left periphery). However, recent work on these subject-object extraction asymmetries have singled out anti-locality as the source of the restriction (Erlewine 2016, Bošković 2015). Erlewine (2016) analyzes the restriction on A'-movement of transitive subjects in Kaqchikal, a Mayan language, as the result of a constraint against movement that is too close. Subjects in Spec TP cannot move to Spec CP because spec-to-spec movement without intervening material is banned. The *that*-trace effect has also been reduced to an anti-locality effect (i.e. *who* in *\*Who did you say that left?* must move to the matrix Spec CP via the embedded CP, which is too local to the embedded Spec TP) (see Bošković 1997, Ishii 1999, Brillman and Hirsch 2014 for this kind of account). Under these

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<sup>8</sup> I assume movement to Spec FinP is A-movement. See Chapter 4 for discussion of object fronting as A-movement in Russian.

<sup>9</sup> Branigan (2004) proposes that  $\Pi$  optionally carries an [MD] feature to attract focused phrases that are monotone decreasing in order to capture the difference in acceptability with fronted PPs and auxiliary inversion sentences in (i), where the licitly fronted PP (i,b) is monotone decreasing.

(i) a. \*In this pub can we hold this shindig.

b. In no finer pub could we hold this shindig.

(Branigan 2004: 41)

<sup>10</sup> Note that other extraction restrictions on subjects that have been discussed in the literature are attributed to syntactic ergativity, not to subjecthood. See Aldridge (2004, 2008a) for an analysis of A'-movement with respect to ergative and absolutive arguments in Austronesian.

accounts, A'-movement of subjects is restricted simply because the subject happens to be structurally too high.

Given this discussion it seems problematic to try to define subjecthood in terms of A-position properties or A'-position properties. Nor does it seem as helpful to define subjecthood by citing the restrictions on movement to an A'-position, even though there are clear subject-object asymmetries.

### *2.6 Nominative case assignment*

I began this dissertation by splitting “subjects” into two groups based on their case, nominative or not nominative. If nominative subjects can be shown to have their case assigned uniformly, by the same mechanism, they form a natural class of subjects [NOMINATIVE]. Other subjects can be thought of as the elsewhere case. In Chapter 3, however, I argue that one group of NNSs is assigned case structurally, just as canonical subjects are. In this section, I discuss the relationship between nominative case and subjecthood

In a finite clause, the traditional indicator of the subject in a nominative-accusative aligned language with overt case marking is nominative case. Nominative case marking is associated also with verbal agreement: the verb agrees with the argument marked with nominative case. In the next section I discuss the theoretical mechanism I assume in this thesis that accounts for this connection, Agree, where nominative case assignment is a reflex of Agree with the  $\phi$ -features of the argument (i.e. person, number and gender features). One important departure from this traditional assumption is Ura's (1996) proposal that what allows an argument to take on the grammatical function of “subject” is  $\phi$ -feature checking ( $\phi$ -Agree), not simply nominative case checking. This is possible in his system because  $\phi$ -feature checking and NOM case checking are separate operations. While I do not adopt this severing of between  $\phi$ -features

and NOM case, I do agree that it is important to stress that even if an argument bears nominative case, it is not necessarily a subject. Avoiding such an assumption is desirable because it does not force us to claim that the NOM marked Theme *eta kniga* ‘this book’ in the following psych verb construction is the subject, even though the verb agrees in person and number with the nominative Theme.

(28) Mne nraivitsja eta kniga. *Russian*  
me<sub>DAT</sub> please<sub>3.SG</sub> this book<sub>NOM</sub>  
‘I like this book’

I assume that nominative case is indeed the by-product of  $\phi$ -Agree with T, but that  $\phi$ -Agree is not necessarily accompanied by movement to Spec TP. This gives us the ability to assign NOM to lower arguments like *eta kniga* ‘this book’ above. I will return to the mechanism by which nominative case is assigned in Section 4.4.

We can now return to the question of how to define canonical subjecthood. We have seen that canonical subjects are arguments that are often topics, are associated with thematic roles that are higher on the scale of agentivity or animateness, are merged in higher base positions, from which they move to another position, and they are assigned nominative case. There is no one indicator of subjecthood because, either a property can apply to other arguments or canonical subjects can be shown to not always have said property. The task from here on is to tease apart the properties of non-nominative subjects to find out just how different from canonical subjects they are. At this point, they are differentiated from canonical subjects in that they do not move to Spec TP to be assigned nominative case.

### 3. Non-nominative subjects

Having discussed what it is to be a canonical subject, I will now introduce those subjects that are non-canonical in that they are assigned a case other than nominative. Specifically, I will restrict my investigation to only those constructions in which (i) there is a clear overt subject with the thematic role of an Agent, Experiencer, or Causer, and (ii) the subject is nominal. For instance, the set of constructions in which NNSs appear and the set of impersonal constructions overlap, so it is important to exclude impersonal constructions, like (29) and (30) which do not have an overt subject.

- (29) a. Adversity Impersonal (AI)<sup>11</sup> (Babby 1994) *Russian*  
Soldata ranilo pulej.  
soldier<sub>ACC</sub> wounded<sub>3.SG.NEUT</sub> bullet<sub>INST</sub>  
'A soldier was wounded by a bullet.' (Lavine & Freidin 2002: 258)
- b. Joną purto (nuo šalčio). *Lithuanian*  
Jonas<sub>ACC</sub> shakes<sub>3.SG</sub> from frost  
'Jonas is shaken (from the cold).' (Wiemer & Bjarnadóttir 2014: 306)
- (30) Zero-place predicate
- a. Temneet. *Russian*  
become.dark<sub>3.SG</sub>  
'It gets dark.' (Babby 1994: 25)
- b. Aušta. *Lithuanian*  
dawns<sub>3.SG</sub>  
'Day is breaking.' (Ambrasas et al. 1997: 627)

That these constructions do not actually have subjects is not a given. Setting aside arguments that the subjects in (29) and (30) are an unknown Natural Force or weather, one could argue that the accusative Themes *soldata* 'soldier' and *Joną* 'Jonas' are actually the subjects of the sentences in (29). I argue in Chapter 2, following Germain (2015), that FinP is a landing spot for these

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<sup>11</sup> According to Lavine (2010), Lithuanian does not have the construction known as the Adversity Impersonal, in which the accusative "subject" undergoes an adverse event without an agentive causer (see discussion in Section 3.3 of Chapter 3). I include (29b) here to show that Lithuanian still has a related construction with the only argument bearing accusative, apparently in violation of Burzio's Generalization (Burzio 1986).

elements (as well NNSs) but that it is not necessarily a dedicated subject position. The ACC argument in (29) is therefore not pre-verbal because it is a subject, but because it occupies Spec FinP.

There are also some non-nominative subjects that are actually phrases larger than NP/DP. I will exclude these constructions, an example of which is the nominative object construction in North Russian, since they can be treated as locative inversion. In (31) below, the Agent *lisica* ‘fox’ is the object of a prepositional phrase headed by the preposition *u* ‘at’.

- (31) Nominative object  
 U lisicy uneseno kuročka. *North Russian*  
 at fox<sub>GEN</sub> carried.off<sub>PART.3.SG.NEUT</sub> chicken<sub>NOM</sub>  
 ‘A fox has carried off a chicken.’ (Lavine 2000: 188)

Clausal subjects are a second example of subjects larger than DPs. I will also not discuss these here.

- (32) [To, čto on prišël pozdno] nikogo ne udivilo. *Russian*  
 that he arrived<sub>3.SG</sub> late nobody<sub>GEN</sub> NEG surprised<sub>3.SG.NEUT</sub> e<sub>ACC</sub>  
 ‘That he arrived late surprised no one.’

Once the scope of study is restricted to nominals that are Agents, Causers, or Experiencers, it becomes possible to group NNSs by their general properties. In the next sections, I will compare dative and genitive NNSs in the two languages under consideration here (Russian and Lithuanian) and discuss the accusative subjects found in Lithuanian.

### 3.1 Dative subjects

I follow the researchers cited below and split the group of dative subjects into three groups based on the type of predicate that selects them.

### 3.1.1 Experiencers of psychological verbs

In both languages, there are a number of psych verbs that select a dative Experiencer and a nominative Theme (a Class III verb following Belletti and Rizzi 1988). In Chapter 2, I will argue, following Woolford (2006) that the dative case on the Experiencer argument is inherent.

(33) Man patinka ši knyga. *Lithuanian*  
me<sub>DAT</sub> please<sub>3.SG</sub> this book<sub>NOM</sub>  
'I like this book'

(34) Mne nnavitsja eta kniga. *Russian*  
me<sub>DAT</sub> please<sub>3.SG</sub> this book<sub>NOM</sub>  
'I like this book'

These predicates are “personal” in that they agree in number, person, and gender with the nominative Theme.

### 3.1.2 Experiencers of non-verbal psychological predicates

Experiencers in Russian and Lithuanian can also be subjects of a number of non-verbal predicates. In (35) below, *žal’/gaila* ‘sorry’ is a nominal predicate that does not agree with either argument.

(35) a. Mne žal’ svoju mamu. *Russian*  
me<sub>DAT</sub> sorry self’s mom<sub>ACC</sub>  
'I feel sorry for my mom.'

b. Man gaila savo mamos. *Lithuanian*  
me<sub>DAT</sub> sorry self’s mom<sub>GEN</sub>  
'I feel sorry for my mom.'

In Chapter 2, Section 2.2.3 I discuss these non-verbal predicates at length and review the various forms they can take.

### 3.1.3 Experiencers of derived psych verbs

Other dative Experiencers are selected for by verbs that I have termed “derived psych verbs”.<sup>12</sup>

In Lithuanian and Russian, an activity or psych verb that normally selects a subject which is assigned nominative case, selects for a dative Experiencer when the reflexive *–si-* (Lithuanian) or *–sja* (Russian) is affixed to it. Szucsich (2006) examines these derived psych verbs in Russian, noting that unergative verbs are preferred and accusative internal arguments are disallowed.

(36) Mne ne spit-sja. *Russian*  
 me<sub>DAT</sub> NEG sleep<sub>3.SG-REFL</sub>  
 ‘I can’t/don’t sleep.’

(37) Man ne-si-dirba. *Lithuanian*  
 me<sub>DAT</sub> NEG-REFL-works<sub>3.SG</sub>  
 ‘I can’t work/don’t (feel like) working.’ (Ambrasas et al. 1997: 630)

Slobodchikoff (2008) offers a direct account of the role of *–sja* as a little *v* head in the following constructions with the verb ‘want’. For her, the dative Experiencer merged in the matrix clause and controls PRO in the embedded clause. I follow Slobodchikoff (2008) in assuming that the dative is inherent in this case. The example in (39) is the equivalent construction in Lithuanian.

(38) Mne khočitsja est’. *Russian*  
 me<sub>DAT</sub> want<sub>3SG-REFL</sub> eat<sub>INF</sub>  
 ‘I feel like eating’ (Slobodchikoff 2008: 109)

(39) Man norisi valgyti. *Lithuanian*  
 me<sub>DAT</sub> want<sub>3SG-REFL</sub> eat<sub>INF</sub>  
 ‘I feel like eating’

<sup>12</sup> Dziwirek (1994) calls the Polish equivalent of this construction “productive inversion”.

(i) a. Dobrze mi się dzisiaj spało. *Polish*  
 well I<sub>DAT</sub> refl today slept<sub>3SG.NEUT.PAST</sub>  
 ‘I slept well today.’  
 b. Dobrze *pro* dzisiaj spałam.  
 well today slept<sub>3SG.FEM.PAST</sub>  
 ‘I slept well today.’ (Dziwirek 1994: 57)

### 3.1.4 Subjects of infinitival clauses

In Russian, the case of a subject of an infinitival construction is dative. It has been argued that the construction in (40) and (41) differ with respect to the nature of dative: the dative in (40) is inherent and the one in (41) possibly structural (Franks 1995, Moore and Perlmutter 2000, Sigurdsson 2002, among others).<sup>13</sup> To a limited degree, the construction in (41) also exists in Polish (Greenberg and Franks 1991), but it does not exist in Lithuanian as a declarative clause.<sup>14</sup>

- (40) Mne legko govorit' po-russki *Russian*  
 me<sub>DAT</sub> easy speak<sub>INF</sub> by-Russian  
 'It's easy for me to speak Russian.' (Franks 1995: 250)
- (41) Mne ukhodit'. *Russian*  
 me<sub>DAT</sub> leave<sub>INF</sub>  
 'I have to leave.' (Franks 1995: 250)

The infinitival construction in (42) is argued by Fleisher (2006) and Jung (2008) to be bi-clausal. Fleisher (2006) argues that these are control clauses and that the Dative subject is assigned inherent case. Jung (2008) and Germain (2014) argue that these are raising constructions and that the source of the Dative could be structural, assigned by a non-finite C head.

- (42) Dative infinitive (Main Clause Infinitival for Fleisher 2006) *Russian*  
 a. Mne ne sdat' ekzamen.  
 me<sub>DAT</sub> NEG pass<sub>INF</sub> exam<sub>ACC</sub>  
 'It's not (in the cards) for me to pass the exam.' (Perlmutter & Moore 2002: 620)

<sup>13</sup> This term comes from the Relational Grammar characterization of such nominal as “inverted” (Moore and Perlmutter 2000).

<sup>14</sup> In Lithuanian, infinitival clauses with dative subjects are interpreted as commands (Ambrasas et al. 1997). The imperative in (i) is roughly semantically equivalent to the infinitival clause in (ii).

- (i) Visi tylėkit! *Lithuanian*  
 everybody<sub>NOM</sub> be.silent<sub>2PL.IMP</sub>  
 'Everybody, keep silence!' (Ambrasas et al. 1997: 666)
- (ii) Visiems tylėti! *Lithuanian*  
 everybody<sub>DAT</sub> be.silent<sub>INF</sub>  
 'Everybody, silence!' (Ambrasas et al. 1997: 666)

b. Mne bylo [ ne sdat' ekzamen. ]  
 me<sub>DAT</sub> was<sub>3.SG.NEUT</sub> NEG pass<sub>INF</sub> exam<sub>ACC</sub>  
 'It wasn't (in the cards) for me to pass the exam.' (Fleisher 2006: 4)

### 3.1.5 Subjects of participial clauses

Of Lithuanian's rich selection of participial verbs, non-agreeing active participles occur with dative NNSs when the subject of the adjunct participial clause is not the subject of the matrix clause. This is commonly referred to as the "dative absolute" construction, but I will refer to them as adjunct participial clauses in this thesis to show their connection to the construction in the next sub-section (Ambrazas et al. 1997). The subject of the adjunct clause in (43) is *vaikams* 'children', while the subject of the matrix clause is *lakštingala* 'nightingale'.

(43) [Vaikams sugrįžus], pragydo lakštingala. Lithuanian  
 child<sub>DAT.PL</sub> return<sub>ACT.PERF.-AGR</sub> started.singing<sub>3.SG</sub> nightingale<sub>NOM</sub>  
 'When the children came back, a nightingale burst into singing.'  
 (Ambrazas et al. 1997: 363)

Arkadiev (2012) argues that these clauses are tensed, but as we will see in Chapter 2, there is reason to believe that this clause has no tense, and only an aspectual interpretation.

### 3.2 Accusative subjects

Lithuanian is notable for having a subject which bears ACC in a non-ECM construction (Ambrazas et al. 1997). These subjects occur when the non-agreeing participial clause discussed in the previous section is embedded under a higher clause. In (44), the subject of the embedded clause is *teva* 'father'.

(44) Sakiau [teva gerai gyvenant]. Lithuanian  
 say<sub>1SG.PAST</sub> father<sub>ACC</sub> well live<sub>ACT.PROG.-AGR</sub>  
 'I said father lived well.'  
 (Ambrazas et al. 1997: 367)

In Chapter 3, I discuss this alternation between DAT and ACC on subjects of participial clauses and show that they are subjects of the same construction type. Briefly, one reason we know that these subjects are not assigned ACC through ECM because they can be embedded under transitive matrix clauses that assign ACC to a matrix object, as shown in (45) below.<sup>15</sup>

- (45) *Lithuanian*  
 Jurgis patikino policininką [ savo tėvą gimus kaime]  
 Jurgis<sub>NOM</sub> assure<sub>3.PST</sub> policeman<sub>ACC</sub> self's father<sub>ACC</sub> be.born<sub>ACT.PERF.-AGR</sub> village<sub>LOC</sub>  
 'Jurgis assured the policeman that his father had been born in the countryside.'  
(Arkadiev 2012: 34)

### 3.3 Genitive subjects

The case of other NNSs of active clauses in Russian and Lithuanian can be genitive.

Interestingly, the two languages differ in the kinds of constructions that take genitive NNSs. In this dissertation, I will not discuss the Genitive of Negation or of quantification, but include a brief discussion here to show the differences between Lithuanian and Russian. I refer the reader to Pesetsky (1982a), Bailyn (1997), Brown (1999), Harves (2002), Borschev and Partee (2002), Irwin (2012), for work on Russian Genitive of Negation, Timberlake (1982), Ambrazas (1997), Anderson (2013), Arkadiev (2016), for Lithuanian Genitive of Negation, and Kagan (2012) for both languages.

#### 3.3.1 Genitive of negation

Both languages display the genitive of negation constructions in negated transitive clauses, where the object is assigned genitive case instead of accusative case. In Russian, subjects of negated unaccusative verbs can be genitive as in (46), but subjects of negated unergative verbs cannot be, as in (47) (Pesetsky 1982a, Bailyn 1997, Harves 2002, Borschev and Partee 2002, Irwin 2012, Kagan 2012, a.o.).

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<sup>15</sup> I am unaware of any ditransitive verbs in Lithuanian that have two accusative objects.



overrides ACC on objects and NOM on unaccusative subjects (to a limited extent in Lithuanian), both of which are established structural cases.

### 3.3.2 Genitive of quantification

In Russian and Lithuanian, genitive can appear on nouns that are quantified in some respect (see Babby 1987 and Franks 1995 for Russian, and Ambrazas et al. 1997, Seržant 2014, and references therein for Lithuanian). While both languages have a partitive genitive for objects, as shown in (49), Lithuanian subjects of unaccusative predicates that reference quantity (e.g. *daugėti* ‘increase (in number)’, *apstėti* ‘grow (in number)’, *pakakti/užtekti* ‘suffice’) also have genitive case, shown in (50).

- (49) Partitive GEN
- a. Ja xoču saxara. *Russian*  
 I<sub>NOM</sub> want<sub>1.SG</sub> sugar<sub>GEN</sub>  
 ‘I want (some) sugar.’
- b. Noriu cukraus. *Lithuanian*  
 want<sub>1.SG</sub> sugar<sub>GEN</sub>  
 ‘I want (some) sugar.’
- (50) Mokykloje padaugėjo mokinių. *Lithuanian*  
 school<sub>LOC</sub> increase<sub>3.SG</sub> students<sub>GEN</sub>  
 ‘In school, the number of pupils has increased.’ (Wiemer & Bjarnadóttir 2014: 305)

Subjects of existential or presentational clauses can also have genitive case under an indefinite reading.

- (51) Šiandien pas mus yra / atėjo svečių. *Lithuanian*  
 today at us i<sub>3.SG</sub> / came<sub>3.SG</sub> guests<sub>GEN</sub>  
 ‘Today (some) guests stay at our place/with us.’ (Wiemer & Bjarnadóttir 2014: 321)

I will return to the topic of genitive case in Lithuanian in Chapter 3 during the discussion of the next subject, the Inferential Evidential.

### 3.3.3 Inferential Evidential

One construction that Lithuanian has but Russian does not is the Inferential Evidential, a term due to Lavine (2000, 2010). This construction is notable for its genitive subject and reportative, evidential flavor, as can be seen in (52) below. Lavine (2010) argues that it is an active construction (contra Timberlake 1982), wherein the *-ma/-ta* participial suffix is a  $v_{\text{VOICE}}$  head that assigns lexical genitive to the external argument.

- (52) Inga<sub>GEN</sub> nuraminta<sub>PASS.PERF.-AGR</sub> vaikas<sub>NOM</sub> *Lithuanian*  
‘Inga must have calmed down the child.’ (Lavine 2010: 116)

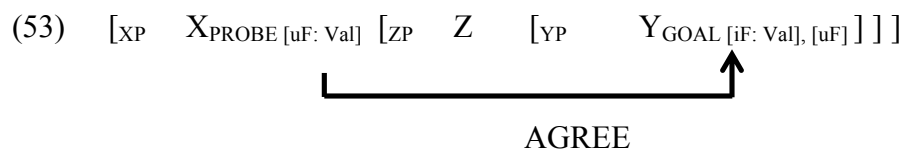
In this section, we have seen that both Russian and Lithuanian have a wide variety of non-nominative subjects. Both languages have Experiencer dative subjects of psychological verbs and non-verbal psych predicates. In Russian, the subject of an infinitival clause is also dative. In Lithuanian, the subject of an adjunct participial clause is dative, and when this clause is embedded, these dative subjects surface as accusative. Subjects in both languages can be assigned the genitive of negation, and subjects of a non-agreeing evidential construction are assigned genitive in Lithuanian. In the next section I present the theoretical background for the model I will propose to account for this wide variety of non-nominative subject cases.

## 4. Theoretical framework and assumptions

This section is devoted to a summary of the general theoretical model of syntax that frames this investigation. I follow the generative framework laid out in the Minimalist Program and subsequent iterations of it (Chomsky 1995, 2001, 2007, 2008).

#### 4.1 Syntactic dependencies in the Minimalist Program

Relations between elements in the syntax, such as those between the subject and the verb, are mediated in the current standard implementation of the Minimalist Program (Chomsky 2001) through a mechanism called Agree. If two elements, for example a Tense head and a DP, are in an Agree relation, they can be said to “share” features. In order for this relation to be possible, they must be in syntactic configuration such that one c-commands the other. As is standard in post-2000 Minimalist approaches, I assume that functional heads that bear uninterpretable features act as Probes, which agree with Goals bearing interpretable features (Chomsky, 2001). When the Probe agrees with a Goal, its uninterpretable (and unvalued) features ([uF]) are valued by the interpretable (and valued) features ([iF]) on the Goal, as diagrammed in (53). In order to be available for Agree, the Goal itself must also have an unvalued interpretable feature. I will refer to this in the dissertation as being “active” for Agree.



I assume that Agree only occurs in a downward fashion. The Probe c-commands the Goal and agrees with it, a Probe cannot search for features on a node that c-command it. I refer the reader to Zeijlstra (2004) or Bjorkman and Zeijlstra (2014) for an argument in favor of upward Agree or Agree in both directions, called ‘hybrid agreement’. As I am only concerned with the instance of Agree that results in case assignment and not, for example concord or tense and aspect coordination, I am agnostic toward theories of feature sharing such as the one adopted in Pesetsky and Torrego (2007). Under their account, the interpretability of a feature and its valuation are independent. This leads to four possibilities for the nature of a feature on a head: i)

interpretable and valued, ii) interpretable but unvalued, iii) uninterpretable but valued, and iv) uninterpretable and unvalued. Thus, an uninterpretable and unvalued feature may probe and agree with an interpretable and unvalued feature, and later in the derivation this goal may in turn agree with a valued feature and share that value with the original probe. I will return to this mechanism in Section 4.4 in discussing how I assume structural case is assigned.

#### *4.2 Uninterpretable features and the interface with semantics*

Agree, along with Merge the operation by which two elements are put together to form a set, are the operations that apply to a selection of lexical items (the Numeration or Lexical Subarray) from the Narrow Syntax. The product of these two operations is interpreted by two interfaces: the Sensorymotor (S-M) and the Conceptual-Intentional (C-I) (Chomsky 2005). In this standard view of Agree, an uninterpretable feature must be valued before the derivation is spelled out. The reasoning is that uninterpretable features, by definition, cannot be interpreted by the C-I interface. I depart from this assumption and assume that in fact an uninterpretable feature can remain unvalued without a crash in the derivation. Preminger (2011) also argues against what he calls the “derivational time-bomb” approach to Agree, contending that the operation itself is obligatory, but that it does not necessarily need to end with uninterpretable features being

successfully checked or valued.<sup>17,18</sup> This is relevant for this thesis because we wish to account for why predicates in constructions like the following do not have verbal or adjectival agreement morphology, despite the fact that the clause is finite.

- (54) Man gaila, kad nebuvo sėkminga. *Lithuanian*  
 me<sub>DAT</sub> sorry that not.was-<sub>AGR</sub> successful  
 ‘I’m sorry that (it) wasn’t successful.’

Another option would be to assume that a null expletive is what agrees with the verb, triggering the appearance of third person neuter agreement morphology. I refer the reader to Germain (2015) for arguments against adopting null expletives into the theoretical framework, as I do not discuss this option in this dissertation. Briefly, I argue that since null expletives are both semantically and phonologically void of content it is at the very least unappealing to propose that they are elements present in natural languages. Rather, they are a theoretical tool to satisfy a theoretical mechanism, the EPP, in the case where no subject is available to satisfy the EPP and the language in question does not happen to have overt expletives. This has been pointed out in the literature and T has often been assumed to be defective in some way to allow for non-nominative elements, instead of null expletives to satisfy the EPP (see for example Lavine and

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<sup>17</sup> Preminger (2011) appeals to the notion of failed Agreement to explain verbal agreement morphology in Kichean Mayan. If the  $\phi$ -probe is sensitive only to [person], as shown by agreement with the second person subject in (i.a) and the second person object in (i.b) then the null agreement morphology in (ii) must be a default value because neither argument has a [person] feature.

- (i) a. ja rat x-at/\* $\emptyset$ -axa-n ri achin *Kichean (Mayan)*  
 foc you(sg.) prfv-2sg/\*3sg.abs-hear-of the man  
 ‘It was you(sg.) that heard the man.’  
 b. ja ri achin x-at/\* $\emptyset$ -axa-n rat  
 foc the man prfv-2sg/\*3sg.abs-hear-of you(sg.)  
 ‘It was the man that heard you(sg.)’ (Preminger 2011: 82)
- (ii) ja ri t z’i’ x- $\emptyset$ -etzela-n ri sian *Kichean (Mayan)*  
 foc the dog prfv-3sg.abs-hate-of the cat  
 ‘It was the dog that hated the cat.’ (Preminger 2011: 83)

<sup>18</sup> See also Bošković’s (2009) account of first and last conjunct agreement in Serbo-Croatian that relies on the proposal that uninterpretable features do not have to undergo feature checking with interpretable ones.

Freidin 2002). In Chapter 2, I discuss a new way to model how T might be “defective”, thereby maintaining the EPP and avoiding recourse to null expletives in the theory, called Split Feature Inheritance (see also Germain 2015).

#### 4.3 Phase theory

This Agree operation is further constrained by the current conception of Spell-out as occurring in chunks referred to as phases (Chomsky 2000, 2001, 2007, 2008). The Phase Impenetrability Condition (PIC), presented in (55) below, captures the idea that the portion of the phase transferred to the interfaces is unavailable for further operations.

- (55) Phase Impenetrability Condition<sub>1</sub>  
In phase  $\alpha$  with head H, the domain of H is not accessible to operations outside  $\alpha$ ; only H and its edge are accessible to such operations. (Chomsky 2000: 108)

In Chomsky (2001), the PIC given above is reformulated to encompass the idea that the complement of a phase head is transferred only at the point when the next phase head has been merged. For example, the complement of the  $v$  phase head, VP, is sent to both interfaces at the point at which the C head has merged with TP. Richards 2010 (following Müller (2004)) refers to this as PIC2:

- (56) Phase Impenetrability Condition 2  
[Given structure [<sub>ZP</sub> Z...[<sub>HP</sub>  $\alpha$  [H YP]]], with H and Z the heads of phases]: The domain of H is not accessible to operations at ZP; only H and its edge  $\alpha$  are accessible to such operations. (Chomsky 2001: 13)

The Agree relation that will be most discussed in this dissertation is mainly is the operation that values [ $u\phi$ ] features on a Probe. It is this Agree relation that is assumed to be the “trigger” for structural Case assignment on a DP, the classic instance being valuation of [ $u\phi$ ] on T by a DP, which in turn receives nominative case. The presence of [ $u\phi$ ] on a functional head

means that that head will act as a Probe, just as the presence of EPP on either head triggers movement to that head’s specifier position. For the purposes of this thesis, I am not concerned with the individual nominal features (e.g. person, number, gender) that make up  $\varphi$ -features, and will refer to all of them as collectively  $\varphi$ -features.<sup>19</sup>

#### 4.4 Case assignment

I now turn to the distinction between structural and inherent case. Structural case is Case that a DP is assigned via agreement with a functional head (Probe). In Section 2.6 above, I stated that I assume that NOM case assignment is a result of  $\varphi$ -Agree between T and the subject DP. One major alternative to this view on nominative case assignment is Pesetsky and Torrego’s (2001) proposal that  $\varphi$ -Agree is not involved in case assignment. Instead, the subject DP has a [uT] feature that agrees with [iT] on T and is valued once [iT] is valued by the tense value on the lower  $\nu$  (Pesetsky and Torrego 2007). Here I would like to point out an issue with proposing that DPs have a [uT] feature. If case assignment is simply [uT] on a DP entering into an Agree relation with [iT] on T, then we have no way of explaining how nominative case can end up on the Theme of the psychological verb in (28), repeated here as (57).

(57) Mne nnavitsja eta kniga. *Russian*  
 me<sub>DAT</sub> please<sub>3.SG</sub> this book<sub>NOM</sub>  
 ‘I like this book

Assuming that the Experiencer argument also has a [uT] feature and that this Experiencer is structurally higher than the Theme, one would expect for the [iT] probe to encounter it first. If NOM assignment comes out of this instance of Agree, how is it that the lower Theme bears

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<sup>19</sup> Several analyses of non-canonical subject-verb agreement do rely on reference to only person or number. In some languages, agreement seems dependent only on a subset of  $\varphi$ -features. See Richards (2008) for such an analysis of “quirky” case in Icelandic and Rezac (2008) for the Person Case Constraint (PCC) in Basque. I discuss this phenomenon briefly in Section 4 of Chapter 2.

NOM? Of course, the dative DP could be missing a [uT] feature or have a [uv] or other feature, allowing the unvalued [iT] on T to ignore it. This would mean that, instead of each DP having a generic [uCase] feature that, once valued, makes it inactive for further Agree operations, each DP would come in to the Numeration already specified for which instance of Agree will assign it case (i.e. a DP with [uT] will only get NOM and a DP with [uv] will only get ACC).<sup>20</sup> This is functionally equivalent to the older conception of case checking where a DP entered the structure with a case that needed to be checked against a functional head (Chomsky 1995). For the sake of simplicity, I will assume that structural case is [uCase] on a DP valued via  $\phi$ -Agree with a higher probe.

Turning to the source of inherent case, I adopt Woolford's (2006) distinction between two non-structural cases: lexical and inherent case. Lexical case is assigned by lexical heads like V or P and inherent case is assigned by light  $v$  heads. In terms of theta-roles, only Themes and internal arguments bear lexical case. Assuming the proposal advocated in McGinnis (1996) that Goal DPs are introduced by a second  $v$  head, Woolford (2006) argues that inherent case therefore can only be assigned to external arguments (i.e. inherent ergative in ergative languages) or DP goals (i.e. inherent Dative case). The following examples show this distinction for Russian.

(58) Lexical Dative case  
 On pomog **mne**.  
 he<sub>NOM</sub> helped<sub>3.SG</sub> me<sub>DAT</sub>  
 'He helped me.'

*Russian*

(59) Inherent Dative case  
 On dal **mne** jabloko.  
 he<sub>NOM</sub> gave<sub>3.SG</sub> me<sub>DAT</sub> apple<sub>ACC</sub>  
 'He gave me an apple.'

*Russian*

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<sup>20</sup> That [uCase] being valued makes a DP inactive (as it is the DP's only uninterpretable feature) explains why the non-nominative DP in (57) does not agree with the verb. If the DP happens to have [iwh] features, however, it still needs to remain active for Agree with an interrogative C head. Under the mechanism I adopt here, there is not a clear way to restrict "inactivity" to only  $\phi$ -Agree.

In this thesis, I do not argue for any particular mechanism by which inherent Dative case is assigned to Goals or Experiencers. I assume in Chapter 2, following Cuervo (2003), that Experiencers are merged in at Spec ApplP and that this Applicative head is equivalent to a light *v* head that assigns inherent case to its specifier. I will argue in Chapter 3 that the Dative case found on the dative subject of non-finite clauses is a structural case resulting from Agree between a Fin head inside the CP layer and the Dative subject. Previous accounts relying on structural dative case have pointed to the alternation between accusative and dative in active-passive pairs of dative infinitive constructions and dative case on secondary predicates in embedded infinitival clauses (Kondrashova 1994, Landau 2008, Livitz 2012, Livitz 2014). As I discuss only Experiencers in Chapter 2, I will refer to the dative case that they have as ‘inherent dative’.

#### 4.5 A note on the term “impersonal”

Many of the non-nominative subjects under investigation here are subjects of constructions that could be said to be impersonal. I would like to clarify that the term “impersonal” in ‘impersonal clause’ or ‘impersonal construction’ refers to the agreement morphology on the verb. As Harves (2006) defines it, ‘impersonal’ morphology is simply non-agreeing. This does not exclude the existence of an ‘understood’ subject in impersonal constructions or an overt non-nominative one. The dative infinitive structure in (57) below, agreement marker on the copula *byt’* ‘be’ is the impersonal *-o*, which also functions as the third person singular neuter<sup>21</sup> ending in personal sentences like (58).<sup>22</sup> Here *-o* indicates agreement with the neuter subject *pis’mo* ‘letter’.

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<sup>21</sup> As all third person singular genders are indicated by the same morpheme in the present tense (*-it* or *-aet*), where possible, the data in this paper will be given in the past tense for clarity’s sake.

<sup>22</sup> Past tense in Russian is marked with the former participial morpheme *-l-*, giving *-l* for masculine singular past, *-lo* for neuter singular past, *-la* for feminine singular past, and *-li* for plural past of all genders.

- (60) Mne byl-**o** ne sdat' ekzamen. *Russian*  
Impersonal  
 m<sub>E</sub><sub>DAT</sub> was-<sub>AGR</sub> NEG pass<sub>INF</sub> exam<sub>ACC</sub>  
 'It wasn't (in the cards) for me to pass the exam.'
- (61) Pis'mo prishl-**o** *Russian*  
Personal  
 letter<sub>3.S.NEUT</sub> arrived<sub>+AGR</sub>  
 'The letter arrived.'

## 5. Conclusion

In this chapter I have shown that subjects are a special class of arguments in that they have a rather large cluster of properties, like the ability to undergo raising or be omitted in coordinate constructions, that other arguments do not. I also unpacked the notion of subjecthood, evaluating it against five properties: i) position in the clause, ii) information structure status, iii) thematic properties, iv) movement to a dedicated position, and v) nominative case assignment. We concluded that the best description of a canonical subject is one that involves all of these properties. Canonical subjects are the highest thematic argument which also has nominative case. We then introduced the non-nominative subjects of interest by case, dative, accusative, and genitive.

### 5.1 Research questions

In subsequent chapters I will address the following research questions:

- (62) a. How do non-nominative subjects come to bear a case other than nominative (NOM)?  
 b. What effect does having a case other than NOM have on a subject with respect to their ability to bind anaphors?

We will see that NNSs that are assigned structural case are assigned case in the same way, through Agree with some functional head. The case that is assigned to the NNS depends on the

location of the head in the clause. These structural NNSs will be contrasted with inherent NNSs. We will wait until Chapters 4 to address the second question through experimental evidence.

## *5.2 Structure of the dissertation*

The remainder of the dissertation is structured as follows. In Chapter 2, I account for non-nominative case and the pre-verbal status of inherent NNSs. Here I also introduce the theoretical mechanism I developed in Germain (2015), Split Feature Inheritance, to explain how the basic, neutral word order is derived and the EPP is satisfied. In Chapter 3, I turn to the structural NNSs and develop a proposal for how it is the case that a subject could bear a structural case beyond NOM. Thus, I propose a division in NNSs between based on the source of case, and establish three groups of subjects for comparison in experimental settings: nominative, structural NNSs, and inherent NNSs. In Chapter 4, I present results from the acceptability judgment study looking at how NNSs in Russian and Lithuanian behave with respect to the binding of anaphors. Using Nikolaeva's (2014) account for the (anti) subject-orientation of anaphors in Russian, I provide an analysis for the differences between nominative subjects and NNSs in Russian and Lithuanian. I conclude the dissertation in Chapter 5.

## Chapter 2: Inherent non-nominative subjects

### 1. Introduction

#### 1.1 Goals of the chapter

In this chapter and the next, I show that while wide array of non-nominative subjects (NNS) in Russian and Lithuanian look like come in many guises, they can actually be divided into two categories - structural NNSs and inherent NNSs - and be given two analyses. This is not a new observation (see, for example, Moore and Perlmutter 2000 for Russian dative subjects), but this thesis adds more breadth and depth to the discussion by articulating the mechanism behind case assignment and proposing an analysis for the argument structure of each type of NNS construction. This chapter focuses on the analysis of the inherent NNSs. First, I review arguments that show that Russian and Lithuanian dative Experiencers have inherent structural case. Then, I explore two types of dative Experiencers, subjects of psychological verbs (e.g. Russian *nravit'sja*/ Lithuanian *patikti* 'to like') and subjects of non-verbal psychological predicates (e.g. Russian *žal'*/ Lithuanian *gaila* 'sorry'), and show that these constructions have different argument structures.<sup>1</sup>

I also introduce a modification of Feature Inheritance (Chomsky 2008, Richards 2008b), called Split Feature Inheritance, that allows for T to inherit  $\phi$ -features but not the EPP feature. What this gives us is an account for how these subjects, which do not agree with the verb and do not move to Spec TP, appear pre-verbally in discourse neutral contexts.

Finally, I conclude the chapter with an introduction to the current facts surrounding inherent non-nominative subjects and the traditional subjecthood diagnostic of anaphor binding.

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<sup>1</sup> In this chapter, when I discuss specific lexical items that are cognates in the two languages, I will write both words separated by a slash. The first will always be in Russian, and the second will be the Lithuanian equivalent. For example, with *žal'/gaila* 'sorry', *žal'* is Russian and *gaila* is Lithuanian.

This establishes the background and predictions for Chapter 4, in which I tackle the following research question:

- (1) Do structural NNSs behave more like nominative subjects or inherent NNSs with respect to the binding of anaphors?

In the next section I introduce a modified version of Feature Inheritance, Split Feature Inheritance, in which  $[\text{u}\phi]$  can be inherited separately from EPP (Germain 2015). As we will see in Section 3, this modification will be necessary to account for the preverbal position of inherent NNSs.

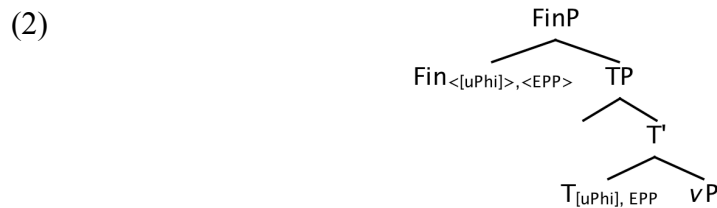
### *1.2 Split Feature Inheritance*

I propose that in languages like Russian and Lithuanian, uninterpretable  $\phi$ -features ( $[\text{u}\phi]$ ) can be inherited separately from EPP, while EPP remains on the higher phase head, allowing for a DP other than the one involved in Agree with  $[\text{u}\phi]$  to move to the specifier of this head. That a head can bear an EPP feature without associated  $[\text{u}\phi]$  or case has been proposed elsewhere (e.g. McGinnis 2001); in such proposals the presence of the EPP feature is what differentiates high versus low Applicative heads. Coupled with the notion that Feature Inheritance is optional, we are given four possible options for the distribution of  $[\text{u}\phi]$  and EPP, which I discuss in the following subsections (see Ouali 2006, Legate 2011, and Aldridge in press for the application of optional Feature Inheritance to a variety of languages).<sup>2</sup> I also argue that one of the options is ruled out for independent reasons.

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<sup>2</sup> Optionality in Feature Inheritance is explicitly developed in Ouali's (2006) Feature Inheritance system. C does not always pass along its  $[\text{u}\phi]$  feature and EPP to T, and in fact, may Donate (i.e. in the case of simple declaratives), Keep, or Share its uninterpretable features. In Legate's (2011) Under-Inheritance system, which corresponds to Ouali's Keep, the lack of Feature Inheritance by T generates the subject-initial V2 clauses found in Germanic. Because neither the A'- nor A- features of C are inherited by T, the subject DP values the features of the Probe C and moves to Spec CP. In the following German sentences, 'last week' is adjoined to TP and the subject and verb appear before it in the V2 construction in (ib).

The first option is that normal C to T inheritance occurs. In the diagram in (2), we see the standard implementation of Feature Inheritance where all features are inherited by the lower head. I assume that the head in the left periphery from which T receives its  $[\text{u}\phi]$  features from is the lowest C head of Rizzi's (1997) expanded left periphery, the Finiteness (Fin) head.<sup>3</sup>



Here, the highest DP available for Agree agrees with  $[\text{u}\phi]$  on T, is assigned NOM, and moves to Spec TP to satisfy EPP. This is what happens in with canonical nominative subjects.

In the second option, shown in (3), no Feature Inheritance has occurred and both  $[\text{u}\phi]$  and EPP remain on the Fin head.



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- (i) a. Ich weiß, daß letzte Woche Peter tatsächlich ein Buch gelesen hat. *German*  
 I know that last week Peter actually a book read has  
 b. \*Letzte Woche Peter hat tatsächlich ein Buch gelesen.  
 last week Peter has actually a book read  
 c. Peter hat letzte Woche tatsächlich ein Buch gelesen.  
 Peter hat last week actually a book read (Legate 2011: (2a,d,e))

Legate (2011) also accounts for the fact that the subject here also exhibits A-movement properties. If T never inherits features from C, the subject moves directly to Spec CP.

<sup>3</sup> I follow Dyakonova's (2009) adaptation for Russian of Rizzi's (1997) expanded left periphery.

- (i)  $[\text{ForceP Force} [\text{FrameP Frame} [\text{InterP Inter} [\text{TopP Top} [\text{topP top} [\text{FocP Foc} [\text{topP top} [\text{FinP Fin}]]]]]]]]]]]$   
(Dyakonova 2009: 145)

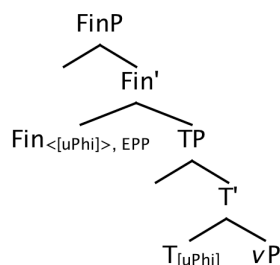
The relevant heads in this discussion are given in (ii).

- (ii) Russian Left Periphery  
 $[\text{ForceP Force} [\text{TopP Top} [\text{FocP Foc} [\text{FinP Fin}]]]]]$

Again, the highest DP available for Agree undergoes all three operations. It agrees with Fin, valuing  $[u\phi]$ , is assigned DAT, and moves to Spec FinP to satisfy EPP. I argue that this is how structural NNSs receive DAT case.

The tree in (4) gives us the result of the application of Split Feature Inheritance, the third option. The set of  $[u\phi]$  is inherited by T, but EPP remains on Fin.

(4)

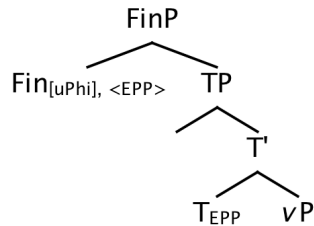


I assume that EPP and  $[u\phi]$  cannot probe separately when they are on one head because EPP is a second order feature, as I will discuss below (see Adger and Svenonius 2011). So, this splitting of the EPP and  $[u\phi]$  means that one DP can satisfy the EPP and a different DP can provide the interpretable  $\phi$ -features to value  $[u\phi]$ . First, the highest DP, whether or not it is available for Agree or not, moves to Spec FinP to satisfy the EPP. Second,  $[u\phi]$  on T probes for the highest DP that is active for Agree in order to value it. By active, I assume, following the Activity Condition, that the DP must not yet have its case valued. If a DP has case, assigned inherently or lexically, it will not be able to bear the structural case feature that is the evidence of its being in an Agree relation.<sup>4</sup> Therefore, it is the highest DP available that undergoes Agree with  $[u\phi]$  on T and is assigned NOM. I argue that this is what occurs with psychological predicates with preverbal DPs that bear inherent DAT case.

<sup>4</sup> This notion of “availability” brings up the question of *why* it might matter that a DP “show” that it is in an Agree relation with some head. Perhaps structural case is not only about licensing a DP but also about indicating that uninterpretable features on the Probe have been taken care of via valuation. If there’s no way to show that  $[u\phi]$  are valued, then there is no reason for Agree to take place at all, and  $[u\phi]$  is simply left unvalued. This cannot be a universal generalization, though, as languages like Icelandic display intervention effects where an inherently dative marked DP can provide features for the  $\phi$ -probe. See Section 4.2 for more discussion.

Finally, we are left with the fourth logical possibility. Here, it is the EPP that is inherited by T, and the [uφ] feature complex that is left behind on Fin.

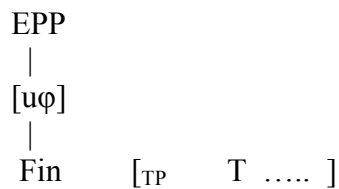
(5)



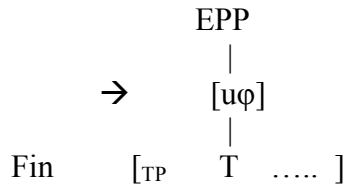
If this were possible, we would predict that elements that do not bear NOM could move to Spec TP. I discuss arguments against NNSs moving to Spec TP in Section 3.2, but I also refer the reader to Citko, Germain, and Witkoś (to appear) for arguments against the movement of XPs that do not agree with T to Spec TP.

Adger and Svenonius (2011: 25) refer to the EPP as a “second order feature” which in most cases attracts “specific features”. I argue that we can rule out Option 4 by being explicit about what we mean by “second order”. I draw on insights from phonology, in particular from Goldsmith’s (1976) theory of Autosegmental Phonology, in which tones are a second order of phonological feature that “float” above articulatory features like [+sonorant]. Adapting this theory to syntactic features, we can think of EPP as if it were a tone and the [uF] it is associated with as its tone-bearing unit. We could then model classic Feature Inheritance from C (Fin) to T as in (6) below.

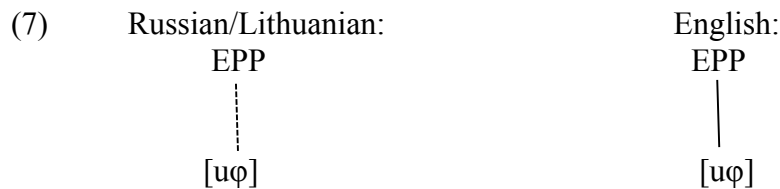
(6) Step 1: Fin merges with TP



Step 2: Feature Inheritance applies

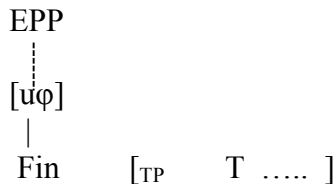


Next, I propose that in Russian and Lithuanian, the link between EPP and  $[\text{u}\phi]$  is “loose” and the EPP “floats” above it. By contrast, in English, the EPP is always anchored to  $[\text{u}\phi]$ .<sup>5</sup>

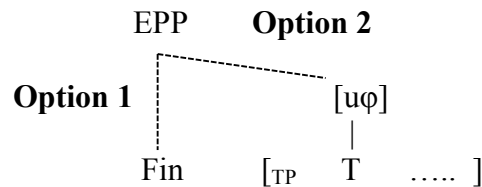


If this is the case, then Step 2 of (6) above, where T inherits  $[\text{u}\phi]$ , could result in two different outcomes: i) the EPP falls on the Fin head, or ii) falls on the next possible “tone bearing unit”, T, which now also bears  $[\text{u}\phi]$ .

(8) Step 1: Fin Merges with TP

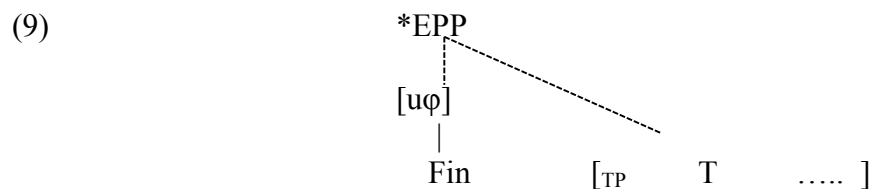


Step 2: Feature Inheritance applies



<sup>5</sup> I speculate that this could be a reason why English has (overt) expletives and Russian and Lithuanian do not. Perhaps if  $\phi$ -Agree is always linked to EPP, then the only solution for filling the specifier position when there are no available DPs for Agree is an expletive. Sentential subjects, which arguably do not have  $\phi$ -features, and *there*-expletives, which agree with DPs in VP, are obvious counter-arguments to this speculation, and I leave the question for future research.

Finally, like tonal spreading, the movement of EPP to a different head must be triggered by some other process, namely Feature Inheritance of  $[u\phi]$ . Since the EPP has to have a unit to bear it, it will not “drift” on its own.



Here we have seen the theoretical mechanism that I will invoke to explain how it is possible for a non-nominative subject to move from its  $vP$  internal position to a position that is not related to topicalization or focusing. Instead of movement to the dedicated, canonical subject position Spec TP, as others have suggested (esp. Lavine and Freiden 2002 and Bailyn 2004), NNSs move to Spec FinP to satisfy the EPP there. If Split Feature Inheritance has occurred, the  $[u\phi]$  on a lower head is free to agree with any lower DPs that are active for Agree. I return to this mechanism in Section 4, and discuss the implications that arise from assuming both Feature Inheritance and a split CP field. Briefly, I assume that Feature Inheritance is not a mechanism that applies only in the case of T inheriting  $\phi$ -features but rather something that occurs with uninterpretable features on every phase head. So, it is possible for Feature Inheritance to happen among multiple C heads simultaneously. In Section 4, I will propose that this happens in a cascade with higher heads triggering inheritance by lower heads. I will also briefly discuss the interaction between this theory and accounts of Person Case Constraint effects found in other languages in Section 4. In the next subsection, I introduce the two subgroups of NNSs: structural and inherent NNSs.

### 1.3 Two classes of non-nominative subjects

#### 1.3.1 Dative Experiencers

I group these dative subjects together initially because, not only are the subjects all Experiencers, their predicates are finite and tensed and do not agree with the subject (Franks 1995, Moore and Perlmutter 2000, a.o.). As (10b,d) shows, nominative subjects are disallowed with the agreeing form of these predicates. In Section 3.3.1, I will discuss how nominative case is assigned to the Theme in these examples. In (11b,d) we can see that the psych predicate itself does not show agreement morphology, but the copula, which does, does not agree with the nominative subject.

(10) Psych verbs

a. **Mne** nraivitsja èto kofe.  
me<sub>DAT</sub> please<sub>3.SG</sub> this coffee<sub>NOM</sub>  
'I like this coffee'

*Russian*

b. \***Ja** nraiv'us' èto kofe.  
I<sub>NOM</sub> please<sub>1.SG</sub> this coffee<sub>ACC</sub>  
'I like this coffee.'

c. **Man** patinka ši kava.  
me<sub>DAT</sub> please<sub>3.SG</sub> this coffee<sub>NOM</sub>  
'I like this coffee.'

*Lithuanian*

d. \***Aš** patinku ši kavą  
I<sub>NOM</sub> please<sub>1.SG</sub> this coffee<sub>ACC</sub>  
'I like this coffee.'

(11) Non-verbal psych predicates

a. **Mne** bylo žal', čto ne polučilos'.  
me<sub>DAT</sub> was<sub>SG.NEUT</sub> sorry that<sub>NEG</sub> was.successful  
'I was sorry that (it) wasn't successful.'

*Russian*

b. \***Ja** byla žal', čto ne polučilos'.  
I<sub>NOM</sub> was<sub>SG.FEM</sub> sorry that<sub>NEG</sub> was.successful  
'I was sorry that (it) wasn't successful.'

c. **Man** buvo gaila, kad nepasisekė.  
me<sub>DAT</sub> was<sub>3.SG</sub> sorry that not.was.successful  
'I'm sorry that (it) wasn't successful.'

*Lithuanian*

- d. \***Aš** buvau gaila, kad nepasisekė.  
 I<sub>NOM</sub> was<sub>1.SG</sub> sorry that not.was.successful  
 ‘I’m sorry that (it) wasn’t successful.’

Note also that these constructions all convey a realis meaning, unlike the following set. In Section 2 below, I will follow others in assuming that the dative case assigned to this first group of non-nominative subjects is assigned inherently, and give evidence to show this.

### 1.3.2 Other non-nominative subjects

For this second group of subjects that do not bear nominative case, the predicate is non-finite (either participial or infinitival) and we can see that when the predicate *is* finite, the case of the subject is nominative (see Moore and Perlmutter (M&P) 2000 for Russian, Arkadiev 2012 and Lavine 2010 for Lithuanian). This is shown in (b) and (d) of (12) through (16).

- (12) a. *čtoby* purpose clause (DAT) *Russian*  
 Mama sobirala naši veši, čtoby **nam** uexat’ na vokzal.  
 Mom gathered our things, that we<sub>DAT</sub> go-out<sub>INF</sub> to train station  
 ‘Mom gathered up our things, in order for us to go out to the train station.’  
 (P&M 2002: 621; AG)
- b. Mama sobirala naši veši, čtoby **my** uexali na vokzal.  
 Mom gathered our things that we<sub>NOM</sub> went-out<sub>3.PL</sub> to train station  
 ‘Mom gathered up our things, so that we went out to the train station.’
- (13) Dative infinitive (DAT) *Russian*  
 a. **Mne** ne sdat’ ekzamen.  
 me<sub>DAT</sub> NEG pass<sub>INF</sub> exam<sub>ACC</sub>  
 ‘It’s not (in the cards) for me to pass the exam.’ (P&M 2002: 620)
- b. **Ja** ne sdala ekzamen.  
 I<sub>NOM</sub> NEG passed<sub>3.SG.FEM</sub> exam<sub>ACC</sub>  
 ‘I didn’t pass the exam.’
- (14) Adjunct non-agreeing participial clause (DAT) *Lithuanian*  
 a. [**Vaikams** sugrįžus], pragydo lakštingala.  
 child<sub>DAT.PL</sub> return<sub>PST.PA</sub> started.singing<sub>3.SG</sub> nightingale<sub>NOM.SG</sub>  
 ‘When the children came back, a nightingale burst into singing.’  
 (Ambrazas et al. 1997: 363)

- b. Kai **vaikai** sugrįžo, pragydo lakštingala.  
 when child<sub>NOM.PL</sub> returned<sub>3.Sg</sub> started.singing<sub>3.SG</sub> nightingale<sub>NOM.SG</sub>  
 ‘When the children came back, a nightingale burst into singing.’
- (15) Embedded non-agreeing participial clauses (ACC) *Lithuanian*
- a. Sakiau [tėvą gerai gyvenant]. *Lithuanian*  
 say<sub>1SG.PAST</sub> father<sub>ACC</sub> well live<sub>ACT.PROG.-AGR</sub>  
 ‘I said father lived well.’ (Ambrasas et al. 1997: 367)
- b. Sakiau kad, tėvas gerai gyveno. *Lithuanian*  
 say<sub>1SG.PAST</sub> that father<sub>NOM</sub> well lived<sub>3.SG</sub>  
 ‘I said that father lived well.’
- (16) Inferential Evidential (GEN) *Lithuanian*
- a. **Ingos** nuraminta vaikas.  
 Inga<sub>GEN</sub> calm.down<sub>-AGR</sub> child<sub>NOM</sub>  
 ‘Inga must have calmed down the child.’ (Lavine 2010: 116)
- b. **Inga** nuramino vaiką.  
 Inga<sub>NOM</sub> calmed.down<sub>3.sg</sub> child<sub>ACC</sub>  
 ‘Inga calmed down the child.’

We can draw some more generalizations about the constructions that involve these NNSs. The predicate can be transitive or intransitive, and some kind of modal or irrealis meaning is conveyed. In the case of the participial phrases, the mood is realis but is dependent on the matrix clause for tense (see discussion in Section 2.2.2 of Chapter 3). With respect to the subjects themselves, it is notable that DAT, ACC, and GEN are all available in Lithuanian, while Russian is restricted to only Dative subjects. In Chapter 3, we will see that the thematic roles assigned to these subjects are also diverse, ranging from Experiencers to Agents (and possibly even Themes), and I will argue that these NNSs all bear a structural case, assigned via Agree with [uφ] on a head other than T.

Before concluding this first section, I would like to address another set of non-nominative subjects that seem to have characteristics that intersect with both groups given above. Dziwirek

(1994) labels the equivalent construction in Polish “productive inversion” and Marušić and Žaucer (2006) calls the Slovenian counterpart a “*feel-like* construction”. In (17a,c) the dative subject is the Experiencer of a non-agreeing, finite reflexive verb, while in (17b,d) the subject is nominative and the verb agrees with it when it is no longer reflexive.

(17) Productive psych verbs (DAT)

a. **Mne** ne spit-sja. *Russian*

me<sub>DAT</sub> NEG sleep<sub>3.SG-REFL</sub>

‘I can’t/don’t sleep.’

b. **Ja** ne spliu.

I<sub>NOM</sub> NEG sleep<sub>1.SG-REFL</sub>

‘I don’t sleep.’

c. **Man** ne-si-dirba. *Lithuanian*

me<sub>DAT</sub> NEG-REFL-works<sub>3.SG</sub>

‘I can’t work/don’t (feel like) working.’

(Ambrazas et al. 1997: 630)

d. **Aš** ne-dirbu.

I<sub>NOM</sub> NEG-work<sub>1.SG</sub>

‘I don’t work.’

While the addition of the reflexive marker coincides with the alternation between DAT and NOM for the subject, I submit that these subjects do not belong in the second group above in (12) through (16), which I will show are structural NNSs. First of all, unlike these subjects, the subjects in (17) do not maintain the same or very similar thematic role when their case changes. The datives in (17) have a strongly non-agentive, experiential role (see Savchenko 2011 for experimental evidence for this). Second, we know already that the addition of the reflexive marker in Balto-Slavic and other language families is associated with valence change. This is exemplified by the suppression of the object in the anti-passive in (18).<sup>6</sup>

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<sup>6</sup> This is different from the anti-passive construction found in ergative languages like Dyirbal, in which the object is present but demoted and has an oblique case.

(i) yabu<sub>i</sub> [e<sub>i</sub> bural-nga-ngu nguma-gu] banaga-nyu  
 mother<sub>ABS</sub> see<sub>AP-REL</sub> father<sub>DAT</sub> return<sub>NONFUT</sub>  
 ‘Mother, who saw father, was returning.’

*Dyirbal*

(Aldridge 2008b: 968, citing Dixon 1994)

- (18) Šuo kandžioja-si *Lithuanian*  
 dog<sub>NOM</sub> bite<sub>3sg-REFL</sub>  
 ‘Dogs bite’ (Geniušienė 1987: 84)

Given this, it could be the case that the dative subject in (17a,c) is an additional, applied argument and that the nominative in (17b,d) is actually alternating with a PRO in (17a,c) in a biclausal structure. I refer the reader to analyses in Marušić and Žaucer (2006) and Slobodchikoff (2008) for such accounts. Finally, Szucsich (2006) shows that, for Russian at least, these constructions usually only occur with intransitive verbs, unlike the constructions in (12) through (16) which can occur with both transitive and intransitives. For these reasons, I will follow the studies cited in this discussion and assume that the DAT here is assigned inherently, but will not discuss the construction further, focusing instead on the NNSs in (12) and (13).

In the next section I provide an analysis for how case is assigned to the first set of NNSs in (10) and (11). For reasons outlined below, I follow Cuervo’s (2003) analysis for Spanish dative Experiencers and assume that these NNSs are merged in the Specifier position of a high Applicative head. I will then contrast the argument structure of two dative Experiencers: the subjects of psych(ological) verbs and the subjects of non-verbal psych predicates. In the third section, I will discuss the mechanism for accounting for the discourse neutral preverbal position of NNSs, the Split Feature Inheritance of Germain (2015a). In the fourth section I discuss outstanding questions arising from the analysis. I conclude the chapter in the fifth section with a discussion of the predictions made by these analyses and questions to be answered in subsequent chapters.

## 2. Case and argument structure

In this section, I first provide arguments for assuming that the case on dative Experiencers in Russian and Lithuanian is inherent case, following Greenberg and Franks (1991) and Franks (1995) who posit that DAT is assigned “configurationally” by virtue of being in Spec VP. I argue, however, that these subjects are merged in the specifier of an applicative phrase, following Cuervo’s (2003) structure for Spanish dative Experiencers. Finally, I propose different underlying argument structures for psych verbs and non-verbal psych predicates.

### 2.1 Evidence for inherent case

That the source of dative case in a dative Experiencer is non-structural is a well-established conclusion (Woolford 2006, Franks 1995, Greenberg and Franks 1991.) As the dative case in these constructions is associated with a certain thematic role, namely Experiencer, it is aligned with Chomsky’s (1986) characterization of non-structural case being associated with  $\theta$ -marking. Woolford (2006) points out that her proposal that inherent case is only licensed on DPs in the specifiers of light *v* heads also coincides with Chomsky’s (1986) model of non-structural case occurring at an earlier point than structural case. One syntactic test for ruling out a structural source for a case is that it survives under A-movement in passivization and raising. This is exemplified for the raising constructions in (19).

- (19) a. Emu načalo nravit’sja kofe. *Russian*  
him<sub>DAT</sub> started<sub>3.SG</sub> please<sub>INF</sub> coffee<sub>NOM</sub>  
‘He started to like coffee.’
- b. Man pradėjo oro trukti. *Lithuanian*  
me<sub>DAT</sub> started<sub>3.SG</sub> air<sub>GEN</sub> lack<sub>INF</sub>  
‘I started to lack air.’  
(<http://www.supermama.lt/forumas/index.php?showtopic=32916&pid=1777312&mode=threaded&show=&st=&>)

The following examples in (20) show the dative subject in clauses with passive morphology (i.e. auxiliary *be*, which is silent in present tense in Russian, and the perfective passive participial).

However, I note that these are not canonical passives in that, although the Theme is nominative and triggers verbal agreement morphology, it has not undergone A-movement.

- (20) a. Mne vseгда bol'she nraivitas' Fateeva. *Russian*  
 me<sub>DAT</sub> always more please<sub>PST.PART.3.SG.F</sub> Fateeva<sub>NOM.F.SG</sub>  
 'I always was pleased more by Fateeva.'  
 (<http://www.woman.ru/stars/medley1/thread/4289461/>)
- b. Jai buvo patiktas ne tik filosofiškas. *Lithuanian*  
 she<sub>DAT</sub> was pleased<sub>PST.PART.3.SG.M</sub> NEG only philosophical<sub>3.SG.M</sub>  
 'She was pleased not only by the philosophical (part).'  
 (<http://www.delfi.lt/klubas/vakareliai/indres-kavaliauskaites-aktories-karjera-prasidejo-nuo-lovos-scenos.d?id=64016542>)

Bruening (2007), in his response to Woolford (2006), stresses that A-movement is only correlated with the assignment of a different structural case and is not the cause of it. He notes that other kinds of A-movement, namely A-scrambling, do not result in a change in structural case, citing the Japanese example in (21) where the scrambled object is able to bind into the subject.

- (21) ? Karera-o<sub>i</sub> otagai<sub>i</sub>-no sensei-ga hihansita (koto). *Japanese*  
 they<sub>ACC</sub> each.other<sub>GEN</sub> teacher<sub>NOM</sub> criticized (fact)  
 'Them<sub>i</sub> each other<sub>i</sub>'s teachers criticized.' (Bruening 2007: 13, citing Saito 1996)

Secondly, he points out that while the DAT on indirect objects survives when promoted to subject in Icelandic passives, the accusative case of the object does not survive and surfaces as nominative. This change in case could not have occurred because of A-movement. In (22), I provide the equivalent Icelandic examples in Russian to show that this concern applies here.

- (22) a. Druz'ja dali emu kličku *Russian*  
 friends<sub>NOM</sub> gave<sub>3.PL</sub> him<sub>DAT</sub> nickname<sub>ACC.SG.F</sub>  
 'Friends gave him a nickname.'

b. Emu byla dana klička  
 him<sub>DAT</sub> was<sub>3.SG.F</sub> given<sub>SG.F</sub> nickname<sub>NOM.SG.F</sub>  
 ‘He was given a nickname.’

Ultimately, Bruening (2007) concludes that other than association with thematic role, the only a-theoretical diagnostic of structural case is a change in the structure of the construction under consideration with lexical items and thematic roles remaining constant. If the case of the argument changes without the thematic role changing, the case is structural. Woolford (2006) refers to case as “changing”, but really what is happening is that the source of structural case changes. In a passive, the *v* is unable to assign ACC and the object moves to Spec TP to be assigned NOM by T.

Woolford (2006) also cites the presence of a NOM object as a test for diagnosing non-structural case on a subject. However, ACC and partitive GEN objects are also allowed in some constructions with DAT inherent subjects in Russian and in Lithuanian.

(23) a. Mne žal’ Tanju. *Russian*  
 me<sub>DAT</sub> sorry Tanya<sub>ACC</sub>  
 ‘I feel sorry for Tanya.’

b. Man trūksta laiko. *Lithuanian*  
 me<sub>DAT</sub> lack<sub>3.SG</sub> time<sub>GEN</sub>  
 ‘I lack the time.’

The Lithuanian Inferential Evidential also has a non-nominative subject and a nominative object, as shown in (16), repeated here as (24).

(24) Ingos nuraminta vaikas. *Lithuanian*  
 Inga<sub>GEN</sub> calm.down<sub>AGR</sub> child<sub>NOM</sub>  
 ‘Inga must have calmed down the child.’ (Lavine 2010: 116)

In Chapter 3 I will argue that GEN here is a structural case assigned by D, and discuss whether NOM on the object is a default case or structurally assigned by T. I take Woolford’s (2006) diagnostic of the presence of NOM on an object not to be a true diagnostic, but rather an

indication that the case of the subject might possibly be inherent. One analysis for the case pattern with constructions with nominative objects is that a  $\phi$ -probe on T has attempted to agree with the higher DP, but cannot because it is already valued for case by the time that T enters the derivation. It then probes farther and finds the object which is unvalued for case and able to enter into an Agree relation. This is the analysis I adopt for DAT-NOM psychological verbs in Section 3.3.1 below. The question is what the reason might be for why the higher DP is already valued for case. If there is no possible source for structural case for the subject (i.e. no c-commanding functional head with a  $[\text{u}\phi]$  feature that intervenes between the T and the DP), it is safe to conclude that the subject has inherent case.

One other diagnostic of structural case used in the literature on Slavic languages is the genitive of quantification (see Franks 1995 for discussion). For Russian, in contexts where structural case is assigned, the numerals of five and above (up to 999) assign genitive case to their DP complements, as in (25).

- (25) čitat' pjat' interesnyx knjig. *Russian*  
 read<sub>INF</sub> five<sub>ACC</sub> interesting<sub>GEN</sub> books<sub>GEN</sub>  
 'to read five interesting books' (Franks 1995: 95)

When the numeral phrase is selected by a lexical case assigning P or V, the entire phrase is assigned that particular lexical case. In (26), the preposition *s* 'with' assigns instrumental case to every element in its complement. This is interpreted as the structural GEN, which is usually assigned by the numeral, being overridden.

- (26) s pjat'ju interesnymi knjigami *Russian*  
 with five<sub>INST</sub> interesting<sub>INST</sub> books<sub>INST</sub>  
 'with five interesting books' (Franks 1995: 95)

Similarly, the subject of a dative Experiencer will bear only DAT when it is headed by a numeral, which, in a structural case positions assigns GEN, as in (27). This is shown in (28).

(27) ...počemu sto ljudje ljubjat futbol. *Russian*  
 why hundred<sub>NOM</sub> people<sub>GEN</sub> love<sub>3.PL</sub> football<sub>ACC</sub>  
 ‘... why a hundred people love soccer.’  
 (<http://www.nlpforum.ru/viewtopic.php?t=9365&sid=5e3900b2c859c1dc0d3d4f6c6d8f8f1e>)

(28) Esli sta ljudjam nravitsja fotografija... *Russian*  
 if hundred<sub>DAT</sub> people<sub>DAT</sub> please<sub>3.SG</sub> photography<sub>NOM</sub>  
 ‘If hundred people like photography..’  
 (<http://kuluars.info/novosti/mir-cherez-ob-ektiv-nikolaj-tarkhanov-i-ego-masterskaya.html>)

In Lithuanian, numerals in the teens and powers of ten and hundreds assign GEN as well.

However, this diagnostic does not carry over from Russian to Lithuanian because these numerals assign GEN even in lexical case environments. In the preposition *su* ‘with’ assigns INST to the numeral *šimtas* ‘one hundred’, but the quantified DP still bears GEN.

(29) su šimtais kitų automobilių *Lithuanian*  
 with hundred<sub>INST</sub> other<sub>GEN</sub> cars<sub>GEN</sub>  
 ‘with a hundred other cars’ (VMU Corpus)

In (30), as expected, the DAT subject of the psych verb *reikėti* ‘need’ is assigned GEN by the numeral.

(30) ...įvairaus lygio pagalbos reikia beveik 550 senų ir ligotų žmonių. *Lithuanian*  
 various<sub>GEN</sub> level<sub>GEN</sub> help<sub>GEN</sub> need<sub>3</sub> almost 550 old<sub>GEN</sub> and sick<sub>GEN</sub> people<sub>GEN</sub>  
 ‘...various levels of aid are needed by almost 550 old and sick people.’ (VMU Corpus)

The Genitive of Negation is a similar diagnostic for inherent case Russian, and I address this the next section. Before turning to the argument structure of these constructions, I note that the Genitive of Negation is also not the best test to apply to Lithuanian NNSs because it cannot be assigned to unaccusative subjects as it can in Russian, as shown in (31a) versus (31b) (see Chapter 1, Section 3.3.1 for more discussion.)<sup>7</sup>

(31) a. Ne prišlo pis'ma *Russian*  
 not arrived<sub>3.SG.NEUT</sub> letter<sub>GEN</sub>  
 ‘No letter came’

<sup>7</sup> See Anderson (2013: 36-38) for discussion on diagnosing (non-) structural case on objects in Russian and Lithuanian. For example, the distributive preposition ‘by’ (*po* in both Russian and Lithuanian) assigns lexical instrumental case in Russian and lexical dative in Lithuanian to its object.

b. \*Neatvyko                      laiško  
not.arrived<sub>3.SG.NEUT</sub> letter<sub>GEN</sub>  
'No letter came'

*Lithuanian*

To summarize, we conclude that the DAT of dative Experiencers in Russian and Lithuanian is inherent because (i) DAT is not overridden when the source of structural case is changed (i.e. in raising and passive constructions), (ii) the Theme is assigned NOM (with caveats), and (iii) GEN of quantification and negation is not assigned (Russian only). We will return to these diagnostics in Chapter 3 where we will see that the DAT on subjects of infinitives (Russian) and participles (Lithuanian) behaves oppositely to the DAT of the NNSs under discussion here.

## *2.2 Argument structure*

### 2.2.1 Dative Experiencers as Specifiers of ApplP

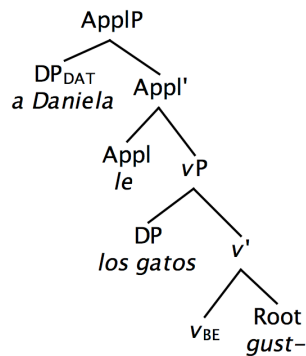
Analyses for how dative Experiencers are introduced into the derivation generally must answer two questions: (i) which head introduces the Experiencer, and (ii) what kind of phrase is the Experiencer itself? With respect to the first question, Experiencers are generally either treated as an additional internal object selected for by the root V (e.g. Belletti and Rizzi 1988), or as an “applied” object introduced by a light *v* in the style of Kratzer’s (1996) Agent-introducing Voice head (e.g. McGinnis 1996). With respect to the second question, the Experiencer has been argued to not simply be a DP argument, but rather a PP. A recent example of a PP proposal is Landau’s (2010) locative analysis of Experiencers as PPs selected by V, wherein even ACC Experiencers are actually headed by a null P. In this section, I do not intend to argue for a unified approach to the argument structure involving dative Experiencers, but rather aim to propose a structure that best describes Russian and Lithuanian dative Experiencers. I follow Marantz (2013) in assuming

that different languages make use of different strategies for adding additional arguments to a predicate (see Polinsky 2016 for a specific proposal to this effect for ergative subjects).<sup>8</sup>

I assume a Spec *v*P analysis to account for the selection of and case assignment to Lithuanian and Russian dative Experiencer subjects, and adopt Cuervo’s (2003) proposal for Spanish dative Experiencers for several reasons. First, Cuervo’s (2003) structure neatly accounts for the semantics of psych verbs with dative subjects in Spanish, and the semantics of these verbs closely matches the interpretation of psych verbs in Russian and Lithuanian. In the structure given in (32) below, the Experiencer in Spec Appl is above the event denoted by the VP.

- (32) a. *Á Daniela le gustan los gatos.* *Spanish*  
 Daniela<sub>DAT</sub> CL.DAT like<sub>PL</sub> the cats  
 ‘Daniela likes cats.’

b.



(Cuervo 2003: 165)

The nominative DP is the subject of the predicate *gustar*, but, crucially, psychological verbs do not project an external argument. Cuervo (2003) characterizes the Experiencer as external to the predication relation between the nominative DP and the stative verb and not as the subject of the

<sup>8</sup> As an example of how different languages utilize different already existing structures for mapping psychological states on to argument structure, Marantz (2013: 164) offers up the contrast between how English and Japanese express affected experiencers. While English utilizes prepositional phrases in expressions like “John’s cat died on him”, the Japanese “adversative causative” has the affected individual expressed as the nominative subject, as the example in (i) shows.

- (i) Taro-ga dorobou-ni heya-o aras-are-ta. *Japanese*  
 Taro<sub>NOM</sub> thief<sub>DAT</sub> room<sub>ACC</sub> destroy<sub>PASS.PAST</sub>  
 ‘Taro’s room got destroyed on him by the thief.’ (Pykkänen 2002: 59)

predicate. The High Applicative head therefore relates the dative Experiencer to a state, not an event. The second reason for adopting this structure for dative Experiencers is that it captures the spirit of Rizzi and Belletti's (1988) insight that dative Experiencers of psych verbs are internal arguments as they are merged below a Voice or external argument selecting *v*. Third, an analysis of a dative Experiencer which is in a direct c-command relationship with the Theme may help to account for why anaphor binding by some of these Experiencers is acceptable, as shown in (33) below. I return to this point in Chapter 4 when reviewing Nikolaeva's (2014) account for the subject-orientation of anaphors in Russian and how it can explain binding by dative subjects.

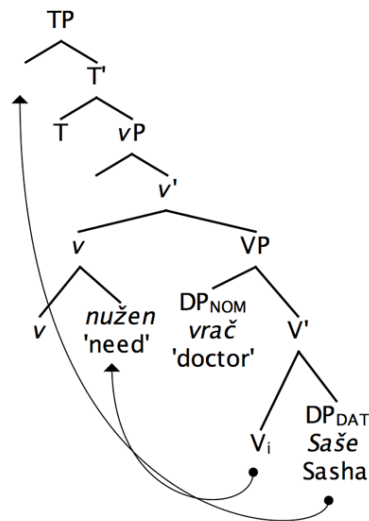
- (33) Mne<sub>i</sub> žal' svoju<sub>i</sub>/moju<sub>i</sub> mamu. *Russian*  
 me<sub>DAT</sub> sorry self's/my<sub>ACC</sub> mom<sub>ACC</sub>  
 'I feel sorry for my mom.'

A VP-internal argument analysis for Experiencers, like the one adopted in Bailyn (2012) for Russian dative Experiencers, is problematic for reasons I will outline below (see also Greenberg and Franks 1991, Franks 1995, and Komar 1999). Bailyn (2012) proposes that i) dative Experiencers are merged in as complement to V and nominative or accusative Themes are specifiers of V, and ii) that dative Experiencers move past the Theme and land in Spec TP. This is shown in the tree in (34) below.

- (34) a. Saše nužen vrač.  
 Sasha<sub>DAT</sub> need<sub>SG.MASC</sub> doctor<sub>MASC.NOM</sub>  
 ‘Sasha needs a doctor.’

Russian

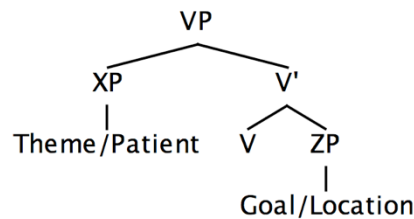
b.



(Bailyn 2012: 162)

This analysis relies on parallels he observes between Goals and Experiencers and arguments for the structure in (35), where Themes c-command Goals in a VP.

(35)



(Bailyn 2012: 161)

Discussion of whether the structure in (35) is appropriate for Russian is beyond the scope of this thesis, but concluding that dative Experiencers are merged as the complement to VP is not necessary to account for the facts that Bailyn (2012) covers. Bailyn's (2012) first piece of evidence for assuming this structure is that the NOM Theme of the predicate *nužno* 'need' can be assigned the Genitive of Negation while the dative Experiencer cannot.

- (36) a. Saše ne nužno medsestry  
 Sasha<sub>DAT</sub> NEG need<sub>AGR</sub> nurse<sub>GEN</sub>  
 ‘Sasha doesn't need a nurse.’

Russian

- b. \*Saši ne slyšno pesni  
 Sasha<sub>GEN</sub> NEG hear<sub>AGR</sub> song<sub>GEN</sub>  
 ‘Sasha does not hear the song.’

(Bailyn 2012: 164)

First, GEN on the Theme DP is not indicative of it being in Spec VP, specifically, but rather of it being within the scope of negation, which according to configurational approaches to the Genitive of Negation applies to internal arguments (Bailyn 1997, Harves 2002, Babyonshev 2003, a.o.). Second, as Bailyn notes, the lack of GEN on dative Experiencers is usually attributed to the DAT of Experiencers being inherent and not able to be overridden by the structural GEN of negation. His account for DAT assigned to Goals is that it is assigned configurationally by V; therefore, assuming that Experiencers are also merged in this position forces him to claim that the DAT on Experiencers is also structural, which we have seen is not the case.

His other piece of evidence for arguing that Experiencers and Themes are in the same configuration as Goals and Themes (as shown in (35)) is that the Themes in psych predicate contexts can control into adjoined instrumental small clauses, as shown in (37). Bailyn (2012) takes this to be associated with the Spec VP position because ACC DPs in NOM-ACC constructions can also control into these clauses, as (38) shows.

(37) Saše<sub>i</sub> nužno vrača<sub>j</sub> [PredP PRO\*<sub>i/j</sub> p'janym\*<sub>i/j</sub>]. *Russian*  
 Sasha<sub>DAT</sub> need<sub>AGR</sub> doctor<sub>ACC</sub> drunk<sub>INST</sub>  
 'Sasha needs a doctor drunk.'  
 (Interpretation: The doctor is drunk, not Sasha.) (Bailyn 2012: 166)

(38) Gubernator<sub>i</sub> prodal raba<sub>j</sub> Borisu<sub>k</sub> [PredP PRO<sub>i/j/\*k</sub> golym<sub>i/j/\*k</sub>]. *Russian*  
 Governor<sub>NOM</sub> sold<sub>3.SG</sub> slave<sub>ACC</sub> Boris<sub>DAT</sub> nude<sub>INST</sub>  
 'The governor sold the slave to Boris nude.'  
 (Interpretation: Either the governor or the slave were nude but not Boris.)  
(Bailyn 2012: 148)

However, when there is no intervening Theme, the Experiencer is free to control PRO in an instrumental small clause.

(39) a. Borisu<sub>i</sub> nraivsja [TP PRO<sub>i</sub> igrat' muzyku golym<sub>i</sub>]. *Russian*  
 Boris<sub>DAT</sub> please<sub>3.SG</sub> play<sub>INF</sub> music<sub>ACC</sub> nude<sub>INST</sub>  
 'Boris likes to play music drunk.'

- b. Boris<sub>i</sub> veselo [<sub>PredP</sub> PRO<sub>i</sub> golym<sub>i</sub>].  
 Boris<sub>DAT</sub> happy-AGR nude<sub>INST</sub>  
 ‘Boris likes to play music drunk.’ (Bailyn 2012: 166)

For Bailyn (2012), this is possible because dative Experiencers move to Spec TP where they are able to c-command into the TP or adjoined VP. I submit that an analysis in which the Experiencer is merged in at Spec ApplP like the one in (32) proposed by Cuervo (2003) can account for both of these phenomena. Datives in Spec ApplP are inherent and thus unable to be assigned GEN in Genitive of Negation contexts. From this position, they c-command VP adjoined instrumental small clauses, but the Theme will intervene if present.

Finally, I follow Dyakonova (2009) and Bailyn (2012) in assuming that dative Experiencers in Russian are not headed by a null P. One reason to avoid a PP account for dative Experiencers in Russian and Lithuanian is that the subjects of non-verbal psych verbs can bind anaphors, and a DP complement would have to c-command out of PP to do so.

- (40) a. Mne<sub>i</sub> žal’ svoju<sub>i</sub> mamu. *Russian*  
 me<sub>DAT</sub> sorry self’s mom<sub>ACC</sub>  
 ‘I feel sorry for my mom.’
- b. Man<sub>i</sub> gaila savo<sub>i</sub> mamos. *Lithuanian*  
 me<sub>DAT</sub> sorry self’s mom<sub>GEN</sub>  
 ‘I feel sorry for my mom.’

In Russian, the possessor PP ‘*u* + GEN’ construction also appears pre-verbally, as shown in (41) where (41c) is infelicitous in the out of the blue contexts.

- (41) Čto slučilos’? *Russian*  
 what happened  
 ‘What happened?’
- a. U menja slomalsja kompjuter.  
 at me<sub>GEN</sub> broke computer<sub>NOM</sub>
- b. U menja kompjuter slomalsja.  
 at me<sub>GEN</sub> computer<sub>NOM</sub> broke

c. #Kompjuter slomaslja u menja.  
 computer<sub>NOM</sub> broke at me<sub>GEN</sub>  
 ‘My computer broke’

(Wood and Livitz 2012: 9)

Unlike the dative Experiencer in (40), these PPs cannot bind anaphors (see Section 3.2 below for more discussion on PPs and binding).

(42) a. U Petja<sub>i</sub> est’ fotografii ego<sub>i</sub> / ??svoej<sub>i</sub> ženy.  
 at Petja is photos<sub>NOM</sub> his / self’s wife<sub>GEN</sub>  
 ‘Petja has photos of his wife.’

*Russian*

b. U Petja<sub>i</sub> slomalis’ ego<sub>i</sub> / \*svoi<sub>i</sub> očki.  
 at Petja broke his / self’s glasses<sub>NOM</sub>  
 ‘Petja’s glasses broke.’

(Wood and Livitz 2012: 7)

Similarly, Polinsky (2016) argues for a distinction between languages whose ergative subjects are DPs and those whose subjects are PPs. Aside from binding, she shows that PP ergatives do not undergo raising. The situation in Russian is less clear because, while dative Experiencers undergo raising (as in (19) above repeated here as (43)), PP possessors do also.

(43) Emu načalo nraivit’sja kofe.  
 him<sub>DAT</sub> started<sub>3.SG.NEUT</sub> please<sub>INF</sub> coffee<sub>NOM</sub>  
 ‘He started to like coffee.’

*Russian*

(44) U nego načalo skladyvat’sja akademičeskoe predstavlenie o mire  
 a him started<sub>3.SG.NEUT</sub> take.shape<sub>INF.REFL</sub> academic idea about world  
 ‘He began to form an academic view of the world.’

(<https://books.google.ru/books?isbn=5040073623>)

Unfortunately, Lithuanian does not have a similar PP construction to compare to. Finally, the dative Experiencer fails an additional test that Polinsky (2016) argues can diagnose a DP versus a PP, the ability to be controlled. In (45), the dative subject of the embedded clause is unable to be PRO.

(45) \*Sasa xočet [TP PRO<sub>DAT</sub> nraivit’sja deti].  
 Sasha<sub>NOM</sub> wants please<sub>INF</sub> children<sub>NOM</sub>  
 ‘Sasha wants to like the children.’

*Russian*

(Williams 2006: 419)

However, this does not necessarily indicate that the dative is a PP; rather, it shows that PRO cannot surface in certain argument positions, namely, any except Spec TP. The accusative preverbal argument of an Adversity Impersonal in (46a) can also not be controlled, as shown in (46b).

- (46) a. *Rabočego sil'no udarilo oskolkom plity* *Russian*  
 worker<sub>ACC</sub> strongly hit<sub>3.SG.NEUT</sub> shard<sub>INST</sub> concrete<sub>GEN</sub>  
 'A worker was hit hard by a shard of concrete slab.' (Lavine & Freidin 2002: 278)
- b. \**Ja ne xoču [TP PRO<sub>ACC</sub> ubit' oskolkom plity].*  
 I.NOM NEG want<sub>1.SG</sub> kill<sub>INF</sub> shard<sub>INST</sub> concrete<sub>GEN</sub>  
 'I don't want to be killed with a shard of concrete.' (Williams 2006: 419)

Presumably this is not due to the accusative being a PP, as it is a Theme, not an Experiencer (cf. the accusative PP Experiencers of Landau (2010)). Instead, PRO simply cannot be the complement of a VP (see also discussion in Citko, Germain, and Witkoś to appear.)

In the next two subsections, I outline the structure I propose first for the full psych verbs and then for the non-verbal psych predicates. The main difference between the two will involve the base position of the Theme DP.

### 2.2.2 Psychological verbs

In this section and the following one I propose a different underlying structure for psychological verbs and non-verbal predicates. In their discussion of dative subjects in Russian, Moore and Perlmutter (2002) recognize different predicates, but group psychological verbs and non-verbal predicates together and treat them as Inverted Constructions, where the dative Experiencer moves over the Theme to the subject position.<sup>9</sup> As mentioned above, Bailyn (2012) also argues

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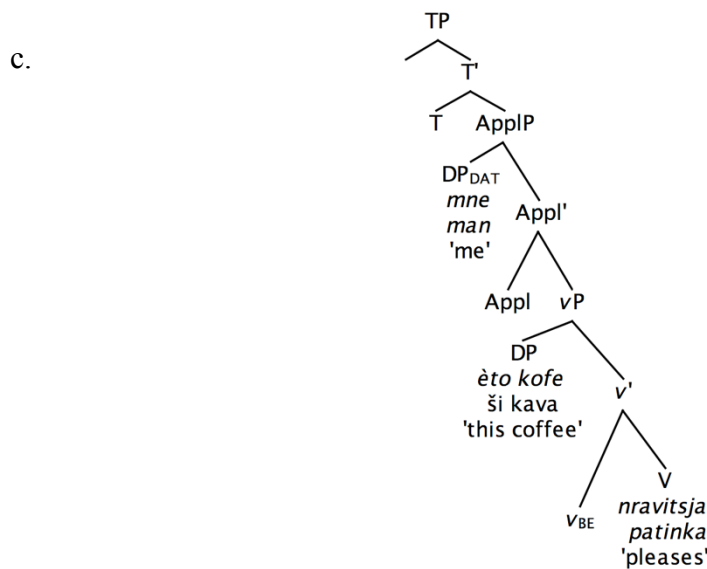
<sup>9</sup> The Inversion Analysis account for Russian is due to Perlmutter (1978b). In the framework of Relational Grammar, arguments that undergo inversion are called Inverted Nominals, or I-nominals.

for an inversion analysis wherein psychological verbs and non-verbal psychological predicates share the same structure. Assuming that these constructions have the same argument structure presents two issues. For one, we have no way of explaining how the Theme in different constructions comes to have different cases. Second, we have no way of explaining why subjects of psych verbs and subjects of non-verbal psych predicates might differ with respect to their ability to bind anaphors. I discuss the binding properties of these constructions in more depth in Section 5.2 and return to the connection between their argument structure and binding facts in Chapter 4.

I assume a structure parallel to Cuervo's (2003) structure in (32) for the Russian and Lithuanian psych verbs. The examples in (47a,b) are laid out in the tree in (47c).

(47) a. **Mne** nraivitsja èto kofe. *Russian*  
 me<sub>DAT</sub> please<sub>3.SG</sub> this coffee<sub>NOM</sub>  
 'I like this coffee.'

b. **Man** patinka ši kava. *Lithuanian*  
 me<sub>DAT</sub> please<sub>3.SG</sub> this coffee<sub>NOM</sub>  
 'I like this coffee.'



Here the high Appl head selects the predicate relation in  $vP$  and “applies” an extra argument to it, the Experiencer *mne/man* ‘me’ (see Pylkkänen 2002 for a discussion of high versus low Appl). This DP is then assigned inherent DAT by virtue of its position in Spec ApplP. The Theme is merged in as the specifier of the light  $v_{BE}$ , reflecting its status as the “subject” of the state of being pleasing. Cuervo (2010) argues that this configuration also explains how the NOM Theme of psych verbs can be in a predication relation with the verb to the exclusion of the Experiencer, meaning that the Theme is a subject in these cases. As the contrast between the NOM DP of the psych verb in (48) and of the existential in (49) shows, the Theme of the psych verb can be in a predication relation with the verb (and appear pre-verbally) while the NOM the existential cannot.<sup>10</sup>

(48) Los gatos nunca molestan. *Spanish*  
 the cats<sub>NOM</sub> never bother<sub>3,PL</sub>  
 ‘Cats are never bothersome.’ (Cuervo 2010: 33)

(49) a. Faltaron dos sillas. *Spanish*  
 lacked<sub>3,PL</sub> two chairs<sub>NOM</sub>  
 ‘There were two chairs too few.’

b. \*Dos sillas faltaron  
 two chairs<sub>NOM</sub> lacked<sub>3,PL</sub>  
 ‘There were two chairs too few.’ (Cuervo 2010: 33)

This predication relation between the Theme and the verb is also possible in Russian and Lithuanian. In (50), NOM *fil'm* ‘film’ is the subject of pleasing, and in (51) the votes are being

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<sup>10</sup> Existential constructions in Spanish also have dative Experiencer subjects, as (i) below shows.

(i) Al libro le faltan las tapas *Spanish*  
 the book<sub>DAT</sub> CL<sub>DAT</sub> lack<sub>PL</sub> the covers  
 ‘The book has no covers/ is missing its covers’ (Cuervo 2010: 30)

needed. In this example, the subject is GEN because the verb *reikėti* ‘to need’ takes a GEN Theme.<sup>11</sup>

- (50) Fil'm nraivitsja. *Russian*  
 film<sub>NOM</sub> please<sub>3.SG</sub>  
 ‘The film pleases.’ (Russian National Corpus (RNC))
- (51) 44 balsų reikia. *Lithuanian*  
 44 votes<sub>GEN</sub> needs<sub>3</sub>  
 ‘Forty-four votes are needed.’ (VMU Corpus)

Next, I turn to argument structure of the other dative Experiencer construction under discussion here, the non-verbal psychological predicate.

### 2.2.3 Non-verbal psychological predicates

Here I present a more detailed proposal of the argument structure of non-verbal psych predicates. First, I follow Bailyn (2012) in assuming that the predicate *nužno* ‘need’ in Russian can be given the same analysis as the Russian and Lithuanian *žal’/gaila* ‘sorry’ and *stydno/gėda* ‘shame’. However, it is important to note that there are good arguments against assuming that predicates like the non-agreeing *nužno* and agreeing *nuž-en/-na-/-no* are two forms of the same non-verbal psych predicate.<sup>12</sup> Melnikova (2015) argues that the non-agreeing *nužno* in (52a) is a modal predicate that selects a VP. This is because (52a) is actually interpreted as (52b).

- (52) a. Vove nužno vrača. *Russian*  
 Vova<sub>DAT</sub> need doctor<sub>ACC</sub>  
 ‘Vova needs a doctor.’
- b. Vove nužno videt’ vrača.  
 Vova<sub>DAT</sub> need see<sub>INF</sub> doctor<sub>ACC</sub>  
 ‘Vova needs to see a doctor.’ (Melnikova 2015: 6)

<sup>11</sup> Other Lithuanian psych verbs, like *trūkti* ‘to lack’, assign GEN to Themes. I assume this is the Intensional GEN assigned by other verbs that select objects that lack an existential commitment (e.g. *norėti* ‘want’), following Kagan’s (2012) terminology and analysis. See Section 3.3.1 for more discussion.

<sup>12</sup> Other non-verbal psych predicates that appear to have an agreeing and non-agreeing form are *slyšno* ‘audible’ and *vidno* ‘visible’.

Indeed, a search in the Russian National Corpus (RNC) for “*nužno*” yields no instances of *nužno* with an ACC object in the first 100 sources returned.<sup>13</sup> Moreover, a search for an instance of *nužno* with an object that is likely not to be embedded in a VP, like *pomošč’* ‘help’ as in (53a), yields only one hit.<sup>14</sup>

- (53) a. Mne *nužno* *pomošč’*. *Russian*  
           me<sub>DAT</sub> need<sub>AGR</sub> help<sub>ACC.FEM</sub>  
           ‘I need help.’
- b. Mne *nužna* *pomošč’*.  
           me<sub>DAT</sub> need<sub>FEM</sub> help<sub>NOM.FEM</sub>  
           ‘I need help.’

On the other hand, searching for the agreeing “*nužna pomošč’*”, as in (53b), returns 246 examples.<sup>15</sup> Given this, I assume that the non-verbal psych predicate *nužno* ‘need’, has one form, the one that agrees with a NOM Theme. Non-agreeing *nužno* is a modal predicate, and beyond the scope of this discussion as I am focusing here on base SVO constructions without modal verbs.

At the start of this section I argued that dative Experiencers in Russian and Lithuanian are specifiers of an applicative phrase. What distinguishes the argument structure of psychological verbs and non-verbal psychological predicates, then, is the type of predicate and the structural

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<sup>13</sup> The Russian National Corpus’s main corpus, which includes spoken and non-spoken speech, has 115 645 documents, 23 803 881 sentences, 283 431 966 words in total. The search interface can be accessed at <http://search.ruscorpora.ru/>.

<sup>14</sup> A search in the RNC for the phrase “*slyšno pesnju*” (or “*pesnju slyšno*”) ‘audible song’ from Bailyn’s (2012: 162) example yields no results.

(i) Saše *slyšno* *pesnju* *Russian*  
       Sasha<sub>DAT</sub> hear<sub>AGR</sub> song<sub>ACC</sub>  
       ‘Sasha hears a song.’ (Bailyn 2013: 162)

However, non-agreeing *vidno* ‘visible’ as it appears in the phrase “*vidno dorogu*” with the accusative Theme *dorogu* ‘road’ returned four hits in the RNC. As these two predicates are formed from the past passive participle of the verbs *slyšit’* ‘hear’ and *videt’* ‘see’, it is reasonable that there exists a non-agreeing form that assigns accusative case to the DP Theme. I leave a more thorough corpus investigation to future research.

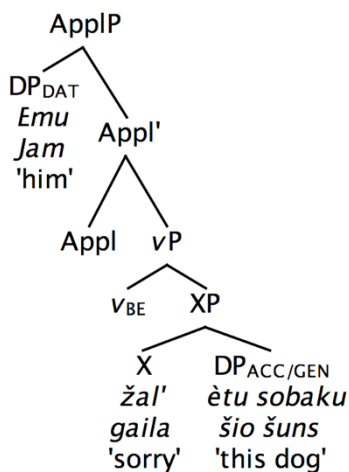
<sup>15</sup> Nominative and accusative case for feminine nouns ending in –‘ (Russian “soft sign” ь) is syncretic -∅.

status of the Theme. I assume the structure in (54c) for the argument structure of non-verbal psychological predicate ‘sorry’ in (54a,b).

(54) a. Emu žal’ ètu sobaku. Russian  
 me<sub>DAT</sub> sorry this dog<sub>ACC</sub>  
 ‘He feels sorry for this dog.’

b. Jam gaila šio šuns. Lithuanian  
 me<sub>DAT</sub> sorry this dog<sub>GEN</sub>  
 ‘He feels sorry for this dog.’

c.



In the tree in (47) above, the light stative verb  $v_{BE}$  selects a root V ‘please’ as its complement and the Theme DP as its specifier. Here,  $v_{BE}$  selects an XP headed by the non-verbal psychological predicate and does not project a specifier. The Theme here is the complement of the non-verbal psych predicate. The dative Experiencer is “applied” to the  $vP$  after it is selected by the Appl head. I remain agnostic as to the nature of the kind of predicate the head X is, but note that assuming that the Theme is its complement allows us to hypothesize that the Theme is assigned case lexically following Woolford’s (2006) definition of lexical case. In Russian, this lexical case happens to be ACC for žal’ ‘sorry’ and in Lithuanian it happens to be GEN for gaila ‘sorry’. On the other hand, it is conceivable that *nužno* ‘need’ might be adjectival in nature, and

therefore does not assign case to the Theme, leaving it available for Agree with T, as can be seen in (53b) where *pomošć'* is NOM.

Recall that Cuervo's (2010) diagnostic for a DP Theme complement is that it cannot appear in a predication relation with the verb as the subject, to the exclusion of the Experiencer. I repeat the relevant existential construction from (49) here as (55).

- (55) a. *Faltaron dos sillas.* *Spanish*  
           lacked<sub>3,PL</sub> two chairs<sub>NOM</sub>  
           ‘There were two chairs too few’
- b. \**Dos sillas faltaron*  
           two chairs<sub>NOM</sub> lacked<sub>3,PL</sub>  
           ‘There were two chairs too few’ (Cuervo 2010: 33)

This seems to hold for Russian and Lithuanian as well, as shown in (56) with the predicate ‘sorry’.

- (56) a. ?*Mamu/mam – žal’* *Russian*  
           mom/moms sorry  
           ‘Mom/moms are pitied’
- b. \**Mamos/mamų yra gaila.* *Lithuanian*  
           Mom/moms<sub>GEN</sub> are<sub>3</sub> sorry  
           ‘Mom/moms are pitied.’

In addition, assuming different merge positions for the Themes of psychological verbs and non-verbal psych predicates gives us an explanation for why the Genitive of Negation is only found on one of them. In (57), the Theme of the non-verbal psych predicate is GEN under the scope of negation instead of NOM.<sup>16</sup>

- (57) *Saše ne nužno medsestry.* *Russian*  
       Sasha<sub>DAT</sub> NEG need<sub>-AGR</sub> nurse<sub>GEN</sub>  
       ‘Sasha doesn’t need a nurse.’ (Bailyn 2012: 164)

<sup>16</sup> That the predicate in (57) does not agree with either argument does not necessarily entail that it is the modal predicate *nužno*. It could be that agreement with the Theme is blocked because the Theme is unavailable for Agree with T, having been assigned GEN.

Themes of psychological verbs on the other hand do not bear the Genitive of Negation, as (58) shows.

- (58) Mne ne nraivitsja medsestra. *Russian*  
 me<sub>DAT</sub> NEG please<sub>3.SG</sub> nurse<sub>NOM</sub>  
 ‘I don’t like a nurse, (which...).’ (<https://aksakova.ru/info/386>)

This follows if we assume that a DP must be in the VP to be assigned GEN (i.e. as unaccusative subjects are.) Here, the DP is in the Spec of vP and therefore not eligible for the Genitive of Negation.<sup>17</sup>

Finally, I note that other non-verbal psych predicates like *stydno/gėda* ‘shame’ or *grustno/liūdna* ‘sad’ most commonly take PP, VP, or CP complements, as the examples in (59) show for *gėda*. Others, like *xolodno/šalta* ‘cold’ or *ploxo/bloga* ‘ill (lit. ‘bad’)’ most commonly do not take a complement at all.

- (59) a. Jums gėda dėl tėvų. *Lithuanian*  
 you<sub>DAT.PL</sub> shame because parents<sub>GEN</sub>  
 ‘You are ashamed of your parents.’
- b. Jums gėda būti čia.  
 you<sub>DAT.PL</sub> shame be<sub>INF</sub> here  
 ‘You are ashamed to be here.’
- c. Jums gėda, kad tėvai neatėjo.  
 you<sub>DAT.PL</sub> shame that parents<sub>NOM</sub> not.come<sub>3.PAST</sub>  
 ‘You are ashamed that your parents didn’t come.’

In the next section, I will build on these structures to explore how these dative Experiencers come to be pre-verbal in discourse neutral contexts. I will show that we can use Split Feature Inheritance to account for their position.

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<sup>17</sup> Thank you to Jacek Witkoś for drawing my attention to this.

### 3. “Subject” movement

Constructions with dative Experiencer subjects have different underlying structures. In the last section I argued that, while Experiencers of *žal’/gaila* ‘sorry’ type predicates and full psychological verbs are both specifiers of an applicative phrase, their Themes occupy different structural positions. Themes of non-verbal predicates are objects of the predicate, and Themes of psychological verbs are in the specifier of a phrase headed by  $v_{BE}$ . Here I show how the Experiencer moves to the “subject” position.

#### 3.1 Establishing preverbal discourse neutral status

An important fact is that these non-nominative subjects (NNSs) and others can appear pre-verbally in discourse neutral contexts. As (60) shows, the DAT-V-NOM word order expresses new information, while the NOM-V-DAT word order is a topicalization of the NOM DP (and possibly VP).

- (60) a. Saše        ne nravitsja Boris. *Russian*  
Sasha<sub>DAT</sub> NEG please<sub>3.SG</sub> Boris<sub>NOM</sub>  
‘Sasha does not like Boris.’ Answer to: Do you foresee any problems with our group trip?
- b. Boris        ne nravitsja Saše.  
Boris<sub>NOM</sub> NEG please<sub>3.SG</sub> Sasha<sub>DAT</sub>  
‘Sasha does not like Boris.’ Not answer to: Do you foresee any problems with our group trip? Answer to: Who likes Boris?
- (Slioussar 2011: 2059)

In addition, the NOM-DAT order destroys the wide focus reading of the sentence. The preverbal nominative in (61) can only be interpreted as definite.

- (61) a. Sashe        nrajatsja izvestnyj pisatel. *Russian*  
Sasha<sub>DAT</sub> please<sub>3.SG</sub> famous writer<sub>NOM</sub>  
‘Sasha likes a famous writer.’

- b. Izvestnyj pisatel nraivitsia Sashe.  
 famous writer<sub>NOM</sub> please<sub>3.SG</sub> Sasha<sub>DAT</sub>  
 ‘Sasha likes the famous writer.’

(Livitz 2006: 19)

This non-nominative preverbal word order is the discourse neutral order for a host of other constructions.

- (62) a. Locative inversion *Russian*  
 V klasse pojavilsja noven’kij. PP-V-S  
 in class appeared<sub>3.SG.MASC</sub> new(one)<sub>NOM</sub>  
 ‘A new boy entered the class.’
- b. Possessive PP PP-V-S  
 U menja est’ vopros.  
 at me<sub>GEN</sub> is question<sub>NOM</sub>  
 ‘I have a question.’
- c. Dative Experiencer DatExp-V-S  
 Soldatam vidna doroga.  
 soldiers<sub>DAT</sub> visible<sub>FEM.SG</sub> road<sub>NOM.FEM.SG</sub>  
 ‘The soldiers can see the road.’ (Bailyn 2003: 159)

Lavine and Freiden (2002) show that this is the case also with Adversity Impersonals whose highest ranked argument is the accusative marked Theme. When the Theme remains within the VP, as in (63b) the resulting VOO word order is infelicitous.

- (63) a. Soldata ranilo pulej. *Russian*  
 soldier<sub>MASC.ACC</sub> wounded<sub>3SG.NEUT</sub> bullet<sub>FEM.INST</sub> (Lavine & Freidin 2002: 258)
- b. #Ranilo soldata pulej.  
 wounded<sub>3SG.NEUT</sub> soldier<sub>MASC.ACC</sub> bullet<sub>FEM.INST</sub>  
 ‘A soldier was wounded by a bullet.’ (Lavine & Freidin 2002: 272)

They show that this is not simply a case of object scrambling by comparing the wide scope reading of OVO Adversity Impersonals to the interpretation of object scrambling in (64). When the object *jabloko* ‘apple’ scrambles over the indirect object *mal’čiku* ‘boy’, the apple can no longer be interpreted as non-specific.

- (64) a. Odná ženščina podarila mal'čiku jabloko. *Russian*  
 one woman<sub>NOM</sub> gave<sub>3.SG.FEM</sub> boy<sub>DAT</sub> apple<sub>ACC</sub>  
 (i) 'A woman gave a boy an apple.'  
 (ii) 'A woman gave the boy an apple.'
- b. Odná ženščina podarila jabloko<sub>i</sub> mal'čiku *t<sub>i</sub>*.  
 one woman<sub>NOM</sub> gave<sub>3.SG.FEM</sub> apple<sub>ACC</sub> boy<sub>DAT</sub>  
 (i) \*'A woman gave an apple to a boy.'  
 (ii) 'A woman gave the apple to a boy.' (Junghanns and Zybatow 1997: 295)

However, as Nikolaeva (2014) points out, it is only the structurally higher Theme of an Adversity Impersonal that can appear pre-verbally under a wide focus reading. When the Instrument is pre-verbal, the Theme is interpreted as focused and the Instrument as topicalized.

- (65) Pulej ranilo soldata. *Russian*  
 bullet<sub>FEM.INST</sub> wounded<sub>3SG.NEUT</sub> soldier<sub>MASC.ACC</sub>  
 'It's the soldier that the bullet wounded.' (Nikolaeva 2014: 107)

She notes that this pattern of wide focus, wherein only in cases where the most structurally high argument is fronted, is problematic for Lavine and Freidin's (2002) account for how non-nominative subjects appear pre-verbally. In the next section I will discuss their account.

### 3.2 *The dedicated subject position*

Given the standard assumption that the subject position is Spec TP and that movement to any specifier is driven by an EPP feature, we are left with a problem. If the NNS has not moved to a left-peripheral position via topicalization or focus-fronting, and is not valuing [ $u\phi$ ] on T, two options remain: either a null expletive is in Spec TP to satisfy the EPP or T is defective in some way and any XP can satisfy the EPP on T, not just one with  $\phi$ -features.

In Lavine and Freidin's (2002) analysis of Russian Adversity Impersonals, T is defective for  $\phi$ -features and the ACC object moves to Spec TP. Bailyn (2003, 2004) Generalized Inversion, V moves to T to satisfy [ $uD$ ] features and any XP moves to Spec TP to satisfy EPP.

These researchers follow Rappaport (1986) in assuming that binding happens from Spec TP because anaphors are subject-oriented in Russian.<sup>18</sup> Therefore, one of the main pieces of evidence for them that any XP may move to Spec TP is the appearance that these XPs can bind anaphors, as shown in (66) below. (See Section 5.2.1 below for more discussion on binding by non-subjects.)

- (66) **U nego** ne ostavilos' vremeni na sebja. *Russian*  
 at him<sub>GEN</sub> NEG remained<sub>AGR</sub> time for self  
 'He didn't have any time left for himself.' (Franks 1995: 254)

Slioussar (2011) counters this generalization with the example in (67) showing that the ACC argument unable to bind the possessive anaphor *svoej* 'self's'.<sup>19</sup>

- (67) Soldata ranilo ego / \*svoej pulej. *Russian*  
 soldier<sub>ACC</sub> wounded<sub>3.SG.NEUT</sub> his / self's bullet<sub>INST</sub>  
 'A/the soldier was wounded by his bullet.' (Slioussar 2011: 2060)

She also objects to the claim that PPs may bind anaphors. She observes that in every instance where a PP binds an anaphor, the anaphor does not simply denote possession but rather a sense of exclusive possession, better translated into English as "one's own personal X", and can be substituted with the adjective *sobstvennyj* 'own/private'. Indeed, she points out that once this factor is controlled for, the PP can no longer bind. In (68) below, there is no way to construe the apartment as having a personal owner, and the binding fails on the simple co-indexed reading.

- (68) \*V kvartiru<sub>i</sub> vošel svoji<sub>i</sub> xozjain. *Russian*  
 in apartment entered [self's owner]<sub>NOM</sub>  
 'Into the apartment walked its owner.' (Slioussar 2011: 2065)

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<sup>18</sup> In the example in (i), the c-commanding object *arestovannogo* 'suspect' cannot bind the reflexive *sebe* 'self'. I return to the subject-orientation of anaphors in Section 5 and cover this topic in Chapter 4.

- (i) Militционер<sub>i</sub> rassprašival arestovannogo<sub>j</sub> o sebe<sub>i/\*j</sub> *Russian*  
 policeman<sub>NOM</sub> questioned suspect<sub>ACC</sub> about self<sub>PREP</sub>  
 'The policeman<sub>i</sub> questioned the suspect<sub>j</sub> about himself<sub>i/j</sub>.' (Rappaport 1986: 101)

<sup>19</sup> See also Slioussar (2007) for argumentation against the V to T movement of Bailyn's Generalized Inversion based on corpus data on the placement of low adverbs.

Slioussar (2011) concludes that Spec TP is never occupied by anything other than a NOM DP or a null expletive. For the constructions with preverbal NNSs then, a null expletive is merged into Spec TP.

An additional argument against NNSs in Spec TP comes from Chomsky's (2013, 2014) labeling algorithm (Citko, Germain, and Witkoś to appear). By default, the head of a projection determines its label. For example, when a verb selects a DP complement, V projects and the new syntactic structure is labeled a VP. When two phrases, XP and YP, Merge, however, the Labeling Algorithm encounters two equidistant heads and either X or Y could in principle project as the label of this new syntactic object. In Chomsky's labeling algorithm, this tension can be resolved in two ways, i) one phrase moves, leaving the other to project, or ii) XP and YP share some feature, which projects. The first option is illustrated by the successive cyclic movement in long distance *wh*-movement in (69), where a CP headed by a declarative C and a DP, which share no features, are merged, and the DP moves beyond the CP.

- (69) a. What article do you think that Mary wrote?  
 b. ....[?? [DP what article<sub>[Q]</sub> [CP that<sub>[Decl]</sub> [IP Mary wrote] ] ]  
 c. ....[CP what article<sub>[Q]</sub> [C' that<sub>[Decl]</sub> [IP Mary wrote] ] ]

The second option is illustrated when the Q-feature bearing DP merges with a CP that is headed by an interrogative C, as shown in (70). As the two phrases have the [Q] feature in common, it is possible to label the new syntactic object.

- (70) a. Bill wondered what article Mary wrote.  
 b. ....[CP what article<sub>[Q]</sub> [C' C<sub>[Q]</sub> [IP Mary wrote] ] ]

Subject movement to Spec TP is another instance in which two phrases are being merged. In the case of canonical subjects, T agrees with this DP which in turn shares with T its  $\phi$ -features.

When a non-nominative DP merges with TP (or T'), the [ $u\phi$ ] on T are not satisfied by that DP's

$\phi$ -features, and the syntactic object created by Merging DP and TP cannot be labeled via the second option, illustrated in (70). Therefore, labeling can only happen via the first option, meaning that non-nominative DPs must either not move to Spec TP at all or at least move beyond it.

### 3.3 Applying Split Feature Inheritance

In this section, I show that we can account for the surface position of non-nominative subjects without assuming that they are in Spec TP. I argue that, in all cases, the NNS moves to the specifier of FinP.<sup>20,21</sup> I follow Citko, Germain, and Witkoś in assuming that once the NNS is in

<sup>20</sup> In Citko, Germain, and Witkoś (to appear) we posit that Spec TopP is the landing site for some non-nominative elements which have been argued to be in Spec TP. These include PPs of locative inversion constructions and instrumental DPs in predicate inversion constructions in Polish and Russian, as exemplified in (i) for Polish.

- (i) a. *Locative inversion* *Polish*  
 Do pokoju wszedł Jan.  
 to room entered<sub>3.SG.MASC</sub> Jan<sub>NOM</sub>  
 ‘Into the room walked John.’  
 b. *Predicate inversion*  
 Moim najlepszym przyjacielem był Jan.  
 my best friend<sub>INSST</sub> was<sub>3.SG.MASC</sub> Jan<sub>NOM</sub>  
 ‘My best friend was Jan.’

(Citko, Germain, and Witkoś to appear: 10)

TopP can be labeled when DP merges with it because the two phrases have a [Top] feature in common. See also Bondaruk (2013) for analysis of movement to Spec TopP.

<sup>21</sup> Livitz (2006) and Wood and Livitz (2012) also argue that non-nominative arguments in Russian move to a specifier position above TP that is not associated with information status (Major Subject Phrase in Livitz 2006 and Aboutness Phrase in Wood and Livitz 2012). In arguing for this, they site is the ability for possessor PPs to be able to control into an adjunct phrase that is adjoined high in the clause, as shown in (i).

- (i) [ PROi/\*j podnjavšis’ na goru ] u menjai sletela šljapaj . *Russian*  
 [ climbed on mountain ] at me<sub>GEN</sub> flew-off hat<sub>NOM</sub>  
 ‘Having climbed the mountain, my hat flew off.’ (Babby and Franks 1998: 489)

Babby and Franks (1998) show that dative Experiencers can also control into these adjuncts, as shown in (ii)

- (ii) Vspominaja eti vstreči, mne dumaetsja, čto... *Russian*  
 recalling those meetings me<sub>DAT</sub> thinks<sub>3.SG.REFL</sub> that  
 ‘Recalling those meetings, it seems to me that...’ (Babby and Franks 1998: 511)

Unfortunately for any analysis which argues for a position for NNSs higher than TP, this does not actually diagnose a higher position, because nominative subjects, which are presumably in Spec TP, can also control into these high-adjoined adjuncts. This is shown in (iii).

- (iii) Pročitav knigu, otec ubedilsja v nevinnosti osuždennogo. *Russian*  
 read<sub>PART</sub> book father<sub>NOM</sub> convinced<sub>3.SG.REFL</sub> in innocence defendant  
 ‘Having read the book, father became convinced of the defendant’s innocence.’  
 (Babby and Franks 1998: 502)

Spec FinP, the new syntactic object [DP FinP] can be labeled because Fin has a nominal ([+N]) feature. This feature on Fin is what Rizzi and Shlonsky (2006) propose satisfies the Subject Criterion.<sup>22</sup> As discussed in Chapter 1, I assume, following Preminger (2011), that Agree between the  $\varphi$ -probe on T and a DP Goal is an obligatory operation, but it may fail. When Agree fails [u $\varphi$ ] is left unvalued, and the morphological component supplies it with a default value isomorphic with third person singular neuter. This will become relevant when discussing the non-verbal psych predicates in Section 3.3.1.

### 3.3.1 Dative subjects of psych verbs

In Section 2 I argued that subjects of psych verbs (Rizzi and Belletti's Class III) and the subjects of non-verbal psych predicates are merged in Spec ApplP and have inherent DAT case. Via Split Feature Inheritance, the [u $\varphi$ ] is inherited by T but Fin retains an EPP feature. When this feature probes for an XP to satisfy it, it encounters the dative Experiencer which then moves to Spec FinP.

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<sup>22</sup> Rizzi and Shlonsky (2006) point to the French *que/qui* alternation, wherein subject-headed relatives have the *qui* complementizer, and argue *-i* morpheme is an overt realization of the Finiteness head with this nominal feature:

(i)  $-i$  : [+Fin], [+N]

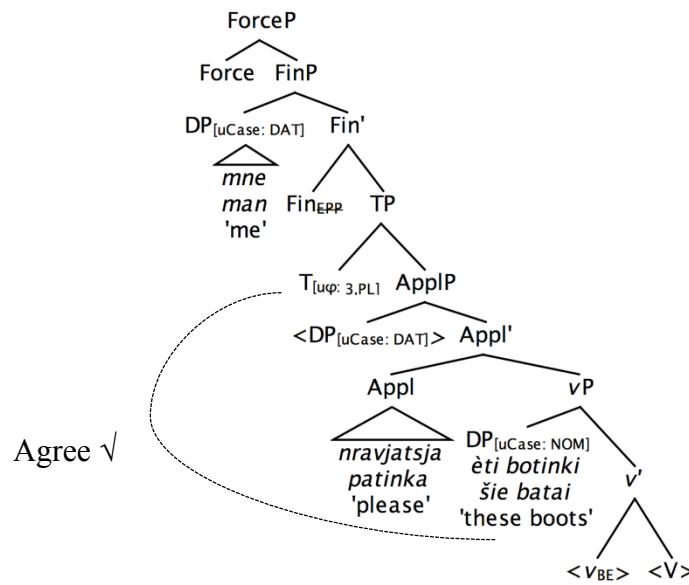
(71) a. **Mne** nravjatsja èti botinki.  
 me<sub>DAT</sub> please<sub>3.PL</sub> these boots<sub>NOM</sub>  
 ‘I like these boots.’

Russian

b. **Man** patinka šie batai.  
 me<sub>DAT</sub> please<sub>3.PL</sub> these boots<sub>NOM</sub>  
 ‘I like these boots.’

Lithuanian

c.



The [uφ] probe on T agrees with the lower DP Theme because the Experiencer DP, while closer, is unavailable for Agree because it bears DAT. As a consequence, the lower Theme is assigned NOM.

In Lithuanian, the Theme object of psychological verbs *reikėti* ‘to need’ and *trūkti* ‘to lack’ have GEN instead of NOM.

(72) a. **Man** reikia laiko.  
 me<sub>DAT</sub> need<sub>3SG</sub> time<sub>GEN</sub>  
 ‘I need time.’

Lithuanian

b. **Man** trūksta laiko.  
 me<sub>DAT</sub> lack<sub>3SG</sub> time<sub>GEN</sub>  
 ‘I lack time.’

I assume that this GEN is of the type described by Kagan (2012) as Irrealis Genitive. Kagan (2012) unifies the Genitive of Negation and the Intensional Genitive in (73) under the umbrella of Irrealis Genitive.

(73) Intensional Genitive:

a. Ivan xočet mira.  
 Ivan<sub>NOM</sub> want<sub>3SG</sub> peace<sub>GEN</sub>  
 'Ivan wants peace.'

*Russian*

b. Jonas nori taikos.  
 Jonas<sub>NOM</sub> want<sub>3SG</sub> peace<sub>GEN</sub>  
 'Jonas wants peace.'

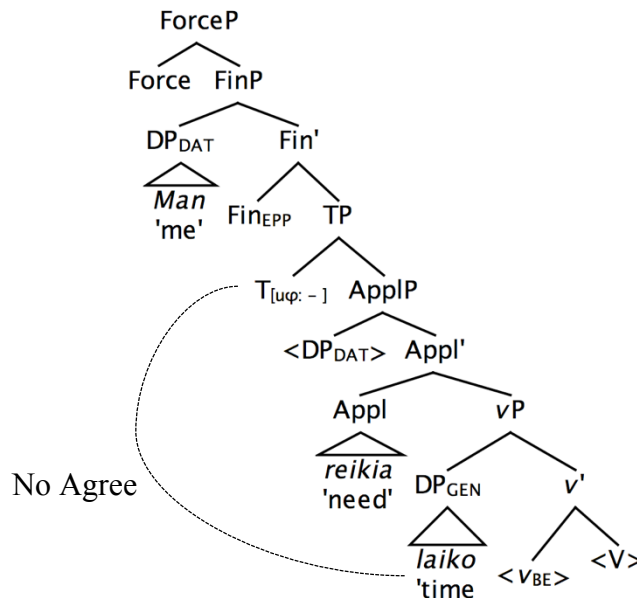
*Lithuanian*

These objects share the following semantic traits with objects bearing the genitive of negation: i) they denote properties, and ii) they lack existential commitment (Kagan 2012: 80). In the tree in (74) below, by the time that [u $\phi$ ] on T probes past the Experiencer, the Theme already bears GEN. I leave the exact mechanism behind the assignment of Irrealis Genitive for future research but note that in the examples in (72) it appears to be a non-structural case.

(74) a. Man reikia laiko  
 me<sub>DAT</sub> need<sub>3SG</sub> time<sub>GEN</sub>  
 'I need time.'

*Lithuanian*

b.



### 3.3.2 Dative subjects of non-verbal psych predicates

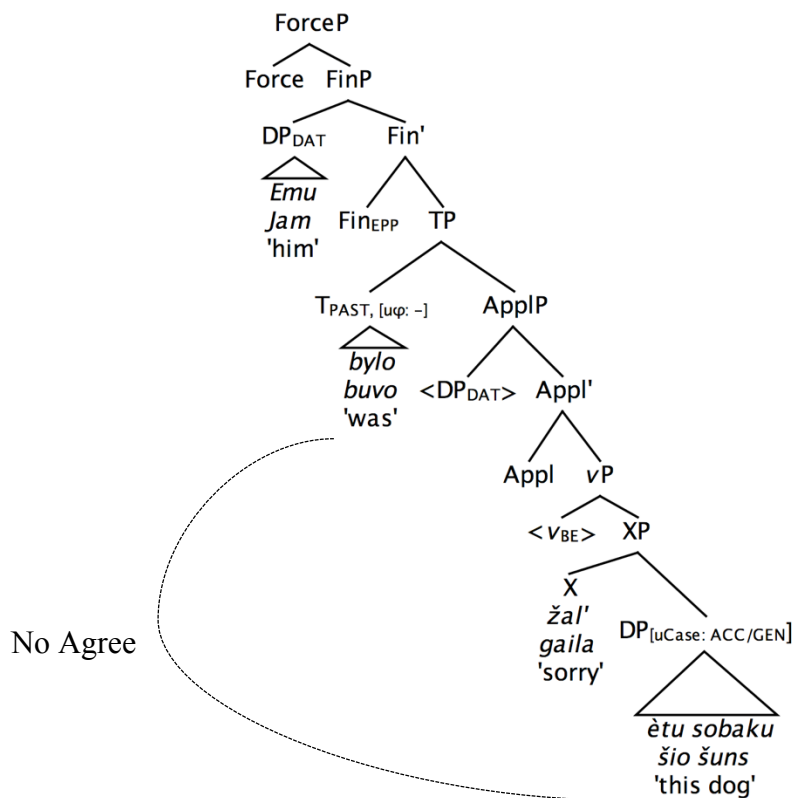
In the derivation of a non-verbal psych predicate, the same steps occur. The Appl selects a  $vP$  headed by a  $v_{BE}$  which has selected an XP headed by the non-verbal psych predicate. The Theme complement of this head is assigned ACC or GEN. T inherits  $[u\phi]$  from Fin, but not EPP, and the highest argument, the Experiencer, moves to Spec FinP.

(75) a. Emu bylo žal' ètu sobaku.  
 him<sub>DAT</sub> was-AGR sorry this dog<sub>ACC</sub>  
 'He felt sorry for this dog.'

Russian

b. Jam buvo gaila šio šuns.  
 him<sub>DAT</sub> was-AGR please<sub>3.SG</sub> this dog<sub>GEN</sub>  
 'He felt sorry for this dog.'

Lithuanian



Here, we can see that T is unable to have its  $[u\phi]$  features valued by any of the DPs because they are all already assigned case. Consequently, the past tense form of the copula in T has non-agreeing verbal morphology.

In this section, I have argued that even though the NNS appears pre-verbal in discourse neutral contexts, it does not move to Spec TP, the canonical subject position. Instead, it moves to Spec FinP, a position in the CP not associated with Information Structure. Split Feature Inheritance allows for Fin to have an EPP feature and T to only have [u $\phi$ ]. The dative Experiencer is merged in at Spec ApplP and moves to Spec FinP. If the lower Theme is unvalued for case, T will agree with it and the verb matching verbal morphology. In the next section, I discuss the role that Split Feature Inheritance plays in these constructions in more detail.

#### **4. A closer look at the role and nature of features**

In this section I will discuss why it might be the case that Feature Inheritance is not triggered, leaving [u $\phi$ ] on Fin, and how this is related to another case in which features have been proposed to be split, the Person Case Constraint (PCC).

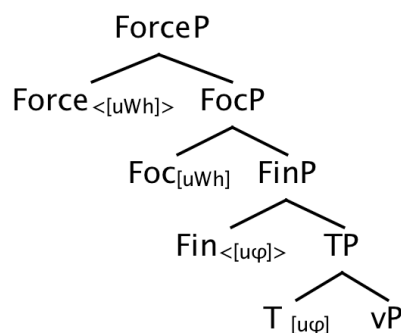
##### *4.1 Triggering Feature Inheritance*

In Section 1.2 above, following Ouali (2006) and others, I argued that Feature Inheritance is an optional process, and that Fin can optionally keep [u $\phi$ ] and EPP, but I did not discuss why Feature Inheritance might be triggered in the first place. One indirect explanation comes from Richards (2008b), who points out that no two phase heads can be adjacent to one another because this would result in uninterpretable features not being valued, so Feature Inheritance must occur to allow space for features on phase heads to Probe.

For a finite matrix clause, I maintain that Force, responsible for determining the nature of the clause (e.g. indicative, subjunctive, interrogative, imperative, etc) merges and contains features such as [Q] in interrogative clauses. As is currently standard in Minimalism, wh-

movement (or wh-operator movement) is motivated by an EPP feature associated with an uninterpretable [uWh] or [uQ] feature on C. I propose then that it is Force that initially bears this feature and Foc which inherits it. Wh-movement then, is movement to Spec FocP (Rizzi 1997 also argues for question operator movement to Spec FocP, but not in the context of Feature Inheritance). This inheritance of features from Force to Foc is what triggers inheritance from Fin to T. If bearing an uninterpretable feature is the hallmark of a phase head, as proposed by Gallego 2010, then this feature-inheriting cascade maintains the proper alternation of phase heads alternating with non-phase heads in the CP field. This is schematized in (70).

(76)



Allowing Feature Inheritance to apply in this manner predicts when [uφ] will appear on Fin and when it will appear on T. If a clause has a Force head, then T can inherit its uninterpretable features from Fin, if a clause has no Force head, then it will not inherit any features. If non-finite clauses are clauses without sentential force, then perhaps they can be represented as a FinP in some cases without a Force head layer.<sup>23</sup> This would explain why we only see structural dative case in non-finite constructions: the Russian dative infinitive and the Lithuanian participial adjunct clause. In the next chapter, I will argue that structural DAT is assigned to the NNSs of these constructions via agree with [uφ] on Fin.

<sup>23</sup> Thank you to Edith Aldridge for pointing out that this would also seem to imply that both Force and Fin(itness) are phase heads. I leave this for future thought, and note that I do not see any perils for the analysis if this is the case.

#### 4.2 Split Feature Inheritance and the Person Case Constraint

I will end this section with a brief discussion of another instance in which features have been proposed to be split, the phenomenon of the Person Case Constraint (PCC) (first discussed by Bonet 1991). Because PCC effects occur when an argument that has inherent case is structurally higher than an argument without inherent case and one functional head probes them both, we might expect to see this phenomenon in Russian and Lithuanian. For example, in Icelandic the nominative Theme in “quirky” case constructions are prohibited from being first or second person.

- (77) \*Henni leiddumst við. *Icelandic*  
 her<sub>DAT</sub> was.bored.by<sub>IPL.PAST</sub> we<sub>NOM</sub>  
 ‘She was bored with us.’ (Taraldsen 1995: 309)

This is often attributed to the DAT subject “blocking” agreement between T and the lower Theme (see Boeckx 2000). One solution for accounting for this is to assume that T can probe for person and number separately. Béjar and Rezac (2003) account for PCC effects in Romance ditransitive constructions in this way. In (78), the second person singular clitic *te* is not permitted as the direct object.

- (78) Je le /\*te lui ai présenté. *French*  
 I<sub>NOM</sub> him<sub>3.ACC</sub> /\*you<sub>2.ACC</sub> her<sub>3.DAT</sub> have<sub>1.SG</sub> introduced  
 ‘I introduced him/\*you to her.’ (Béjar and Rezac 2003: 49)

This is because when the person probe [ $\pi$ ] on  $\nu$  probes into the VP, it first encounters the indirect object and is unable to agree with it because it is inherently marked DAT, as in (79a). Next, the number probe [#] looks past the indirect object and agrees with the direct object, valuing it ACC.

- (79) a. 

-----[ $\pi$ ]
DAT $\nu$ t <sub>DAT</sub> ACC

  
 b. 

----- [#]
-----[ $\pi$ ]
DAT $\nu$ t <sub>DAT</sub> ACC

(Béjar and Rezac 2003: 54)

The failed Agree between [ $\pi$ ] and the DAT DP results in default person features on  $v$ . As long as the lower DP is third person, there is no mismatch between the default person and the third person features. Mismatch, and therefore the PCC effect, arises when the ACC DP is in a different person.

In this thesis, I have referred to person and number probes collectively as [ $u\phi$ ] and assumed that the processes of Feature Inheritance and Agree involve [ $u\phi$ ] as one unit. And indeed, there seems to be no reason to think that person and number probe separately in Russian and Lithuanian. Unlike in Icelandic, no PCC effects arise when the Theme of a psychological verb is first or second person, as (80) shows for first person in Lithuanian and (81) for second person in Russian (Baker 2008).<sup>24</sup>

(80) Aš jiems rūpiu. *Lithuanian*  
 I<sub>NOM</sub> them<sub>DAT</sub> care<sub>1.SG</sub>  
 ‘They care about me.’

(81) Ej ty nraviš’sja *Russian*  
 her<sub>DAT</sub> you<sub>NOM</sub> please<sub>2.SG</sub>  
 ‘She likes you.’

One question that arises, though, is why [ $u\phi$ ] is able to effectively ignore the higher Experiencer and enter into an Agree relation with the lower Theme. I tentatively propose that Split Feature Inheritance helps to avoid the scenario where T attempts to Agree with the higher DP and then must probe again.<sup>25</sup> If the EPP on Fin and [ $u\phi$ ] on T probe simultaneously, then the DAT DP is equidistant to both and can move to Spec FinP to satisfy EPP before T probes it. Derivations in which this does not happen simply crash.

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<sup>24</sup> One question that does arise with first and second person Themes is why they tend to appear pre-verbally in the constructions in (80) and (81). I leave this as a casual observation and topic for future investigation, but speculate that perhaps this is connected to [person] features needing to be local to certain projections in the left periphery, which have been argued to be connected to speech act participants, as discussed in Bianchi (2006) for Plains Cree and Italian (see also Cinque 1999, Speas 2004, and the references therein).

<sup>25</sup> Thank you to Edith Aldridge for suggesting that splitting features might obviate PCC effects.

## 5. Conclusion

In this chapter, we have seen that one group of non-nominative Subjects in Russian and Lithuanian can be characterized as NNSs with inherent case. Inherent NNSs are subjects of finite, realis psychological verbs and non-verbal psychological predicates. I have argued that these subjects are merged in the Spec of ApplP, and that psychological verbs and non-verbal predicates have different argument structures. Namely, Themes of psychological verbs are merged in Spec *v*P and Themes of non-verbal predicates are complements in a phrase headed by the predicate. I introduced Split Feature Inheritance and discussed its implications. Finally, we looked at derivations of the constructions that have dative Experiencers in Russian and Lithuanian and accounted for the case of the arguments and the subject's ultimate position in Spec FinP.

I would like to conclude with a discussion of how we might expect inherent NNSs to behave with respect to one of the more standard subjecthood diagnostics, anaphor binding. In Chapter 4, I will report the results of an experiment looking at dative subjects of psychological verbs and non-finite predicate. I will also discuss these results in the context of current theories of anaphor binding in Russian. We will see that Nikolaeva's (2014) account, which argues that pronouns and anaphors raise to higher positions in the structure, re-configuring the c-command relationship with antecedents, helps account for the differences between NNSs. In this chapter I have argued that psychological verbs and non-verbal predicates have different argument structure. I will argue in Chapter 4, that because the Themes are in a different position, we expect to see differences in anaphor binding between psychological verbs and non-verbal predicates. As I show below, this prediction seems to hold.

As I briefly mentioned in Chapter 1, anaphors are subject-oriented in Russian, as shown by the fact that the c-commanding object in (82) cannot bind the anaphor in the PP ‘about self’.

- (82) Militционер<sub>i</sub> rassprašival arestovannogo<sub>j</sub> o **sebe**<sub>i/\*j</sub> *Russian*  
 policeman<sub>NOM</sub> questioned suspect<sub>ACC</sub> about **self**<sub>PREP</sub>  
 ‘The policeman<sub>i</sub> questioned the suspect<sub>j</sub> about himself<sub>i/j</sub>.’ (Rappaport 1986:101)

The question is whether dative Experiencers count as subjects in this respect. As (83) though (85) show, subjects of psych verbs in both languages are not able to bind the reflexive possessive determiner *svoj/savo* ‘self’s’. My informant for Lithuanian reports outright ungrammaticality in Lithuanian, and experimental evidence from Germain (2015b) reports only a preference for pronominal possessors in Russian.

- (83) Man patinka mano/\*savo vadovelis. *Lithuanian*  
 me<sub>DAT</sub> likes<sub>3sg</sub> my/ self’s textbook<sub>NOM</sub>  
 ‘I like my textbook’

- (84) Devuške ne nraivitsja ???**svoj/eë** sviter. *Russian*  
 girl<sub>DAT</sub> NEG please<sub>3sg</sub> **self’s/her** sweater<sub>NOM</sub>  
 ‘The girl doesn’t like her sweater.’ (Germain 2015:14)

- (85) a. \*Vane nraivatsja **svoj** kollegi. *Russian*  
 Vanja<sub>DAT</sub> please<sub>3PL</sub> **self’s**<sub>NOM</sub> colleagues<sub>NOM</sub>  
 ‘Vanja likes his colleagues.’

- b. Vane nraivatsja **ego** kollegi.  
 Vanja<sub>DAT</sub> please<sub>3PL</sub> **his** colleagues<sub>NOM</sub>  
 ‘Vanja likes his colleagues.’ (Nikolaeva 2014: 63)

For Experiencers of non-verbal psych predicates like *gaila/žal* ‘sorry’, on the other hand, it seems to be the case that either possessor is acceptable in Russian and Lithuanian, as (86) and (87) show.<sup>26</sup>

- (86) Mne žal’ svoju/moju mamu. *Russian*  
 me<sub>DAT</sub> sorry self’s/my<sub>ACC</sub> mom<sub>ACC</sub>  
 ‘I feel sorry for my mom’

<sup>26</sup> In (87), the word ‘cousin’ *pusbrolio*, is misspelled as *pusbralio*.

- (87) a. Man gaila savo pusbraliu. *Lithuanian*  
 me<sub>DAT</sub> sorry self's cousin<sub>GEN</sub>  
 'I feel sorry for my cousin'  
 ([http://banga.tv3.lt/lt/2forum.showPosts/559754.121..14262853-=\(659206099\)](http://banga.tv3.lt/lt/2forum.showPosts/559754.121..14262853-=(659206099)))
- b. Man gaila mano tauto.  
 me<sub>DAT</sub> sorry my nation<sub>GEN</sub>  
 'I'm sad for my nation'  
 (<http://www.delfi.lt/news/daily/emigrants/disidentas-lkazakevicius-man-gaila-mano-tautos.d?id=48145883>)

The examples in (83) through (87) bring up a second question for binding by dative subjects in Russian and Lithuanian, the “anti-subject” orientation of pronouns (Vikner 1985, Nikolaeva 2014). In (88), the pronominal possessive determiner *jo* ‘his’ cannot be interpreted as co-indexed to the nominative subject.

- (88) Jis<sub>i</sub> nori savo/jo\*<sub>i/j</sub> knygo *Lithuanian*  
 he<sub>NOM</sub> want<sub>3.SG</sub> self's/his book<sub>GEN</sub>  
 'He<sub>i</sub> wants his<sub>i/j</sub> book.'

In the case of the psychological verbs, the dative Experiencer seems to be able to bind a pronoun without any issues.

The facts at hand seem to show that not all dative Experiencers can bind anaphors. In the next chapter, I will discuss a different set of dative subjects, and argue that these are assigned DAT structurally. At the end of that chapter we will review the current understanding of their ability to bind anaphors. In Chapter 4, we will return to the argument structure of the dative Experiencers and discuss how the proposals in this chapter account for the pattern of anaphor binding across subjects.

## Chapter 3: Structural non-nominative subjects

### 1. Introduction

#### *1.1 Goals of the chapter*

In the previous chapter, we saw that the wide array of non-nominative subjects (NNS) in Russian and Lithuanian make up two categories, inherent NNSs and a second group which I argue are assigned case structurally. I follow Greenberg and Franks (1991), Franks (1995), Moore and Perlmutter (2000), Perlmutter and Moore (P&M) (2002), among others, who argue that the source of case on dative subjects in Russian can differ. This chapter focuses on the analysis of these structural NNSs. After presenting arguments for structural case, I propose a specific argument structure for each construction highlighting which functional head assigns the subject DP structural case. In Section 3, I discuss the “subject” movement that these subjects undergo. With the distinction drawn between Structural and Inherent NNSs, this chapter establishes a foundation for subsequent experimental investigation into the behavior of NNSs with respect to the classic, but not universally accepted, subjecthood diagnostic of anaphor binding. We will be able to compare three different subject types: structural NNSs, inherent NNS, and nominative subjects (NS).

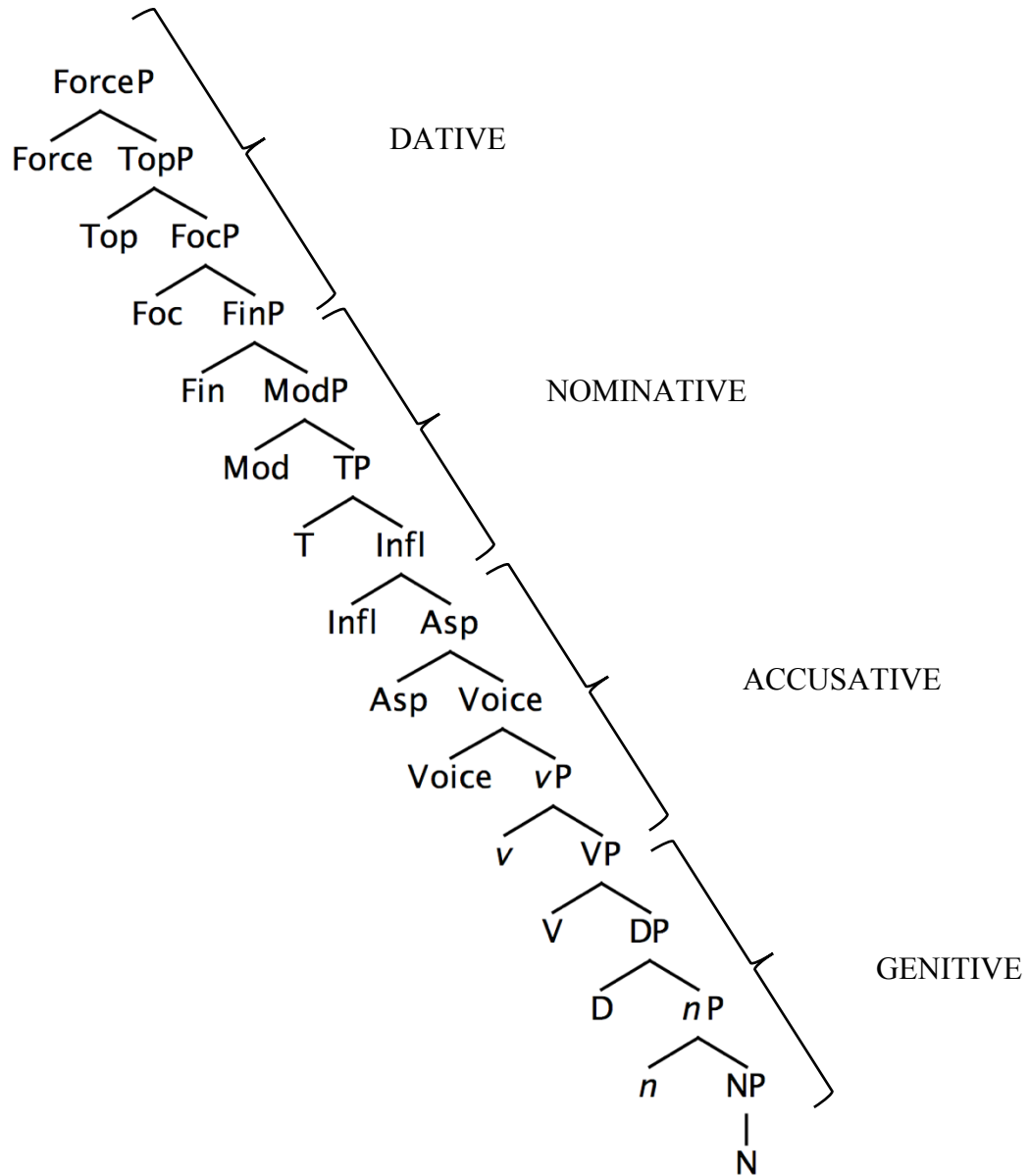
I now give a preview of the analysis for how non-nominative subjects are assigned different structural cases. I show how this proposal for the assignment of varying subject cases is dependent on the operation of Feature Inheritance (Chomsky 2008, Richards 2008b), which was proposed independently of case theory. I end this section with a review of the NNSs under discussion in this chapter.

## *1.2 Preview of the analysis*

This thesis argues for a distinction between two classes of non-nominative subjects: (i) inherent case-marked NNSs, and (ii) structural case-marked NNSs. As we will see, the second group of NNSs is quite varied, with Lithuanian NNSs being assigned dative (DAT), accusative (ACC), or genitive (GEN) case. What unifies them is an analysis of non-nominative case as structural case, assigned by the same mechanism: Agree with a head bearing a set of  $[u\phi]$ . The morphological form that structural case takes is determined solely by the location of  $[u\phi]$  in the clause. That ACC or GEN is assigned structurally by a  $v$  or D head is an uncontroversial notion for objects and possessors. What I argue in this chapter is that subjects as well can end up in an Agree relation with these heads and be assigned ACC and GEN.

The assignment of a structural case other than nominative (NOM) to a subject occurs when the  $[u\phi]$  that would normally be hosted by (T)ense via C-to-T Feature Inheritance is located in a different domain of the clause. When this  $[u\phi]$  happens to be in the left periphery of the clause, the form that surfaces on the DP is DAT, when it is in the middle field it is NOM, when it is lower in the clause (the domain of event or argument structure), it is ACC, and when it is in the nominal domain it is GEN. This is shown schematically in (1) below.

(1)

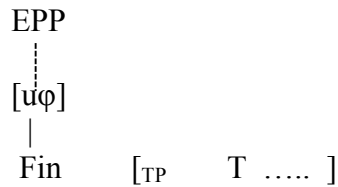


If we assume that only phase heads enter the derivation with their own set of  $[u\phi]$ , this set of features can only appear on non-phase heads lower in the clause via Feature Inheritance. Feature Inheritance in the classical sense implies that all features, including EPP, are inherited together.

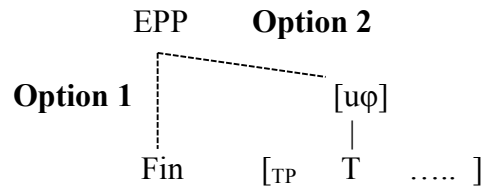
Recall from Chapter 2 that Russian and Lithuanian are languages with Split Feature Inheritance, where  $[u\phi]$  can be inherited by itself, abandoning the EPP on a higher head. In finite

clauses, this gives us two options: 1) T inherits [uφ] and the EPP stays on Fin, or 2) T inherits with both [uφ] and EPP.

(2) Step 1: Fin Merges with TP



Step 2: Feature Inheritance applies



The first option is what allows for a non-nominative subject (or other XP) to move to Spec FinP to check EPP without agreeing with [uφ]. We can now account for why the inherently marked dative DP in (3) is pre-verbal in discourse neutral contexts (i.e. in the “subject” position), while the verb agrees with nominative DP, without proposing that the EPP does not exist in these constructions or that a null expletive satisfies it. The dative DP moves to Spec FinP, a left peripheral position not associated with information structure, and the [uφ] probe on T agrees long-distance with the Theme.

- (3) a. **Mne** nraŋjatsja èti botinki. *Russian*  
 me<sub>DAT</sub> please<sub>3,PL</sub> these boots<sub>NOM</sub>  
 ‘I like these boots.’
- b. **Man** patinka šie batai. *Lithuanian*  
 me<sub>DAT</sub> please<sub>3,PL</sub> these boots<sub>NOM</sub>  
 ‘I like these boots.’

At the end of Chapter 2, I discussed what the conditions are for Feature Inheritance to occur. When a clause-typing Force head is present, any lower C heads inherit its features,

triggering a cascade that results in Fin passing its features along to T. When Force is not present, no Feature Inheritance takes place from Fin. I follow Adger (2007) in assuming that non-finite clauses can be truncated at FinP, (instead of just at TP or VP), and that Rizzi’s (2007) Fin head can have a [+/- finite] feature.<sup>1</sup> In this chapter, I introduce two new complexities to this system. First, it is just not Force or a C head that triggers inheritance from Fin to T. Embedding a FinP means that there are higher heads that can trigger Feature Inheritance like Force does, and whether inheritance happens depends on the selecting head. Second, we will see that when a T layer is not present the features of Fin are simply inherited by whatever heads the phrase that Fin selects. This comes into play during the discussion of the Lithuanian non-agreeing participial clauses. Next, I present the constructions whose case assignment and argument structure properties I address in this chapter.

### *1.3 Review of structural non-nominative subjects*

In Chapter 2, I introduced the dative, accusative, and genitive subjects under discussion in this thesis. In contrast with the dative Experiencers, these are subjects of non-finite predicates. In the finite versions in (b) of (2) through (6), the subject agrees with the verb and the subject is assigned nominative case.

- (4) a. *čtoby* purpose clause (DAT) *Russian*  
       *čtoby*    **nam**    *uexat’*    *na vokzal.*  
       in.order   *we*<sub>DAT</sub>   *go-out*<sub>INF</sub>   *to train station*  
       ‘in order for us to go out to the train station.’ (P&M 2002: 621)
- b. *čtoby*    **my**    *uexali*    *na vokzal.*  
       in.order   *we*<sub>NOM</sub>   *went-out*<sub>3,PL</sub>   *to train station*  
       ‘so that we went out to the train station.’

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<sup>1</sup> See also Bianchi (2003) for discussion of Fin as the logophoric center of a clause. In her system, tense and speech event variables in non-finite clauses are determined anaphorically by the values of the matrix clause. The Fin head provides the “anchor” for transmitting these values.

- (5) Dative infinitive (DAT) (aka. Main Clause Infinitival (Fleisher 2006)) *Russian*
- a. **Mne** ne sdat' ekzamen. (P&M 2002: 620)  
 me<sub>DAT</sub> NEG pass<sub>INF</sub> exam<sub>ACC</sub>  
 'It's not (in the cards) for me to pass the exam.'
- b. **Ja** ne sdala ekzamen.  
 I<sub>NOM</sub> NEG passed<sub>3.SG.FEM</sub> exam<sub>ACC</sub>  
 'I didn't pass the exam.'
- (6) Adjunct non-agreeing participial clause (DAT) *Lithuanian*
- a. [**Vaikams** sugrižus], pragydo lakštingala.  
 child<sub>DAT.PL</sub> return<sub>ACT.PERF.-AGR</sub> started.singing<sub>3.SG</sub> nightingale<sub>NOM.SG</sub>  
 'When the children came back, a nightingale burst into singing.'  
(Ambrazas et al. 1997: 363)
- b. Kai **vaikai** sugrižo, pragydo lakštingala.  
 when child<sub>NOM.PL</sub> returned<sub>3</sub> started.singing<sub>3.SG</sub> nightingale<sub>NOM.SG</sub>  
 'When the children came back, a nightingale burst into singing.'
- (7) Embedded non-agreeing participial clauses (ACC) *Lithuanian*
- a. Sakiau [tėvą gerai gyvenant]. (Ambrazas et al. 1997: 367)  
 say<sub>1SG.PAST</sub> father<sub>ACC</sub> well live<sub>ACT.PROG.-AGR</sub>  
 'I said father lived well.'
- b. Sakiau kad, tėvas gerai gyveno. *Lithuanian*  
 say<sub>1SG.PAST</sub> that father<sub>NOM</sub> well lived<sub>3.SG</sub>  
 'I said that father lived well.'
- (8) Inferential Evidential (GEN) *Lithuanian*
- a. **Ingos** nuraminta vaikas. (Lavine 2010: 116)  
 Inga<sub>GEN</sub> calm.down<sub>PASS.PERF.-AGR</sub> child<sub>NOM</sub>  
 'Inga must have calmed down the child.'
- b. **Inga** nuramino vaiką.  
 Inga<sub>NOM</sub> calmed.down<sub>3.sg</sub> child<sub>ACC</sub>  
 'Inga calmed down the child.'

The Lithuanian constructions in (6) through (8) all make use of participial forms of the main predicate. The verb in the Inferential Evidential in (8) is a past participle (-*ma* or -*ta*), and the verbs of the participial clauses are non-agreeing and active (-*ant* or -*us*). Before diving into these

constructions further, I provide the relevant subset of the participle paradigm in Lithuanian in Table 1 below.

Table 1: Lithuanian singular participles from *padaryti* ‘do’

Voice	Non-perfect (progressive)	Perfect
Active	Padar-ąs (M) Padar-anti (F) Padar-ant (-AGR)	Padar-ęs (M) Padari-usi (F) Padari-us (-AGR)
Passive	Padaro-mas (M) Padaro-ma (F, N/-AGR <sup>2</sup> )	Padary-tas (M) Padary-ta (F, N/-AGR)

The table below gives a summary of the subjects we have already discussed in this thesis, nominative and inherent NNS. I return to this table at the end of Section 2, after discussing the case properties of the second group of NNSs, structural NNSs.

Table 2: Nominative and inherent non-nominative subjects in Russian and Lithuanian

Case Type	Construction	Subject Case	Example <sup>3</sup>	Arguments for Case Type
Nominative	Finite clauses	Structural NOM	<b>Aš</b> nusipirkau bilieta. I <sub>NOM</sub> bought <sub>1.SG</sub> ticket <sub>ACC</sub> ‘I bought a ticket.’	<ul style="list-style-type: none"> <li>• Subject-verb agreement</li> <li>• Not thematically-linked</li> <li>• GenNeg is assigned</li> </ul>
	Psychological verbs	Inherent DAT	<b>Man</b> patinka ši kava. me <sub>DAT</sub> please <sub>3.SG</sub> this coffee <sub>NOM</sub> ‘I like this coffee.’	<ul style="list-style-type: none"> <li>• Thematically-linked</li> <li>• Survives under A-movement</li> </ul>
Inherent non-nominative	Non-verbal psych predicates		<b>Man</b> gaila šalies. me <sub>DAT</sub> please <sub>3.SG</sub> country <sub>GEN</sub> ‘I feel sorry for the country.’	<ul style="list-style-type: none"> <li>• No GenNeg (Russian only)</li> <li>• No GEN of quantification (Russian only)</li> </ul>

<sup>2</sup> The neuter noun paradigm in Lithuanian has been assimilated into the feminine declension. As we will see, the old neuter form of these participial appears in non-agreeing contexts. Therefore, I have glossed it here as N/-AGR. Also, not included in this table are the plural forms which have different forms for masculine and feminine.

<sup>3</sup> Here I give examples in Lithuanian.

In this chapter, I argue that the subjects in (2) through (6) Agree with [ $u\phi$ ] on a head other than T. This feature is blocked from being inherited by T either because T is not present or because Feature Inheritance does not occur in non-finite clauses (see Section 4.1 for discussion). If this [ $u\phi$ ] had been inherited by T, the DP that agreed with it would have been assigned NOM. The mechanism of Feature Inheritance allows for these uninterpretable features to appear on a head other than T, and when this occurs a case other than NOM is assigned. In Section 2, I discuss the idea that these structural cases are limited to certain positions in the clausal spine or inside a DP. Next, I provide arguments to show that these NNSs are assigned case structurally and an analysis that proposes a unified explanation for how it could be possible for there to be any structural case for a full argument subject (i.e. not an agentive by-phrase) beyond NOM.

## 2. Case and argument structure

### 2.1 Arguments for structural non-nominative case

Here I provide arguments to show that DAT, ACC, and GEN on NNSs are structural and not inherent. As we will see, the existence of a structural DAT in Russian has been argued for by many others, while ACC and GEN have been discussed to a lesser degree.

#### 2.1.1 Dative in Russian infinitivals

Greenberg and Franks (1991) and Franks (1995) are some of the first researchers to suggest that DAT on the subject of the infinitival in (9) below has a structural source. They propose that [-AGR] I assigns DAT, rather than NOM to its specifier.

- (9) Mne uxodit'. *Russian*  
 me<sub>DAT</sub> leave<sub>INF</sub>  
 'I have to leave.'(Franks 1995: 250)

That this DAT is different from the inherent DAT, exemplified in (8) and discussed in Chapter 2, is argued first by Greenberg and Franks (1991). Although Greenberg and Franks do not discuss the Experiencer subject of the full psychological verb in (11), which agrees with the NOM Theme, I give them the same analysis with respect to case assignment in this thesis.

(10) Emu žal' ètu devušku. *Russian*  
 him<sub>DAT</sub> sorry that girl<sub>ACC</sub>  
 'He feels sorry for that girl.'  
(Greenberg and Franks 1991: 71)

(11) Mne nraivit'sja Saša. *Russian*  
 me<sub>DAT</sub> like<sub>3.SG.REFL</sub> Sasha<sub>NOM</sub>  
 'I like Sasha.'

For Greenberg and Franks (1991), the fact that the dative infinitival is only present in Russian and Polish (to a restricted degree) while the dative Experiencer of impersonal predicates is found in every Slavic language, means that the two constructions merit different analyses. Noting that their thematic role is restricted in the same way that indirect objects are most commonly restricted to the role of Goal, Greenberg and Franks (1991) assume that the DAT assigned to the Experiencers in (10) and (11) is assigned in the Spec of VP. Moore and Perlmutter (2000) take up this point and draw on evidence from secondary agreement between the dative subject and predicate adjectives, as shown in (12) below, and the ability for these datives to be controlled to argue that dative subjects of infinitives are “true” subjects.

(12) Toj rukopisi ne byt' opublicovannoj zarubezhnym *Russian*  
 that manuscript<sub>DAT.F</sub> NEG be<sub>INF</sub> published<sub>INST.F.SG</sub> foreign  
 izdatel'stvom.  
 publishing-house<sub>INST</sub>  
 'It's not (in the cards) for that manuscript to be published by a foreign publishing house.'  
(M&P 2000: 393)

In her argument for structural DAT case assignment by a null Mod(al) head, Kondrashova (1994) points out that it alternates with ACC in passive constructions. In (13b), passive *v* is unable to assign ACC to the Theme, *Vasja*, instead it raises and is assigned DAT.

- (13) a. Drugu ne obmanut' Vasju *Russian*  
 friend<sub>DAT</sub> NEG deceive<sub>INF</sub> Vasja<sub>ACC</sub>  
 'It's not (in the cards) for a friend to deceive Vasja.'
- b. Vasje ne byt' obmanutym drugom  
 Vasja<sub>DAT</sub> NEG be<sub>INF</sub> deceived<sub>INST</sub> friend<sub>INST</sub>  
 'It's not (in the cards) for Vasja to be deceived by a friend.'
- (Kondrashova 1994: 249)

This fits Bruening's (2007) diagnostic for structural case (discussed in Chapter 2, Section 2.1) in that the lexical items are held constant and the arguments still have the same thematic roles, and when the structure is changed (*v*<sub>PASS</sub> is merged instead of active *v*) the case of the Theme argument is different.

One other piece of evidence for these subjects being assigned a structural case is that they can be assigned the Genitive of Negation (GenNeg). Recall from Chapter 2 that dative Experiencers cannot be assigned GEN in GenNeg contexts, as shown in (14b).

- (14) a. Saše ne slyšno pesni. *Russian*  
 Sasha<sub>DAT</sub> NEG hear<sub>-AGR</sub> song<sub>GEN</sub>  
 'Sasha does not hear the song.'
- b. \*Saši ne slyšno pesni.  
 Sasha<sub>GEN</sub> NEG hear<sub>-AGR</sub> song<sub>GEN</sub>  
 'Sasha does not hear the song.'
- (Bailyn 2012: 164)

As the examples in (15) and (16) below show, subjects of unaccusatives can be assigned GEN instead of DAT under GenNeg in infinitive clauses.<sup>4</sup>

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<sup>4</sup> These infinitives are all in *čto*by purpose clauses. I follow Permuter and Moore (2002) in assuming that we can extend the same analysis for the source of DAT to both so-called Main Clause Infinitivals and purpose clauses. Both are assigned by a non-finite C, but main clause infinitivals are bi-clausal.

- (15) Čtoby ne byt' ètogo, nado očen' s detstva sledit'... *Russian*  
 that not be<sub>INF</sub> that<sub>GEN</sub>, necessary very from childhood follow...  
 'In order that that not be, it is necessary from childhood to follow...'  
 (<http://poncini.com/userfiles/skachat-tantsi-dlya-pohudeniya-talii-cherez-torrent-5747.xml>)
- (16) Destvovat' nužno bystro, čtoby ne suščestvovat' ètogo ubljuka. *Russian*  
 act<sub>INF</sub> need fast that not exist<sub>INF</sub> that bastard<sub>GEN</sub>  
 'One needs to act fast, in order that that bastard not exist.'  
 (<http://www.goldtravel.it/esli-zhenshina-konchaet-ot-etogo-hudeyut-2163.xml>)

In Section 2.2.2 I provide an analysis in which this DAT is assigned structurally in the clause. Two developments in previous research inform this account for structural dative: (i) these infinitivals as well as other modal dative constructions are bi-clausal and raising (Fleisher 2006, Jung 2008), and (ii) the secondary dative case found in embedded clauses in Russian is assigned by a non-finite embedded C (Landau 2008). To be clear, the fact that these subjects are merged into an embedded clause does not entail that that they are assigned structural case. What this first development does is place the subject in an environment which has already been shown to be associated with structural dative case in Russian, embedded non-finite clauses.

### 2.1.2 Accusative and dative in Lithuanian participial clauses

Arkadiev (2012) makes a thorough case for why the accusative subject of the embedded verb in (7a) above is truly the subject of the embedded clause and not a raised object. As (17) below shows, transitive verbs can select these participial clauses and also license an object in the matrix clause. In (17), the matrix object is *policininką* 'policeman' and the embedded subject is *savo tėvą* 'self's father', both of which are accusative.

- (17) Jurgis patikino policininką savo tėvą gimus kaime. *Lithuanian*  
 Jurgis<sub>NOM</sub> assured<sub>3.SG</sub> policeman<sub>ACC</sub> self's father<sub>ACC</sub> be.born<sub>ACT.PERF.-AGR</sub> village<sub>LOC</sub>  
 'Jurgis assured the policeman that his father had been born in the countryside.'  
 (Arkadiev 2012: 34)

That the ACC on the subject of the embedded clause is not assigned through ECM via the matrix verb, is shown in the following. In (18a), we can see the verb *tikėti* ‘believe’ assigns instrumental (INST) case lexically. Originally observed by Gronemeyer and Usonienė (2001: 117), the matrix verb in (18b) fails to assign INST to the subject of the embedded clause, which instead bears ACC.

- (18) a. Ar tiki tuo /??ta, ką kalbu? *Lithuanian*  
 Q believe<sub>2sg.PRS</sub> that<sub>INST / \*ACC</sub> what<sub>ACC</sub> say<sub>1.SG.PRS</sub>  
 ‘Do you believe what I am saying?’
- b. Jie tikėjo [valstybę / \*valstybe jiems padėsiant ].  
 he<sub>NOM</sub> believe<sub>3sg.PST</sub> state<sub>ACC / \*INS</sub> he<sub>DAT</sub> help<sub>ACT.PROG.FUT.-AGR</sub>  
 ‘They believed the state would help them.’  
 (Arkadiev 2012: 35, citing Gronemeyer and Usonienė 2001)

That this instance of ACC is structural case can be seen in the following data in (19) through (21). As is standardly assumed, structural case can be overridden by a lexical or inherent case (Chomsky 1986, Woolford 2006, a.o.). In (19b) ACC is overridden by inherent DAT which is assigned by *reikėti* ‘need’ in the embedded clause.

- (19) a. Tėvui reikia pagalbos. *Lithuanian*  
 father<sub>DAT</sub> need<sub>3.PRS</sub> help<sub>GEN</sub>  
 ‘Father needs help.’
- b. Supratau [tėvui reikiant pagalbos].  
 understand<sub>1.sgpST</sub> father<sub>DAT</sub> need<sub>ACT.PROG.-AGR</sub> help<sub>GEN</sub>  
 ‘I understood that father needed help.’ (Arkadiev 2012: 36)

In (20), the case subject of the embedded participial clause is GEN, as ACC has been blocked here by GenNeg.

- (20) ...sako nesant lėšų jiems parengti. *Lithuanian*  
 ...say<sub>3</sub> not.be<sub>ACT.PROG.-AGR</sub> funds<sub>GEN</sub> them<sub>DAT</sub> prepare<sub>INF</sub>  
 ‘(They) say that there aren’t the funds to prepare them.’  
 (<http://www.delfi.lt/news/daily/lithuania/pareigunai-gales-dirbti-iki-vyresnio-amziaus.d?id=60560061>)

Finally, ACC in this construction can be assigned to Themes which have been promoted to the subject of a passive clause.

- (21) Girdėjau jį esant mušamą. *Lithuanian*  
 heard<sub>1.SG</sub> him<sub>ACC</sub> be<sub>ACT.PROG.-AGR</sub> beaten<sub>PASS.PROG.SG.MASC.ACC</sub>  
 ‘I heard they beat him.’ (Ambrazas 1997: 370)

Returning to the dative subject of adjunct participial clauses, I assume that their alternation with the accusative subjects of embedded clauses indicates that this DAT is also structural. When the participial clause is embedded under a finite verb, the DAT is overridden. In addition, we can see that this DAT can also be blocked in GenNeg contexts. The subject of the negated adjunct participial clause in (22) below is GEN, not DAT.

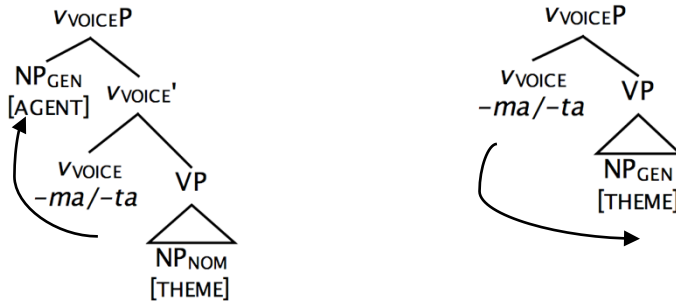
- (22) Nesant Centro vadovo, jį pavaduoja Ūkio skyriaus vadovas. *Lithuanian*  
 not.be<sub>ACT.PROG.-AGR</sub> central boss<sub>GEN</sub> him<sub>ACC</sub> replaces<sub>3</sub> Economy department boss<sub>NOM</sub>  
 ‘In the absence of the Central head, he is replaced by the head of the Department of Economy.’  
(VDU corpus)

I give an analysis for how DAT and ACC alternate when the argument-adjunct status of the participial clause changes in Section 2.2.2, and I return to the question of *why* this might be the case in Section 4.2. First, I discuss the rationale for arguing that GEN can also be a structural case assigned to NNSs.

### 2.1.3 Genitive in the Lithuanian Inferential Evidential

Lavine (2010) argues that this genitive case can be assigned by *v* to its specifier or to an embedded object lexically. He stipulates that this *v*, which is the non-agreeing participial *-ma/-ta*, cannot assign accusative case.

(23)



(Lavine 2010: 128)

The configuration in (23) is meant to account for the fact that subjects of unaccusative verbs can participate in the Inferential Evidential construction, as shown in (24).

(24) a. Čia turbūt ir gribų esama. *Lithuanian*  
here evidently even mushrooms<sub>GEN</sub> be<sub>PASS.PROG.-AGR</sub>  
'There must be mushrooms here.'

b. Ledo staiga ištirpta.  
ice<sub>GEN</sub> suddenly melted<sub>PASS.PERF.-AGR</sub>  
'The ice must have suddenly melted'

(Lavine 2010: 124)

This analysis of GEN as lexical is a revision of Lavine's (2000) proposal that this GEN is an ergative case. The argument for an ergative source for GEN in the Inferential Evidentials comes from parallels to the development of split-ergativity in Hindi as proposed by Mahajan (1994). Lavine (2000) observes that, like in Hindi, Lithuanian does not use the verb *have* in periphrastic constructions (the only auxiliary is *būti* 'be') and it also has oblique subjects in other constructions. Lavine (2000) argues that the old Lithuanian forms \*/-mo/ and \*/-to/, which Ambrazas (1978) notes were nominalizing, deverbal suffixes, have been reanalyzed as morphemes with the lexical property of assigning ergative case.

I return to the nature of these morphemes in Section 2.2.3 below, but here I would like to argue that the evidence at hand indicates that, in modern Lithuanian, this GEN is assigned structurally. First, lexical case is generally assumed to be assigned by a non-functional head (eg. V or P) to its complement (see Woolford 2006), so under the assumption that GEN is lexical here it would be surprising for external arguments to be assigned GEN in Inferential Evidentials. It is

important to highlight too that this case is not associated with a particular thematic role; the DPs in (24) are Themes while the genitive DP in (25) is clearly an Agent. This is also a hallmark of possessor genitive (note the difference between *the city's destruction* and *the city's proposal*).

- (25) Mokytojo ištaisyta klaidos. Lithuanian  
 teacher<sub>GEN</sub> correct<sub>PASS.PERF.-AGR</sub> mistakes<sub>NOM</sub>  
 ‘The teacher apparently corrected the mistakes.’

Also, it seems to be the case that when this construction is formed with the psychological verb *patikti* ‘like’, shown in (26), or *trūkti* ‘lack’, shown in (27), the inherent dative case on the Experiencer survives.

- (26) Apie vyrus... Ar iskart patinkama merginoms?? Lithuanian  
 about men Q at.once like<sub>PASS.PROG.-AGR</sub> girls<sub>DAT</sub>  
 ‘About men, can girls like them at first sight?’  
 (<http://forumas.ieskok.lt/viewtopic.php?id=6699>)

- (27) ...tai gali reikšti, kad jūsų organizmui trūkta geležies... Lithuanian  
 this can mean, that your body<sub>DAT</sub> lack<sub>PASS.PERF.-AGR</sub> iron<sub>GEN</sub>  
 ‘... this can mean that your body is lacking in iron...’  
 ([http://www.alfa.lt/straipsnis/11170187/ka-rankos-sako-apie-jusu-sveikata?ref=lnkgo&utm\\_source=lnkgo&utm\\_medium=responsive&utm\\_campaign=infoblokai](http://www.alfa.lt/straipsnis/11170187/ka-rankos-sako-apie-jusu-sveikata?ref=lnkgo&utm_source=lnkgo&utm_medium=responsive&utm_campaign=infoblokai))

At first glance, it appears that the GenNeg test for structural case is impossible to implement here as the NNS already has GEN. However, Lithuanian has two different genitives: possessive GEN and the GEN assigned in Kagan’s (2012) Irrealis Genitive contexts, which includes Intensional GEN and GenNeg (see Chapter 2, Section 3.3.1 for discussion). These two GENs surface with different forms for first and second person singular pronouns, as shown in the table below.<sup>5</sup>

Table 3: Lithuanian GEN on pronouns

Possessive		Irrealis	
<b>mano</b> ‘my’	mūsų ‘our’	<b>manęs</b> ‘me’	mūsų ‘us’
<b>tavo</b> ‘your’	jūsų ‘your (pl.)’	<b>tavęs</b> ‘you’	jūsų ‘you (pl.)’
jo/jos ‘his/her’	jų ‘their’	jo/jos ‘him/her’	jų ‘them’

<sup>5</sup> The reflexive pronoun also shows this split in GEN forms, with possessive *savo* ‘self’s’ and object *save* ‘self’.

Comparing the genitive NNSs of the Inferential Evidential in (28) to the genitive DPs in (29) and (30), it is clear that the NNSs bear the same form as the possessor DP in (29) and not the DPs bearing Irrealis GEN in (30).

(28) Inferential Evidential *Lithuanian*  
 a. **Mano** sergma!?  
 I.GEN sick.PASS.PROG.-AGR  
 ‘Evidently I am sick!’ (Gronemeyer 1997: 107)

b. **Tavo** būta čia!  
 you.GEN be.PART.-AGR here  
 ‘(Evidently) you were here!’

(29) Possessive GEN *Lithuanian*  
**Tavo** tėvas yra **mano** dėdė.  
 your father.NOM is.3SG my father.NOM  
 ‘Your father is my uncle.’ (Tananevičius 1912: 60)

(30) a. Intensional GEN *Lithuanian*  
 Jis laukia. Laukia **tavęs** ir **manęs**.  
 he.NOM waits.3SG waits.3SG you.GEN and be.GEN  
 ‘He waits. (He) waits for you and me.’ (<http://jezus.lt/kuryba/giedam-tau/>)

b. GEN of Negation  
 Kol **manęs/tavęs** čia nebuvo  
 while me/you.GEN here not.be<sub>3</sub>.PAST  
 ‘While I/you was/were not here.’

We can now test to see if the GEN normally assigned to the subjects of Inferential Evidentials can be overridden by the GEN assigned in GenNeg contexts. As the example in (31) shows, this is indeed the case.<sup>6</sup> The subject of the evidential construction in (31b) is as the same GEN form as the subject in the GenNeg context in (30b).

<sup>6</sup> My consultant reports that the *tavęs* form is not necessarily required when negated. She was unable to identify any real difference in meaning between (i,a) and (i,b).

(i) a. **Tavęs** nebūta čia. *Lithuanian*  
 you<sub>GEN</sub> not.be<sub>PASS.PERF.-AGR</sub> here  
 ‘Evidently, you were not here’  
 a. **Tavo** nebūta čia.  
 you<sub>GEN</sub> not.be<sub>PASS.PERF.-AGR</sub> here  
 ‘Evidently, you were not here’

(31) a. **Tavo** būta čia! *Lithuanian*  
 you<sub>GEN</sub> be<sub>PASS.PERF.-AGR</sub> here  
 ‘Evidently, you were here!’

b. Tai pasaulis, kuriame dar **tavęs** nebūta...  
 that world which<sub>LOC</sub> yet you<sub>GEN</sub> not.be<sub>PASS.PERF.-AGR</sub>  
 ‘That world, in which you (apparently) weren’t yet...’  
 (<http://www.satenai.lt/2011/04/22/tetele-janyte-teta-janina/>)

The ability to be assigned to different types of arguments and to be overridden by inherent case and GEN in GenNeg contexts are two canonical properties of structural case. Given this, I argue in the next section that GEN is assigned when the subject Agrees with [uφ] on a D head. I take up the discussion of the source of NOM on the Theme in Section 3.3 and follow Lavine (2010) in assuming that this is a default case.

## 2.2 Argument structure and subject case assignment

Now that we have cause to believe that structural NNSs really are assigned structural case, we can explore how each case is assigned. The main idea of this section is that structural case works the same no matter which case it is. It is a by-product of Agree with a head bearing the feature complex [uφ]. An alternative structural case is assigned when [uφ] is hosted by a head other than T or *v*. The [uφ] comes to be on this head by the application or the non-application of Feature

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Interestingly, she did note a difference in interpretation in positive sentences. The possessive forms *mano/tavo* ‘my/yours’ denote that the speaker is distancing themselves from committing to an assertion, as in (ii).

(ii) Mano sapnuota. *Lithuanian*  
 me<sub>GEN</sub> dream<sub>PASS.PERF.-AGR</sub>  
 ‘I must have dreamed (that).’

She reports that in (iii) the genitive subject can be used “metaphorically” in a partitive sense (i.e. there is evidence of the subject’s presence, so “part” of the subject is present).

(iii) Context: Talking on the phone to your spouse as you are going home, you walk in to find dinner set on the table.  
 Tavęs būta! *Lithuanian*  
 you<sub>GEN</sub> be<sub>PASS.PERF.-AGR</sub>  
 ‘Oh! You’re (already here).’

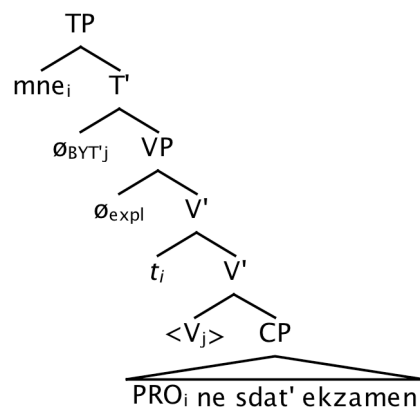
Inheritance. In the following subsections I address the assignment of each of the alternative structural cases for subjects: DAT, ACC, and GEN. In Section 3, I discuss how the NNSs at hand appear in their final “subject” positions. We will see how, with Split Feature Inheritance, the NNS can move to a higher position beyond the head that it is in an Agree relation with.<sup>7</sup>

### 2.2.1 Dative

I propose that in non-finite clauses,  $[u\phi]$  features stay on the Finiteness head and is not inherited by T. In Russian, this occurs with dative infinitive clauses and can occur in *čtoby* ‘in order to’ clauses. Before schematizing how Fin assigns DAT to the subject of an infinitival in Russian and to the subject of an adjunct participial clause in Lithuanian, I first review arguments for the bi-clausal, raising status of the Main Clause Infinitivals in Russian.

Fleisher’s (2006) bi-clausal proposal for dative infinitives arises from the placement of the auxiliary *byt’* ‘be’. He argues that ‘be’ in these clauses is a modal verb that selects a non-finite CP complement. As (32) shows, it is null in the present tense like the copula ‘be’.

(32)



(adapted from Fleisher 2006: 6)

<sup>7</sup> In this section I show Agree relations (or lack thereof) with dotted lines. I avoid using arrows to show movement for clarity’s sake. Moved XPs are written with arrow brackets <XP>.

The past and future forms of the constructions in (32) are different from the personal future imperfective form in (33) with respect to the location of the auxiliary *byt'*. In the dative infinitive construction, *byt'* precedes negation (as shown in (32b,c)), while in the personal future imperfective it follows it.

- (33) a. Mne ne sdat' ekzamen. *Russian*  
 me<sub>DAT</sub> NEG pass<sub>INF</sub> exam<sub>ACC</sub>  
 'It's not (in the cards) for me to pass the exam.' (P&M 2002: 620)
- b. Mne budet ne sdat' ekzamen.  
 me<sub>DAT</sub> is<sub>3SG.NEUT</sub> NEG pass<sub>INF</sub> exam<sub>ACC</sub>  
 'It won't be (in the cards) for me to pass the exam.' (Fleisher 2006: 5)
- c. Mne bylo ne sdat' ekzamen.  
 me<sub>DAT</sub> was<sub>3.SG.NEUT</sub> NEG pass<sub>INF</sub> exam<sub>ACC</sub>  
 'It wasn't (in the cards) for me to pass the exam.' (Fleisher 2006: 4)
- (34) Ja ne budu sdavat' ekzamen. *Russian*  
 I<sub>NOM</sub> NEG be<sub>1SG</sub> pass<sub>INF-IMP</sub> exam<sub>ACC</sub>  
 'I won't pass the exam.'

The dative DP originates as an internal argument of the matrix VP and moves to Spec TP. The PRO subject of the embedded clause is controlled by a null expletive in Spec vP.<sup>8</sup> Jung (2008) is the first to propose that this construction is actually a raising one. She observes that in (35) the subject can be interpreted below the null copula.

- (35) 2 studentam iz Ameriki [ rešit' sledujuščuju zadaču], *Russian*  
 2 student<sub>DAT</sub> from America Ø<sub>BYT'</sub> solve<sub>INF</sub> next problem<sub>ACC</sub>  
 čtoby amerikanskoj komande vyigrat?  
 in.order American team<sub>DAT</sub> Ø<sub>BYT'</sub> win<sub>INF</sub>

*Context: Student teams from various countries participate in a math contest. Individual students' performances contribute to each team's record.*

<sup>8</sup> See Germain (2015a) for conceptual arguments against null expletives, which are both phonologically and semantically empty. Split Feature Inheritance obviates the need to posit null expletives in the grammar because the EPP is not on T, and therefore not linked to Agree with [uφ]. Any XP already in the derivation may move to Spec FinP to satisfy the EPP.

- (i) ‘There are 2 students from America. Is each of them supposed to solve the next problem in order for the American team to win?’  $2 > be$   
(ii) ‘Is it necessary that any 2 students from America solve the next problem in order for the American team to win?’  $be > 2$   
(Jung 2008: 158)

That these subjects can be interpreted in the embedded clause can be seen in the scopal interaction between the universal quantifier *vsem* ‘everyone’ and negation in (36) and (37), as shown by Germain (2014).

- (36) *Vsem ne sdat' ekzamen.* *Russian*  
everyone<sub>DAT</sub> NEG pass<sub>INF</sub> exam<sub>ACC</sub>  
a. ???It’s (in the cards) that everyone won’t pass the exam. Q > Neg  
b. It’s not (in the cards) for everyone to pass the exam (but some will). Neg > Q
- (37) *Vsem ne prijti' vo vremja.* *Russian*  
everyone<sub>DAT</sub> NEG arrive<sub>INF</sub> on time  
a. ???It’s (in the cards) that everyone will not arrive on time. Q > Neg  
b. It’s not (in the cards) for everyone to arrive on time (but some will). Neg > Q

In English, quantifier interpretation in control and raising clauses differs, in that QR but not reconstruction is allowed in control clauses. In (38), it is not possible to interpret the universal under the scope of negation.<sup>9</sup>

- (38) a. Everyone doesn’t want [PRO to go to the store]  
b. \*’It’s not the case that everyone wants to go to the store, some do.’ Neg > Q

So if (36) and (37) above had the structure in (32) we might not expect to see the interpretation that we do.<sup>10</sup>

<sup>9</sup> See also Wurmbrand (2013) for a discussion of the interpretation of quantifiers in raising and control constructions, although her arguments concern QR out of these clauses, not reconstruction.

<sup>10</sup> Unfortunately, a control sentence for comparison to (36) or (37) for comparison is quite unnatural in Russian. Note that the negation in the embedded clause in (ia) is more naturally expressed on the subject in (ib).

- (i) a. ???*Vse xotjat ne sdat' ekzamen.* *Russian*  
everyone<sub>NOM</sub> want<sub>3,PL</sub> NEG pass<sub>INF</sub> exam<sub>ACC</sub>  
‘Everyone wants to not pass the exam.’ Q > Neg

Melnikova (2015) extends a bi-clausal, raising analysis to dative NNSs with overt, impersonal modals. One major piece of evidence that these constructions are bi-clausal is that adjectives that are semantically incompatible co-occur in these clauses, as shown with *vse čaše* ‘more often’ and *reže* ‘more rarely’ in (39).

- (39) **Vse čaše** Vove<sub>i</sub> nužno [<sub>*t<sub>i</sub>*</sub> prinimat’ lekarstvo **reže**]. *Russian*  
 more often Vov<sub>DAT</sub> need<sub>NEUT</sub> take<sub>INF</sub> medicine<sub>ACC</sub> more rarely]  
 ‘More often Vova needs to take medicine more rarely.’ (Melnikova 2015: 11)

In addition, she also observes the following: (i) Dative modal constructions alternate with impersonal modals that embed a finite *čtoby* clause, just as raising verbs like *seem* do, (ii) promoted objects in passives retain Theme role, but get assigned DAT, and (iii) idioms and weather verbs are grammatical with the impersonal modals.<sup>11</sup>

Under Fleisher’s (2006) analysis, DAT is assigned inherently while Jung (2008) and Melnikova (2015) argue for DAT to be assigned in an ECM fashion. In my analysis, I assume that the source of structural DAT for these subjects is one that has already been proposed to exist in another construction in Russian, control clauses. To account for the secondary dative in the

- 
- b. Nikto xočet stat’ ekzamen.  
 no.one<sub>NOM</sub> want<sub>3.SG</sub> pass<sub>INF</sub> exam<sub>ACC</sub>  
 ‘No one wants to pass the exam.’

<sup>11</sup> This comparison is not quite complete, as Perlmutter and Moore (2002) note, weather verbs are expressly ungrammatical with dative infinitivals, along with passives, I-nominals, Adversity Impersonals and impersonal raising predicates.

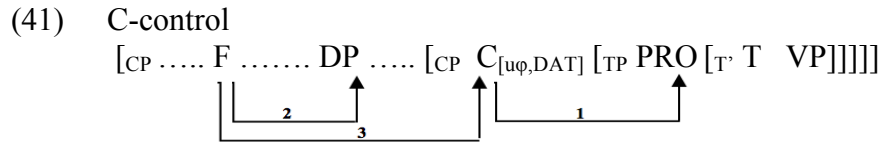
- (i) a. Na Gavajax ne morozit. *Russian*  
 in Hawaii<sub>NEG</sub> freeze<sub>3.SG</sub>  
 ‘It doesn’t freeze in Hawaii.’  
 b. \*Na Gavajax ne morozit’.  
 in Hawaii<sub>NEG</sub> freeze<sub>INF</sub>  
 ‘It’s (not in the cards) for it to freeze in Hawaii.’ (P&M 2002: 621)

I tentatively propose that this restriction might be due to semantic conflict. The null modal cannot take weather events and other impersonal constructions or constructions with Dative Experiencers because these constructions do not have agentive subjects (or subjects at all). Roughly, what the modal does is take an event and relate it to an individual much like the English cleft ‘It’s not for me to do’ or ‘It’s not possible for me to do X’. I leave a more fleshed out semantic analysis of this construction to future research.

embedded clause, Landau (2008) proposes that there exists a non-finite C head which assigns Dative case in control structures.

- (40) Ona poprosila ego ne ezdit' tuda odnogo/**odnomu** zavtra. *Russian*  
 she<sub>NOM</sub> asked<sub>3.SG.FEM</sub> him<sub>ACC</sub> NEG go<sub>INF</sub> there alone<sub>ACC/DAT</sub> tomorrow  
 'She asked him not to go there alone tomorrow.'  
 (Landau 2008: 886)

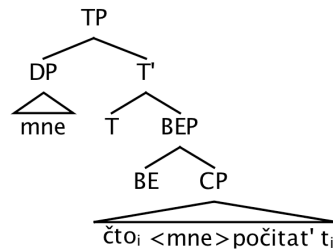
As is shown in (41), a head F in the matrix clause (T or *v*) has its [*uφ*] features valued by the controller DP in the embedded clause. Because PRO has no such features, the embedded non-finite C is valued by the matrix F. The C head, which has a dative case feature, passes these features to PRO in the process of valuing it as DAT.



(Landau 2008: 898)

Livitz (2012) adopts this mechanism as the source of the DAT in the existential possessive structure in (42).<sup>12</sup>

- (42) a. Mne est' čto počitat'. *Russian*  
 me<sub>DAT</sub> be<sub>INF</sub> what<sub>ACC</sub> read<sub>INF</sub>  
 'There is something for me to read.'  
 b.



(Livitz 2012: 716)

<sup>12</sup> Livitz (2012) does not argue specifically for an Agree relation to hold between [*uφ*] on Fin and the subject as I do, but cites Landau's (2008) proposal of a non-finite C as the source of DAT in infinitival control clauses. Also, as Edith Aldridge points out, her structure is problematic in that movement of the dative subject though Spec TP to the matrix Spec TP violates the Phase Impenetrability Condition (PIC) of Chomsky (2001). By the PIC, the TP of the phase headed by the embedded C would be spelled out before the matrix T is merged. In the structure I adopt below, this is not a problem as the subject moves through the Spec of Fin as it raises to the matrix clause.

Babby and Franks (1998) also argue that the subject position in infinitival clauses in Russian is a case position, pointing out that overt subjects are acceptable in infinitival clauses in a number of contexts, as examples in (43) show.

- (43) a. [Tebe ujti na pensiju] značilo by kapitulirovat' pered vragom. *Russian*  
 [you<sub>DAT</sub> go<sub>INF</sub> on pension] mean<sub>3.SG.NEUT</sub> PRT capitulate<sub>INF</sub> before enemy.  
 ‘(For) you to retire, would be the same as surrendering to the enemy.’
- b. Možet, [mne vzjat' ego s soboj]?  
 can.be<sub>3.SG</sub> me<sub>DAT</sub> bring<sub>INF</sub> him<sub>ACC</sub> with self  
 ‘Perhaps I should take him with me?’ (Babby & Franks 1998: 497)

This also explains an issue for Fleisher’s (2006) account. He explains that finite clauses in *čtoby* purpose clauses are always in past tense, shown in (44a), but when a dative infinitive (i.e. Main Clause Infinitival) is embedded, the past tense form of ‘be’ *bylo*, is not present.

- (44) a. Mama sobirala naši veši, čtoby my uexali na vokzal. *Russian*  
 Mom gathered our things, that we<sub>NOM</sub> went-out<sub>3.PL</sub> to train station  
 ‘Mom gathered up our things, so that we would go out to the train station.’
- b. Mama sobirala naši veši, čtoby nam (\*bylo) uexat' na vokzal.  
 Mom gathered our things, that we<sub>DAT</sub> was<sub>3.SG.NEUT</sub> go-out<sub>INF</sub> to train station  
 ‘Mom gathered up our things, in order for us to go out to the train station.’

He argues that because *čtoby* historically was formed with the conditional particle *by*, there is no need for there to be an overt, tensed verb. The simpler explanation, however, is that what the C head *čtoby* embeds is not the biclausal MCI, but rather an infinitival FinP.<sup>13</sup>

- (45) [<sub>CP</sub> čtoby [<sub>FinP</sub> nam Fin [<sub>TP</sub> uexat' na vokzal ]]. *Russian*  
 that we<sub>DAT</sub> go-out<sub>INF</sub> to train.station  
 ‘in order for us to go out to the train station.’

<sup>13</sup> As to which C head *čtoby* is, it could be that it is an instantiation of Force in that it does type the clause as a purpose or subjunctive type clause. I hesitate to label it this because I do not wish to imply that this is a fully finite clause. I leave this for future work and refer the reader to Eide (2016) for a discussion of the notion of gradience in finiteness.

This analysis is impossible under an account in which the dative subject does not originate in the embedded FinP, like the control proposal in Fleisher (2006).

In his discussion of dative subjects of infinitives, Franks (1995) observes that embedded clauses which cannot host a finite copula and therefore do not have tense cannot have an overt subject. This is shown with the object control clause in (46). This, for him, is evidence that dative infinitives are full and finite CP clauses, and that a non-agreeing, but tensed I is the source of DAT.

- (46) Ja poprosil Volodju [ (\*Maše) polučit' premiju ]. *Russian*  
 I<sub>NOM</sub> asked Volodja<sub>ACC</sub> Masha<sub>DAT</sub> receive<sub>INF</sub> prize  
 'I asked Volodya for Masha to get the prize.' (Franks 1995: 252)

I repeat this argument here to show also that the source of DAT in infinitive clauses cannot be inherent. If these dative subjects were merged in Spec ApplP or some Spec vP, we would expect (46) to be possible with *Maše* because presumably an embedded control TP is large enough to host an ApplP or vP. A non-finite TP is not large enough to include dative subject and I take this to be further evidence that these subjects are assigned their case by higher head, namely Fin.

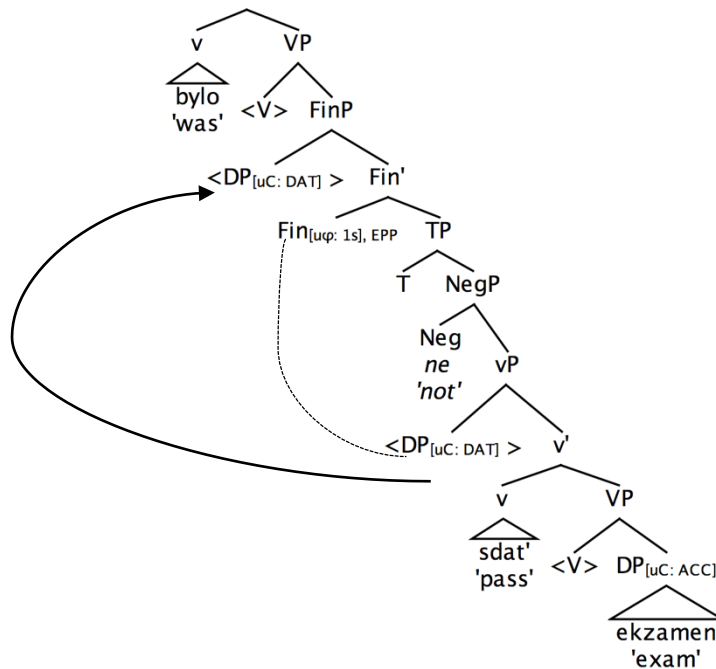
We have just seen that in Russian the dative infinitive construction is bi-clausal and raising. As we saw in Section 2.2.1, there is reason to believe that DAT here is structural, given that it alternates with ACC in passives and can be overridden by GEN in Genitive of Negation contexts. I argue, therefore, that the source of DAT is the embedded Fin head. In the derivation in (47), I show how the dative subject is assigned case structurally by Fin. It first is merged into the VP external subject position in the embedded clause. When the embedded Fin head is merged with the TP, T does not inherit its features and the Fin head remains a Probe which agrees with the DP in Spec vP. The [u $\phi$ ] of Fin is valued [1, sg] and the [uCase] of the DP is valued [DAT]. Because the Fin head also retains the EPP, the DP moves to Spec FinP.

- (47) a. Mne bylo [FinP ne sdat' ekzamen].  
 me<sub>DAT</sub> was<sub>3.SG.NEUT</sub> NEG pass<sub>INF</sub> exam<sub>ACC</sub>  
 'It wasn't (in the cards) for me to pass the exam.'

Russian

(Fleisher 2006: 4)

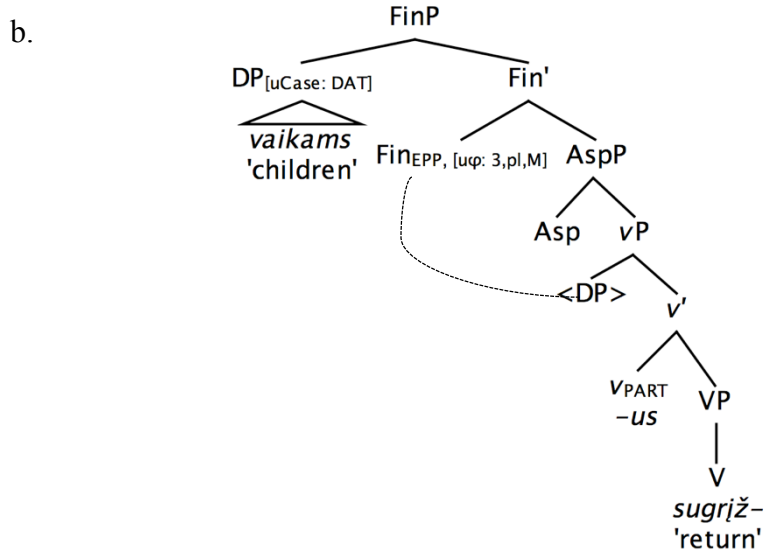
b.



This non-finite clause is then selected by an auxiliary *byt'* 'be', which will be spelled out as past tense *bylo*. In Section 3, I return to this and the other structures to be reviewed here and show how the subject raises to the matrix clause to satisfy EPP on matrix Fin but is not assigned case there.

In Lithuanian, structural DAT is assigned to a subject when a non-agreeing participial clause is un-embedded, that is, when it is an adjunct. Arkadiev (2012) also suggests that this DAT is assigned in the manner of Landau (2008). The structure in (48) gives my revised analysis. Just as in the embedded clause in (47), Feature Inheritance does not occur and the DP is assigned DAT through Agree with [uφ] on Fin.

- (48) a. [Vaikams sugrįžus], pragydo lakštingala. Lithuanian  
 child<sub>DAT.PL</sub> return<sub>ACT.PERF.-AGR</sub> start.singing<sub>3.PAST</sub> nightingale<sub>NOM</sub>  
 ‘When the children came back, a nightingale burst into singing.’  
 (Ambrazas et al. 1997: 363)



I assume that  $v$  also has  $[u\phi]$  and agrees with an object DP if present. Accusative case is assigned in these non-finite clauses like in finite clauses, as can be seen in (49).

- (49) a. A.B.Breivikas [teismui žiūrint jo propagandinį filmą] apsiašarojo Lithuanian  
 A.B. Breivik court<sub>DAT</sub> watching<sub>ACT.PROG.-AGR</sub> his propaganda film<sub>ACC</sub> teared.up<sub>3.SG.REFL</sub>  
 ‘A.B. Breiviks teared up while the court was watching is propaganda film.’  
 (<http://kauno.diena.lt/galerijos/vaizdai/abbreivikas-teismui-ziurint-jo-propagandini-filma-apsiasarojo-372431>)
- b. Teismas žiūrėjo jo propagandinį filmą.  
 court<sub>NOM</sub> watched<sub>3.SG</sub> his propaganda film<sub>ACC</sub>  
 ‘The court watched his propaganda film.’

It is interesting to note that Lithuanian also has dative case assigned in infinitival clauses. But as the example in (50) shows, this DAT is assigned to the object.

- (50) Pastatė daržinę [šienui sukrauti]. Lithuanian  
 built<sub>3</sub> hayloft<sub>ACC</sub> hay<sub>DAT</sub> keep<sub>INF</sub>  
 ‘They built a hayloft to keep hay.’  
 (Ambrazas et al. 1997: 557)

Franks and Lavine (2006) show that this DAT is structural and alternates with ACC when the object is post-verbal. They analyze the source of this structural DAT as a C head and show that



(52) Gde mne spat’?  
 where me<sub>DAT</sub> sleep<sub>INF</sub>  
 ‘Where am I to sleep?’

Russian

(Franks 1995: 250)

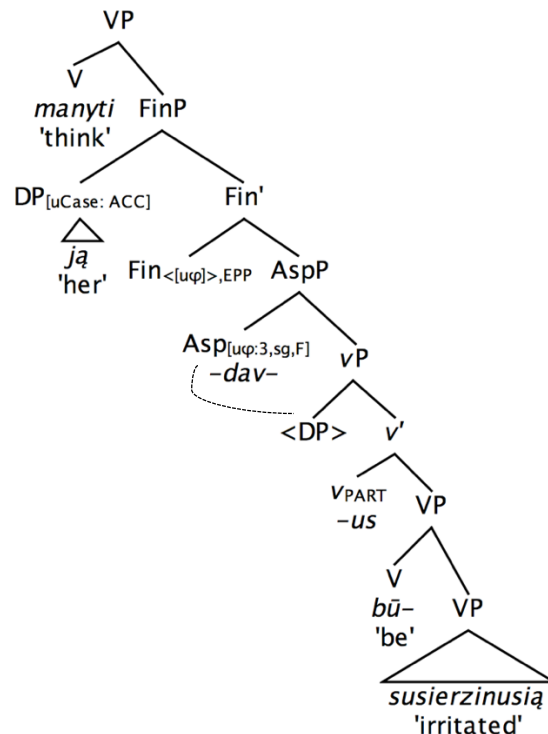
One could argue that the C that assigns ACC is another type of embedded complementizer like the finite complementizer *kad* ‘that’. If we assume Feature Inheritance, however, there’s no need to assume any difference between the two participial clauses except for the fact that one is embedded.

When these clauses are embedded, Feature Inheritance is triggered and [u $\phi$ ] is inherited from Fin by a head that I propose here to be Aspect. Because it is Asp and not T that the DP undergoes Agree with, the case assigned is not NOM, but ACC.

(53) a. ... skatina manyti [ j̄a dažnai būdavus susierzinusią ] Lithuanian  
 ... induce<sub>3,PRS</sub> think<sub>INF</sub> she<sub>ACC</sub> often be<sub>ACT.PERF.HAB.-AGR</sub> irritated<sub>ACT.PROG.ACC.SG.FEM</sub>  
 ‘[this] induces one to believe her to have often been irritated...’

(<http://alfa.lt/straipsnis/150854>)

b.



Crucially, I note that NOM is never assigned in these clauses and propose that T is missing from the structure of participial clauses. Arkadiev (2012) argues that these clauses are

tensed because they can occur with the particles *-dav-* denoting habitual past, shown in (53), and *-si-* future, shown in (54).

- (54) *Lithuanian*  
 Jurgis grasino [tėvą atein-si-ant ir juos sumu-ši-ant].  
 Jurgis<sub>NOM</sub> threaten<sub>3.PAST</sub> father<sub>ACC</sub> come<sub>ACT.PROG.FUT.-AGR</sub> and them beat<sub>ACT.PROG.FUT.-AGR</sub>  
 ‘Jurgis threatened that his father would come and beat them.’ (Arkadiev 2012: 9)

He labels the participial endings *-ant* and *-us* as preterite and present, respectively.

However, there is an alternative interpretation of what the function of these morphemes is. These morphemes do not denote location of the event on a timeline, but rather the aspectual nature of the event with respect to the event in the matrix clause. Indeed Arkadiev (2012: 10) notes that the tense of the embedded clause is interpreted relative to the matrix clause (see also discussion in Ambrazas et al. 1997: 368). Also, these participles are not possible in matrix clauses without an accompanying finite verb. That the temporal semantics of the participial clauses are dependent on the matrix tense can be seen in the English translations of (55a-c), where the event of the father living is anchored to the past tense ‘I said’.

- (55) a. Sakiau [tėvą gerai gyvenant]. *Lithuanian*  
 say<sub>1SG.PAST</sub> father<sub>ACC</sub> well live<sub>ACT.PROG.-AGR</sub>  
 ‘I said father lived well.’
- a. Sakiau [tėvą gerai gyvenus].  
 say<sub>1SG.PAST</sub> father<sub>ACC</sub> well live<sub>ACT.PERF.-AGR</sub>  
 ‘I said father had lived well.’
- a. Sakiau [tėvą gerai gyvensiant].  
 say<sub>1SG.PAST</sub> father<sub>ACC</sub> well live<sub>ACT.FUT.-AGR</sub>  
 ‘I said father would live well.’ (Ambrazas et al. 1997: 367)

The participial morpheme *-us* denotes a telic, completed event, while the morpheme *-ant* denotes an atelic or on-going event. I have analyzed these as  $v_{\text{PART}}$  heads. The morpheme *-dav-* does not contribute information about tense, but rather about the habitual nature of the event, and I analyze this as an Aspect head. Following Hill’s (2014) work on the semantic reconstruction of

East Baltic future *-s-* as the descendant of Proto Indo-European desiderative *-s-* and jussive *-sje/o-*, I analyze the future morpheme as a low Modal head.<sup>15</sup> These morphemes and the functional head they correspond to in the syntax are given in Table 4 below.

Table 4: Lithuanian Participial morphemes

Morpheme	Head	Semantics
<i>-us</i>	<i>v</i> <sub>PART</sub>	telic
<i>-ant</i>	<i>v</i> <sub>PART</sub>	atelic
<i>-dav-</i>	Asp	habitual
<i>-s-</i>	Mod	future

Before continuing on to the source of structural GEN in Lithuanian Inferential Evidentials, I note that arguing for Tense-less non-finite clauses is not unprecedented. Wurmbrand (2007) argues for irrealis infinitive to be tenseless in English, and Todorovic (2015) proposes that Serbian clauses can actually lack T even in finite clauses.

### 2.2.3 Genitive

In arguing for an ergative source for the GEN on subjects of Inferential Evidentials, Lavine (2000) argues against a proposal by Nuñez (1994) that possessor GEN, agentive by-phrase GEN, and the GEN in Evidentials is assigned through the same mechanism. Note that in contrast to Russian, which assigns INST to demoted subjects of passives, Lithuanian assigns GEN, as shown by the contrast in (56).

- (56) a. *Kniga byla napisana Ivanom.* *Russian*  
 book<sub>NOM.EFM</sub> WAS<sub>3.F.</sub> WRITTEN<sub>PASS.PERF.FEM</sub> Ivan<sub>INST</sub>  
 ‘The book was written by Ivan’

<sup>15</sup> Under the schema for the location of structural case assignment I briefly introduced in (1), if [u $\phi$ ] were inherited by a Modal head in its standard middle-field position, NOM, not ACC, would be assigned to the subject of the embedded Lithuanian participial clause with future *-s-*. Hacquard (2006) proposes that, in the case where aspect is interpreted as scoping above modality, there is a low Modal head. One indication that this might be the clausal location of *-s-* is that aspectual prefixes and verbal roots always precede the modal *-s-* in linear order. I leave the exact semantics of future tense in Lithuanian participial clauses to future research.

b. Knyga buvo **Jono** parašyta.  
 book<sub>NOM.FEM</sub> was<sub>3</sub> Jonas<sub>GEN</sub> written<sub>PASS.PERF.FEM</sub>  
 ‘The book was written by Jonas.’

*Lithuanian*

Nuñez (1994) follows Baker (1998) and Baker, Johnson, and Roberts (1988) in assuming that the passive participial morphology in Lithuanian is of the category noun and proposes that *-ma/-ta* are a T with nominal [+N] feature that assigns possessive GEN. For him, the only difference between the passive by-phrase and the subject of an Inferential Evidential is that the by-phrase is the only one that is dethematized.

Lavine (2000) points out that a unified analysis does not take into account differences between the two structures. For one, the GEN by-phrase is optional and may appear pre- or post-verbally, while the GEN DP of the Inferential Evidential must appear pre-verbally. In addition, Lavine (2000, 2010) shows that these constructions are not passives, contrary to what the descriptive literature has maintained (Ambražas 1997, Timberlake 1982, Geniušienė 2006, Gronemeyer 1997, Wiemer 2006, among others). Given the parallels between the evidential in (57) and the passive in (58) (i.e. both have GEN Agents and use the past passive participle), it is not unreasonable to assume that (57) is derived from (58).

(57) Evidential *Lithuanian*  
 Vagies nusikirsta visi kopustai.  
 thief<sub>GEN</sub> cut.down<sub>PASS.PERF.-AGR</sub> all cabbages<sub>NOM</sub>  
 ‘(Evidently), a thief cut down all the cabbages.’ (adapted from Geniušienė 2006: 56)

(58) Passive with GEN Agentive *by*-phrase *Lithuanian*  
 Visi kopustai buvo nusikirsti vagies.  
 all cabbages<sub>NOM.MASC</sub> was<sub>3.SG</sub> cut.down<sub>PASS.PERF.PL.MASC</sub> thief<sub>GEN</sub>  
 ‘All the cabbage were cut down by a thief.’

First, as shown in (24) above and again in (59), Inferential Evidentials can be formed from unaccusatives, which is surprising if they are actually a passive construction.

- (59) a. Čia turbūt ir gribų esama. Lithuanian  
 here evidently even mushrooms<sub>GEN</sub> be<sub>PASS.PROG.-AGR</sub>  
 ‘There must be mushrooms here.’
- b. Ledo staiga ištirpta.  
 ice<sub>GEN</sub> suddenly melted<sub>PASS.PERF.-AGR</sub>  
 ‘The ice must have suddenly melted’ (Lavine 2010: 124)

Second, the binding facts in (59) show that the GEN subject of an Inferential Evidential is a “true” subject. In (60a) *motinos* ‘mother’ binds the reflexive *savo* and triggers the anti-subject effect when co-indexed with the pronominal *jos* (Vikner 1985). The Agentive by-phrase in (60b), however, is unable to bind *savo* and completely grammatical with *jos*.

- (60) a. Evidential Lithuanian  
 Motinos<sub>i</sub> sudeginta savo<sub>i</sub> / jos<sub>\*i/j</sub> namas  
 mother<sub>GEN</sub> burned.down<sub>PASS.PERF.-AGR</sub> self’s / her house<sub>NOM.MASC</sub>  
 ‘Mother apparently burned down her own house.’
- b. Passive  
 Motinos<sub>i</sub> buvo sudeginta <sup>??</sup>savo<sub>i</sub> / jos<sub>i/j</sub> namas  
 mother<sub>GEN</sub> was<sub>3.SG</sub> burned.down<sub>PASS.PERF.-AGR</sub> self’s / her house<sub>NOM.MASC</sub>  
 ‘Mother burned down her own house.’ (Lavine 2010: 126)

Finally, this evidential construction can be formed from a passive itself. In (61), the passive auxiliary *būti* ‘be’ appears in the non-agreeing past participial form *būta*.

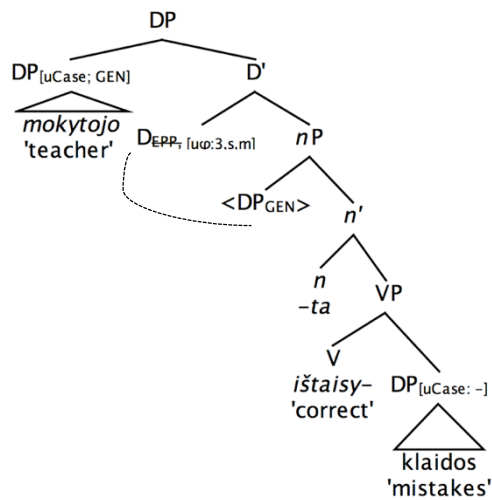
- (61) Hanos būta (savo sesių) apgautos. Lithuanian  
 Hana<sub>GEN</sub> be<sub>PASS.PERF.-AGR</sub> self’s sisters<sub>GEN</sub> deceived<sub>PASS.PERF.FEM.GEN</sub>  
 ‘Hana has apparently been deceived by her sisters.’ (Lavine 2010: 125)

In light of these facts, I would like to revive Nuñez’s (1994) analysis with some major revisions. I argue that he is correct in analyzing that the GEN of the Inferential Evidential is assigned by a head with the category specification noun, but that this construction is distinct from the passive in that its argument structure is actually a complex DP in a clause that has a finite T. As mentioned in Section 2.1.3, the *-ma/-ta* morpheme was historically a deverbalizing morpheme in Old Lithuanian specified for neuter gender. Given that all neuter nouns in

Lithuanian were reanalyzed and absorbed into the masculine and feminine classes, I propose that these morphemes have been retained as special deverbalizing *n* heads that select for VPs, much like a gerund does. This also reflects the semantics of the construction, paraphrased as, “Given this evidence, it must be the case that event X happened” (see Timberlake 1982, Ambrazas et al. 1997, Geniušienė 2006).<sup>16</sup> The DP here is this event. In the structure in (62), the predicate *ištaisy-* ‘correct’ is selected by *n*-*ma/-ta*, which assigns no inherent case but can select for an external argument if one is present in the Numeration. The D head which merges with *nP* bears [u $\phi$ ] features that agree with the highest available argument. This DP is in turn assigned GEN.

(62) a. Mokytojo ištaisyta klaidos. Lithuanian  
 teacher<sub>GEN</sub> correct<sub>PASS.PERF.-AGR</sub> mistakes<sub>NOM</sub>  
 ‘The teacher apparently corrected the mistakes.’

b.



This analysis comes with several benefits. First, it gives a straightforward account for why this GEN resembles the possessor GEN in Lithuanian. In (63), both the subject of the Inferential Evidential in (a) and the possessor in (b) are assigned GEN in Spec DP.

(63) a. Mano/tavo sergma!? Lithuanian  
 I<sub>GEN</sub> you<sub>GEN</sub> sick<sub>PASS.PERF.-AGR</sub>  
 ‘Evidently I/you am/are sick!?’ (Gronemeyer 1997: 107; AG)

<sup>16</sup> Ambrazas et al. (1997: 371) note that these constructions “usually convey an unexpected event or an event judged by its results and often causing surprise”.

- b. Mano/tavo brolis gyvena čia.  
 my your brother<sub>NOM</sub> lives<sub>3.SG</sub> here  
 ‘My/your brother lives here.’

Second, it allows us to avoid the problem that Lavine (2000) encounters in calling this an ergative GEN. It is typologically rare for subjects of intransitive predicates to bear ergative case, especially subjects of unaccusatives, but the Inferential Evidential can include these predicates, as shown in (24), repeated here as (64).<sup>17</sup>

- (64) a. Čia turbūt ir griby esama. *Lithuanian*  
 here evidently even mushrooms<sub>GEN</sub> be<sub>PASS.PROG.-ACT</sub>  
 ‘There must be mushrooms here.’
- b. Ledo staiga ištirpta.  
 ice<sub>GEN</sub> suddenly melted<sub>PASS.PERF.-AGR</sub>  
 ‘The ice must have suddenly melted’ (Lavine 2010: 124)

The point here of arguing against an ergative-type case for these subjects is that ergative is inherent. Assuming that these are constructions with structural genitive (and by extension not an instance of ergativity), accounts for the facts in (64). I return to this construction in Section 3.3 and discuss the status of T and the default source of NOM on the object, but I first provide an interim summary of the subjects discussed so far and their respective structural, non-NOM cases

### 2.3 Interim summary

In this section, we have seen that the sources for three different cases on some non-nominative subjects, DAT, ACC, and GEN, can be reduced to one operation: Agree with [u $\phi$ ]. In the table below, building on Table 2 above, we can compare these structural NNSs with NNs and the Inherent NNSs from Chapter 2.

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<sup>17</sup> See Bruening (2007) for discussion on the assignment of ergative case on subjects of intransitive verbs in languages like Basque and Hindi.

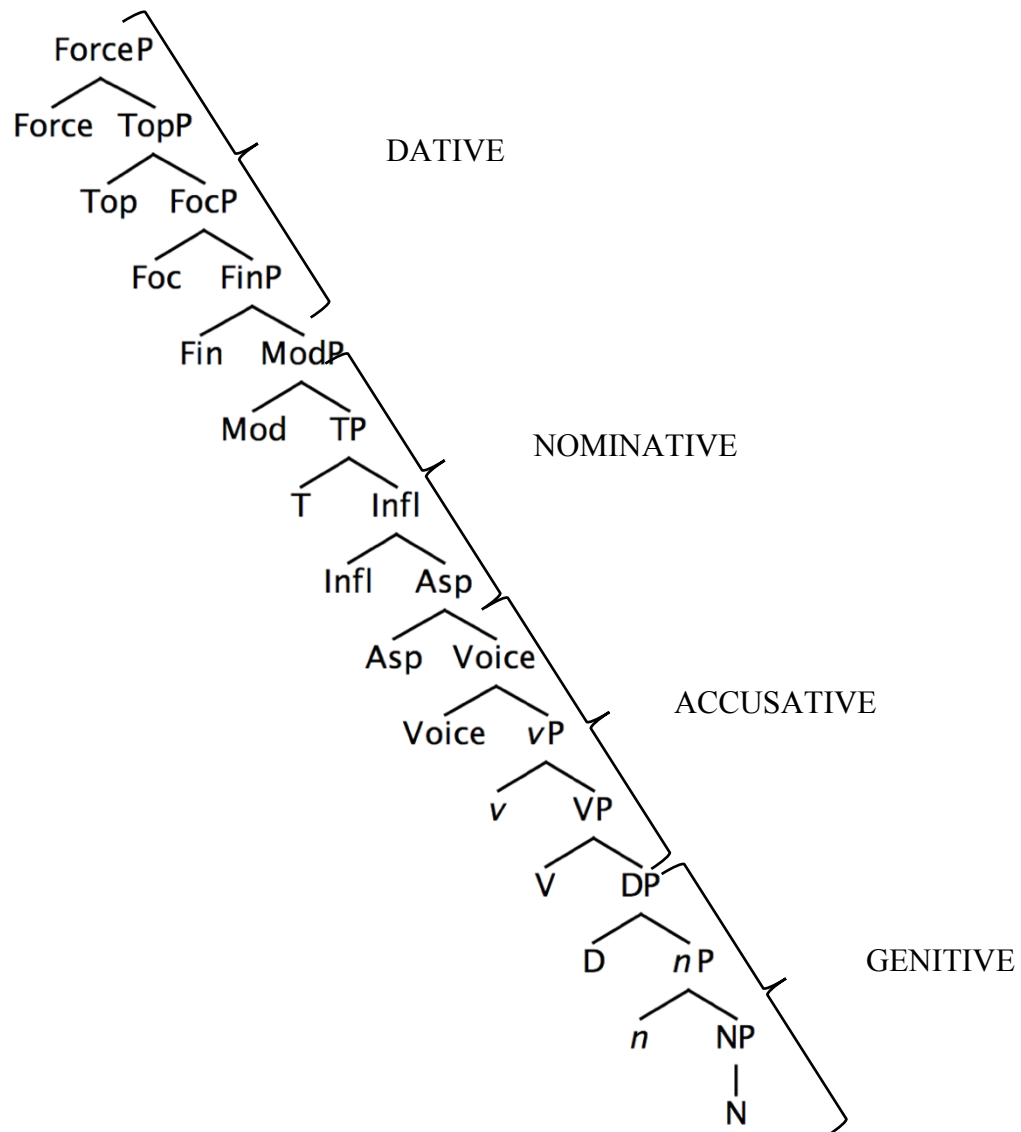
Table 5: Nominative and non-nominative subjects in Russian and Lithuanian

Case Type	Construction	Subject Case	Example <sup>18</sup>	Arguments for Case Type
Nominative	Finite clauses	Structural NOM via Agree with T	<b>Aš</b> nusipirkau bilieta. I <sub>NOM</sub> bought <sub>1.SG</sub> ticket <sub>ACC</sub> 'I bought a ticket.'	<ul style="list-style-type: none"> <li>• Subject-verb agreement</li> <li>• Not thematically-linked</li> <li>• GenNeg is assigned</li> </ul>
Inherent non-nominative	Psychological verbs	Inherent DAT (due to status as applied argument in Spec ApplP)	<b>Man</b> patinka ši kava. me <sub>DAT</sub> please <sub>3.SG</sub> this coffee <sub>NOM</sub> 'I like this coffee.'	<ul style="list-style-type: none"> <li>• Thematically-linked</li> <li>• Survives under A-movement</li> <li>• No GenNeg (Russian only)</li> <li>• No GEN of quantification (Russian only)</li> </ul>
	Non-verbal psych predicates		<b>Man</b> gaila šalies. me <sub>DAT</sub> please <sub>3.SG</sub> country <sub>GEN</sub> 'I feel sorry for the country.'	
Structural non-nominative	Infinitival and <i>čtoby</i> purpose clauses (Russian)	Structural DAT via Agree with Fin	<b>Mne</b> ne sdat' ekzamen. me <sub>DAT</sub> NEG pass <sub>INF</sub> exam <sub>ACC</sub> 'It's not (in the cards) for me to pass the exam.'	<ul style="list-style-type: none"> <li>• Applies to unaccusative subjects</li> <li>• Not thematically-linked</li> <li>• Overridden with change in construction (eg. DAT changes to ACC when participle is embedded)</li> <li>• GenNeg is assigned</li> </ul>
	Participial adjunct clause (Lithuanian)		<b>Vaikams</b> sugrįžus... children <sub>DAT</sub> return <sub>PART</sub> 'The children having returned..'	
	Participial embedded clause (Lithuanian)	Structural ACC via Agree with Asp	Sakiau say <sub>1SG.PAST</sub> [ <b>tėva</b> gerai gyvenant]. father <sub>ACC</sub> well live <sub>ACT.PROG.-AGR</sub> 'I said father lived well.'	
	Inferential Evidential (Lithuanian)	Structural GEN via Agree with D	<b>Ingos</b> nuraminta vaikas. Inga <sub>GEN</sub> calm.down <sub>AGR</sub> child <sub>NOM</sub> 'Inga must have calmed down the child.'	

<sup>18</sup> Here I give examples in Lithuanian except for the Dative Infinitival construction of Russian.

In the case of the structural NNSs, if [u $\phi$ ] happens to not be on T, one of these alternate cases will be assigned to the DP in the Agree relation. Once we see these cases as structural we can start to answer why Lithuanian in particular has three non-NOM structural cases. I suggest that the morphological form of a structural case reflects the location in the structure of the relevant [u $\phi$ ]. To be explicit, DAT is the structural case of the left-periphery (CP layer), NOM is the structural case of the middle field (Infl, T, Mod) and ACC is the structural case of the lowest bound of the clause where argument and event structure is established (Asp, v/Voice, V), GEN is the structural case of the DP. This is schematized in the structure in (65) with possible representative heads of each area.

(65)



In the unusual case of the Lithuanian accusative subject, T is missing from the structure of the participial clause. Instead of T, therefore, an Aspect head inherits [ $u\phi$ ]. Because that Asp head is a part of the clause where ACC is assigned via Agree, this is the case that is assigned to the subject.<sup>19</sup> In the next section, I show how these NNSs move to their pre-verbal position.

### 3. “Subject” movement

Now that we have established the source of case on these subjects, we can complete the derivations outlined in Section 2.2 above and see how these non-nominative arguments come to appear before the verb in discourse neutral contexts. That these NNSs do not bear special focus or topic features can be seen in that they are pre-verbal in answers to questions like “What happened?” or can be uttered in “out of the blue” contexts. Take the GEN NNSs in (64) for example. In the scenario where one walks to one’s kitchen and sees tea laid out on the table, it is possible to exclaim (66a) but not (66b).

- (66) a. Mamos būta! *Lithuanian*  
 mom<sub>GEN</sub> be<sub>PASS.PERF.-AGR</sub>  
 ‘Mom must be here!’
- b. #Būta mamos!  
 be<sub>PASS.PERF.-AGR</sub> mom<sub>GEN</sub>  
 ‘Mom must be here!’

---

<sup>19</sup> I tentatively suggest that one reason why Russian does not have structural GEN or ACC subjects (genitive of negation aside), is the lack (or loss) of participial morphology. In Russian, verbal adverbs are non-agreeing. Compare the non-agreeing participial in (i) to the agreeing one in (ii).

- (i) Slušaja muzyku, ja čitala gazetū. *Russian*  
 listen<sub>PRES.PART.-AGR</sub> music, I<sub>NOM</sub> read newspaper  
 ‘While listening to music, I read the newspaper.’
- (ii) Klausydama muziką, aš skaičiau laikraštį. *Lithuanian*  
 listen<sub>PRES.PART.3.sg.F</sub> music, I<sub>NOM</sub> read newspaper  
 ‘While listening to music, I read the newspaper.’

Indeed, Babby and Franks (1998) analyze these adjuncts as VPs, which would mean that the [ $u\phi$ ] of the C-T layer is not present to agree with an external argument and assign it case.

We will see that in each construction, the subject moves to Spec FinP, a left-periphery position not associated with notions like topic or focus. With Split Feature Inheritance, we do not have to assume that the NNS at hand will necessarily move to the Spec of the head that bears the  $[u\phi]$  it is in an Agree relation with (unless of course, Fin happens to be the head bearing  $[u\phi]$ ).

Before moving on to the derivations at hand, I would like to briefly restate my approach to Agree and to when we might see overt verbal agreement morphology on a predicate. As discussed in Chapter 1, I assume, following Preminger (2011), that Agree between the  $\phi$ -probe and a DP Goal is an obligatory operation, but it may fail. When Agree fails,  $[u\phi]$  is left unvalued, and the morphological component supplies it with a default value isomorphic with third person singular neuter. I assume that even in the case where a subject is available to agree with  $[u\phi]$  and its  $\phi$ -features are copied onto the probe, overt agreement morphology will only surface on the verb when it is T that has  $[u\phi]$  and agrees with the subject, perhaps because these languages do not have  $v$  to T movement. Therefore, we do not expect to see subject-verb agreement except for cases when NOM is assigned via Agree with T.

### *3.1 Non-nominative subjects of dative infinitives*

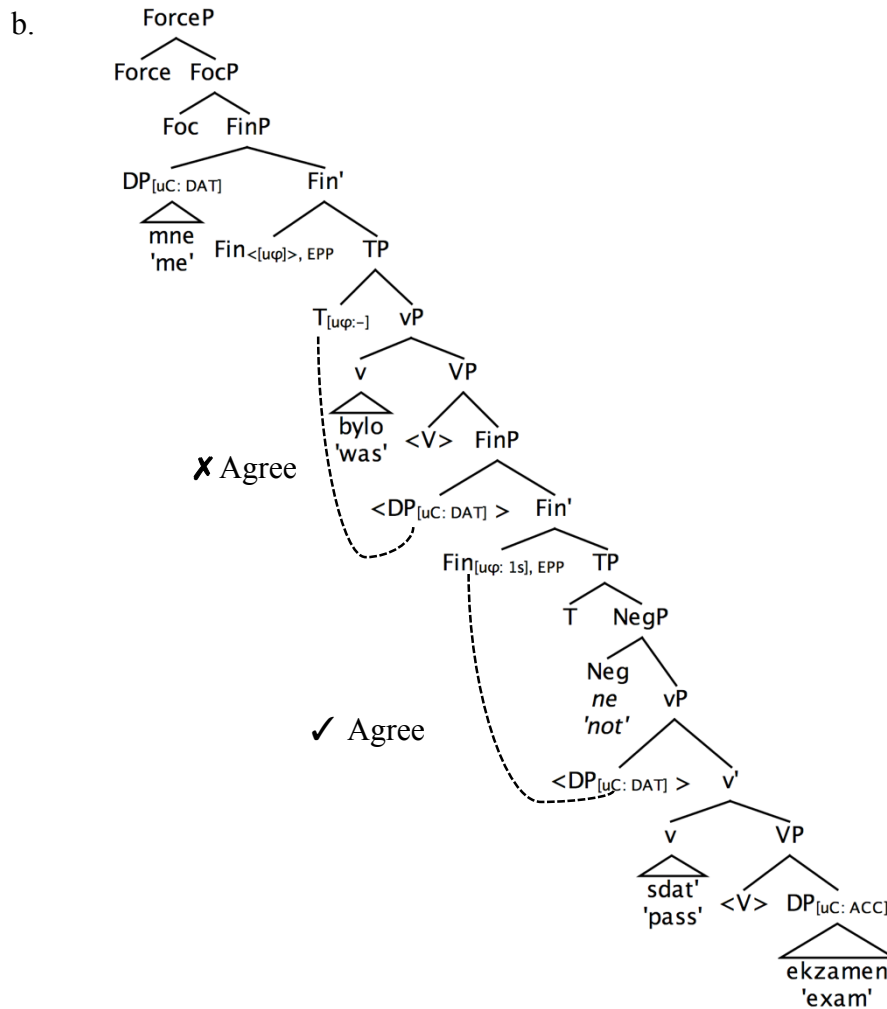
In (47) above, we saw how the embedded clause of the dative infinitive construction in Russian is built. A Fin head selects a TP, and when Feature Inheritance does not occur, the subject in Spec  $vP$  agrees with Fin, is assigned DAT, and moves to the Spec of FinP to satisfy the EPP on Fin. Next the light verb *byt'* 'be' selects this FinP. As shown in (67), in the finite matrix clause, Feature Inheritance does occur between Fin and T, but T inherits only  $[u\phi]$ . (I return to the question of when exactly Feature Inheritance does and does not occur in Section 4.2 below.) It probes down the tree, and as there are no DPs available for Agree, it remains unvalued. The

auxiliary *byt'* is then spelled out with third person singular neuter (impersonal) morphology.

Because Fin retains the EPP, the dative DP moves to Spec FinP to satisfy it.

- (67) a. Mne ne sdat' ekzamen.  
 me<sub>DAT</sub> NEG pass<sub>INF</sub> exam<sub>ACC</sub>  
 'It's not (in the cards) for me to pass the exam.'

Russian



Crucially, this DP is in the Spec of the phase FinP and is visible to T when it is merged. I assume

here that the light *v* of the matrix clause is not a phase head or is a weak phase in the sense of

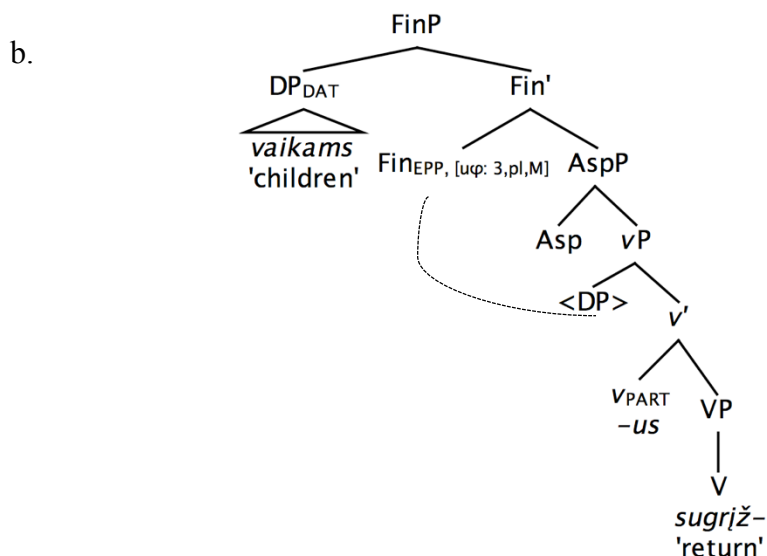
Chomsky (2001), meaning that the VP containing the embedded FinP is not spelled out.<sup>20</sup>

<sup>20</sup> One issue that arises for this analysis is how it interacts with the notion of Criterial Freezing. Rizzi and Shlonsky (2007) account for subject-object extraction asymmetries and the requirement to have a subject (i.e. the EPP) with the proposal that once arguments reach certain Criterial Positions associated with some “scope-discourse interpretive property”, they are restricted from moving further. For them, subjects move to a dedicated subject position (SubjP) above TP, which one could argue correlates with (embedded) FinP here. To account for subject movement in

### 3.2 Non-nominative subjects of Lithuanian participial clauses

The NNS of both the embedded and non-embedded (i.e. adjunct) participial clauses move to Spec FinP in the same fashion. For the adjunct clause, the NNS remains in the specifier of the head it is in an Agree relation with. The tree in (48) is repeated here as (68).

- (68) a. [Vaikams sugrižus], pragydo lakštingala. Lithuanian  
 child<sub>DAT.PL</sub> return<sub>ACT.PERF.-AGR</sub> start.singing<sub>3.PAST</sub> nightingale<sub>NOM</sub>  
 ‘When the children came back, a nightingale burst into singing.’  
 (Ambrasas et al. 1997: 363)



The ACC NNSs of an embedded participial clause, on the other hand, moves beyond its case-assigning head Asp to Spec FinP to satisfy the EPP. This is because Split Feature Inheritance of

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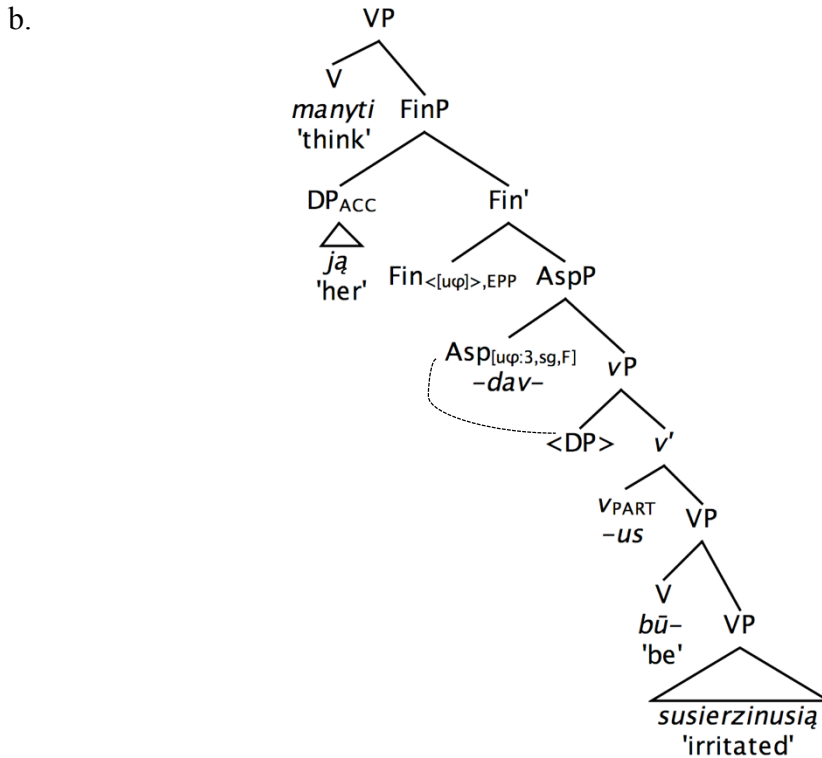
English raising (*Mary<sub>i</sub> seems [ t<sub>i</sub> to like it]*), Rizzi and Shlonsky (2007) propose that the embedded clause is so truncated that it does not have a SubjP layer, therefore obviating the need to satisfy the Subject Criterion at that level. Instead of assuming a SubjP here, I note that Rizzi and Shlonsky (2007) argue that  $\phi$ -features on Fin can satisfy the Subject Criterion in cases of subject extraction across a null C, as in (i) below.

- (i) Who do you think [ t' Fin+Phi [ Subj [ t came ]]]? (Rizzi and Shlonsky 2007: 145)

It is important to point out that the system of Criterial Freezing and the Subject Criterion seeks to derive the EPP by proposing another mechanism or restriction on the model. In this thesis, I have embraced the EPP as a useful way to model how certain phrases seem to “require” a specifier, and as I noted in Chapter 2, I see it as a second-order feature in the way that tones are seen as second order in Autosegmental Phonology (Goldsmith 1976). Thank you to Edith Aldridge for pointing out this issue.

[u $\phi$ ] was triggered when the embedded FinP was selected by a lexical V (see discussion in Section 4.1.1). In (69) below, the subject *jā* ‘her’ is in Spec FinP.<sup>21</sup>

- (69) a. ... skatina manyti [*jā dažnai būdavus susierzinsią*]. *Lithuanian*  
 ... induces<sub>3</sub> think<sub>INF</sub> she<sub>ACC</sub> often be<sub>PASS.PERF.HAB.-AGR</sub> irritated<sub>ACT.PROG.ACC.SG.FEM</sub>  
 ‘[this] induces one to believe her to have often been irritated...’  
 (<http://alfa.lt/straipsnis/150854>)



Recall from Section 2.2.2 above that these participial clauses are missing a TP layer, making the events they introduce dependent on the matrix clause for tense. When Split Feature Inheritance occurs, Asp is the head that inherits [u $\phi$ ] from Fin, not T. Because Asp is part of the event and argument structure of the clause, ACC is the case that it assigns to the DP it agrees with.

<sup>21</sup> I assume that Split Feature Inheritance occurs here, forcing movement of the subject to the specifier of FinP to check the EPP on Fin. Although, it is conceivable that Asp could inherit both [u $\phi$ ] and EPP, forcing the subject DP to move to Spec AspP. One aspect of these embedded participles to keep in mind, though, is that no wh-movement is possible. If Spec FinP were not occupied by the subject, perhaps wh-fronting would be possible to that position.

- (i) \*Nežinau kur tėvą išėjus. *Lithuanian*  
 not.know<sub>PRS-1SG</sub> where father<sub>ACC.SG</sub> go.out<sub>ACT.PERF.-AGR</sub>  
 intended meaning: ‘I don’t know where father has gone.’  
 (Arkadiev 2012: 12)

### 3.3 Non-nominative subjects of Inferential Evidential

In Section 2 above I described the source of the GEN on these non-nominative subjects (NNSs) as coming from a D which heads a gerund. Here I argue that a null light verb *v* selects for this DP and T merges with this *v*P. In a departure from Lavine (2010) I analyze T as finite, inheriting [u $\phi$ ] from Fin, as these are utterances about past events or states. Lavine (2010) draws parallels between English subjunctive clauses and non-finiteness (*I insisted that he go*) to argue that it's possible for main clause Inferential Evidentials to be non-finite, but his main piece of evidence is that finite auxiliaries are not permitted with this construction.

- (70) Vaiko (\*yra /\*buvo) sudaužyta puodelis. *Lithuanian*  
 child<sub>GEN</sub> be<sub>3P.PRES/be<sub>3P.PAST</sub></sub> broke<sub>PASS.PART.NEUT</sub> cup<sub>NOM</sub>  
 'The child apparently broke the cup.' (Lavine 2010: 126)

However, we saw in Section 2 above that the Inferential Evidential is not a passive, as the GEN subject binds anaphors and the construction can be formed from unaccusatives and already passivized clauses. Therefore, we have no reason to expect that an auxiliary would be present at all. This bleeds the main argument for these constructions being non-finite, and I assume from here on that they are finite.<sup>22</sup>

Lavine (2010) analyzes the source of the evidential semantics as an Evid head in the CP layer. I've retained this, but re-labeled it as Force with an [EVID] feature, to show that these utterances have a sentential force other than a pure assertion that an event occurred.

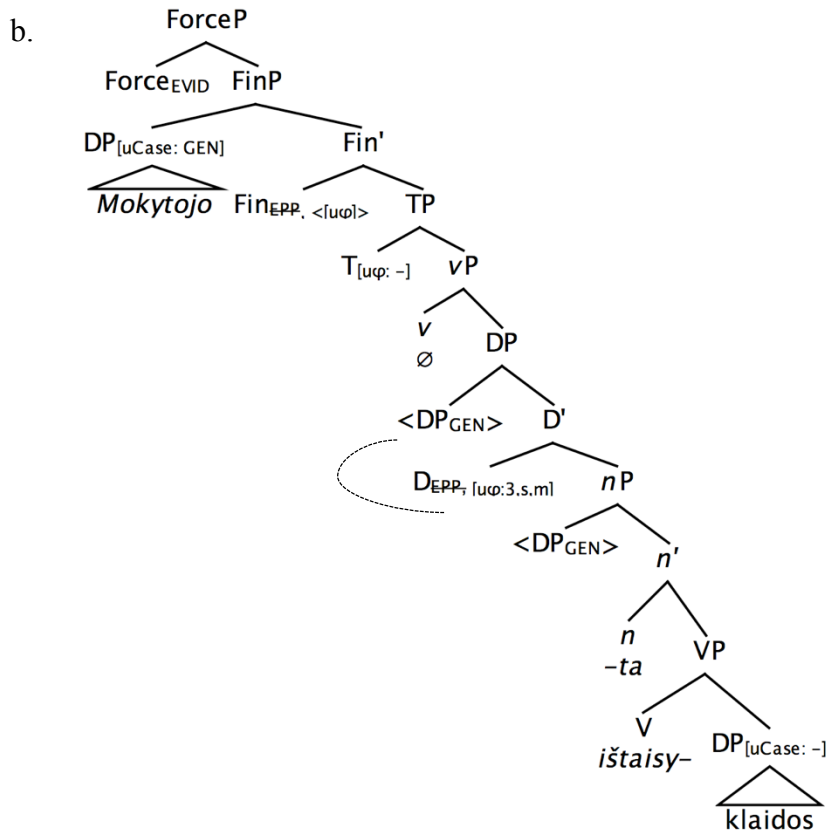
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<sup>22</sup> In addition, the reportative evidential construction, which has similar semantics, has a nominative subject. Non-finiteness is not a prerequisite for having evidential semantics in Lithuanian.

- (i) Tėvas pavargęs *Lithuanian*  
 father<sub>NOM</sub> tired<sub>ACT.PART.MASC</sub>  
 'Father (it is said) is tired' (Gronemeyer 1997: 98)

- (71) a. Mokytojo ištaisyta klaidos.  
 teacher<sub>GEN</sub> correct<sub>PASS.PERF.-AGR</sub> mistakes<sub>NOM</sub>  
 ‘The teacher apparently corrected the mistakes’

Lithuanian



Via Split Feature Inheritance, the EPP is still on the Fin head and the GEN DP moves to Spec FinP to satisfy it.

Notice here that T is left unvalued. After arguing that the Inferential Evidential is non-finite, Lavine (2010) concludes that the NOM on the object in these constructions is assigned as a default case. Although I disagree that these clauses are necessarily non-finite, I follow him in assuming that NOM here is the same default case which arises in elided or fragment answers, as shown in (72) (see Schütze 2001).

(72) Q: Kas ten?  
 who<sub>NOM</sub> there  
 ‘Who’s there?’

*Lithuanian*

A: Tik aš.  
 just I<sub>NOM</sub>  
 ‘Just me.’

First of all, the structure I have proposed in this thesis predicts that T should be unable to probe the object DP inside of the matrix DP, which is also evidenced by the lack of agreement morphology on the verb.<sup>23</sup> By the Phase Impenetrability Condition (PIC) of Chomsky (2001), the complement of the D phase head will be spelled-out when C (or Fin) is merged into the derivation, and the embedded object DP has no way to escape via Spec DP. Furthermore, assuming that DPs have internal phases themselves would lead us to conclude that the object is spelled-out when the matrix D is merged in, before T even selects the *v*P (Svenonius 2004, see Manlove 2016 for discussion of DP-internal phases or peripheries).

Second, Lavine (2010) offers the following evidence for default NOM on the object in (71). In the Inferential Evidential, there is no source for case for the DP within the VP. Unlike Russian, Polish, and Ukrainian, Lithuanian does not have the Adversity Impersonal construction where an ACC object appears in the absence of a NOM subject.

(73) Kulju bulo rozirvano svjaxom.  
 balloon<sub>ACC</sub> was pierced<sub>-AGR</sub> nail<sub>INST</sub>  
 ‘The balloon was pierced by a nail.’

*Ukrainian*

(Lavine 2010: 132)

(74) \*Balioną pradūrė vinimi.  
 balloon<sub>ACC</sub> pierced<sub>3.PAST</sub> nail<sub>INST</sub>  
 ‘The balloon was pierced by a nail.’

*Lithuanian*

(Lavine 2010: 133)

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<sup>23</sup> Thanks to Edith Aldridge for pointing this out.

Lavine (2010) attributes this to the fact that in Lithuanian  $v_{CAUSE}$  and  $v_{VOICE}$  are “bundled” in the sense of Pylkkänen (2002), while in Russian, Polish, and Ukrainian, a  $v_{CAUSE}$  can be merged in the absence of the Agent selecting  $v_{VOICE}$ .

- (75) Soldat<sub>i</sub> [<sub>VP</sub>  $v_{CAUSE}$  [<sub>VP</sub> ranilo <sub>t<sub>i</sub></sub> pulej]] *Russian*  
 soldier<sub>ACC</sub> wounded<sub>3,-AGR</sub> bullet<sub>INST</sub>  
 ‘A soldier got wounded by a bullet.’

The  $v_{CAUSE}$  in (73) and in the Russian Adversity Impersonal in (75) introduces the causing event and assigns ACC to the internal argument (see also Markman 2004). Under my analysis, this can be accounted for by assuming that  $n_{-ma/-ta}$  simply does not assign case. Lavine (2000) shows that these objects can indeed have case assigned to them lexically though.

- (76) a. Tėvai didžiuojasi savo sūnum. *Lithuanian*  
 parents<sub>NOM</sub> proud<sub>3,REFL</sub> self’s son<sub>INST</sub>  
 ‘The parents are proud of their son.’
- b. Tėvų didžiuojamasi savo sūnum.  
 parents<sub>GEN</sub> proud<sub>PASS.PROG.-AGR,REFL</sub> self’s son<sub>INST</sub>  
 ‘The parents are apparently proud of their son.’ (Lavine 2000: 202)

This follows if we assume that lexical case is assigned by non-functional heads like V and that  $n_{-ma/-ta}$  selects VPs, as shown in (71). In addition, some speakers only accept NOM on the object, even in GenNeg contexts, as shown in (77).

- (77) Ingos nenuraminta \*vaiko / vaikas. *Lithuanian*  
 Inga<sub>GEN</sub> not.calm.down<sub>PASS.PERF.-AGR</sub> child\*<sub>GEN/NOM</sub>  
 ‘Inga must not have calmed down the child.’ (Lavine 2010: 136)

Finally, Lavine (2010) notes apparent Person Case Constraint (PCC) effects wherein first and second person pronouns are ungrammatical as the NOM object of the Instrumental Evidential.

- (78) Ingos nuraminta \*aš / \*tu. *Lithuanian*  
 Inga<sub>GEN</sub> calm.down<sub>PASS.PERF.-AGR</sub> I/you<sub>NOM</sub>  
 ‘Inga must not have calmed down me/you.’ (Lavine 2010: 137)

If it is the case that [person] features must be checked via Agree with T and that in Russian and Lithuanian person and number features do not probe separately, then we can account for (78) by arguing that Agree here has failed to take place (see Chapter 2, Section 4.2 for discussion on PCC). We can also compare the lack of agreement morphology on the participle in an Inferential Evidential to the agreement morphology of the participle of an actual passive. In (58) above, repeated here as (80), the participle *nusikirsti* ‘cut down’ agrees in number, gender, and case with the NOM Theme *visi kopustai* ‘all the cabbages’.

(79) Evidential *Lithuanian*  
 Vagies nusikirsta visi kopustai.  
 thief<sub>GEN</sub> cut.down<sub>PASS.PERF.-AGR</sub> all cabbages<sub>NOM</sub>  
 ‘(Evidently), a thief cut down all the cabbages.’ (adapted from Geniušienė 2006: 56)

(80) Passive with GEN Agentive *by*-phrase *Lithuanian*  
 Visi kopustai buvo nusikirsti vagies.  
 all cabbages<sub>NOM.MASC</sub> was<sub>3.SG</sub> cut.down<sub>PASS.PERF.NOM.PL.MASC</sub> thief<sub>GEN</sub>  
 ‘All the cabbage were cut down by a thief.’

The GEN subject, on the other hand, triggers agreement with predicates of small clauses embedded in an Inferential Evidential.

(81) a. Jo būta kareivio. *Lithuanian*  
 he<sub>GEN</sub> be<sub>PASS.PART.-AGR</sub> soldier<sub>GEN.SG.MASC</sub>  
 ‘(They say) he was a soldier.’ (Ambrazas, et al. 1997: 660)

b. Mindaugo būta žiaurus.  
 Mindaugas<sub>MASC.GEN</sub> be<sub>PASS.PART.-AGR</sub> cruel<sub>GEN.SG.MASC</sub>  
 ‘Mindaugas is said to have been cruel.’ (Wiemer 2006: 43)

As a final note on the structure I have proposed in (71), I present the following word order restriction in *wh*-questions formed from the Inferential Evidential. Unlike canonical subjects, GEN subjects of these constructions must appear pre-verbally in questions, as in (82a). Compare the ungrammatical  $OVS_{GEN}$  order in (82b) to the grammatical  $OVS_{NOM}$  in (82b).

- (82)
- |    |   |  |
|----|---|--|
| a. | Kokių studentų klaidos mokytojo ištaisyta?  | <i>Lithuanian</i><br>DP <sub>GEN</sub> V |
|    | which student <sub>GEN</sub> mistakes <sub>NOM</sub> teacher <sub>GEN</sub> corrected <sub>PASS.PERF.-AGR</sub> |  |
|    | ‘Which students’ mistakes did the teacher apparently correct?’  |  |
| b. | *Kokių studentų klaidos ištaisyta mokytojo?   | *V DP <sub>GEN</sub>                     |
|    | which student <sub>GEN</sub> mistakes <sub>NOM</sub> corrected <sub>PASS.PERF.-AGR</sub> teacher <sub>GEN</sub> |  |
|    | ‘Which students’ mistakes did the teacher apparently correct?’  |  |
| c. | Kokių studentų klaidas ištaisė mokytojas?   | V DP <sub>NOM</sub>                      |
|    | which student <sub>GEN</sub> mistakes <sub>ACC</sub> corrected <sub>PASS.PERF.-AGR</sub> teacher <sub>NOM</sub> |  |
|    | ‘Which students’ mistakes were corrected by the teacher?’   |  |

Perhaps we can account for this puzzle if we assume that the DP structure in (71) restricts the movement of the verb to the interrogative C head in questions. The NOM object in (82a) bears a [wh] feature that allows it to escape the DP, perhaps via an additional DP left-peripheral position, while the verb and subject remain in the SV order predicted by the subject’s presence in Spec DP.

- (83) Kokių studentų klaidos<sub>k</sub> [TP T [VP *v* [DP *t<sub>k</sub>* [DP mokytojo<sub>i</sub> D [nP *t<sub>i</sub>* ištaisyta<sub>j</sub> [VP *t<sub>j</sub>* *t<sub>k</sub>* ]]]]]  
 which student mistakes<sub>NOM</sub> teacher<sub>GEN</sub> corrected<sub>PASS.PERF.-AGR</sub>  
 ‘Which students’ mistakes did the teacher apparently correct?’

The question is why head movement from *n* through D all the way to the interrogative C is restricted here. Assuming that the DP is a phase means that by the time the interrogative C is merged, the *nP* containing the trace of the subject and the predicate will have been spelled out, so it could be the case that the word order in (82) is necessary to preserve the linear order of SV in *nP*, à la Fox and Pesetsky (2005).

In this section, we have seen that, after (or as) they are assigned case structurally via Agree with [u $\phi$ ] on a head other than T, NNSs in these constructions move to Spec FinP, just as the Inherent NNSs were proposed to do in Chapter 2. In Section 4, I discuss the source of structural subject case further. `

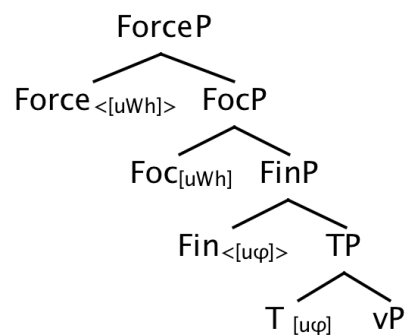
#### 4. The source and meaning of non-nominative structural subject case

In this section I discuss why it might be the case that Feature Inheritance is not always triggered, leaving  $[u\phi]$  on Fin. I also briefly discuss the possible diachronic origin of a non-nominative structural case for subjects. I end the section with a discussion of what structural case tells us about the relationship between arguments and the propositions they are a part of.

##### 4.1 Triggering Feature Inheritance

In Section 4.1 of Chapter 2 I speculated on what might be the trigger for Feature Inheritance from the Fin(iteness) head to T, hypothesizing that inheritance of features from a higher head like Force might cause a cascade effect. For example, if we assume  $[uWh]$  is a feature that Force can have when it is merged into the structure, then its being inherited by Foc, can trigger the inheritance of  $[u\phi]$  by T from Fin, as shown in (84) below.

(84)



I raised the question of what it is that allows Feature Inheritance to *not* occur, noting that structural dative (the result of Feature Inheritance not occurring) only occurs in non-finite clauses: the Russian dative infinitive and the Lithuanian participial adjunct clause. If these non-finite constructions both occur without a Force head, then perhaps Feature Inheritance isn't triggered. However, as mentioned in Section 2.2.2, *wh*-movement (and focus movement) can occur in the dative infinitive construction. In the example in (85), we can see that this is a

bi-clausal construction because of the presence of the finite *bylo* ‘was’. I assume that the *wh*-word *čto* ‘what’ must move through an embedded FocP on its way to the matrix FocP. Therefore, I assume that additional structure beyond FinP can be in the embedded clause, but that these functional heads (e.g. Foc) are perhaps featureless, and do not trigger Feature Inheritance from the lower Fin to T.

- (85) Čto<sub>i</sub> nam<sub>j</sub> bylo [FocP t<sub>i</sub> Foc [FinP t<sub>j</sub> Fin<sub>[uφ]</sub> [TP T [vP t<sub>j</sub> [VP delat’ t<sub>i</sub> ]]]] do<sub>INF</sub>  
 what<sub>ACC</sub> us<sub>DAT</sub> was<sub>3.SG.NEUT</sub> do<sub>INF</sub>  
 ‘What were we to do?’

The next question that this brings up is the difference in inheritance between the embedded FinP clauses in these constructions. In the case of the embedded Lithuanian participial clauses, what selects the FinP is not another head from the left periphery, but a verbal head. As (17) from above, repeated here as (86), shows, these verbal heads can assign ACC and therefore bear [uφ] features.

- (86) Jurgis patikino policininką [ savo tėvą gimus kaime]. *Lithuanian*  
 Jurgis<sub>NOM</sub> assure<sub>3.PST</sub> policeman<sub>ACC</sub> self’s father<sub>ACC</sub> be.born<sub>ACT.PERF.-AGR</sub> village<sub>LOC</sub>  
 ‘Jurgis assured the policeman that his father had been born in the countryside.’  
 (Arkadiev 2012: 34)

This head then triggers Feature Inheritance in the manner described above from Fin to an Asp head.

This, however, does not occur in the derivation for the Russian dative infinitive structures given in (47) and (67) above. The FinP is an embedded clause, and yet DAT is still assigned. If we assume the cascade effect above, this means that nothing has triggered Feature Inheritance. As these clauses are selected by a null copula it is reasonable to assume that this V simply has no [uφ] feature-bundle that would trigger Feature Inheritance. The next question is why matrix Vs in Lithuanian can select FinPs, but matrix Vs in Russian cannot. I note that matrix verbs in

neither language can select infinitival TP clauses in ECM constructions.<sup>24</sup> What would be an ECM construction in English is a matrix verb selecting finite clause in Russian and Lithuanian, as shown in (87) and (88) below.

- (87) a. Ja videl, kak on ukral bumažnik. *Russian*  
 I<sub>NOM</sub> saw how he<sub>NOM</sub> stole<sub>PAST.3.SG.M</sub> wallet<sub>ACC</sub>  
 ‘I saw him steal the wallet.’
- b. \*Ja videl ego ukrast’ bumažnik.  
 I<sub>NOM</sub> saw him<sub>ACC</sub> steal<sub>INF</sub> wallet<sub>ACC</sub>  
 ‘I saw him steal the wallet.’
- (88) a. Aš pamačiau, kaip jis pavogė piniginę. *Lithuanian*  
 I<sub>NOM</sub> saw how he<sub>NOM</sub> stole<sub>PAST.3.SG.M</sub> wallet<sub>ACC</sub>  
 ‘I saw him steal the wallet.’
- b. \*Aš pamačiau jį pavogti piniginę.  
 I<sub>NOM</sub> saw him<sub>ACC</sub> steal<sub>INF</sub> wallet<sub>ACC</sub>  
 ‘I saw him steal the wallet.’

Here, the verb *videl/pamačiau* ‘saw’ must select a clause that is big enough to allow the *wh*-adverb *kak* ‘how’ to move to the left-periphery or be base generated there. The accusative subjects in the embedded participial construction have their own source of case in the embedded clause and are licit. I tentatively suggest that one clue as to why Russian matrix Vs cannot select FinPs might come from the historical origins of these constructions. In the next section I briefly discuss how the accusative subjects of the embedded participles were once true objects that were reanalyzed as subjects of their own clause, which is linked to the presence of agreeing participles in Old Lithuanian (Ambrazas 1990). Perhaps part of this reanalysis involved learners positing additional structure in participial clauses as the source of subject accusative case. I leave analysis of this difference between Russian and Lithuanian to future research.

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<sup>24</sup> Thank you to Barbara Citko for the suggestion that these phenomena may be connected.

#### 4.2 Diachronic source of non-nominative case for subjects

Another interesting question is how to provide a synchronic account for these structures that is informed by the origin of these non-NOM structural cases. We know that in East Baltic, the *-t-* morpheme of the infinitival ending *-ti* was once a deverbal morpheme of action nominals. The dative form of the action nominal (*-t-* plus the dative ending *-i*) was later reanalyzed as the infinitive through its use in purpose clauses, and as (89) shows the infinitive can be replaced by a dative nominal (Ambrazas 1995, 2001).

- (89) Rugiai (mums) liko                    sėti / sėjai.                    *Lithuanian*  
rye<sub>NOM</sub> we<sub>DAT</sub> remain<sub>3.PAST</sub> sow<sub>INF</sub> / sowing<sub>DAT</sub>  
'The rye remained (for us) to sow/for sowing.'  
(Ambrazas 2001: 393)

Ambrazas (2001) argues that nominative objects were originally subjects that were part of clauses modified by the dative action nominal and were only later reanalyzed as objects of the infinitive. Jung (2010) provides a good discussion on the hypothesis that this sort of reanalysis is the origin for the dative infinitive construction in Russian, a proposal that dates back to Obnorskij (1927). Once the action nominal was reanalyzed as the infinitive and the Theme as its object, the Old Russian dative possessor from the existential possessive construction exemplified in (90) was interpreted as the subject of the infinitival clause.

- (90) Ne bystь pamjati ni **jedinomu** že o vьziskanii telese stāago.                    *Old Russian*  
not was memory not **one**<sub>DAT</sub> PART about search body saint  
'Nobody had a memory about the search of the saint's body.'  
(From *Sъkazanie i strastь i poxvala svjatuju mučeniku Borisa i Glěba*, the 12th c.; cited by Jung 2010: 380)

Regarding the dative and accusative subjects in Lithuanian participial clauses, Ambrazas (1990) shows that they have different origins in Old Lithuanian (see also discussion in Greenberg and Lavine 2006, Arkadiev 2013, and references therein). The adjunct participial clause comes from

the Indo-European “dative absolute”. As (91) shows, this construction used to have an agreeing participle, which lost its agreement morphology by the nineteenth century (Ambrasas 1990).

- (91) *Old Lithuanian*  
 [Bet Petruī ataius-**iam** ing Antiochia], passistengiau esch ing akis.  
 but Petras<sub>DAT</sub> come<sub>ACT.PERF.DAT.SG.MASC</sub> in Antioch opposed<sub>1.SG</sub> I<sub>NOM</sub> in eyes  
 ‘When Peter came to Antioch, I opposed him to his face.’  
 (Jonas Bertkūnas’s Lithuanian translation of the Bible, Königsberg 1579–1590 (BB), Gal. 2:11, cited by Ambrasas 1990: 164)

The embedded participial construction developed from objects that were modified by participles and later reanalyzed as subjects of their own clause. In (92), we can see that the participial in this construction also used to agree in case, person, and gender with the accusative argument.

- (92) Regim malda daug galincz-e. *Old Lithuanian*  
 see<sub>1.SG</sub> prayer<sub>ACC</sub> a.lot can<sub>ACT.PROG.ACC.SG.FEM</sub>  
 ‘We see that prayer can (do) a lot.’ (BP, II 99, cited by Ambrasas 1990: 143)

In Lithuanian, the GEN agentive by-phrase developed from the possessor GEN when the periphrastic passive arose (Ambrasas 1978). Perhaps the Inferential Evidential developed alongside the periphrastic passive and survived because it developed its special evidential semantics.<sup>25</sup> The question arises as to how the case on these arguments could have been reanalyzed to be systematic structural cases. One clue might come from the source of nominative case in Japanese (p.c. Edith Aldridge). The nominative marker *ga* was once a genitive case marker of subjects of nominalized clauses like relative clauses. When these nominalized clauses were later interpreted as matrix clauses because the nominalizing verb morphology was not distinguishable from the finite verb morphology, *ga* was reinterpreted as NOM. I leave this here as a point for future research and refer readers to discussion in Aldridge (2009).

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<sup>25</sup> Or, as Edith Aldridge suggests, the evidential semantics are retained from an earlier evidential construction that was later reanalyzed as the periphrastic passive.

#### 4.3 The importance of clausal location for case

One important question that the analysis of structural case I have argued for here raises is *why* the location of  $[u\phi]$  in the clause matters for which case the subject DP will be assigned. What does it mean to say that dative is associated with the left periphery, nominative with the inflectional domain, accusative the locus of event and argument structure, and genitive with the nominal domain? To my mind, one promising answer to this question can be found in the relational perspective on structural case advocated in Hinzen (2014). Hinzen (2014) points out that structural cases are confined to DPs that are arguments in a grammatical structure, unlike thematic roles which can be associated with adjuncts (e.g. the agentive *by*-phrase in passives). He views grammatical processes (i.e. structure building) as uniquely endowed with the task of establishing relationships of reference. It is not an accident, on his account, that as nominals become more referential, DP structure grows in size (e.g. the root *man* has no reference to entities in the real world until a determiner like *the* selects it). Similarly, until an object DP is added to a verb phrase, the verb cannot denote an event (e.g. *cut* versus *cut an apple*). For him, this is where structural case steps in. We know that a DP is related to the event as the object of the event because it has accusative case. In (93a), ACC expresses the relation “between the internal argument and the verb, which together yield only a grammatical predicate but crucially no truth value (‘killed him’ is not true or false)” (Hinzen 2014: 141).

- (93) a. We [ $\text{Voice}_{\text{ACT}-v}$  killed him $_{\text{ACC}}$ ]  
b. He $_{\text{NOM}}$  [ $\text{Voice}_{\text{PAS}-v}$  was killed].  
c. He $_{\text{NOM}}$  [ $\text{Voice}_{\text{UNACC}-v}$  died]

Nominative, on the other hand, marks when an argument is related to a finite verb such that the new structure is a full proposition with a truth value, as in (93b,c). Different case forms are meaningful in this framework: the difference between NOM and ACC marks “different cross-

phasal relations into which [the] nominal enters” (Hinzen 2014: 141) (i.e. ACC with  $v$  phase and NOM with the C-T phase).

I submit that the structural dative that we see in Russian infinitival clauses and Lithuanian participial clauses fits in with this conception of case as something that tracks the addition of arguments to build up meaningful structure. Hinzen (2014) discusses how the licensing of PRO and the ways that case can be assigned in embedded infinitival clauses is correlated with how “referentially complete” the clause is. In ECM constructions, the embedded clause does not have referential independence as a proposition because it is lacking in finiteness and the anchoring to speech events that accompanies it (see Bianchi 2003 for the argument that finiteness is the locus of the logophoric anchoring of a clause). Therefore, the phase boundary of the left periphery is weak and allows for the matrix  $v$  to assign case exceptionally to the embedded subject, as in (94a). However, in (94b), when the infinitive clause is a factive and therefore closer to having a truth value, its phase domain is opaque and ECM is ruled out.

- (94) a. John believed [Mary to be pretty].  
 b. \*John regretted/resented [Mary to be pretty].

Next, when an infinitival clause is tensed and has its own temporal reference, it can license a subject, albeit one that itself is not overt.

- (95) I hope [PRO to be at the party tomorrow].

Hinzen (2014) points out that it is not surprising then to for some languages, like Russian and Icelandic to allow PRO to have its own independent case, as shown in (96), repeated from (39) above.

- (96) Ona poprosila ego ne ezdit' tuda odnogo/**odnomu** zavtra. *Russian*  
 she<sub>NOM</sub> asked<sub>3.SG.FEM</sub> him<sub>ACC</sub> NEG go<sub>INF</sub> there alone<sub>ACC/DAT</sub> tomorrow  
 ‘She asked him not to go there alone tomorrow.’ (Landau 2008: 886)

What is happening in the non-finite clauses in (97) and (98) then is that a DP external argument

has been added to the event that has been built up by the  $\nu$ P phase. The addition of the DP creates a new grammatical structure that denotes a sort of un-asserted proposition, as opposed to a proposition that is asserted by a speaker to be true or not. Dative is simply the case in Russian and Lithuanian that reflects when a DP is in this grammatical relation to the structure.

(97) Mama sobirala naši veši, [čtoby **nam** uexat' na vokzal]. *Russian*  
 Mom gathered our things, that we<sub>DAT</sub> go-out<sub>INF</sub> to train station  
 'Mom gathered up our things, in order for us to go out to the train station.'

(98) [Vaikams sugrižus], pragydo lakštingala. *Lithuanian*  
 child<sub>DAT.PL</sub> return<sub>ACT.PERF.-AGR</sub> start.singing<sub>3.PAST</sub> nightingale<sub>NOM.SG</sub>  
 'When the children came back, a nightingale burst into singing.'  
 (Ambrazas et al. 1997: 363)

In this dissertation, I have assumed that the mechanism by which a DP comes to have a certain structural case is Agree with a head bearing  $[u\phi]$ . Which case is spelled out on the DP is then a reflection of where in the structure  $[u\phi]$  is, which tells us what part of the structure the DP is related to as an argument. Hinzen (2014) argues that because morphological cases are the visible evidence of grammatical relations, there is no need to assume that they are also abstract features in the narrow syntax. I disagree on this point. I think it is helpful to build the assignment of case into our feature driven syntax to account for scenarios in which a structural case does *not* reflect the grammatical relation it normally reflects. I have discussed in this dissertation how nominative is assigned to the Theme of a psychological verb (99a) and accusative is assigned to the subject of an embedded participial clause in Lithuanian (99b).

(99) a. Mne nra vjatsja èti botinki. *Russian*  
 me<sub>DAT</sub> please<sub>3.PL</sub> these boots<sub>NOM</sub>  
 'I like these boots.'

b. Sakiau [tèvą gerai gyvenant]. *Lithuanian*  
 say<sub>1SG.PAST</sub> father<sub>ACC</sub> well live<sub>ACT.PROG.-AGR</sub>  
 'I said father lived well.'  
 (Ambrazas et al. 1997: 367)

Hinzen (2014), therefore, gives us the rationale of structural case, and in this chapter I have

proposed a unified way of modeling structural case in situations where it may seem unexpected, that is, when subjects have a non-nominative case.

If what determines which case a DP is spelled-out with is the location of the  $[u\phi]$ -bearing head in the clause, it is important to be sure that the morphological component can recognize where in the structure this feature bundle was (i.e. was it in the left periphery, and therefore DAT should be spelled out, or in the nominal domain and GEN should be spelled out). I tentatively propose that what values  $[uCase]$  on a DP is the label of the head bearing  $[u\phi]$  (or a feature associated with it), similar to Pesetsky and Torrego's (2007)  $[uT]$  or  $[uv]$  feature on DPs. So, if a T head with  $[u\phi]$  agrees with a DP, as in (99a), the DP's  $[uCase]$  feature will be valued as  $[uCase: T]$ , which in Russian and Lithuanian is spelled out as NOM. Similarly, if the head is an Aspect head, the DP will have  $[uCase: Asp]$ , and will be spelled out with ACC morphology. The next section summarizes this proposal and concludes the chapter.

## **5. Conclusion**

### *5.1. Summary*

What unifies the non-nominative subjects discussed in this chapter is that they all bear a structural case. In other words, these DPs each undergo Agree with  $[u\phi]$  on a c-commanding head. The case that they end up bearing is determined by location of the head that hosts the  $[u\phi]$  feature. Subjects that agree with  $[u\phi]$  in the left periphery are assigned DAT, those that agree with  $[u\phi]$  in the middle-field are assigned NOM, those that agree with  $[u\phi]$  in the event or argument structure (i.e. verbal) domain are assigned ACC, and those that agree with a  $[u\phi]$  in a nominal are assigned GEN. That these subjects are assigned a case structurally is not a new proposal. What is new is a unified account for *why* certain constructions end up marking their subjects non-NOM and a clear prediction for why each subject bears the exact case that it does.

These NNSs are like nominative subjects in that they can be subjects of transitive or intransitive predicate, originating in Spec vP or VP internally. It is the structure that the predicate is part of that dictates that the subject will bear a non-nominative case. The inherent NNSs discussed in Chapter 2, on the other hand, are unlike nominative subjects, in that, in addition to bearing inherent case, they are merged in Spec ApplP. This gives us three groups of subjects to compare across in the next chapter on binding properties: nominative subjects, structural non-nominative subjects, and inherent non-nominative subjects.

### 5.2 Binding by structural non-nominative subjects

In Chapter 4, I investigate the interaction between non-nominative subjects in Russian and Lithuanian and the binding of anaphors. As mentioned in previous chapters, not only are only nominative subjects allowed to bind reflexives, as shown in (100), but also subjects are unable to bind pronouns, as shown in (101).

(100) Militционер<sub>i</sub> rassprašival arestovannogo<sub>j</sub> o sebe<sub>i/\*j</sub>. *Russian*  
 policeman<sub>NOM</sub> questioned suspect<sub>ACC</sub> about self<sub>PREP</sub>  
 ‘The policeman<sub>i</sub> questioned the suspect<sub>j</sub> about himself<sub>i/j</sub>.’ (Rappaport 1986: 101)

(101) Jis<sub>i</sub> nori savo/jo<sub>\*i/j</sub> knygo *Lithuanian*  
 he<sub>NOM</sub> want<sub>3.SG</sub> self’s/his book<sub>GEN</sub>  
 ‘He<sub>i</sub> wants his<sub>i/j</sub> book.’

Thus binding can be said to be connected in some way to structural position, with the strictest stance being that in some languages only a nominal in Spec TP can bind an anaphor (see also Ura 2000). In this thesis, I have argued that all non-nominative subjects in Russian and Lithuanian move to Spec FinP, not Spec TP. Under this hypothesis, it is surprising that the structural NNSs here seem to all be able to bind reflexive *svoj/savo* ‘self’s’, as the examples in (102) through (104) show.

- (102) Dative infinitive *Russian*  
 Emu<sub>i</sub> ne opublikovat' **svoej<sub>i</sub>** stat'i.  
 him<sub>DAT</sub> NEG publish<sub>INF</sub> self's articles<sub>ACC</sub>  
 'It's not (in the cards) for him to publish his articles' (Nikolaeva 2014: 62)
- (103) Participial subject *Lithuanian*  
 Diplomatei<sub>i</sub> išjuokus **savo<sub>i</sub>** mažą šalį, prezidentas ją atleido  
 diplomat<sub>DAT</sub> mock<sub>ACT.PERF.-AGR</sub> self's small country<sub>ACC</sub>, president<sub>NOM</sub> her<sub>ACC</sub> relieved<sub>3.SG</sub>  
 iš posto.  
 from post  
 'After the diplomat mocked her small country, the president relieved her of (her) post.'
- (104) Inferential evidential *Lithuanian*  
 Motinos<sub>i</sub> sudeginta **savo<sub>i</sub>** namas.  
 mother<sub>GEN</sub> burned-down<sub>PASS.PERF.-AGR</sub> self's house<sub>NOM</sub>  
 'Mother apparently burned down her own house' (Lavine 2010: 126)

We want to avoid arguing that DPs can bind from Spec FinP because elements like the accusative in the Adversity Impersonal in (105) cannot bind anaphors. In Citko, Germain, and Witkoś (to appear) we derive the fact that these DPs do not move to Spec TP, but to Spec FinP due to the failure of TP to be labeled when non-agreeing DPs are merged in as its specifier (see Chapter 2 for discussion for how [DP FinP] is labeled via Fin's [+N] feature). Recall also that they are pre-verbal in discourse neutral contexts, just as the NNSs in this paper are.

- (105) Soldata<sub>i</sub> ranilo **ego<sub>i</sub> / \*svoej<sub>i</sub>** pulej.  
 soldier<sub>ACC</sub> wounded<sub>3.SG.NEUT</sub> his / self's bullet<sub>INST</sub>  
 'A/the soldier was wounded by his bullet.' (Slioussar 2011: 2060)

In the next chapter, I use experimental methods to test the ability of inherent and structural NNSs to bind anaphors, focusing in on dative subjects. I compare dative subjects of psychological verbs in Russian and Lithuanian and dative subjects of Russian infinitives and Lithuanian participial clauses. I introduce Nikolaeva's (2014) theory of the (anti) subject-orientation of pronouns in Russian, where pronouns and reflexives are indexes that raise covertly in the course of the derivation, and the relative configuration of binder and bindee determines whether an index will be spelled out as a reflexive or pronoun. We will see that, combined with

the case and argument structure I have proposed for NNSs in Russian and Lithuanian, we can begin to account for pattern in the binding capabilities of NNSs.

## Chapter 4: Binding by non-nominative subjects

### 1. Introduction

#### 1.1 Goals of the chapter

In previous chapters I discussed ways in which non-nominative subjects in Russian and Lithuanian are like canonical subjects. For one, they appear pre-verbally in discourse neutral word orders. In addition, some subjects bear structural case, just as canonical subjects do. I have also argued that, like Agents, dative Experiencers are merged in a specifier position, namely Spec ApplP. The focus of this chapter is the behavior of non-nominative subjects (NNSs) in Russian and Lithuanian with respect to a key diagnostic for subjecthood, the classic subject property of anaphor binding.

#### 1.2 The (anti) subject-orientation of anaphors

Unlike the complex English anaphor *pronoun + self* (e.g. himself, themselves), Russian and Lithuanian anaphors, given in the table below, are morphologically simplex, roughly translated as ‘self’s’ (see discussion in Section 4.2.2 below on simplex versus complex anaphors).<sup>1</sup>

Table 1: Reflexive anaphors in Russian and Lithuanian

	Full pronoun	Possessive determiner
Russian	sebja	svoj
Lithuanian	save	savo

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<sup>1</sup> Russian *sebja* and Lithuanian *save* are insensitive to gender and number, but can bear any case, except nominative. The Lithuanian determiner *savo* is fixed in form, but its Russian counterpart *svoj* can bear any case and agrees with the possessum in gender and number.

For these two languages, the generalization is that reflexive anaphors are “subject-oriented” in that only subjects can co-refer with a reflexive (see Rappaport 1986 for Russian and Timberlake 1982 for Lithuanian). In (1), the object, although it c-commands the reflexive *sebe* ‘self’, cannot be co-indexed with it.

- (1) Militционер<sub>i</sub> rassprašival arestovannogo<sub>j</sub> o **sebe**<sub>i/\*j</sub> *Russian*  
 policeman<sub>NOM</sub> questioned suspect<sub>ACC</sub> about **self**<sub>PREP</sub>  
 ‘The policeman<sub>i</sub> questioned the suspect<sub>j</sub> about himself<sub>i/j</sub>.’ (Rappaport 1986: 101)

Conversely, pronouns in Russian and Lithuanian are “anti-subject oriented” in that they cannot be bound by a subject. I show this for Lithuanian in (2).

- (2) Jis<sub>i</sub> nori **savo**<sub>i/jo\*</sub><sub>i/j</sub> knygo *Lithuanian*  
 he<sub>NOM</sub> want<sub>3.SG</sub> **self’s/his** book<sub>GEN</sub>  
 ‘He<sub>i</sub> wants his<sub>i/j</sub> book.’

### 1.3 Structure of the chapter

The question that this chapter investigates is whether non-nominative subjects show the same pattern as nominative subjects in that they are able to bind clause-mate reflexives but not pronouns. I bring experimental evidence to bear on this question for dative subjects in particular. First, though, I present the state-of-the-art for the theory of the (anti) subject orientation of anaphors, focusing on Nikolaeva (2014) (Section 2). I discuss the predictions that Nikolaeva’s (2014) system makes for binding by non-nominative subjects in Section 3. With this proposal as a theoretical framework for the experiment, I then report on the results of the acceptability judgment task and provide an analysis of the data (Section 4). In Section 5, I return to Nikolaeva

(2014) and discuss the implications that the experimental results have and how the proposals I have made in previous chapters can help account for them. Section 6 concludes the chapter.

## **2. Background on anaphor binding**

In this section I discuss general theories of binding and explain why I ultimately follow the theory of binding outlined in Chomsky (1981, 1986) that defines it in terms of the requirement of an anaphor to be either bound or not bound in a certain domain.<sup>2</sup> One reason for this is that other accounts rely on the SELF-SE distinction in types of anaphors and, as I will show, Russian and Lithuanian anaphors do not fit into this distinction. I will also review the main proposals that have been put forward to account for subject-oriented reflexives, focusing on the most recent proposal, Nikolaeva's (2014) Index Raising.

### *2.1 General theory*

Binding as a theory of the distribution of co-referring elements in a clause is due to Chomsky (1981, 1986). An element is bound if it is c-commanded by the element that it co-refers with or is “co-indexed” with.<sup>3</sup> To capture the apparent complementary distribution between reflexive and pronominal anaphors, as in (3a,b), and the resistance that nouns referring to individuals (R-

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<sup>2</sup> In this thesis I will not discuss alternate theories of anaphor distribution beyond binding. For theories of binding that reduce the process to an Agree relation, I refer the reader to Hicks (2009), Reuland (2011), and Rooryck and Van den Wyngaerd (2011) and to Charnavel and Sportiche (2016) for arguments against this proposal. In addition, Hornstein (2001) proposes that movement can account for binding properties if we assume that anaphors are traces. Another alternate theory can be found in Kayne (2002), where antecedents and anaphors are base merged as co-constituents with only the antecedent raising. See Bailyn (2010) for arguments from Russian against both Hornstein (2001) and Kayne (2002).

<sup>3</sup> According to Reinhart and Reuland (1993: 674), co-reference and co-indexing are technically different processes by which two nouns can refer to the same entity. Bound variable interpretations of anaphors arise when they are co-indexed to an antecedent in the linguistic structure. Co-reference with an antecedent occurs when an anaphor is a free variable.

expressions) show to being bound, as in (3c,d), Chomsky (1981, 1986) proposes that different elements are subject to different restrictions with respect to binding.

- (3) a. Bob<sub>i</sub> saw himself<sub>i/\*j</sub>  
b. Bob<sub>i</sub> saw him<sub>\*i/j</sub>  
c. He<sub>i</sub> saw Bob<sub>\*i/j</sub>  
d. He<sub>i</sub> knows that Bob<sub>\*i/j</sub> left.

These restrictions are captured in three Principles, A, B, and C, paraphrased in (4) below.

- (4) Principle A:  
Reflexive anaphors must be bound within their local binding domain.  
Principle B:  
Pronominal anaphors must *not* be bound within their local binding domain.  
Principle C:  
R-expressions must never be bound.

For Chomsky (1981), the local binding domain is the smallest clause (i.e. a phrase headed by S, I, or T) which contains both the anaphor and the head which assigns it case. Chomsky (1986) adjusts the definition of local domain include a c-commanding NP if the anaphor needs to be bound in order to account for examples as in (5).

- (5) a. Bob<sub>i</sub> believes that pictures of him<sub>i</sub> are hanging in the kitchen.  
b. Bob<sub>i</sub> believes that pictures of himself<sub>i</sub> are hanging in the kitchen.

This means that for (5a) the embedded clause is a local domain because *him* does not need to be bound. Because the embedded clause does not contain an NP that c-commands *himself*, the local domain is the entire sentence in (5b) as *himself* needs to be bound.

Major additions to binding theory have since tried to address cases in which reflexives or pronouns occur in positions not predicted by Principles A or B. Reflexives which are licit in violation of Principle A, such as in (6), below, have come to be known as “exempt anaphors”.<sup>4</sup>

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<sup>4</sup> This term is due to Pollard and Sag (1992).

As first pointed out by Jackendoff (1972), the reflexives of picture noun phrases need not be c-commanded by their antecedents.

- (6) The fact that there is a picture of himself<sub>i</sub> hanging in the post office is believed (by Mary) to be disturbing Tom<sub>i</sub>. (Jackendoff 1972: 137)

Contra Belletti and Rizzi (1988), Pollard and Sag (1992) show that this is not due to the presence of a psych verb (i.e. *disturb* in (6)), as can be seen in (7).

- (7) The picture of herself<sub>i</sub> on the front page of the *Times* made Mary<sub>i</sub>'s claims seem somewhat ridiculous. (Pollard and Sag 1992: 264)

They also note that there are cases outside of picture noun phrases that seem to violate Principle A in that the reflexive is not c-commanded (as also discussed by Ross 1970, Postal 1971, Kuno 1972; 1987, Lebeaux 1984, and Keenan 1988, a.o.).

- (8) a. John<sub>i</sub> had worked hard to make sure that the twins would be well taken care of. As for *himself<sub>i</sub>*, it was relatively unlikely that anyone would be interested in hiring an ex-convict who had little in the way of professional skills.  
b. Mary<sub>i</sub> was well aware that, although everyone knew that the building had been designed by John and *herself<sub>i</sub>*, only he would receive the professional recognition that would ensure his future in the field of architecture. (Pollard and Sag 1992: 264)

Returning to cases in which Principle A does apply, Pollard and Sag (1992) observe that in each case the anaphor is a co-argument with its antecedent. In (9), each DP is selected by the predicate.

- (9) a. John<sub>i</sub> hates himself<sub>i</sub>.  
b. The men<sub>i</sub> admired each other<sub>i</sub>.  
c. Mary<sub>i</sub> explained Doris<sub>j</sub> to herself<sub>i/j</sub>.  
d. Dana<sub>i</sub> talked to Gene<sub>j</sub> about himself<sub>i/j</sub>.  
e. The men<sub>i</sub> introduced the women<sub>j</sub> to each other<sub>i/j</sub>. (Pollard and Sag 1992: 265)

Their solution to the problem of accounting for the distribution of exempt anaphors is to modify Principle A so that it only applies to anaphors which are arguments (see also Reinhart and

Reuland 1993 and discussion below). Modifying examples of exempt anaphors like in (8) so that they are co-arguments produces an ungrammatical sentence, as predicted. This is shown in (10).

(10) \*The fact that Sue likes himself<sub>i</sub> is believed (by Mary) to be disturbing Tom<sub>i</sub>.

Drawing on the notion of obliqueness, they assume the following hierarchy which they note is similar to other hierarchies of argument types from non-Generative frameworks like Relational Grammar or Construction Grammar.

(11) SUBJECT < PRIMARY OBJ < SECOND OBJ < OTHER COMPLEMENTS

Thus, Principle A is restated as in (12) and correctly predicts the contrast between (13a) and (13b).

(12) An anaphor must be co-indexed with a less oblique co-argument, if there is one. (Pollard and Sag 1992: 266)

(13) a. Mary talked to John<sub>i</sub> about himself<sub>i</sub>.  
b. \*Mary talked about John<sub>i</sub> to himself<sub>i</sub>. (Pollard and Sag 1992: 266)

In (13), the anaphor in the PP *about himself* is not an argument of *talk*, while the anaphor of the PP *to himself* is. Therefore, only *himself* in (13b) needs to be co-indexed to a higher argument, which *John* is not. Finally, if possessors are considered subjects, the contrast in (14) is also explained.

(14) a. John<sub>i</sub>'s description of himself<sub>i</sub> was flawless.  
b. \*The fact that Mary<sub>i</sub>'s description of himself<sub>i</sub> was flawless was believed to be disturbing John<sub>i</sub>. (Pollard and Sag 1992: 265)

The anaphor here is co-indexed with the higher subject argument and is also a co-argument with that subject.

Exempt anaphors are sometimes discussed in conjunction with logophors (e.g. Reinhart and Reuland 1993), the context for which Culy (1994) and Speas (2004) argue is connected to

speech-act notions like reported speech or belief. Culy (1994) shows that logophors appear in different contexts in different languages. In (15), the reflexive anaphor is not c-commanded by its antecedent, but is licit as it refers to the person whose point of view is being expressed.

(15) As for myself<sub>i</sub>, I<sub>i</sub> think that golf is great.

Pollard and Sag (1994) show that exempt anaphors are sensitive to changes in point of view.

Once the antecedent is no longer the source of the narrative, as in (16b), the exempt anaphor becomes ungrammatical.

(16) a. John<sub>i</sub> was going to get even with Mary. That picture of himself<sub>i</sub> in the paper would really annoy her, as would the other stunts he had planned.

b. Mary was quite taken aback by the publicity John<sub>i</sub> was receiving. \*That picture of himself<sub>i</sub> in the paper had really annoyed her, and there was not much she could do about it. (Pollard and Sag 1992: 274)

Charneval and Sportiche (2016) report a study on binding in French in which they control for exempt anaphors and logophoric uses of anaphors by testing only inanimate antecedents. They conclude that the “classical” formulation of Principle A as advanced by Chomsky (1986) is the superior description of binding facts in French, with the addition of the restriction that an anaphor cannot be bound by an antecedent outside the tensed TP which contains it. Before showing that Principle A can be restated in terms of phase theory, they present a series of arguments against the co-argument status based explanations for Principle A first advanced by Pollard and Sag (1992) and taken up by Reinhart and Reuland (1993) and Safir (2004). Aside from appeals to conceptual objections to the reference to argumenthood to explain binding, they show that (i) if an anaphor does not have eligible co-argument it does not mean that it is necessarily exempt, and (ii) if an anaphor does have an eligible co-argument, it does not mean it

is non-exempt (plain). First, as the contrast between (17b) and (17c) shows, inanimate anaphors in French cannot be exempt.

- (17) a. [Ce pont]<sub>i</sub> dispose de son<sub>i</sub> (propre) architecte. *French*  
 ‘[This bridge]<sub>i</sub> has its<sub>i</sub> (own) architect.’
- b. [Ce pont]<sub>i</sub> a l’air très fragile. Son<sub>i</sub> (\*propre) architecte a reçu moins de moyens  
 ‘[This bridge]<sub>i</sub> looks very fragile. Its<sub>i</sub> (\*own) architect got less means  
 que les autres architectes de la région.  
 than the other architects of the area.’
- c. [Cet enfant]<sub>i</sub> a l’air très perturbé. Sa<sub>i</sub> (propre) mère passe moins de temps à la  
 ‘[This child]<sub>i</sub> looks very disturbed. His<sub>i</sub> (own) mother spends less time at  
 maison que les autres mères de la classe.  
 home than the other mothers of the children in the class.’  
(Charnavel and Sportiche 2016: 40)

Modifying the co-argument account to make inanimates automatically plain anaphors still does not predict why binding of these anaphors is subject to locality restraints, as shown in (18). This is because the co-argument based definition of Principle A in (12) does not make reference to local domains.

- (18) *French*
- a. \*[Cette loi]<sub>i</sub> est si importante que les journalistes prédisent la publication d’un livre  
 ‘\*[This law]<sub>i</sub> is so important that the journalists predict the publication of a book  
 sur elle<sub>i</sub>-même et sur son auteur.  
 about itself<sub>i</sub> and about its author.’
- b. \*[La Grande Roue]<sub>i</sub> a été fermée après que des enfants ont été éjectés au-dessus  
 ‘\*[The Ferris wheel]<sub>i</sub> was closed after some children got ejected above  
 d’ellei-même.  
 itself<sub>i</sub>.’  
(Charnavel and Sportiche 2016: 49)

Second, the anaphors in the following examples have eligible co-arguments (the subject of *dépendre de*) but are nevertheless exempt in that they are bound by a non-commanding antecedent.

- (19) a. Marie<sub>i</sub> s'inquiète souvent du fait que ses enfants dépendent d'elle<sub>i</sub>-même. *French*  
 'Mary<sub>i</sub> is often worried that her children depend on herself<sub>i</sub>.'
- b. [L'avenir de Marie<sub>i</sub>]<sub>k</sub> ne dépend pas d'elle-même<sub>i</sub>, mais de ses parents.  
 '[Mary<sub>i</sub>'s future]<sub>k</sub> does not depend on herself<sub>i</sub>, but on her parents.'  
 (Charnavel and Sportiche 2016: 52)

Given these facts, Charnavel and Sportiche (2016) advocate for a theory of exempt anaphors which determines which anaphors are exempt based on the nature of the antecedent instead of upon the position of the anaphor. Namely, exempt anaphors are those whose antecedents are pragmatically prominent (e.g. as the source of the point of view) (see also Charnavel 2014).

Returning to the languages under discussion in this thesis, I note that Russian and Lithuanian reflexives do not occur as exempt anaphors. The example in below shows that *svoj/savo* cannot appear unbound in its local domain, even when the point of view of the antecedent has been established.

- (20) a. Tanja<sub>i</sub> očen' razozlilas'. \*Svoju<sub>i</sub> fotografiju opublikovali v gazete. *Russian*  
 Tanja<sub>NOM</sub> very got.angry<sub>3.FEM</sub> self's photograph<sub>ACC</sub> published<sub>3.PL</sub> in newspaper  
 'Tanja got very angry. They published her photograph in the newspaper.'
- b. *Lithuanian*  
 Aušra labai pikta. \*Savo nuotrauką jie paskelbė laikraštyje.  
 Aušra<sub>NOM</sub> very angry<sub>SG.FEM</sub> self's photograph<sub>ACC</sub> they<sub>NOM</sub> published<sub>3.PL</sub> in.newspaper  
 'Aušra is very angry. They published her photograph in the newspaper.'

Compare this to the exempt anaphor in the English example in (16a), where *himself* is licit even though it is not c-commanded by its antecedent.

At first glance, it is tempting to attribute this to the SELF-SE distinction between anaphors that Reinhart and Reuland (1993) advocate. Reinhart and Reuland (1993) refer to morphologically complex anaphors in languages like English and Dutch as SELF anaphors and

morphologically simplex as SE (“simplex expression”). SELF anaphors are complex in that they are generally formed from the addition of an intensifier or focus particle to a pronoun (see Charnavel and Sportiche 2016 for discussion). They argue that SELF anaphors are able to be exempt anaphors, while SE are not. However, the reflexive anaphors of Russian and Lithuanian, which are non-exempt, do not have the same distribution of the SE anaphors of Dutch and Norwegian. The SE anaphors of Dutch (and Norwegian) are only licensed with “intrinsically reflexive” predicates, as the contrast between (21) and (22) shows.

- (21) a. \*Max haat zich. *Dutch*  
       Max hates SE
- b. \*Max praat met zich.  
       Max speaks with SE (Reinhart and Reuland 1993: 665)
- (22) a. Max wast zich. *Dutch*  
       Max washes SE
- b. Max schaamt zich.  
       Max shames SE  
       'Max is ashamed. (Reinhart and Reuland 1993: 666)

At this point, it is good to note why Reinhart and Reuland (1993) are interested in whether or not a predicate is intrinsically reflexive. The notion that a predicate can be reflexive is what allows them to reformulate Principle B, the condition that pronouns must be unbound in their binding domain, into the following:

- (23) Condition B  
       A reflexive predicate is reflexive-marked. (Reinhart and Reuland 1993: 663)

What makes a predicate reflexive is if at least two of its arguments are co-indexed. If a reflexive predicate is not lexically reflexive as in (21) then it needs to be marked as such by the presence of a SELF anaphor. So, in a sentence like (24), the predicate is reflexive because its two

arguments are co-indexed, but it is not intrinsically so. It needs to be marked as reflexive with a SELF anaphor. Therefore, (24) is not ungrammatical because a pronoun is being bound when it should be free, but because a reflexive predicate is failing to be marked as reflexive.

(24) \*John<sub>i</sub> saw him<sub>i</sub>.

They note that this also accounts for the distribution of R-expressions, as described in Principle C, because the presence of a R-expression cannot mark a reflexive predicate as reflexive.

Returning to Lithuanian and Russian, even though the reflexive anaphors *sebja/save* are morphologically simplex (in that they are not formed from the addition of an intensifier or other particle to a pronoun), they do not pattern with SE. First, as Antoneko (2012) notes, they can occur with predicates that are not intrinsically reflexive. Compare, (25) and (26) with the Dutch SE examples in (21) above.

- (25) a. Maks nenavidit sebja. *Russian*  
 Max hates self<sub>ACC</sub>  
 ‘Max hates himself’
- b. Maks razgovarivaet s soboj.  
 Maks speaks with self  
 ‘Max speaks with himself’
- (26) a. Maksas nekenčia savęs.. *Lithuanian*  
 Max hates self<sub>GEN</sub>  
 ‘Max hates himself’
- b. Maksas kalba su savimi.  
 Max speaks with self<sub>INST</sub>  
 ‘Max speaks with himself’

Second, they do not occur with intrinsically reflexive predicates.<sup>5</sup> As in Romance, this is the domain of the verbal reflexive “marker”, *-sja* in Russian and *-si-* in Lithuanian.<sup>6</sup>

- (27) a. Maks moet-sja. *Russian*  
 Max washes<sub>3.SG.REFL</sub>
- b. Maks serdit-sja.  
 Max angers<sub>3.SG.REFL</sub>  
 'Max is angry.'
- (28) a. Maksas maudo-si. *Lithuanian*  
 Max washes<sub>3.SG.REFL</sub>
- b. Maksas džiaugia-si  
 Max is.glad<sub>3.SG.REFL</sub>  
 'Max is glad.'

The reflexive anaphors in Russian and Lithuanian do not fit into the SELF-SE dichotomy of Reinhart and Reuland (1993) in another respect. Aside from not occurring in exempt or logophoric contexts, Russian pronouns are not like SELF anaphors in that they are subject-oriented and can be bound long distance into a non-finite clause, as shown in (29).

- (29) Professor<sub>i</sub> poprosil assistenta<sub>j</sub> [PRO<sub>j</sub> chitat **svoj**<sub>i/j</sub> doklad] *Russian*  
 professor asked assistant PRO read **self**'<sub>s</sub>ACC report  
 'The professor<sub>i</sub> asked the assistant<sub>j</sub> to read his<sub>i/j</sub> report.' (Rappaport 1986: 104)

Arkadiev (2012) reports that long distance binding into a non-finite clause is possible in Lithuanian.

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<sup>5</sup> Replacing the reflexive marker with the full pronoun results in a different interpretation. As shown here for Russian, replacing *-sja* with *sebja* for the verb *rezat* 'to cut', encodes “intensionality”. See also Townsend (1967).

- (i) Ja porezal-sja. *Russian*  
 I cut<sub>PAST.REFL</sub>  
 'I cut myself (accidentally).'
- (ii) Podrostok rezet sebja. *Russian*  
 teenager cuts self  
 'The teenager cuts himself (on purpose).'

<sup>6</sup> Rivero and Sheppard (2003) attempt to assimilate Slavic reflexive clitics/markers into the SELF-SE dichotomy of Reinhart and Reuland (1993) by proposing that null NPs (either subject or object) with a “human feature” move to the head CL of a Clitic Phrase to check their case. They argue that this chain qualifies as a SE-anaphor.

- (30) Algirdas<sub>i</sub> liepė Jurgiui<sub>j</sub> [PRO<sub>j</sub> grižti į savo<sub>i/j</sub> kambarį]. *Lithuanian*  
 Algirdas<sub>NOM</sub> ordered<sub>3.SG</sub> Jurgis<sub>DAT</sub> return<sub>INF</sub> to self's room  
 'Algirdas<sub>i</sub> ordered Jurgis<sub>j</sub> to return to his<sub>i/j</sub> room.' (Arkadiev 2012: 22)

This may be subject to speaker-variation, however, as my two consultants report that the following sentence in (31) is unacceptable on the interpretation that *savo* refers to the matrix subject. As the (anti) subject-orientation of these anaphors is the main focus of this chapter, I leave this puzzle as a topic for future research.

- (31) Profesorius<sub>i</sub> paprašė asistentą<sub>j</sub> [PRO<sub>j</sub> skaityti savo<sub>\*i/j</sub> ataskaitą] *Lithuanian*  
 professor asked assistant PRO read self's<sub>ACC</sub> report  
 'The professor<sub>i</sub> asked the assistant<sub>j</sub> to read his<sub>\*i/j</sub> report.'

Finally, it is important to note that the reflexive marker is also not a SE anaphor with respect to this property. In (32b), the predicate marked with *-sia* is not able to be interpreted as having the matrix subject as its argument.

- (32) a. Ivan<sub>i</sub> poprosil Mašu<sub>j</sub> [PRO<sub>j</sub> zaščitit' sebja<sub>i/j</sub>.] *Russian*  
 Ivan<sub>NOM</sub> asked Mary<sub>ACC</sub> PRO defend<sub>INF</sub> self<sub>ACC</sub>  
 'Ivan<sub>i</sub> asked Mary<sub>j</sub> to defend him<sub>i</sub>/herself<sub>j</sub>.'  
 b. Ivan<sub>i</sub> poprosil Mašu<sub>j</sub> [PRO<sub>j</sub> zaščitit'sja<sub>\*i/j</sub>.]  
 Ivan<sub>NOM</sub> asked Mary<sub>ACC</sub> PRO defend<sub>INF.REFL</sub>  
 'Ivan<sub>i</sub> asked Mary<sub>j</sub> to defend \*him<sub>i</sub>/herself<sub>j</sub>.' (Gozzi 2017: 113)

In Lithuanian, the reflexive marker *-si-* in (33b) can also not be interpreted as referring to the matrix subject. This is not surprising if it is the case that long-distance binding is not acceptable.

- (33) a. Jonas<sub>i</sub> paprašė Indrės<sub>j</sub> [PRO<sub>j</sub> pasaugoti save<sub>\*i/j</sub>.] *Lithuanian*  
 Jonas<sub>NOM</sub> asked Indrė<sub>GEN</sub> PRO defend<sub>INF</sub> self<sub>ACC</sub>  
 'Jonas<sub>i</sub> asked Indrė<sub>j</sub> to defend \*him<sub>i</sub>/herself<sub>j</sub>.'  
 b. Jonas<sub>i</sub> paprašė Indrės<sub>j</sub> [PRO<sub>j</sub> pa-si-saugoti<sub>\*i/j</sub>.]  
 Jonas<sub>NOM</sub> asked Indrė<sub>ACC</sub> PRO defend<sub>INF.REFL</sub>  
 'Jonas<sub>i</sub> asked Indrė<sub>j</sub> to defend \*him<sub>i</sub>/herself<sub>j</sub>.'

Given the argumentation put forward by Charnavel and Sportiche (2016) against the co-argument based explanation of Principle A first advanced by Pollard and Sag (1992) and that Reinhart and Reuland's (1993) update of it relies on a SELF-SE distinction that does not work for Russian and Lithuanian, I assume that Chomsky's (1981, 1986) Principle A is the correct initial description of the distribution of reflexive anaphors in these languages. What remains to be accounted for is the subject-orientation of these anaphors. The next subsections are dedicated to this discussion.

## *2.2 Theories of (anti) subject-orientation*

If we assume that anaphors in Russian and Lithuanian are regulated by Principles A and B as formulated by Chomsky (1981, 1986) where anaphors need to be bound in local domains and pronouns must not be bound, we still need an explanation for why they require certain antecedents (i.e. subjects for reflexives). In this subsection, I review theories of subject-orientation that frame the phenomenon in terms of the antecedent, make reference to the size of the anaphor, or allow anaphors to move and alter c-command configurations. I focus on Nikolaeva's (2014) account for Russian because it is the most recent and comprehensive theory which explains how reflexives and pronouns are sometimes in complementary distribution (i.e. the anti-subject orientation of pronouns) and sometimes are found in the same environments.

### *2.2.1 The antecedent-based approach*

One way of accounting for the subject-orientation of anaphors is to catalogue the acceptable antecedents, find the underlying feature that these antecedents have, and encode the anaphors with the requirement that they be associated with that feature. Rappaport's (1986) analysis is a

good example of this approach. Licit antecedents for Russian anaphors in his analysis are given in (34).

- (34) a. AGR, a nominal agreement element assumed to be present in a finite clause as a sister node to the subject NP and the Verb Phrase  
b. The subject of a finite clause  
c. The empty subject of an infinitival clause (PRO)  
d. The Specifier of a lexical category (e.g., of an NP) (Rappaport 1986: 102)

These are all instances of “subjects”, so the anaphor can be said to have the feature [+SUBJECT]. Like approaches found in Vikner (1985) and Manzini and Wexler (1987), the restriction therefore does not come out of the properties of the anaphor, but out of the properties of its *antecedent*.

This approach suffers from the fact that it first must stipulate what a subject is in order to account for subject-orientation. Beyond the fact that this creates a circular argument when researchers use reflexive anaphor binding to diagnose non-nominative subjects as “true” subjects, attributing this phenomenon to a value of a parameter that is a lexical property misses out on the opportunity to explain the anti-subject orientation of pronouns, as Nikolaeva (2014) also points out.

### 2.2.2 Simplex versus complex pronouns

Another line of theory looks for the source of the subject-orientation of anaphors in the properties of the anaphors themselves, specifically their size. Pica (1985, 1987) proposes that morphologically simplex anaphors are heads,  $X^0$ , while complex anaphors are full XPs. This difference can then be adduced to affect either the location of the anaphor in the syntactic structure or to limit the type of antecedent that may bind it. For Pica (1985, 1987) and other

“raising accounts”,  $X^0$  anaphors but not XP ones raise to a functional projection like T or D. The anti-subject orientation of pronouns is then a matter of pronouns in these languages also being of the size  $X^0$  (Hestvik 1992, Avrutin 1994, see also Asarina 2005).

Bennett and Progovac (1993: 71-72) capitalize on this to explain the correlation between anaphors that are subject-oriented and anaphors that can be bound long-distance. This connection has been noted and characterized as a dependence relationship: LD binding is only possible if the anaphor is subject-oriented (Rappaport 1983, Yang 1983, Giorgi 1984, Rappaport 1986).

- (35) Professor<sub>i</sub> poprosil assistenta<sub>j</sub> [PRO<sub>j</sub> čitat svoj<sub>i/j</sub> doklad] *Russian*  
 professor asked assistant PRO read self's<sub>ACC</sub> report  
 ‘The professor<sub>i</sub> asked the assistant<sub>j</sub> to read his<sub>\*i/j</sub> report.’ (Rappaport 1986: 104)

Examples of long distance binding in Russian, as in (35), show that PRO (controlled by the object) does not block binding of the anaphor by the higher matrix subject. Progovac (1993) concludes that XP elements like PRO are not eligible binders for the anaphor. Because these simplex anaphors are  $X^0$ , only other heads may act as binders. The relevant head here is the matrix AGR that has the phi-features of the subject NP. In the non-finite embedded clause in (36), the AGR projection is null and “anaphoric”, allowing the anaphor to potentially ignore it in its search for an antecedent.

- (36) Professor poprosil assistenta [PRO čitat' svoj doklad] *Russian*  
 Professor<sub>i</sub> AGR<sub>1</sub><sub>i</sub> asked assistant<sub>j</sub> [PRO AGR<sub>2</sub><sub>j</sub> read<sub>INF</sub> self's<sub>i/j</sub> report  
 ‘The professor asked the assistant to read his (own) report’ (Progovac 1993)

Bennett and Progovac (1993) also note that this proposal accounts for why LD binding of  $X^0$  anaphors is possible across finite embedded clauses in Chinese, Japanese and Korean. These languages do not have overt agreement morphology. Therefore, AGR in those languages is always null and the anaphor can always look past them to find an antecedent.

However, the  $X^0$  versus XP typology of anaphors is problematic for Russian. First, Avrutin (1994) shows that an independent diagnostic for distinguishing  $X^0$  versus XP type pronouns that Hestvik (1992) cites does not work for Russian. Hestvik (1992) hypothesizes that the possibility for the restrictive modification of pronouns reflects their size. As (37) shows, in Norwegian, a restrictively modifying PP may be the complement of pronoun which he hypothesizes to be an  $N^0$ , but it may not be sister to a pronoun in English as it is an NP.

- (37) a. [<sub>NP</sub> han<sub>N</sub> [<sub>PP</sub> med rod hatt]] *Norwegian*  
           he           with red hat  
       b. \*[[he]<sub>NP</sub> [<sub>PP</sub>With the red hat]] (Hestvik 1992: 569, 570)

Unfortunately, it is also not possible to modify a pronoun in this way in Russian and Lithuanian as shown in (38).

- (38) a. \*[on s krasnoj šljapoj] *Russian*  
           he with red hat  
       b. <sup>???</sup>[jis su raudona skrybèle] *Lithuanian*  
           he with red hat

In addition, Asarina (2005) shows that the reflexive anaphor is unable to be modified by a restrictive modifier in both Norwegian and Russian. This is also the case for Lithuanian.

- (39) a. \*[seg med rod hatt] *Norwegian*  
           himself/herself with red hat  
       b. \*[sebja s krasnoj šljapoj] *Russian*  
           himself/herself with red hat (Asarina 2005: 7)
- (40) \*[save su raudona skrybèle] *Lithuanian*  
           himself/herself with red hat

Not only does there not seem to be independent evidence for anaphors in Russian and Lithuanian being a different size, this proposal also opens up the possibility that languages may have anaphors and pronouns of different types (i.e. an  $X^0$  anaphor and an XP pronoun). Since

anti-subject oriented pronouns only occur in languages with subject-oriented anaphors, we want to restrict the occurrence of  $X^0$  pronouns to languages with  $X^0$  anaphors. Nikolaeva (2014) cites this concern in advocating for an approach to the (anti)-subject orientation of anaphors that relies on the notion of competition. Finally, if anaphors in Russian are not actually heads, it becomes difficult to capture subject orientation and LD binding phenomena with Bennett and Progovac's (1993) explanation that anaphors can only agree with heads (i.e. AGR). As we will see in the next section, Nikolaeva's (2014) proposal that combines the raising approach with the idea that reflexives and pronouns are different morphological realizations of the same entity addresses both the anti-subject orientation and long distance binding.

### 2.2.3 Index Raising (Nikolaeva 2014)

Following competition based approaches like the one put forward in Safir (2004), Nikolaeva (2014) proposes that an "index" is the element that is expressed morphologically as a pronoun or reflexive. Instead of a reflexive raising covertly (to T) as Chomsky (1993, 1995) proposes for subject-oriented anaphors, it is the indexical part of an anaphor that raises in the course of the derivation. Whether an index is spelled out as a reflexive is determined by a series of rules that reference the index's position in the structure with respect to its antecedent. If the index location does not match one of the specified locations, then the index is spelled out as a pronoun, making the pronoun an "elsewhere" case. As we will see below, what this account buys us is an explanation for how reflexives and pronouns can be found in the same environment in certain cases in Russian (and Lithuanian).<sup>7</sup>

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<sup>7</sup> I would like to note that overt extraction out of nouns is more restricted in Lithuanian than in Russian. Left-branch extraction is licit in Russian, but not in Lithuanian, as shown in (i) and (ii) (see also discussion in Nikolaeva 2014: 28, 138).

The index system is combined with the raising mechanism proposed first by Hestvik (1992). She institutes two restrictions on index raising: (i) an index cannot raise beyond another c-commanding argument to c-command it, and (ii) it cannot cross more than one DP boundary and c-command it (Nikolaeva 2014: 28). This is what allows her to explain restrictions on so-called Anti-Cataphora Effects (ACE) in Russian. For example, the backward anaphora in (41) is ungrammatical in Russian, even though the pronoun does not c-command its R-expression antecedent. For Nikolaeva (2014), this is because the pronoun has covertly raised above the DP it is embedded in, causing the R-expression to be c-commanded in its binding domain (i.e. a Principle C violation).

- (41) ??? ~~nej~~ [<sub>DP</sub> Kniga o nej<sub>i</sub>] upala na Mašu<sub>i</sub>. *Russian*  
 book<sub>NOM</sub> about her fell on Masha<sub>ACC</sub>.  
 A book about her<sub>i</sub> fell on Masha<sub>i</sub>. (Nikolaeva 2014: 18; AG)

However, ACE is ameliorated when the DP containing the pronoun (*eë dostinženijax* ‘her achievements’ in (42)) is embedded in another DP. In (42), the DP *kniga* ‘book’ c-commands *eë* and the index cannot raise beyond its DP to cause a Principle C violation.

- 
- (i) Kakuju on kupil mašinu? *Russian*  
 which<sub>ACC</sub> he<sub>NOM</sub> bought car<sub>ACC</sub>  
 ‘What kind of car did he buy?’
- (ii) ???Brangi jis matė mašina *Lithuanian*  
 expensive<sub>ACC</sub> he<sub>NOM</sub> saw car<sub>ACC</sub>  
 ‘He saw the expensive car.’ (Gillon & Armoskaitė 2011: 5)

Adjunct extraction, on the other hand, is possible out of Lithuanian nouns, as example (iii) shows.

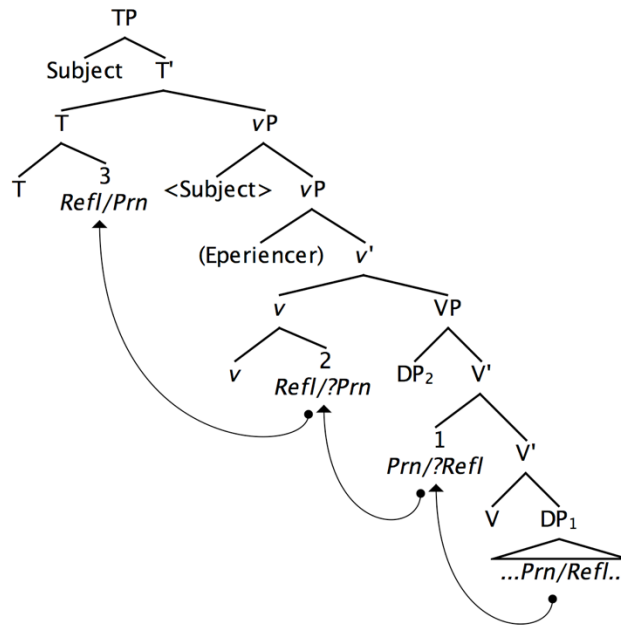
- (iii) Iš kurio miesto Petras sutiko [merginas *t<sub>i</sub>*]? *Lithuanian*  
 From which city Petras<sub>NOM</sub> met girls<sub>ACC</sub>  
 ‘From which city did Peter meet the girls?’ (Gillon & Armoskaitė 2015: 5)

Bošković (2008) takes left branch extraction and adjunct extraction to be indicators that a language has NPs not DPs. As Nikolaeva (2014) argues that Russian has DPs, I follow her and assume that covert index raising is possible out of DPs in Lithuanian, if it is the case that Lithuanian has DP (see Gillon & Armoskaitė 2015). As we will see later in this chapter, Russian and Lithuanian show a similar pattern with respect to anaphor binding, and I will discuss how Nikolaeva’s (2014) proposal might account for these facts in both languages.

- (42) [DP Kniga o eë [DP<sub>1</sub> eë<sub>i</sub> dostiženijax]] upala na Mašu<sub>i</sub>. *Russian*  
 book<sub>NOM</sub> about her<sub>i</sub> achievements fell on Masha<sub>i</sub>.  
 The book about her<sub>i</sub> achievement fell on Masha<sub>i</sub>. (Nikolaeva 2014: 19)

In Nikolaeva's (2014) system, the index raises cyclically to phrases headed by D, V, v, or T, as shown in the tree below. If the index is embedded inside a DP, it can first raise as a phrase to tuck in as an additional Spec DP before moving to the main clause (Nikolaeva 2014: 9).

(43)



(Nikolaeva 2014: 57)

Finally, the raising and spelling out of indexes is governed by the principles in (44), where a “reflexivization site” is a location which, if an index lands there, it must be spelled out as a reflexive. These principles are what feed the evaluation of binding Principles A and B after Spell-out.

- (44) I. Movement: An index must undergo Index Raising unless it is at a reflexivization site or movement is no longer possible.  
 II. Reflexivization site: An index is sister to a node with label D/v/T and is c-commanded by a specifier.  
 III. Co-argumental Reflexivization: If an index is at a reflexivization site and is coindexed with a specifier which is its co-argument, the index has to be realized as a reflexive.

IV. Reflexivization at spell-out: When the sentence is sent to spell-out, if an index is co-indexed with the specifier of the projection to which it is adjoined, the index has to be realized as reflexive.

V. Pronominal is an elsewhere condition: If an index has not been realized as reflexive, it is realized as a pronominal. (Nikolaeva 2014: 68)

Crucially, indexes that head move to adjoin to  $v$  or T do not c-command from this position. This aspect of the proposal is necessary to ensure that Principle C effects are not triggered in double object constructions. In (45) below, if *ego* ‘his’ c-commanded from its position in  $v$  then it would bind the R-expression *Saše* ‘Sasha’.

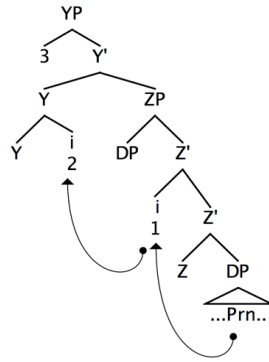
- (45) Vanja  $ego_j$  pokazal Sase $_j$  [ego $_j$  načal'nika]. *Russian*  
Vanja showed Sasha<sub>DAT</sub> his boss<sub>ACC</sub>  
Vanja $_i$  showed Sasha $_j$  his $_j/*_i$  boss. (Nikolaeva 2014: 60)

This assumption is one that any movement based approach to (anti) subject-effects must make. Hestvik’s (1992) definition of c-command where “x c-commands y iff every node dominating x includes x and y, and x does not dominate y (where x includes y iff y is dominated by every segment of x, as proposed by May (1985))” means that adjuncts are unable to c-command because as the node dominating the adjunct at the adjunction site does not include it (p. 574). Assuming this approach to head-adjoined elements, Nikolaeva (2014) restricts an index’s ability to c-command a DP that originally c-commanded it by stipulating that index raising occurs as phrasal movement (tucking in as a specifier) until it encounters a c-commanding DP. After that, the index head moves to adjoin to higher functional heads.<sup>8</sup> This is shown in the tree below.

---

<sup>8</sup> One issue for this system is that DP movement to tuck in as a new specifier of VP should mean that the moved DP is opaque for further movement, given the “Freezing Effect” on extraction out of moved constituents (see Stepanov 2007). Thank you to Akira Omaki for pointing this out.

(46)



(Nikolaeva 2014: 70)

An additional factor that is crucial to make explicit for Nikolaeva’s (2014) system to function is the connection between the location of case assignment and the ability of a c-commanding antecedent to bind a reflexive. One must assume that nominative subjects merged in Spec *vP* only bind from their case position in Spec *TP*. Otherwise, an index in *T* could be spelled out as a pronoun. Nikolaeva (2014) does discuss at length a different instance where arguments cannot bind from a c-commanding position, that of binding by objects in OVS word orders. In (47), a Principle B violation is not triggered even though the antecedent *Mašu* ‘Masha’ c-commands the pronoun *eĕ* ‘her’.

- (47) *Mašu<sub>i</sub> uvažajut [druz’ja eĕ<sub>i</sub> otca]* *Russian*  
 Masha<sub>ACC</sub> respect<sub>3,PL</sub> friends<sub>NOM</sub> her father<sub>GEN</sub>  
 ‘Her<sub>i</sub> dad’s friends respect Masha<sub>i</sub>’ (Nikolaeva 2014: 112)

She assumes that this OVS configuration is derived via A-movement of the object in a scrambling operation she calls Left-Periphery Fronting (LPF). Bailyn (2004) argues that lack of WCO effects in the OVS order indicates that the object has moved to an argument position. Compare the Principle B violation triggered by QR (A’-movement) in (48a) to the lack of a Principle B violation in the overt object scrambling in (48b).

- (48) *Russian*  
 a. \**Načal’nik ego<sub>i</sub> ot dela budet kontrolirovat’ [každogo novogo sotrudnika]<sub>i</sub>.* QR  
 boss<sub>NOM</sub> his department<sub>GEN</sub> will monitor every new employee<sub>ACC</sub>  
 His<sub>i</sub> department’s boss will monitor every new employee<sub>i</sub>.

- b. [Každogo novogo sotrudnika]<sub>i</sub> budet kontrolirovat' načal'nik ego<sub>i</sub> otdela. LPF  
 every new employee<sub>ACC</sub> will monitor boss<sub>NOM</sub> his department<sub>GEN</sub>  
 His<sub>i</sub> departments' boss will monitor every new employee<sub>i</sub> (Nikolaeva 2014: 102)

Following Takahashi and Hulseý's (2009) conception of the effects of A- versus A'-movement in their Wholesale Late Merger system, Nikolaeva (2014) assumes that the location of case assignment is correlated with reconstruction effects. If case is assigned after movement, then the moved argument will not be able to reconstruct to its former position.<sup>9</sup> For her, LPF fits into the four-way distinction predicted by Wholesale Late Merger, and this is captured in the following table. LPF is like "classic" A-movement in that it doesn't trigger WCO, but different in that fronted objects cannot bind reflexives.

Table 2: Nikolaeva's (2014) adaptation of Takahashi and Hulseý's (2009) 4-way distinction

		Landing site:	
		A-position	A'-position
Case available after movement?	Yes	"classic" A-movement	T&H's cases <sup>10</sup>
	No	LPF	"classic" A'-movement

} Correlates with reconstruction effects

} Correlates with WCO and parasitic gaps

<sup>9</sup> The logic behind this is that Late Merger of an NP cannot occur after case is assigned or else the Case Filter is violated. In typical cases of A-movement for case, the NP is late merged into the A-position and what actually A-moves is just a D. Therefore, what reconstructs in A-movement is only a D and does not interact with binding principles B and C.

- (i) a. Legal A-movement, full copy:  
 [D NP<sub>+Case</sub>]<sub>A, Case assigned</sub> ... [~~D~~ NP<sub>-Case</sub>]  
 b. Legal A-movement, Late Merger of NP and "empty" trace:  
 [D NP<sub>+Case</sub>]<sub>A, Case assigned</sub> ... [~~D~~]
- (Nikolaeva 2014: 110)

<sup>10</sup> Takahashi and Hulseý (2009) account for why wh-movement in (i,b) does not trigger a Principle C violation (via *he* c-commanding *John*) as in (i,a) by proposing that the NP *corner of John's room* can be merged after wh-movement. This is because its position as the object of *repainted* is a case position.

- (i) a. \*[Which corner of John<sub>i</sub>'s room] was he<sub>i</sub> sitting in ~~which corner of John's room?~~  
 b. [Which [<sub>CP</sub> corner of John's room that Mary repainted ~~corner of John's room~~]] was he<sub>i</sub> sitting in ~~which?~~  
 (from Takahashi and Hulseý 2009: 408)

Therefore, because the object scrambles to a non-case assigning position, the object will reconstruct, even though the OVS order is derived via A-movement. For Nikolaeva (2014) the binding facts in the OVS word order are explained by assuming that the object reconstructs to its base position, leaving it unable to c-command the subject. In (49), the OVS order fails to bleed a Principle C violation because the R-expression reconstructs to a position where it is c-commanded by a co-indexed argument.

- (49) \*Mašinu<sub>i</sub> učitel'nicu ona<sub>i</sub> uvažae<sub>t</sub> ~~Mašinu učitel'nicu~~ *Russian*  
 Masha's teacher<sub>ACC</sub> she<sub>NOM</sub> respects  
 'She<sub>i</sub> respects Masha's<sub>i</sub> teacher.'  
(Nikolaeva 2014: 112)

We know that this is a Principle C violation and not a Principle B one because possessor subjects in Spec DP do not c-command out of the DP, as shown in (50).

- (50) Mašina<sub>i</sub> učitel'nica poxvalila eë<sub>i</sub> *Russian*  
 Masha's teacher<sub>NOM</sub> praised her<sub>ACC</sub>  
 'Masha's teacher praised her.'  
(Nikolaeva 2014: 112)

In addition, (51) shows that Principle B effects cannot be obviated by movement of the object to a c-commanding position above the subject.

- (51) *Russian*  
 \*Knigu o ego<sub>i</sub> issledovanijax uvidel v magazine Ivan<sub>i</sub> ~~Knigu o ego<sub>i</sub> issledovanijax~~  
 book<sub>ACC</sub> about his research saw in store Ivan<sub>NOM</sub>  
 'Ivan<sub>i</sub> saw a book about his<sub>i</sub> research in the store.'  
(Nikolaeva 2014: 116)

That this is a Principle B violation and not a Principle C violation is shown in (52), where the deeply embedded pronoun cannot c-command the R-expression *Ivana* 'Ivan'.

- (52) Kniga o ego<sub>i</sub> issledovanijax xvalit Ivana<sub>i</sub> *Russian*  
 book<sub>NOM</sub> about his research praises Ivan<sub>ACC</sub>  
 'A book about his<sub>i</sub> research praises Ivan<sub>i</sub>.'  
(Nikolaeva 2014: 116)

Thus, following Nikolaeva (2014), the connection between case and binding is an indirect one, mediated by reconstruction effects. Returning to the topic of binding by non-nominative

subjects, if we assume that subjects that move for case do not reconstruct to their base positions, the position of the index will be evaluated with respect to the derived subject position. If the subject does not move for case, the position of the index will be evaluated with respect to the position it gets case, which incidentally is its base position. We are now ready to turn to binding by the non-nominative subjects I have discussed in this thesis.

### **3. Binding by non-nominative subjects**

In this section, I discuss predictions that Nikolaeva's (2014) theory makes for the dative subjects that I discussed in Section 2, motivating the research questions to be investigated in the experiment reported on in the next section. In Section 5 below, I will discuss the implications this has for binding by genitive and accusative subjects.

The antecedent-based approaches (e.g. Rappaport 1986) and size-based approaches to the subject orientation of anaphors in Slavic argue that any DP in Spec TP can bind anaphors, either because Spec TP is a privileged position or because simplex anaphors raise to T and therefore can only be bound by a DP in that position. Nikolaeva's (2014) Index Raising proposal opens up the possibility that a DP in Spec  $\nu$ P may bind an anaphor as well because an index may raise to  $\nu$  and remain there. This system also allows for a subject in Spec  $\nu$ P to bind a pronoun because if the index moves on to T where it is no longer c-commanded by its antecedent, it will be spelled out as a pronoun. Given the conjecture that binding principles are evaluated with respect to a DP's case position, Nikolaeva's (2014) theory predicts the following for dative subjects in Russian and Lithuanian:

1. Dative subjects which are assigned (inherent) case in Spec *v*P (or, as I have argued in Chapter 2, Spec ApplP) will be able to bind either anaphors or pronouns.

2. Dative subjects which are assigned (structural) case in Spec FinP will be able to bind anaphors but not pronouns.

### 3.1 Dative Experiencers

The first prediction is born out for Experiencer subjects of non-verbal psych predicates. Indeed, researchers who have used binding facts to diagnose dative Experiencers as subjects in Russian include Schoorlemmer (1994), Avrutin and Babyonyshev (1997), and Bailyn (2012), among others.<sup>11</sup> Compare the dative Experiencer in (53), which can bind the full pronominal reflexive *sebja* ‘self’ and the reflexive form of the possessive determiner *svoju* ‘self’s’, to the dative Goal in (54), which cannot.

(53) Boris<sub>i</sub> bylo žal’ sebja<sub>i</sub> i svoju<sub>i</sub> sem’ju Russian  
 Boris<sub>DAT</sub> was<sub>AGR</sub> sorry self<sub>ACC</sub> and self’s family<sub>ACC</sub>  
 ‘Boris felt sorry for himself and his family.’ (Moore and Perlmutter 2000: 374)

(54) a. Ja<sub>i</sub> napisal Borisu<sub>j</sub> dlinnoe pis’mo o sebje<sub>i/\*j</sub> Russian  
 I<sub>NOM</sub> wrote Boris<sub>DAT</sub> long letter<sub>ACC</sub> about self  
 ‘I wrote Boris a long letter about myself/\*himself.’

<sup>11</sup> Franks (1995) and King (1995) are notable for expressing skepticism at the use of anaphor binding to diagnose subjecthood, but Slioussar (2011) offers an explanation for one of the main reasons for Franks’s (1995) reservations, binding by prepositional phrases. As mentioned in Chapter 2, Slioussar (2011) argues that binding by non-nominative preverbal elements like PPs is not true anaphor binding. In cases like (i) the reflexive *svoj* is actually being interpreted as an adjective meaning ‘one’s own personal’ and could be replaced by the lexical item *soobstvennyj* ‘personal’.

(i) U Petrovyx byl svoj dom. Russian  
 at Petrovs<sub>GEN</sub> was<sub>AGR</sub> self’s house<sub>NOM</sub>  
 ‘The Petrovs had their own house.’ (Bailyn 2003: 6)

Removing any possibility of a personal ownership reading shows that PPs cannot bind reflexives after all. This is shown in (ii).

(ii) \*V kvartiru vošel svoji xozjain. Russian  
 in apartment entered [self’s owner]<sub>NOM</sub>  
 ‘Into the apartment walked its owner.’ (Slioussar 2011: 2065)

- b. Emu<sub>i</sub> uže bylo soobščeno o \*svoej<sub>i</sub>/ego<sub>i</sub> predstojaščej nagrade.  
 him<sub>DAT</sub> already was-<sub>AGR</sub> communicated about self's/his forthcoming award  
 'He had already been told about his forthcoming award.'

(Moore and Perlmutter 2000: 379)

In their study on the differences between dative subjects of non-finite predicates and dative subjects of infinitives, Moore and Perlmutter (2000) argue that even though the former are not “true” subjects, the fact that they can bind reflexives means they have some subject properties.<sup>12</sup> What Nikolaeva’s (2014) account adds is an explanation for why pronouns, which are normally anti-subject oriented, can be bound by these subjects as well. This is shown in (55) for Russian and Lithuanian.

- (55) Mne žal’ **moju/svoju** mamu. *Russian*  
 Man gaila ?**mano/savo** mamos. *Lithuanian*  
 me<sub>DAT</sub> sorry my/self’s mom<sub>ACC/GEN</sub>  
 ‘I feel sorry for my mom.’

Because this subject is merged in at Spec vP, it is between two landing sites for the index, a tucked in Spec vP and T. If the index stays in Spec vP, it will be spelled out as a reflexive by Principle II. If it moves to T, then it will be spelled out as a pronoun by Principle V.

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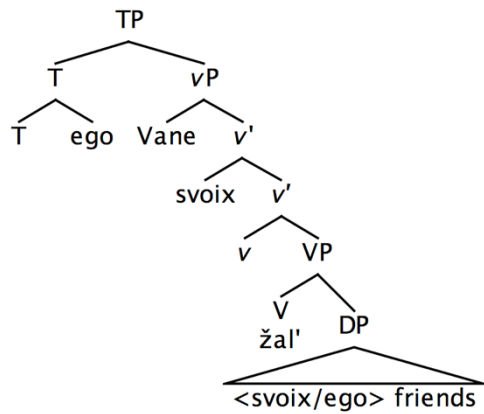
<sup>12</sup> Moore and Perlmutter (2000) rely on Relational Grammar’s notion of multiple grammatical “strata” to reconcile their conclusion that dative Experiencers of non-verbal psych predicates (in their term, “Inversion (I-) Nominals”) are not true subjects with the fact that they can bind reflexives. Following Perlmutter’s (1978a) proposal that nominals that head a “subject arc” (i.e. are a subject at a lower strata) can antecede reflexives, they assume that I-nominals are not surface subjects but are subjects underlyingly. See also discussion in Dziwirek (1994) on Polish dative subjects.

- (56) a. Vane<sub>i</sub> žal' svoix<sub>i</sub> /ego<sub>i</sub> družej.  
 Vanja<sub>DAT</sub> pities self's/his friends<sub>ACC</sub>  
 'Vanja<sub>i</sub> feels sorry for his<sub>i</sub> friends.'

Russian

(Nikolaeva 2014: 91)

b.

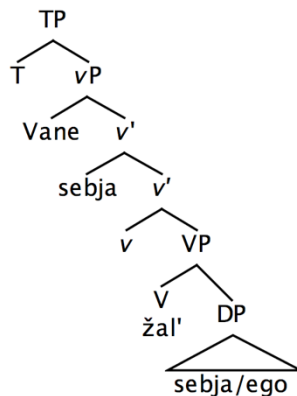


Because the pronoun is not a co-argument, it need not be spelled out at the position in Spec vP, following Principle III. This principle accounts for why full pronouns, and not possessive determiners, are never able to be bound by a subject, dative or not. This is shown in (57).

- (57) a. Vanje<sub>i</sub> žal' sebja<sub>i</sub> /\*ego<sub>i</sub>.  
 Vanja<sub>DAT</sub> pities self/\*himself<sub>ACC</sub>  
 'Vanja<sub>i</sub> feels sorry for himself<sub>i</sub>.'

Russian

b.



(Nikolaeva 2014: 91)

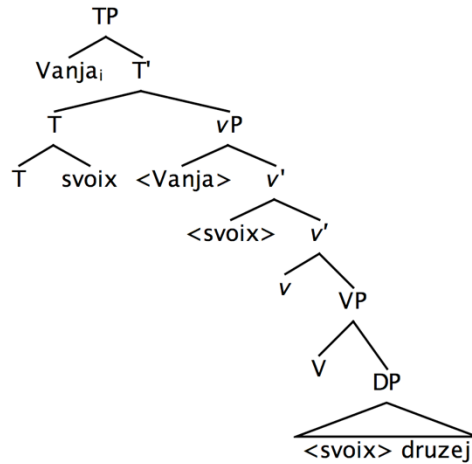
Compare this to the sentence in (58) with a nominative subject. Because it is in Spec TP, it c-commands the index in T, and the index is spelled out as a reflexive (Principles II and IV).

- (58) a. Vanja<sub>i</sub> žaleet svoix<sub>i</sub> /\*ego<sub>i</sub> družej.  
 Vanja<sub>NOM</sub> pities self's/\*his friends<sub>ACC</sub>  
 'Vanja<sub>i</sub> pities his<sub>i</sub> friends.'

Russian

(Nikolaeva 2014: 91)

b.



What is less understood, however, is the behavior of dative Experiencers of psychological verbs. Slioussar (2011) notes that the dative subject in (59) is actually less acceptable with a reflexive possessive determiner than a pronominal one.

- (59) Maše<sub>i</sub> nraivitsja ??svoja<sub>i</sub> /eë<sub>i</sub> rabota.  
 Masha<sub>DAT</sub> likes<sub>3.SG</sub> self's /her work<sub>NOM</sub>  
 'Masha likes her work.'

Russian

(Slioussar 2011: 2065)

The experiment I discuss in Section 4 investigates Nikolaeva's (2014) prediction for dative Experiencers of psychological verbs, which is that they be able to bind both reflexive and pronominal determiners.

### 3.2 Dative subjects of non-finite clauses

It is well known that dative subjects of Russian infinitival clauses can bind anaphors (Greenberg and Franks 1991, Kondrashova 1993, Franks 1995, Moore and Perlmutter 2000, among others).

Nikolaeva (2014) is the first, that I am aware of, to assert that the inverse is the case: dative subjects of Russian infinitival clauses cannot bind pronouns, as shown in (60) below.<sup>13</sup>

(60) Borisu ne zaščitit' svoego/???ego soobščnika. *Russian*  
Boris<sub>DAT</sub> NEG defend<sub>INF</sub> self's/ his articles<sub>ACC</sub>  
'It's not (in the cards) for him to publish his articles' (Nikolaeva 2014: 91)

If it is the case that these subjects pattern with nominative subjects with respect to binding because their case position is higher than any position an index could move to, this makes a prediction for the behavior of the dative subjects of Lithuanian participial clauses. Because they also receive case in Spec FinP, as argued in Chapter 3, they should also be unable to bind pronouns.

## 4. Experiment

### 4.1 Motivation

The tasks at hand given the discussion in the previous section are: (i) to investigate how dative Experiencers of psych verbs compare to dative Experiencers of non-verbal psych predicates, (ii) to confirm the observation that dative subjects of infinitives in Russian cannot bind pronouns, and (iii) to test the predictions made here for dative subjects in Lithuanian. This leads us to the research questions to be investigated in the experiment described in this section.

RQ1: Do dative Experiencers of psychological verbs bind anaphors? Do they bind pronouns?

RQ2: Do dative subject of non-finite clauses bind anaphors? Do they bind pronouns?

---

<sup>13</sup> Nikolaeva (2014: 62) cites Moore and Perlmutter's (2000) analysis that, like nominative subjects, dative subjects of infinitives receive case from T, albeit an "uninflected" one. This analysis is due to Greenberg and Franks (1991). See Chapter 3 for more discussion.

RQ3: Do dative subjects in Russian and Lithuanian behave in the same way with respect to anaphor binding?

Based on the predictions from Nikolaeva's (2014) theory of the (anti)-subject orientation of anaphors in Russian, I predict the following:

P1: Dative Experiencers of psychological verbs will bind both anaphors and pronouns.

P2: Dative subjects of non-finite clauses will only bind anaphors, and not pronouns.

P3: There will be no difference in binding by dative subjects between Russian and Lithuanian.

To answer these questions, the following study asks native speakers of Russian and Lithuanian to rate sentences on a Likert scale from 1 (bad) to 7 (good), rather than asking for a binary (good or bad) judgement. Therefore, we can reformulate the predictions above to the following:

P1: For sentences with dative Experiencer subjects, the presence of a reflexive versus pronoun will not affect ratings.

P2: For sentences with dative subjects of non-finite clauses, the presence of a reflexive will increase ratings, while the presence of a pronoun will decrease ratings.

P3: The choice of language will not have an effect on ratings.

Studying acceptability judgements in an experimental setting is beneficial for several reasons. For one, the use of a Likert scale can yield more fine-grained data that can help in understanding the size of the difference between conditions (Schütze and Sprouse 2014). We can see how the (anti) subject-orientation of anaphors affects acceptability in terms of the difference in ratings instead of in terms of acceptable versus unacceptable. In addition, when speakers disagree in informal judgments, it could just be the case that a sentence is middling and some speakers rate it above average and some below. Gathering judgements in the form of a Likert scale, which the experimenter assumes to be parametric, and using statistical test like linear

mixed-effect models allows the researcher to see whether ratings for two conditions are significantly different from each other.

Secondly, in an experimental setting with a factorial design, described in Section 4.4 below, we can answer the question of how much one variable is contributing to the judgment speakers have and whether there is an additive effect with multiple variables (Schütze and Sprouse 2014). For example, if we compare the acceptability of a sentence with the dative subject of an infinitival predicate binding a pronoun (predicted to be unacceptable) with one with a nominative subject of a finite predicate binding a reflexive (predicted to be acceptable), we cannot say whether it is the type of anaphor or the case of the subject that is contributing to its unacceptability. With a factorial design, we can see what effect the variables of case (i.e. dative versus nominative) and anaphor (i.e. pronoun versus reflexive) have and whether or not they interact to contribute to the acceptability or unacceptability of a sentence.

Finally, in this study, we can control for the fact that some sentences are rare or not-colloquial. As discussed in Chapter 3, the dative infinitive construction (i.e. Main Clause Infinitivals) have a modal interpretation, so we might expect for these sentences to be rated lower on the whole as compared to standard SVO sentences with nominative subjects. Because we compare dative infinitive sentences to each other with respect to anaphor binding, we can control for this potential issue. I return to this topic in Section 4.7 below. The following subsections elaborate on the design, results, and analysis of this experiment.

## 4.2 Participants

There were 40 native speaker participants above the age of 18 for each version of the experiment, Russian and Lithuanian. Lithuanian speakers all currently reside in Lithuania, most in Vilnius. Russian speakers were citizens of countries other than Lithuania. Lithuanian speakers who reported themselves to be native speakers of Lithuanian and another language (most commonly Russian or Polish) were excluded. Participants also filled out an anonymous language background questionnaire before the survey, in which they reported on their age, gender, native language(s), experience with Russian or Lithuanian, and other questions.

## 4.3 Task

In this study, participants were asked to rate sentences on a Likert scale of 1 to 7, with 1 being “bad” and 7 being “good”. They were instructed to rate sentences based on how natural they sounded in Russian or Lithuanian, ignoring factors like formality, semantic plausibility, and lack of context. For example, a participant taking the Lithuanian version of the survey might see the following sentence (minus the English glossing).

(61) Vyresniam broliui patinka savo nauja sesutė. (savo = vyresnio brolio)  
Older brother<sub>DAT</sub> likes self's new baby sister. (self's = older brother)

The phrase in parentheses was included to instruct participants as to how they should interpret the possessive determiner, as that subject or as “someone else”.

#### 4.4 Materials

Sentences were spread across eight conditions created with the factorial design given in Table 3. The first factor is subject case, with two levels: dative (DAT) and nominative (NOM). I have designated second factor to be predicate type in order to capture the fact that we are testing two different kinds of dative subjects. The first level, psychological verbs (*psych*), are predicates that have dative Experiencer subjects, which I have argued to be inherent NNSs. The second level, non-psychological, are predicates that select dative subjects when non-finite, which I have argued to be structural NNSs.<sup>14</sup> In Russian these are infinitives, and in Lithuanian they are participles. As it is impossible to create proper control group for these subjects (i.e. nominative subjects do not occur in non-finite clauses), I compare them to subjects of finite clauses with non-psych verbs (conditions 7 and 8). Finally, the third factor is the type of determiner, the levels of which correspond to reflexive (*svoj* in Russian, *savo* in Lithuanian) or pronominal. As all subjects were third person singular, the pronominal determiners were either ‘his’ (*ego* in Russian, *jo* in Lithuanian) or ‘her’ (*eĭ* in Russian, *jos* in Lithuanian).

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<sup>14</sup> One of the 18 verbs used in Conditions 5 through 8 of the Russian version, *uznat* ‘get to know’, also has the psychological reading ‘find out’. When used with an animate object, as in *The prisoner will never get to know his baby*, I assume that speakers interpret it as a non-psychological verb because of the volition reading involved. See Appendix A for a complete list of all predicates used in this experiment.

Table 3: Factorial design for anaphor binding by dative and nominative subjects with sentences from example item in Lithuanian

Condition	Factor 1: Subject case	Factor 2: Predicate type	Factor 3: Determiner type	Construction
1	DAT	Psych	Reflexive	Dative Experiencer
<i>Vyresniam broliui patinka savo nauja sesutė. (savo = vyresnio brolio)</i> Older brother <sub>DAT</sub> likes self's new baby sister. (self's = older brother)				
2	DAT	Psych	Pronominal	Dative Experiencer
<i>Vyresniam broliui patinka jo nauja sesutė. (jo = vyresnio brolio)</i> Older brother <sub>DAT</sub> likes his new baby sister. (his = older brother)				
3	NOM	Psych	Reflexive	Nominative Experiencer
<i>Vyresnis brolis myli savo naują sesutę. (savo = vyresnio brolio)</i> Older brother <sub>NOM</sub> loves self's new baby sister. (self's = older brother)				
4	NOM	Psych	Pronominal	Nominative Experiencer
<i>Vyresnis brolis myli jo naują sesutę. (jo = vyresnio brolio)</i> Older brother <sub>NOM</sub> loves his new baby sister. (his = older brother)				
5	DAT	Non-psych (non-finite)	Reflexive	Rus: Infinitival Lith: Participial
<i>Vyresniam broliui laukiant savo naujos sesutės, močiutė jį linksmina žaislais. (savo = vyresnio brolio)</i> Older brother <sub>DAT</sub> waiting self's new baby sister, grandmother entertains him with toys. (self's = older brother)				
6	DAT	Non-psych (non-finite)	Pronominal	Rus: Infinitival Lith: Participial
<i>Vyresniam broliui laukiant jo naujos sesutės, močiutė jį linksmina žaislais. (jo = vyresnio brolio)</i> Older brother <sub>DAT</sub> waiting his new baby sister, grandmother entertains him with toys. (jo = older brother)				
7	NOM	Non-psych (finite)	Reflexive	Baseline
<i>Vyresnis brolis laukia savo naujos sesutės, ir močiutė jį linksmina žaislais. (savo = vyresnio brolio)</i> Older brother <sub>NOM</sub> waits self's new baby sister, and grandmother entertains him with toys. (self's = older brother)				
8	NOM	Non-psych (finite)	Pronominal	Baseline
<i>Vyresnis brolis laukia jo naujos sesutės, ir močiutė jį linksmina žaislais. (jo = vyresnio brolio)</i> Older brother <sub>NOM</sub> waits his new baby sister, and grandmother entertains him with toys. (self's = older brother)				

#### 4.5 Procedure

Each participant saw a randomized group of 28 filler sentences and 24 target sentences (8 conditions x 3 observations per condition). The 24 item groups (as exemplified in Table 3) were distributed across 8 lists in a Latin square design. Each participant saw one list (plus the filler

sentences), meaning that they rated 3 versions of each condition and did not see the same lexical items more than once. There were 20 fillers with full object pronouns (‘himself’/‘him’) which were distributed across grammatical (8), ungrammatical (8), and middle (2). Half had reflexive anaphors and half had pronouns. The (predicted) ungrammatical fillers had either subject-verb agreement errors or object case errors. The (predicted) middle fillers were scrambled OVS or VSO. In addition, there were 8 fillers that had objects with pronominal determiners that were discourse bound by a referent not in the sentence. For example, in (62), the participant is directed to interpret the pronoun as referring not to the subject but to someone else.

(62) Geras teisėjas<sub>i</sub> patikėjo jo<sub>j</sub> ramia žmona. (jo = kieno nors) *Lithuanian*  
 kind judge<sub>NOM</sub> trusted his quiet wife<sub>INST</sub> his someone<sub>GEN</sub> else  
 ‘The kind judge<sub>i</sub> trusted his<sub>j</sub> quiet wife. (his = someone else’s)’

Half of these had dative subjects and half had nominative. Finally, half of the fillers in the Lithuanian version were bi-clausal (two coordinated clauses) to match the bi-clausal conditions 5 through 8. (Conditions 5 and 6 are necessarily bi-clausal in order to host the adjunct participial clause.)

This survey was online and took participants about 20 minutes to complete. It was hosted on Ibex Farm ([spellout.net/ibexfarm/](http://spellout.net/ibexfarm/)), a web platform for psycholinguistic experiments.

Sentences were presented one at a time, and after clicking one of the buttons for 1 through 7, the participant had to click to the next page.

#### 4.6 Results

The figures below give the z-score transformed average response by participant for each condition and for fillers that were expected to be rated high, middle, and low.<sup>15</sup> Z-scores are helpful because they normalize the average ratings across participants in case some participants use the 1 to 7 scale differently from others (i.e. one person may use the high end of the scale (3-7) more, while another may use the low end (1-5) more).

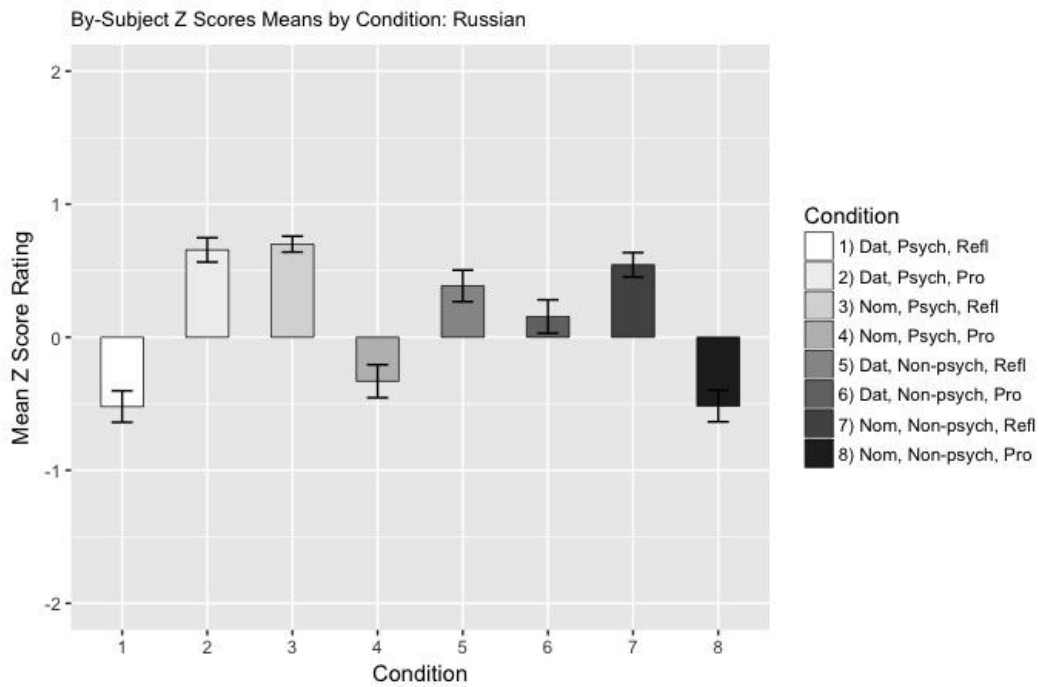


Figure 1: Ratings of conditions for Russian

<sup>15</sup> One set of filler sentences were not used to calculate z-scores: the additional 8 sentences that had objects with pronominal determiners that were discourse bound by a referent not in the sentence. These were excluded because they were rated more poorly than expected.

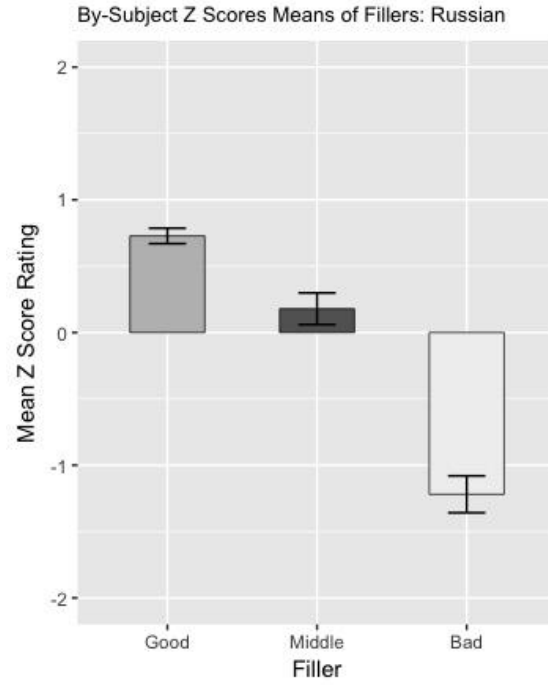


Figure 2: Ratings of fillers for Russian

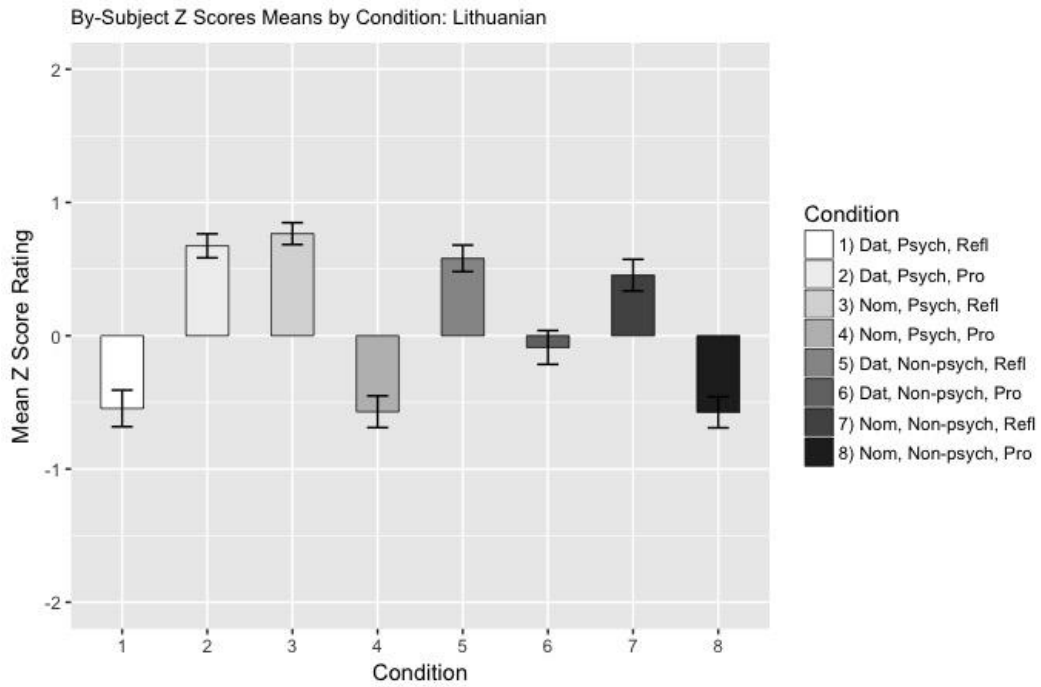


Figure 3: Ratings of conditions for Lithuanian

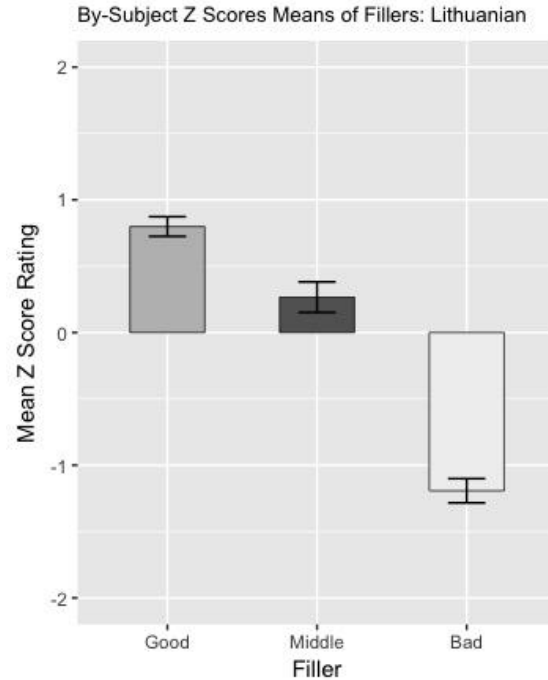


Figure 4: Ratings of fillers for Lithuanian

Descriptively, the pattern of ratings across conditions is similar for both Russian (Figure 1) and Lithuanian (Figure 3) versions of the survey. Dative subjects of psychological verbs (Experiencers) are rated lower with objects that have reflexive rather than pronominal determiners (condition 1 versus 2). Nominative subjects of psychological verbs (Experiencers) and nominative subjects of non-psychological verbs are rated higher with objects that have reflexive determiners rather than pronominal ones (conditions 3 versus 4 and 7 versus 8). Dative subjects of non-finite clauses (infinitive in Russian, participial in Lithuanian) are rated higher with objects that have reflexive determiners (condition 5), but these subjects with pronominal determiners are rated higher than nominative subjects with pronominal determiners (condition 6 versus condition 4 and condition 8).

#### 4.7 Analysis

First, I show the statistical significance of the effect of four factors CASE, PREDICATE, ANAPHOR, and LANGUAGE and their interactions across all conditions. To do this, I performed a regression using a linear mixed effect model with items and participants included as random factors and CASE, PREDICATE, ANAPHOR, and LANGUAGE as fixed effects, each with two levels (i.e. DAT and NOM for CASE, psych and non-psych for PREDICATE, reflexive and pronominal for ANAPHOR, and Russian and Lithuanian for LANGUAGE). The levels that were set as base levels for the purpose of treatment coding were nominative, non-psych, reflexive, and Russian. The intercept estimate value in Table 4, therefore, corresponds to the following levels: dative, psych, pronominal, and Lithuanian (i.e. the rating for Condition 2 in Lithuanian). I used the languageR package for R, so all  $p$ -values are estimated using the MCMC method (Baayen 2007; Baayen, Davidson & Bates 2008).

Table 4: Fixed effects summary with items and participants as random effects

	Estimate	SE
Intercept	0.67***	0.06
CASE	-1.25***	0.09
ANAPHOR	-1.22***	0.09
PREDICATE	-0.76***	0.09
LANGUAGE	-0.02	0.09
CASE x ANAPHOR	2.56***	0.12
CASE x PREDICATE	0.76***	0.12
ANAPHOR x PREDICATE	1.89***	0.13
CASE x LANGUAGE	0.26*	0.12
ANAPHOR x LANGUAGE	0.04	0.12
PREDICATE x LANGUAGE	0.26*	0.13
CASE x ANAPHOR x PREDICATE	-2.19***	0.17
CASE x ANAPHOR x LANGUAGE	-0.35*	0.17
CASE x PREDICATE x LANGUAGE	-0.44**	0.17
ANAPHOR x PREDICATE x LANGUAGE	-0.48**	0.17
CASE x ANAPHOR x PREDICATE x LANGUAGE	0.82***	0.24

\* $p \leq 0.05$ , \*\* $p \leq 0.01$ , \*\*\* $p \leq 0.001$

To see what is driving the four-way interaction in Table 4 above, I ran two regressions, one for Russian and one for Lithuanian, with the same linear mixed effect model except with LANGUAGE excluded. Table 5 shows the summary of these models. For both Russian and Lithuanian there was a significant interaction between CASE, ANAPHOR, and PREDICATE on the z-score transformed ratings.

Table 5: Fixed effects summary with items and participants as random effects

	Russian		Lithuanian	
	Estimate	SE	Estimate	SE
Intercept	0.66***	0.06	0.67***	0.06
CASE	-0.99***	0.09	-1.25***	0.09
ANAPHOR	-1.18***	0.09	-1.22***	0.11
PREDICATE	-0.50***	0.10	-0.76***	0.10
CASE x ANAPHOR	2.21***	0.12	2.56***	0.13
CASE x PREDICATE	0.31**	0.12	0.76***	0.12
ANAPHOR x PREDICATE	1.41***	0.13	1.89***	0.13
CASE x ANAPHOR x PREDICATE	-1.38***	0.17	-2.19***	0.17

\* $p \leq 0.05$ , \*\* $p \leq 0.01$ , \*\*\* $p \leq 0.001$

In order to understand the three-way interaction in Table 5 between CASE, ANAPHOR, and PREDICATE, I factored out PREDICATE and ran regressions to look at the effect of CASE and ANAPHOR for psych and non-psych predicates in Russian and Lithuanian. Table 6 shows the summary for psych predicates and Table 7 for non-psych predicates.

Table 6: Fixed effects summary with items and participants as random effects for psych predicates.

	Russian		Lithuanian	
	Estimate	SE	Estimate	SE
Intercept	0.66***	0.06	0.67***	0.06
CASE	-0.99***	0.09	-1.25***	0.10
ANAPHOR	-1.18***	0.08	-1.22***	0.13
CASE x ANAPHOR	2.21***	0.11	2.56***	0.15

\* $p \leq 0.05$ , \*\* $p \leq 0.01$ , \*\*\* $p \leq 0.001$

Table 7: Fixed effects summary with items and participants as random effects for non-psych predicates.

	Russian		Lithuanian	
	Estimate	SE	Estimate	SE
Intercept	0.16	0.08	-0.09	0.07
CASE	-0.67***	0.09	-0.49***	0.09
ANAPHOR	0.23*	0.10	0.66***	0.09
CASE x ANAPHOR	0.83***	0.12	0.36**	0.14

\* $p \leq 0.05$ , \*\* $p \leq 0.01$ , \*\*\* $p \leq 0.001$

Because CASE and ANAPHOR interact, I looked at the effect of CASE and ANAPHOR separately for different pairs of conditions. For sentences with psych predicates, having a reflexive decreases the z-score transformed rating if the case of the subject is dative (with a mean rating difference of 1.18 in Russian and 1.22 in Lithuanian) and increases it if it is nominative (with a mean rating difference of 1.03 in Russian and 1.34 in Lithuanian). This is shown in the following table.

Table 8: Fixed effects summary with items and participants as random effects for psych predicates.

	Russian		Lithuanian	
	Estimate	SE	Estimate	SE
Dative subjects				
Intercept	0.66***	0.07	0.67***	0.06
ANAPHOR	-1.18***	0.10	-1.22***	0.17
Nominative subjects				
Intercept	-0.33***	0.07	-0.57***	0.07
ANAPHOR	1.03***	0.07	1.34***	0.08

\* $p \leq 0.05$ , \*\* $p \leq 0.01$ , \*\*\* $p \leq 0.001$

From this, we cannot confirm Prediction 1, which is repeated below. For both languages, sentences with dative Experiencer subjects binding a reflexive are actually rated lower than sentences with dative Experiencer subjects binding a pronoun.

P1: For sentences with dative Experiencer subjects, the presence of a reflexive versus pronoun will not affect ratings.

However, for sentences with non-psych predicates, having a reflexive increases the z-score transformed rating if the case of the subject is dative (with a mean rating difference of 0.23 in Russian and 0.67 in Lithuanian). As the following table shows, the anaphor being reflexive also increases the rating if the subject is nominative (with a mean rating difference of 1.06 in Russian and 1.02 in Lithuanian).

Table 9: Fixed effects summary with items and participants as random effects for non-psych predicates.

	Russian		Lithuanian	
Dative subjects				
	Estimate	SE	Estimate	SE
Intercept	0.16***	0.10	-0.09***	0.07
ANAPHOR	0.23***	0.10	0.67***	0.09
Nominative subjects				
	Estimate	SE	Estimate	SE
Intercept	-0.52***	0.07	-0.57***	0.08
ANAPHOR	1.06***	0.08	1.03***	0.11

\* $p \leq 0.05$ , \*\* $p \leq 0.01$ , \*\*\* $p \leq 0.001$

This confirms Prediction 2, repeated below. For both languages, sentences with dative subjects of non-finite clauses binding a reflexive are rated higher than sentences with dative subjects of non-finite clauses binding a pronoun.

P2: For sentences with dative subjects of non-finite clauses, the presence of a reflexive will increase ratings, while the presence of a pronoun will decrease ratings.

With regard to Prediction 3, repeated here, we can see from Table 4 above that LANGUAGE does interact with the other factors to affect ratings.

P3: The choice of language will not have an effect on ratings.

Because both languages show the same pattern of the direction of change in ratings with respect to the effect of ANAPHOR, I ran more regressions with a linear mixed effect model looking at

the effect of CASE instead. Table 10 shows the summary. For subjects of psych predicates, being nominative instead of dative increases the z-transformed rating in sentences with reflexive anaphors (with a mean rating difference of 1.22 in Russian and 1.32 in Lithuanian). When the anaphor is pronominal, the subject being nominative instead of dative decreases ratings (with a mean rating difference of 0.99 in Russian and 1.24 in Lithuanian).

*Table 10:* Fixed effects summary with items and participants as random effects for psych predicates.

	Russian		Lithuanian	
Reflexive determiner				
	Estimate	SE	Estimate	SE
Intercept	-0.52***	0.06	-0.55***	0.12
CASE	1.22***	0.07	1.31***	0.13
Pronominal determiner				
	Estimate	SE	Estimate	SE
Intercept	0.66***	0.07	0.67***	0.06
CASE	-0.99***	0.12	-1.25***	0.11

*\*p ≤ 0.05, \*\*p ≤ 0.01, \*\*\*p ≤ 0.001*

Where Russian and Lithuanian differ is with the effect of CASE for sentences with non-psych predicates and reflexive anaphors, shown in Table 11. In Russian, the subject being nominative instead of dative when the anaphor is reflexive increases the rating, with a mean rating difference of 0.15. In Lithuanian, there is no significant effect of CASE for these sentences. For both languages, though, the subject being nominative instead of dative decreases the rating in sentences with pronominal anaphors (with a mean rating difference of 0.68 in Russian and 0.48 in Lithuanian).

Table 11: Fixed effects summary with items and participants as random effects for non-psych predicates.

	Russian		Lithuanian	
Reflexive determiner				
	Estimate	SE	Estimate	SE
Intercept	0.39***	0.08	0.58***	0.08
CASE	0.16*	0.08	-0.12	0.10
Pronominal determiner				
	Estimate	SE	Estimate	SE
Intercept	0.16	0.10	-0.09	0.08
CASE	-0.67***	0.10	-0.49***	0.10

\* $p \leq 0.05$ , \*\* $p \leq 0.01$ , \*\*\* $p \leq 0.001$

What Table 11 above shows is that in Russian, even though non-finite sentences with dative subjects and reflexives (Condition 5) are rated higher than non-finite sentences with dative subjects and pronouns (Condition 6), they are nevertheless rated worse than finite sentences with nominative subjects and reflexive anaphors. Main Clause Infinitivals are on the whole less acceptable than canonical sentences.

I have focused so far on whether or not LANGUAGE affects whether the direction that ratings change in (e.g. for sentences with dative subjects and psych verbs, having a reflexive instead of a pronominal anaphor will decrease ratings). Because z-scores on the whole are more extreme in Lithuanian than in Russian, I also looked at whether LANGUAGE has an effect on the magnitude of the change in ratings (see Appendix B for numerical values of z-scores).

I first ran two regressions, one for psych predicates and one for non-psych predicates, using a linear mixed effect model with items and participants included as random factors and CASE, ANAPHOR, and LANGUAGE as fixed effects. Because the base level for the contrast coding is set to Russian, the intercept value corresponds to the Lithuanian value. The summary for psych predicates is given in Table 12 and the summary for non-psych in Table 13.

Table 12: Fixed effects summary with items and participants as random effects for psych predicates

	Estimate	SE
Intercept	0.67***	0.06
CASE	-1.25***	0.09
ANAPHOR	-1.22***	0.10
LANGUAGE	-0.02	0.09
CASE x ANAPHOR	2.56***	0.12
CASE x LANGUAGE	0.26*	0.12
ANAPHOR x LANGUAGE	0.04	0.12
CASE x ANAPHOR x LANGUAGE	-0.35*	0.16

\* $p \leq 0.05$ , \*\* $p \leq 0.01$ , \*\*\* $p \leq 0.001$

Table 13: Fixed effects summary with items and participants as random effects for non-psych predicates

	Estimate	SE
Intercept	-0.09	0.07
CASE	-0.49***	0.09
ANAPHOR	0.66***	0.10
LANGUAGE	0.24*	0.10
CASE x ANAPHOR	0.37**	0.12
CASE x LANGUAGE	-0.18	0.12
ANAPHOR x LANGUAGE	-0.43***	0.13
CASE x ANAPHOR x LANGUAGE	0.47**	0.17

\* $p \leq 0.05$ , \*\* $p \leq 0.01$ , \*\*\* $p \leq 0.001$

Because we know that dative subjects and nominative subjects behave differently with respect to ratings, I next looked at the interaction between ANAPHOR and LANGUAGE for each case in for each predicate type. As the model summary in Table 14 shows, there is no significant interaction between the fixed effects of ANAPHOR and LANGUAGE for dative subjects of psych predicates, but there is for nominative subjects.

Table 14: Fixed effects summary with items and participants as random effects for dative and nominative subjects of psych predicates

	Dative		Nominative	
	Estimate	SE	Estimate	SE
Intercept	0.67***	0.07	-0.57***	0.06
ANAPHOR	-1.22***	0.16	1.34***	0.08
LANGUAGE	-0.02	0.07	0.24**	0.09
ANAPHOR x LANGUAGE	0.04	0.17	-0.31**	0.11

\* $p \leq 0.05$ , \*\* $p \leq 0.01$ , \*\*\* $p \leq 0.001$

To see how LANGUAGE contributes to this interaction I ran a separate regression for sentences with reflexive anaphors and sentences with pronominal anaphors. As Table 16 shows, LANGUAGE only has a significant effect on the ratings for nominative subjects with pronominal anaphors at  $p \leq 0.1$ . In other words, the average rating for nominative subjects of psych predicates with pronouns (condition 4) in Russian is statistically different than the average rating for this condition in Lithuanian, if the cut-off for significance is  $p \leq 0.1$ .

Table 15: Fixed effects summary with items and participants as random effects for nominative subjects of psych predicates

	Reflexive		Pronominal	
	Estimate	SE	Estimate	SE
Intercept	0.77***	0.05	-0.57***	0.09
LANGUAGE	-0.07	0.06	0.24.	0.13

$p \leq 0.1$ , \* $p \leq 0.05$ , \*\* $p \leq 0.01$ , \*\*\* $p \leq 0.001$

Turning to the effect of LANGUAGE with subjects of non-psych verbs, there is a significant interaction between the fixed effects of ANAPHOR and LANGUAGE for dative subjects of psych predicates, but not for nominative subjects. This is shown in the table below.

Table 16: Fixed effects summary with items and participants as random effects for dative and nominative subjects of non-psych predicates

	Dative		Nominative	
	Estimate	SE	Estimate	SE
Intercept	-0.09	0.07	-0.57***	0.07
ANAPHOR	0.67***	0.09	1.03***	0.10
LANGUAGE	0.24*	0.12	0.06	0.09
ANAPHOR x LANGUAGE	-0.44**	0.13	0.03	0.12

\* $p \leq 0.05$ , \*\* $p \leq 0.01$ , \*\*\* $p \leq 0.001$

Table 17 shows the summary for the separate regressions I ran for sentences with dative subjects with reflexive anaphors and those with pronominal anaphors. The ratings for these two conditions in Russian and Lithuanian are significantly different, but only at  $p \leq 0.1$ .

Table 17: Fixed effects summary with items and participants as random effects for dative subjects of non-psych predicates

	Reflexive		Pronominal	
	Estimate	SE	Estimate	SE
Intercept	0.58***	0.07	-0.09	0.08
LANGUAGE	-0.19.	0.11	0.24.	0.14

$p \leq 0.1$ , \* $p \leq 0.05$ , \*\* $p \leq 0.01$ , \*\*\* $p \leq 0.001$

To sum up, the difference between ratings for Russian and Lithuanian are only significant for three conditions. Sentences with nominative subjects, psych predicates, and pronominal anaphors (Condition 4) are rated worse than their counterpart with reflexive anaphors (Condition 3), but they are rated more negatively in Lithuanian. Sentences with dative subjects, non-psych (non-finite) predicates, and reflexive anaphors (Condition 5) are rated better than their counterpart with pronominal anaphors (Condition 6), but they are rated more positively in Lithuanian. Finally, the ratings for Condition 6 are worse in Lithuanian than in Russian. That the pattern of ratings (i.e. high versus low) is the same for both languages, but that ratings are more extreme in Lithuanian is puzzling and warrants further investigation. However, will not return to

these differences in the next section, which is focused on accounting for the pattern of binding across the different types of subjects.

#### *4.8 Summary of findings*

To return to the predictions introduced at the beginning of this section, we cannot confirm the first prediction, but we can confirm the second.

P1: For sentences with dative Experiencer subjects, the presence of a reflexive versus pronoun will not affect ratings.

P2: For sentences with dative subjects of non-finite clauses, the presence of a reflexive will increase ratings, while the presence of a pronoun will decrease ratings.

P3: The choice of language will not have an effect on ratings.

The pattern that I have found is that in both languages, 1) sentences with dative subjects of psych verbs are unacceptable binding reflexives, but are acceptable with pronouns, 2) sentences with nominative subjects of both psych and non-psych verbs are acceptable binding reflexives but not pronouns, and 3) sentences with dative subjects of non-psych verbs (in non-finite predicates) are acceptable binding reflexives, and less acceptable binding pronouns. With respect to the third prediction, I found that Russian and Lithuanian had different ratings in two areas: 1) in Russian, but not Lithuanian, CASE had a significant effect on the ratings of non-psych sentences with reflexive anaphors, and 2) Lithuanian ratings were more extreme than Russian ones, and these ratings were significantly different from the Russian ratings for Conditions 4, 5, and 6. In the following section I will address the implications that these findings have for the theoretical explanation of the (anti) subject-orientation of anaphors in Russian and Lithuanian.

## 5. Implications of findings and discussion

As I discussed in Section 2, the current theory with the most explanatory power for anaphor binding in Russian is that found in Nikolaeva (2014). In her system, reflexive and pronominal anaphors are the form that an “index” takes at spell-out. Indexes undergo phrasal and head movement to adjoin to phrases headed by D, *v*, or T. The overarching implication of Nikolaeva’s (2014) system is that the (anti) subject-oriented nature of anaphors in Balto-Slavic is not necessarily linked to subjecthood or a subject position. Because the relative ordering of antecedents and anaphors is not fixed, while the locations at which indexes must be pronounced as reflexives are, it is not necessary to make reference to a specific location from which c-command must happen in order for a reflexive to be bound. In this section, I show how this system can account for some of the experimental results in the previous section, if we assume the structures I have argued for in previous chapters. The main questions we will attempt to answer are:

1. Why are some inherent NNSs able to bind only pronouns and others either pronouns or reflexives?
2. Why do structural dative NNSs bind both reflexives and pronouns?

I will spend this section focusing on the binding of non co-argument *ego/jo* ‘his’ and *voj/savo* ‘self’s’. Nikolaeva’s (2014) Principle III stipulates that an index that is a co-argument to the c-commanding antecedent will always be spelled out as a reflexive. The cases of optionality occur with the non co-argument indexes because they are allowed to continue moving up the structure. Before going through each derivation, I discuss the interaction between case and binding.

### 5.1 Binding by inherent NNSs

As it stands, Nikolaeva's (2014) cannot account for the difference between these experimental findings on binding by dative Experiencers of psychological verbs and the reported judgements on non-verbal psychological predicates. As the results of the acceptability judgement study discussed above show, dative subjects of full psych verbs are as unacceptable with reflexive determiners as nominative subjects are with pronominal determiners in both Russian and Lithuanian.

- (63) a. Vane<sub>i</sub> nravitsja \*svoj<sub>i</sub>/ego<sub>i</sub> učebnik *Russian*  
Vanja<sub>DAT</sub> likes<sub>3.SG</sub> self's/his textbook  
'Vanja<sub>i</sub> likes his<sub>i</sub> textbook.'
- b. Vanja ljubit svoj<sub>i</sub>/\*ego<sub>i</sub> učebnik  
Vanja<sub>NOM</sub> loves<sub>3.SG</sub> self's/his textbook  
'Vanja<sub>i</sub> loves his<sub>i</sub> textbook.'

As discussed at the end of Chapter 2, subjects of non-verbal psych predicates are acceptable with both reflexive and pronominal determiners. Compare (63a) with (64), repeated from (56) above.

- (64) Vane<sub>i</sub> žal' svoix<sub>i</sub> /ego<sub>i</sub> družej. *Russian*  
Vanja<sub>DAT</sub> pities self's/his friends<sub>ACC</sub>  
Vanja<sub>i</sub> feels sorry for his<sub>i</sub> friends. (Nikolaeva 2014: 91)

We can account for these differences if we assume the argument structure that I proposed for each of these constructions in Chapter 2. Recall that the Theme of a psych verb is merged in at Spec vP, following Cuervo's (2003) analysis of Spanish psychological verbs. This is shown in (65).

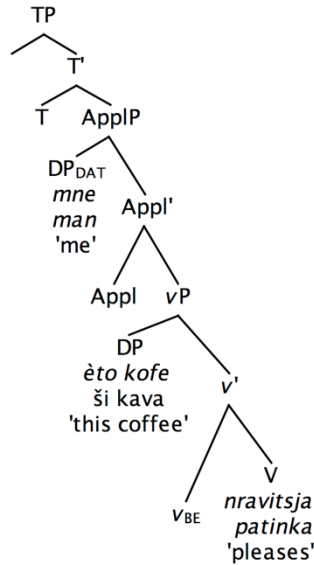
(65) a. Mne nravitsja èto kofe.  
 me<sub>DAT</sub> please<sub>3.SG</sub> this coffee<sub>NOM</sub>  
 'I like this coffee.'

Russian

b. Man patinka ši kava.  
 me<sub>DAT</sub> please<sub>3.SG</sub> this coffee<sub>NOM</sub>  
 'I like this coffee.'

Lithuanian

c.



The Theme of the non-verbal psychological verb, on the other hand, is the complement of the X of the XP headed by the non-verbal psych predicate.<sup>16</sup> In the tree in (66), the Theme DP is more deeply embedded than the Theme DP in (65).

<sup>16</sup> As I discuss in Chapter 2, I leave the category of the non-verbal psych predicate as X in this tree as I assume that these predicates can be of differing categories. For example, while *žal'* is somewhat nominal, *grustno* in (i) probably best analyzed as an Adj.

(i) Emu grustno.  
 him<sub>DAT</sub> sad  
 'He is sad.'

Russian

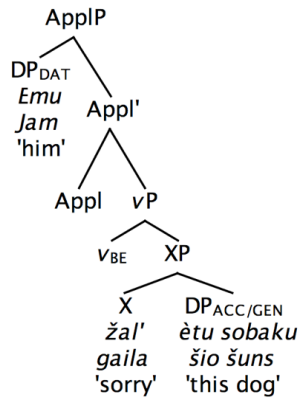
- (66) a. Emu žal' ètu sobaku.  
 him<sub>DAT</sub> sorry this dog<sub>ACC</sub>  
 'He feels sorry for this dog.'

Russian

- b. Jam gaila šio šuns.  
 him<sub>DAT</sub> sorry this dog<sub>GEN</sub>  
 'He feels sorry for this dog.'

Lithuanian

c.

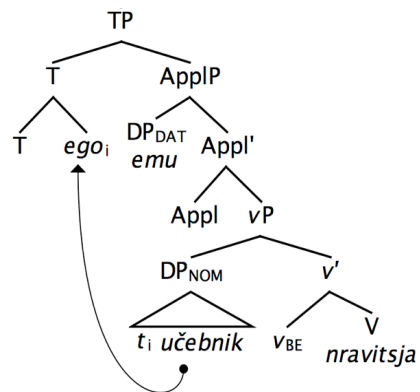


If we assume that an Applicative phrase is not a possible landing site for index raising, then in the case of the psychological verb, the index will raise directly to T. Because the index c-commands its antecedent, none of the requirements for reflexivization are met and it is spelled out as a pronoun. This is shown in the tree in (67b) with Russian lexical items.

- (67) a. Emu nravitsja ego učebnik.  
 Jam patinka jo vadovėlis.  
 him<sub>DAT</sub> please<sub>3.SG</sub> his textbook<sub>NOM</sub>  
 'He<sub>i</sub> likes his<sub>i</sub> textbook.'

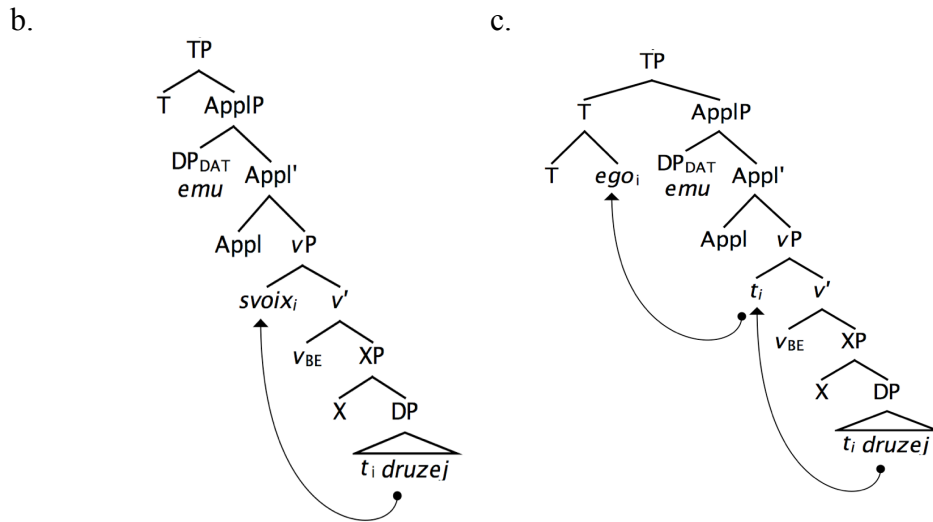
Russian  
 Lithuanian

b.



The argument structure of the non-verbal psych predicate provides more structure for index raising. In (67b), the index is able to land in Spec vP where it is c-commanded by the antecedent in Spec ApplP and spelled out as the reflexive, as shown for Russian. In (68c), the index moves on to adjoin to T where it c-commands the antecedent and is spelled out as the pronoun, Russian *ego*.

- (68) a. Emu<sub>i</sub> žal' svoix<sub>i</sub> / ego<sub>i</sub> druzej.  
 Jam<sub>i</sub> gaila savo<sub>i</sub> / jo<sub>i</sub> draugų.  
 him<sub>DAT</sub> pities self's/his friends  
 'He<sub>i</sub> feels sorry for his<sub>i</sub> friends.'
- Russian*  
*Lithuanian*



Finally, I note again that we have to exclude the projection headed by Appl from the list of possible adjunction sites for the index. Nikolaeva (2014) stipulates that index raising cannot stop in (a tucked-in) Spec VP and must move on to *v* or T. This is to account for why indirect objects in Spec VP cannot bind reflexives, as shown in (69) with *i* to indicate the relevant index position.

- (69) Petja pokazal [<sub>VP</sub> Vane<sub>j</sub> ***i*** [<sub>DP</sub> \*svoju<sub>i</sub> / ego<sub>j</sub> fotografiju]].  
 Petja showed Vanja<sub>DAT</sub> self's<sub>i</sub> / his<sub>i</sub> photograph<sub>ACC</sub>  
 Petja showed Vanja<sub>i</sub> his<sub>i</sub> photograph.  
(Nikolaeva 2014: 74)
- Russian*

Perhaps it is the case that Spec ApplP is also a position in which an index cannot remain. In the case of the psychological verbs, that would mean that the index stops in Spec ApplP but then must head adjoin to T. Why this might be the case is not clear. As other types of functional layers are also irrelevant for index raising (e.g. PPs), it seems that D, *v*, and T are targeted specifically as landing sites where indexes can remain. I speculate that this could be related to the fact that these heads can have  $\phi$ -features which pronouns are argued also to have (see Harley and Ritter 2002, Cardinaletti and Starke 1999, among others).

An alternative possibility to avoid stipulating that Appl is not a potential landing site for index raising is to consider whether we can derive the difference between binding by subjects of psych verbs and non-verbal predicates via the difference in the structural status of their Themes.<sup>17</sup> I have argued that Themes of psych verbs are specifiers while Themes of non-verbal psych predicates are complements. Movement out of specifiers is known to be restricted (i.e. Huang's (1982) Condition on Extraction Domains), so perhaps it is the case that index raising is not possible out of a psych verb Theme in Spec *v*P. Unfortunately, this would make the wrong prediction that the index will always be spelled out as a reflexive because the dative subject in Spec ApplP will always c-command it. As we have seen, sentences with dative subjects of psych verbs are acceptable only with pronominal determiners.

## *5.2 Binding by structural NNSs*

In this section I will first apply index raising to the structural dative subjects and then explore how Nikolaeva's (2014) system can account for the reported facts on binding by the genitive

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<sup>17</sup> Thank you to Edith Aldridge for encouraging me to look to this option.

subject of Inferential Evidentials. One surprising finding from the study I reported on above is that structural dative subjects are much more acceptable with pronouns than nominative subjects are. This conflicts with Nikolaeva's (2014) conclusion that dative subjects of infinitives behave exactly like nominative subjects. For the sake of this discussion, let us assume that these acceptability judgments reflect the same optionality in binding that dative subjects of non-verbal psych predicates show, and that index raising is occurring in (70) though (72) below.

- (70) Non-verbal psych predicate  
 Emu<sub>i</sub> žal' svoix<sub>i</sub> /ego<sub>i</sub> družej. *Russian*  
 Jam<sub>i</sub> gaila savo<sub>i</sub>/jo<sub>i</sub> draugų. *Lithuanian*  
 him<sub>DAT</sub> pities self's/his friends  
 'He<sub>i</sub> feels sorry for his<sub>i</sub> friends.'
- (71) Dative infinitive *Russian*  
 Emu<sub>i</sub> ne najti svoix<sub>i</sub> /ego<sub>i</sub> družej.  
 him<sub>DAT</sub> NEG find<sub>INF</sub> self's/his friends  
 '(It's not in the cards for) him<sub>i</sub> to find his<sub>i</sub> friends.'
- (72) Adjunct participial clause *Lithuanian*  
 Jam<sub>i</sub> laukiant savo<sub>i</sub> /jo<sub>i</sub> draugų...  
 him<sub>DAT</sub> waiting<sub>ACT.PROG.-AGR</sub> self's/his friends  
 '(While) he was waiting for his friends...'

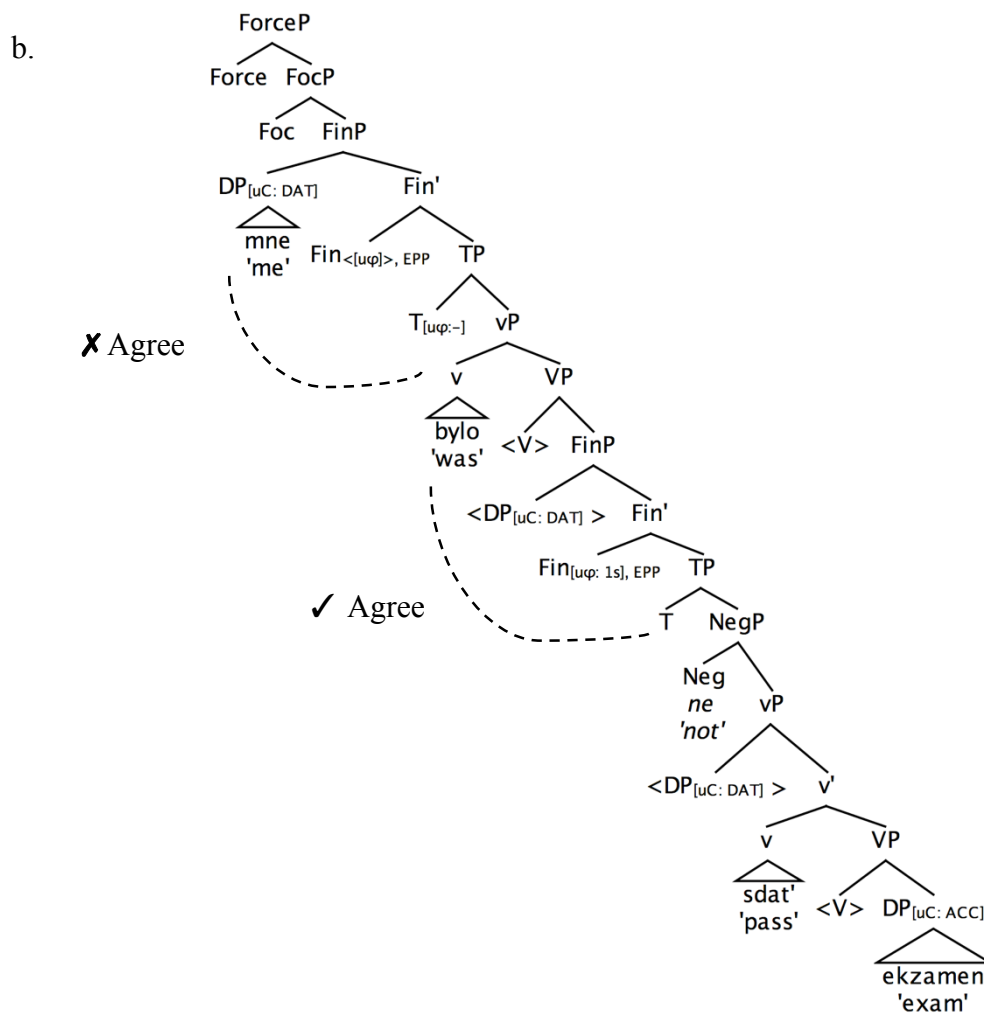
Following Nikolaeva's (2014) analysis that arguments that undergo A-movement to a non-case position will reconstruct, I assume that subjects will be interpreted in the position in which they receive case when binding principles are evaluated.

### 5.2.1 Dative infinitive

In the case of dative infinitives, I have argued that they are assigned DAT in the Spec of an embedded FinP before moving to the matrix Spec FinP. The derivation in (72) is repeated from Chapter 3.

- (73) a. Mne bylo ne sdat' ekzamen.  
 me<sub>DAT</sub> was<sub>3.SG.NEUT</sub> NEG pass<sub>INF</sub> exam<sub>ACC</sub>  
 'It's not (in the cards) for me to pass the exam.'

Russian



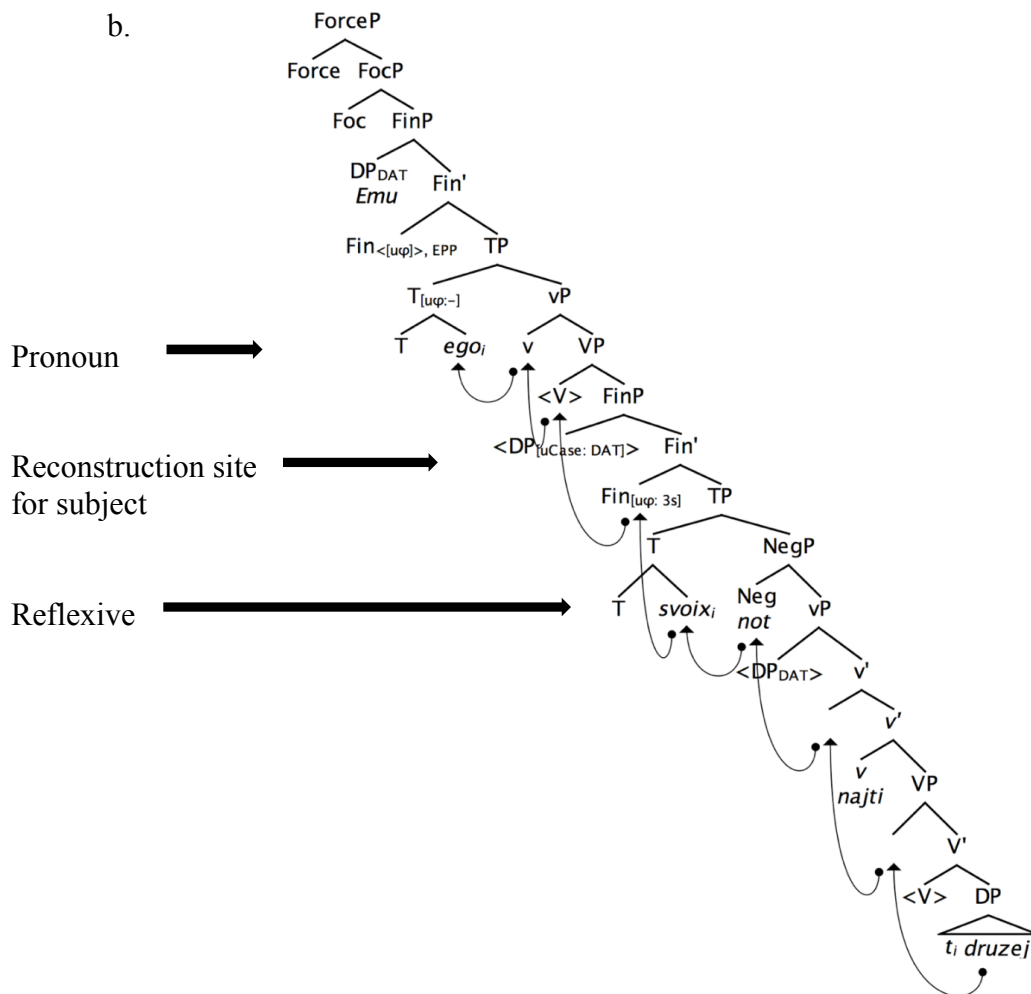
Deriving the optionality in binding is then a matter of accounting for the locations at which index raising occurs with respect to the embedded Spec FinP. If the subject will always reconstruct to Spec FinP, then the index must raise into the matrix clause. In order not to violate the Head Movement Constraint of Travis (1984) we have to assume that index raising can move through a Fin head. Nikolaeva's (2014) restraint on index raising beyond T only applies to finite TPs. This allows her to account for long-distance binding by subjects in to non-finite clauses;

under the interpretation that the reflexive is co-indexed with the matrix subject and not PRO, the index has moved to adjoin to matrix T.

- (74)  $Masa_i$  poprosila  $Vanju_j$  [ $TP$   $PRO_j$   $vstretit'$   $svoju_{i/j}$   $sestru$ ]. *Russian*  
*Masha*<sub>NOM</sub> asked *Vanja*<sub>ACC</sub> meet<sub>INF</sub> self's sister<sub>ACC</sub>  
*Masha*<sub>i</sub> asked *Vanja*<sub>j</sub> to meet her<sub>i</sub>/his<sub>j</sub> sister. (Nikolaeva 2014: 70)

In the tree in (74b) the index can similarly undergo raising to the matrix T where it will be spelled out as a pronoun. If, however, it does not, it will be spelled out as a reflexive because it is c-commanded by the subject in its case-position in the embedded Spec FinP.

- (75) a.  $Emu_i$  ne najti  $svoix_i / ?ego_i$   $druzej$ . *Russian*  
*him*<sub>DAT</sub> *NEG* *find*<sub>INF</sub> *self's/his* *friends*  
 '(It's not in the cards for) *him*<sub>i</sub> to find *his*<sub>i</sub> friends.'



Note that this optional raising into the matrix clause is also what accounts for the ability for objects in object control clauses to bind either reflexives or pronouns. I submit that these two constructions are parallel in that the index can be interpreted either above or below its antecedent.

- (76) Maša<sub>i</sub> poprosila Vanju<sub>j</sub> [ PRO<sub>j</sub> pokritikovat' svoj<sub>j</sub>/<sup>??</sup>ego<sub>j</sub> stat'ju]. *Russian*  
 Masha<sub>NOM</sub> asked Vanju<sub>ACC</sub> criticize<sub>INF</sub> self's / his paper  
 'Masha<sub>i</sub> asked Vanja<sub>j</sub> to criticize his<sub>j</sub> paper.' (Nikolaeva 2014: 86)

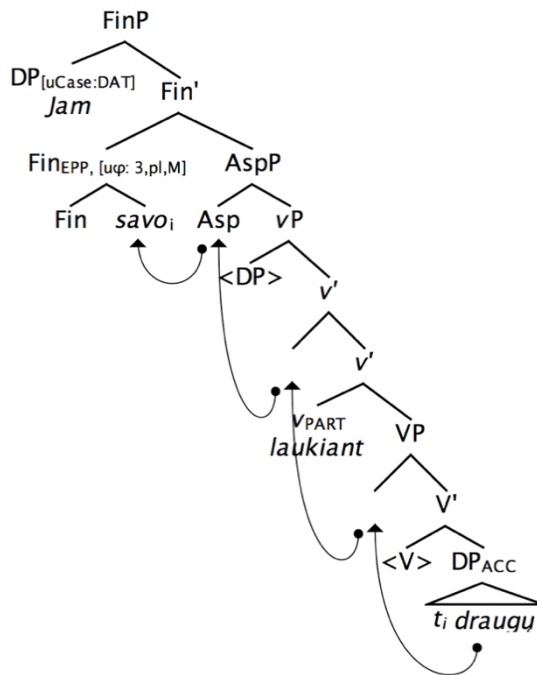
### 5.2.2 Participial clauses

This brings us to the question of what could account for the fact that dative subjects of participial clauses in Lithuanian can bind reflexives but are also more acceptable with pronouns than nominative subjects are. Under Nikolaeva's (2014) index raising proposal, the index will raise from the DP to eventually adjoin to Fin. As the subject receives case in Spec Fin, this is an instance of A-movement for case and we do not expect the subject to reconstruct to its Spec *v*P position. Therefore it is surprising that the pronominal form of the possessive determiner *jo* is not unacceptable. Index raising predicts that no matter where the index raises to, it should be spelled out as a reflexive. This is shown in the tree in (77).

- (77) a. Jam<sub>i</sub> laukiant savo<sub>i</sub>/jo<sub>i</sub> draugu...  
 him<sub>DAT</sub> waiting<sub>ACT.PROG.-AGR</sub> self's/his friends  
 '(While) he was waiting for his friends...'

Lithuanian

- b.  
 No reconstruction →  
 Reflexive →



One potential solution is that there is more structure in this construction above the subject for the index to move to above the subject in Spec FinP. Recall from Chapter 3, that these constructions do not allow Q particles or *wh*-movement, as shown for the embedded participial clause in (78).

- (78) a. \*Nežinau ar tėvą jau atėjus.  
 NEG-know<sub>PRS-2SG</sub> Q father<sub>ACC.SG</sub> already come<sub>ACT.PERF.-AGR</sub>  
 intended meaning: 'I don't know if father has already come.'

Lithuanian

- b. \*Nežinau kur tėvą išėjus.  
 NEG-know<sub>PRS-2SG</sub> where father<sub>ACC.SG</sub> go.out<sub>ACT.PERF.-AGR</sub>  
 intended meaning: 'I don't know where father has gone.' (Arkadiev 2012: 12)

However, it appears that non-subject material is permitted a pre-verbal position in the participial adjunct clause in inverted clauses. In (79), the PP *iš Lietuvos* is moved to a pre-verbal position, with the dative subject remaining post-verbal.

- (79) Iš Lietuvos išvykus didelei daliai nelietuvių kilmės *Lithuanian*  
 from Lithuania leave<sub>ACT.PERF.-AGR</sub> large part<sub>DAT</sub> non-Lithuanian origin

Lietuvos gyventojų, migracijos saldo reikšmės vis gerėjo.  
 Lithuania residents<sub>GEN</sub> migration balance values<sub>NOM</sub> all improved  
 ‘After a large portion of the residents of non-Lithuanian origin left Lithuania, the value of  
 the migration balance improved.’ (VDU corpus; AG)

The example in (80) below shows the same inversion but with *wh*-movement of *kada* ‘when’.

- (80) Kada atvykus šeimai su neįgaliuoju balsuoti *Lithuanian*  
 when arrive<sub>ACT.PERF.-AGR</sub> family<sub>DAT</sub> with handicapped vote<sub>INF</sub>

Lietuvos centro partijos stebėtoja.... pažemino neįgalųjį.  
 Lithuania center party<sub>GEN</sub> observer<sub>INOM</sub> humiliated handicapped<sub>ACC</sub>  
 ‘When a family with a handicapped person arrived to vote, the Lithuanian Center Party  
 observer humiliated the handicapped person.’  
 (<http://www.alfa.lt/straipsnis/10647688/rinkimu-stebetoja-zemino-neigalu-rinkeja>)

Bondaruk (2013) and Citko, Germain, and Witkoś (to appear) argue that in inversion constructions in Polish, a related language, the PP or inverted predicate is topicalized. That they are in an A’-position like Spec TopP is shown by the fact that they undergo reconstruction. In (81), the anaphor in the PP and inverted predicate is interpreted below the subject, avoiding a Principle C violation.

- (81) a. Do *swojeji* ojczyzny wrócił każdy żołnierz<sub>i</sub>. *Polish*  
 to self motherland returned every soldier<sub>NOM</sub>  
 ‘Every soldier returned to his motherland.’
- b. Wrogiem *swojego<sub>i</sub>* sąsiada było [każde państwo  
 enemy.instr self.gen neighbor.gen was every.nom country.nom  
 w Europie Zachodniej]<sub>i</sub>.  
 in Europie Western  
 Lit. ‘The enemy of its neighbor was every country in Western Europe.’  
 (Bondaruk 2013: 288)

Given the proposal from Lambova (2003) that *wh*-movement in Slavic is to a focus position in the left periphery, I take the examples in (79) and (80) to be evidence for a Topic or Focus

Phrase layer in the non-embedded participial clause. If indexes may move beyond Fin to Top or Foc, then Nikolaeva’s (2014) proposal can account for the near optionality between *savo* ‘self’s’ and *jo* ‘his’ in (76) above. Unfortunately, the problem then becomes how to prevent indexes from moving to Top or Foc in canonical sentences, a position that the nominative subject will not be able to c-command. Another issue is that Top and Foc are not generally assumed to have [uφ] features, which is what I proposed in Section 5.1 might determine which heads an index can raise to. Further work on binding by these adjunct phrases and comparison to their embedded counterparts is necessary.

Turning to the accusative subjects of embedded participial clauses, we can see in (82) that these subjects also can bind reflexives.<sup>18</sup>

- (82) Sakiau [tèvą<sub>i</sub> nežinant savo<sub>i</sub> sūnaus]. *Lithuanian*  
 said<sub>1.SG</sub> father not.knowing<sub>ACT.PROG.-AGR</sub> self’s son<sub>GEN</sub>  
 ‘I said father<sub>i</sub> didn’t know his<sub>i</sub> son.’

This is predicted under the analysis from Chapter 3, in which these subjects are assigned ACC in the specifier of an Aspect Phrase, as shown in (83).

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<sup>18</sup> Interestingly, Arkadiev (2012) reports long distance binding by the matrix subject in this construction. In (i), matrix subject Jonas can co-refer with *savo* ‘self’s in the participial clause

(i) Jonas<sub>i</sub> įrodė [Algirda<sub>j</sub> buvus savo<sub>ij</sub> kambaryje. ] *Lithuanian*  
 Jonas<sub>NOM</sub> proved<sub>3.SG</sub> Algirda<sub>ACC</sub> be<sub>ACT.PERF.-AGR</sub> self’s room<sub>LOC</sub>  
 ‘Jonas proved that Algirdas had been in his (Jonas’s or Algirdas’s) room.’ (Arkadiev 2012: 22)

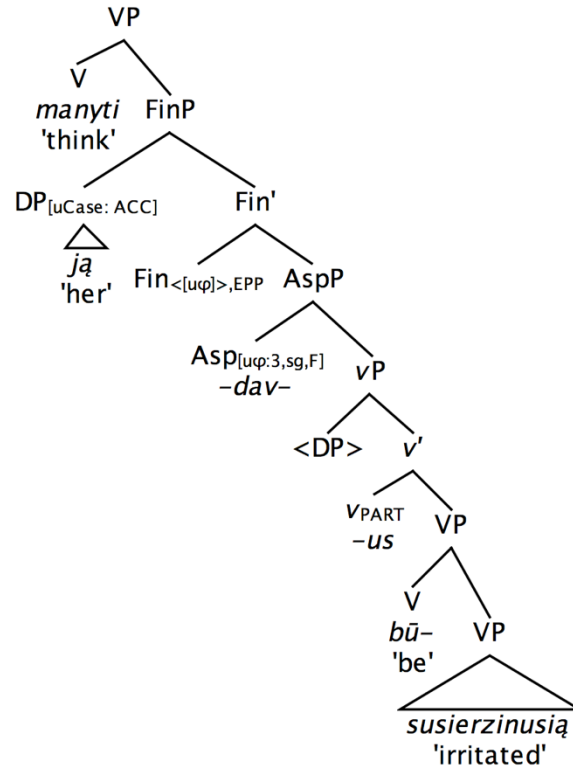
For (82), my consultant rejected the interpretation of *savo* as *my*, which indicates that the matrix subject cannot bind the reflexive.

(83)

Lithuanian

a. ... skatina manyti [ ją dažnai būdavus susierzinusią ]...  
 ... induce<sub>3.PRS</sub> think<sub>INF</sub> she<sub>ACC</sub> often be<sub>ACT.PERF.HAB.-AGR</sub> irritated<sub>ACT.PROG.ACC.SG.FEM</sub>  
 ‘[this] induces one to believe her to have often been irritated...’  
 (<http://alfa.lt/straipsnis/150854>)

b.



The case position of the antecedent DP is higher than *v*, a position which an index can raise to, allowing the index to be spelled out as reflexive *savo*.<sup>19</sup>

### 5.2.3 Inferential Evidentials

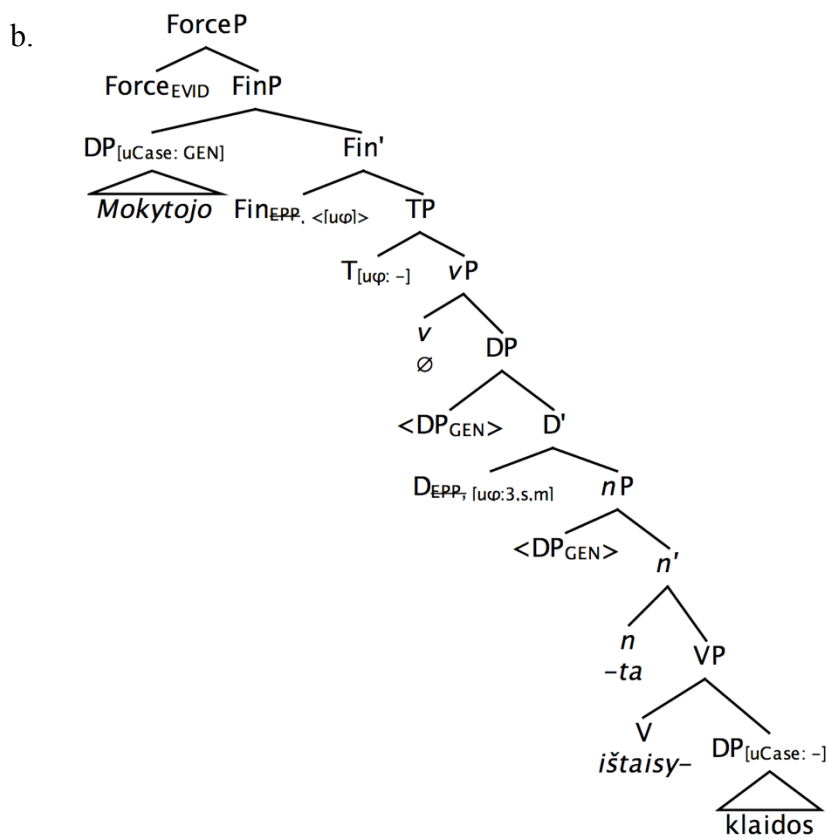
Lavine (2000, 2010) argues that the genitive subject of an Inferential Evidential is a “true” subject in that it, like nominative subjects, can bind reflexives and is unable to bind pronouns.

<sup>19</sup> As these clauses are FinPs, Nikolaeva’s (2014) index raising proposal predicts that these subjects should also be able to bind pronouns because Fin is an additional position the index can raise to, and it is above the antecedent’s case position. I leave investigation of the potential optionality in binding in this construction to future experimental work.

- (84) Motinos<sub>i</sub> sudeginta savo<sub>i</sub> / jos\*<sub>i/j</sub> namas. Lithuanian  
 mother<sub>GEN</sub> burned.down<sub>PASS.PERF.-AGR</sub> self's / her house<sub>NOM.MASC</sub>  
 'Mother apparently burned down her own house.' (Lavine 2010: 126)

In Chapter 3, I argued that the argument structure of this construction is actually a gerund-like DP that is the one argument in a finite clause. In (85) below, the subject is assigned genitive case in the specifier of DP and moves to Spec FinP to satisfy the EPP.

- (85) a. Mokytojo ištaisyta klaidos. Lithuanian  
 teacher<sub>GEN</sub> correct<sub>PASS.PERF.-AGR</sub> mistakes<sub>NOM</sub>  
 'The teacher apparently corrected the mistakes'

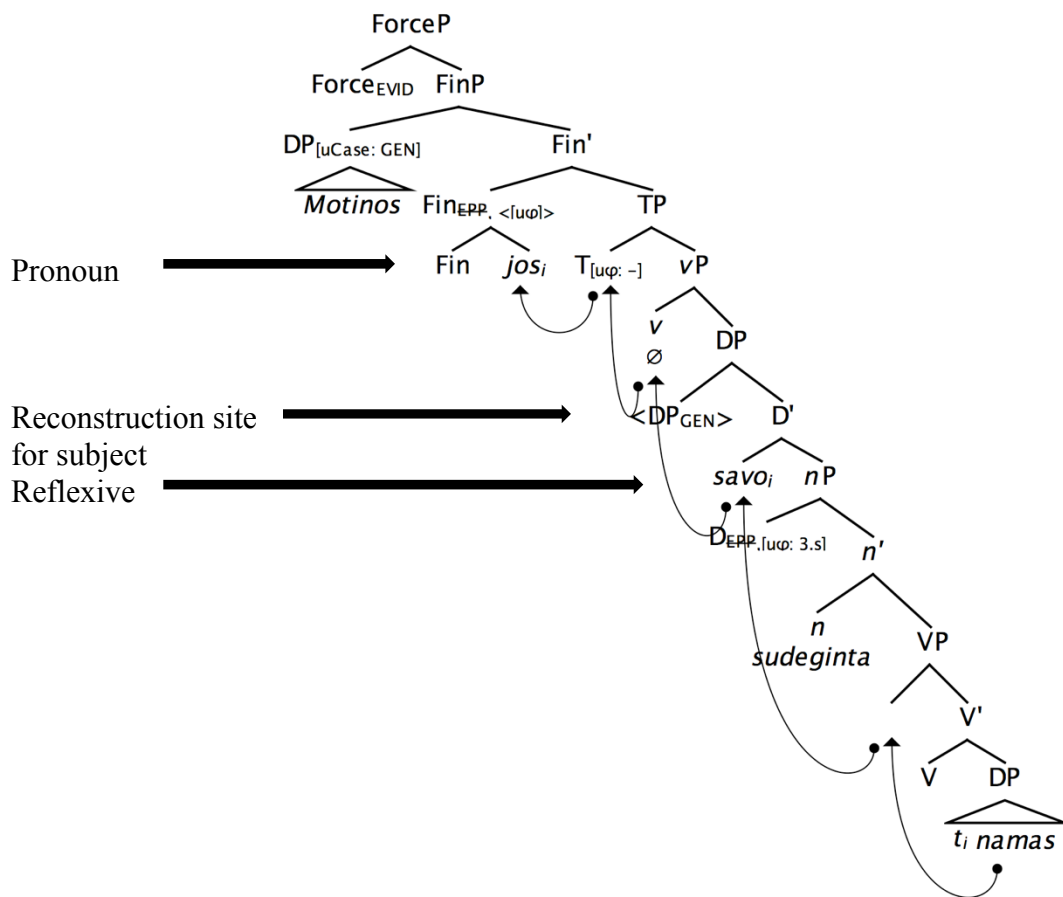


On this analysis, binding within an Inferential Evidential is parallel to binding within a DP that has a possessor DP within its specifier. Nikolaeva (2014) reports that such possessor DPs in Russian are able to bind both reflexives and pronouns, as shown in (86).

- (86) [DP<sub>2</sub> Mašiny<sub>i</sub> [DP<sub>1</sub> rasskazy o svoix<sub>i</sub> / eë<sub>i</sub> putesestvijax ]] - udivitel'ny.  
 Masha's stories about self's / her travels astonishing  
 'Masha's<sub>i</sub> stories about her<sub>i</sub> travels are astonishing.'

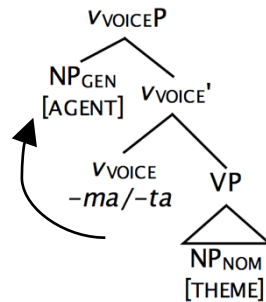
This is because the index can raise out of the second DP to be outside of the c-command domain of the possessor subject. Outside this DP, it will be spelled out as a pronoun. On my analysis that the genitive subject is assigned GEN in Spec DP, the subject should reconstruct to this position, despite the fact that it moves to Spec FinP. This would predict that the subject would be acceptable with a pronominal determiner, as the tree in (87b) shows.

- (87) a. Motinos<sub>i</sub> sudeginta savo<sub>i</sub> / jos\*<sub>i/j</sub> namas. *Lithuanian*  
 mother<sub>GEN</sub> burned.down<sub>PASS.PERF.-AGR</sub> self's / her house<sub>NOM.MASC</sub>  
 'Mother apparently burned down her own house.'  
 (Lavine 2010: 126)
- b.



A more thorough investigation into the binding properties of these genitive subjects is necessary, and I leave this as a puzzle for future research. I will conclude by noting that, even under Lavine’s (2010) analysis for the case and argument structure of the Inferential Evidential, Nikolaeva’s (2014) proposal predicts that these subjects should bind both reflexives and pronouns. This is because the case position of these subjects for Lavine (2010) is Spec *v*P.

(88)



(Lavine 2010: 128)

Therefore, even if the genitive subject moves to Spec TP or Spec FinP, it should reconstruct to this position, a position below the highest landing site for index raising, T.

(89) [TP [T + jos<sub>i</sub>] [<sub>vP</sub> Motinos<sub>i</sub> sudeginta [DP savo<sub>i</sub> / jos\*<sub>i/j</sub> namas]]].  
 mother<sub>GEN</sub> burned.down self's / her house  
 ‘Mother apparently burned down her own house.’

In this subsection, we have seen that Nikolaeva’s (2014) approach works well for dative Experiencers, provided that we adopt the argument structure I have proposed in Chapter 2. Her system of index raising can also account for the greater optionality in binding by dative subjects of infinitives because these subjects reconstruct to the embedded Spec FinP while the index can optionally move beyond it and be spelled out as a pronoun. With the dative subjects of Lithuanian participial clauses, her proposal can account for the possible binding of pronouns as long as we assume an additional CP-layer to host the index. Where her proposal cannot account for the pattern of binding is with subjects of the Inferential Evidential, given the implications regarding a subject’s c-command domain being linked to its case position. I next address an

additional issue for relying the system of index raising to account for (anti) subject-effects in Russian and Lithuanian.

### 5.3 Optionality in binding and interpretation

One issue for the account that Nikolaeva (2014) provides is the possibility that there is a non-structural reason for the ability of some subjects to bind both pronouns and reflexives, namely that they have different interpretations. It is interesting to note that, while Experiencers of non-verbal psych predicates are able to bind both a reflexive and a pronominal possessor, the type of possessor yields a different meaning. Livitz (2006) notes that in (90) *svoj* implies the meaning of ‘one’s own’.<sup>20</sup>

- (90) a. Maše<sub>i</sub> nužna eë<sub>i</sub> sobaka. *Russian*  
 Masha<sub>DAT</sub> need<sub>FEM</sub> her dog<sub>ACC</sub>  
 ‘Masha needs her dog (to be here).’
- b. Maše<sub>i</sub> nužna svoja<sub>i</sub> sobaka.  
 Masha<sub>DAT</sub> need<sub>FEM</sub> need<sub>FEM</sub> dog<sub>ACC</sub>  
 ‘Masha needed her own dog (She had to share one with her brother before).’  
(Livitz 2006: 40)

This echoes Slioussar’s (2011) argument that in cases where *svoj* seems to be being bound by a non-nominative argument, *svoj* is actually being used in the sense of the lexical item *sobstvennyj* ‘personal’. Once this reading is no longer possible, binding is not possible, as shown in (91).

<sup>20</sup> This holds true also for the subject of the kind of derived psychological verb discussed in Chapter 1.

- (i) a. Mne khotelos moju sobaku. *Russian*  
 me<sub>DAT</sub> want<sub>AGR</sub> my dog<sub>ACC</sub>  
 ‘I wanted my dog (to be here).’
- b. Mne khotelos svoju sobaku.  
 me<sub>DAT</sub> want<sub>AGR</sub> self’s dog<sub>ACC</sub>  
 ‘I wanted my own dog. (I had to share one with my brother before).’  
(Livitz 2006: 40)

- (91) \*V kvartiru<sub>i</sub> vošel svoj<sub>i</sub> xozjain. Russian  
 in apartment entered [self's owner]<sub>NOM</sub>  
 'Into the apartment walked its owner.'  
(Slioussar 2011: 2065)

Avrutin (1994) and Asarina (2005) note a difference in interpretation with binding by nominative subjects. In (92), the distributive reading in which each tourist described a different city is only possible with the reflexive *svoj* 'self's'. The use of *ix* 'their' only gives rise to a collective reading in which all of the tourists are from one city.

- (92) Amerkianskie turisty<sub>i</sub> opisali ix<sub>i</sub>/ svoj<sub>i</sub> goroda Russian  
 American tourists<sub>NOM</sub> described their/self's cities<sub>ACC</sub>  
 'American tourists described their cities.'  
(Avrutin 1994: 709)

Similarly, pronominal binding by singular nominative subjects is possible in the first and second person, with a non-bound variable reading. In (93a), the strict reading in which Masha eats the speaker's dinner is the "preferred" reading, while the sloppy reading in which Masha eats her own dinner is preferred in (93b).

- (93) a. Ja<sub>i</sub> s"el moj<sub>i</sub> obed, i Maša tože. Russian  
 I<sub>NOM</sub> ate my dinner<sub>ACC</sub> and Masha also  
 'I ate my dinner, and Masha did too.'  
 b. Ja<sub>i</sub> s"el svoj obed, i Maša tože.  
 I<sub>NOM</sub> ate self's<sub>i</sub> dinner<sub>ACC</sub> and Masha also  
 'I ate my dinner, and Masha did [eat her own dinner] too.'  
(Asarina 2005: 23)

Nikolaeva's account of pronouns as indexes which are unable to be pronounced as reflexives, fails to capture possible differences in readings. In addition, if it is the case that *svoj* with dative Experiencers is always interpreted like *sobstvennyj* 'personal', then perhaps these constructions do not actually involve binding. Without true optionality in binding, we lose some of the motivation for a multi-step raising proposal like that of Nikolaeva (2014). I leave the question of the interpretation of *svoj* with dative and nominative subjects for future research.

#### *5.4 Index Raising, learnability, and cross-linguistic variation*

In accounts that assume that the long-distance binding and subject-orientation of reflexives is due to the size of the reflexives ( $X^0$  or XP), what triggers the acquisition of these phenomena is the child learning what size the reflexives are in their language (e.g. Progovac 1993). Under Nikolaeva's (2014) theory, what accounts for the (anti) subject-orientation of reflexives is the covert movement of an index, not the whole reflexive (or pronoun). Since this is not related to the size of the pronoun, there must be some other trigger that helps children acquire binding in Russian and Lithuanian. Descriptively, children must learn the following: (i) pronouns can never refer to a subject, unless the subject is a dative Experiencer, and (ii) reflexives must have a subject as an antecedent, unless the subject is a dative Experiencer of a psych verb. Essentially, they must learn that dative Experiencers of psychological verbs pattern with dative Goals with respect to anaphor binding. It could be that this is connected to the acquisition of non-structural dative case. Once children learn that these subjects are specifiers of an Applicative phrase, they understand these subjects can bind pronouns (see Babyonyshev 1993 for discussion of the slower acquisition of lexical than structural case by Russian-speaking children).

The question then is how children with languages that have reflexives that are not subject-oriented learn *not* to apply Index Raising. English has morphological case limited to pronouns and no subject-oriented reflexives, but Chinese, a language without morphological case, has complex anaphors that cannot be bound long distance but are subject-oriented (Huang and Tang 1991). A second, related question is how it is that some languages have Index Raising and others do not. Previous approaches to subject-orientation as anaphor raising assumed that the cross-linguistic variation boiled down to different languages having differently-sized anaphors

(e.g. Hestvik 1992). With Index Raising, it seems that some languages have indexes that raise and other languages have indexes that do not. Nikolaeva (2014: 67) motivates Index Raising by proposing that the index raises “in search of a binder”. Perhaps indexes in languages with reflexives that show morphology related to  $\phi$ -features do not need to raise to find a binder (e.g. the index of *himself/herself* does not raise) (see Franks 2013 for the suggestion that it is LF-interpretable features like  $\phi$ -features that make a reflexive “complex” and therefore not subject-oriented). If this is the case, we are still left with the puzzle of why pronouns in Russian and Lithuanian must raise even though they have  $\phi$ -features. I leave these questions for future work, and conclude the chapter after discussing the following alternative explanation for the facts at hand.

### 5.5 A note on an alternative explanation

I would like to conclude this section with a note on an alternative explanation for the fact that reflexive anaphors are unacceptable with dative subjects of psychological verbs. Given examples like (94) below, one might conclude that the reflexive is simply not acceptable in its nominative form.

- (94) a. \*Emu ne nraivitsja svoja mat'. *Russian*  
 him<sub>DAT</sub> NEG please<sub>3.SG</sub> self's mother<sub>NOM</sub>  
 'He<sub>i</sub> doesn't like his<sub>i</sub> mother.'
- b. \*Jam nepatinka savo motina. *Lithuanian*  
 him<sub>DAT</sub> not.please<sub>3.SG</sub> self's mother<sub>NOM</sub>  
 'He<sub>i</sub> doesn't like his<sub>i</sub> mother.'

Indeed, Baker (2008) takes these nominative Themes to move to Spec TP and be assigned case in that position, which would mean that the reflexive c-commands the Experiencer causing a

Principle A violation. However, an explanation for dative Experiencer subjects being unable to bind reflexive anaphors that boils down to the anaphor being unable to be nominative is problematic for two reasons. For one, from a morphological standpoint, the nominative forms of the Russian reflexive determiner *svoj* do actually exist. This can be seen in the adage given in (95) which roughly translates to ‘Everyone has their one role to play in life’.

- (95) Každomu - svoja rol'. *Russian*  
 each<sub>DAT</sub> self's role<sub>NOM.FEM</sub>  
 ‘To each one’s role.’

Secondly, this explanation is not broad enough to cover the whole range of binding facts for dative Experiencers of psych verbs. There are several verbs whose Themes take a case other than nominative in Lithuanian and who also are unacceptable with reflexive determiners, as shown in (96) for the *trūkti* ‘lack’.

- (96) \*Onai trūksta savo bato. *Lithuanian*  
 Ana<sub>DAT</sub> lacks self's shoe<sub>GEN</sub>  
 ‘Ana is missing her shoe.’

As the example in (97) shows, this is also the case in Polish, a language more closely related to Russian.

- (97) Ani brakuje \*?swojego/ jej buta *Polish*  
 Ana<sub>DAT</sub> lacks self's/ her shoe<sub>GEN</sub>  
 ‘Ana is missing her shoe.’ (Barbara Citko, p.c.)

For these reasons, I assume that an explanation for the pattern of anaphor binding by dative Experiencers must rely on a structural solution, like the one put forward in Nikolaeva (2014).

## 6. Conclusion

In this chapter, I have taken a closer look at the behavior of non-nominative subjects in Russian and Lithuanian with respect to the classic subjecthood diagnostic of anaphor binding. Although

the main contribution of this chapter was to bring experimental evidence to bear on our understanding of binding by dative subjects, I also framed this in a general discussion of the (anti) subject-orientation of anaphors in Balto-Slavic. The three main findings from the experiment were the following:

1. Contra the predictions made in Nikolaeva (2014), dative Experiencers of psychological verbs are able to bind pronouns but not anaphors,
2. Following the predictions in Nikolaeva (2014), dative subjects of non-finite clauses are less acceptable binding pronouns than anaphors, and
3. Russian and Lithuanian did differ in the pattern of ratings, but only in that dative infinitive constructions (MCIs) in Russian are rated lower on the whole than nominative SVO counterparts and there is no such difference for the dative participial construction in Lithuanian.

In the final portion of the chapter I returned to the theory proposed in Nikolaeva (2014) and discussed how it explains the pattern of acceptability found in the experiment, if we assume the analysis for dative subjects proposed in previous chapters of this dissertation.

The following chapter concludes the dissertation. In it, I offer a summary of what we have learned about how non-nominative subjects in Russian and Lithuanian come to have the case they do and how they compare to nominative subjects.

## Chapter 5: Conclusion

### 1. Introduction

Subjects are special elements in grammar. They have properties that distinguish them from other arguments in a clause, and other clausal properties are correlated with their presence. Cross-linguistically, it is common for canonical subjects to be the argument that determines verbal agreement morphology and co-refers with reflexive anaphors. They are also the argument that is licensed even when silent, as can be seen in PRO-control clauses, *pro*-drop languages, and cross-linguistically in the second conjunct of coordinate clauses (e.g. *Sandy dried the dishes and will sweep the floor*). When added to an event-denoting linguistic structure, subjects allow the structure to become a proposition with a truth value (e.g. *wash the dog* vs *Bob washed the dog*). As discussed at the end of Chapter 3, the ability for a clause to have a subject tracks the clause's referential independence, even in infinitival clauses (i.e. PRO-control clauses in English can be tensed while raising clauses are not).

In Chapter 1, I concluded that canonical subjects in Russian and Lithuanian can be roughly described as the argument that the sentence is “about” and the argument that has nominative case. The subsequent chapters were devoted to arguments that appear to be what the sentence is “about” but do not bear nominative case, exemplified in (1) through (7) below.

- (1) Psych verbs (DAT)
- a. **Mne** nraivitsja èto kofe. *Russian*  
me<sub>DAT</sub> please<sub>3.SG</sub> this coffee<sub>NOM</sub>  
'I like this coffee'
- b. **Man** patinka ši kava. *Lithuanian*  
me<sub>DAT</sub> please<sub>3.SG</sub> this coffee<sub>NOM</sub>  
'I like this coffee.'

- (2) Non-verbal psych predicates (DAT) *Russian*  
 a. **Mne** bylo žal', što ne polučilos'.  
 me<sub>DAT</sub> was<sub>SG.NEUT</sub> sorry that not was.successful  
 'I was sorry that (it) wasn't successful.'
- b. **Man** buvo gaila, kad nepasisekė. *Lithuanian*  
 me<sub>DAT</sub> was<sub>3.SG</sub> sorry that not.was.successful  
 'I'm sorry that (it) wasn't successful.'
- (3) *Čtoby* purpose clause (DAT) *Russian*  
 čtoby **nam** uexat' na vokzal.  
 in.order we<sub>DAT</sub> go-out<sub>INF</sub> to train station  
 'in order for us to go out to the train station.' (P&M 2002: 621)
- (4) Dative infinitive (DAT) *Russian*  
**Mne** ne sdat' ekzamen.  
 me<sub>DAT</sub> NEG pass<sub>INF</sub> exam<sub>ACC</sub>  
 'It's not (in the cards) for me to pass the exam.' (P&M 2002: 620)
- (5) Adjunct non-agreeing participial clause (DAT) *Lithuanian*  
**[Vaikams** sugrižus], pragydo lakštingala.  
 child<sub>DAT.PL</sub> return<sub>ACT.PERF.-AGR</sub> started.singing<sub>3.SG</sub> nightingale<sub>NOM.SG</sub>  
 'When the children came back, a nightingale burst into singing.'  
 (Ambrazas et al. 1997: 363)
- (6) Embedded non-agreeing participial clauses (ACC) *Lithuanian*  
 Sakiau [tėvą gerai gyvenant].  
 say<sub>1SG.PAST</sub> father<sub>ACC</sub> well live<sub>ACT.PROG.-AGR</sub>  
 'I said father lived well.' (Ambrazas et al. 1997: 367)
- (7) Inferential Evidential (GEN) *Lithuanian*  
**Ingos** nuraminta vaikas.  
 Inga<sub>GEN</sub> calm.down<sub>PASS.PERF.-AGR</sub> child<sub>NOM</sub>  
 'Inga must have calmed down the child.' (Lavine 2010: 116)

In this dissertation, I aimed to de-mystify these subjects, investigating why they do not have nominative case and how subject-like they are with respect to one of the major subject properties of Russian and Lithuanian, anaphor binding. Inherent non-nominative subjects are thematically prominent and appear pre-verbally in discourse neutral contexts but, unlike nominative subjects, have a case that correlates with their thematic role. Structural non-nominative subjects are DPs that, because they appear in non-finite environments, get assigned a structural case that is not

nominative. Finally, dative subjects of these two categories participate in anaphor binding in ways different from each other and from nominative subjects. In the next sections, I review in more detail the conclusions from Chapters 2 through 4.

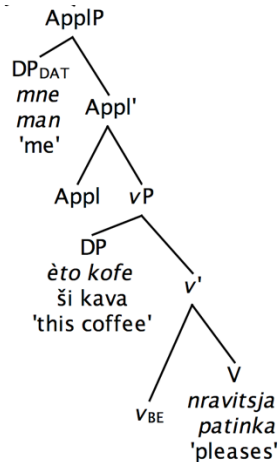
## 2. Chapter 2: Inherent non-nominative subjects

One set of subjects in Russian and Lithuanian are dative Experiencers that are assigned case inherently. In (8), the dative DP is the subject of a full psychological verb, while in (9) the predicate which selects a dative subject is non-verbal.

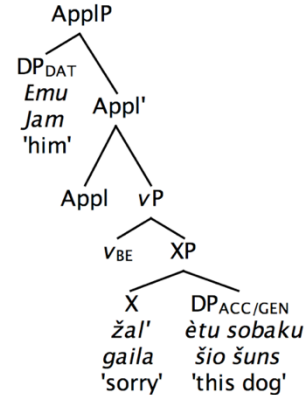
- (8) Psych verbs
- a. Mne nravitsja èto kofe. *Russian*  
 me<sub>DAT</sub> please<sub>3.SG</sub> this coffee<sub>NOM</sub>  
 ‘I like this coffee’
- b. Man patinka ši kava. *Lithuanian*  
 me<sub>DAT</sub> please<sub>3.SG</sub> this coffee<sub>NOM</sub>  
 ‘I like this coffee.’
- (9) Non-verbal psych predicate
- a. Emu žal’ ètu sobaku. *Russian*  
 me<sub>DAT</sub> sorry this dog<sub>ACC</sub>  
 ‘He feels sorry for this dog.’
- b. Jam gaila šio šuns. *Lithuanian*  
 me<sub>DAT</sub> sorry this dog<sub>GEN</sub>  
 ‘He feels sorry for this dog.’

In Chapter 2, I showed that these two constructions have similar but ultimately different argument structures. Like dative Goals, the dative Experiencer here is the specifier of a high Applicative phrase. In both (8) and (9), this Appl head selects a  $vP$  headed by a light  $v_{BE}$ . As the two trees in (10) show, where the constructions differ is in what  $v_{BE}$  selects.

(10) a.



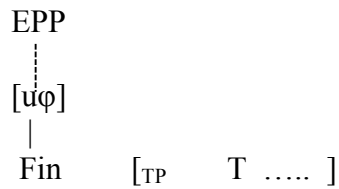
b.



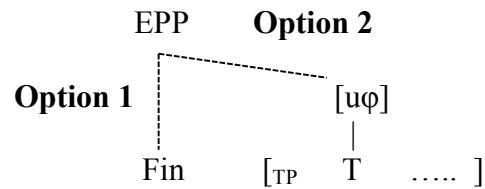
In (10a), the Theme DP is the subject of the vP which incorporates the root psychological verb as the complement of *v*. In (10b), *v<sub>BE</sub>* selects a predicate headed by the non-verbal predicate which can be nominal or adjectival in category. The Theme in this case is the object of the non-verbal predicate. These differences in argument structure explain differences in the properties of the Theme, like, for example, the fact that Themes of psychological verbs can have nominative case.

The second innovation of Chapter 2 accounts for subject movement of these datives after case and argument structure is built up. I argued that these subjects move to the specifier of FinP, instead of TP. This position is not associated with information structure status and is not a position from which subjects can be controlled or can control PRO. What drives movement to Spec FinP is the EPP, which is stranded after Split Feature Inheritance occurs and [ $u\phi$ ] is inherited by T. Split Feature Inheritance is what can happen in languages in which the EPP is only loosely associated with [ $u\phi$ ]. When Feature Inheritance is triggered, the EPP can either move with [ $u\phi$ ] to T (or whichever head is below Fin) or remain on Fin.

(11) Step 1: Fin Merges with TP



Step 2: Feature Inheritance applies



The inherent dative DP moves to Spec FinP to check the EPP and [uφ] on T is free to agree with any available DPs and value its φ-features. With this system, we need not argue that a non-nominative subject moves to Spec TP, which labeling theory does not predict. We also can avoid proposing that a null expletive satisfies the EPP or assuming that the EPP does not exist in Russian and Lithuanian.

### 3. Chapter 3: Structural non-nominative subjects

In Chapter 3, the non-nominative subjects under discussion appear in many different constructions, and what unifies them is that they all are assigned case structurally via Agree with [uφ]. The table below gives each subject, including nominative subjects, and the case they are assigned and summarizes evidence for structural case.

Table 1: Subjects in Russian and Lithuanian with structural case

Construction	Subject Case	Example <sup>1</sup>	Arguments for Structural Case
Finite clauses	NOM via Agree with T	<b>Aš</b> nusipirkau bilieta. I <sub>NOM</sub> bought <sub>1.SG</sub> ticket <sub>ACC</sub> 'I bought a ticket.'	<ul style="list-style-type: none"> <li>• Subject-verb agreement</li> <li>• Not thematically-linked</li> <li>• GenNeg is assigned</li> </ul>
Infinitival and <i>čtoby</i> purpose clauses (Russian)	DAT via Agree with Fin	<b>Mne</b> ne sdat' ekzamen. me <sub>DAT</sub> NEG pass <sub>INF</sub> exam <sub>ACC</sub> 'It's not (in the cards) for me to pass the exam.'	<ul style="list-style-type: none"> <li>• Applies to unaccusative subjects</li> <li>• Not thematically-linked</li> <li>• Overridden with change in construction (eg. DAT changes to ACC when participle is embedded)</li> <li>• GenNeg is assigned</li> </ul>
Participial adjunct clause (Lithuanian)		<b>Vaikams</b> sugrįžus... children <sub>DAT</sub> return <sub>PART</sub> 'The children having returned..'	
Participial embedded clause (Lithuanian)	ACC via Agree with Asp	Sakiau say <sub>1SG.PAST</sub> [ <b>tėvą</b> gerai gyvenant]. father <sub>ACC</sub> well live <sub>ACT.PROG.-AGR</sub> 'I said father lived well.'	
Inferential Evidential (Lithuanian)	GEN via Agree with D	<b>Ingos</b> nuraminta vaikas. Inga <sub>GEN</sub> calm.down <sub>-AGR</sub> child <sub>NOM</sub> 'Inga must have calmed down the child.'	

What determines which case the subject will be assigned is the location of [u $\phi$ ] in the clause. In finite clauses with assertive force, Feature Inheritance occurs and [u $\phi$ ] on T agrees with the subject which is assigned nominative case. If Feature Inheritance does not occur because the clause is non-finite and does not have a Force head to trigger inheritance, [u $\phi$ ] will stay on Fin and the DP that agrees with it will be dative.

When these non-finite clauses are embedded, whether Feature Inheritance occurs depends on the matrix head that selects the FinP. In the case of the dative infinitive in Russian, a  $v_{BE}$

<sup>1</sup> Here I give examples in Lithuanian except for the Dative Infinitival construction of Russian.

selects FinP and no inheritance occurs. The embedded subject is assigned dative case and raises to the matrix clause to check the EPP on the matrix Fin. Because the matrix clause is a finite clause with a Force head, Feature Inheritance has happened. Split Feature Inheritance in these clauses allows  $[u\phi]$  alone to be inherited by T and remain unvalued, yielding the non-agreeing forms of ‘be’ (e.g. past tense, neuter singular *bylo*). When Lithuanian non-agreeing participial clauses are embedded, on the other hand, the selecting head is a V and Feature Inheritance occurs. Because these clauses do not have a TP layer, the head to inherit  $[u\phi]$  is Asp. The subject in these clauses is assigned accusative case.

The Inferential Evidentials are a different construction. The argument structure here is contained entirely within a gerund-like DP. A deverbalizing little *n*, spelled-out as non-agreeing *-ma/-ta*, selects a verbal root and a specifier subject. This DP moves to Spec DP and is assigned genitive case via Agree with  $[u\phi]$  on D. A null T selects this DP and the genitive subject moves to the specifier of FinP to check the EPP.

It is well understood that dative case is correlated with the left periphery, nominative with the inflectional field, accusative with event and argument structure, and genitive with the nominal domain. What Chapter 3 aimed to do was explain how subjects can also be assigned these cases, given the analyses I propose for the structure in which they are merged.

#### **4. Chapter 4: Binding by non-nominative subjects**

Anaphor binding is a subjecthood diagnostic in many languages because, in these languages, c-command and co-indexing is not sufficient to bind a reflexive. As the example in (12) shows, the antecedent must also be a subject.

- (12) Militционер<sub>i</sub> rassprašival arestovannogo<sub>j</sub> o sebe<sub>i/\*j</sub> *Russian*  
 policeman<sub>NOM</sub> questioned suspect<sub>ACC</sub> about self<sub>PREP</sub>  
 ‘The policeman<sub>i</sub> questioned the suspect<sub>j</sub> about himself<sub>i/j</sub>.’ (Rappaport 1986: 101)

In Russian and Lithuanian, the inverse of the subject-orientation of reflexives, the anti-subject orientation of pronouns, holds for nominative subjects.

- (13) Jis<sub>i</sub> nori savo/jo<sub>\*i/j</sub> knygo *Lithuanian*  
 he<sub>NOM</sub> want<sub>3.SG</sub> self’s/his book<sub>GEN</sub>  
 ‘He<sub>i</sub> wants his<sub>i/j</sub> book.’

In Chapter 4, I aimed to investigate how non-nominative subjects bind anaphors.

Specifically, I tested predictions made by a recent theory of the (anti) subject-orientation of anaphors in Russian, Nikolaeva’s (2014) Index Raising. In this system, it is not that reflexives move to T, leaving only subjects in Spec TP as available, c-commanding binders (Chomsky 1993, 1995), but rather that the indexical part of an anaphor raises to multiple locations in the clause in the course of the derivation. Because it is only the index, it can be spelled out as a reflexive or an anaphor. Nikolaeva (2014) proposes certain principles that dictate positions in which an index must be spelled out as a reflexive (e.g. it is adjoined to a phrase headed by D, *v*, or T which has an antecedent in the specifier position). The index is spelled out as a pronoun in all other cases. What multiple positions give Nikolaeva (2014) is an explanation for why both reflexive and pronominal determiners are able to be bound by some subjects.

- (14) Mne žal’ moju/svoju mamu. *Russian*  
 Man gaila ?mano/savo mamos. *Lithuanian*  
 me<sub>DAT</sub> sorry my/self’s mom<sub>ACC/GEN</sub>  
 ‘I feel sorry for my mom.’

Index Raising, combined with Nikolaeva’s argument that binding principles are evaluated for an antecedent with respect to its case position, gave us the following predictions for dative subjects in Russian and Lithuanian. Prediction 2 is formulated this way because dative subjects of non-

finite clauses are assigned case in Spec FinP, a high position in the clause from which we expect them to be able to bind an index.

(15) P1: Dative Experiencers of psychological verbs will bind both anaphors and pronouns.

P2: Dative subjects of non-finite clauses will only bind anaphors, and not pronouns.

P3: There will be no difference in binding by dative subjects between Russian and Lithuanian.

To test these predictions, I conducted a formal acceptability judgement experiment. Forty participants in each language rated sentences on a scale from 1 (bad) to 7 (good). Sentences varied as to whether the case of the subject was dative or nominative, whether the verb was a psych or non-psych verb (as a proxy for finite versus non-finite predicates), and whether the object had a reflexive or pronominal determiner. Table 2, repeated from Chapter 4, gives the factorial design and example sentences.

Table 2: Factorial design for anaphor binding by dative and nominative subjects with sentences from example item in Lithuanian

Condition	Factor 1: Subject case	Factor 2: Predicate type	Factor 3: Determiner type	Construction
1	DAT	Psych	Reflexive	Dative Experiencer
<i>Vyresniam broliui patinka savo nauja sesutė. (savo = vyresnio brolio)</i> Older brother <sub>DAT</sub> likes self's new baby sister. (self's = older brother)				
2	DAT	Psych	Pronominal	Dative Experiencer
<i>Vyresniam broliui patinka jo nauja sesutė. (jo = vyresnio brolio)</i> Older brother <sub>DAT</sub> likes his new baby sister. (his = older brother)				
3	NOM	Psych	Reflexive	Nominative Experiencer
<i>Vyresnis brolis myli savo naują sesutę. (savo = vyresnio brolio)</i> Older brother <sub>NOM</sub> loves self's new baby sister. (self's = older brother)				
4	NOM	Psych	Pronominal	Nominative Experiencer
<i>Vyresnis brolis myli jo naują sesutę. (jo = vyresnio brolio)</i> Older brother <sub>NOM</sub> loves his new baby sister. (his = older brother)				
5	DAT	Non-psych (non-finite)	Reflexive	Rus: Infinitival Lith: Participial
<i>Vyresniam broliui laukiant savo naujos sesutės, močiutė jį linksmina žaislais. (savo = vyresnio brolio)</i> Older brother <sub>DAT</sub> waiting self's new baby sister, grandmother entertains him with toys. (self's = older brother)				
6	DAT	Non-psych (non-finite)	Pronominal	Rus: Infinitival Lith: Participial
<i>Vyresniam broliui laukiant jo naujos sesutės, močiutė jį linksmina žaislais. (jo = vyresnio brolio)</i> Older brother <sub>DAT</sub> waiting his new baby sister, grandmother entertains him with toys. (jo = older brother)				
7	NOM	Non-psych (finite)	Reflexive	Baseline
<i>Vyresnis brolis laukia savo naujos sesutės, ir močiutė jį linksmina žaislais. (savo = vyresnio brolio)</i> Older brother <sub>NOM</sub> waits self's new baby sister, and grandmother entertains him with toys. (self's = older brother)				
8	NOM	Non-psych (finite)	Pronominal	Baseline
<i>Vyresnis brolis laukia jo naujos sesutės, ir močiutė jį linksmina žaislais. (jo = vyresnio brolio)</i> Older brother <sub>NOM</sub> waits his new baby sister, and grandmother entertains him with toys. (self's = older brother)				

In Figures 1 and 2 I give the results of the experiment. The means are z-transformed so that middle ratings are now zero.

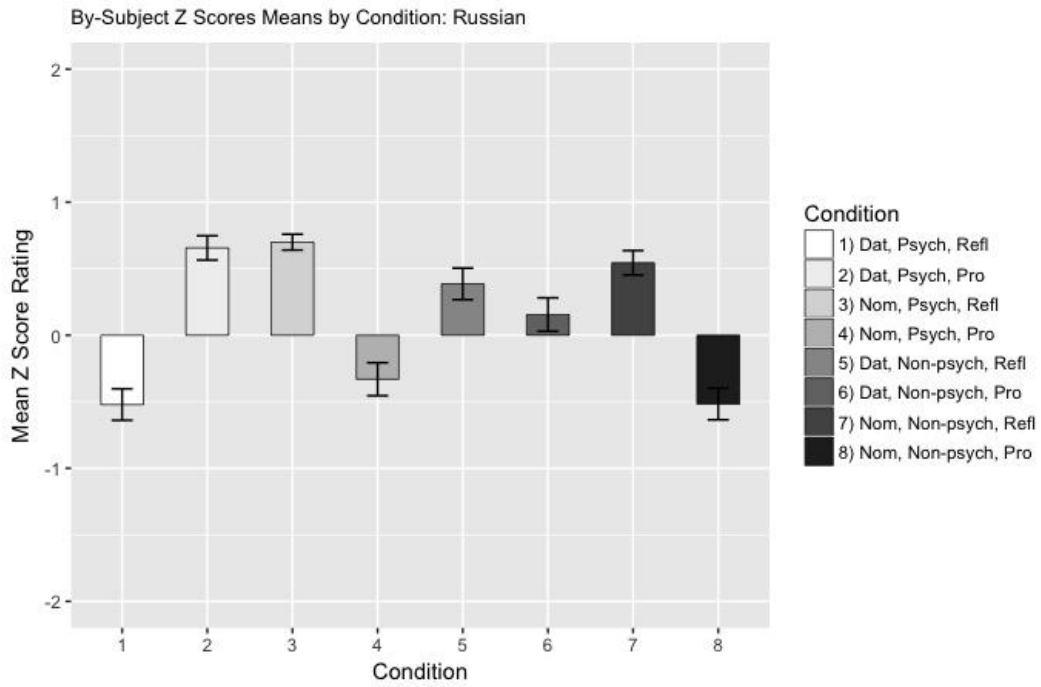


Figure 1: Ratings of conditions for Russian

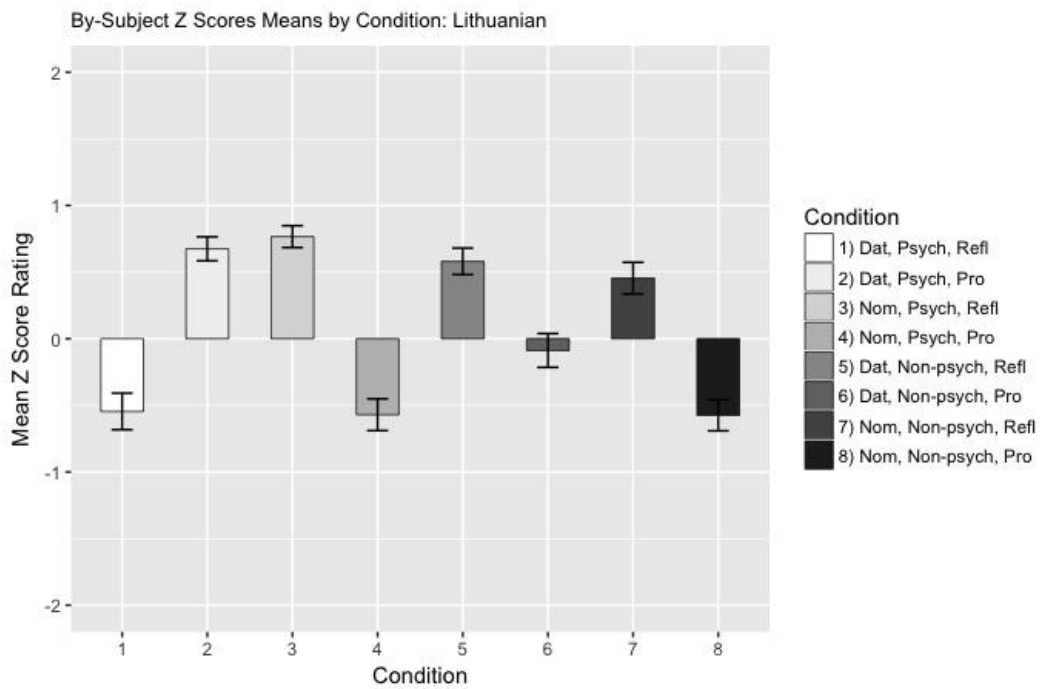


Figure 3: Ratings of conditions for Lithuanian

These findings show the following pattern: 1) sentences with dative subjects of psych verbs are unacceptable binding reflexives, but are acceptable with pronouns, 2) sentences with nominative subjects of both psych and non-psych verbs are acceptable binding reflexives but not pronouns, and 3) sentences with dative subjects of non-psych verbs (in non-finite predicates) are acceptable binding reflexives, and less acceptable binding pronouns. This does not confirm the first prediction, but it does validate the second with the caveat that the binding of pronouns by structural dative subjects is more acceptable than it is by nominative subjects.

Finally, I showed how Nikolaeva's (2014) Index Raising proposal can account for why dative subjects of psych verbs do not bind reflexives if we assume the structure for these constructions I proposed in Chapter 2. The bi-clausal structure for the dative infinitives in Russian I argue for in Chapter 3 helps account for why binding by pronouns was not judged completely unacceptable. I concluded the chapter with discussion of how the structure of Lithuanian participles that are not embedded might be modified to account for the results of the experiment and of some challenges for Nikolaeva's framework.

## **5. Conclusion**

The goal of this thesis was to provide an account of the case and properties of non-nominative subjects in Russian and Lithuanian. I showed that, with modifications to our theory of Feature Inheritance and clear proposals for the argument structure of these constructions, we can account for how subjects in these languages come to seem so varied. In completing this task, I wanted to capitalize on the advances that generativist researchers have made in the understanding of Slavic languages to account for phenomena in Lithuanian, following, in this respect, recent works like Lavine (2000) and Anderson (2013). In addition, I aimed to use experimental methods to

illuminate some of the complexities surrounding binding in these languages. Through both comparative and experimental methods, I hope to have provided another window into the phenomena of non-nominative subjects and subjecthood in general.

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## Appendix A: Stimuli

Subjects of all stimuli sentences were animate (Experiencers or Agents). Of the objects in Russian sentences, 7 of 24 were animate and 11 of 24 were (grammatically) feminine. Of objects in Lithuanian stimuli, 7 of 24 were genitive. In (i) through (iii) below, I list all of the verbs used in the sentences.

(i) Psych verbs with dative subjects:

Russian: *nravit'sja* 'like', *nadoedat* 'bore', *dosaždat* 'annoy'

Lithuanian: *patikti* 'like', *reikėti* 'need', *rūpėti* 'care'

(ii) Psych verbs with nominative subjects:

Russian: *ljubit* 'love', *nenavidet* 'hate', *slyšit* 'hear', *bojat'sja* 'fear', *obožat* 'adore', *zamečat* 'notice', *ponimat* 'understand', *xotet* 'want', *slyšit* 'hear'

Lithuanian: *mylėti* 'love', *norėti* 'want', *pastebėti* 'notice', *nekęsti* 'hate', *dievinti* 'adore', *bijoti* 'fear', *suprasti* 'understand', *matyti* 'see', *girdėti* 'hear', *mėgti* 'like'

(iii) Non-psych verbs:

Russian: *minovat* 'avoid', *spasti* 'save', *uznat* 'get to know', *osuščestvit* 'make happen', *zaveršit* 'complete', *izbegnut* 'escape', *predstavjat* 'present', *sobljusti* 'follow', *najti* 'find', *uderžat* 'keep', *rukovodit* 'manage', *vypolnit* 'complete', *prodat* 'sell', *uslyšat* 'obey', *ubirat* 'tidy', *vstretit* 'meet', *polučit* 'get', *obnjat* 'hug'

Lithuanian: *laukti* 'wait', *įsiminti* 'memorize', *pagerinti* 'improve', *įgyvendinti* 'make happen', *pamesti* 'lose', *padovanoti* 'give', *išjuokti* 'mock', *mesti* 'quit', *išklausyti* 'hear out', *parduoti* 'sell', *išsinuomuoti* 'rent out', *apmąstyti* 'ponder', *surasti* 'find', *išskalbti* 'launder', *paskambinti* 'call', *nuplauti* 'wash', *sutaisyti* 'fix', *sutvarkyti* 'tidy', *apkabinti* 'hug'

## Appendix B: Mean ratings

The following tables give the mean ratings in numbers for all conditions. The information in Table 2 is also given in Figures 1 and 3 in the text.

*Table 1: Rating means for all conditions out of 7 (not Z-transformed)*

Condition			Russian		Lithuanian	
			Means	SE	Means	SE
Psych	DAT + REFL	1	3.80	0.21	3.28	0.26
	DAT + PRO	2	6.47	0.15	6.15	0.18
	NOM + REFL	3	6.59	0.09	6.39	0.15
	NOM + PRO	4	4.23	0.24	3.20	0.27
Non-psych	DAT + REFL	5	5.88	0.21	5.96	0.18
	DAT + PRO	6	5.33	0.22	4.37	0.25
	NOM + REFL	7	6.26	0.14	5.69	0.21
	NOM + PRO	8	3.82	0.22	3.23	0.24

*Table 2: Z-score transformed rating means for all conditions*

Condition			Russian		Lithuanian	
			z-means	SE	z-means	SE
Psych	DAT + REFL	1	-0.52	0.12	-0.55	0.14
	DAT + PRO	2	0.66	0.09	0.67	0.09
	NOM + REFL	3	0.70	0.06	0.77	0.08
	NOM + PRO	4	-0.33	0.12	-0.57	0.12
Non-psych	DAT + REFL	5	0.39	0.12	0.58	0.10
	DAT + PRO	6	0.16	0.13	-0.09	0.13
	NOM + REFL	7	0.54	0.09	0.45	0.12
	NOM + PRO	8	-0.52	0.12	-0.57	0.12